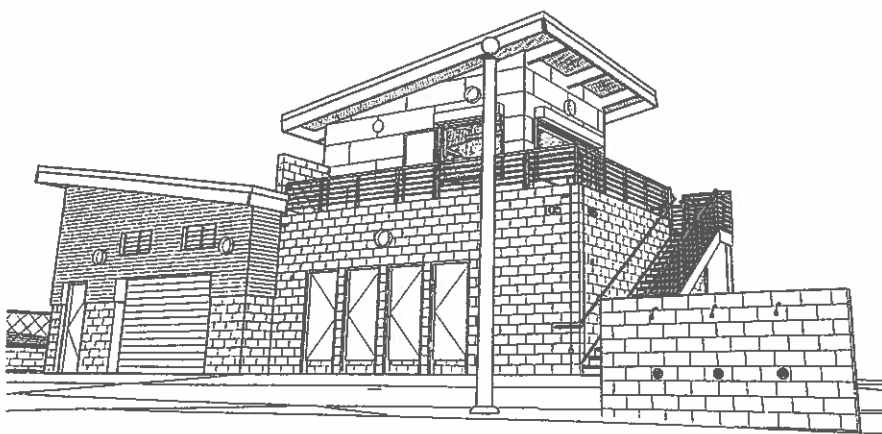


**ABBREVIATIONS**

ABV ABOVE	ACT ACUSTICAL	AD AREA DRAIN	ADJ ADJUSTABLE	APF ABOVE FINISH FLOOR	ALT ALTERNATE	ALUM ALUMINUM	APPROX APPROXIMATE	ARCH ARCHITECT	B.O BOTTOM OF	BALC BALCONY	BO BOARD	BET BETWEEN	BLOG BUILDING	BLOG BUILDING	BW BELOW	BS BEAM	BT BOTTOM	BRKT BRACKET	BULKHD BULKHEAD	BUR BUILT UP ROOF	C.G CORNER GUARD	CAB CABINET	CALL CALLING	CEM CEMENT	CER CERAMIC	CJ CONTROL JOINT	CLD CEILING	CLS CLOSET	CLR CLEAR	CO CASED OPENING	COL COLUMN	CONC CONCRETE	COHT CONTRAHOUS	CPT CARPET	CT CENTER TILE	CTR CENTER	DBL DOUBLE	DET DETAIL	DM DIAMETER	DM DOWNSCOM	DR DOOR	DS DOWNSPOUT	DV DRYWALL	DWG DRAWING	E EAST	EA EACH	EFS EXTERIOR INSULATION & FINISH SYSTEM	ELC ELEVATION	ELEV ELEVATION	EMER EMERGENCY	ENCL ENCLOSURE	EOS EDGE OF SLAB	EQ EQUAL	EQUIP EQUIPMENT	ETR EXISTING TO REMAIN	EW EACH WAY	EXP. JT. EXPANSION JOINT	EXIST EXISTING	F.O. FACE OF	FA FIRE ALARM	FAP FIRE ANNUNCIATOR PANEL	FD FLOOR DRAIN	FE FIRE EXTINGUISHER	FEC FIRE EXTINGUISHER PANEL	FG FINISH GROUP	FH FIRE HYDRANT	FHC FIRE HOSE CABINET	FHS FRESH	FLR FLOOR	FLUR FLOOR FINISH	FLUR FLOOR FINISH	FR FOOT OR FEET	FR FRAMING	GAL GALLON	GALV GALVANIZED	GB GYPSUM BOARD	GIP GYPSUM	H.W.H. HOT WATER HEATER	HWWD HARDWOOD	HWHR HARDWARE	HM HOLLOW METAL	HRZR HORIZONTAL	HR HOUR	HT HEIGHT	IC INNER DIAMETER	ICA INCADESCENT	INSN INSULATION	INT INTERIOR	JAN JANITOR	JST JOIST	JT JOINT	LAM LAMINATE	LAV LAVATORY	LD(S) LINDS	LDG LANDING	LT LIGHT	LT MAXIMUM	MCH MECHANICAL	MEMB MEMBRANE	MFR MANUFACTURER	MHI MINIMUM	MISC MISCELLANEOUS	MO MASONRY OPENING	MTD MOUNTED	MFL METAL	NI NORTH	NC NOT IN CONTRACT	NO NUMBER	NOM NOMINAL	NTS NOT TO SCALE	OP OVERHEAD PIPE	OK OVERALL	OC ON CENTER	OD OUTSIDE DIAMETER	OPF OFF	OH OPPOSITE HAND	OPG OPENING	OPOS OPPOSITE	PAR PARTITION	PERM PERMETER	PG PAINT GRADE	PLAM PLASTIC LAMINATE	PLSTR PLASTER	PLYVD PLYWOOD	PR PAIR	PT PAINT	PTD PAINTED	R RISER	RAD RADIUS	RCP REFLECTED CEILING PLAN	RDP ROOF DRAIN	RE REFER	REF REFRIGERATOR	REINP REINFORCED	REQD REQUIRED	RESK RESKIN	RM ROOM	RO ROUGH OPENING	RTU ROOF TOP UNIT (MECH SOUTH)	SAFB SOUND ATTENUATION FIBER BATT	SC SCOFFER	SCHED SCHEDULE	SEAL SEALANT	SECT SECTION	SF SQUARE FOOT	SHT SHEET	SM SIMILAR	SPEC SPECIFICATION	SS STAINLESS STEEL	STD STANDARD	STL STEEL	STOR STORAGE	STRUC STRUCTURAL	SUSP SUSPENDED	SYM SYMMETRICAL	T TREAD	T&G TONGUE & GROOVE	TEL TELEPHONE	TER TERRAZZO	THK THICK	THR THRESHOLD	TO TOP OF	TP TYPICAL	UC UNDERCUT	UNFIN UNFINISHED	UNL UNLESS NOTED OTHERWISE	UN UNLESS OTHERWISE NOTED	UTL UTILITY	VT VERTICAL COMPOSITION TILE	VERT VERTICAL	VF VENT IN FIELD	VTR VENT TERMINATION PIPE	VWC VENT WALL COVERING	W WEST	W WITH	W/O WITHOUT	WAT WATERSHED	W/W WOOD	WP WATERPROOF	WS WETSTACK	W/S WASTECOT	WT WEIGHT
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**El Segundo Lifeguard Station**  
El Segundo, CA

**PROJECT SCOPE**

- CONSTRUCTION OF A NEW TWO (2) STORY LIFEGUARD STATION.
- WORK INCLUDES (BUT IS NOT LIMITED TO): ON-SITE AND OFF-SITE IMPROVEMENTS, MASONRY AND STEEL CONSTRUCTION, ELECTRICAL, MECHANICAL AND PLUMBING.

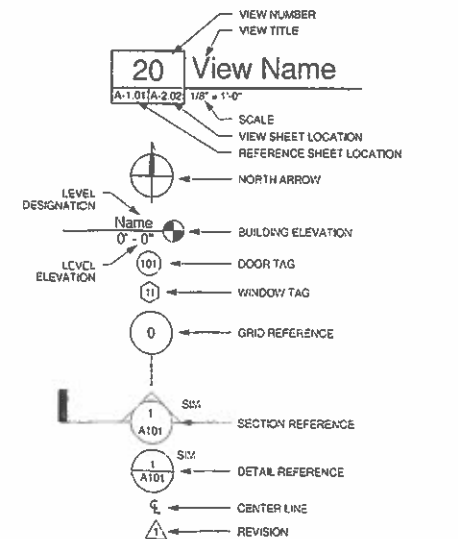
**GENERAL NOTES**

- APPLICABLE CODES AND STANDARDS:  
2007 CALIFORNIA BUILDING CODE AND ITS APPENDICES AND STANDARDS.  
2008 CITY OF LOS ANGELES BUILDING CODE - AMENDMENTS  
2007 CALIFORNIA PLUMBING CODE AND ITS APPENDICES AND STANDARDS  
2007 CALIFORNIA MECHANICAL CODE AND ITS APPENDICES AND STANDARDS  
2007 CALIFORNIA FIRE CODE AND ITS APPENDICES AND STANDARDS  
2007 CALIFORNIA ELECTRICAL CODE AND ITS APPENDICES AND STANDARDS  
2007 CALIFORNIA BUILDING ENERGY CODE.
- ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY WITH EXISTING SITE CONDITIONS. ANY DISCREPANCIES AND UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, HE/SHE SHALL BE PRECEDING AT HIS/HER OWN RISK.
- OMISSIONS MADE IN THESE DRAWINGS AND SPECIFICATIONS OR THE MIS-DESCRIPTION OF THE WORK WHICH IS MANIFESTLY NECESSARY TO CARRY OUT THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, OR WHICH IS CUSTOMARILY PERFORMED SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH OMITTED OR DESCRIBED DETAILS OF THE WORK AS IF FULLY AND COMPLETELY SET FORTH AND DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.
- DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWING SCALE OR PROPORTION. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- IN THE EVENT OF THE UNFORESEEN ENCOUNTER OF MATERIALS SUSPECTED TO BE OF AN ARCHAEOLOGICAL OR PALEONTOLOGICAL NATURE, ALL GRADING AND EXCAVATION SHALL CEASE IN THE IMMEDIATE AREA AND THE APPROPRIATE AUTHORITIES ARE TO BE NOTIFIED BY THE CONTRACTOR. THE FIND SHALL BE LEFT UNTOUCHED UNTIL AN EVALUATION BY A QUALIFIED ARCHAEOLOGIST OR PALEONTOLOGIST IS MADE.
- CONTRACTOR IS TO BE RESPONSIBLE FOR BEING FAMILIAR WITH THESE DOCUMENTS INCLUDING ALL CONTRACT REQUIREMENTS.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- FIRE SPRINKLER SHOP DRAWINGS & CALCULATIONS SHALL BE SUBMITTED TO BUILDING DEPT. & APPROVED BY FIRE DEPT. PRIOR TO INSTALLATION.
- SHOP WELDS MUST BE PERFORMED IN A LA CITY BLDG. DEPT. LICENSED FABRICATOR'S SHOP.
- CONTRACTOR TO REVIEW TITLE 24 DOCUMENTATION TO PROVIDE A BUILDING THAT MEETS AND EXCEEDS THE BUILDING ENERGY AND EFFICIENCY AND PERFORMANCE AS REQUIRED BY ASHRAES/IESNA 90.1-1999 OR THE LOCAL ENERGY CODE, WHICHEVER IS MORE STRINGENT. THE BUILDING IS TO MEET THE ENERGY AND ATMOSPHERE MINIMUM ENERGY PERFORMANCE PREREQUISITE POINT 2 PER THE USGBC LEED GREEN BUILDING RATING SYSTEM, VERSION 2.1.
- THE FOLLOWING ITEMS SHOWN ON THE DRAWINGS ARE OWNER PROVIDED. OWNER INSTALLED. UTILITIES PROVIDED FOR THESE ITEMS WILL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE INSTALLATION WITH OWNER.  
PORTABLE AIR COMPRESSOR  
REFRIGERATOR  
SECURITY CAMERA  
MICROWAVE
- OSHA PERMITS REQUIRED FOR VERTICAL CUTS 5' OR OVER.
- CONTRACTOR TO PROVIDE COMPLETE DETAILS OF ENGINEERED TEMPORARY SHORING OR SLOT CUTTING PROCEDURES ON PLANS. CALL FOR INSPECTION BEFORE EXCAVATION BEGINS.
- THE SOILS ENGINEER IS TO APPROVE THE KEY OR BOTTOM AND LEAVE A CERTIFICATE ON THE SITE FOR THE GRADING INSPECTOR. THE GRADING INSPECTOR IS TO BE NOTIFIED BEFORE ANY GRADING BEGINS, AND FOR BOTTOM INSPECTION, BEFORE FILL IS PLACED. FILL MAY NOT BE PLACED WITHOUT APPROVAL OF THE GRADING INSPECTOR.

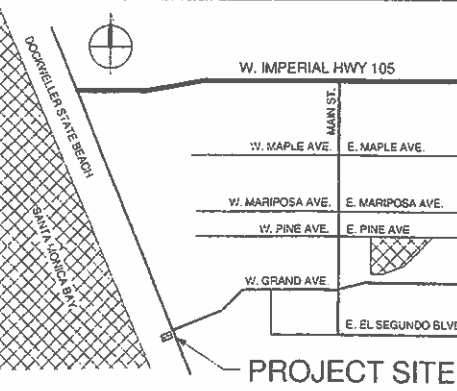
**PROJECT PHASES**

- PHASE 1 CONSTRUCTION OF NEW RETAINING WALL AND CHAIN LINK FENCE, SECURITY FENCE BETWEEN THE SITE AND THE ADJACENT PROPERTY MUST BE MAINTAINED AT ALL TIMES.
- PHASE 2 DEMOLITION OF EXISTING SECURITY FENCE AND CONSTRUCTION OF LIFEGUARD STATION.

**SYMBOLS**



**VICINITY MAP**



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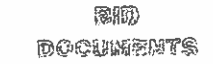
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS**  
TITLE SHEET

**T-1.1**  
09/20/2010

SHEET 1 OF 68  
JOB NO. 1109531

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E.



# CONDITIONS OF APPROVAL

IN ADDITION TO ALL APPLICABLE PROVISIONS OF THE EL SEGUNDO MUNICIPAL CODE (EMC), THE CITY OF EL SEGUNDO AGREES TO COMPLY WITH THE FOLLOWING PROVISIONS AS CONDITIONS FOR THE CITY OF EL SEGUNDO'S APPROVAL OF THE ENVIRONMENTAL ASSESSMENT NO. EA-062, CONDITIONAL USE PERMIT NO. 10-02, VARIANCE NO. 10-02, AND COASTAL DEVELOPMENT PERMIT NO. 10-01 (PROJECT CONDITIONS):

### ZONING CONDITIONS

- THIS APPROVAL IS FOR THE PROJECT AS SHOWN ON THE PLANS REVIEWED AND APPROVED BY THE PLANNING COMMISSION AND ON FILE BEFORE THE CITY ISSUES A BUILDING PERMIT. THE APPLICANT MUST SUBMIT PLANS, SHOWING THAT THE PROJECT SUBSTANTIALLY COMPLIES WITH THE PLANS AND CONDITIONS OF APPROVAL ON FILE WITH THE PLANNING AND BUILDING SAFETY DEPARTMENT. ANY SUBSEQUENT MODIFICATIONS MUST BE REFERRED TO THE DIRECTOR OF THE PLANNING AND BUILDING SAFETY DEPARTMENT FOR A DETERMINATION REGARDING THE NEED FOR PLANNING COMMISSION REVIEW AND APPROVAL OF THE PROPOSED MODIFICATION.
- PURSUANT TO EMC SECTION 15-23-11(B)(1), THE CONDITIONAL USE PERMIT EXPIRES TWENTY-FOUR (24) MONTHS AFTER ITS APPROVAL IF THE USE HAS NOT COMMENCED OR IF IMPROVEMENTS ARE REQUIRED, BUT CONSTRUCTION HAS NOT COMMENCED UNDER A VALID BUILDING PERMIT.
- PURSUANT TO EMC SECTION 15-23-11 (A)(1), THE VARIANCE LAPSES AND BECOMES VOID ONE YEAR FOLLOWING THE DATE ON WHICH THE VARIANCE BECOMES EFFECTIVE UNLESS A VALID BUILDING PERMIT IS ISSUED AND CONSTRUCTION IS COMMENCED AND DULGENTLY PURSUED TOWARD COMPLETION OF THE PROJECT ON THE SITE.

### POLICE DEPARTMENT CONDITIONS

- ALL ENTRY DOORS, ROLL UP DOORS AND WINDOWS, AND RESTROOM DOORS MUST BE ILLUMINATED WITH A MINIMUM OF ONE FOOT-CANDLE OF LIGHT ON THE GROUND SURFACE DURING HOURS OF DARKNESS.
- OPEN STAIRWAYS MUST BE ILLUMINATED WITH A MINIMUM MAINTAINED AS FOOT-CANDLES OF LIGHT ON ALL LANDINGS AND STAIR TREADS DURING HOURS OF DARKNESS.
- LIGHTING DEVICES MUST BE ENCLOSED AND PROTECTED BY WEATHER AND VANDAL RESISTANT COVERS.
- A PHOTOMETRIC STUDY THAT INCORPORATES THE REQUIREMENTS SPECIFIED IN CONDITIONS 4, 5, AND 6 OF THIS RESOLUTIONS MUST BE PROVIDED BEFORE ISSUING THE BUILDING PERMIT.
- THERE MUST BE A SECURITY CAMERA (INTERNET BASED/PAN/TILT/ZOOM) INSTALLED AT THE LIFE GUARD STATION IN ACCORDANCE WITH EL SEGUNDO POLICE DEPARTMENT INSTRUCTIONS INCLUDING WITHOUT LIMITATION VIEWING OF THE BATHROOM DOORS.

### FIRE DEPARTMENT CONDITIONS

- THE APPLICANT MUST COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE 2007 CALIFORNIA BUILDING AND FIRE CODES AND THE 2006 INTERNATIONAL FIRE CODE AS ADOPTED BY THE CITY OF EL SEGUNDO AND EL SEGUNDO FIRE DEPARTMENT REGULATIONS. PLEASE BE ADVISED THE CITY OF EL SEGUNDO IS ADOPTING THE 2010 EDITIONS OF THE CALIFORNIA BUILDING AND FIRE CODES AND THE 2006 INTERNATIONAL FIRE CODE, EFFECTIVE JANUARY 1, 2011.

### BUILDING SAFETY DIVISION CONDITIONS

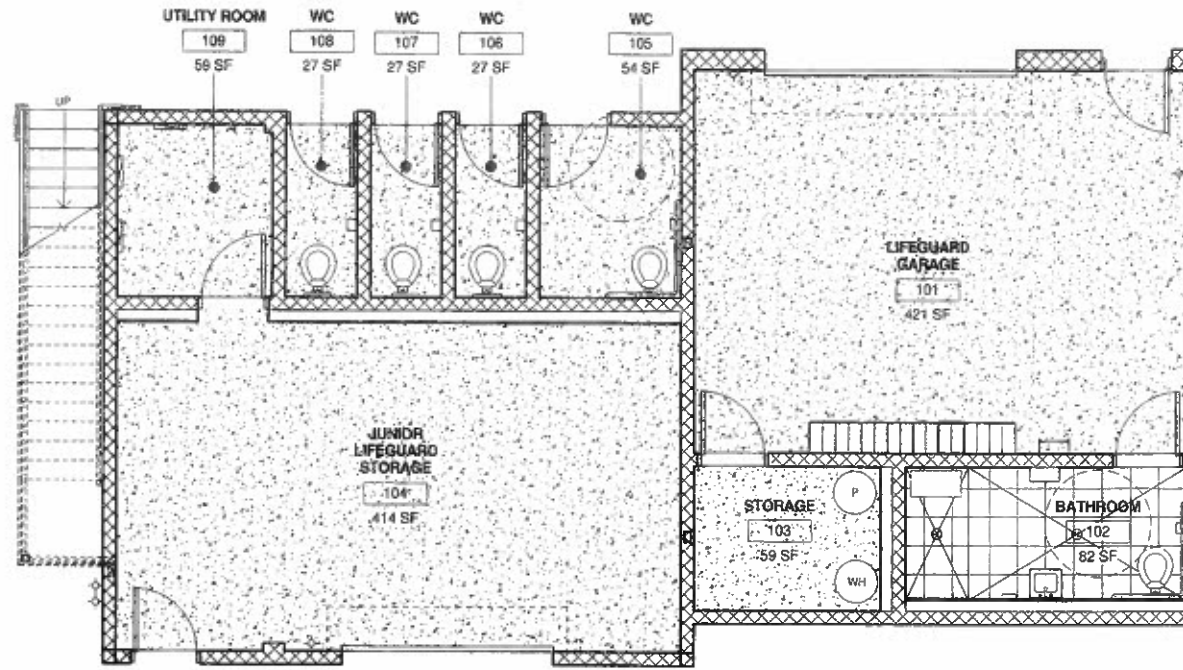
- THE IDENTIFIED MEZZANINE AREA MAY ONLY BE USED FOR EQUIPMENT.
- CALCULATIONS, DETAILS, AND A SOILS GEOLOGICAL REPORT MUST BE PROVIDED TO THE SATISFACTION OF THE BUILDING OFFICIAL.
- A DISABLED ACCESS PATH OF TRAVEL IS REQUIRED FROM DISABLED ACCESS PARKING TO THE LOWER LEVEL RESTROOMS AND BATHROOM OR PROVIDE EQUIVALENT FACILITATION.
- DISABLED ACCESS AT THE UPPER LEVEL IS NOT REQUIRED AS LONG AS THERE IS NO PUBLIC ACCESS.
- THE STRUCTURE SHALL BE "WET-FLOOD-PROOFED" TO THE SATISFACTION OF THE BUILDING OFFICIAL. THE "WET-FLOOD-PROOFING" MUST SUBSTANTIALLY CONFORM WITH THE GUIDELINES IDENTIFIED IN FEDERAL EMERGENCY MANAGEMENT AGENCY TECHNICAL BULLETINS ONE AND TWO.

### MISCELLANEOUS CONDITIONS

- BEFORE THE CITY ISSUES A BUILDING PERMIT, A COPY OF THE CONDITIONS OF APPROVAL MUST BE INCLUDED WITH THE NOTES ON THE BUILDING PLANS.
- ANY SUBSEQUENT REMODELING OF THE BUILDING MUST OBTAIN APPROVAL OF THE POLICE CHIEF OR DESIGNEE.

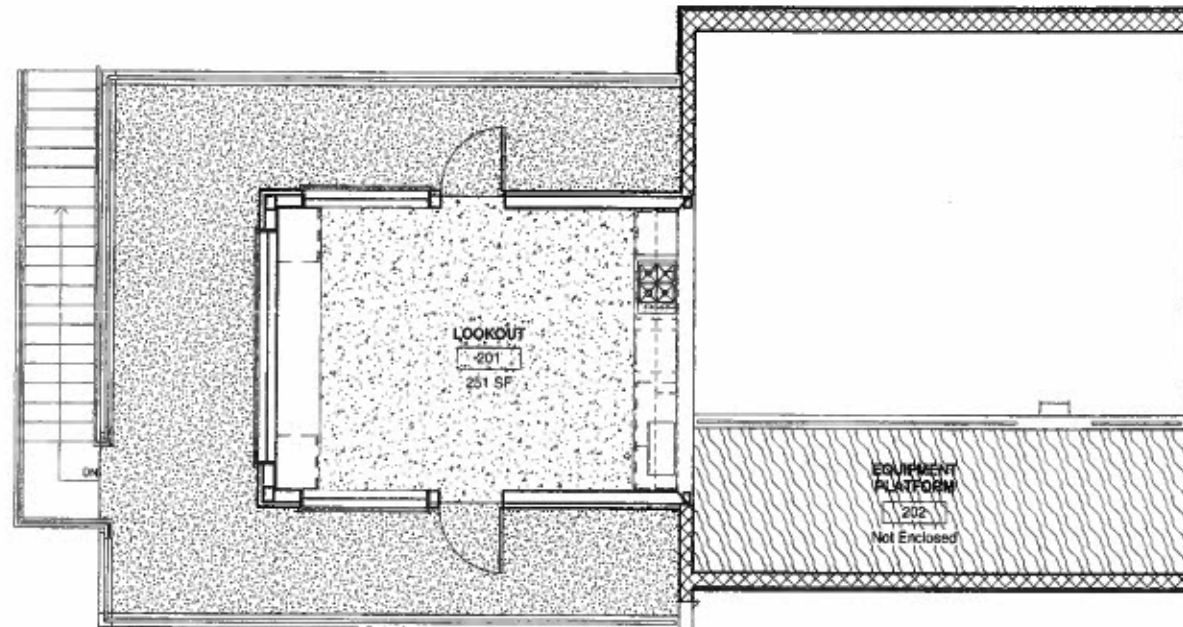
# SECURITY CAMERA

- THERE WILL BE A SECURITY CAMERA (INTERNET BASED/PAN/TILT/ZOOM) INSTALLED AT THE LIFE GUARD STATION IN ACCORDANCE WITH THE EL SEGUNDO POLICE DEPARTMENT INSTRUCTIONS WITHOUT LIMITATION VIEWING OF THE BATHROOM DOORS.
- SECURITY CAMERA SHALL ALSO INCLUDE VIEWING OF THE SHOWER/SINK AREA.
- SECURITY CAMERA LOCATION IS SHOWN ON SHEET A-1.1, A-2.2, A-3.1, A-5.2 AND ELECTRICAL DRAWINGS.



**1 GROUND FLOOR CODE PLAN**

A2 T-1.2 1/4" = 1'-0"



**2 SECOND FLOOR CODE PLAN**

A5 T-1.2 1/4" = 1'-0"

# PERMIT APPLICATION

SEPARATE PERMIT APPLICATION IS REQUIRED FOR THE FOLLOWING ITEMS:  
 A. ELECTRICAL, MECHANICAL AND PLUMBING  
 B. VAULT  
 C. RETAINING WALL AND BLOCK WALLS

# CODE ANALYSIS

CODE INTERPRETATION	BUSINESS GROUP B	354
OCCUPANCY	WN	T-601
CONSTRUCTION TYPE	M-2	T-533
ZONING DISTRICT	M-2	T-503
ALLOWABLE BUILDING HEIGHT	40'-0"	T-503
ALLOWABLE NUMBER OF STORES	2	T-503
FIRE SPRINKLER INCREASE	NA	504.2
FIRE SPRINKLER AREA INCREASE	NA	506.3
FIRE RESISTANCE RATING	0	T-601
PROTECTED EXTERIOR OPENINGS		T-704.5
MAX TRAVEL DISTANCE WITHIN A STORY	300'-0"	T-1016
COMMON PATH OF EGRESS TRAVEL	75'-0"	1014.3
ONE EGRESS FROM SPACE REQUIRED		
	GROUP B-49 OCCUPANTS	T-1015.1
	GROUP B-29 OCCUPANTS	T-1015.3
MINIMUM NUMBER OF EXITS		T-1019.2
ACCESSIBLE EGRESS		1007.1
ACCESSIBLE AREAS		11058.3.5

PROPOSED PROJECT		
BUILDING AREA	GROUND FLOOR	1,111 SF
	SECOND FLOOR	251 SF
	TOTAL FLOOR AREA	1,362 SF
	SECOND FLOOR DECK AREA	494 SF
	TOTAL BUILDING AREA	1,856 SF
BUILDING HEIGHT		25'-0"
NUMBER OF STORES		2
AUTOMATIC FIRE SPRINKLERS		NO
SITE LOCATION		LOCAL COASTAL ZONE
ENTITLEMENTS		CUP 10-02, VARIANCE 10-02, COP 10-01
WET FLOOD PROOFING CALC		
	104 - JUNIOR LIFE GUARD STORAGE	414 SF
	109 - UTILITY ROOM	59 SF
	TOTAL AREA	473 SF
	WEST WALL OPENING AREA	904 SQ. FT.
	101 - LIFE GUARD GARAGE	421 SF
	102 - BATHROOM	82 SF
	103 - STORAGE	59 SF
	TOTAL AREA	962 SF
	EAST WALL OPENING AREA	688 SQ. FT.

**JUL 21 2011**

# LEGEND

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RISIBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL, FURRING

**BID DOCUMENTS**

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS  
 CODE ANALYSIS**

**T-1.2**

08/20/2010

SHEET 2 OF 28

JOB NO. 1109531

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BEACH PARKING LOT

EXISTING A.C. PARKING LOT

PROPOSED 8' CHAIN LINK FENCE WITH PRIVACY SLATS PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 600-2 (TYP.)

PROPERTY LINE

JOIN EXISTING CHAIN-LINK FENCE

EXISTING CHAIN LINK FENCE (PROTECT IN PLACE)

PROPOSED 8' Ø PRECAST CONCRETE PUMP STATION WET WELL SEE SHEET C-5

PROPOSED MASONRY RETAINING WALL WITH 6' CHAIN LINK FENCE WITH PRIVACY SLATS. FOR DETAILS SEE STRUCTURAL DRAWINGS

LIFEGUARD STATION  
F.F. EL 1975

RESTROOMS

PROPOSED 6-INCH REINFORCED CONCRETE PAVEMENT, PROVIDE WEAKENED PLANE JOINTS AT 10-FOOT INTERVALS AND AS DIRECTED BY CITY INSPECTOR. INSTALL EXPANSION JOINT AT CONTACT POINT WITH ALL STRUCTURES

EXISTING CHAIN LINK FENCE TO BE REMOVED

LIMITS OF OVEREXCAVATION SEE NOTE

EXISTING ELEC CONDUIT (TO BE REMOVED)

WEAKENED PLANE JOINT (TYP) SEE (C-2)

PROPOSED SHOWER WALL

EXISTING CHAIN LINK FENCE TO BE REMOVED

EXISTING A.C. BEACH TRAIL

BEACH

CHEVRON

**EXCAVATION NOTES:**

1. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE. WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED, THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.
2. EXCAVATION UP TO FIVE FEET IN VERTICAL HEIGHT MAY BE REQUIRED FOR THE GRADING ACTIVITIES. THE EXCAVATIONS ARE EXPECTED TO PENETRATE ACTIVE DUNE AND SAND DEPOSITS, WHICH ARE SUITABLE FOR VERTICAL EXCAVATIONS UP TO FIVE FEET WHERE LOOSE SOILS OR CAVING SANDS ARE NOT PRESENT.
3. VERTICAL EXCAVATIONS GREATER THAN FIVE FEET SHALL REQUIRE SLOPING MEASURES IN ORDER TO PROVIDE A STABLE EXCAVATION. IT IS ANTICIPATED THAT SUFFICIENT SPACE IS AVAILABLE TO COMPLETE THE REQUIRED EARTHWORK FOR THIS PROJECT USING SLOPING MEASURES. IF NECESSARY, SHORING AND/OR ALTERNATIVE TEMPORARY EXCAVATION RECOMMENDATIONS WILL BE PROVIDED IN AN ADDENDUM.
4. WHERE SUFFICIENT SPACE IS AVAILABLE, TEMPORARY UNSURCHARGED EMBANKMENTS SHALL BE SLOPED BACK AT A UNIFORM 1:1 SLOPE GRADIENT OR FLATTER. A UNIFORM SLOPE DOES NOT HAVE A VERTICAL PORTION.
5. WHERE SLOPED EMBANKMENTS ARE UTILIZED, THE TOP OF THE SLOPE SHALL BE BARRICADED TO PREVENT VEHICLES AND STORAGE LOADS AT THE TOP OF THE SLOPE WITHIN A HORIZONTAL DISTANCE EQUAL TO THE HEIGHT OF THE SLOPE. IF THE TEMPORARY CONSTRUCTION EMBANKMENTS ARE TO BE MAINTAINED DURING THE RAINY SEASON, BERMS SHALL BE USED ALONG THE TOPS OF THE SLOPES WHERE NECESSARY TO PREVENT RUNOFF WATER FROM ENTERING THE EXCAVATION AND ERODING THE SLOPE FACES. GEORGE WEST, INC. PERSONNEL SHALL INSPECT THE SOILS EXPOSED IN THE CUT SLOPES DURING EXCAVATION SO THAT MODIFICATIONS OF THE SLOPES CAN BE MADE IF VARIATIONS IN THE SOIL CONDITIONS OCCUR. ALL EXCAVATIONS SHALL BE STABILIZED WITHIN 30 DAYS OF INITIAL EXCAVATION.

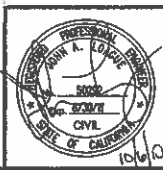
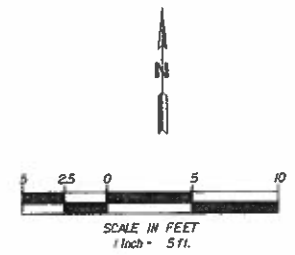
**CONSTRUCTION PHASING NOTES:**

CONTRACTOR SHALL CONSTRUCT NEW FENCING AND WALLS AS THE FIRST PHASE OF WORK. NO EXISTING CHEVRON FENCING MAY BE REMOVED OR ANY SITE WORK STARTED UNTIL THE NEW FENCE IS IN PLACE. CONTRACTOR SHALL COORDINATE NEW FENCE AND WALL INSTALLATION WITH CHEVRON.

GRADING QUANTITIES	
DESCRIPTION	VOLUME (yd <sup>3</sup> )
TOTAL CUT	52.7
TOTAL FILL	20.3
TOTAL GRADING WORK	32.4
OVEREXCAVATION AND ENGINEERED FILL	77.4 cy
TOTAL EXPORT (NO COMPACTION)	806.4 cy

JUL 21 2011

BID DOCUMENTS



THE ENCLOSED SPECIFICATIONS, SHALL BE OBSERVED AND ADHERED TO BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE SUPERVISION AND CONTROL OF THE CITY ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY ENGINEER AND THE PUBLIC WORKS DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY ENGINEER AND THE PUBLIC WORKS DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY ENGINEER AND THE PUBLIC WORKS DEPARTMENT.

**AKM** AKM CONSULTING ENGINEERS  
553 WALD IRVINE, CA, 92618  
(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**LIFEGUARD STATION**  
**GRADING PLAN**

DATE: 10/10/10  
DRAWN BY: J.L.  
CHECKED BY: J.L.

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_  
CITY ENGINEER P.E.

**C-1**  
10/06/2010  
SHEET 4 OF 58  
JOB NO. 1109531

BEACH PARKING LOT

EXISTING A.C. PARKING LOT

PROPOSED 6-INCH REINFORCED CONCRETE PAVEMENT, PROVIDE WEAKENED PLANE JOINTS AT 10-FOOT INTERVALS AND AS DIRECTED BY CITY INSPECTOR. INSTALL EXPANSION JOINT AT CONTACT POINT WITH ALL STRUCTURES

EXISTING CHAIN LINK FENCE TO BE REMOVED

PROPOSED 8' CHAIN LINK FENCE WITH PRIVACY SLATS PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 600-2 (TYP)

PROPERTY LINE

JOIN EXISTING CHAIN-LINK-FENCE

EXISTING CHAIN LINK FENCE (PROTECT IN PLACE)

PROPOSED 8' 0" PRECAST CONCRETE PUMP STATION WET WELL SEE SHEET C-5

EXISTING CHAIN LINK FENCE TO BE REMOVED

BEACH

EXISTING A.C. BEACH TRAIL

RESTROOMS

LIFEGUARD STATION F.F. EL. 1975

PROPOSED 6' x 10' PRECAST CONCRETE PUMP STATION VALVE VAULT. SEE SHEET C-5

FUTURE PUMP STATION CONTROL PANEL

PROPOSED 8' CHAIN LINK FENCE PER STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 600-2 (TYP)

PROPOSED 2" BACKFLOW PREVENTER SEE SHEET C-3

PROPOSED 2" WATER METER SEE SHEET C-3

PROPOSED MASONRY RETAINING WALL WITH 6' CHAIN LINK FENCE WITH PRIVACY SLATS. FOR DETAILS SEE STRUCTURAL DWGS AND STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION 600-2

CHEVRON

**EXCAVATION NOTES:**

1. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE. WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED, THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.
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GRADING QUANTITIES	
DESCRIPTION	VOLUME (yd <sup>3</sup> )
TOTAL CUT	527
TOTAL FILL	203
TOTAL GRADING WORK	324
OVEREXCAVATION AND ENGINEERED FILL	774 cy
TOTAL EXPORT (NO COMPACTION)	806.4 cy

**CONSTRUCTION PHASING NOTES:**

CONTRACTOR SHALL CONSTRUCT NEW FENCING, AND WALLS AS THE FIRST PHASE OF WORK. NO EXISTING CHEVRON FENCING MAY BE REMOVED OR ANY SITE WORK STARTED UNTIL THE NEW FENCE IS IN PLACE. CONTRACTOR SHALL COORDINATE NEW FENCE AND WALL INSTALLATION WITH CHEVRON.

JUL 21 2011



105 VISTA DEL MAR #2  
30148-1



THE ENCLINED DRAWINGS, SPECIFICATIONS, DEEDS, RECORDS AND AMENDMENTS REPRESENTED HEREBY ARE AND SHALL REMAIN THE PROPERTY OF AKM CONSULTING ENGINEERS AND NO PART THEREOF SHALL BE COPIED, REPRODUCED OR OTHERWISE TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF AKM CONSULTING ENGINEERS. THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE THE ENTIRE CONTRACT FOR THE PROJECT. NO CONTRACTOR SHALL BE BOUND BY ANY OTHER DOCUMENTS OR SPECIFICATIONS UNLESS THEY ARE SPECIFICALLY REFERENCED IN THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

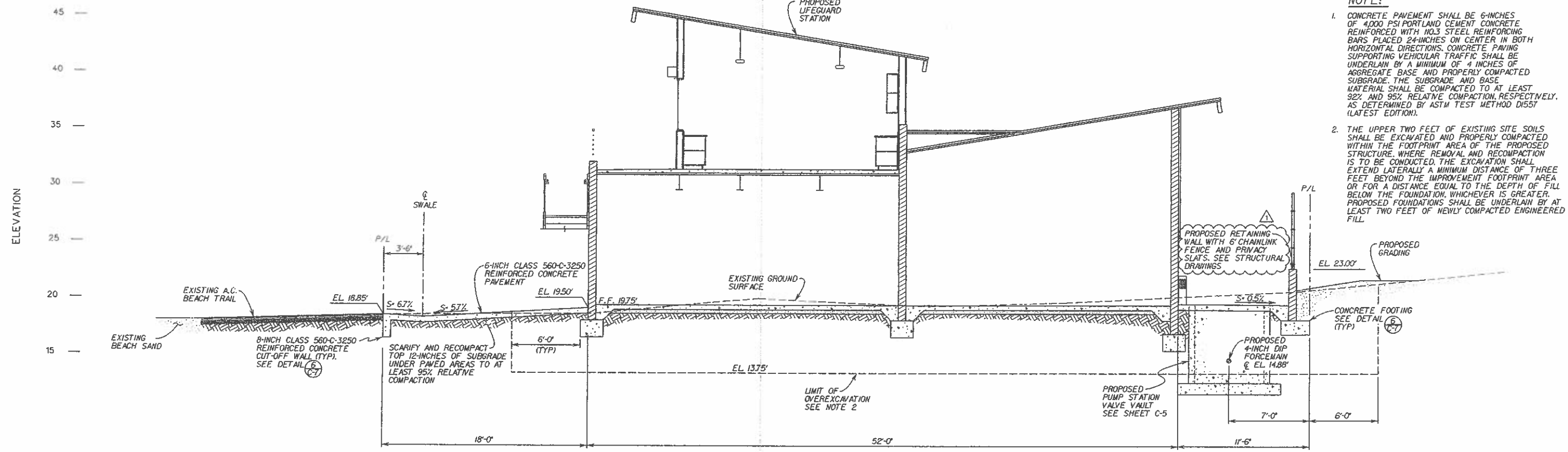
**AKM** AKM CONSULTING ENGINEERS  
553 WALD IRVINE, CA. 92618  
(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.
2	02-06-2011	J.L.

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
GRADING PLAN

**C-1**  
10092/2010  
SHEET 4 OF 68  
JOB NO. 1109531

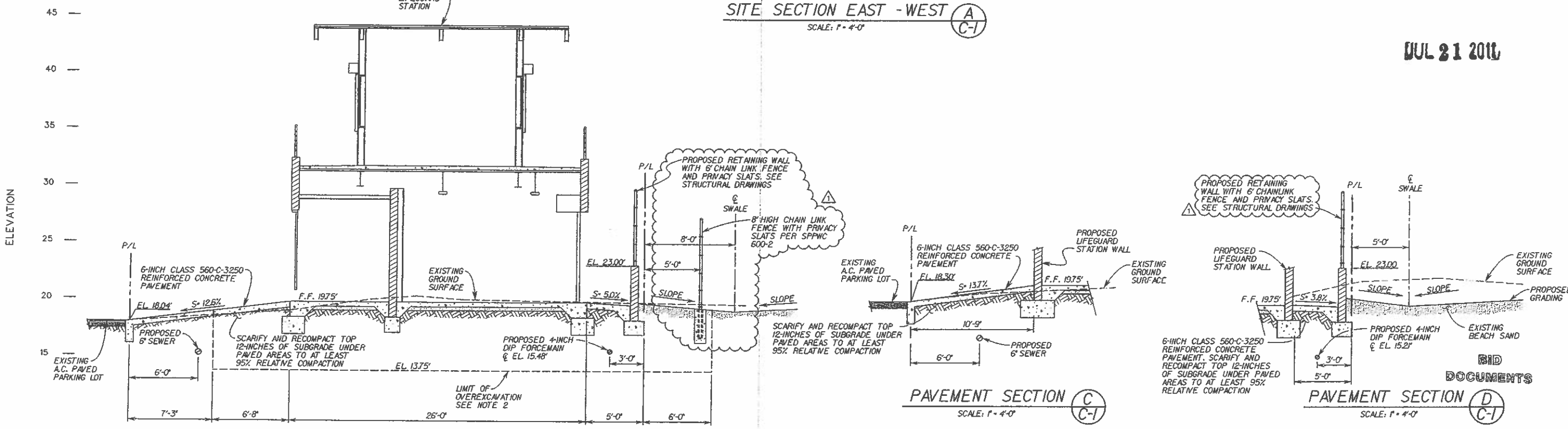
APPROVED DATE \_\_\_\_\_  
CITY ENGINEER R.E.



- NOTE:**
1. CONCRETE PAVEMENT SHALL BE 6-INCHES OF 4000 PSI PORTLAND CEMENT CONCRETE REINFORCED WITH #0.3 STEEL REINFORCING BARS PLACED 24-INCHES ON CENTER IN BOTH HORIZONTAL DIRECTIONS. CONCRETE PAVING SUPPORTING VEHICULAR TRAFFIC SHALL BE UNDERLAIN BY A MINIMUM OF 4 INCHES OF AGGREGATE BASE AND PROPERLY COMPACTED SUBGRADE. THE SUBGRADE AND BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 92% AND 95% RELATIVE COMPACTION, RESPECTIVELY, AS DETERMINED BY ASTM TEST METHOD D1557 (LATEST EDITION).
  2. THE UPPER TWO FEET OF EXISTING SITE SOILS SHALL BE EXCAVATED AND PROPERLY COMPACTED WITHIN THE FOOTPRINT AREA OF THE PROPOSED STRUCTURE, WHERE REMOVAL AND RECOMPACTION IS TO BE CONDUCTED. THE EXCAVATION SHALL EXTEND LATERALLY A MINIMUM DISTANCE OF THREE FEET BEYOND THE IMPROVEMENT FOOTPRINT AREA OR FOR A DISTANCE EQUAL TO THE DEPTH OF FILL BELOW THE FOUNDATION, WHICHEVER IS GREATER. PROPOSED FOUNDATIONS SHALL BE UNDERLAIN BY AT LEAST TWO FEET OF NEWLY COMPACTED ENGINEERED FILL.

**SITE SECTION EAST - WEST (A-C-1)**  
SCALE: 1" = 4'-0"

**JUL 21 2010**



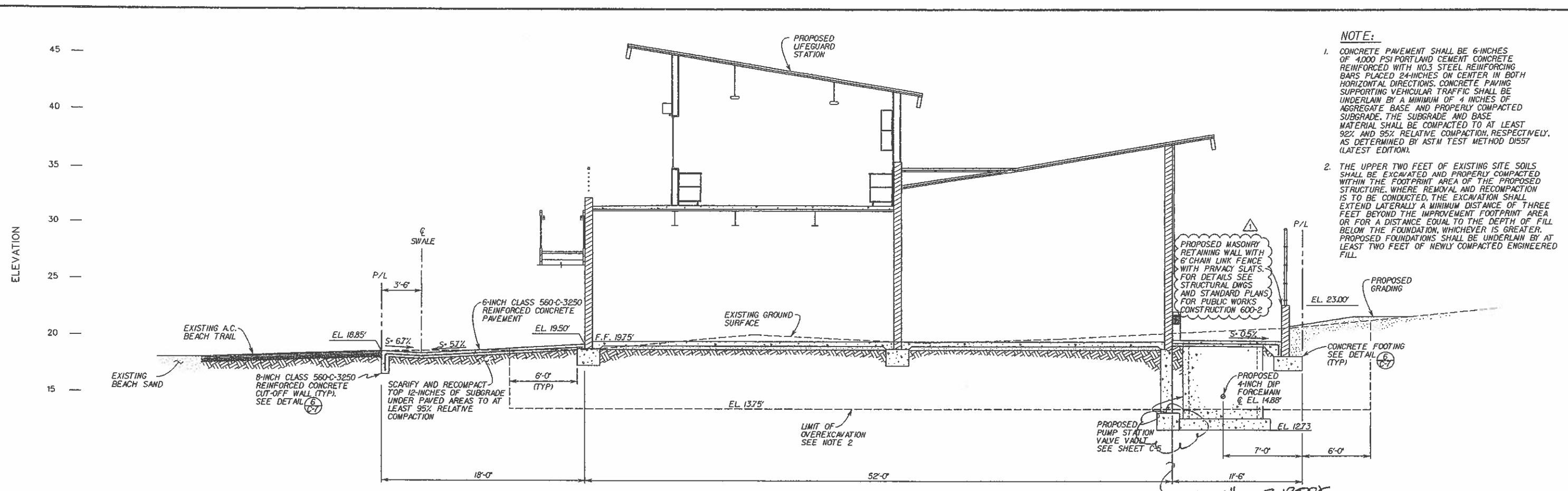
**SITE SECTION NORTH - SOUTH (B-C-1)**  
SCALE: 1" = 4'-0"

**PAVEMENT SECTION (C-C-1)**  
SCALE: 1" = 4'-0"

**PAVEMENT SECTION (D-C-1)**  
SCALE: 1" = 4'-0"

**BID DOCUMENTS**

	<p>THE ENCLERED DRAWING, SPECIFICATIONS, NOTES, RECORDS AND AMENDMENTS REPRESENT THE PROJECT AS SHOWN AND NO PART THEREOF SHALL BE COPIED, REPRODUCED OR OTHERWISE TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF AKM CONSULTING ENGINEERS. ANY SUCH VIOLATION SHALL BE CONSIDERED A VIOLATION OF THE PROFESSIONAL ENGINEERING ACT AND THE PENALTIES THEREOF SHALL BE ENFORCED BY THE BOARD OF PROFESSIONAL ENGINEERS OF THE STATE OF CALIFORNIA.</p>	<p><b>AKM</b> AKM CONSULTING ENGINEERS 553 WALD IRVINE, CA 92618 (949) 753-7333</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>10-06-2010</td> <td>J.L.</td> </tr> </table>			NO.	DATE	BY	1	10-06-2010	J.L.	<p>CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION</p>		<p><b>C-2</b> 10/08/2010 SHEET 5 OF 68 JOB NO. 1109531</p>
			NO.	DATE	BY									
1	10-06-2010	J.L.												
<p>APPROVED _____ DATE _____ CITY ENGINEER P.E.</p>			<p>LIFEGUARD STATION SITE SECTIONS</p>											

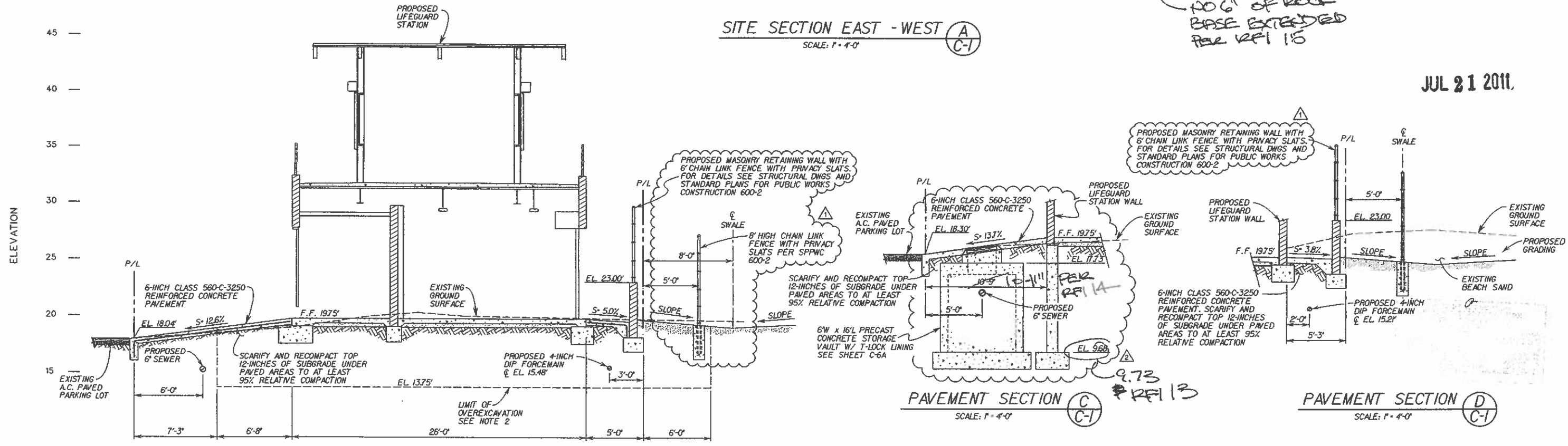


- NOTE:**
- CONCRETE PAVEMENT SHALL BE 6-INCHES OF 4000 PSI PORTLAND CEMENT CONCRETE REINFORCED WITH NO.3 STEEL REINFORCING BARS PLACED 24-INCHES ON CENTER IN BOTH HORIZONTAL DIRECTIONS. CONCRETE PAVING SUPPORTING VEHICULAR TRAFFIC SHALL BE UNDERLAIN BY A MINIMUM OF 4 INCHES OF AGGREGATE BASE AND PROPERLY COMPACTED SUBGRADE. THE SUBGRADE AND BASE MATERIAL SHALL BE COMPACTED TO AT LEAST 92% AND 95% RELATIVE COMPACTION, RESPECTIVELY, AS DETERMINED BY ASTM TEST METHOD D1557 (LATEST EDITION).
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**SITE SECTION EAST - WEST (A)**  
SCALE: 1" = 4'-0"

NO 6" OF ROCK BASE EXTENDED PER REF 15

JUL 21 2011



**SITE SECTION NORTH - SOUTH (B)**  
SCALE: 1" = 4'-0"

**PAVEMENT SECTION (C)**  
SCALE: 1" = 4'-0"

**PAVEMENT SECTION (D)**  
SCALE: 1" = 4'-0"



THE ENGINEER OR ARCHITECT, BY SIGNING THESE PLANS, CERTIFIES THAT HE OR SHE IS A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT IN THE STATE OF CALIFORNIA AND THAT HE OR SHE HAS PREPARED THESE PLANS OR SUPERVISED THEIR PREPARATION AND THAT HE OR SHE IS A MEMBER OF THE CALIFORNIA PROFESSIONAL ENGINEERS' BOARD OR ARCHITECTS' BOARD.

**AKM** AKM CONSULTING ENGINEERS  
533 WALD IRVINE, CA. 92618  
(949) 753-7333

REVISIONS		
NO.	DATE	BY
1	10-06-2010	J.L.
2	02-08-2011	J.L.

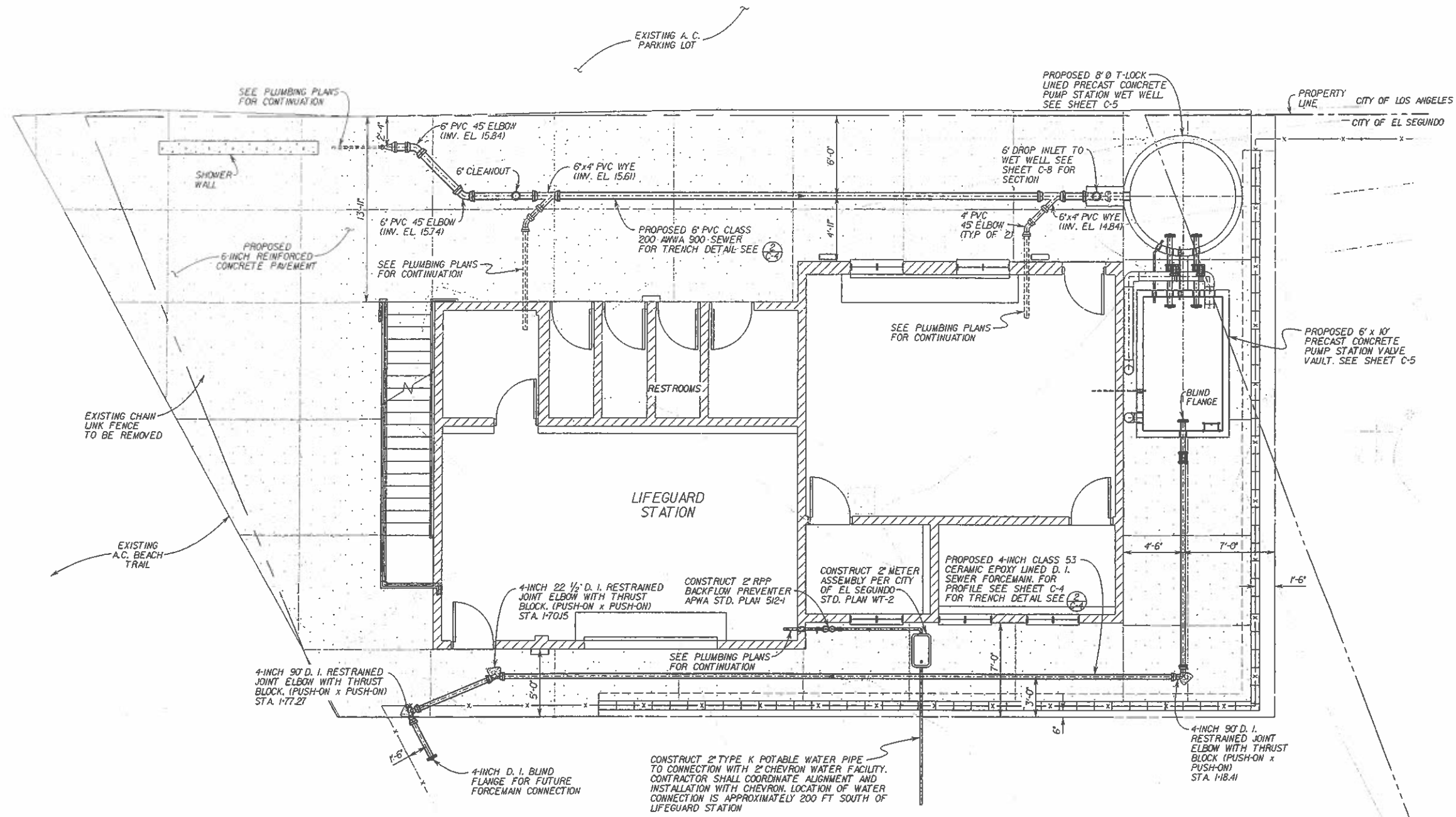
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
SITE SECTIONS

DATE 10/06/2010  
DATE 02/08/2011

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CITY ENGINEER R.E.

**C-2**  
10/06/2010  
SHEET 5 OF 68  
JOB NO. 1109531

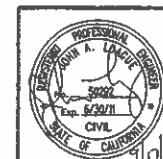
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JUL 21 2011

**SITE AND PIPING PLAN**  
SCALE: 1" = 4'-0"

BID DOCUMENTS



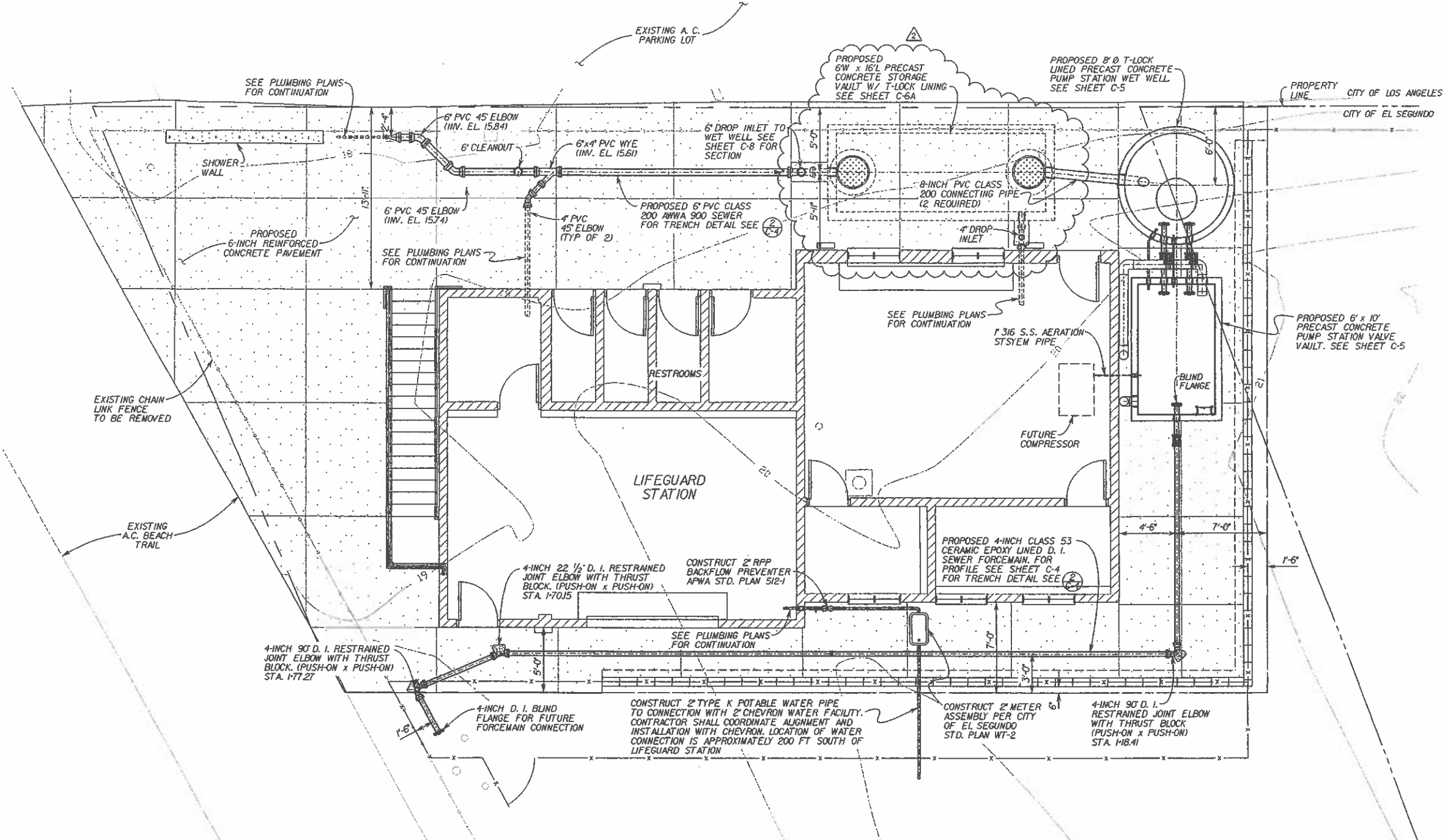
AKM CONSULTING ENGINEERS  
553 WALD AVENUE, CA. 92618  
(949) 753-7333

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
**SEWER AND FORCEMAIN PLAN**

**C-3**  
MADDYYYY  
SHEET X OF X  
JOB NO. 0000000

PM DATE \_\_\_\_\_ APPROVED DATE \_\_\_\_\_  
DRAWN DATE \_\_\_\_\_  
CHECK DATE \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_



JUL 21 2011.

**SITE AND PIPING PLAN**  
SCALE: 1" = 4'-0"



THE INCLUDED DRAWINGS, SPECIFICATIONS, MEASUREMENTS, AND APPROPRIATE REPRESENTED THEREBY ARE AND SHALL REMAIN THE PROPERTY OF AKM CONSULTING ENGINEERS AND NO PART THEREOF SHALL BE COPIED, REPRODUCED, OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF AKM CONSULTING ENGINEERS. THESE DRAWINGS OR SPECIFICATIONS SHALL CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES AND NO OTHER AGREEMENTS OR UNDERSTANDINGS SHALL BE CONSIDERED A PART OF THESE DOCUMENTS FOR ANY PURPOSES.

**AKM** AKM CONSULTING ENGINEERS  
555 WALD  
IRVINE, CA. 92618  
(949) 753-7333

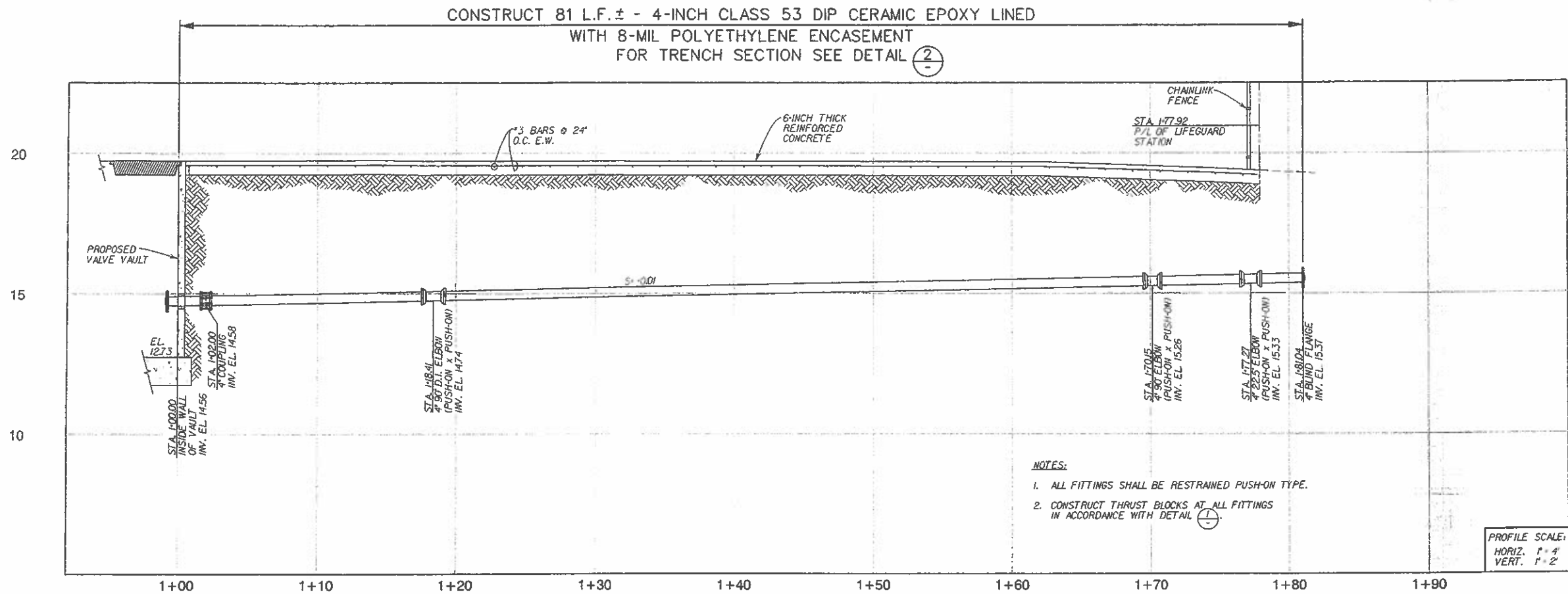
REVISIONS		
NO.	DATE	BY
2	02-08-2011	J.L.

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
**SEWER AND FORCEMAIN PLAN**

DATE 10/10  
DATE 10/10  
DATE 10/10

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_  
CITY ENGINEER R.E.

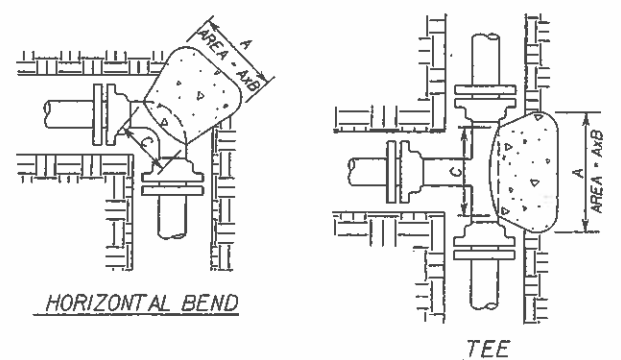
**C-3**  
10062010  
SHEET X OF 68  
JOB NO. 1109531



- NOTES:**
1. ALL FITTINGS SHALL BE RESTRAINED PUSH-ON TYPE.
  2. CONSTRUCT THRUST BLOCKS AT ALL FITTINGS IN ACCORDANCE WITH DETAIL (1)

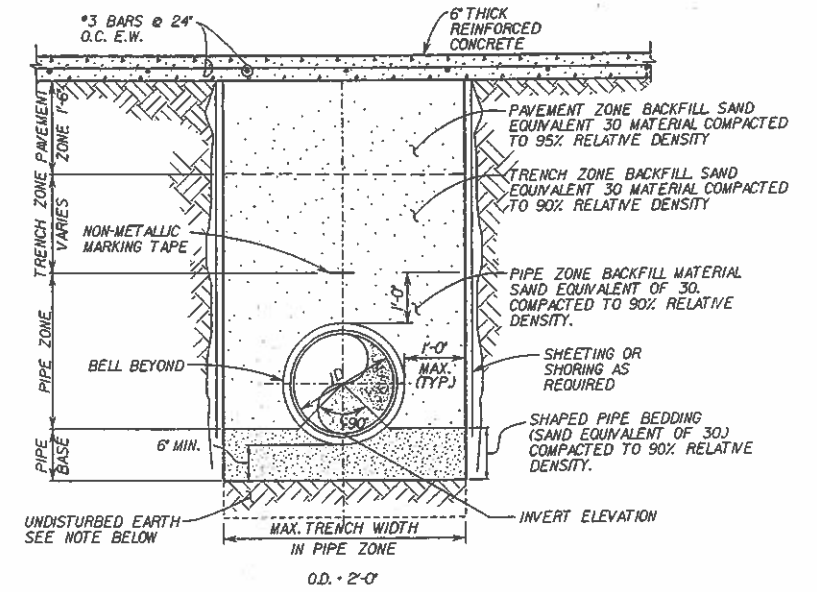
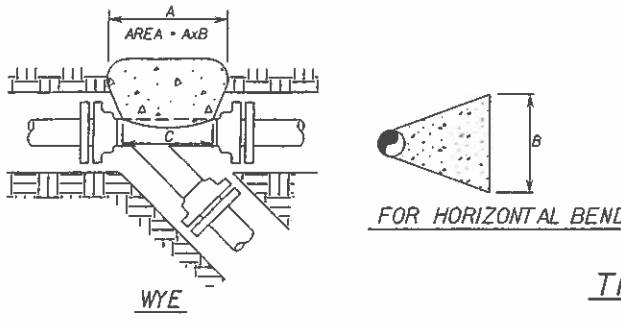
**4-INCH D.I. FORCEMAIN PROFILE**  
SEE SHEET C-3 FOR PLAN

JUL 21 2011



NOMINAL PIPE SIZE (INCHES)	TEST PRESSURE (PSI)	HORIZONTAL BENDS													
		DEAD ENDS AND TEES			BENDS LESS THAN OR EQUAL TO ANGLE									ALL BENDS	
		A	B	C	11-1/4°			22-1/2°			45°			90°	
4"	200	1'-8"	1'-0"	4"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	1'-0"	8"		
6"	200	2'-6"	1'-6"	6"	1'-0"	1'-0"	2'-0"	1'-0"	3'-0"	1'-0"	3'-6"	1'-6"	8"		
8"	200	4'-6"	1'-6"	8"	1'-0"	1'-0"	3'-0"	1'-0"	3'-6"	1'-6"	5'-0"	2'-0"	10"		
10"	200	5'-6"	2'-0"	10"	2'-0"	1'-0"	3'-0"	1'-6"	4'-0"	2'-0"	6'-0"	2'-6"	1'-0"		
12"	200	7'-6"	2'-0"	1'-0"	2'-0"	1'-6"	3'-0"	2'-0"	4'-6"	2'-6"	7'-0"	3'-0"	1'-0"		
16"	200	9'-0"	3'-0"	1'-4"	2'-4"	2'-0"	4'-6"	2'-0"	6'-0"	3'-6"	9'-0"	4'-6"	1'-4"		

- NOTES:**
1. THRUST BLOCK SIZES ARE BASED ON A BEARING CAPACITY OF 1500 P.S.F. WITH A MINIMUM SOIL COVER OF 3'-0". IF SOIL COVER IS LESS THAN 3'-0", MULTIPLY BEARING AREA BY FACTOR OF 1.5 FOR SOIL COVER OF 2'-0" TO 3'-0", OR 3.0 FOR SOIL COVER OF 1'-0" TO 2'-0".
  2. DIMENSIONS SHOWN REFER TO THRUST BLOCK TYPES SHOWN IN DETAIL AND ARE MINIMUM VALUES ONLY.
  3. CONCRETE MIX SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR 3000 PSI. STRENGTH AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C39.
  4. ALL THRUST BLOCKS SHALL BE POURED SOLIDLY AGAINST FIRM, UNDISTURBED SOIL. THRUST BLOCKS PLACED IN AREAS OF DISTURBED SOIL SHALL BE FORMED.
  5. IF SOILS HAVE BEEN PREVIOUSLY EXCAVATED AND BACKFILLED, CONTRACTOR SHALL NOTIFY RESIDENT ENGINEER WHO MAY DIRECT TO INCREASE THE DIMENSIONS SHOWN BY A FACTOR OF 1.5.
  6. CONCRETE POURED AGAINST PIPE FITTINGS SHALL NOT EXTEND BEYOND THE FITTING JOINTS WITHOUT THE APPROVAL OF THE RESIDENT ENGINEER.



**NOTE:**  
IF UNSTABLE SOIL IS ENCOUNTERED, CONTRACTOR SHALL BRING THE ISSUE TO THE CITY'S ATTENTION BEFORE PROCEEDING FURTHER.

**BID DOCUMENTS**

**CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION**

**LIFEGUARD STATION  
4-INCH FORCEMAIN PROFILE,  
THRUST BLOCK, AND TRENCH DETAILS**

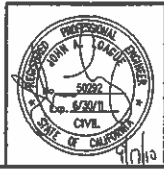
PH. DATE \_\_\_\_\_ APPROVED DATE \_\_\_\_\_  
DRAWN DATE \_\_\_\_\_ CHECK DATE \_\_\_\_\_  
CITY ENGINEER P.E.

**C-4**  
MDDDDYYY  
SHEET    OF     
JOB NO. 0000000

**AKM CONSULTING ENGINEERS**  
553 WALD  
RYNE, CA. 92618  
(747) 753-7333

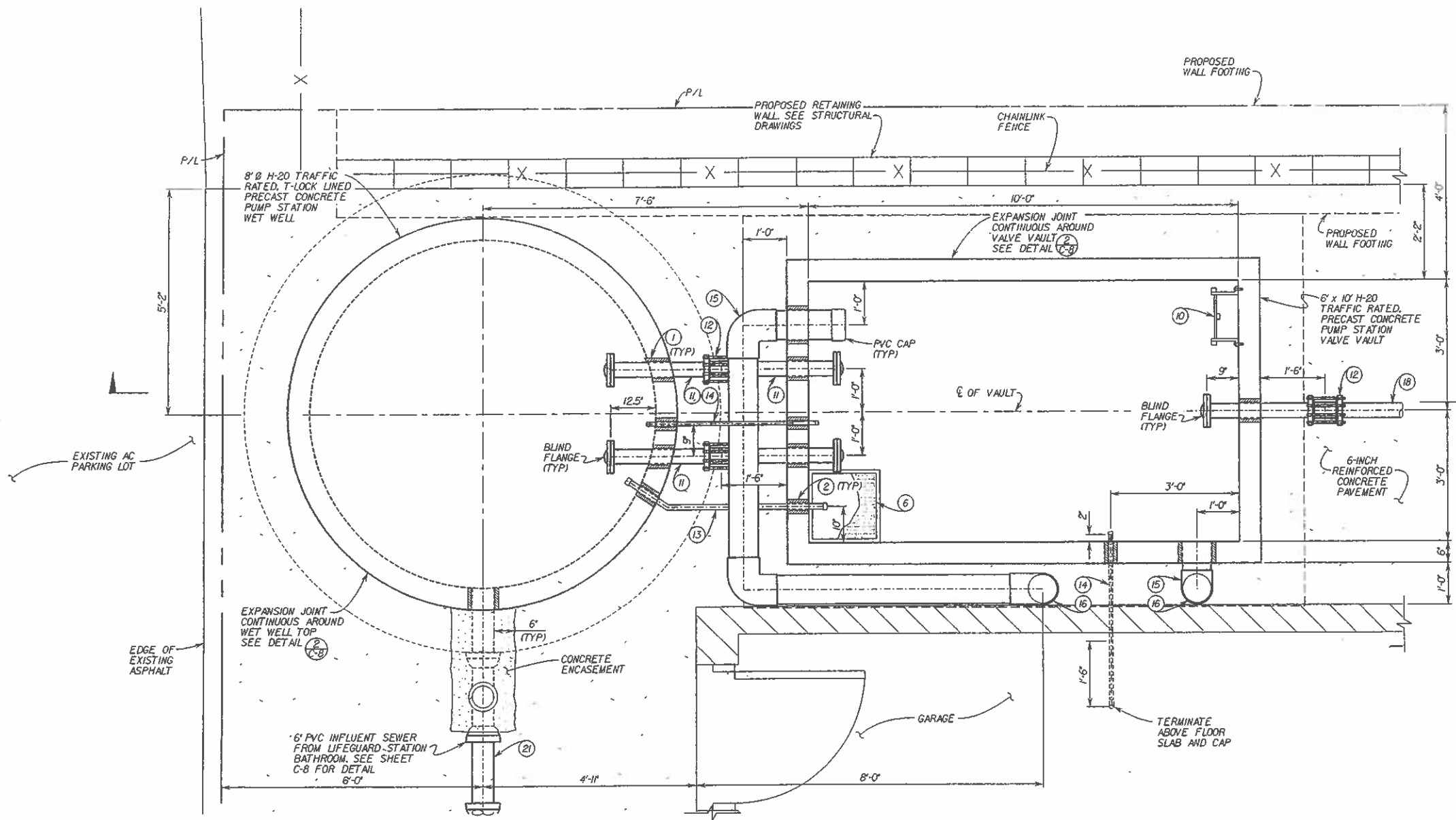
**REVISIONS**

NO.	DATE	BY





ITEM	DESCRIPTION	SIZE	QTY
1	WET WELL PENETRATION PER DETAIL 2 ON SHEET C-7	AS REQ'D	-
2	VALVE VAULT PENETRATION PER DETAIL 1 ON SHEET C-7	AS REQ'D	-
3	WET WELL BASE JOINT PER DETAIL 5 ON SHEET C-7	-	AS REQ'D
4	WET WELL JOINT PER DETAIL 3 ON SHEET C-7	-	AS REQ'D
5	VALVE VAULT JOINT PER DETAIL 4 ON SHEET C-7	-	AS REQ'D
6	PRECAST CONCRETE SUMP WITH IRON GRATE	15' x 15'	1
7	CRUSHED ROCK	3/4"	AS REQ'D
8	ALUMINUM TWO DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH FALL PROTECTION GRATING PER DETAIL 10:1 SHEET C-8	6' x 4'	1
9	ALUMINUM FOUR DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH REMOVABLE BEAMS AND SAFETY GRATES. SEE DETAIL 4 ON SHEET C-9	10' x 6'	1
10	316 STAINLESS STEEL LADDER WITH SAFETY POST PER DETAIL 3 ON SHEET C-9	AS REQ'D	1
11	STD. WT. 316 STAINLESS STEEL PIPE	4"	AS REQ'D
12	SLEEVE TYPE COUPLING, 316 STAINLESS STEEL DRESSER STYLE 38 WITH HARNESS RESTRAINT PER DETAIL 1 ON SHEET C-9	4"	3
13	SCH 80 PVC PIPE AND FITTINGS, SUMP PUMP DISCHARGE	1/2"	AS REQ'D
14	AERATION PIPING AND FITTINGS, 316 STAINLESS STEEL 3000PSI	1"	AS REQ'D
15	AIR DUCT, SCH 40 PVC PIPE AND FITTINGS	8"	-
16	AIR VENT TERMINAL PER DETAILS 2 ON SHEET C-9	8"	2
17	SLEEVE TYPE COUPLING	8"	2
18	FLANGED DUCTILE IRON PIPE CLASS 53 ANSI/AWWA C151/A215, CERAMIC EPOXY LINED (PROTECTO 40 LINING, 40 MILS)	4"	AS REQ'D
19	316 S.S. STEPS CAST INTO WET WELL WITH 304 S.S. SAFETY POST (BILCO LU-3 OR EQUAL)	-	AS REQ'D
20	HIGH LEVEL FLOAT SWITCH PER DETAIL 3 ON SHEET C-8	-	1
21	PVC CLASS 200 AWWA C900 PIPE	6"	AS REQ'D



FOR FORCEMAIN CONTINUATION SEE C-3

- NOTES:
1. PRECAST CONCRETE WET WELL AND VALVE VAULT SHALL BE DESIGNED TO RESIST FLOATATION. ASSUME GROUNDWATER LEVEL TO SURFACE.
  2. THE EXTERIOR OF THE WETWELL AND VALVE VAULT SHALL BE COATED WITH 16 MILS OF COAL TAR EPOXY. ALL JOINTS SHALL BE WRAPPED WITH POLYETHYLENE TAPE.
  3. ALL DUCTILE IRON PIPE SHALL BE CLASS 53 WITH CERAMIC EPOXY LINING. (GROOVED DUCTILE IRON PIPE SHALL BE CLASS 54).

JUL 21 2011

PUMP STATION WET WELL AND VALVE VAULT PIPING PLAN  
SCALE: 3/4" = 1'-0"

BID DOCUMENTS



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NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
LIFEGUARD STATION  
PUMP STATION WET WELL  
AND VALVE VAULT PLAN

C-5  
MWD00000  
SHEET X OF X  
JOB NO. 0000000

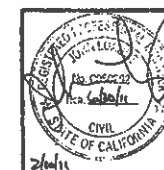
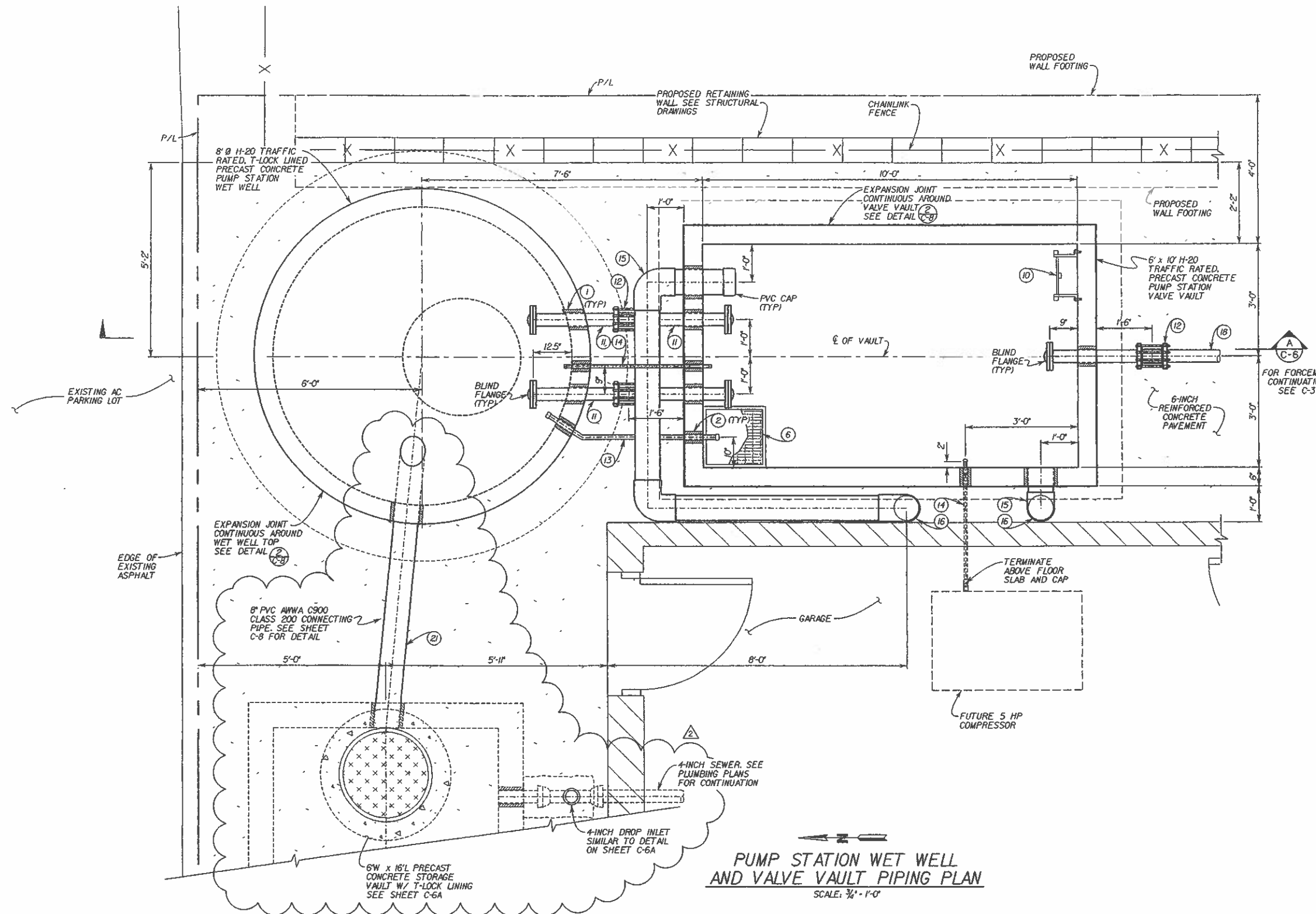
PM DRAWN DATE CHECK DATE APPROVED DATE CITY ENGINEER R.E.

LIST OF MATERIALS			
ITEM	DESCRIPTION	SIZE	QTY
1	WET WELL PENETRATION PER DETAIL 2 ON SHEET C-7	AS REQ'D	-
2	VALVE VAULT PENETRATION PER DETAIL 1 ON SHEET C-7	AS REQ'D	-
3	WET WELL BASE JOINT PER DETAIL 5 ON SHEET C-7	-	AS REQ'D
4	WET WELL JOINT PER DETAIL 3 ON SHEET C-7	-	AS REQ'D
5	VALVE VAULT JOINT PER DETAIL 4 ON SHEET C-7	-	AS REQ'D
6	PRECAST CONCRETE SUMP WITH IRON GRATE	15' x 15'	1
7	CRUSHED ROCK	3/4"	AS REQ'D
8	ALUMINUM TWO DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH FALL PROTECTION GRATING PER DETAIL 1 ON SHEET C-9	6' x 4'	1
9	ALUMINUM FOUR DOOR, SPRING ASSISTED ACCESS HATCH RATED FOR H-20 LOADING WITH REMOVABLE BEAMS AND SAFETY GRATES. SEE DETAIL 4 ON SHEET C-9	10' x 6'	1
10	3/8 STAINLESS STEEL LADDER WITH SAFETY POST PER DETAIL 3 ON SHEET C-9	AS REQ'D	1
11	STD. WT. 3/8 STAINLESS STEEL PIPE	4"	AS REQ'D
12	SLEEVE TYPE COUPLING, 3/8 STAINLESS STEEL, DRESSER STYLE 38 WITH HARNESS RESTRAINT PER DETAIL 1 ON SHEET C-9	4"	3
13	SCH 80 PVC PIPE AND FITTINGS, SUMP PUMP DISCHARGE	1/2"	AS REQ'D
14	AERATION PIPING AND FITTINGS, 3/8 STAINLESS STEEL 3000PSI	1"	AS REQ'D
15	AIR DUCT, SCH 40 PVC PIPE AND FITTINGS	8"	-
16	AIR VENT TERMINAL PER DETAILS 2 ON SHEET C-9	8"	2
17	SLEEVE TYPE COUPLING	8"	2
18	FLANGED DUCTILE IRON PIPE CLASS 53 ANSI/AWWA C151/AB15, CERAMIC EPOXY LINED (PROTECTO 400 LINING, 40 MILS)	4"	AS REQ'D
19	3/8 S.S. STEPS CAST INTO WET WELL WITH 304 S.S. SAFETY POST (BILCO LU-3 OR EQUAL)	-	AS REQ'D
20	HIGH LEVEL FLOAT SWITCH PER DETAIL 3 ON SHEET C-8	-	1
21	PVC CLASS 200 AWWA C900 PIPE	8"	AS REQ'D

- NOTES:
1. PRECAST CONCRETE WET WELL, VALVE VAULT AND STORAGE TANK SHALL BE DESIGNED TO RESIST FLOATATION. ASSUME GROUNDWATER LEVEL TO SURFACE.
  2. THE EXTERIOR OF THE WET WELL, VALVE VAULT AND STORAGE TANK SHALL BE COATED WITH 16 MILS OF COAL TAR EPOXY. ALL JOINTS SHALL BE WRAPPED WITH POLYETHYLENE TAPE.
  3. ALL DUCTILE IRON PIPE SHALL BE CLASS 53 WITH CERAMIC EPOXY LINING. GROOVED DUCTILE IRON PIPE SHALL BE CLASS 541.

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PUMP STATION WET WELL AND VALVE VAULT PIPING PLAN  
SCALE: 3/4" = 1'-0"



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1	02-08-2011	J.L.

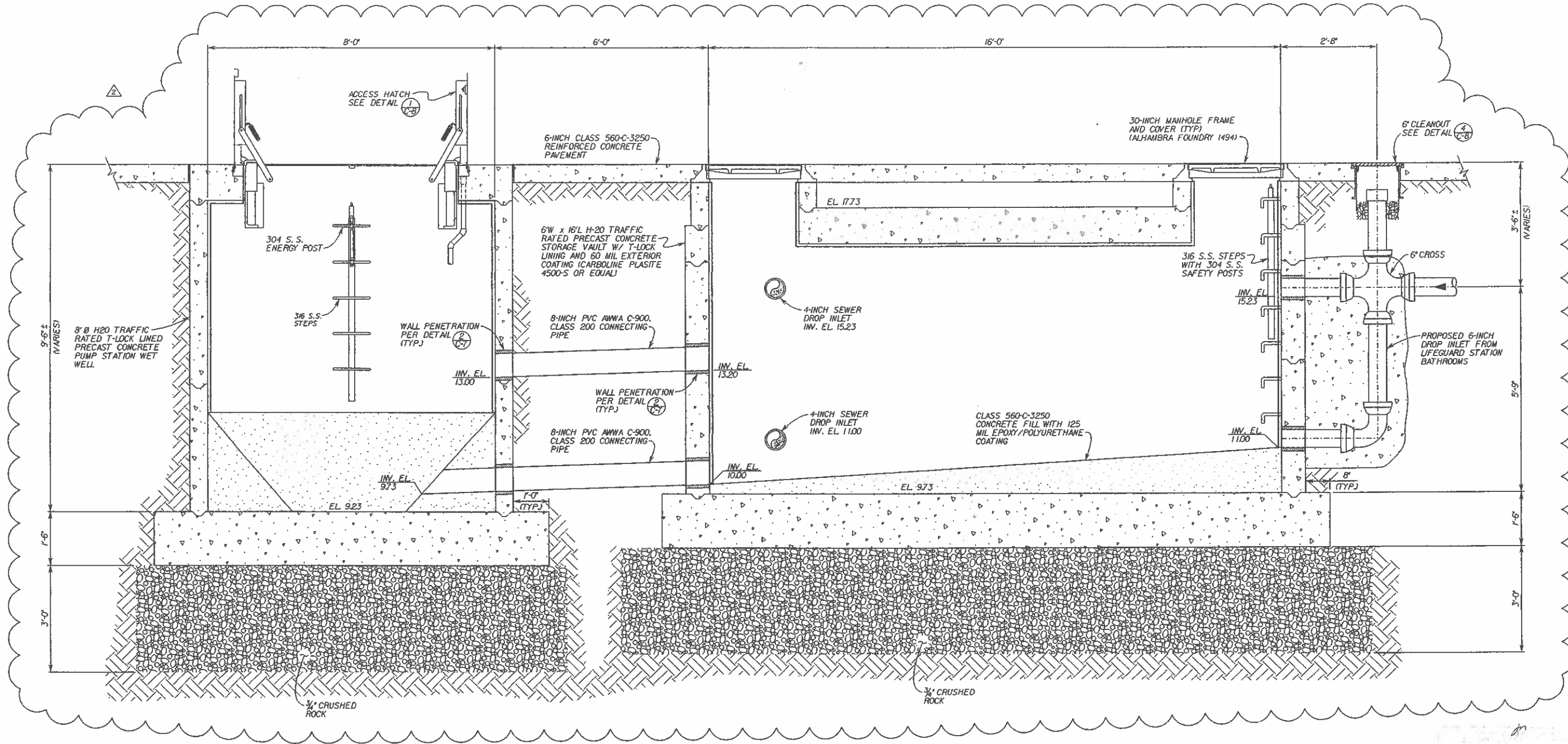
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
LIFEGUARD STATION  
PUMP STATION WET WELL  
AND VALVE VAULT PLAN

**C-5**  
10/06/2010  
SHEET X OF 88  
JOB NO. 1109531

DATE 10/10  
DATE 10/10  
DATE 10/10  
APPROVED DATE  
GTY ENGINEER R.E.



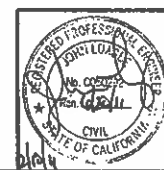




**SEWER DROP PIPE INTO PROPOSED STORAGE VAULT**  
SCALE: 1/2" = 1'-0"

JUL 21 2011

7/20/2011 REVISED: 01/20/2011: Lifeguard Station, Station 1082, 1082, C.A., 1082, 1082



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CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**LIFEGUARD STATION**  
SEWER DROP PIPE INTO  
PROPOSED STORAGE VAULT

PM: J.L. DATE 08/10/10  
DRAWN: J.L. DATE 08/10/10  
CHECK: J.L. DATE 08/10/10

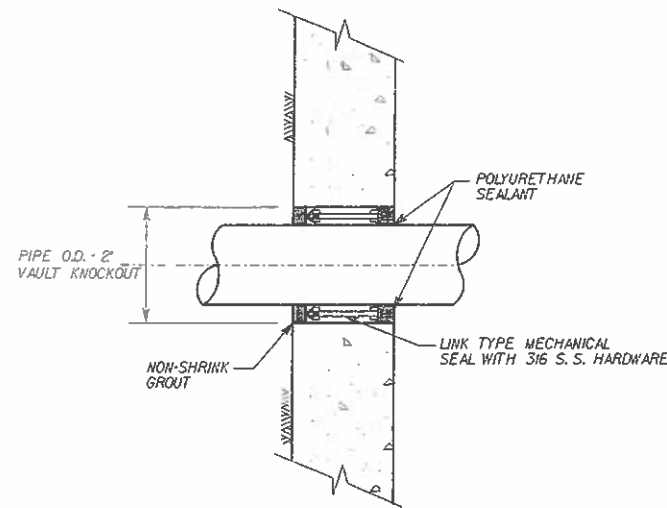
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

**C-6A**

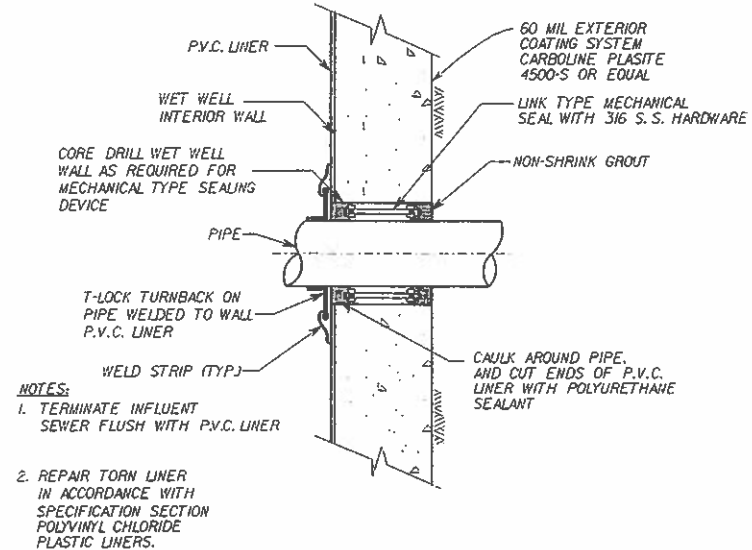
1006/2010

SHEET   X   OF   88  

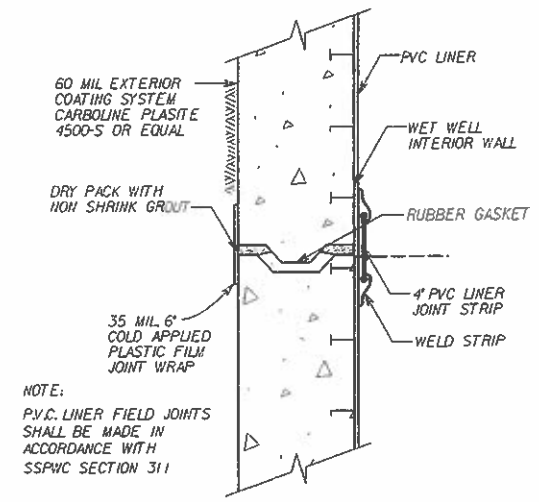
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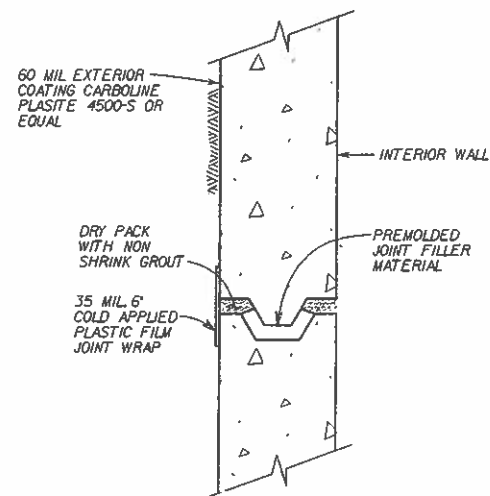
WALL PENETRATION DETAIL WITHOUT P.V.C. LINER (1) NOT TO SCALE C-5, C-6



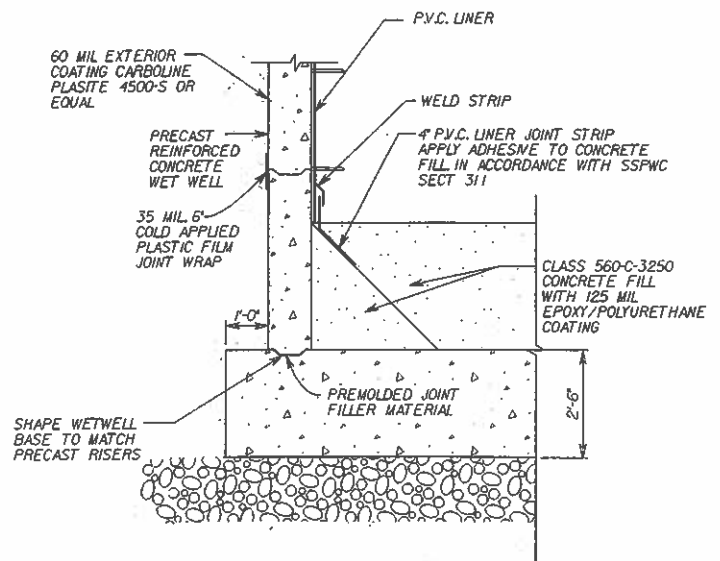
WALL PENETRATION DETAIL WITH "T" LOCK P.V.C. LINER (2) NOT TO SCALE C-5, C-6



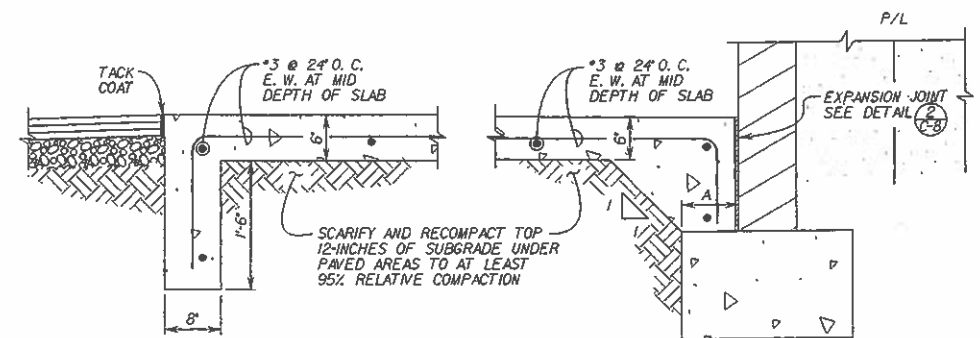
WET WELL JOINT DETAIL (3) NOT TO SCALE C-6



VALVE VAULT JOINT DETAIL (4) NOT TO SCALE C-6



WET WELL BASE JOINT DETAIL (5) NOT TO SCALE C-6

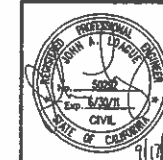


CUT-OFF WALL AND FOOTING DETAIL (6) SCALE: 1" = 1'-0" C-2

JUL 21 2011

A - 8' FOR SITE SECTION A  
A - 7' FOR SITE SECTIONS B AND D

BID DOCUMENTS



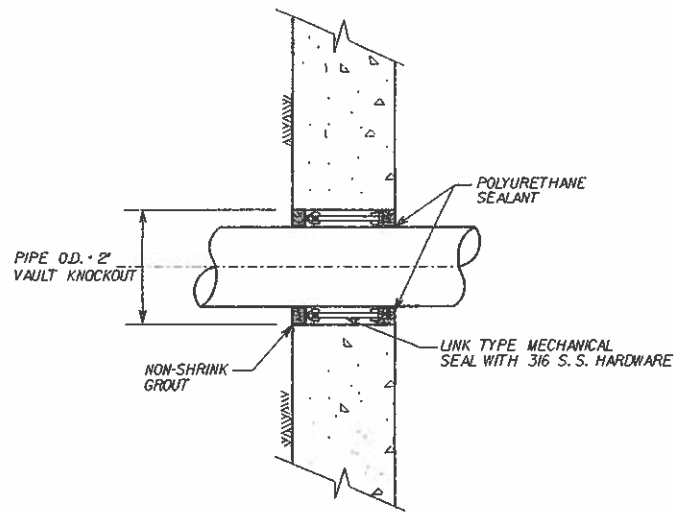
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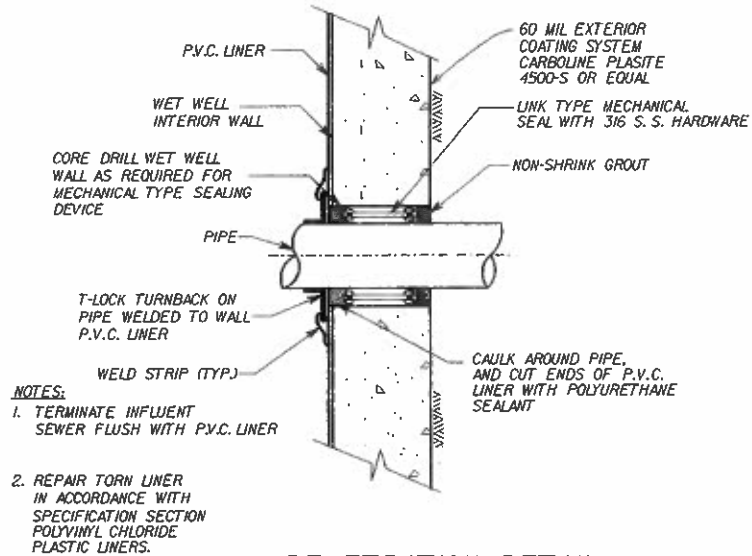
REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
PUMP STATION WET WELL WALL  
PENETRATION, JOINT, AND BASE JOINT DETAILS  
PM \_\_\_\_\_ DATE \_\_\_\_\_ APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN \_\_\_\_\_ DATE \_\_\_\_\_ CITY ENGINEER R.E. \_\_\_\_\_  
CHECK \_\_\_\_\_ DATE \_\_\_\_\_

**C-7**  
MMDDYYYY  
SHEET X OF X  
JOB NO. 0000000

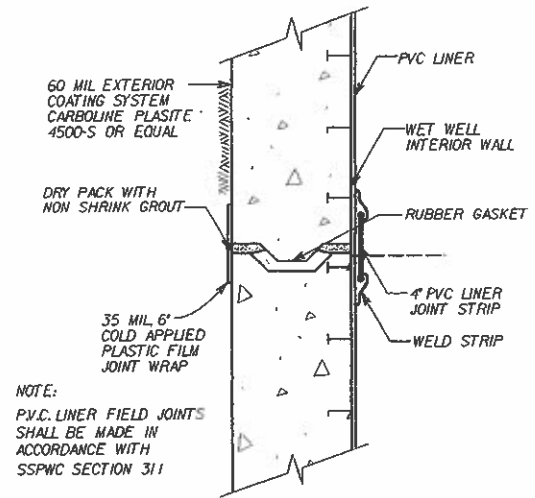


WALL PENETRATION DETAIL WITHOUT P.V.C. LINER (1) C-5, C-6  
NOT TO SCALE



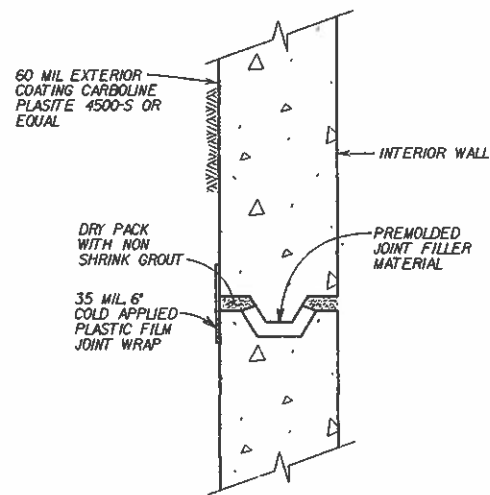
NOTES:  
1. TERMINATE INFLUENT SEWER FLUSH WITH P.V.C. LINER  
2. REPAIR TORN LINER IN ACCORDANCE WITH SPECIFICATION SECTION POLYVINYL CHLORIDE PLASTIC LINERS.

WALL PENETRATION DETAIL WITH "T" LOCK P.V.C. LINER (2) C-5, C-6  
NOT TO SCALE

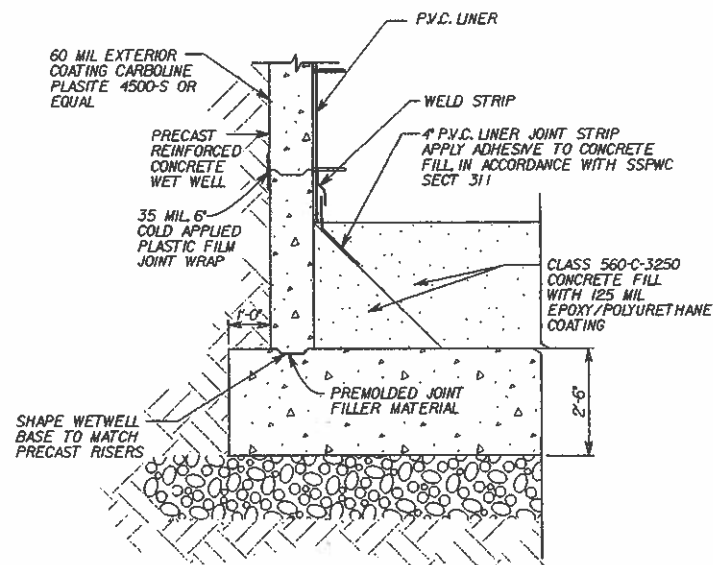


NOTE:  
P.V.C. LINER FIELD JOINTS SHALL BE MADE IN ACCORDANCE WITH SSPWC SECTION 311

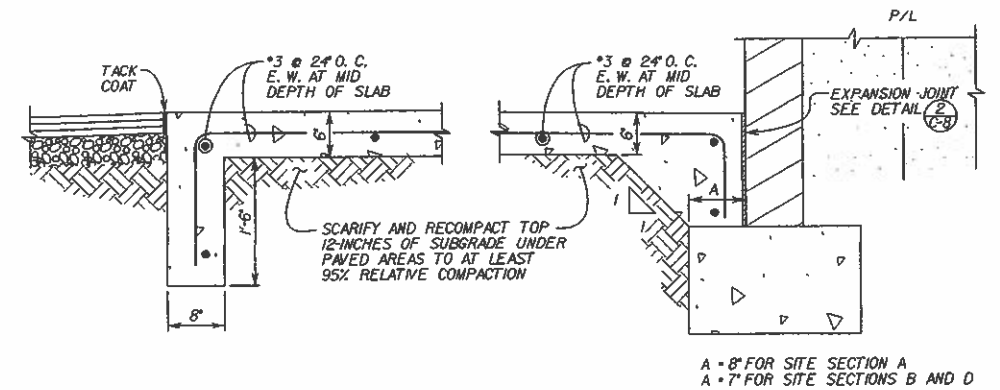
WET WELL JOINT DETAIL (3) C-6  
NOT TO SCALE



VALVE VAULT JOINT DETAIL (4) C-6  
NOT TO SCALE



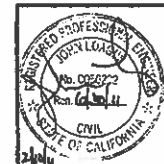
WET WELL BASE JOINT DETAIL (5) C-6  
NOT TO SCALE



CUT-OFF WALL AND FOOTING DETAIL (6) C-2  
SCALE: 1" = 1'-0"

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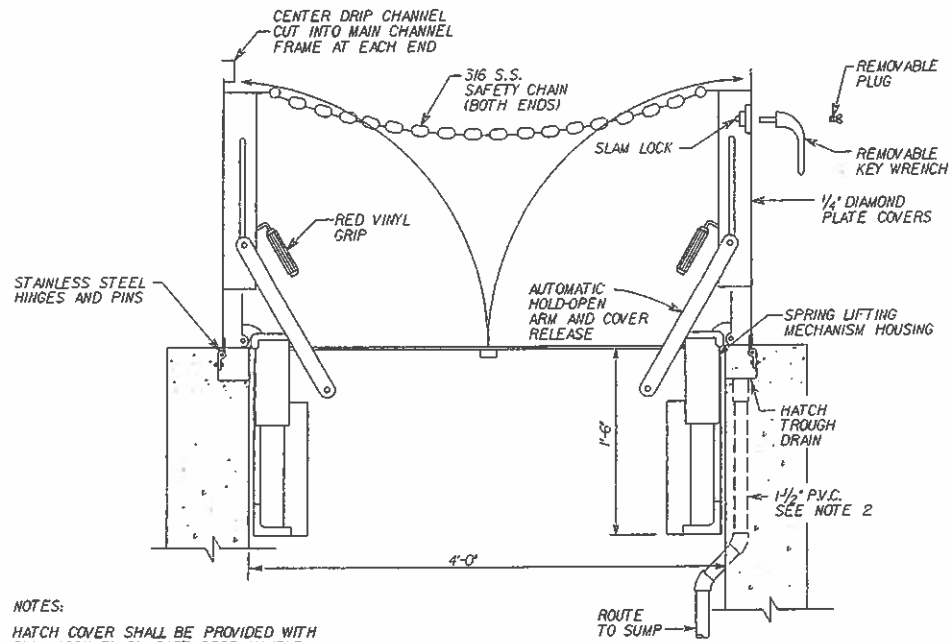
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NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
PUMP STATION WET WELL WALL  
PENETRATION, JOINT, AND BASE JOINT DETAILS  
PM 11 DATE 10/10  
DRAWN S.G. DATE 10/10  
CHECK Z.K. DATE 10/10  
APPROVED DATE \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

**C-7**  
10/06/2010  
SHEET X OF 88  
JOB NO. 1109531



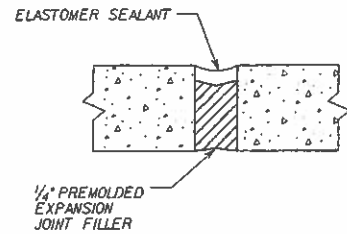
NOTES:

- HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE AND TROUGH COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 3/16 S.S. BOLTS.
- PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH DRAIN TO SUMP.
- HATCH COVER SHALL BE ALUMINUM.
- HATCH COVER SHALL BE RATED FOR OCCASIONAL H2O TRAFFIC LOADING.
- ALL PARTS OF FRAME IN CONTACT WITH CONCRETE SHALL BE COATED WITH 16 MILS OF BITUMINOUS PAINT.
- SHOWN FOR DOUBLE LEAF HATCH. SIMILAR FOR SINGLE LEAF HATCH.

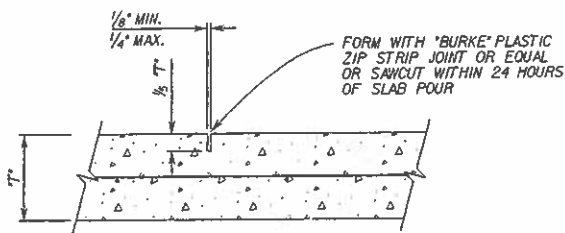
ACCESS HATCH DETAIL (1)  
 NOT TO SCALE C-6

NOTE

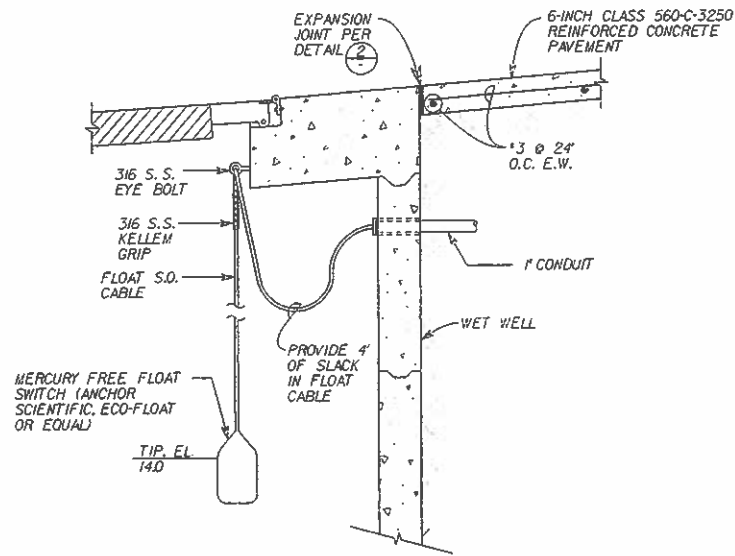
PLACE AS SHOWN OR CONTINUOUS ALONG PERIMETER OF ISOLATED SLAB W/ STRUCTURE, AND PIPE PENETRATIONS THROUGH SLAB



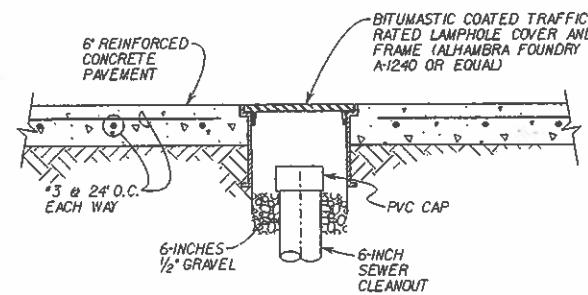
EXPANSION JOINT



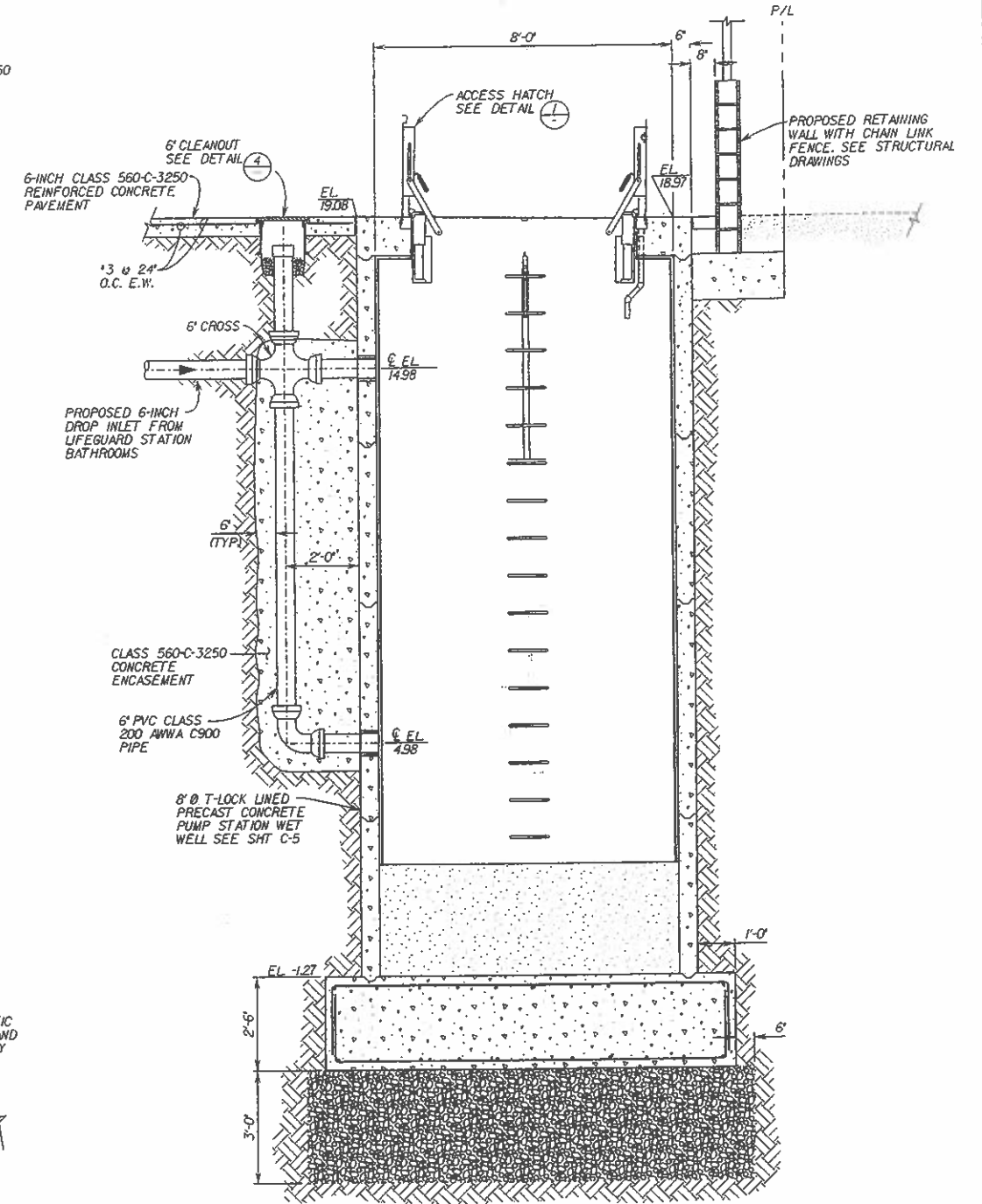
WEAKENED PLANE JOINT



HIGH LEVEL FLOAT SWITCH MOUNTING DETAIL (3)  
 NOT TO SCALE C-6



SEWER CLEANOUT DETAIL (4)  
 NOT TO SCALE



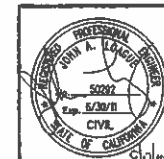
SEWER DROP PIPE INTO PROPOSED WET WELL  
 SCALE: 1/2" = 1'-0"

PAVING JOINT DETAILS (2)  
 NOT TO SCALE C-5, C-6

JUL 21 2011

BID DOCUMENTS

DATE



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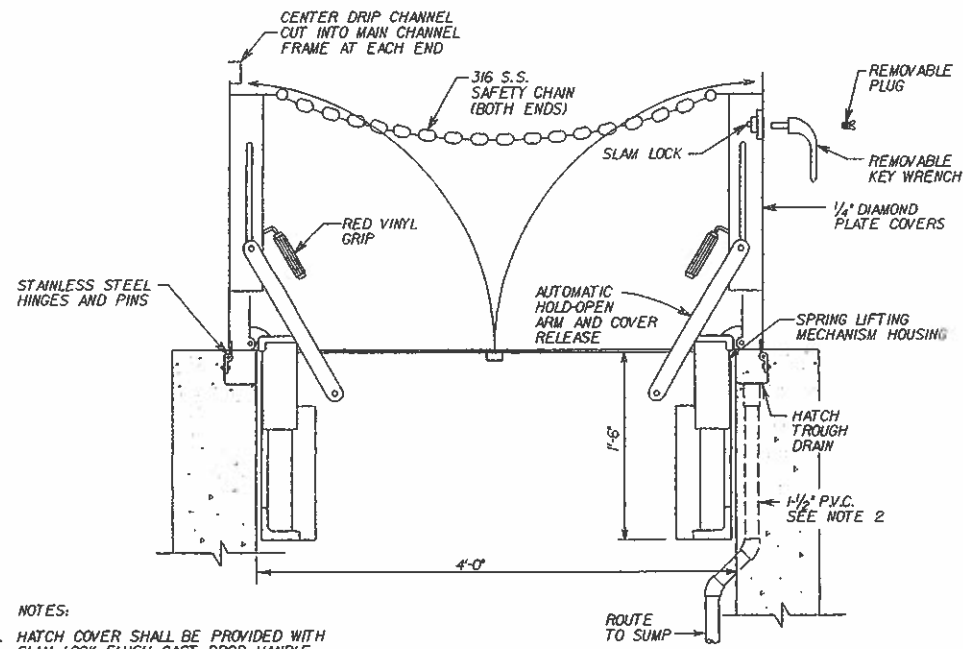
REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
 PUMP STATION WET WELL ACCESS HATCH,  
 FLOAT SWITCH, SEWER DROP PIPE,  
 AND EXPANSION JOINT DETAILS

PM: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHECK: \_\_\_\_\_ DATE: \_\_\_\_\_

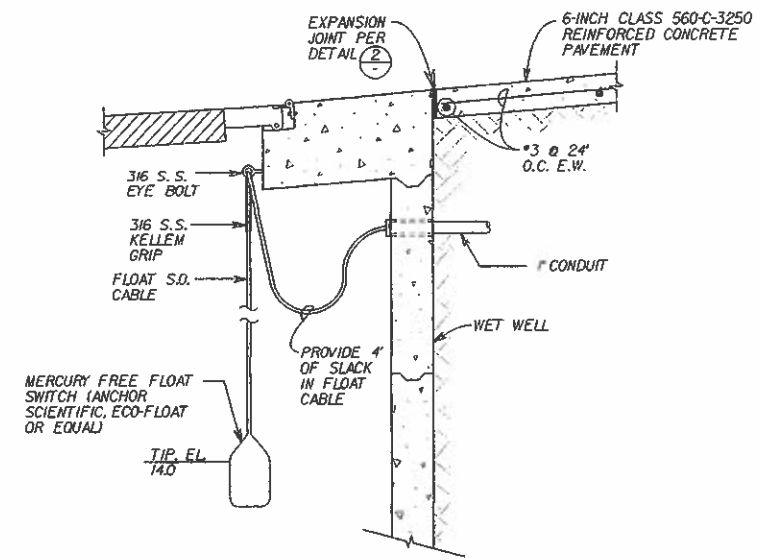
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CITY ENGINEER R.E.

**C-8**  
 MMDYYYY  
 SHEET X OF X  
 JOB NO. 0000000



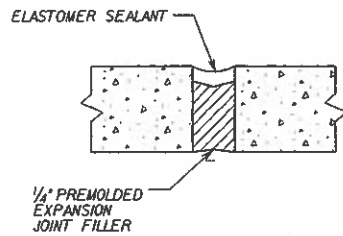
- NOTES:
- HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
  - PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH DRAIN TO SUMP.
  - HATCH COVER SHALL BE ALUMINUM.
  - HATCH COVER SHALL BE RATED FOR OCCASIONAL H2O TRAFFIC LOADING.
  - ALL PARTS OF FRAME IN CONTACT WITH CONCRETE SHALL BE COATED WITH 16 MILS OF BITUMINOUS PAINT.
  - SHOWN FOR DOUBLE LEAF HATCH. SIMILAR FOR SINGLE LEAF HATCH.

ACCESS HATCH DETAIL (1)  
NOT TO SCALE C-6

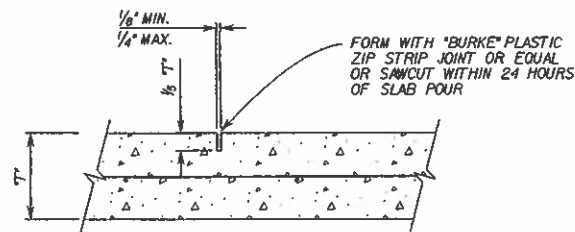


HIGH LEVEL FLOAT SWITCH MOUNTING DETAIL (3)  
NOT TO SCALE C-6

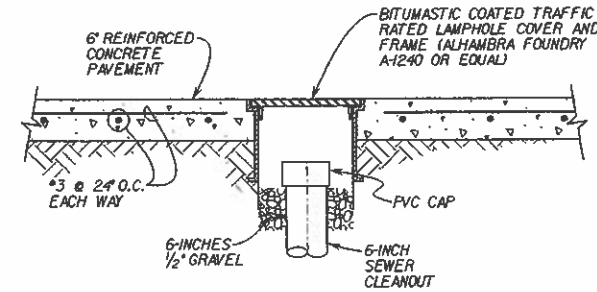
NOTE  
PLACE AS SHOWN OR CONTINUOUS ALONG PERIMETER OF ISOLATED SLAB W/ STRUCTURE AND PIPE PENETRATIONS THROUGH SLAB



EXPANSION JOINT



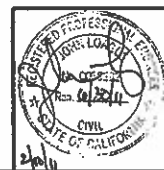
WEAKENED PLANE JOINT



SEWER CLEANOUT DETAIL (4)  
NOT TO SCALE

PAVING JOINT DETAILS (2)  
NOT TO SCALE C-5, C-6

JUL 21 2011



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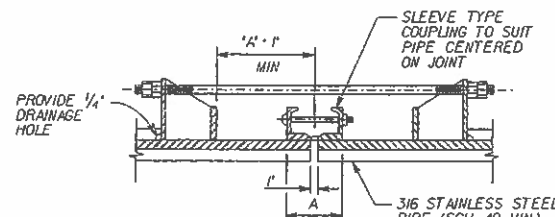
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IRVINE, CA. 92618  
(949) 753-7333

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
PUMP STATION WET WELL ACCESS HATCH,  
FLOAT SWITCH, AND  
EXPANSION JOINT DETAILS

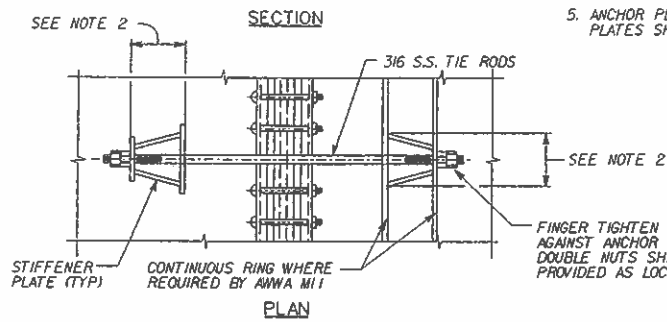
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DATE 10/10 CITY ENGINEER R.E. \_\_\_\_\_

**C-8**  
10/06/2010  
SHEET X OF 68  
JOB NO. 1109531

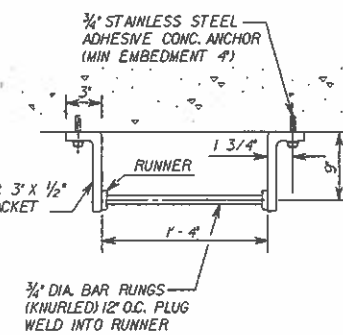
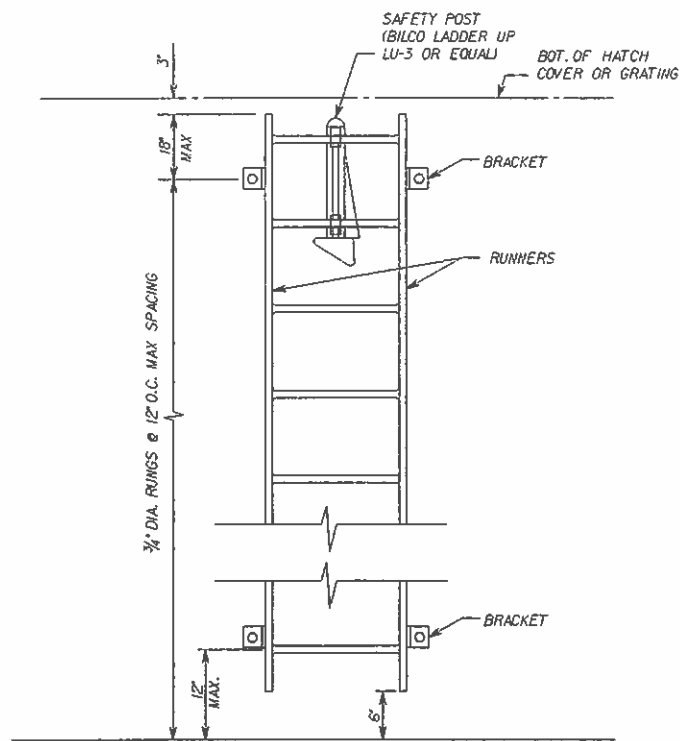


**NOTES:**

1. DESIGN SHALL BE BASED ON 100 PSI.
2. ANCHOR LUGS AND TIE RODS FOR STAINLESS STEEL PIPE SHALL BE DESIGNED BY PIPE MANUFACTURER IN ACCORDANCE WITH AMVA M11 STEEL PIPE MANUAL.
3. GRIND ALL CORNERS SMOOTH.
4. TIE RODS, NUTS, BOLTS, AND WASHERS SHALL BE 316 S.S.
5. ANCHOR PLATES/RINGS AND STIFFENER PLATES SHALL BE FACTORY WELDED.

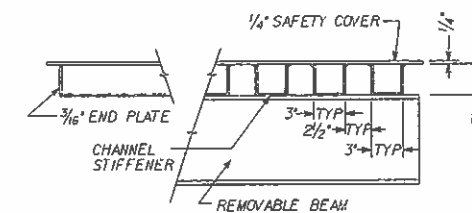


**SLEEVE COUPLING WITH HARNESS ASSEMBLY ①**  
NOT TO SCALE C-5, C-6

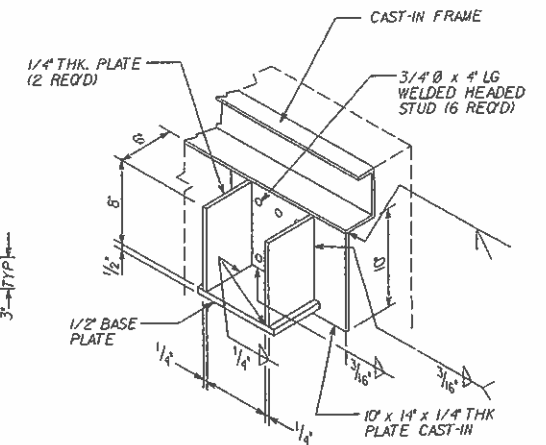


**NOTE:**  
ALL MATERIAL SHALL BE 316 STAINLESS STEEL

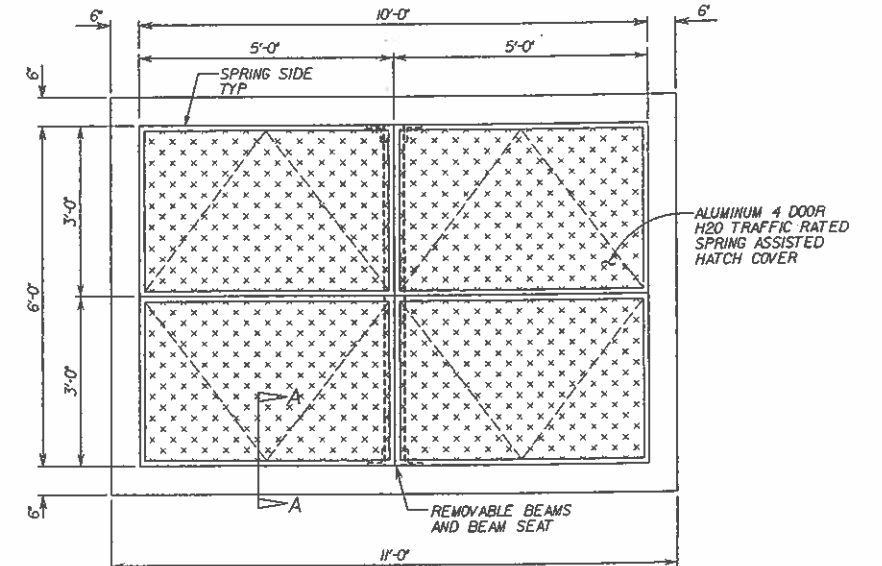
**LADDER DETAIL ③**  
NOT TO SCALE C-6



**SECTION A-A**



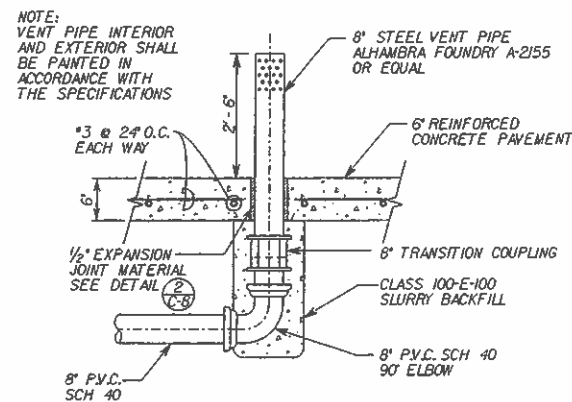
**BEAM SEAT DETAIL**  
NTS



**NOTES:**

1. EACH HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE, AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
2. PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH TO SUMP.
3. HATCHES SHALL BE PROVIDED WITH SAFETY GRATES.

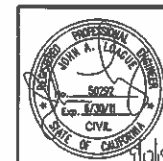
**VALVE VAULT COVER DETAIL ④**  
NOT TO SCALE C-6



**VENT PIPE DETAIL ②**  
NOT TO SCALE C-5

JUL 21 2011

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NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

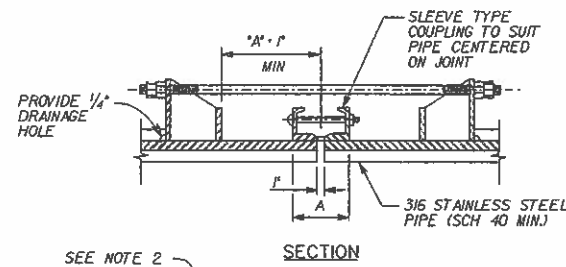
**LIFEGUARD STATION**  
PUMP STATION SLEEVE COUPLING, VENT PIPE, LADDER, AND VALVE VAULT COVER DETAIL

PM \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN \_\_\_\_\_ DATE \_\_\_\_\_  
CHECK \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

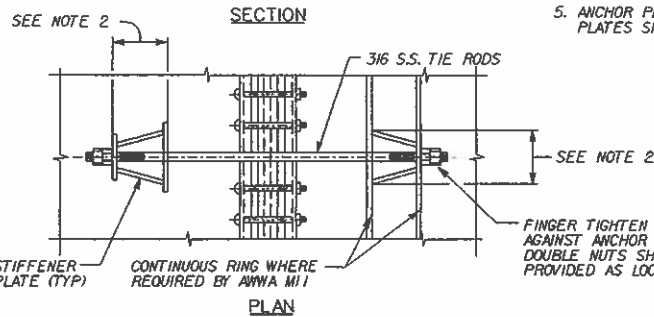
**C-9**  
M4004444

SHEET    OF     
JOB NO. 0000000

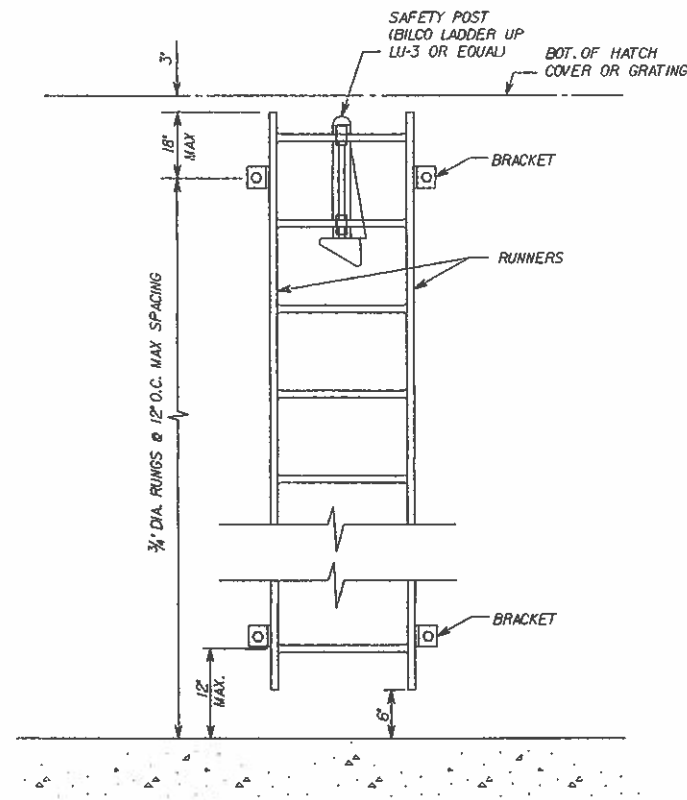


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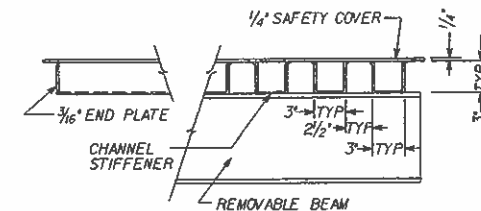
1. DESIGN SHALL BE BASED ON 100 PSI.
2. ANCHOR LUGS AND TIE RODS FOR STAINLESS STEEL PIPE SHALL BE DESIGNED BY PIPE MANUFACTURER IN ACCORDANCE WITH AWWA M11 STEEL PIPE MANUAL.
3. GRIND ALL CORNERS SMOOTH.
4. TIE RODS, NUTS, BOLTS, AND WASHERS SHALL BE 316 S.S.
5. ANCHOR PLATES/RINGS AND STIFFENER PLATES SHALL BE FACTORY WELDED.



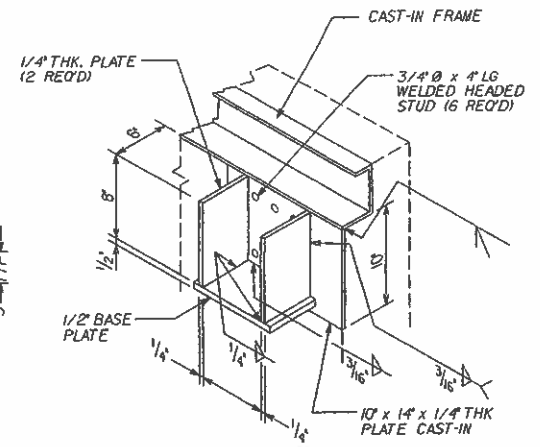
**SLEEVE COUPLING WITH HARNESS ASSEMBLY 1**  
NOT TO SCALE C-5, C-6



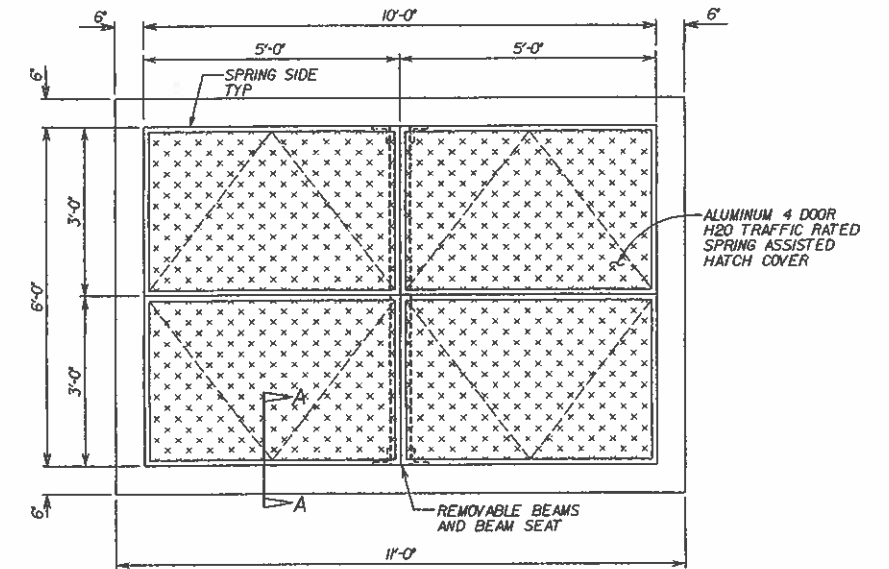
**LADDER DETAIL 3**  
NOT TO SCALE C-6



**SECTION A-A**



**BEAM SEAT DETAIL**  
NTS

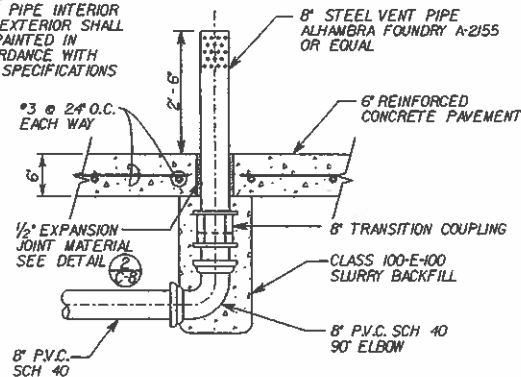


**NOTES:**

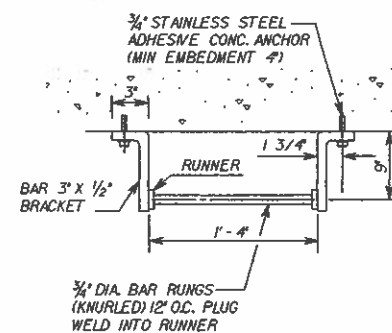
1. EACH HATCH COVER SHALL BE PROVIDED WITH SLAM LOCK, FLUSH CAST DROP HANDLE, RECESSED PADLOCKABLE STAPLE, AND TROUGH. COVERS SHALL BE SECURED TO THE FRAME WITH 1/2" 316 S.S. BOLTS.
2. PROVIDE 1 1/2" PVC SCH 80 DRAIN PIPE FROM HATCH TROUGH TO SUMP.
3. HATCHES SHALL BE PROVIDED WITH SAFETY GRATES.

**VALVE VAULT COVER DETAIL 4**  
NOT TO SCALE C-6

**NOTE:**  
VENT PIPE INTERIOR AND EXTERIOR SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS



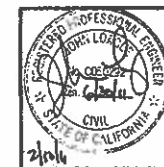
**VENT PIPE DETAIL 2**  
NOT TO SCALE C-5



**NOTE:**

ALL MATERIAL SHALL BE 316 STAINLESS STEEL

JUL 21 2011



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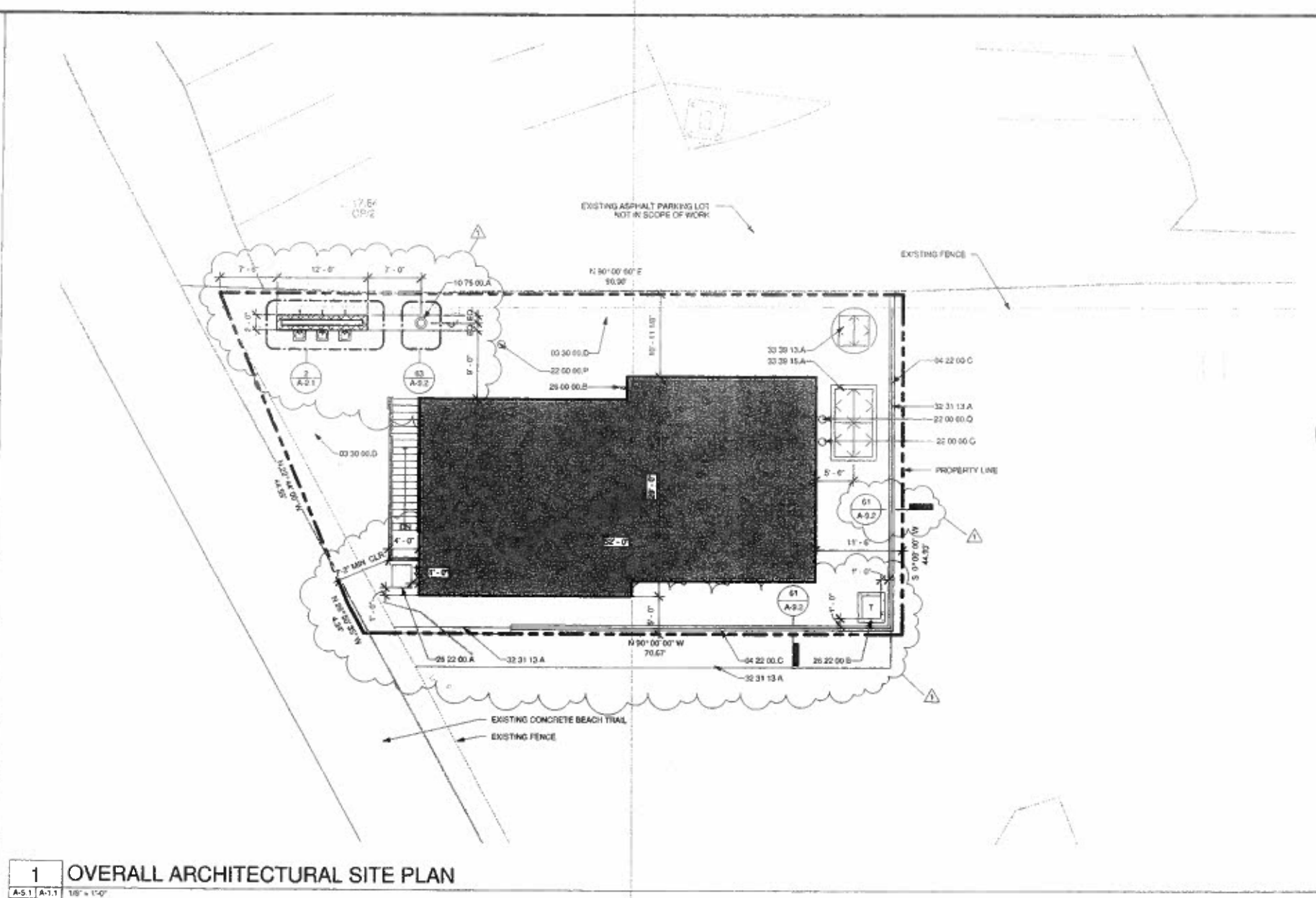
REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**LIFEGUARD STATION**  
PUMP STATION SLEEVE COUPLING, VENT PIPE, LADDER, AND VALVE VAULT COVER DETAIL

PM DATE 10/10/10  
DRAWN DATE 10/10/10  
CHECK Z.E. DATE 10/10/10

APPROVED DATE  
CITY ENGINEER R.E.

**C-9**  
10/06/2010  
SHEET X OF 58  
JOB NO. 1109531



**1** OVERALL ARCHITECTURAL SITE PLAN  
 A-5.1 | A-1.1 | 1/8" = 1'-0"

**GENERAL NOTES**

- 1 REFER TO CIVIL PLANS FOR FURTHER INFORMATION.
- 2 REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
- 3 REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
- 4 REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.

**KEYNOTES**

- 03 30 00 D CONCRETE PAVING FOR VEHICULAR TRAFFIC. SEE CIVIL.
- 04 22 00 C CMU RETAINING WALL. COLORS REFER TO CIVIL AND STRUCTURAL.
- 10 75 00 A FLAG POLE. REFER TO PLUMBING AND CIVIL.
- 22 00 00 P CLEAN-OUT. REFER TO PLUMBING AND CIVIL.
- 22 00 00 Q VENT PIPES. REFER TO PLUMBING AND CIVIL.
- 28 00 00 B SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
- 28 22 00 A TRANSFORMER HAND HOLE. REFER TO ELECTRICAL.
- 28 22 00 B TRANSFORMER WITH CONCRETE HOUSING/KEEPING PAD. REFER TO ELECTRICAL.
- 32 31 13 A CHAIN LINK FENCE. REFER TO CIVIL.
- 32 31 13 A PRECAST CONCRETE PUMP STATION WET WELL. REFER TO CIVIL.
- 32 39 15 A PRECAST CONCRETE PUMP STATION VALVE VAULT. REFER TO CIVIL.

**LEGEND**

JUL 21 2011

RED DOCUMENTS

CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION		<b>A-1.1</b> 190610 SHEET 12 OF 28 JOB NO. 1109531
EL SEGUNDO LS ARCHITECTURAL SITE PLAN		
DATE: _____	APPROVED: _____	
CITY ENGINEER P.E.		

REVISIONS		
NO.	DATE	BY
1	10/06/2010	KA

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**GENERAL NOTES**

- 1 REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION
- 2 REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION
- 3 REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION
- 4 REFER TO PLUMBING PLANS FOR FURTHER INFORMATION
- 5 ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY
- 6 REFER TO FINISH PLAN AND SCHEDULE FOR INTERIOR WALL, CEILING AND FLOOR FINISH INFORMATION
- 7 DIMENSIONS ARE TO FACE OF FRAMING UNLESS SPECIFICALLY NOTED OTHERWISE
- 8 PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES
- 9 PROVIDE FIRE BLOCKING FOR WALL CAVITIES THAT EXCEED CBC HEIGHT LIMITATION
- 10 FIRE EXTINGUISHERS ARE TO BE LOCATED WITHIN THE 75 FOOT TRAVEL DISTANCE AND TO HAVE A MINIMUM RATING OF 2A:10BC. FIRE EXTINGUISHER LOCATIONS ARE TO BE FIELD VERIFIED BY THE FIRE DEPARTMENT INSPECTOR. (CCR T-19 SECTION 568)
- 11 INSTALL PLAINLY VISIBLE AND LEGIBLE SIGNS AT DOORS INTO ROOMS WITH ELECTRICAL CONTROL PANELS STATING "ELECTRICAL ROOM" (DFC SECTION 605.3.1)
- 12 A RECESSED KNOX BOX IS TO BE INSTALLED ON THE BUILDING. THE LOCATION IS TO BE FIELD VERIFIED BY THE FIELD FIRE DEPARTMENT. (CFD SECTION 505.1)
- 13 ALL EQUIPMENT MUST BE A MINIMUM OF 2'-0" ABOVE ELEVATION 0'-0"
- 14 WET FLOODPROOFING PROVIDED AT 01-GROUND FLOOR, 0'-0". FOR EVERY SQUARE FOOT OF FLOOR AREA AT THE GROUND LEVEL, ONE SQUARE INCH OF WALL OPENING MUST BE PROVIDED. SEE WET FLOOR PROOFING CALCS ON T-1.2, CODE ANALYSIS

**KEYNOTES**

- 04 22 00.B CMU WALL, COLOR B. REFER TO STRUCTURAL
- 05 12 00.B STEEL COLUMN PER STRUCTURAL
- 05 50 00.B STEEL GUARDRAIL W/ HANDRAIL, PAINTED
- 05 50 00.C STEEL HANDRAIL, PAINTED
- 05 51 00.A ACCESS LADDER
- 05 51 00.B STEEL STAIRS
- 06 33 23.A OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE
- 08 91 00.A METAL WALL LOCKER. REFER TO WINDOW SCHEDULE
- 10 28 00.A SURFACE MOUNTED TOWEL DISPENSER/WASTE RECEPTACLE
- 10 28 00.C SURFACE MOUNTED TOILET TISSUE DISPENSER
- 10 28 00.E SOAP DISPENSER
- 10 28 00.F SHOWER BENCH
- 10 28 00.J GRAB BAR
- 10 28 00.K SURFACE MOUNTED SEAT COVER DISPENSER
- 10 44 00.A FIRE EXTINGUISHER IN SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- 10 51 00.A METAL LOCKERS W/ TOP SHELF, WALL MOUNTED
- 22 00 00.A PLUMBING FIXTURE. REFER TO PLUMBING
- 22 00 00.B ELECTRIC WATER HEATER. REFER TO PLUMBING
- 22 00 00.D FLOOR DRAIN. SLOPE FLOOR TO DRAIN. MIN 1/8" PER 1'-0". REFER TO PLUMBING
- 22 00 00.M HOSE BIB. REFER TO PLUMBING
- 22 00 00.N AIR COMPRESSOR CONNECTION. REFER TO PLUMBING
- 22 00 00.O AIR COMPRESSOR. REFER TO PLUMBING
- 26 00 00.A ELECTRICAL EQUIPMENT. REFER TO ELECTRICAL

**LEGEND**

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL WITH FURRING

JUL 21 2011

BID DOCUMENTS

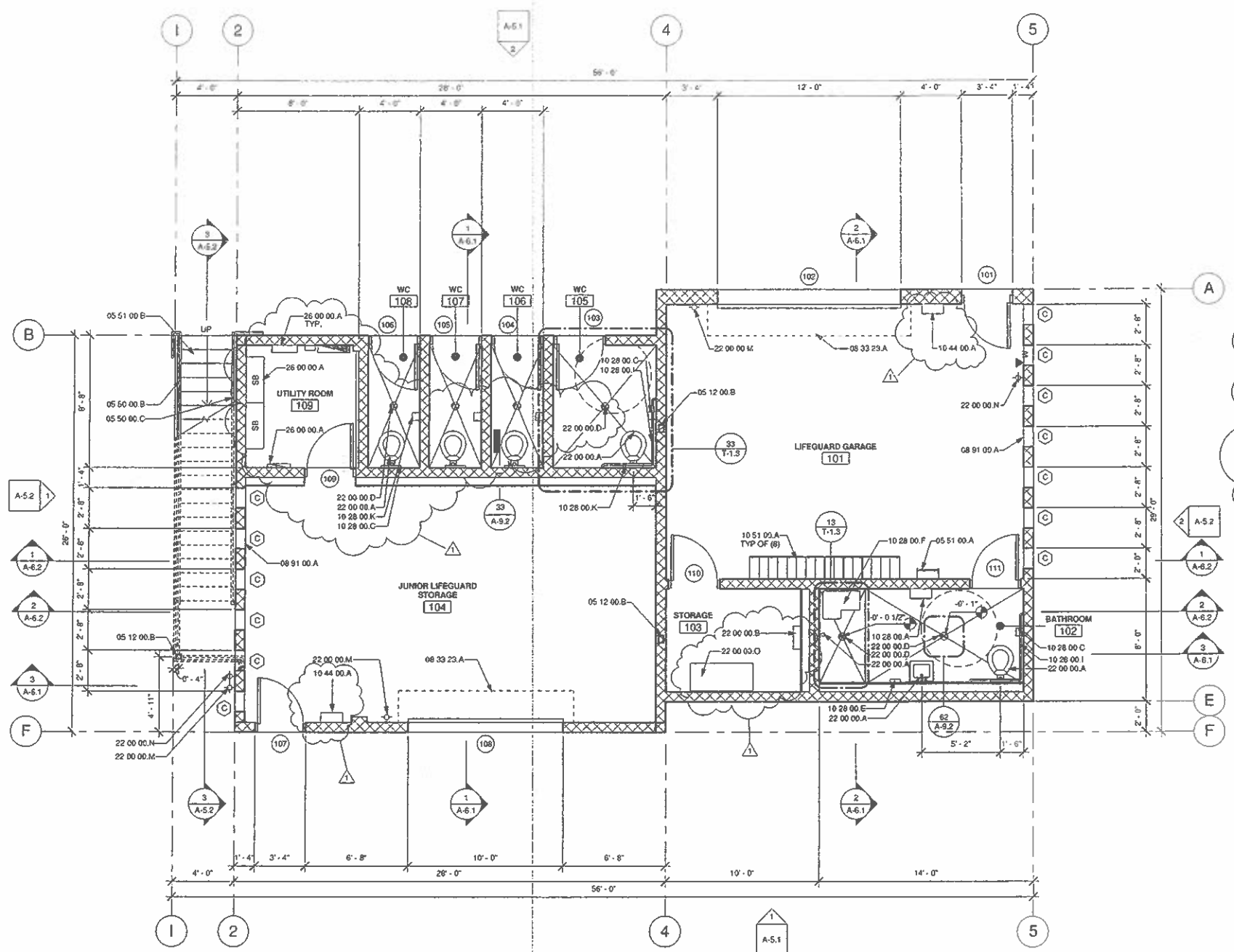
CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION		<b>A-2.1</b> 10/06/10 SHEET 14 OF 68
EL SEGUNDO LS GROUND FLOOR PLAN		
DATE 10/06/2010	APPROVED CITY ENGINEER R.E.	JOB NO. 1109531

REVISIONS		
NO.	DATE	BY
1	10/06/2010	KA

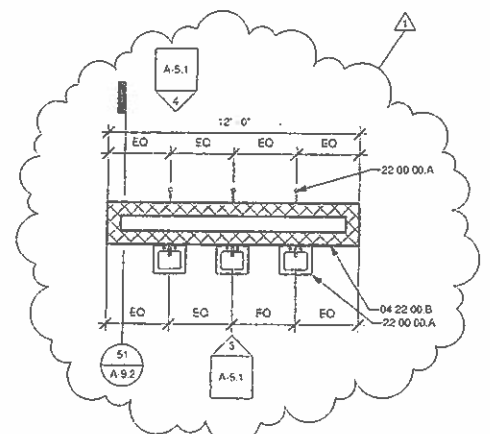
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**1 GROUND FLOOR PLAN**  
A3 A-2.1 1/4" = 1'-0"



**2 SHOWERS**  
A3 A-2.1 1/4" = 1'-0"



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**GENERAL NOTES**

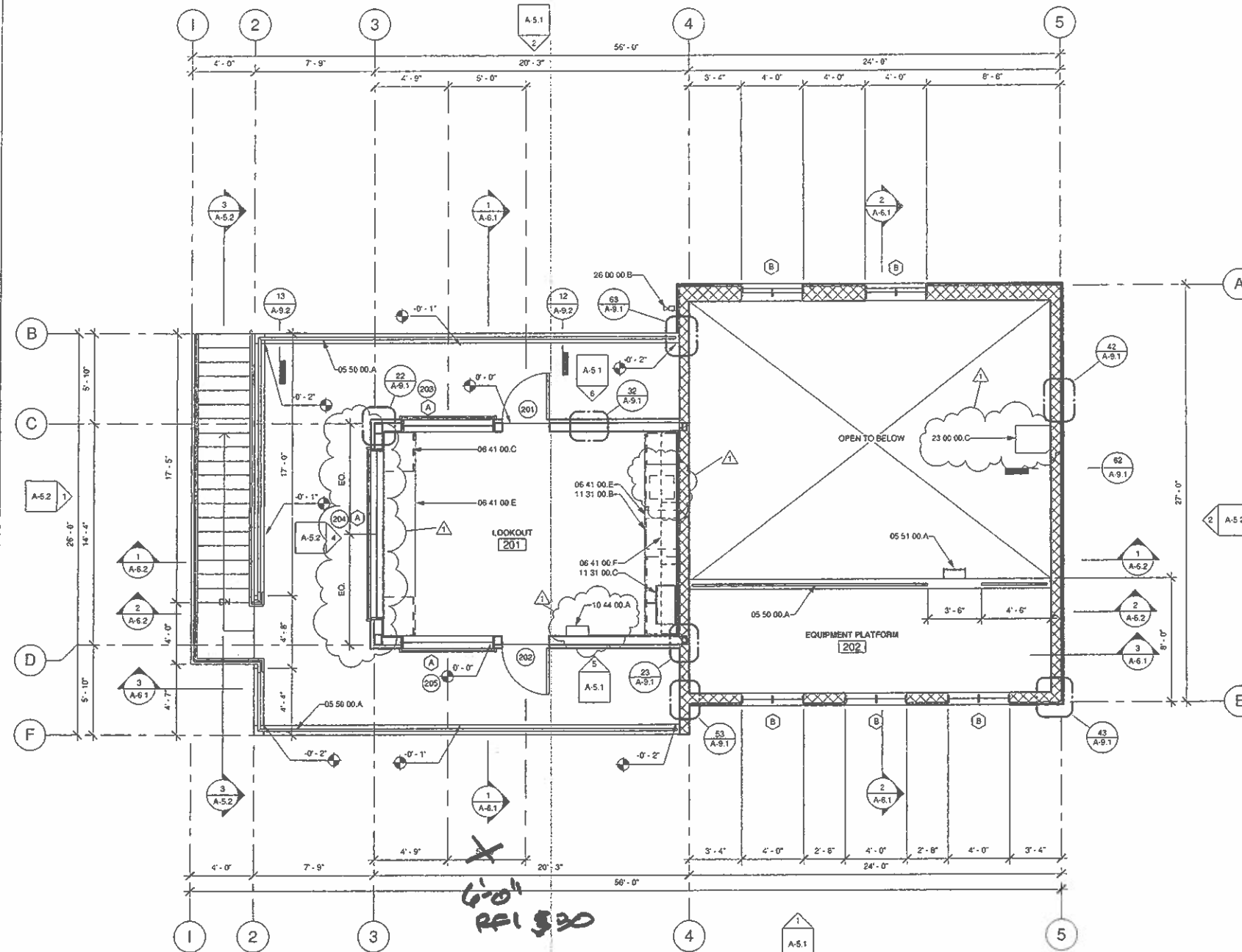
- 1 REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
- 2 REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
- 3 REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION.
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- 9 PROVIDE FIRE BLOCKING FOR WALL CAVITIES THAT EXCEED CBC HEIGHT LIMITATION.
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- 11 INSTALL PLAINLY VISIBLE AND LEGIBLE SIGNS AT DOORS INTO ROOMS WITH ELECTRICAL CONTROL PANELS STATING "ELECTRICAL ROOM" (CFC SECTION 605.3.1)
- 12 A RECESSED KNOX BOX IS TO BE INSTALLED ON THE BUILDING. THE LOCATION IS TO BE FIELD VERIFIED BY THE FIELD FIRE DEPARTMENT. (CFC SECTION 506.1)
- 13 ALL EQUIPMENT MUST BE A MINIMUM OF 2'-0" ABOVE ELEVATION 0'-0".
- 14 WET FLOODPROOFING PROVIDED AT 01-GROUND FLOOR, 0'-0". FOR EVERY SQUARE FOOT OF FLOOR AREA AT THE GROUND LEVEL, ONE SQUARE INCH OF WALL OPENING MUST BE PROVIDED. SEE WET FLOOR PROOFING CALCS ON T-1.2, CODE ANALYSIS.

**KEYNOTES**

- 05 50 00 A STEEL GUARDRAIL, PAINTED.
- 05 51 00 A ACCESS LADDER.
- 06 41 00 C BASE CABS W/ DRAWERS, DOORS & PULL OUT SHELVING
- 06 41 00 E COUNTERTOP WITH BACKSPASH.
- 06 41 00 F UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING.
- 10 44 00 A FIRE EXTINGUISHER IN SURFACE MOUNTED FIRE EXTINGUISHER CABINET
- 11 31 00 B UNDER CABINET REFRIGERATOR, OWNER FURNISHED AND INSTALLED.
- 11 31 00 C MICROWAVE, OWNER FURNISHED AND INSTALLED.
- 23 00 00 C WALL-MOUNTED HEATER, REFER TO MECHANICAL.
- 26 00 00 B SECURITY CAMERA PROVIDED BY OWNER CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.

**LEGEND**

- 12" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" CMU WALL, REFER TO STRUCTURAL PLANS
- 8" METAL STUD WALL W/ EXTERIOR RIBBED METAL PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL W/ EXTERIOR SOLID PHENOLIC PANELS AND INTERIOR FURRING, REFER TO STRUCTURAL PLANS
- 6" METAL STUD WALL FURRING



**1 SECOND FLOOR PLAN**  
A3 A-2.2 1/4" = 1'-0"

JUL 21 2011

**BID DOCUMENTS**

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS  
SECOND FLOOR PLAN**

**A-2.2**

10/06/10

SHEET 15 OF 88

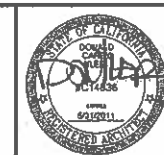
JOB NO. 1109531

DATE \_\_\_\_\_ APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_ CITY ENGINEER R.E.

REVISIONS		
NO.	DATE	BY
1	10/06/2010	KA

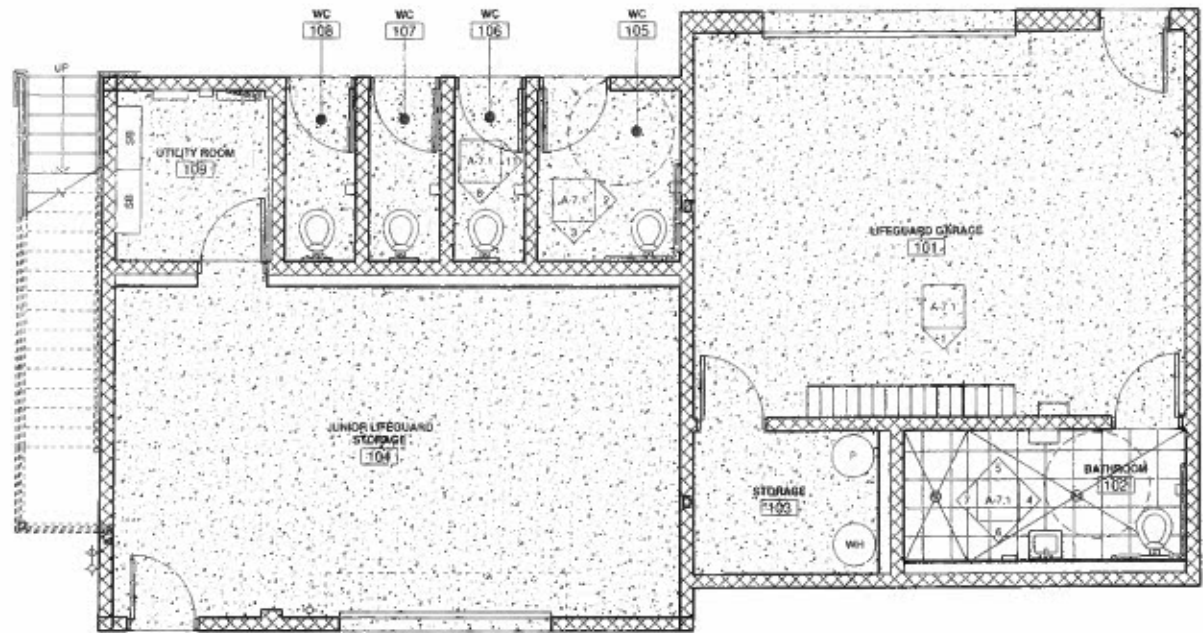
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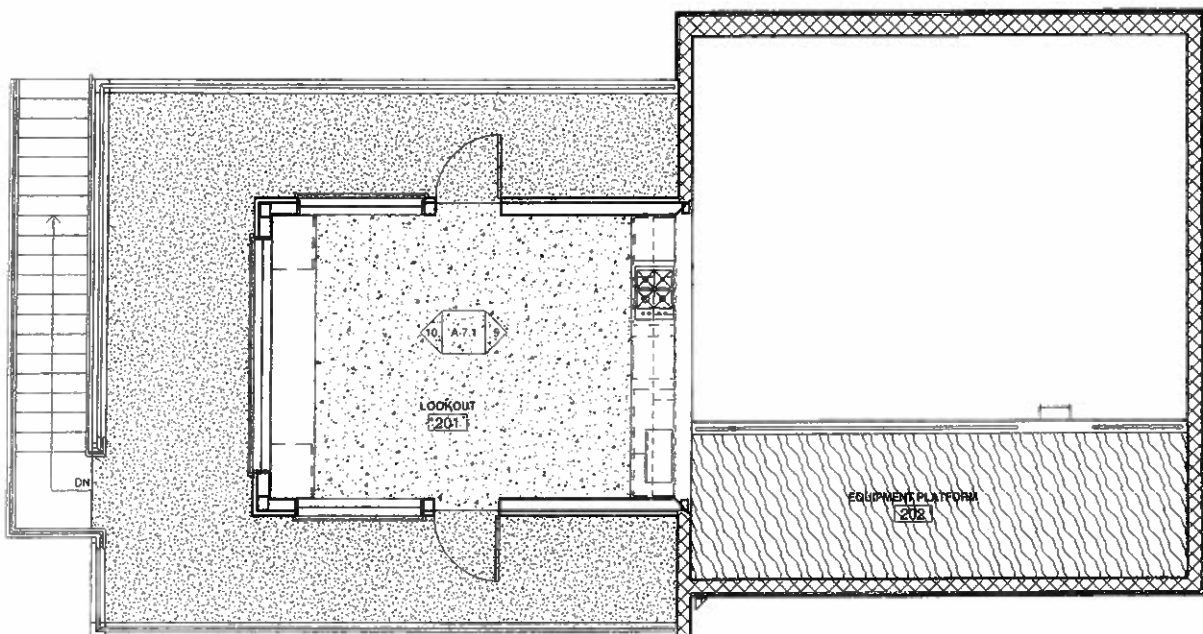


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FILE NO. \_\_\_\_\_



**1 GROUND FLOOR FINISH PLAN**  
A3 | A-2.3 | 1/4" = 1'-0"



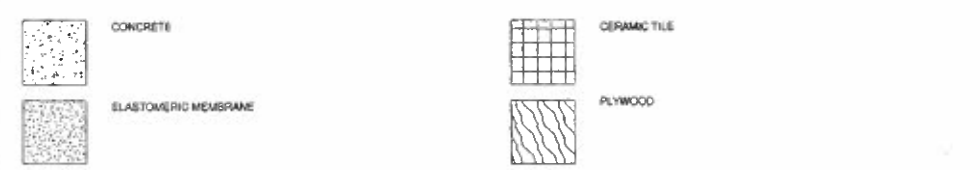
**2 SECOND FLOOR FINISH PLAN**  
A3 | A-2.3 | 1/4" = 1'-0"

**FINISH SCHEDULE**

NUMBER	NAME	FLOOR FINISH	CEILING FINISH	BASE FINISH	WAINSCOT FINISH	WALL FINISH				COMMENTS
						NORTH	SOUTH	EAST	WEST	
101	LIFEGUARD GARAGE	SCON	B.O.S.	CTB		CMU	CMU	CMU	CMU	
102	BATHROOM	CT	B.O.S.	CTB	CTW	CMU/CTW	CMU/GBP	CMU	CMU/CTW	
103	STORAGE	SCON	B.O.S.	CTB		CMU	CMU	GBP	CMU	
104	JUNIOR LIFEGUARD STORAGE	SCON	B.O.S.	CTB		GBP	CMU	CMU	CMU	
105	WC	SCON	GBP			CMU	CMU	CMU	CMU	
106	WC	SCON	GBP			CMU	CMU	CMU	CMU	
107	WC	SCON	GBP			CMU	CMU	CMU	CMU	
108	WC	SCON	GBP			CMU	CMU	CMU	CMU	
109	UTILITY ROOM	SCON	GBP	CTB		CMU	CMU	CMU	CMU	
201	LOOKOUT	PCON	B.O.S.	CTB		GBP	GBP	GBP	GBP	
202	EQUIPMENT PLATFORM	PLY	B.O.S.	CTB		CMU	CMU	CMU		

**COMMENTS**

**LEGEND**



**GENERAL NOTES**

**ABBREVIATIONS**

- SASF BULLNOSED CERAMIC TILE BASF
- CTB
- CEILING
- B.O.S. BOTTOM OF STRUCTURE, PAINT FINISH
- GBP GYPSUM BOARD, PAINT FINISH
- FLOORS
- CT CERAMIC TILE
- PCON POLISHED CONCRETE
- PLY PLYWOOD
- SCON SEALED CONCRETE
- WAINSCOT
- CTW CERAMIC TILE WAINSCOT
- WALLS
- CMU CEMENT MASONRY UNITS
- GBP GYPSUM BOARD, PAINT FINISH

JUL 21 2011

BID DOCUMENTS

UNLESS NOTED OTHERWISE, ALL FINISHES SHALL BE AS SHOWN ON THESE FINISH PLANS. FINISHES SHALL BE APPLIED TO ALL SURFACES UNLESS OTHERWISE NOTED. FINISHES SHALL BE APPLIED TO ALL SURFACES UNLESS OTHERWISE NOTED. FINISHES SHALL BE APPLIED TO ALL SURFACES UNLESS OTHERWISE NOTED.

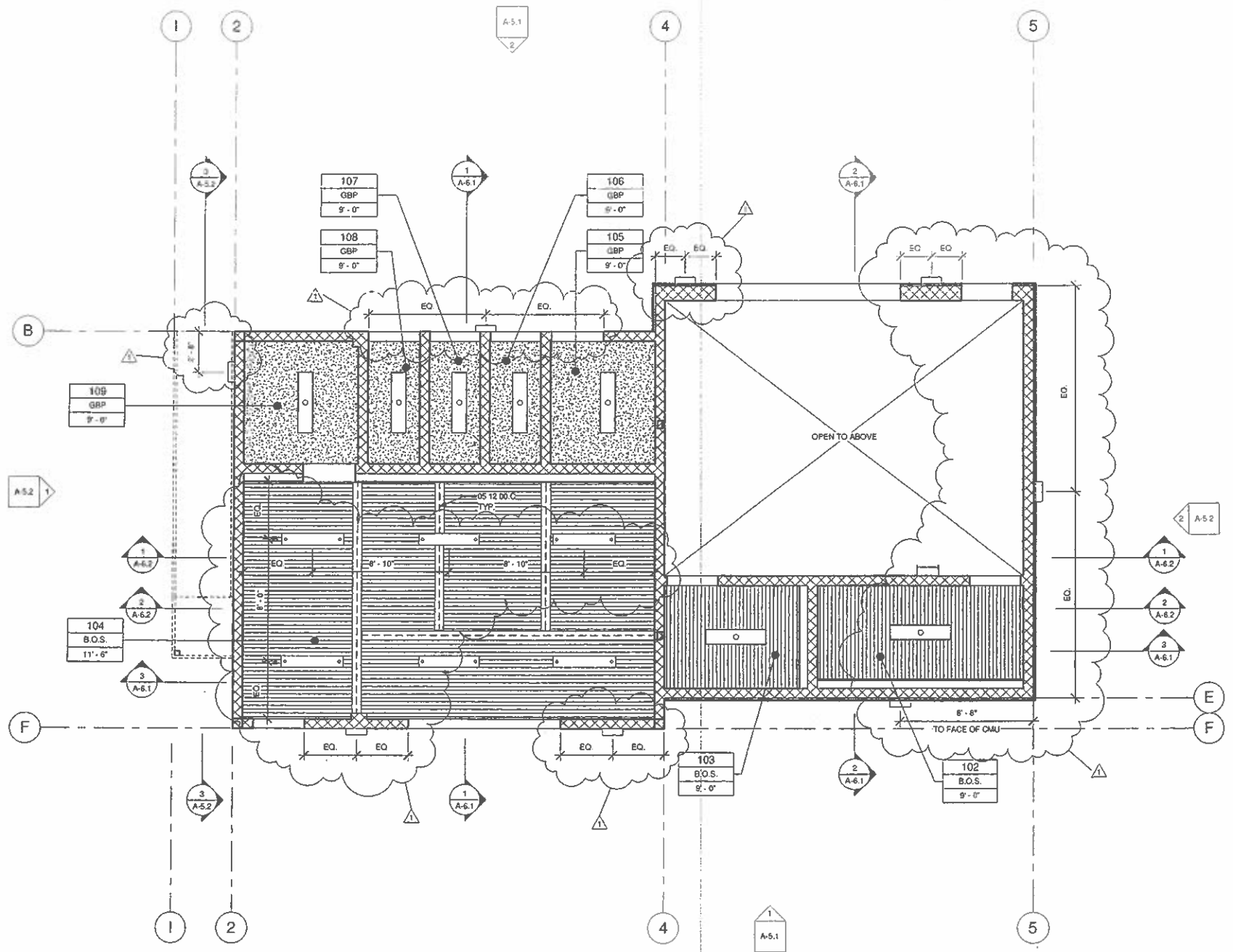
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**EL SEGUNDO LS  
FINISH PLANS**

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**A-2.3**  
09/20/2010  
SHEET 15 OF 50  
JOB NO. 1109531



**GENERAL NOTES**

- BORDERS AT LAY-IN ACoustICAL CEILING PANELS SHALL BE CUT TO MATCH FACTORY EDGE PROFILE. NO EXPOSED FASTENERS SHALL BE PERMITTED INCLUDING POP RIVETS AND TAPSETS.
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UNLESS NOTED OTHERWISE.
- ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN. ARCHITECT TO REVIEW CEILING LAYOUT INCLUDING BULKHEADS AND GRID PRIOR TO INSTALLATION.
- LIGHT FIXTURE TYPES, QUANTITIES AND LOCATIONS ONLY ARE NOTED ON ARCHITECTURAL REFLECTED CEILING PLANS. SPECIFICATIONS, SWITCHING, EXIT LIGHTS, EMERGENCY LIGHTING, LIFE SAFETY EQUIPMENT, AND CIRCUITING ARE NOTED ON ENGINEERING DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ARCHITECTURAL AND ENGINEERING DRAWINGS.
- DIMENSIONED LIGHT FIXTURES ARE FROM FINISHED FACE OF PARTITIONS TO CENTERLINE OF FIXTURE AND FROM CENTERLINE OF FIXTURE TO CENTERLINE OF FIXTURE. ALL FIXTURES SHALL BE INSTALLED IN CENTER OF CEILING TILE UNLESS NOTED OTHERWISE. ANY DISCREPANCIES WITH LIGHT FIXTURES, SWITCHES, THERMOSTATS, OR DIFFUSERS AS TO LOCATION BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

**KEYNOTES**

05-12 00 C STEEL BEAM PER STRUCTURAL

**ABBREVIATIONS**

- BASE**  
CTB BULLNOSED CERAMIC TILE BASE
- CEILING**  
B.O.S. BOTTOM OF STRUCTURE, PAINT FINISH  
GBP GYPSUM BOARD, PAINT FINISH
- FLOORS**  
CT CERAMIC TILE  
PCON POLISHED CONCRETE  
PLY PLYWOOD  
SCON SEALED CONCRETE
- WAINSCOT**  
CTW CERAMIC TILE WAINSCOT
- WALLS**  
CMU CEMENT MASONRY UNITS  
GBP GYPSUM BOARD, PAINT FINISH

JUL 21 2011

**LEGEND**

- 101 ROOM NUMBER
- 00 00 00.000 MATERIAL
- 0'-0" CEILING HEIGHT
- GYPSUM BOARD
- EXPOSED METAL DECK, REFER TO STRUCTURAL PLANS FOR ORIENTATION
- PENDANT MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- CEILING MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- STRUCTURAL BEAM, REFER TO STRUCTURAL PLANS
- STRUCTURAL FRAMING, REFER TO STRUCTURAL PLANS

**1 GROUND FLOOR RCP**  
AS A-3.1 1/4" = 1'-0"

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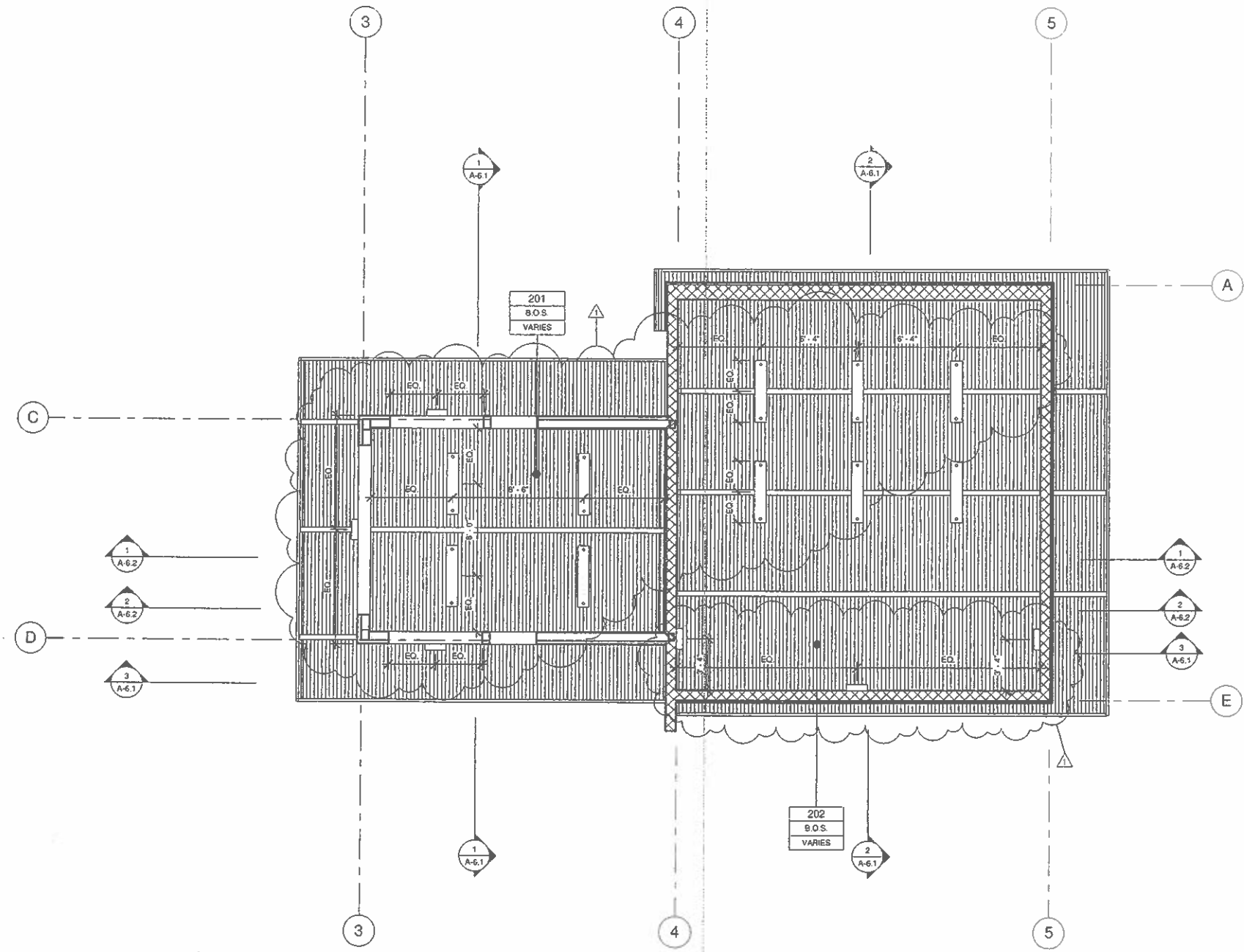
**EL SEGUNDO LS  
GROUND FLOOR RCP**

**A-3.1**  
10/06/10  
SHEET 17 OF 68  
JOB NO. 1109531

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CHECK: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E.

FILE NO. \_\_\_\_\_



**GENERAL NOTES**

- BORDERS AT LAY-IN ACoustICAL CEILING PANELS SHALL BE CUT TO MATCH FACTORY EDGE PROFILE. NO EXPOSED FASTENERS SHALL BE PERMITTED INCLUDING POP RIVETS AND TAPSETS.
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UNLESS OTHERWISE NOTED.
- ALL LIGHT FIXTURES ARE TO BE INSTALLED ACCORDING TO THE ARCHITECTURAL REFLECTED CEILING PLAN. ARCHITECT TO REVIEW CEILING LAYOUT INCLUDING BULKHEADS AND GRID PRIOR TO INSTALLATION.
- LIGHT FIXTURE TYPES, QUANTITIES AND LOCATIONS ONLY ARE NOTED ON ARCHITECTURAL REFLECTED CEILING PLANS. SPECIFICATIONS, SWITCHING, EXIT LIGHTS, EMERGENCY LIGHTING, LIFE SAFETY EQUIPMENT, AND CIRCUITING ARE NOTED ON ENGINEERING DOCUMENTS. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL ARCHITECTURAL AND ENGINEERING DRAWINGS.
- DIMENSIONED LIGHT FIXTURES ARE FROM FINISHED FACE OF PARTITIONS TO CENTERLINE OF FIXTURE AND FROM CENTERLINE OF FIXTURE TO CENTERLINE OF FIXTURE. ALL FIXTURES SHALL BE INSTALLED IN CENTER OF CEILING TILE UNLESS NOTED OTHERWISE. ANY DISCREPANCIES WITH LIGHT FIXTURES, SWITCHES, THERMOSTATS, OR DIFFUSERS AS TO LOCATION BETWEEN ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE CLARIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

**KEYNOTES**

**ABBREVIATIONS**

- BASE  
CTB BULL-NOSED CERAMIC TILE BASE
- CEILING  
B.O.S. BOTTOM OF STRUCTURE, PAINT FINISH  
GBP GYPSUM BOARD, PAINT FINISH
- FLOORS  
CT CERAMIC TILE  
PCON POLISHED CONCRETE  
PLY PLYWOOD  
SCON SEALED CONCRETE
- WAINSCOT  
CTW CERAMIC TILE WAINSCOT
- WALLS  
CMU CEMENT MASONRY UNITS  
GBP GYPSUM BOARD, PAINT FINISH

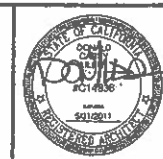
JUL 21 2011

**LEGEND**

- 101 ROOM NUMBER
- 00 00 00.000 MATERIAL
- 0'-0" CEILING HEIGHT
- GYPSUM BOARD
- EXPOSED METAL DECK, REFER TO STRUCTURAL PLANS FOR ORIENTATION
- PENDANT MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- CEILING MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL PLANS
- WALL
- STRUCTURAL BEAM, REFER TO STRUCTURAL PLANS
- STRUCTURAL FRAMING, REFER TO STRUCTURAL PLANS

**1 SECOND FLOOR RCP**  
A3 | A-3.2 | 1/4" = 1'-0"

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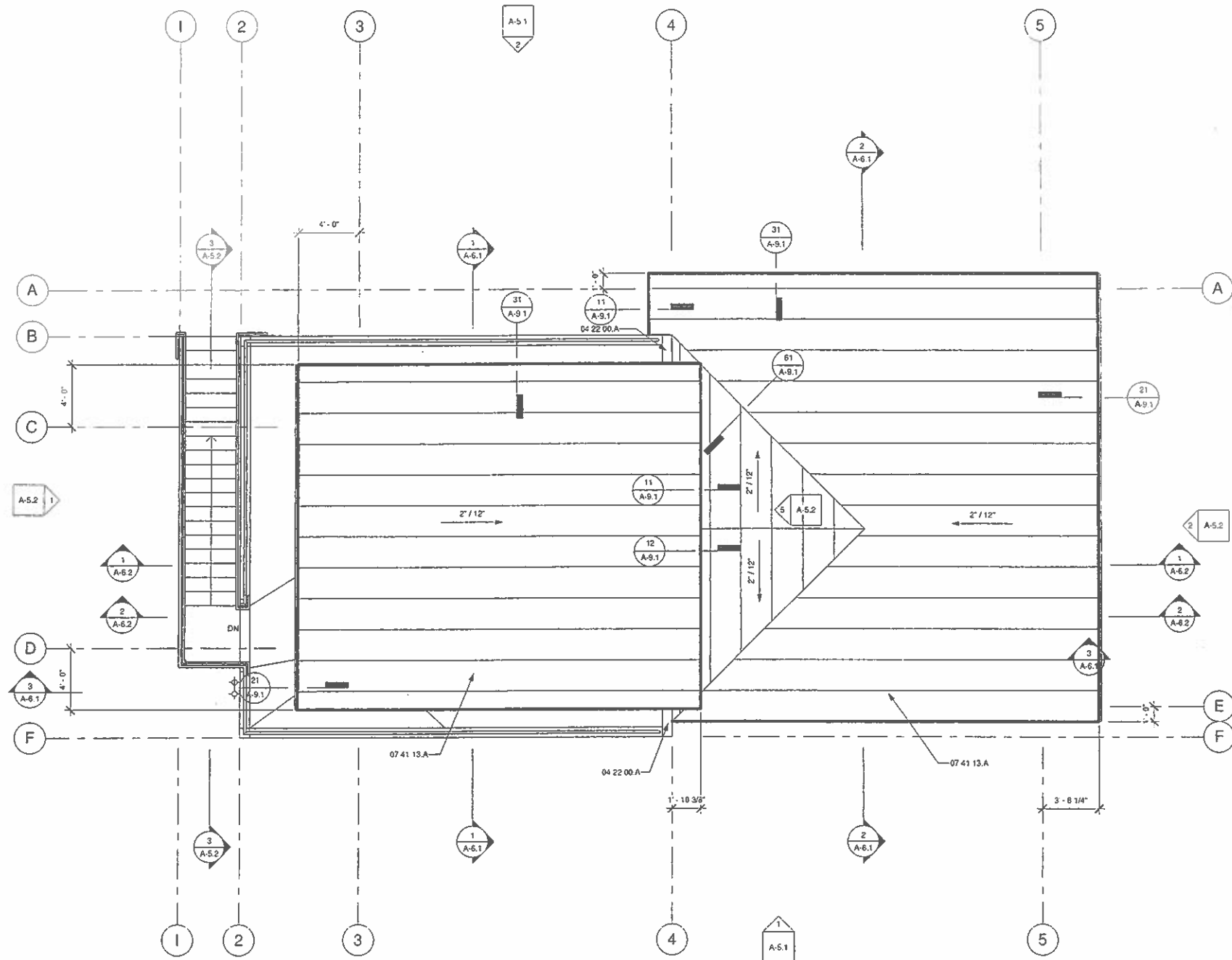
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CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS  
SECOND FLOOR RCP**

**A-3.2**  
10/06/10  
SHEET 18 OF 71  
JOB NO. 1109531

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CHECK: \_\_\_\_\_ DATE: \_\_\_\_\_  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_



**GENERAL NOTES**

- REFER TO STRUCTURAL PLANS FOR ROOF FRAMING INFORMATION INCLUDING MEMBER SIZES AND CONNECTION HARDWARE.
- REFER TO ELECTRICAL PLANS FOR POWER DISTRIBUTION TO ROOF MOUNTED EQUIPMENT.
- REFER TO MECHANICAL PLANS FOR ROOF MOUNTED EQUIPMENT LOCATION AND TYPE.
- REFER TO PLUMBING PLANS FOR ROOF VENT PENETRATION.
- PROVIDE A MINIMUM OF 1 INCH OF AIRSPACE BETWEEN THE INSULATION AND ROOF SHEATHING.

**KEYNOTES**

- 04 22 00.A CH/J WALL COLOR A REFER TO STRUCTURAL  
 07 41 13.A STANDING SEAM METAL ROOF PANEL

**LEGEND**

JUL 21 2011

BID DOCUMENTS

**1 ROOF PLAN**  
 A3 A-4.1 1/4" = 1'-0"

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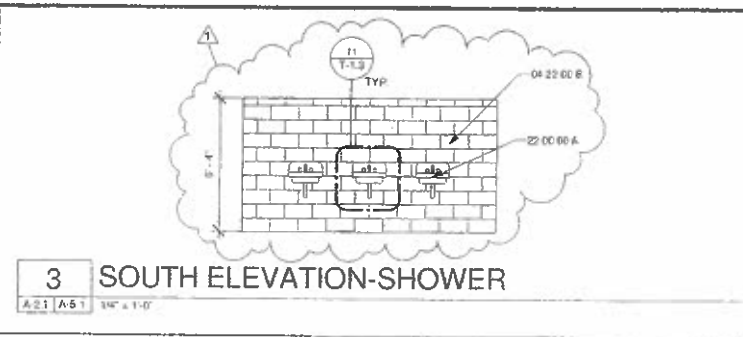
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**EL SEGUNDO LS  
 ROOF PLAN**

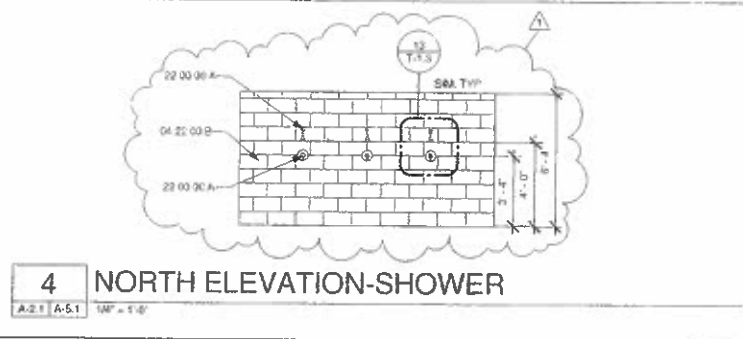
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 SHEET 19 OF 68  
 JOB NO. 1109531

DATE \_\_\_\_\_  
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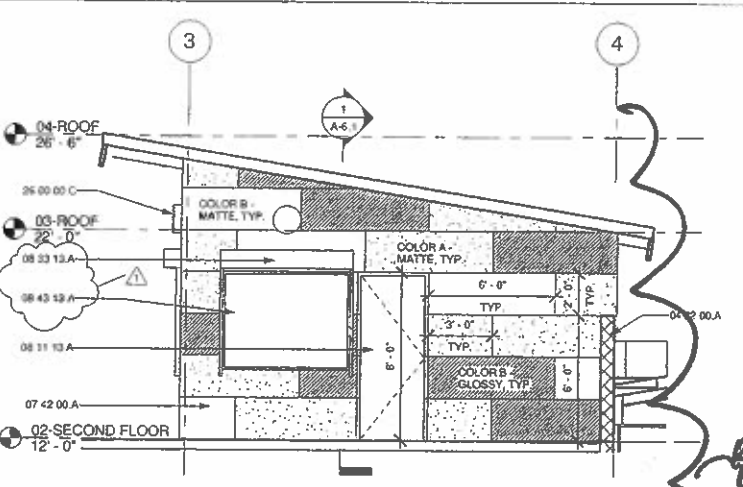
3 SOUTH ELEVATION-SHOWER

A-2.1 | A-5.1 1/4" = 1'-0"



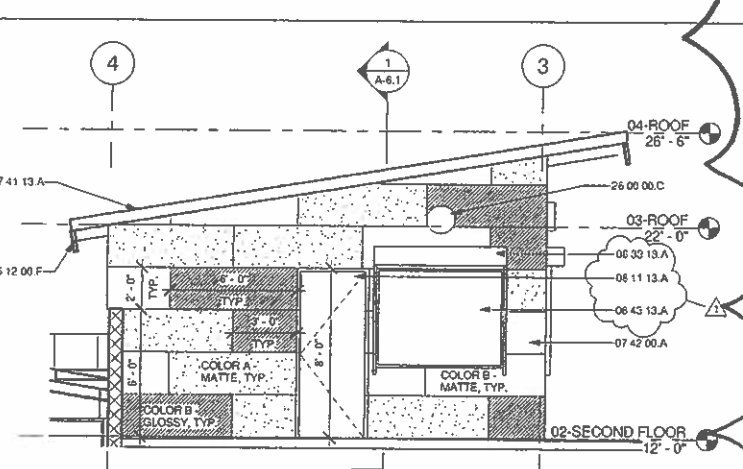
4 NORTH ELEVATION-SHOWER

A-2.1 | A-5.1 1/4" = 1'-0"



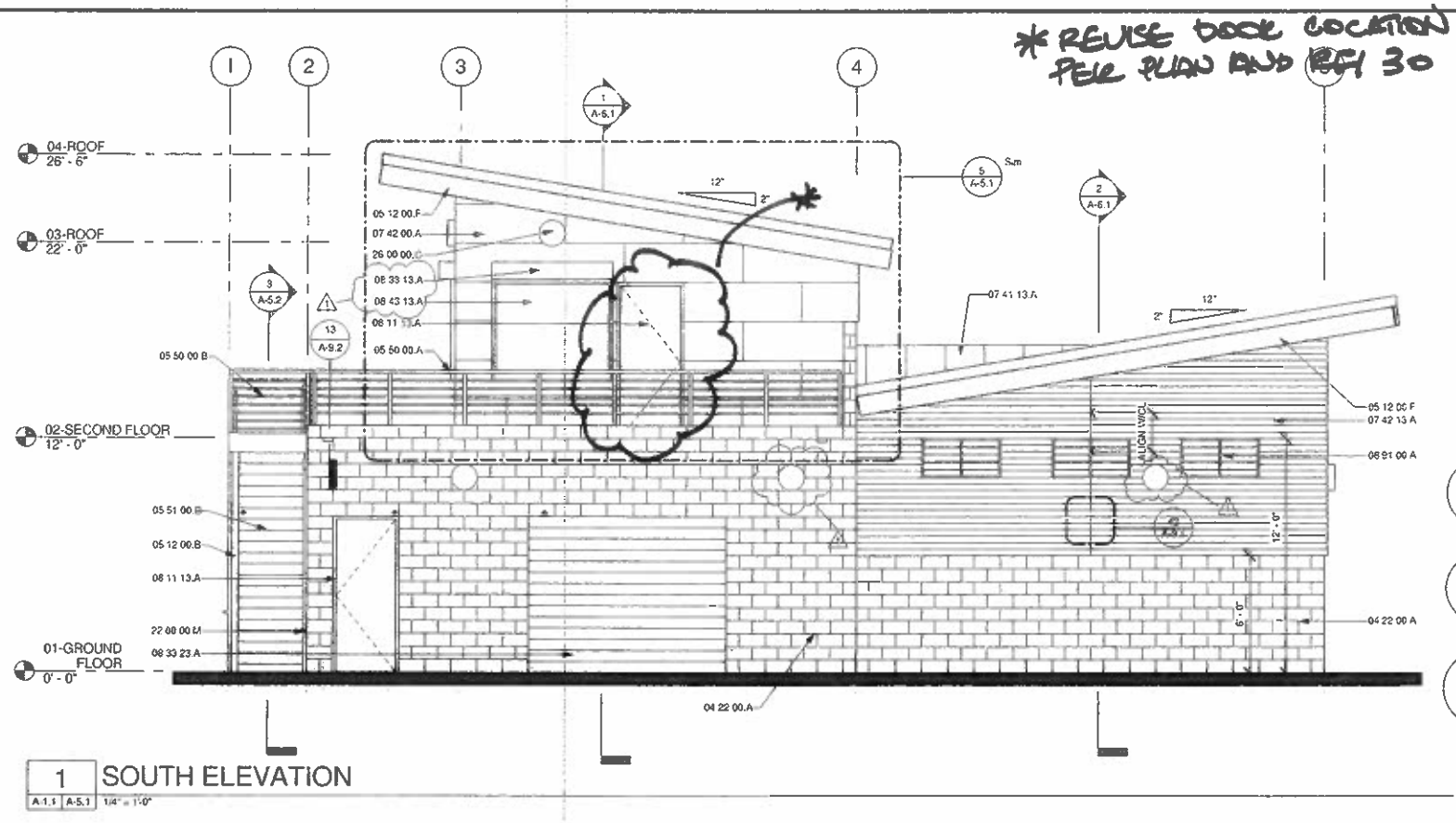
5 SOUTH ELEVATION-LOOKOUT

A-2.2 | A-5.1 1/4" = 1'-0"



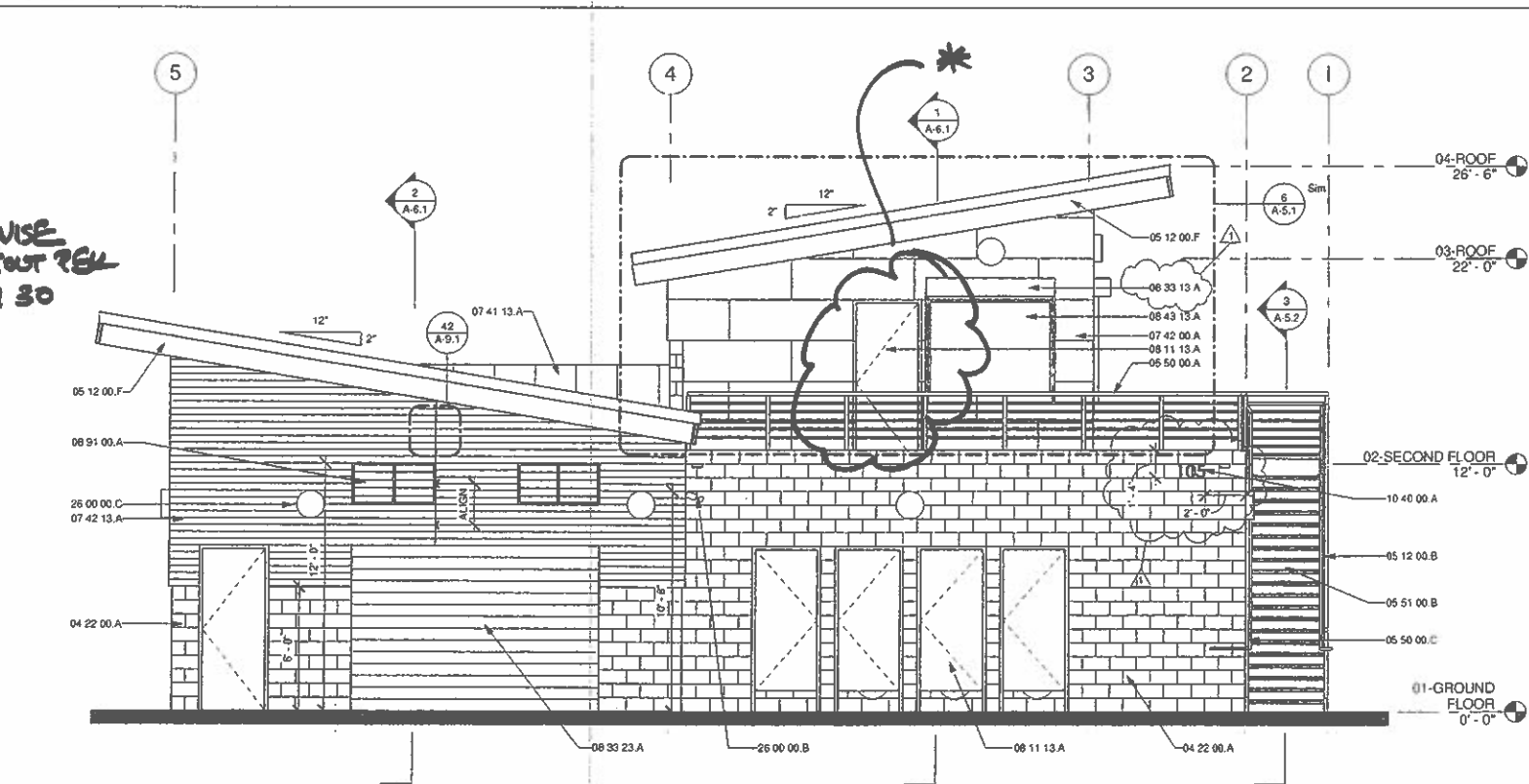
6 NORTH ELEVATION-LOOKOUT

A-2.2 | A-5.1 1/4" = 1'-0"



1 SOUTH ELEVATION

A-1.1 | A-5.1 1/4" = 1'-0"



2 NORTH ELEVATION

A-1.1 | A-5.1 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

- 04 22 00 A CMU WALL. COLOR A REFER TO STRUCTURAL
- 04 22 00 B CMU WALL. COLOR B REFER TO STRUCTURAL
- 05 12 00 B STEEL COLUMN PER STRUCTURAL
- 05 12 00 F STEEL FRAMING PER STRUCTURAL
- 05 50 00 A STEEL GUARDRAIL PAINTED.
- 05 50 00 B STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
- 05 50 00 C STEEL HANDRAIL, PAINTED.
- 05 51 00 B STEEL STAIRS.
- 07 41 13 A STANDING SEAM METAL ROOF PANEL
- 07 42 00 A SOLID PHENOLIC WALL PANELS, RUNNING BOND PATTERN TYP. ALL ALIGN PANELS HORIZONTALLY.
- 07 42 13 A HORIZONTAL METAL PANELS.
- 08 11 13 A HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE
- 08 33 13 A OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
- 08 33 23 A OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
- 08 43 13 A ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE
- 08 91 00 A METAL WALL LOUVER. REFER TO WINDOW SCHEDULE
- 10 40 00 A BUILDING IDENTIFICATION NUMBERS
- 22 00 00 A PLUMBING FIXTURE. REFER TO PLUMBING
- 22 00 00 M HOSE BIB. REFER TO PLUMBING
- 26 00 00 B SECURITY CAMERA PROVIDED BY OWNER. CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
- 26 00 00 C LIGHT FIXTURE. REFER TO ELECTRICAL.

LEGEND

JUL 21 2011

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CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION		<b>A-5.1</b> 10/06/10 SHEET 20 OF 88
EL SEGUNDO LS EXTERIOR ELEVATIONS		
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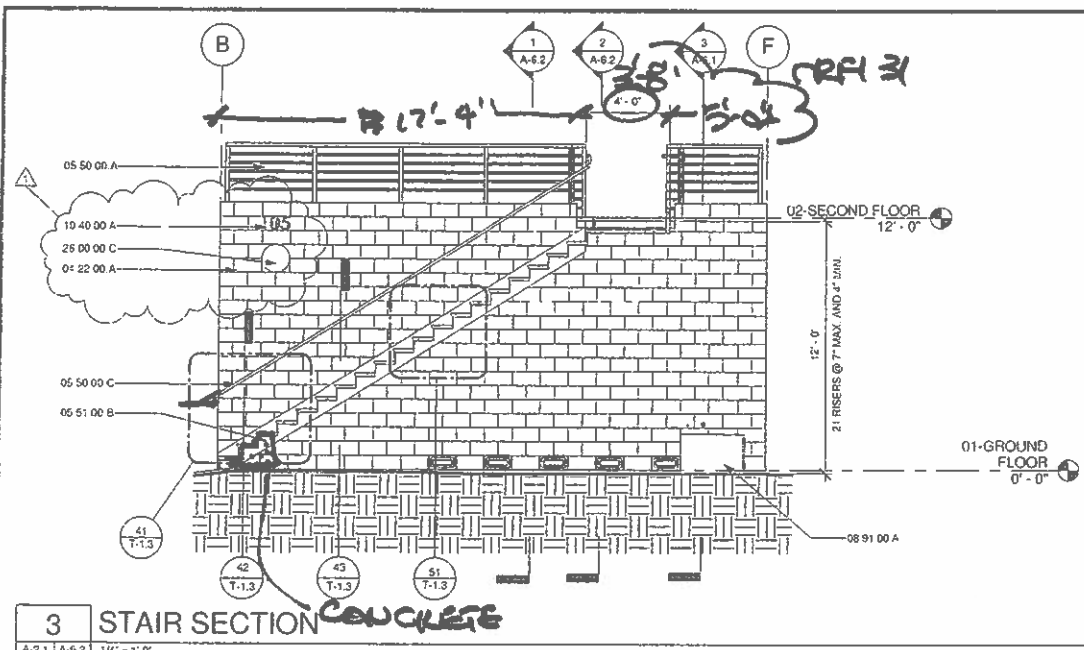
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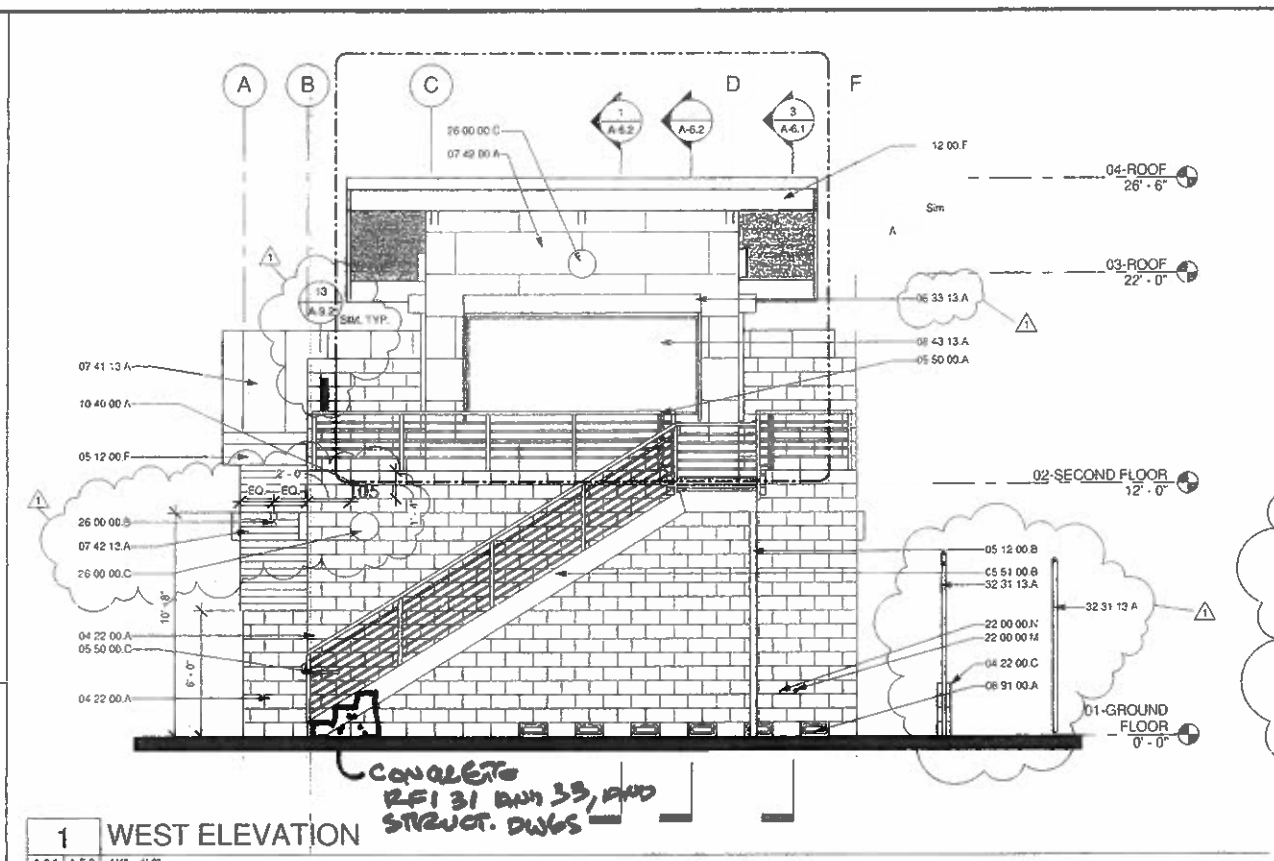
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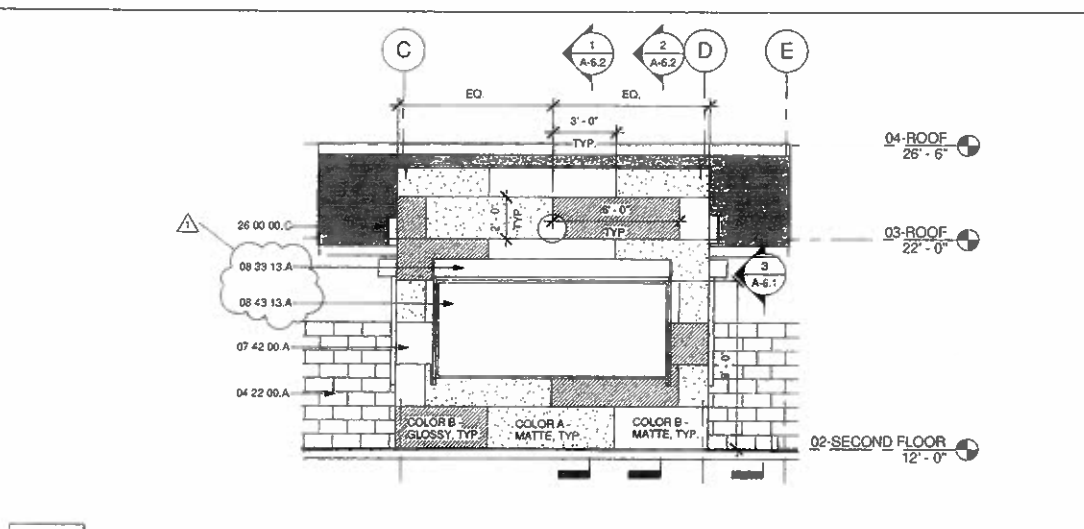
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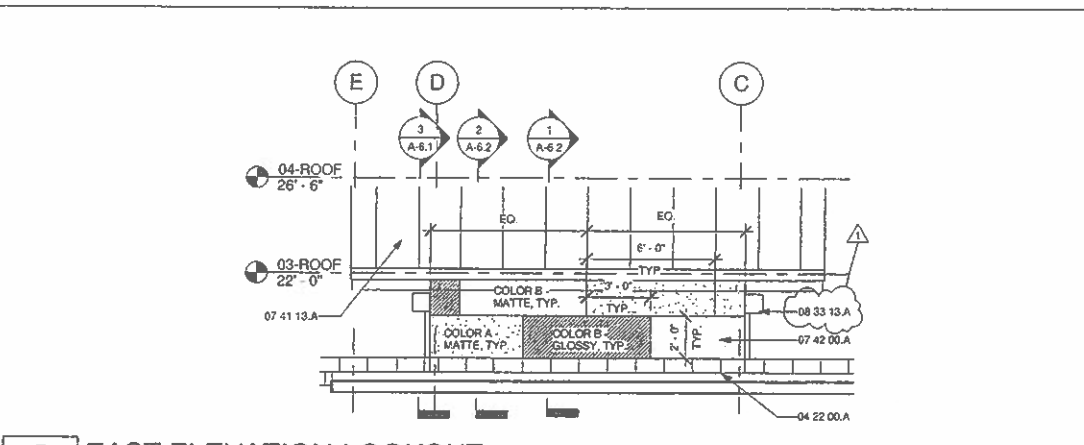
**3 STAIR SECTION**  
A-2.1 | A-5.2 1/4" = 1'-0"



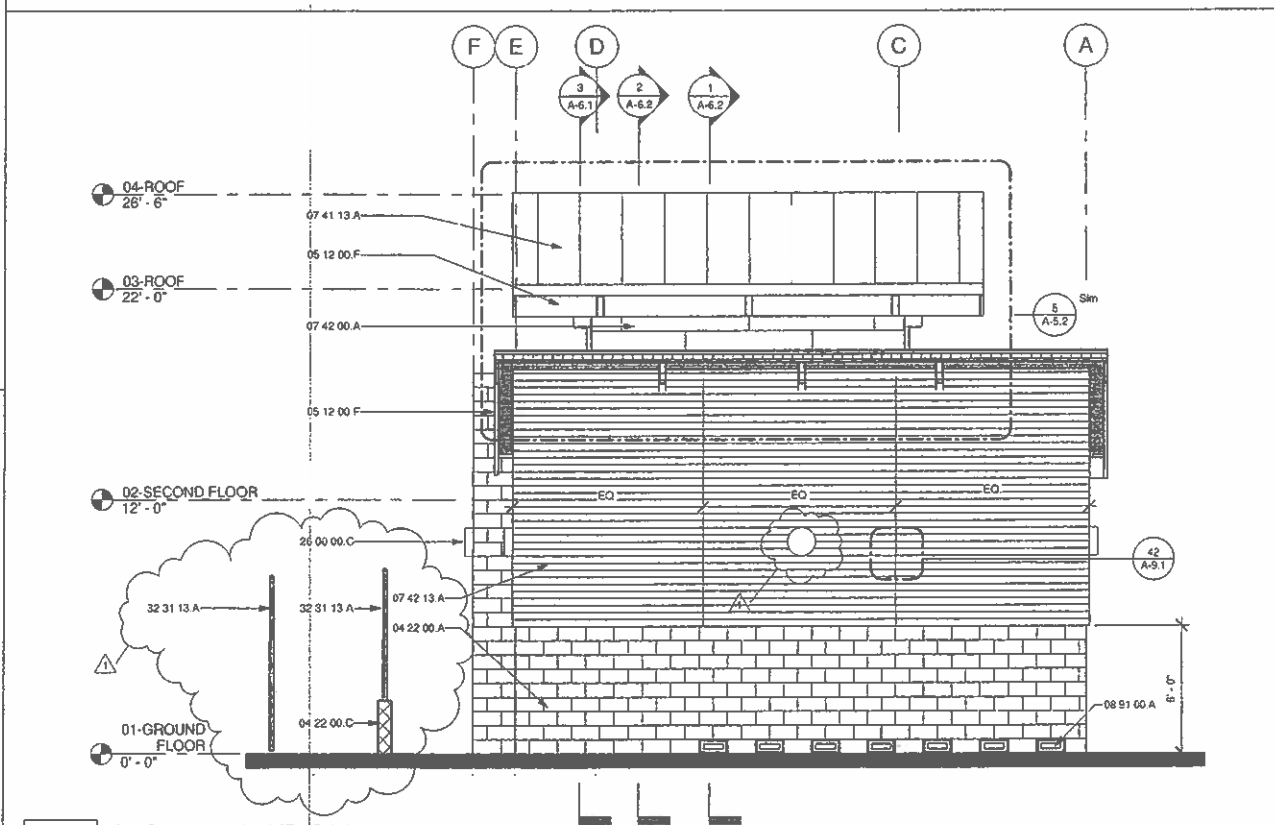
**1 WEST ELEVATION**  
A-2.1 | A-5.2 1/4" = 1'-0"



**4 WEST ELEVATION-LOOKOUT**  
A-2.2 | A-5.2 1/4" = 1'-0"



**5 EAST ELEVATION-LOOKOUT**  
A-2.3 | A-5.2 1/4" = 1'-0"



**2 EAST ELEVATION**  
A-2.1 | A-5.2 1/4" = 1'-0"

**GENERAL NOTES**

**KEYNOTES**

- 04 22 00 A CMU WALL. COLOR A REFER TO STRUCTURAL.
- 04 22 00 C CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
- 05 12 00 E STEEL FRAMING PER STRUCTURAL.
- 05 12 00 F STEEL GUARDRAIL. PAINTED.
- 05 50 00 A STEEL STAIRS.
- 05 50 00 C STEEL HANDRAIL. PAINTED.
- 05 51 00 B STEEL STAIRS.
- 07 41 13 A STANDING SEAM METAL ROOF PANEL.
- 07 42 00 A SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL ALIGN PANELS HORIZONTALLY.
- 07 42 12 A HORIZONTAL METAL PANELS.
- 08 33 13 A OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
- 08 43 13 A ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
- 08 91 00 A METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
- 10 40 00 A BUILDING IDENTIFICATION NUMBERS.
- 22 00 00 M HOSE BIB. REFER TO PLUMBING.
- 22 00 00 N AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
- 26 00 00 B SECURITY CAMERA PROVIDED BY OWNER CONTRACTOR TO INSTALL. REFER TO ELECTRICAL.
- 26 00 00 C LIGHT FIXTURE. REFER TO ELECTRICAL.
- 32 31 13 A CHAIN LINK FENCE. REFER TO CIVIL.

**LEGEND**

JUL 21 2011

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CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

EL SEGUNDO LS  
EXTERIOR ELEVATIONS

**A-5.2**

10/06/10

SHEET 21 OF 68

JOB NO. 1109531

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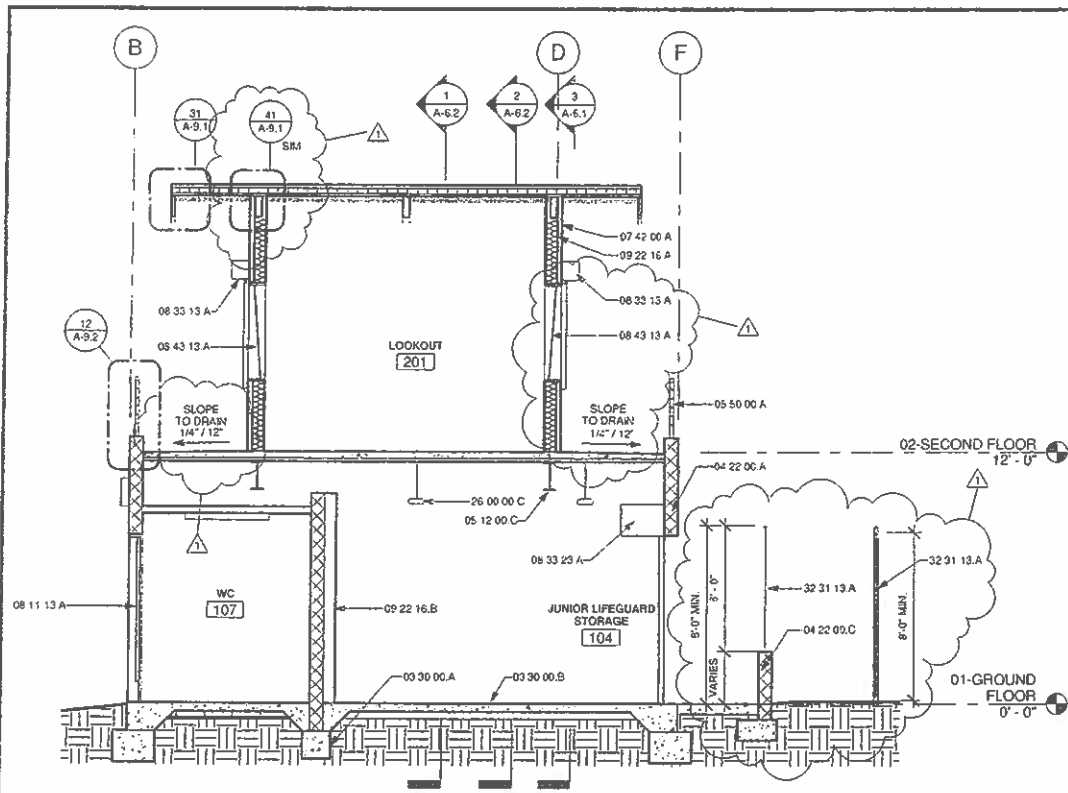
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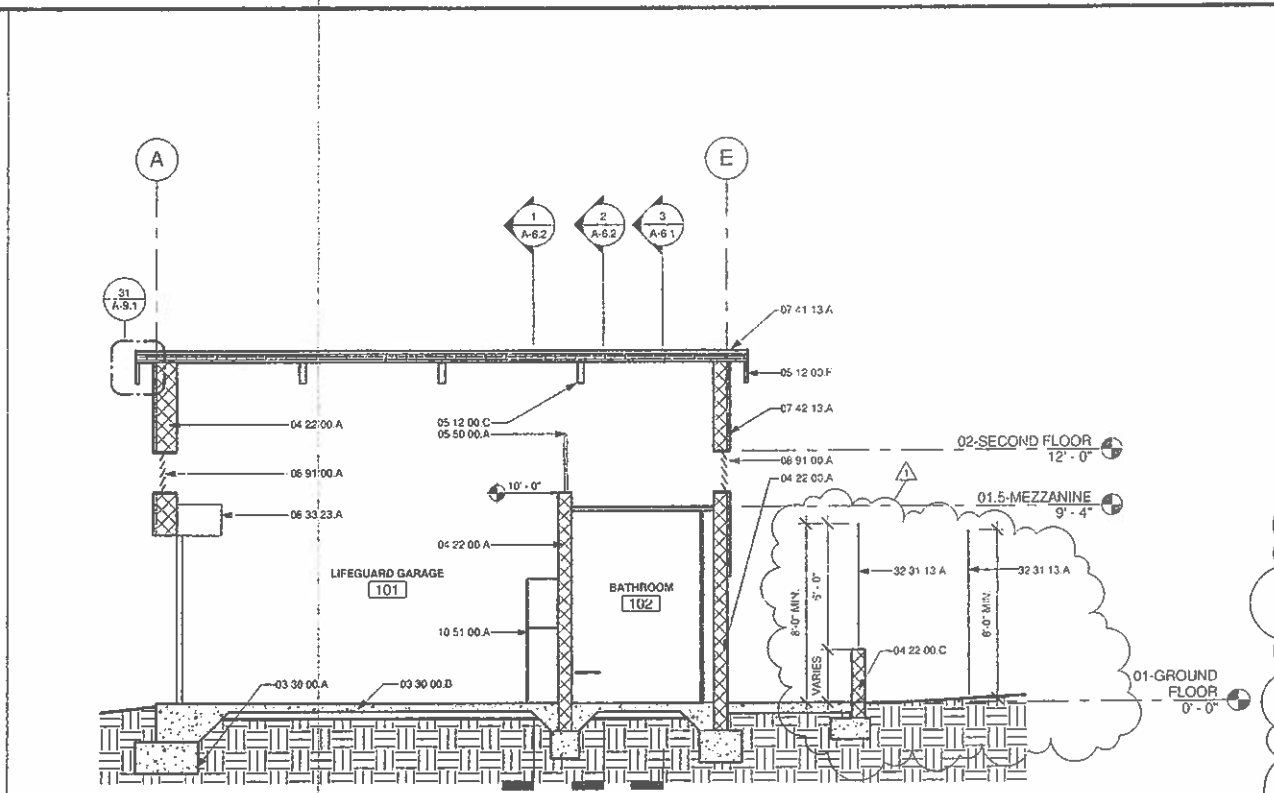
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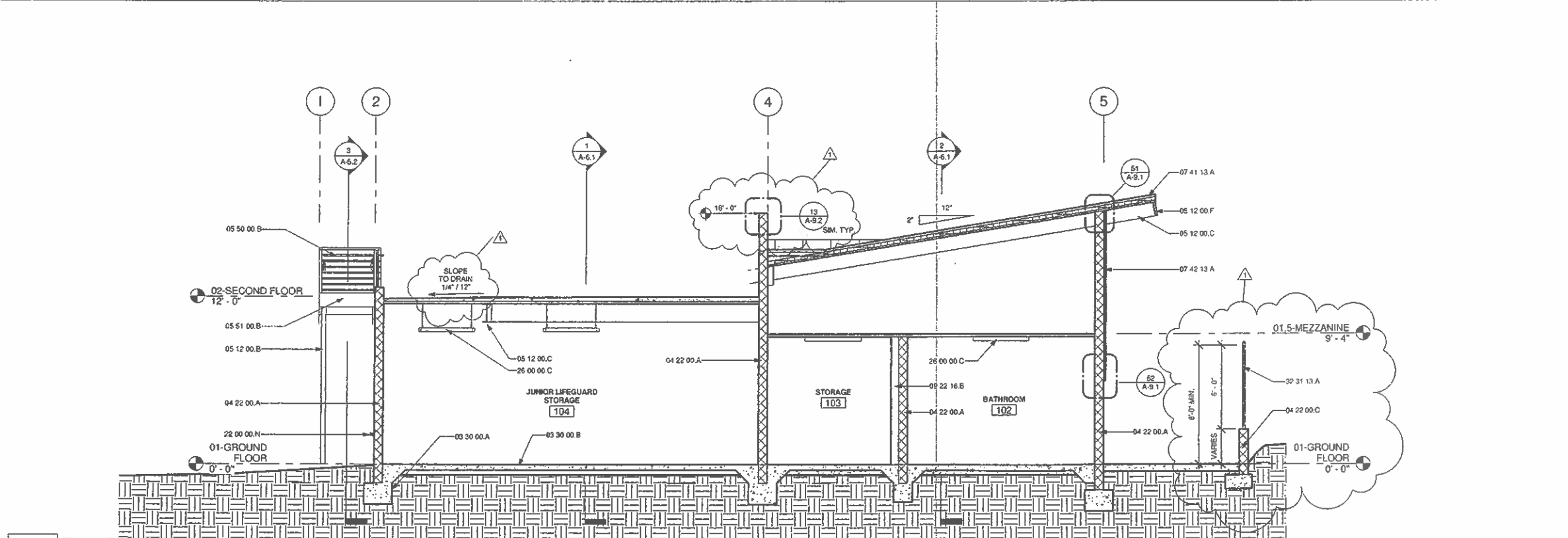
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**1 BUILDING SECTION 1**  
A-2.1 | A-6.1 1/4" = 1'-0"



**2 BUILDING SECTION 2**  
A-2.1 | A-6.1 1/4" = 1'-0"



**3 BUILDING SECTION 3**  
A-2.1 | A-6.1 1/4" = 1'-0"

**GENERAL NOTES**

**KEYNOTES**

- 03 30 00.A CONCRETE FOOTING. REFER TO STRUCTURAL.
- 03 30 00.B CONCRETE SLAB. REFER TO STRUCTURAL.
- 04 22 00.A CMU WALL. COLOR A. REFER TO STRUCTURAL.
- 04 22 00.C CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL.
- 05 12 00.B STEEL COLLUM PER STRUCTURAL.
- 05 12 00.C STEEL BEAM PER STRUCTURAL.
- 05 12 00.F STEEL FRAMING PER STRUCTURAL.
- 05 50 00.A STEEL GUARDRAIL. PAINTED.
- 05 50 00.B STEEL GUARDRAIL W/ HANDRAIL. PAINTED.
- 05 51 00.B STEEL STAIRS.
- 07 41 13.A STANDING SEAM METAL ROOF PANEL.
- 07 42 00.A SOLID PHENOLIC WALL PANELS. RUNNING BOND PATTERN TYP. ALL ALIGN PANELS HORIZONTALLY.
- 07 42 13.A HORIZONTAL METAL PANELS.
- 08 11 13.A HOLLOW METAL DOOR & FRAME. REFER DOOR SCHEDULE.
- 08 33 13.A OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
- 08 33 23.A OVERHEAD COILING DOOR. REFER TO DOOR SCHEDULE.
- 08 43 13.A ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
- 08 91 00.A METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
- 09 22 16.A METAL STUD WALL FRAMING. REFER TO STRUCTURAL PLANS.
- 09 22 16.B METAL STUD FURRING AT INTERIOR CMU WALL.
- 10 51 00.A METAL LOCKERS W/ TOP SHELF. WALL MOUNTED.
- 22 00 00.N AIR COMPRESSOR CONNECTION. REFER TO PLUMBING.
- 26 00 00.C LIGHT FIXTURE. REFER TO ELECTRICAL.
- 32 31 13.A CHAIN LINK FENCE. REFER TO CIVIL.

**LEGEND**

JUL 21 2011

BID DOCUMENTS

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

EL SEGUNDO LS  
BUILDING SECTIONS

**A-6.1**

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SHEET 22 OF 68

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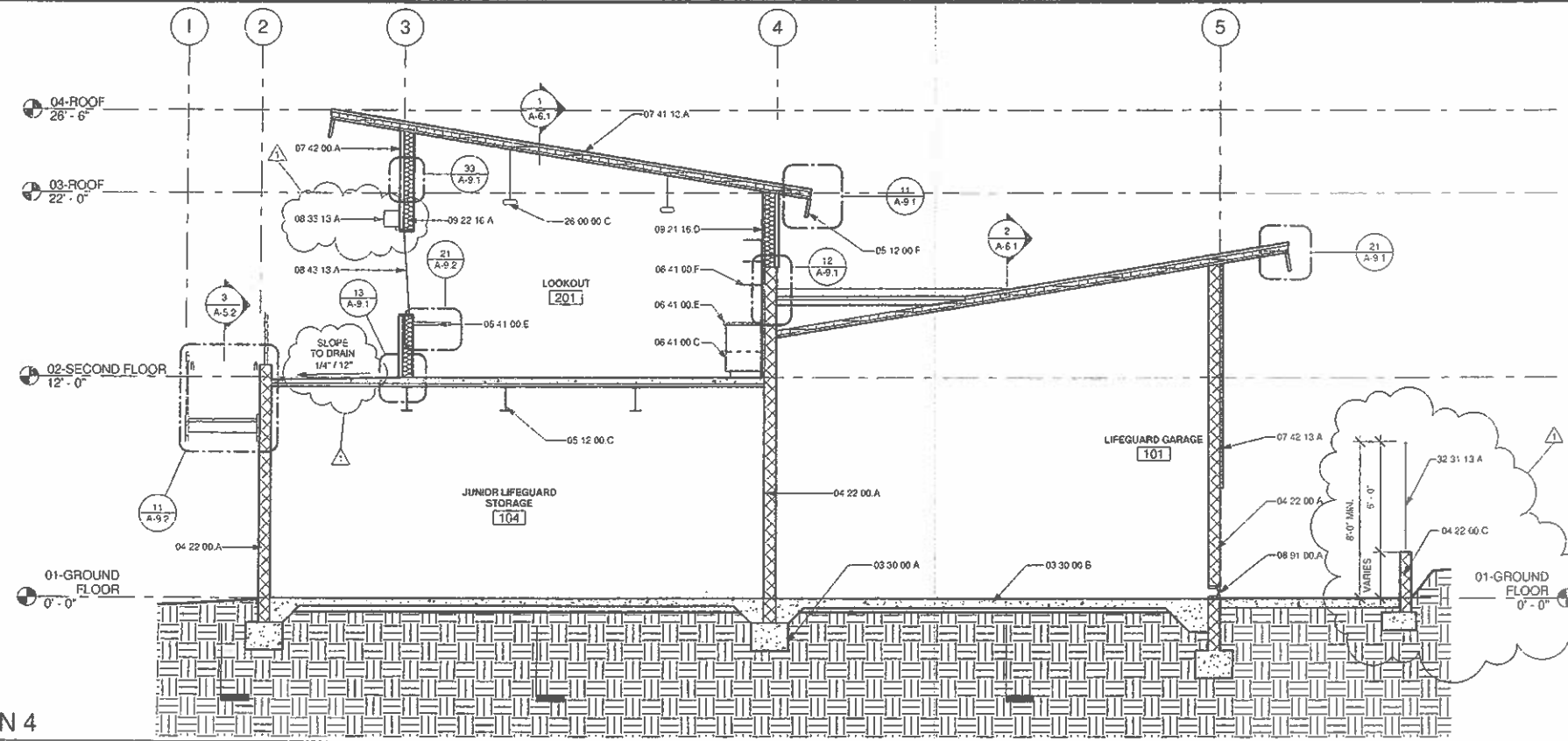


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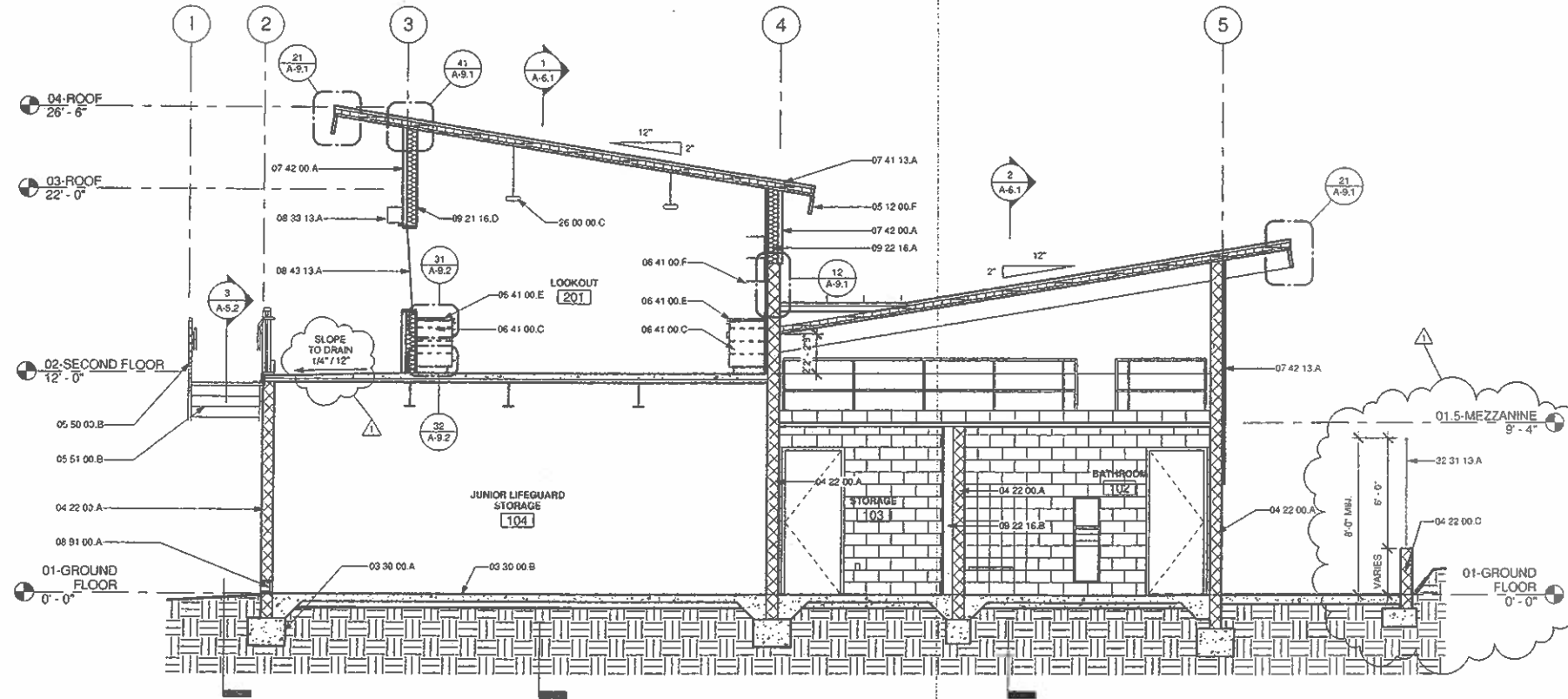
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**1 BUILDING SECTION 4**  
A-2.1 | A-6.2 1/4" = 1'-0"



**2 BUILDING SECTION 5**  
A-2.1 | A-6.2 1/4" = 1'-0"

**GENERAL NOTES**

**KEYNOTES**

- 03 30 00 A CONCRETE FOOTING REFER TO STRUCTURAL
- 03 30 00 B CONCRETE SLAB. REFER TO STRUCTURAL
- 04 22 00 A CMU WALL. COLOR A. REFER TO STRUCTURAL
- 04 22 00 C CMU RETAINING WALL. COLOR B. REFER TO CIVIL AND STRUCTURAL
- 05 12 00 C STEEL BEAM PER STRUCTURAL
- 05 12 00 F STEEL GUARDRAIL W/ HANDRAIL. PAINTED
- 05 50 00 B STEEL STAIRS
- 06 41 00 C BASE CABINETS W/ DRAWERS, DOORS & PULL OUT SHELVINGS
- 06 41 00 E COUNTER TOP WITH BACKSPLASH
- 06 41 00 F UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVINGS
- 07 41 13 A STANDING SEAM METAL ROOF PANEL
- 07 42 00 A SOLID PHENOLIC WALL PANELS. FINISHING BOND PATTERN TYP. ALL ALIGN PANELS HORIZONTALLY.
- 07 42 13 A HORIZONTAL METAL PANELS
- 08 33 13 A OVERHEAD COILING COUNTER DOOR. REFER TO DOOR SCHEDULE.
- 08 43 13 A ALUMINUM FRAMED STOREFRONT WINDOW. REFER TO WINDOW SCHEDULE.
- 08 91 00 A METAL WALL LOUVER. REFER TO WINDOW SCHEDULE.
- 09 21 16 D GYPSUM BOARD WALL FINISH.
- 09 22 16 A METAL STUD WALL FRAMING. REFER TO STRUCTURAL PLANS
- 09 22 16 B METAL STUD FURRING AT INTERIOR CMU WALL
- 26 00 00 C LIGHT FIXTURE. REFER TO ELECTRICAL
- 32 31 13 A CHAIN LINK FENCE. REFER TO CIVIL

**LEGEND**

JUL 21 2011

**BID DOCUMENTS**

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS  
BUILDING SECTIONS**

**A-6.2**

10/06/10

SHEET 23 OF 68

JOB NO. 1109531

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FILE NO.

**GENERAL NOTES**

**KEYNOTES**

- 04 22 00 A CMU WALL, COLOR A REFER TO STRUCTURAL
- 05 12 00 C STEEL BEAM PER STRUCTURAL
- 05 50 00 A STEEL GUARDRAIL, PAINTED
- 05 51 00 A ACCESS LADDER
- 06 41 00 C BASE CABINETS W/ DRAWERS, DOORS & PULL OUT SHELVING
- 06 41 00 E COUNTERTOP WITH BACKSPASH
- 06 41 00 F UPPER CABINET WITH EXPOSED ADJUSTABLE SHELVING
- 07 41 13 A STANDING SEAM METAL ROOF PANEL
- 08 11 13 A HOLLOW METAL DOOR & FRAME REFER DOOR SCHEDULE
- 08 43 13 A ALUMINUM FRAMED STOREFRONT WINDOW REFER TO WINDOW SCHEDULE
- 08 91 00 A METAL WALL LOWER REFER TO WINDOW SCHEDULE
- 09 21 14 D GYPSUM BOARD WALL FINISH
- 09 30 00 A CERAMIC TILE WANGS/TOE
- 09 30 00 B CERAMIC TILE WANGS/TOE
- 10 28 00 A SURFACE MOUNTED TOWEL DISPENSER/WASTE RECEPTACLE
- 10 28 00 C SURFACE MOUNTED TOILET TISSUE DISPENSER
- 10 28 00 E SCRAP DISPENSER
- 10 28 00 F SHOWER BENCH
- 10 28 00 J GRAB BAR
- 10 28 00 K WALL MOUNTED MIRROR
- 10 28 00 L SURFACE MOUNTED SEAT COVER DISPENSER
- 10 51 00 A METAL LOCKERS W/ TOP SHELF, WALL MOUNTED
- 11 31 00 B UNDER CABINET REFRIGERATOR, OWNER FINISHED AND INSTALLED
- 11 31 00 C MICROWAVE, OWNER FINISHED AND INSTALLED
- 22 00 00 A PLUMBING FIXTURE, REFER TO PLUMBING
- 26 00 00 C LIGHT FIXTURE, REFER TO ELECTRICAL

**LEGEND**

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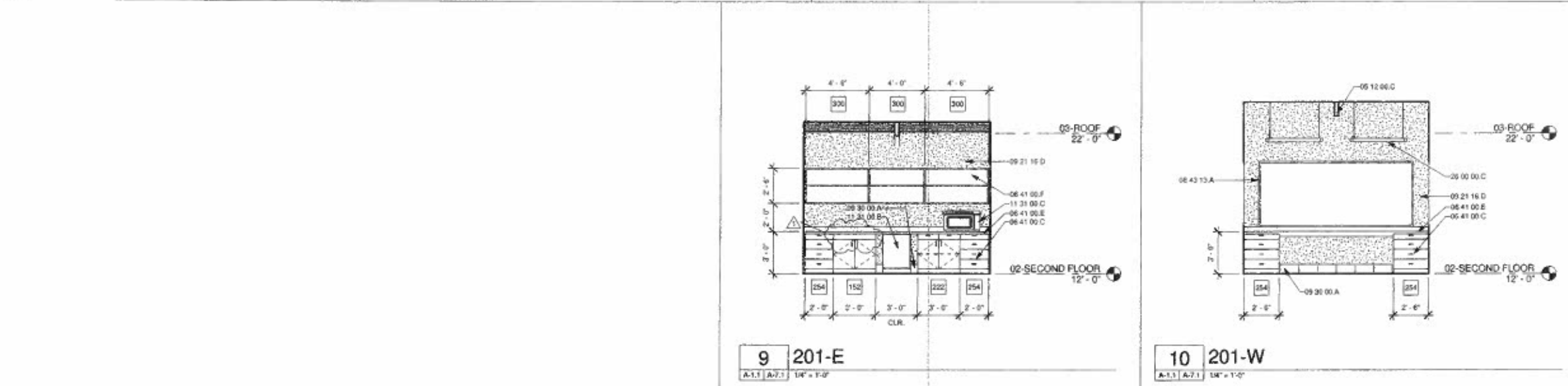
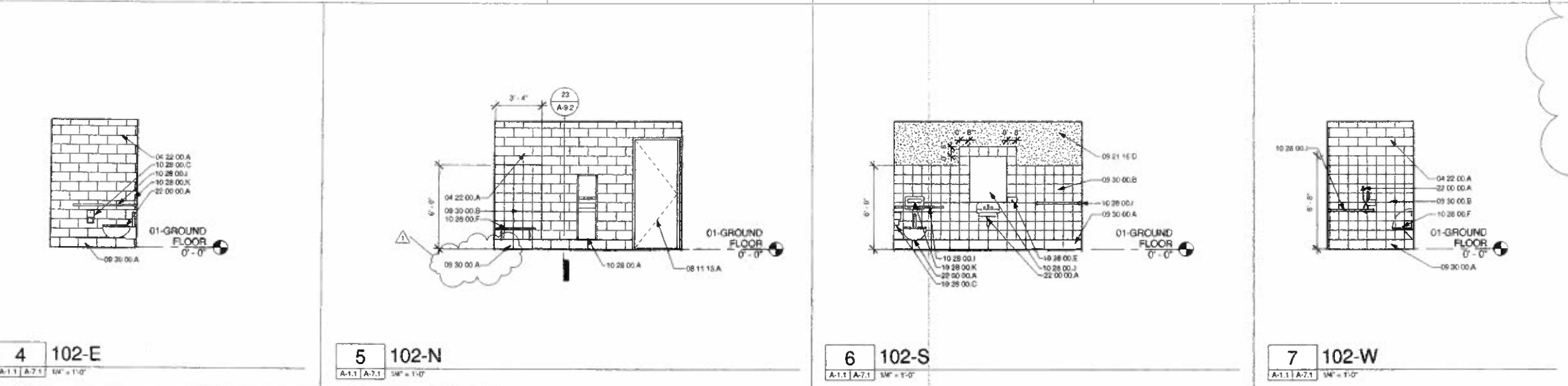
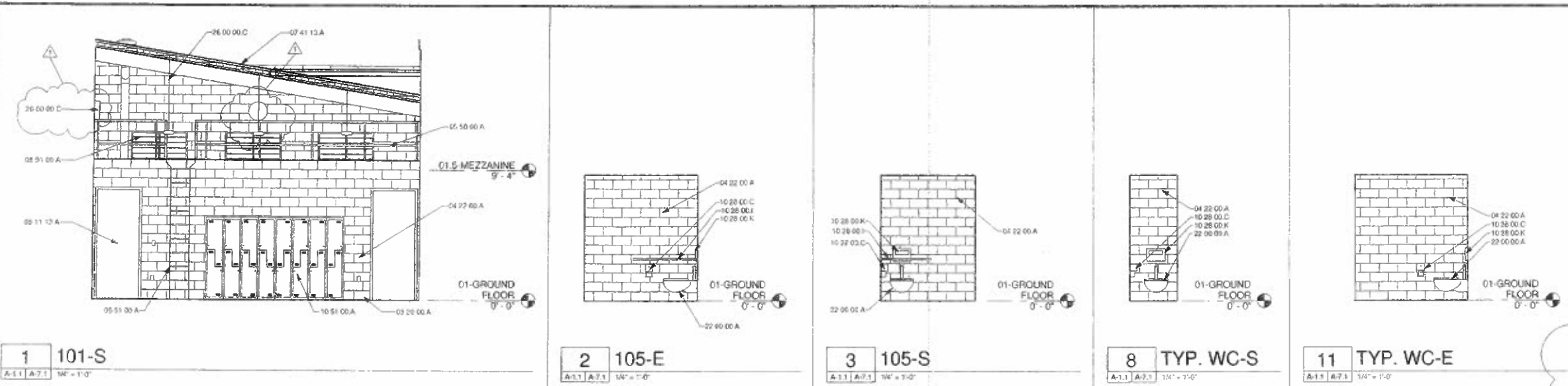
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**EL SEGUNDO LS  
INTERIOR ELEVATIONS**

**A-7.1**  
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SHEET 24 OF 46  
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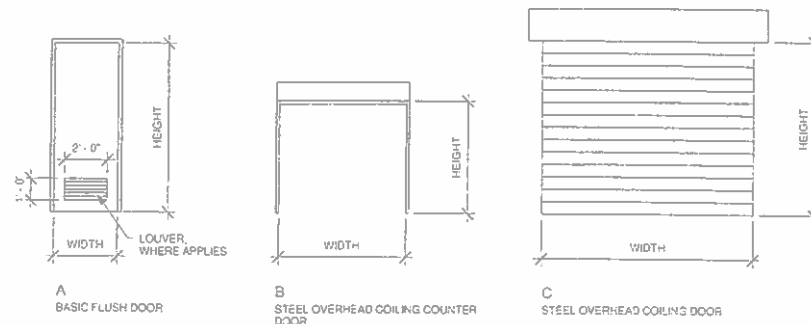
# GENERAL NOTES

- REFER TO DOOR AND HARDWARE SCHEDULE FOR EXTENT, TYPE AND ADDITIONAL NOTES. ACCEPTABLE WOOD DOOR MANUFACTURERS TO BE WEYERHAEUSER, EGGERS, MONARK OR ARCHITECT APPROVED EQUAL. GENERAL CONTRACTOR SHALL PROVIDE A HARDWARE SCHEDULE AND CATALOGUE CUTS FOR ALL FINISH HARDWARE FOR APPROVAL BY THE ARCHITECT INDICATING LOCATION OF HARDWARE SET, CROSS-REFERENCED TO INDICATIONS ON DRAWINGS. MANUFACTURER'S NAME AND PRODUCT NUMBER, FINISH, AND OTHER SIMILAR INFORMATION; BUT DESCRIBING HARDWARE TO BE PROVIDED. ITEMS OF HARDWARE NOT DEFINITELY SPECIFIED, BUT NEEDED FOR SATISFACTORY INSTALLATION OF HARDWARE SHALL BE PROVIDED. SUCH ITEMS SHALL BE OF TYPE AND QUALITY SUITABLE FOR SERVICE NEEDED AND COMPARABLE TO ADJACENT HARDWARE.
- ALL DOORS SHALL BE SET 6" OFF ADJACENT PERPENDICULAR WALL, UNLESS DOORS SHALL NOT BE UNDERCUT, UNLESS ALL LEVERS, PULLS, AND DOORLOCKS ARE TO BE PROVIDED PER THE SCHEDULE. ALL HINGES AND OTHER MISCELLANEOUS EXPOSED HARDWARE SHALL BE IN SIMILAR AND COMPATIBLE FINISHES AS INDICATED ON HARDWARE SCHEDULE.
- GENERAL CONTRACTOR SHALL COORDINATE KEYING SYSTEM WITH OWNER (BUILDING MANAGEMENT), LANDLORD, AND ARCHITECT. GENERAL CONTRACTOR SHALL COORDINATE SECURITY SYSTEM WITH SYSTEM VENDOR AND SCHEDULED HARDWARE AND THE SUBMITTAL OF ALL SECURITY HARDWARE SPECIFICATIONS AND CUT SHEETS TO THE PROPER AUTHORITIES FOR REVIEW AND APPROVAL DURING BUILDING PERMIT PROCESS.
- PROVIDE HARDWARE, DOOR PULLS, HINGES, CLOSERS, ELECTROMAGNETIC DEVICES, ETC. NEEDED TO PROVIDE A FULL AND COMPLETE INSTALLATION. PROVIDE SILENCERS AT METAL FRAME DOORS. ENSURE ADEQUATE BLOCKING FOR WALL MOUNTED STOPS. SUBMIT TO ARCHITECT FOR APPROVAL.
- PROVIDE 4 1/2" X 4 1/2" FULL MORTISE, TEMPLATE, 5-KNUCKLE, HEAVY DUTY, BUTTON TIP HINGES WITH NON-RISING LOOSE PINS AND ANTI-FRICTION, BALL TYPE BEARING. DOORS WITH LOCKSETS SHALL BE FURNISHED WITH NON-RISING LOOSE PINS HINGES. PROVIDE 1-1/2" PAIR HINGES FOR DOORS UP TO 90" IN HEIGHT. ADD 1 HINGE FOR EVERY ADDITIONAL 30" IN HEIGHT.
- HEAVY DUTY CYLINDRICAL LOCKSETS AND LATCHSETS SHALL CONFORM TO ANSI A156.2, SERIES 4000, GRADE 1. FUNCTIONS AS LISTED IN SCHEDULE. HEAVY DUTY MORTISE LOCKSETS AND LATCHSETS, LEVERS SHALL CONFORM TO ANSI A156.13 SERIES, 1000, GRADE 1. OVERHEAD CLOSERS SHALL BE SURFACE MOUNTED OR CONCEALED OVERHEAD AS NOTED IN THE HARDWARE SCHEDULE AND SHALL BE HEAVY DUTY, FULLY HYDRAULIC, RACK AND PINION ACTION AND SIZED TO BE IN COMPLIANCE WITH REQUIREMENTS FOR ACCESSIBILITY FOR HANDICAPPED AND RECOMMENDATIONS OF MANUFACTURER. FURNISH COMPLETE WITH ALL NECESSARY HARDWARE. FURNISH 2 KEYS PER LOCK WITH A MAXIMUM OF 8 KEYS PER KEYSER ALIKE SET. BEFORE FINAL COMPLETION, ADJUST HARDWARE SO THAT DOORS OPERATE IN PERFECT ORDER. TEST AND ADJUST HARDWARE FOR QUIET, SMOOTH OPERATION AND ADJUST CLOSERS FOR PROPER OPERATION. AT FINAL COMPLETION, PROPERLY TAG AND IDENTIFY KEYS AND DELIVER TO OWNER.
- EXIT DOORS TO HAVE SINGLE ACTING HARDWARE WITH NO SPECIAL KNOWLEDGE TO OPERATE. (CFC SECTION 1006.1.8)

# HARDWARE SCHEDULE

HW SET	QTY	DESCRIPTION	QTY	UNIT	QTY	UNIT
HW SET: 001						
4 EA		HINGE	3CB1 4.5 X 4.5	630	IVE	
1 EA		STOREROOM LOCK	LV94801 17A	630	SCH	
1 EA		CYLINDER	CYLINDER(S) AS REQD	626	C-R	
1 EA		SURFACE CLOSER	4011 SRI	689	LCN	
1 EA		KICK PLATE	8400 10" X 2" LDW	630	IVE	
1 EA		SECURITY FLOOR STOP	FS18L	630	IVE	
1 SET		SEALS	129NSS	630	NGP	
1 EA		DOOR SWEEP	200NSS	630	NGP	
1 EA		THRESHOLD	THRESHOLD PER DETAIL	AL	NGP	
HW SET: 002						
3 EA		HINGE	3CB1HW 4.5 X 4.5	630	IVE	
1 EA		PRIVACY LOCK	LV9496L 17A L583-363	630	SCH	
1 EA		CYLINDER	CYLINDER(S) AS REQUIRED	626	C-R	
1 EA		SURFACE CLOSER	4011 DEL SRI X ST3135	689	LCN	
1 EA		WALL STOP	WS407CVX X MASONRY ANCHORS	630	IVE	
3 EA		SILENCER	SR6465/86 AS REQD	630	IVE	
1 EA		RESTROOM SIGN	SB443/444/445 AS REQD	BLU	SBH	
HW SET: 003						
3 EA		HINGE	3CB1HW 4.5 X 4.5	630	IVE	
1 EA		PRIVACY LOCK	LV9496L 17A L583-363	630	SCH	
1 EA		CYLINDER	CYLINDER(S) AS REQD	626	C-R	
1 EA		SURFACE CLOSER	4011 DEL SRI	689	LCN	
1 EA		WALL STOP	WS407CVX X MASONRY ANCHORS	630	IVE	
3 EA		SILENCER	SR6465/86 AS REQD	630	IVE	
1 EA		RESTROOM SIGN	SB443/444/445 AS REQD	BLU	SBH	
HW SET: 004						
4 EA		HINGE	3CB1 4.5 X 4.5 NRP SH	630	IVE	
1 EA		CLASSROOM LOCK	LV9070L 17A	630	SCH	
1 EA		CYLINDER	CYLINDER(S) AS REQD	626	C-R	
1 EA		SURFACE CLOSER	4111 SHOUSH SRI	689	LCN	
1 EA		KICK PLATE	8400 10" X 2" LDW	630	IVE	
1 SET		SEALS	129NSS	630	NGP	
1 EA		DOOR SWEEP	200NSS	630	NGP	
1 EA		THRESHOLD	THRESHOLD PER DETAIL	AL	NGP	
1 EA		LOCK GUARD	LG12	630	IVE	
HW SET: 005						
4 EA		HINGE	3CB1 4.5 X 4.5	630	IVE	
1 EA		CLASSROOM LOCK	LV9070L 17A	630	SCH	
1 EA		CYLINDER	CYLINDER(S) AS REQD	626	C-R	
1 EA		SECURITY FLOOR STOP	FS18L	630	IVE	
1 EA		SEALS	129NSS	630	NGP	
1 SET		DOOR SWEEP	200NSS	630	NGP	
1 EA		THRESHOLD	THRESHOLD PER DETAIL	AL	NGP	
HW SET: 006						
4 EA		HINGE	3CB1 4.5 X 4.5	630	IVE	
1 EA		PRIVACY LOCK	LV940 17A L583-363	630	SCH	
1 EA		SURFACE CLOSER	4011 DEL SRI	689	LCN	
1 EA		KICK PLATE	8400 10" X 2" LDW	630	IVE	
1 EA		SECURITY FLOOR STOP	FS18L	630	IVE	
1 SET		SEALS	129NSS	630	NGP	
1 EA		DOOR SWEEP	200NSS	630	NGP	
1 EA		THRESHOLD	THRESHOLD PER DETAIL	AL	NGP	
1 EA		RESTROOM SIGN	SB443/444/445 AS REQD	BLU	SBH	
HW SET: 007						
0		ALL HARDWARE BY DOOR MANUFACTURER				BO
		DOOR SIZES VARY				
MISC:						
6 EA		CYLINDER	CYLINDER(S) AS REQD FOR PADLOCKS	626	C-R	
6 EA		PADLOCK	KS43D3200	452	SCH	

# DOOR TYPES



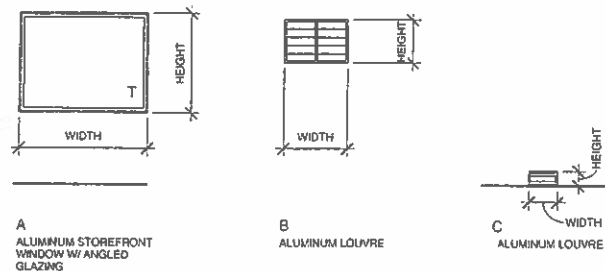
# DOOR SCHEDULE

NO.	TYPE	SIZE		DOOR MATERIAL	FRAME MATERIAL	DETAILS			HARDWARE SET	NOTES
		WIDTH	HEIGHT			HEAD	JAMB	THRESHOLD		
101	A	13'-0"	7'-10"	HM	HRA	33A-9.3	22, 23A-9.3	43A-9.3	001	
102	C	12'-0"	8'-0"	STL	STL	51A-9.3	42, 52A-9.3	43A-9.3	007	
103	A	9'-0"	7'-10"	HM	HRA	21A-9.3	22A-9.3	43A-9.3	005	3.5
104	A	9'-0"	7'-10"	HM	HRA	21A-9.3	22A-9.3	43A-9.3	003	3.6
105	A	9'-0"	7'-10"	HM	HRA	21A-9.3	22A-9.3	43A-9.3	003	3.6
106	A	9'-0"	7'-10"	HM	HRA	21A-9.3	22A-9.3	43A-9.3	003	3.6
107	A	9'-0"	7'-10"	HM	HRA	21A-9.3	22A-9.3	43A-9.3	001	
108	C	10'-0"	8'-0"	STL	STL	41A-9.3	42A-9.3	43A-9.3	007	
109	A	9'-0"	7'-10"	HM	HRA	31A-9.3	32A-9.3	43A-9.3	005	2
110	A	9'-0"	7'-10"	HM	HRA	31A-9.3	32A-9.3	43A-9.3	005	1.2
111	A	9'-0"	7'-10"	HM	HRA	31A-9.3	32A-9.3	43A-9.3	006	2
201	A	13'-0"	7'-10"	HM	HRA	11A-9.3	12A-9.3	13A-9.3	004	
202	A	13'-0"	7'-10"	HM	HRA	11A-9.3	12A-9.3	13A-9.3	004	
203	B	16'-0"	8'-0"	STL	STL	61A-9.3	62A-9.3	63A-9.3	007	
204	B	11'-0"	8'-0"	STL	STL	61A-9.3	62A-9.3	63A-9.3	007	
205	B	16'-0"	8'-0"	STL	STL	61A-9.3	62A-9.3	63A-9.3	007	

# DOOR NOTES

- PROVIDE 24" X 12" DOOR LOUVRE, HIGH AND LOW
- PROVIDE 3/4" UNDERCUT.
- PROVIDE 12" UNDERCUT.
- EXIT DOOR-PROVIDE PANIC HARDWARE TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF KEY, TOOL, OR ANY SPECIAL KNOWLEDGE OR EFFORT PER 2007 CBC, SECTION 1003.1.5
- RESTROOM & ACCESSIBILITY SIGNAGE.
- RESTROOM SIGNAGE.
- PROVIDE INTERIOR LOCKING DEVICE IN THE FORM OF A PADLOCK.

# WINDOW TYPES



# WINDOW SCHEDULE

NO.	TYPE	SIZE		HEAD HEIGHT	Frame Material	DETAILS			NOTES
		WIDTH	HEIGHT			HEAD	JAMB	SILL	
01	IC	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
02	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
03	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
04	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
04	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
06	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
07	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
08	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
09	IC	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
10	IC	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
11	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
12	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
13	C	1'-4"	0'-8"	0'-8"	ALUM.	53A-9.2	51A-9.2	53A-9.2	
21	A	6'-0"	4'-8"	8'-0"	ALUM.	61A-9.3	62A-9.3	63A-9.3	1.2
22	A	6'-0"	4'-8"	8'-0"	ALUM.	61A-9.3	62A-9.3	63A-9.3	1.2
23	A	11'-0"	4'-8"	8'-0"	ALUM.	61A-9.3	62A-9.3	63A-9.3	1.2
24	B	4'-0"	2'-0"	0'-0"	ALUM.	41A-9.2	42A-9.2	43A-9.2	
25	B	4'-0"	2'-0"	0'-0"	ALUM.	41A-9.2	42A-9.2	43A-9.2	
26	B	4'-0"	2'-0"	0'-0"	ALUM.	41A-9.2	42A-9.2	43A-9.2	
27	B	4'-0"	2'-0"	0'-0"	ALUM.	41A-9.2	42A-9.2	43A-9.2	
28	B	4'-0"	2'-0"	0'-0"	ALUM.	41A-9.2	42A-9.2	43A-9.2	

# WINDOW NOTES

- PROVIDE ANGLED GLAZING FOR GLARE REDUCTION.
- TEMPERED SAFETY GLAZING

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EL SEGUNDO LS  
DOOR AND WINDOW SCHEDULES

A-8.1

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SHEET 25 OF 66

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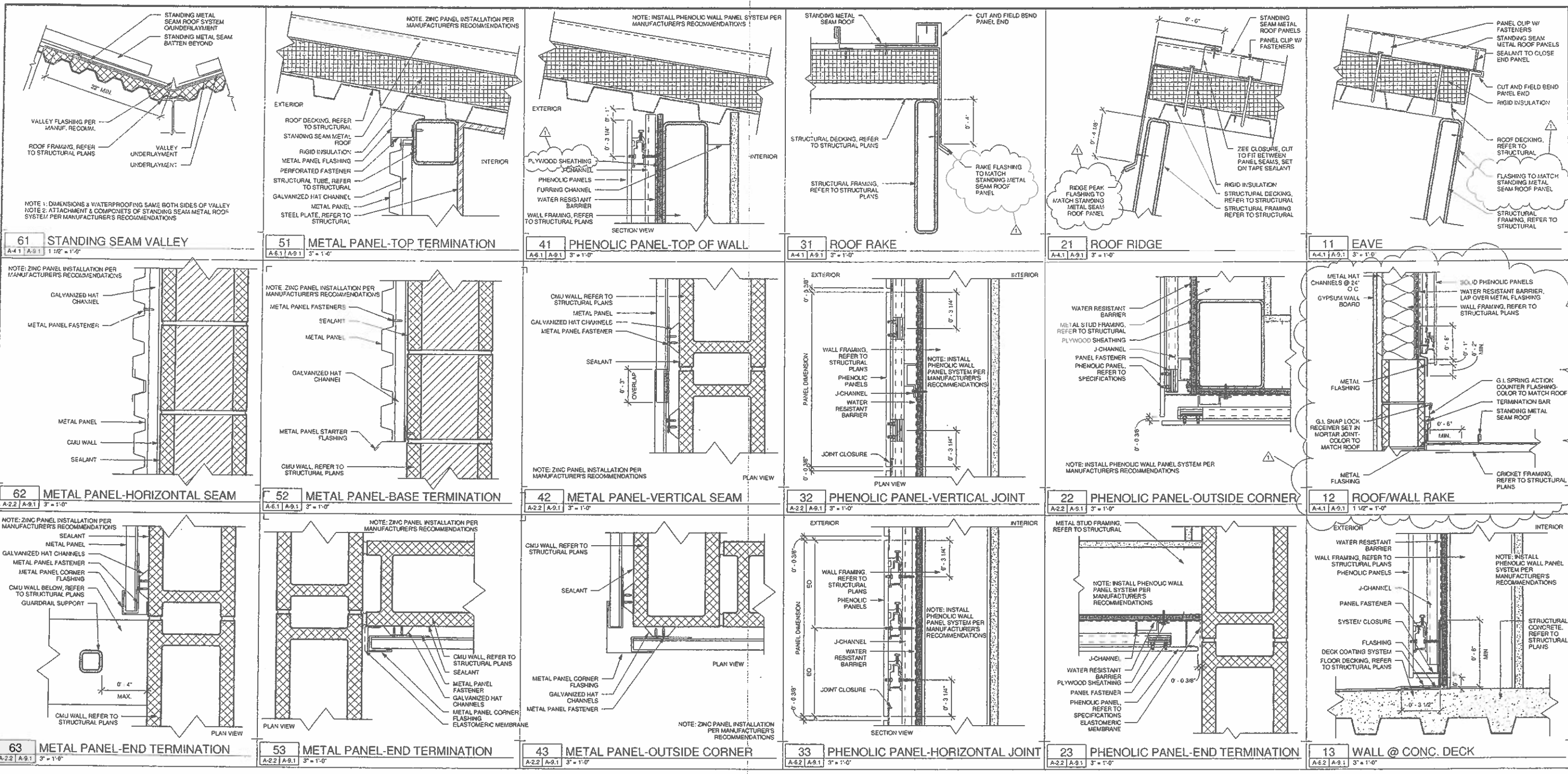
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**EL SEGUNDO LS EXTERIOR DETAILS**

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SHEET 26 OF 88  
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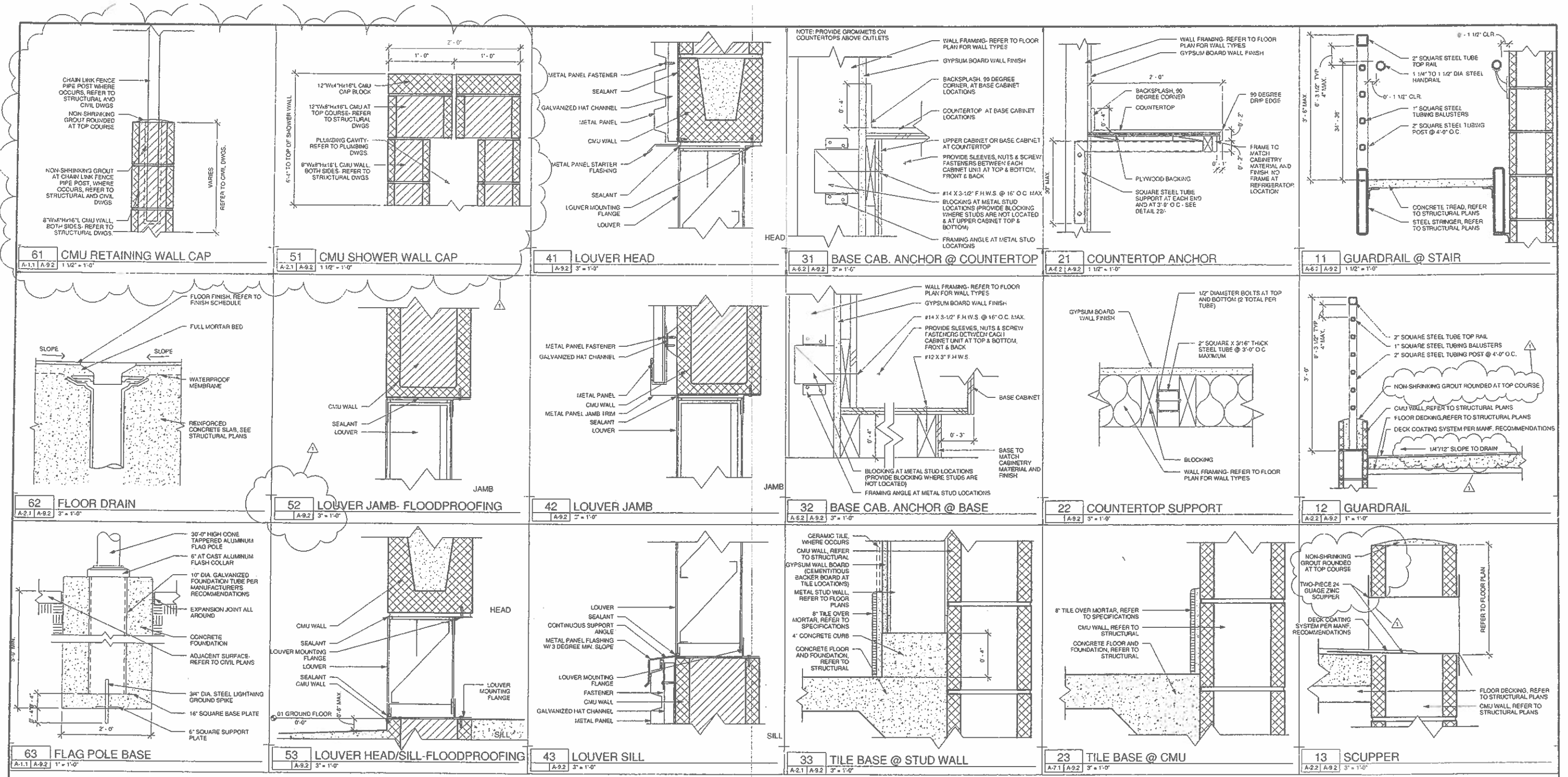
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EL SEGUNDO LS INTERIOR & EXTERIOR DETAILS		
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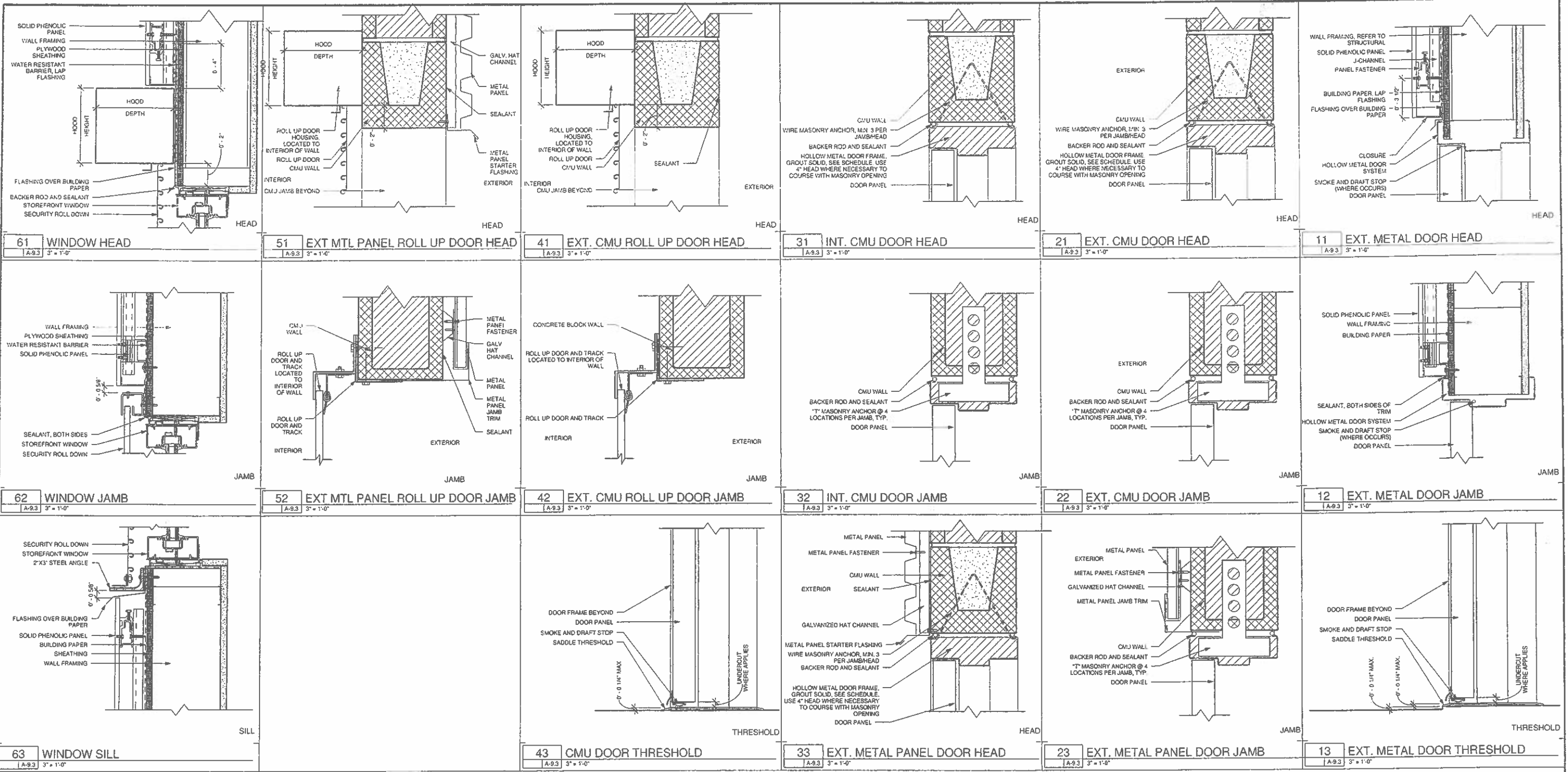
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EL SEGUNDO LS DOOR AND WINDOW DETAILS		
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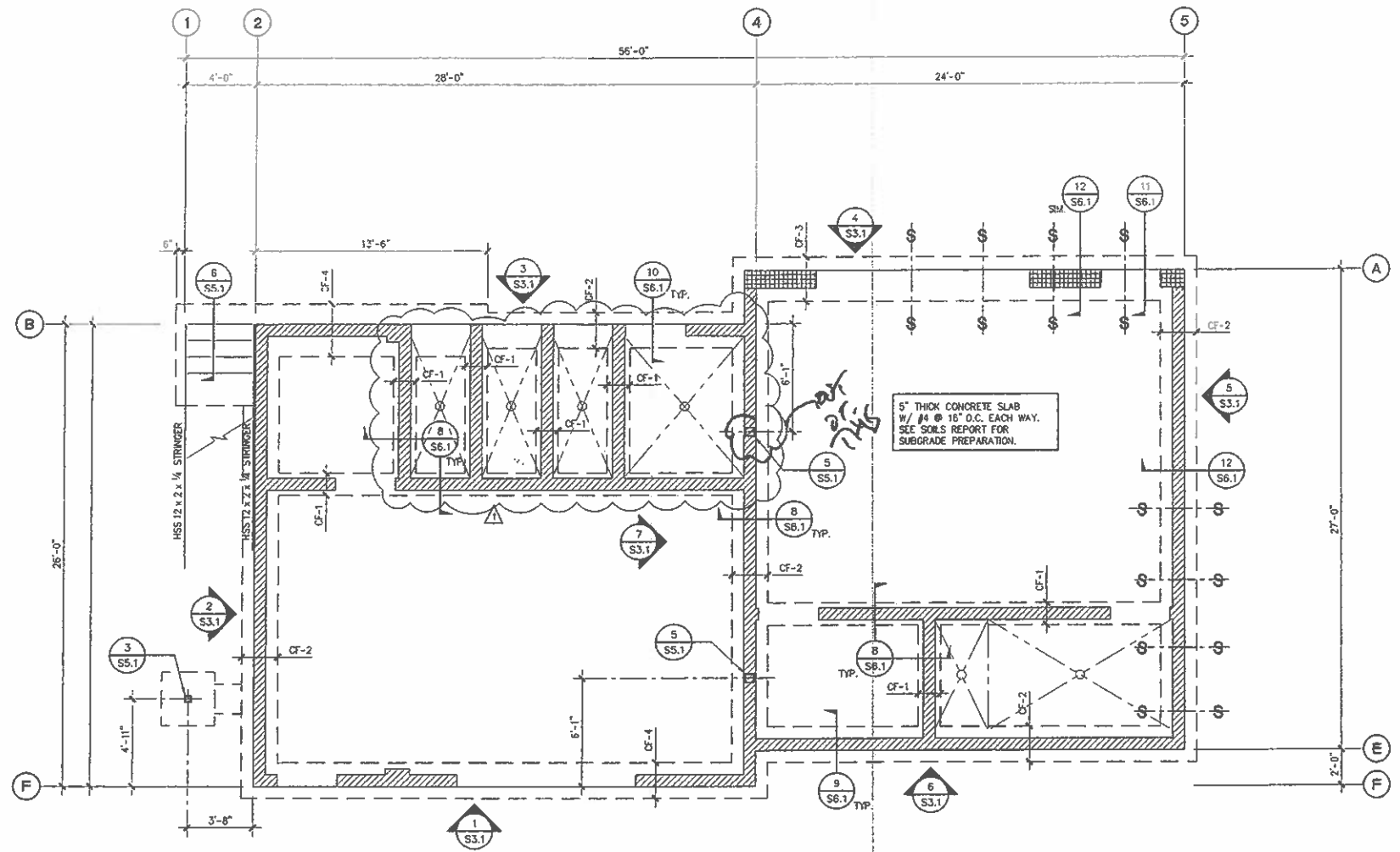
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- FOUNDATION NOTES:**
- SEE GENERAL NOTES ON SHEET "S4.1".
  - FOR TYPICAL CONCRETE DETAILS SEE SHEET "S4.3". TYPICAL MASONRY DETAILS SEE SHEET "S6.1".
  - REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
  - VERIFY ALL DIMENSIONS, DEPRESSIONS, PITS, SLOPES, CURBS, STEPS, ETC. WITH ARCHITECTURAL AND/OR MEP DRAWINGS.
  - DATUM ELEVATION OF [0'-0"] IS AT THE HIGHEST POINT OF SLAB ON GRADE.
  - VERIFY WITH ARCH. OR CIVIL DRAWINGS THE EXTENT OF EXTERIOR SLAB ON GRADE.
  - EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE HEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE. NO MATERIAL IS TO BE EXCAVATED UNNECESSARILY.
  - SPECIAL INSPECTION IS REQUIRED FOR PLACEMENT OF ALL CONCRETE AND MASONRY WALLS.
  - INDICATES 8" CMU WALLS.
  - INDICATES 12" CMU WALLS.
  - INDICATES CONCRETE WALLS.
  - INDICATES STEPPED FOOTING PER DETAIL "11/S4.3".
  - CF-X INDICATES CONTINUOUS FOOTING, SEE SCHEDULE IN DETAIL "7/S6.1" FOR SIZE AND REINF.
  - FOR TYPICAL STAIR DETAILS SEE "S7.1".



**FOUNDATION PLAN**

JUL 21 2011

**BID DOCUMENTS**

PROJECT ADDRESS:  
EL SEGUNDO, CA

**RSSE**  
STRUCTURAL ENGINEERS  
Structural Engineers Inc.  
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Suite 229  
Foothill Ranch, CA 92619  
949.461.2097 / 949.461.7000 Fax

REGISTERED PROFESSIONAL ENGINEER  
ROBERT D. SCHLEIBER  
No. 2568  
EXPIRES 06/30/10  
STATE OF CALIFORNIA

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CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
FOUNDATION PLAN


**S-2.1**  
05/04/2010  
SHEET 29 OF 58  
JOB NO. 1109531

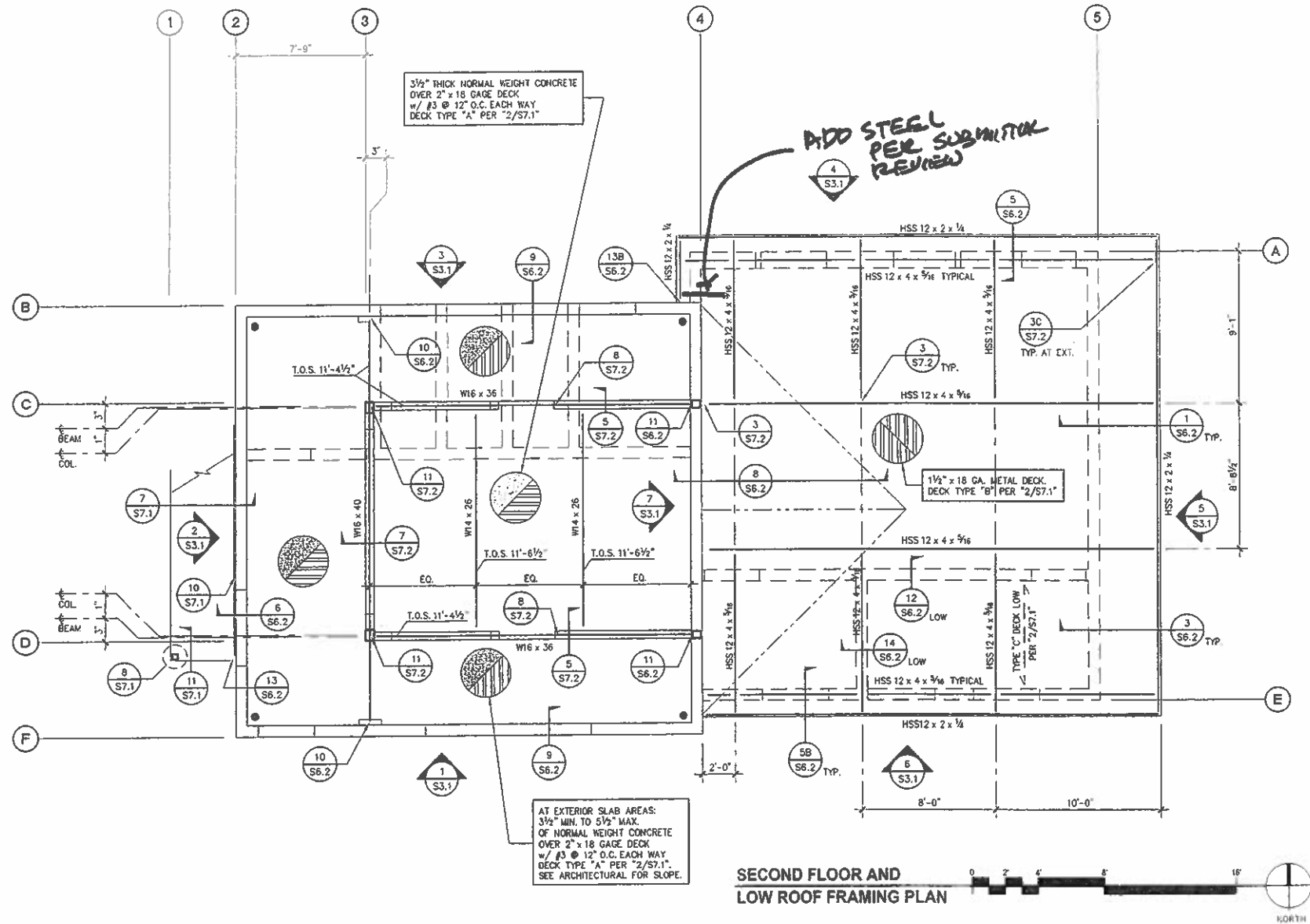
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**FLOOR FRAMING NOTES:**

- FOR GENERAL NOTES SEE SHEET "S4.1"
- FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- NOMINAL SECOND LEVEL FLOOR LINE DATUM ELEVATION IS +12'-0".
- ELEVATIONS OF TOP OF STEEL WIDE FLANGE BEAMS AT SECOND FLOOR LEVEL ARE INDICATED THUS: T.O.S. X'-X". THEY ARE MEASURED FROM NOMINAL FINISH SLAB ON GRADE ELEVATION OF [0'-0"].
-  INDICATES STEEL DECK, CONCRETE FILL AND SPAN DIRECTION PER SCHEDULE "2/S7.1". FOR STEEL DECK GENERAL NOTES SEE SHEET S4.1. PLACEMENT OF CONCRETE SHALL BE PER "4/S7.1"
- ALL BEAMS AND GIRDERS WHICH ARE COVERED BY STEEL DECK AND CONCRETE FILL SHALL HAVE 3/8" WELDED HEADED STUDS WITH A MAXIMUM SPACING OF 12" ON CENTER U.H.I.O. REFER TO DETAILS "3/S7.1" & "5/S7.1".
- FOR TYPICAL BEAM TO COLUMN CONNECTION AND BEAM TO BEAM CONNECTION SEE DETAILS ON S7.2.
- FOR TYPICAL STEEL DECK AND SLAB PENETRATIONS WHERE NOT SPECIFICALLY NOTED ON PLAN, SEE SHEET "S7.1".
- ALL EXPOSED STEEL SHALL BE GALVANIZED.
- FOR SMALL OPENINGS IN FLOOR DECK SEE DETAIL 6/S7.1.

**ROOF FRAMING NOTES:**

- FOR GENERAL NOTES SEE SHEET "S4.1"
- FOR DIMENSIONS NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
-  INDICATES STEEL DECK AND SPAN DIRECTION. STEEL DECK PER SCHEDULE "2/S7.1". FOR STEEL DECK GENERAL NOTES ON SHEET S4.1.
- FOR TYPICAL BEAM TO COLUMN CONNECTION AND BEAM TO BEAM CONNECTION SEE DETAILS ON "S7.2".
- BEAMS SHALL BE EQUALLY SPACED BETWEEN COLUMNS UNLESS NOTED OTHERWISE.
- CAP ENDS OF ALL HSS WITH 1/4" PLATE.
- ALL EXPOSED STEEL SHALL BE GALVANIZED.
- FOR SMALL OPENINGS IN ROOF DECK SEE DETAIL 9/S7.1.



**SECOND FLOOR AND LOW ROOF FRAMING PLAN**



JUL 21 2011

**BID DOCUMENTS**

PROJECT ADDRESS:  
EL SEGUNDO, CA

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CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
SECOND FLOOR & LOW ROOF FRAMING PLAN

DATE \_\_\_\_\_ APPROVED DATE \_\_\_\_\_  
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**S-2.2**  
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SHEET 20 OF 68  
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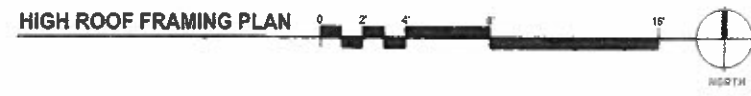
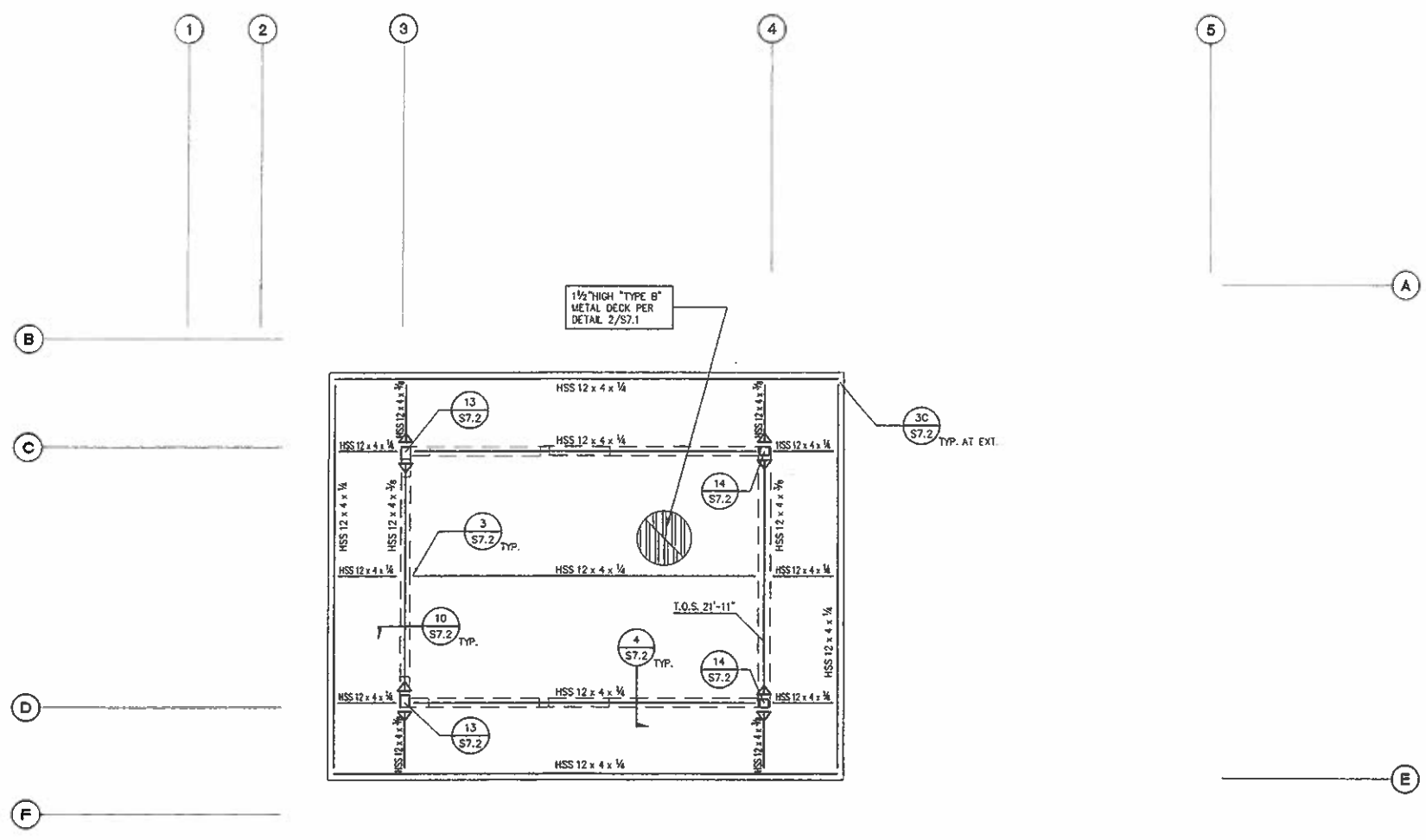
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**ROOF FRAMING NOTES:**



1. FOR NOTES SEE SHEET "S2.2"

2.  INDICATES MOMENT CONNECTIONS OF BEAMS TO COLUMNS. SEE DETAIL "13/S7.2" & "14/S7.2".



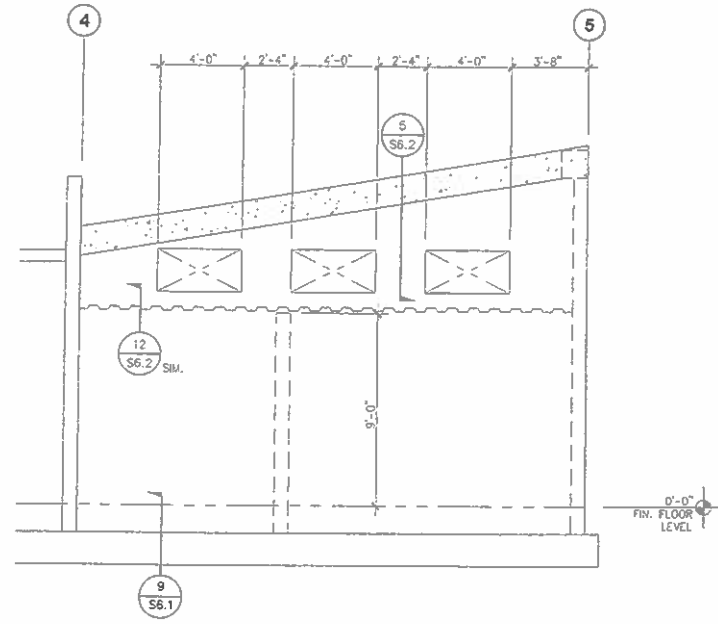
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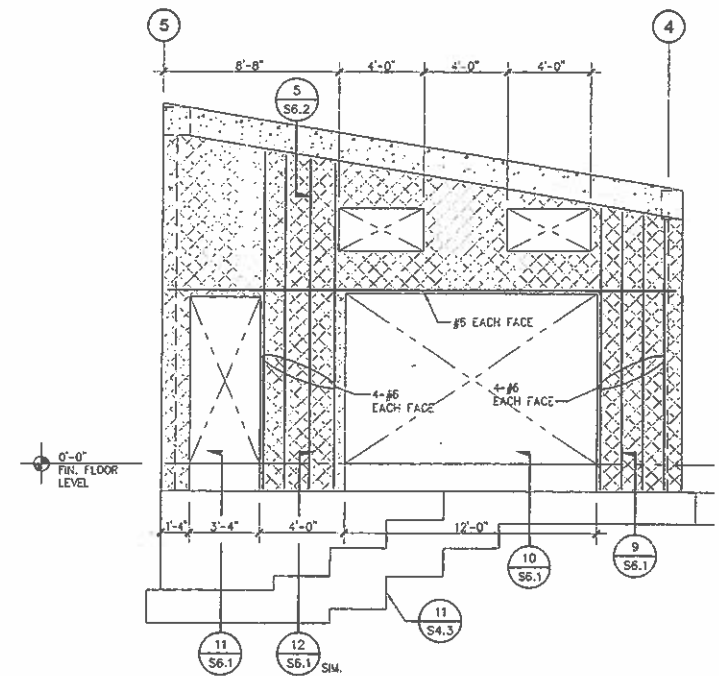
PROJECT ADDRESS: EL SEGUNDO, CA	 <b>RSSE</b> Structural Engineers Inc. 27043 Towne Centre Dr. Suite 270 Poway, CA 92120 949.441.2007 / 949.441.7808 Fax	 <b>rrm design group</b> creating environments people enjoy® 3765 South Figueroa St., Ste. 102, San Luis Obispo, CA 93401 P: (805) 543-1794   F: (805) 543-6800   www.rrmdesign.com <small>A California Corporation   Equal Opportunity Employer   M/F/V   100% Employee Owned</small>	REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	BY										CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION <b>EL SEGUNDO LS</b> HIGH ROOF FRAMING PLAN	<b>S-2.3</b> 05/04/2010 SHEET 31 OF 68 JOB NO. 1109531
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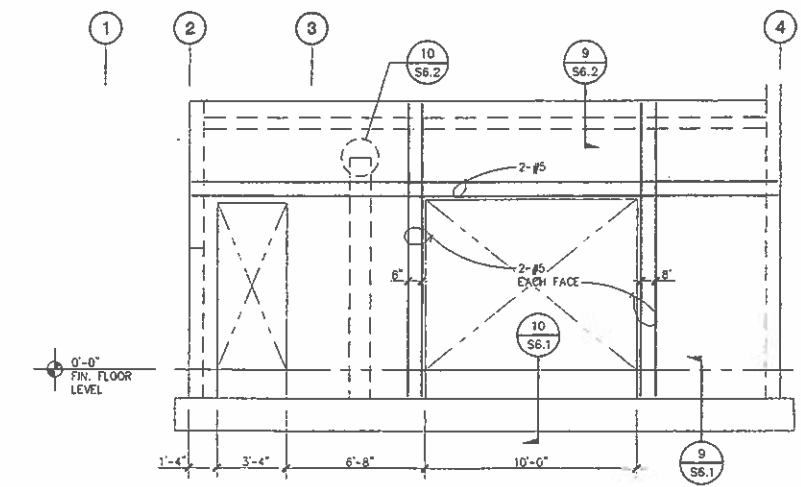
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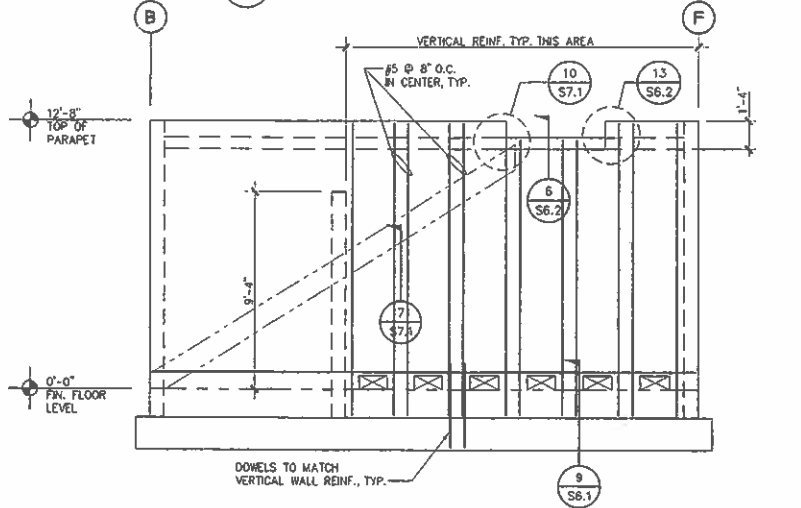
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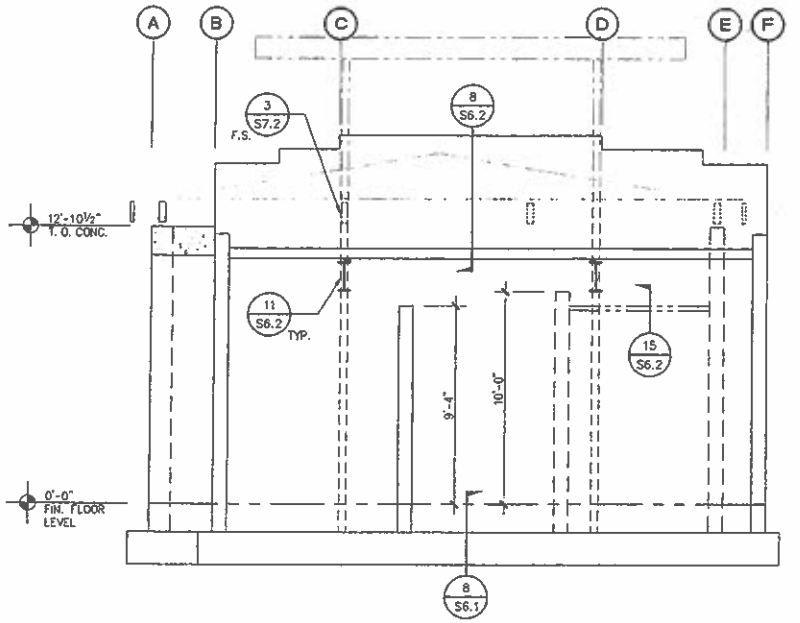
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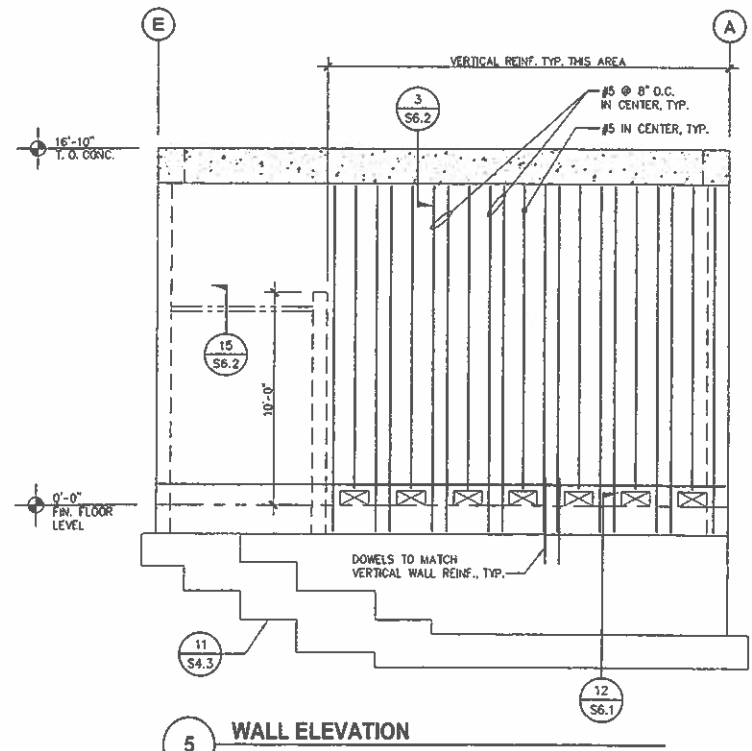
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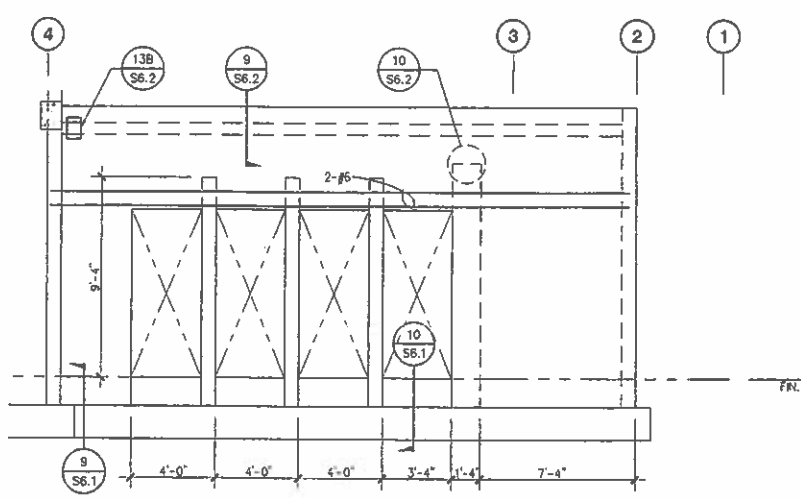
2 WALL ELEVATION



7 WALL ELEVATION



5 WALL ELEVATION



3 WALL ELEVATION

- TYPICAL WALL NOTES:**
- SEE GENERAL NOTES SHEET "S4.1" FOR MASONRY AND REINFORCEMENT NOTES.
  - SEE SHEET "S6.1" FOR TYPICAL MASONRY DETAILS.
  - ALL WALLS SHALL BE 8" THICK AND SOLID GROUTED U.N.O.
  - INDICATES CONCRETE WALLS, LINTELS, AND PILASTERS.
  - INDICATES 12" CMU WALLS.
  - MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY:  $f_m = 1,500$  PSI (SPECIAL INSPECTION REQUIRED).
  - ALL MORTAR JOINTS SHALL BE FULLY BEDDED.
  - PROVIDE 2-#5 CONTINUOUS AT TOP OF PARAPET AND IN FIRST COURSE.
  - TYPICAL WALL REINFORCING U.N.O.:  
FOR 8" CMU: #5 @ 16" O.C. VERTICAL IN CENTER  
#5 @ 24" O.C. HORIZONTAL IN CENTER  
FOR 12" CMU: #5 @ 16" O.C. VERTICAL EACH FACE  
#5 @ 24" O.C. HORIZONTAL EA. FACE
  - TYPICAL REINFORCING AT WALL JAMB AND WALL ENDS FOR 8" CMU 2-#5 EACH SIDE OF EACH OPENING AND ENDS PER "1/S6.1".
  - REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE POSITIONERS OR OTHER SUITABLE DEVICES AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS NOR 10'-0" O.C.
  - MAINTAIN 2" CLEAR FROM FACE OF MASONRY TO ALL REINFORCING.
  - SPECIAL INSPECTION PER CBC REQUIRED FOR ALL MASONRY.
  - ALL DIMENSIONS ARE TO FACE OF MASONRY (FOM). CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS INCLUDING CLEAR OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL PLANS, MECHANICAL PLANS AND DOOR AND WINDOW MANUFACTURER FOR REQUIRED CLEARANCE PRIOR TO ANY WALL CONSTRUCTION. NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
  - CONTRACTOR SHALL COORDINATE AND VERIFY ALL EMBEDDED BOLTS AND PLATES PRIOR TO ANY WALL CONSTRUCTION.

JUL 21 2011

SD DOCUMENTS

PROJECT ADDRESS: EL SEGUNDO, CA	RSSE Structural Engineers Inc. 27041 Towne Centre Dr. Suite 239 Foothill Ranch, CA 92610 949.488.7987 / 949.461.7906-Fax	RRM DESIGN GROUP COPYRIGHT 2010 RRM IS A CALIFORNIA CORPORATION	creating environments people enjoy® 3765 South Higgins Dr., Ste. 102, San Luis Obispo, CA 93401 P: (805) 543-3794 / F: (805) 543-4809 / www.rrmdesign.com	REVISIONS NO. DATE BY	CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION	<b>S-3.1</b> 05/04/2010 SHEET 32 OF 68
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VI. ABBREVIATIONS

Table of abbreviations including terms like DIAMETER, ANCHOR BOLT, ARCHITECTURAL EXPOSED STRUCTURAL STEEL, etc.

E. STRUCTURAL STEEL

- 1. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING. Table with columns: STEEL, DESCRIPTION, ASTM GRADE, MIN. Fy.

F. STEEL DECKING

- 1. STEEL DECKING SHALL BE OF THE TYPES AND GAUGES AS INDICATED ON THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS EXCEPT WHERE INDICATED OTHERWISE ON THE DRAWINGS.

G. LIGHT GAUGE STEEL FRAMING

- 1. ALL STUDS AND TRACKS SHALL BE FORMED FROM STANDARD COMMERCIAL STEEL WITH A MINIMUM YIELD POINT PER PLANS CONFORMING TO EITHER ASTM A611 GRADE "C", ASTM A570 OR ASTM A653-S5.

H. STRUCTURAL WOOD

- 1. ALL WOOD MEMBERS SHALL BE DOUGLAS FIR (DF) OR LARCH GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WCLA, WMPA, OR WCLB).

B. REINFORCED CONCRETE

- 1. CEMENT SHALL CONFORM TO ASTM C-150, SEE NOTE "5" BELOW FOR CEMENT TYPE REQUIRED BASED ON CONCRETE USE. FLY ASH NOT ALLOWED.

Table with columns: CONCRETE USE, MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, MAXIMUM WATER CEMENT RATIO BY WEIGHT, CEMENT TYPE.

- 6. THE SLUMP SHALL BE 4" FOR ALL CONCRETE WORK. ADMIXTURES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.

C. REINFORCING STEEL

- 1. BAR REINFORCEMENT SHALL CONFORM TO: ASTM A615, GRADE 60... ALL REBAR U.S.O.

D. CONCRETE MASONRY

- 1. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY: fm = 1,500 PSI.

III. TESTING AND INSPECTION

- A. OWNER'S TESTING AGENCY SHALL PERFORM THE FOLLOWING TESTS AND SUBMIT APPROPRIATE REPORTS TO THE ARCHITECT, ENGINEER AND BUILDING DEPARTMENT.

IV. DESIGN BASIS

- A. APPLICABLE CODE: CALIFORNIA BUILDING CODE (CBC), 2007 EDITION.

Table with columns: AREA, UNIFORM, CONCENTRATED. Rows: ROOF, FLOOR, MEZZANINE.

- NOTES: (1) THE CONDITION OF UNIFORM OR CONCENTRATED LIVE LOAD PRODUCING THE GREATER STRESS OR DEFLECTION GOVERNS DESIGN.

- 1. SEISMIC: IMPORTANCE FACTOR, I = 1.0 SEISMIC DESIGN CATEGORY = D OCCUPANCY CATEGORY = IV

Table with columns: BASIC STRUCTURAL SYSTEM, LATERAL-FORCE-RESISTING SYSTEM, R. Rows: BEARING WALL, BUILDING FRAME.

- 2. WIND: BASIC WIND SPEED = 85 MPH EXPOSURE = D IMPORTANCE FACTOR = 1.0

V. MATERIALS

A. FOUNDATION

Table with columns: MINIMUM FOOTING WIDTH, MINIMUM FOOTING DEPTH, ALLOWABLE NET SOIL PRESSURE.

200 PSF AND 400 PSF INCREASES FOR EACH ADDITIONAL FOOT OF WIDTH AND DEPTH, RESPECTIVELY, UP TO A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF.

PROPOSED LIFE GUARD TOWER SOUTHWEST CORNER OF GRAND AVENUE AND VISTA DEL MAR, EL SEGUNDO, CALIFORNIA BY GEOTECH WEST, INC. REPORT NO. A8718-08-01, DATED MARCH 11, 2010

- 2. A QUALIFIED SOIL ENGINEER SHALL VERIFY THAT CONSTRUCTION AT THE SITE IS IN ACCORDANCE WITH GENERALLY ACCEPTED GEOTECHNICAL PRACTICES AND THE GEOTECHNICAL REPORT.

I. GENERAL

- A. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY.

II. QUALITY CONTROL

- A. THE FOLLOWING WORK REQUIRES TESTS AND/OR INSPECTIONS. THE SPECIFIC REQUIREMENTS ARE SPECIFIED IN SHEET S4.2. INSPECTIONS SHALL BE MADE IN ACCORDANCE WITH C.B.C. APPENDIX SECTION 109 AND CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR RETAINED BY THE OWNER.

CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION

EL SEGUNDO LS STRUCTURAL GENERAL NOTES

S-4.1

05/04/2010

SHEET 33 OF 68

JOB NO. 1109531

DATE DATE DATE DATE DATE DATE DATE DATE DATE DATE

APPROVED DATE CITY ENGINEER R.E.

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JUL 21 2011

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REVISIONS table with columns: NO., DATE, BY.

**CITY OF EL SEGUNDO**  
 BUILDING SAFETY DIVISION  
 150 MAIN STREET, EL SEGUNDO, CA 90245  
 TEL: (562) 544-1791 FAX: (562) 544-1792

**STRUCTURAL OBSERVATION PROGRAM**  
 (SEE SECTION 1704.3)

PROJECT ADDRESS: \_\_\_\_\_ PERMIT APPL. NO.: \_\_\_\_\_  
 DESCRIPTION OF WORK: \_\_\_\_\_  
 OWNER: \_\_\_\_\_ ARCHITECT: \_\_\_\_\_ ENGINEER: \_\_\_\_\_

STRUCTURAL OBSERVATION PROGRAM (SEE SECTION 1704.3)			
FIRM OR INDIVIDUAL TO BE RESPONSIBLE FOR THE STRUCTURAL OBSERVATION			
NAME: _____ CALIF. REGISTRATION NO.: _____			
FOUNDATION	WALL	FRAME	DIAPHRAGM
<input type="checkbox"/> REINFORCING STEEL WALLS, PIERS	<input type="checkbox"/> CONCRETE	<input type="checkbox"/> STEEL MOMENT FRAME	<input type="checkbox"/> CONCRETE
<input type="checkbox"/> CMU FOUNDATION	<input type="checkbox"/> MASONRY	<input type="checkbox"/> STEEL BRACED FRAME	<input type="checkbox"/> STEEL BECK
<input type="checkbox"/> CAISSON, PILE, GRADE BEAMS	<input type="checkbox"/> CONCRETE	<input type="checkbox"/> CONCRETE MOMENT FRAME	<input type="checkbox"/> WOOD
<input type="checkbox"/> STEEP/SLOPE FOUNDATION	<input type="checkbox"/> OTHERS:	<input type="checkbox"/> MASONRY WALL FRAME	<input type="checkbox"/> OTHERS:
<input type="checkbox"/> HELIXER SPECIAL AGENCIES	<input type="checkbox"/> OTHERS:	<input type="checkbox"/> OTHERS:	<input type="checkbox"/> OTHERS:

DECLARATION BY OWNER:  
 I, THE OWNER OF THIS PROJECT, BECAUSE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS Hired BY ME TO BE THE STRUCTURAL OBSERVER.

DECLARATION BY ARCHITECT OR ENGINEER OF RECORD:  
 I, THE ARCHITECT OR ENGINEER OF RECORD FOR THIS PROJECT, BECAUSE THAT THE ABOVE LISTED FIRM OR INDIVIDUAL IS Hired BY ME TO BE RESPONSIBLE FOR THE STRUCTURAL OBSERVATION.

*Morgan M Jones 4/20/10*  
*Donner C14936 9/20/10*

- 8 CONCRETE CONSTRUCTION (CBC SECTION 1704.4, TABLE 1704.4, AND ACI 318)**
- 8.1 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION AS FOLLOWS:
- DURING THE PLACEMENT OF REINFORCEMENT AND CONCRETE IN SEISMIC FORCE RESISTING MOMENT FRAMES AND SEISMIC SYSTEMS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E, OR F (IN ACCORDANCE WITH CBC 1816), AND ALL STRUCTURES CONSTRUCTED IN WIND EXPOSURE CATEGORIES A, B, C, AND D (AS REQUIRED IN CBC 1706).
  - PRIOR TO AND DURING THE INSTALLATION OF ADHESIVE/GROUTED ANCHORS AND EMBEDMENTS.
  - DURING THE HOLDING OR CONSTRUCTION OF CONCRETE TEST CYLINDERS, BEAMS, OR CORES.
  - PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND ANCHOR BOLTS.
- 8.2 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION AS FOLLOWS:
- AT THE START AND DURING EACH PHASE OF THE PROJECT TO ASCERTAIN PROPOSED CONFORMITY OF MATERIALS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
  - ANCHORAGES FOR EQUIPMENT AND NON-STRUCTURAL COMPONENTS IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F (CBC 1707).
  - REINFORCEMENT VERIFICATION PRIOR TO CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOBSITE.
  - DURING THE PLACEMENT OF CONCRETE (ONLY WHERE PERMITTED BY CODE AND ACI 318)
  - AT SUCH FREQUENCY AS NECESSARY TO CLEARLY CONFIRM THE PLACEMENT OF TIES, HOOPS, STRIPPS, CONNECTIONS, AND ANY ADDITIONAL SPECIFIED REINFORCEMENT (I.E. AT OPENINGS, BEAMS, CORNERS, COLUMNS, PIERS AND CAISSONS) BEFORE THEY ARE COVERED.
  - DURING SAMPLING OF CONCRETE AT DISCHARGE FROM MIXER.
  - VERIFICATION OF DELIVERED MIX DESIGN BEFORE ANY CONCRETE IS PLACED.
  - VERIFICATION OF THE TRAVEL TIME AND ROTATIONS OF THE DRUM OF THE DELIVERED MIX BEFORE ANY CONCRETE IS PLACED. (ASTM C94)
  - MAINTENANCE OF SPECIFIED/APPROVED CURING TEMPERATURE AND TECHNIQUES.

- 9 MASONRY CONSTRUCTION (CBC SECTION 1704.5 AND 2104)**
- 9.1 THE SPECIAL INSPECTOR SHALL VERIFY COMPLIANCE OF THE FOLLOWING, PRIOR TO CONSTRUCTION:
- CERTIFICATES OF COMPLIANCE FOR MATERIALS USED IN MASONRY CONSTRUCTION. (CBC 1708.1)
  - PROPORTIONS OF MATERIALS - INCLUDING ADMIXTURES - IN MORTAR AND GROUT.
  - F.M PRIOR TO CONSTRUCTION, AND FOR EVERY 5,000 SQ. FT. DURING CONSTRUCTION. (CBC 1708.1)
- 9.2 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION AS FOLLOWS:
- DURING PLACEMENT OF ALL MASONRY NON-OPEN END UNITS, REINFORCEMENT, CONNECTIONS.
  - DURING INSTALLATION AND IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS.
  - DURING ALL GROUTING OPERATIONS.
  - DURING PREPARATION AND TAKING OF PRISMS OR TEST SPECIMENS.
  - DURING WELDING OF REINFORCING STEEL.
- 9.3 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION AS FOLLOWS:
- AT THE START AND DURING EACH PHASE OF THE PROJECT TO CONFIRM MATERIAL CERTIFICATIONS AND TESTING REQUIREMENTS, PERSONNEL QUALIFICATIONS AS REQUIRED, AND PROCEDURES WITH THE APPLICABLE CODES, PLANS AND SPECIFICATIONS.
  - AT SUCH FREQUENCY AS NECESSARY, TO VERIFY THAT THE CLEANLINESS, MORTAR PROJECTIONS AND REINFORCEMENT CLEARANCES WITHIN GROUT SPACES, CONFORM TO THE MINIMUM REQUIREMENTS.
  - TO VERIFY THAT THE GROUT POURS AND CONSTRUCTION JOINTS ARE IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
  - TO VERIFY THAT ALL DOWELS, ANCHOR BOLTS, EMBED PLATES, INSERTS, AND ANY OTHER DETAILS OF ANCHORAGE TO MASONRY ARE SECURED IN PLACE.
  - TO VERIFY TYPE, SIZE AND LOCATION OF STRUCTURAL ELEMENTS INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.
  - TO VERIFY PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 F) OR HOT WEATHER (TEMPERATURE ABOVE 90 F).

- 10 LIGHT FRAMED CONSTRUCTION (CBC SECTION 1704 AND 1707)**
- 10.1 SHOP FABRICATED ASSEMBLIES (CBC 1704.2): THE SPECIAL INSPECTOR SHALL VERIFY THE QUALITY AND WORKMANSHIP FOR THE FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES. THE SPECIAL INSPECTOR SHALL REVIEW THE FABRICATOR'S DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES FOR COMPLETENESS AND ADEQUACY. APPROVAL TO WAIVER SPECIAL INSPECTION REQUIREMENTS OF FABRICATED MEMBERS SHALL BE BASED ON REVIEW OF THE FABRICATOR'S WRITTEN AND PROCEDURAL QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY.
- 10.2 CONSTRUCTION (CBC 1704.3, 1704.4, 2210, 2304 AND 2308)
- 10.2.1 THE SPECIAL INSPECTOR SHALL PROVIDE PERIODIC INSPECTION TO VERIFY THE FOLLOWING FOR COMPLIANCE TO APPROVED PLANS AND CODE REQUIREMENTS:
- ROOF DIAPHRAGM TO BLOCKING OR TOP TRACK FASTENER SIZE AND SPACING.
  - FIELD INSTALLATION AND CONNECTION DETAILS, INCLUDING BOLTING, ANCHORING, DRILLING, CUTTING, NOTCHING, BLOCKING AND BRIDGING.
  - INSTALLATION AND LOCATION OF DRAG STRUT, DIAPHRAGM COLLECTOR, BRACES, ANCHORS AND HOLD DOWNS.
  - SHEAR WALL (BOUNDARY AND FIELD) FASTENING DETAILS.
  - OPENING/PENETRATION LOCATIONS AND REQUIREMENTS FOR SUPPLEMENTAL STRAPPING WITH BLOCKING.
  - ACCEPTABILITY OF BLOCKING FIT, CONNECTION, SIZE, LOCATION AND ORIENTATION.
  - WELDING AND FRAMING CONSTRUCTION FOR PROPER FIT OF JOINTS AND CONNECTIONS.
  - CONNECTION HARDWARE, SUCH AS STRAPS, ANGLES, HANGERS, FRAMING CLIPS AND FASTENERS (BAR, BOLT, LAG, OR SCREW) FOR COMPLIANCE WITH SPACING, EDGE DISTANCE, SIZE PENETRATION, AND GAGE REQUIREMENTS.

- 7 STEEL CONSTRUCTION (CBC SECTION 1704.3 AND TABLE 1704.3)**
- 7.1 SUBMITTALS
- 7.1.1 THE CONTRACTOR SHALL PROVIDE COPIES OF THE SUBMITTALS REVIEWED BY THE RDP TO EACH SPECIAL INSPECTOR.
- 7.1.2 THE SPECIAL INSPECTOR SHALL OBTAIN COPIES OF THE FOLLOWING SUBMITTALS FOR THEIR REVIEW:
- SHOP AND ERECTION DRAWINGS.
  - WELDING PROCEDURE SPECIFICATIONS (WPS).
  - MANUFACTURER'S MILL CERTIFICATE.
  - MILL TEST REPORTS.
  - CHARPY V-NOTCH (CVN) IMPACT TEST REPORTS.
  - WELDERS CERTIFICATES.
- 7.2 WELDING (IN COMPLIANCE WITH AWS D1.1)
- 7.2.1 THE SPECIAL INSPECTOR SHALL:
- ASCERTAIN THAT ALL FABRICATION AND ERECTION BY WELDING IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPROVED CONSTRUCTION DOCUMENTS, THE BUILDING CODE AND AWS STANDARDS.
  - VERIFY THAT ONLY MATERIALS AND PROCEDURES CONFORMING TO THE REQUIREMENTS OF AWS, AISC OR ASTM, AND SPECIFIED ON APPROVED PLANS ARE USED.
  - REVIEW ALL WELDING PROCEDURE SPECIFICATION (WPS), VISUALLY INSPECT THE PREPARATION, WELDING PROCESS, ELECTRODES AND EQUIPMENT USED, FOR COMPLIANCE; AND VERIFY THE VARIABLES ARE WITHIN ESTABLISHED PARAMETERS.
  - VERIFY THAT MINIMUM QUALIFICATION OF WELDERS, WELDING OPERATORS AND TACK WELDERS ARE CURRENT, AND IN ACCORDANCE WITH THE WORK TO BE PERFORMED.
  - VERIFY THAT THE FILLER METAL FOR DEMAND CRITICAL WELDS AND ALL WELDS IN MEMBERS AND CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM, AS DESIGNATED IN THE CONTRACT DOCUMENTS, MEETS THE MINIMUM CHARPY V-NOTCH TOUGHNESS REQUIREMENTS: (AWS D1.8).
  - VISUALLY INSPECT ALL WELDS AND VERIFY THAT ALL DISCONTINUITIES (SUCH AS THOSE CREATED BY ERRORS/FABRICATION/ERECTION OPERATIONS) ARE REPAIRED.
- 7.2.2 PERIODIC INSPECTIONS ARE PERMITTED DURING WELDING OF THE FOLLOWING ITEMS, PROVIDED VISUAL INSPECTION IS CONDUCTED PRIOR TO COMPLETION AND/OR SHIPMENT OF SHOP WELDS:
- SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16 IN.
  - FLOOR AND ROOF DECK WELDING.
  - WELDED STUDS IN STRUCTURAL DIAPHRAGM OR COMPOSITE SYSTEMS.
  - WELDED SHEET STEEL FOR COLD-FORMED STEEL FRAMING STUDS AND JOISTS.
  - E. STAIR AND RAILING SYSTEMS.
- 7.2.3 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS INSPECTION FOR SHOP AND FIELD WELDING PER CBC 1707 AND AISC 341. CONTINUOUS INSPECTION IS ALSO REQUIRED FOR SINGLE PASS FILLET WELDS EXCEEDING 5/16", MULTI-PASS WELDS, GROOVE WELDS, WHERE SPECIFICALLY INDICATED ON DRAWINGS, AND OTHER WELDS NOT LISTED FOR PERIODIC INSPECTION.
- 7.2.4 EXCEPT FOR SPECIAL MOMENT-RESISTING FRAMES, SPECIAL CONCENTRIC BRACED FRAMES, OR ECCENTRIC BRACED FRAMES, SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS PERFORMED ON THE PREMISES OF A FABRICATOR CURRENTLY REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION PER SECTION CBC 1704.2, UNLESS OTHERWISE REQUIRED BY THE RDP.
- 7.2.5 PROVIDE NON-DESTRUCTIVE TESTING FOR FULLY RESTRAINED CONNECTIONS BY ULTRASONIC TESTING OR BY RADIOGRAPHY, UNLESS REQUIRED OTHERWISE IN AWS D1.1 OR AS SPECIFIED BY THE RDP:
- COMPLETE JOINT PENETRATION GROOVE WELDS.
  - PARTIAL PENETRATION GROOVE WELDS IN COLUMN SPICES.
  - BASE METAL THICKER THAN 1-1/2 INCHES WHERE SUBJECT TO THROUGH-THICKNESS WELD SHRINKAGE STRAINS.
  - OTHER NON-DESTRUCTIVE TESTING AS REQUIRED BY AISC 341 AND THE RDP.
- 7.2.6 REQUIRED VERIFICATION AND INSPECTION FOR STEEL CONSTRUCTION AS DETAILED IN CBC TABLE 1704.3.
- 7.3 HIGH STRENGTH BOLTING**
- 7.3.1 HIGH STRENGTH BOLTING SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RSCC), UNLESS OTHERWISE NOTED ON THE APPROVED PLANS AND SPECIFICATIONS.
- 7.3.2 THE SPECIAL INSPECTOR SHALL:
- DETERMINE THAT THE SPECIFIED REQUIREMENTS FOR BOLTS, NUTS, WASHERS AND PAINT; BOLTED PARTS, INSTALLATION AND TIGHTENING STANDARDS ARE MET.
  - OBSERVE THE PRE-INSTALLATION TESTING AND CALIBRATION PROCEDURES (WHEN SUCH PROCEDURES ARE REQUIRED OR SPECIFIED) THE CALIBRATED WRENCH TIGHTENING INSTALLATION PROCEDURE SHALL BE CALIBRATED DAILY FOR EACH BOLT DIAMETER, LENGTH AND GRADE USING FASTENER ASSEMBLIES THAT ARE BEING INSTALLED.
  - VERIFY THAT THE SELECTED PROCEDURE FOR INSTALLATION IS PROPERLY USED TO TIGHTEN BOLTS, AND TO ACHIEVE THE REQUIRED PRETENSION (WHEN SPECIFIED).
- 7.3.3 IN BOLTED CONNECTIONS THAT ARE SLIP-CRITICAL OR REQUIRE PRETENSIONING, THE SPECIAL INSPECTOR SHALL DETERMINE THAT ALL AREAS ON THE FAYING SURFACE BETWEEN BOLTS ARE FREE OF PAINT OR ZINC-COATING, UNLESS QUALIFIED/TESTED IN ACCORDANCE WITH THE 2004 RSCC SPECIFICATION APPENDIX A AND APPROVED BY THE RDP.
- 7.3.4 SHUG-TIGHT AND PRETENSIONED BEARING CONNECTIONS, IDENTIFIED AS NOT BEING SLIP-CRITICAL NEED NOT BE INSPECTED FOR BOLT TENSION, OTHER THAN TO ENSURE THAT ALL PILES OF THE CONNECTED MATERIALS HAVE BEEN DRAWN TOGETHER IN FIRM CONTACT.
- 7.3.5 PERIODIC INSPECTION FOR BOLTED CONNECTIONS MAY BE PERFORMED IN ACCORDANCE WITH AISC SPECIFICATIONS AND CBC 1704.3.3.2, INCLUDING:
- THE TURN-OF-NUT METHOD WITH MATCH-MARKING TECHNIQUES.
  - THE DIRECT TENSION INDICATOR METHOD.
  - THE ALTERNATE DESIGN FASTENERS (TWIST-OFF BOLTS).
  - JOINTS DESIGNATED AS SHUG TIGHT.
- 7.3.6 THE SPECIAL INSPECTOR SHALL PROVIDE CONTINUOUS MONITORING FOR:
- TURN-OF-NUT METHOD WITHOUT MATCH-MARKING.
  - PRETENSIONING USING THE CALIBRATED WRENCH METHOD.

- 4 SPECIAL INSPECTIONS**
- 4.1 THE SPECIAL INSPECTOR OR INSPECTION AGENCY RETAINED FOR CONDUCTING INSPECTIONS SHALL NOT BE EMPLOYED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR.
- 4.2 THE SPECIAL INSPECTOR SHALL NOTIFY THE BUILDING OFFICIAL PRIOR TO INSPECTION COMMENCEMENT, DOCUMENT INSPECTION RECORDS AND FURNISH THEM TO THE BUILDING OFFICIAL AND TO THE RDP IN RESPONSIBLE CHARGE. (CBC 1704.1.2).
- 4.3 THE INSPECTION REPORT SHALL INDICATE THAT THE WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS INCLUDING, BUT NOT LIMITED TO THE FOLLOWINGS:
- PROJECT ADDRESS.
  - PERMIT NUMBER AND THE AUTHORITIES HAVING JURISDICTION.
  - DATE OF INSPECTION.
  - DESCRIPTION OF INSPECTIONS PERFORMED, APPLICABLE STANDARD, AND LOCATION (BUILDING ID, GRID LINES, AND ELEVATION OR FLOOR LEVEL).
  - STATEMENT THAT THE WORK INSPECTED CONFORMS TO APPROVED PLANS AND SPECIFICATIONS.
  - LIST OF DISCREPANCIES, UNRESOLVED DEVIATIONS, AND EXCLUSIONS OR ADDITIONS TO APPROVED PLANS AND SPECIFICATIONS AUTHORIZED BY THE RDP.
  - CORRECTIONS TO PREVIOUSLY LISTED ITEMS.
  - LIST OF TEST SPECIMENS TAKEN, TEST RESULTS AND MILL CERTIFICATIONS RECEIVED.
  - NAME, INSPECTION LICENSE OR IDENTIFICATION NUMBER, AND SIGNATURE OF SPECIAL INSPECTOR PERFORMING THE INSPECTION.
- 4.4 ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE BUILDING OFFICIAL AND TO THE RDP (CBC 1704.1.2).
- 4.5 TEST AND INSPECTION REPORTS SHALL BE SUBMITTED WITHIN FIVE (5) WORKING DAYS OF THE INSPECTION OR THE OBTAINING THE RESULTS OF THE TEST.
- 4.6 DEVIATION LOG: EACH SPECIAL INSPECTOR SHALL MAINTAIN A LOG OF WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THIS DEVIATION LOG SHALL INCLUDE REFERENCE TO THE ORIGINAL TEST, INSPECTION, OR OBSERVATION REPORT, THE SUBSEQUENT DATES OF RE-INSPECTION OR RETESTING, AND THE DATE THE CORRECTED WORK WAS VERIFIED TO BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS. THE DEVIATION LOG SHALL BE UPDATED DAILY AND SUBMITTED AT MONTHLY INTERVALS. (CBC 1704.1.2)
- 4.7 UPON COMPLETION OF THE PROJECT, EACH SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT TO THE RDP AND THE BUILDING OFFICIAL, STATING THAT THE WORK REQUIRING SPECIAL INSPECTIONS WAS COMPLETED IN SUBSTANTIAL CONFORMANCE TO THE APPROVED PLANS, SPECIFICATIONS AND THE APPLICABLE PROVISIONS OF THE CODE. ANY WORK NOT IN COMPLIANCE SHALL BE DESCRIBED IN THE REPORT (CBC 1704.1.2 ASCE 7-05 SECTION 11A.4).

- 5 STRUCTURAL OBSERVATION**
- 5.1 THE PURPOSE OF STRUCTURAL OBSERVATION IS TO ENSURE THAT THE STRUCTURAL SYSTEM IS CONSTRUCTED IN GENERAL CONFORMANCE WITH CONSTRUCTION DOCUMENTS. (CBC 1702)
- 5.2 STRUCTURAL OBSERVATION CONSISTING OF VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM, INCLUDING BUT NOT LIMITED TO THE ELEMENTS AND CONNECTIONS FOR GENERAL CONFORMANCE TO THE APPROVED STRUCTURAL PLANS AND SPECIFICATIONS SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD AT SIGNIFICANT REPRESENTATIVE CONSTRUCTION STAGES AS DETERMINED BY THE STRUCTURAL ENGINEER OF RECORD.
- 5.3 OBSERVED DEFICIENCIES:
- OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING.
  - OBSERVED DEFICIENCIES SHALL RESOLVE ALL IDENTIFIED DEFICIENCIES TO THE SATISFACTION OF THE STRUCTURAL OBSERVER.
  - AT THE CONCLUSION OF THE PROJECT, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED (1709.1).

- 6 CONTRACTOR RESPONSIBILITIES**
- 6.1 NOTIFICATIONS: THE CONTRACTOR SHALL COORDINATE THE TESTING, INSPECTION, AND STRUCTURAL OBSERVATION SERVICES WITH THE PROGRESS OF THE WORK. THE CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR AND TESTING AGENCY 24 HOURS IN ADVANCE, AND THE STRUCTURAL OBSERVER 48 HOURS IN ADVANCE OF REQUIRED OBSERVATIONS FOR SCHEDULING PURPOSES. FAILURE BY THE CONTRACTOR TO MEET OBSERVATION SCHEDULES MAY REQUIRE REMOVAL OF ANY SUBSEQUENT WORK FOR OBSERVATION. THE CONTRACTOR SHALL BE LIABLE FOR EXPENSES INCURRED IN THE REMOVAL AND REPLACEMENT OF ANY MATERIAL REQUIRED TO ALLOW INSPECTION OR STRUCTURAL OBSERVATION.
- 6.2 THE CONTRACTOR SHALL REPAIR AND/OR REPLACE WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS, THE CHOICE OF REPAIR OR REPLACEMENT IS SUBJECT TO THE APPROVAL OF THE OWNER, THE RDP, THE ENGINEER RESPONSIBLE FOR THE STRUCTURAL DESIGN, AND THE AUTHORITIES HAVING JURISDICTION IN WHICH THE PROJECT IS CONSTRUCTED.
- CONTRACTOR SHALL ENGAGE AN ENGINEER OR ARCHITECT TO PREPARE REPAIR AND/OR REPLACEMENT PROCEDURES.
  - THE ENGINEER OR ARCHITECT SHALL BE REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. THE ENGINEER OR ARCHITECT SELECTED SHALL BE SUBJECT TO THE APPROVAL OR REJECTION OF THE RDP, AUTHORITIES HAVING JURISDICTION, AND OWNER.
  - PROCEDURES SHALL BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE RDP, ENFORCEMENT AGENCY, AND OWNER BEFORE PROCEEDING WITH CORRECTIVE ACTION.
- 6.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS OF:
- REVIEW OF PROPOSED REPAIR AND/OR REPLACEMENT PROCEDURES BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND THE INSPECTORS AND TESTING AGENCIES
  - REPAIR OR REPLACEMENT OF WORK THAT DOES NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS.
  - RE-TESTING AND RE-INSPECTION OF MATERIALS, WORK, AND/OR PRODUCTS THAT DO NOT MEET THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS AND SHOP DRAWINGS/SUBMITTAL DATA.
- 6.4 SUBMITTALS:
- SUBMIT SHOP DRAWINGS, DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S FIELD REPORTS, AND OTHER QUALITY CONTROL SUBMITTALS AS REQUIRED BY THE CONTRACT DOCUMENTS FOR REVIEW BY THE RDP.

- 1 DEFINITIONS**
- APPROVED AGENCY: THE APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, AND APPROVED BY THE RDP AND THE BUILDING OFFICIAL. (CBC 1702.1).
  - APPROVED FABRICATOR: A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES WITHOUT SPECIAL INSPECTION. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL AND THE RDP (CBC 1704.2.2).
  - CERTIFICATE OF COMPLIANCE: A CERTIFICATE STATING THAT THE MATERIALS AND PRODUCTS MEET SPECIFIED STANDARDS OR THE WORK WAS DONE IN COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS (CBC 1702).
  - RDP: REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE OF THE PROJECT. A REGISTERED DESIGN PROFESSIONAL SHALL BE A REGISTERED STRUCTURAL ENGINEER, A REGISTERED CIVIL ENGINEER, OR A LICENSED ARCHITECT HOLDING A VALID CERTIFICATE TO PRACTICE IN THE STATE OF CALIFORNIA.
  - SPECIAL INSPECTOR: A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND RDP, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION (CBC 1704.1). THE SPECIAL INSPECTOR SHALL HAVE ACTUAL PERSONAL KNOWLEDGE, OBTAINED BY PERSONAL INSPECTION OF THE WORK OF CONSTRUCTION.
  - SPECIAL INSPECTION: INSPECTION OF THE MATERIALS, INSTALLATION, FABRICATION, ERECTION OR PLACEMENT OF COMPONENTS AND CONNECTIONS REQUIRING SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS (CBC 108, 1702 & 1704). THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS BY THE BUILDING OFFICIAL (CBC 109).
  - SPECIAL INSPECTION, CONTINUOUS: CONSTANT, FULL-TIME INSPECTION OF THE WORK OF CONSTRUCTION, IN ALL STAGES OF ITS PROGRESS, BY THE APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED, TO ENSURE THAT THE REQUIREMENTS OF THE APPROVED PLANS AND SPECIFICATIONS ARE BEING COMPLETELY EXECUTED. (CBC 1702)
  - SPECIAL INSPECTION, PERIODIC: PART-TIME OR INTERMITTENT INSPECTION OF WORK OF CONSTRUCTION BY THE APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE WORK HAS BEEN OR IS BEING PERFORMED AND AT COMPLETION OF THE WORK. (CBC 1702)
  - STRUCTURAL OBSERVATION: VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE DESIGNATED STRUCTURAL OBSERVER FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM (CBC 108.3.4.1, 1702 & 1709). STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED PER CBC 109 & 1704.
  - STRUCTURAL OBSERVER: THE STRUCTURAL OBSERVER SHALL BE THE INDIVIDUAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURAL SYSTEMS. ALTERNATIVELY, THE STRUCTURAL OBSERVER SHALL BE A PROFESSIONAL ENGINEER DESIGNATED BY EITHER THE RDP OR PROFESSIONAL ENGINEER DELEGATED RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURAL SYSTEMS OF THE BUILDING. THE STRUCTURAL OBSERVER SHALL BE EMPLOYED BY THE OWNER, THE RDP OR THE PROFESSIONAL ENGINEER DELEGATED RESPONSIBILITY FOR THE DESIGN OF THE STRUCTURAL SYSTEMS OF THE BUILDING.
- 2 GENERAL REQUIREMENTS AND PREPARATION**
- THIS INSPECTION AND OBSERVATION PROGRAM HAS BEEN DEVELOPED WITH THE UNDERSTANDING THAT THE OWNER SHALL DESIGNATE A RESPONSIBLE INDIVIDUAL OR FIRM, ACCEPTABLE TO THE RDP AND BUILDING OFFICIAL, TO OVERSEE AND COORDINATE THE IMPLEMENTATION OF THE PROGRAM, AND MONITOR THE SPECIAL INSPECTION ACTIVITIES ON THE JOB SITE TO ASSURE THAT THE SPECIAL INSPECTORS PERFORM THEIR DUTIES, AS DESCRIBED HEREIN.
  - THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS, INSPECTION AGENCIES OR FIRMS, APPROVED BY THE RDP AND THE BUILDING OFFICIAL, TO PROVIDE INSPECTION DURING CONSTRUCTION ON THE TYPES OF WORK REQUIRING SPECIAL INSPECTION (CBC 1704.1).
  - THE OWNER OR ITS DESIGNEE SHALL EMPLOY MATERIALS TESTING LABORATORY/TESTING AGENCY AS APPROVED BY THE RDP AND THE BUILDING OFFICIAL TO PERFORM TESTS SPECIFIED IN THIS SECTION.
- 3 TESTING AND APPROVALS**
- THE APPROVED AGENCY SHALL BE AN ESTABLISHED AND RECOGNIZED AGENCY UNDER THE RESPONSIBLE CHARGE OF A LICENSED PROFESSIONAL ENGINEER, REGULARLY ENGAGED IN CONDUCTING TESTS OR FURNISHING INSPECTION SERVICES, AND APPROVED BY THE RDP AND THE BUILDING OFFICIAL.
  - THE APPROVED AGENCY RETAINED FOR CONDUCTING TESTS SHALL NOT BE EMPLOYED DIRECTLY OR INDIRECTLY BY THE CONTRACTOR.
  - THE APPROVED AGENCY SHALL HAVE ADEQUATE EQUIPMENT AND PERSONNEL TO MEASURE, EXAMINE, TEST, CALIBRATE OR OTHERWISE DETERMINE THE CHARACTERISTICS OR PERFORMANCE OF CONSTRUCTION MATERIALS AND VERIFY CONFORMANCE WITH CONSTRUCTION DOCUMENTS AND APPLICABLE STANDARDS. (CBC 1703.1)
    - ALL EQUIPMENT NECESSARY TO PERFORM REQUIRED TESTS SHALL BE PERIODICALLY CALIBRATED PER THE REFERENCED STANDARDS AND AS RECOMMENDED BY THE MANUFACTURER.
    - THE APPROVED AGENCY SHALL EMPLOY EXPERIENCED PERSONNEL, EDUCATED IN CONDUCTING, SUPERVISING AND EVALUATING TESTS, AND/OR INSPECTIONS.
  - APPROVAL OF ANY MATERIAL, APPLIANCE, EQUIPMENT, SYSTEM OR METHOD OF CONSTRUCTION MEETING THE REQUIREMENTS OF THIS CODE, SHALL BE IN WRITING. A RECORD OF SUCH APPROVAL SHALL BE KEPT ON FILE IN THE BUILDING OFFICIAL'S OFFICE. SUCH APPROVAL RECORDS SHALL ALSO INCLUDE THE CONDITIONS AND LIMITATIONS OF THE APPROVAL. (CBC 1703.2, 1703.3)
  - THE APPROVED AGENCY SHALL MAINTAIN A RECORD OF TESTS PERFORMED IN SUFFICIENT DETAIL TO VERIFY COMPLIANCE WITH THE TEST STANDARD. (CBC 1703.5.1)
  - TEST REPORTS BY THE APPROVED AGENCY SHALL BE PROVIDED TO THE RDP AND THE BUILDING OFFICIAL TO DETERMINE THAT THE CONSTRUCTION MATERIALS COMPLY WITH APPLICABLE CODE REQUIREMENTS. (CBC 1703.2)

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS:  
EL SEGUNDO, CA

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 REGISTERED STRUCTURAL ENGINEERS  
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CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
 INSPECTION, TESTING, & OBSERVATION NOTES

PH \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECK \_\_\_\_\_ DATE \_\_\_\_\_

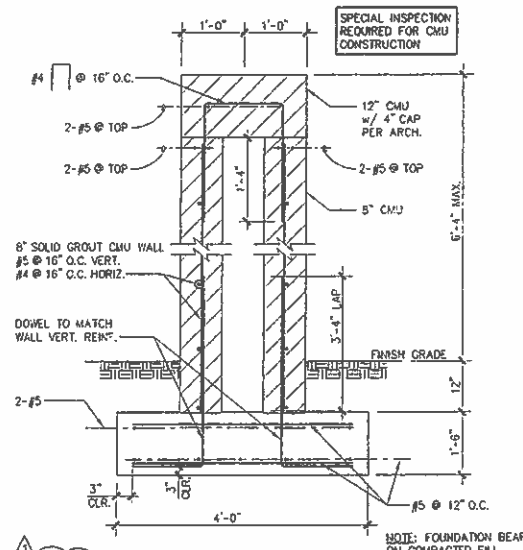
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**S-4.2**  
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 JOB NO. 1109531

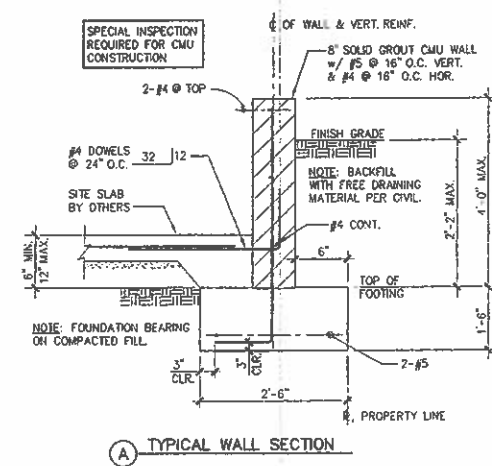
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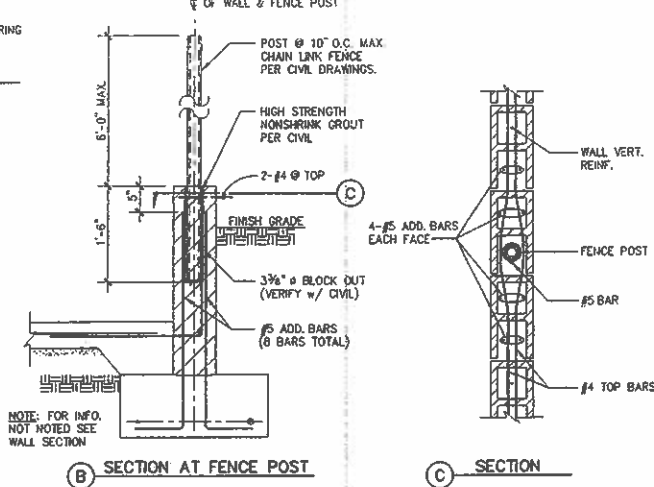




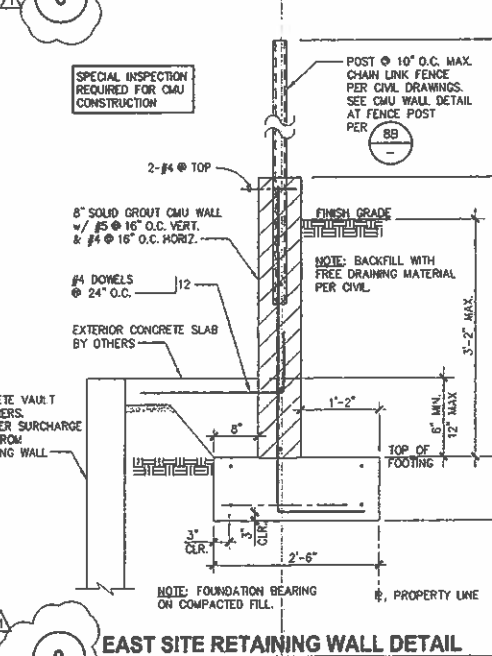
10 FREE STANDING SITE SHOWER WALL



A TYPICAL WALL SECTION



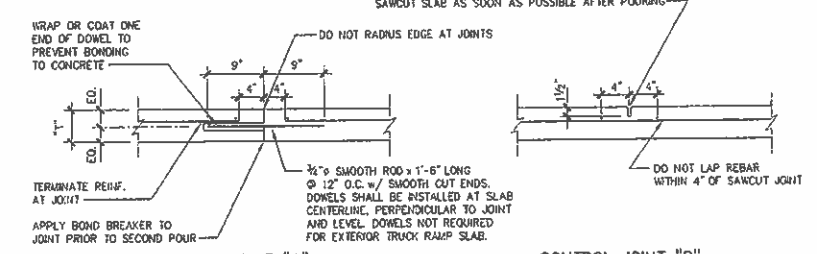
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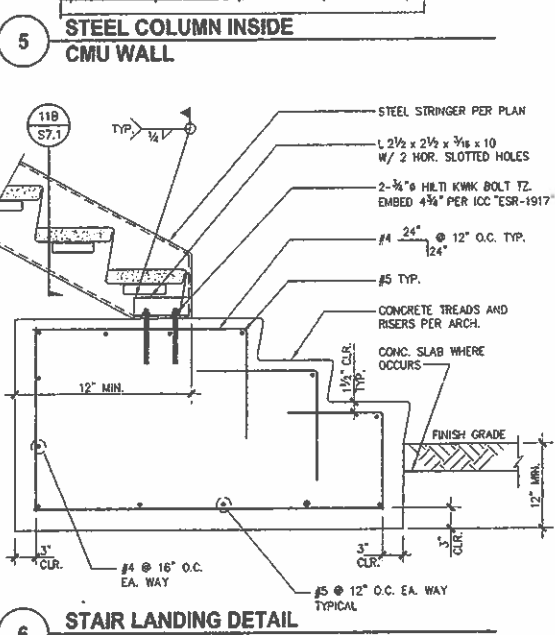
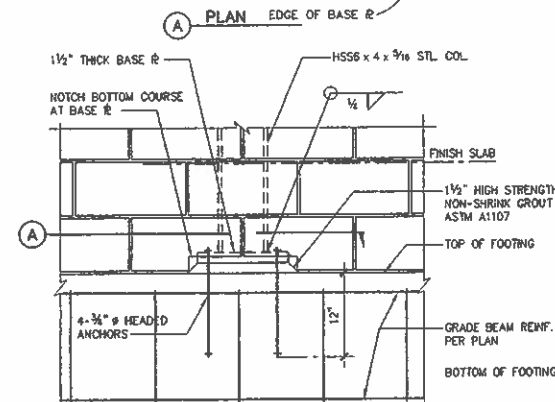
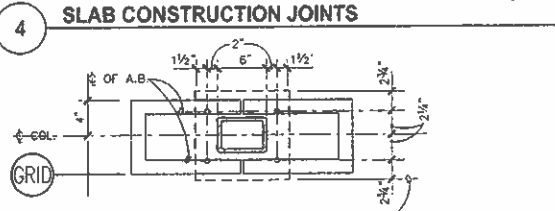
8 SOUTH SITE RETAINING WALL DETAIL



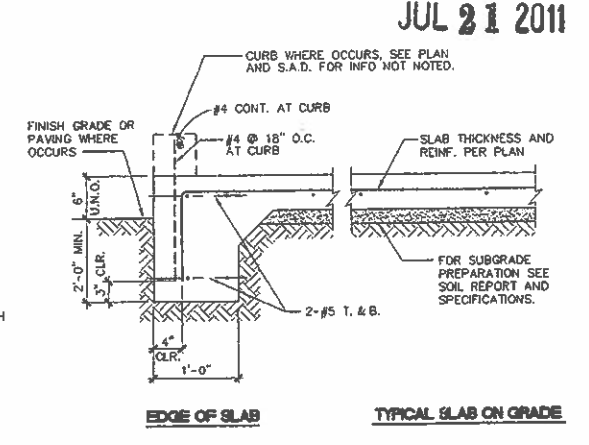
9 EAST SITE RETAINING WALL DETAIL



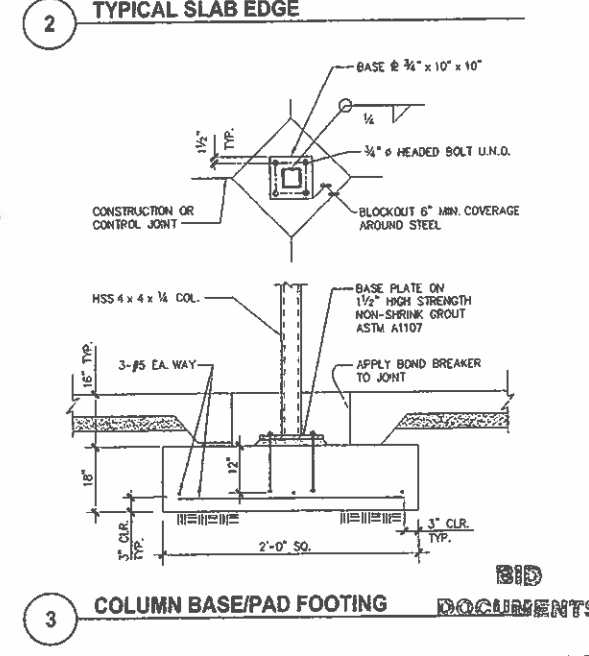
- NOTES:**
1. SLABS MAY BE POURED IN STEPS 52'-0" WIDE MAXIMUM, WITH CONSTRUCTION JOINTS OR CONTROL JOINTS IN PERPENDICULAR DIRECTION AT A MAXIMUM DISTANCE OF 18'-0" BETWEEN JOINTS.
  2. CONSTRUCTION JOINTS SHALL OCCUR IN AT LEAST ONE DIRECTION AND SHALL BE SPACED NO FURTHER APART THAN 52'-0" (INTERMEDIATE CONTROL JOINTS SHALL OCCUR AT MIN. 18'-0" O.C.)
  3. SAWCUT CONTROL JOINTS MAY BE USED IN BOTH DIRECTIONS AND SPACED AT 18'-0"
  4. SAWCUT JOINTS SHALL BE MADE IMMEDIATELY AFTER FINISHING OPERATION AND PRIOR TO DRYING SHRINKAGE. SAW CUT JOINTS SHALL BE MADE WITH "EARLY ENTRY" SAW EQUIPMENT.
  5. DISCONTINUE REINFORCING UNDER ANY COLUMN LINE CONTROL OR CONSTRUCTION JOINT.
  6. FINISHING OF SLAB CONCRETE SHALL BE DONE AFTER SURFACE BLEED WATER HAS EVAPORATED.
  7. CONCRETE SHALL HAVE AIR ENTRAIMENT OF 2% TO 3% BY VOLUME.
  8. MOISTEN SUB-GRADE PRIOR TO PLACING CONCRETE.
  9. APPLY MEMBRANE CURING TO SLAB ON GRADE IMMEDIATELY AFTER FINISHING OPERATION.



6 STAIR LANDING DETAIL



2 TYPICAL SLAB EDGE



3 COLUMN BASE/PAD FOOTING

JUL 21 2011

PROJECT ADDRESS:  
EL SEGUNDO, CA

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CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
DETAILS

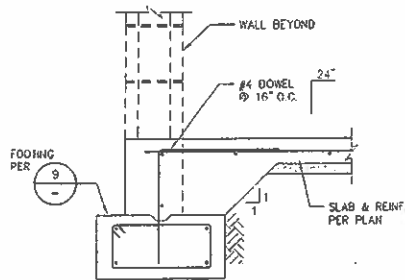
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SHEET 26 OF 66  
JOB NO. 1109531  
FILE NO.

**CONTINUOUS FOOTING SCHEDULE**

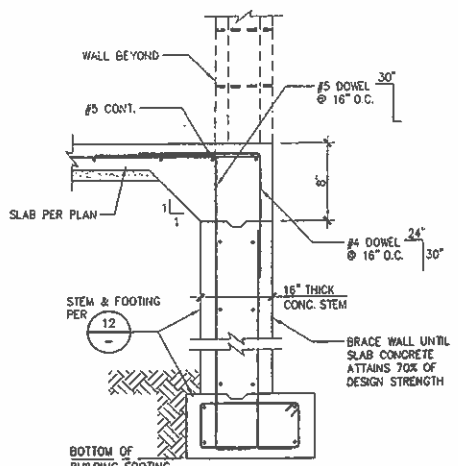
MARK	SIZE W x D	REINFORCING STEEL			
		LONGITUDINAL BARS		SIZE/SPACING	TIES(*)
CF-1	1'-4" x 1'-4"	2-#6	2-#6	----	----
CF-2	2'-0" x 1'-6"	2-#6	2-#6	#4 @ 1'-0" O.C.	(2)
CF-3	3'-0" x 1'-6"	3-#6	3-#6	#4 @ 1'-0" O.C.	(2)
CF-4	3'-0" x 2'-6"	4-#7	4-#7	#4 @ 1'-0" O.C.	(4)

**NOTES:**

- TYPICAL LONGITUDINAL REINFORCEMENT AND TIES PER SCHEDULE APPLY THE FULL LENGTH OF CONTINUOUS FOOTING U.N.O. STAGGER LAP SPICES 2'-0" MINIMUM.
- ALL LONGITUDINAL BARS TO TERMINATE WITH STD. 90° HOOKS AT ENDS OF CONTINUOUS FOOTINGS.
- CONTINUOUS FOOTINGS AT INTERSECTIONS AND WHERE TERMINATING AT PAD FOOTINGS SHALL EXTEND LONGITUDINAL REBAR THE FULL WIDTH OF INTERSECTING FOOTING AND TERMINATE WITH STANDARD HOOKS TYP. U.N.O.
- TIES MAY BE 2-PIECE SETS CONSISTING OF "U" STIRRUP WITH 135° HOOKS ENCLOSING OUTER MOST LONGIT. BARS AND CAP TIE WITH ALTERNATING 135° AND 90° HOOKS AT EACH END.

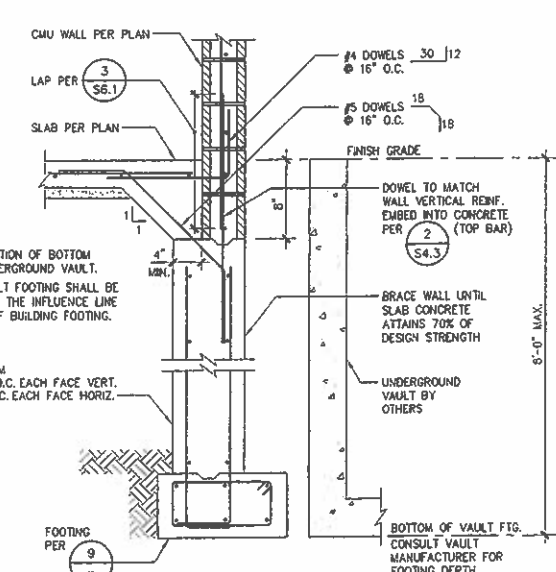


**10 FOOTING DETAIL AT OPENINGS**



**7 CMU WALL FOOTING SCHEDULE**

**11 DETAIL AT STEPPED FOOTING**

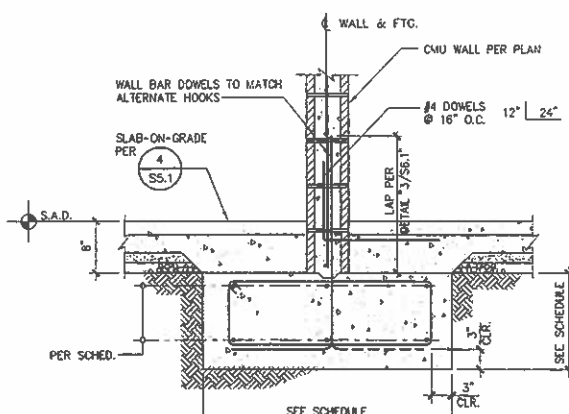


**NOTE:**

- DETERMINE LOCATION OF BOTTOM CORNER OF UNDERGROUND VAULT.
- BOTTOM OF VAULT FOOTING SHALL BE HIGHER THAN THE INFLUENCE LINE FROM BOTTOM OF BUILDING FOOTING.

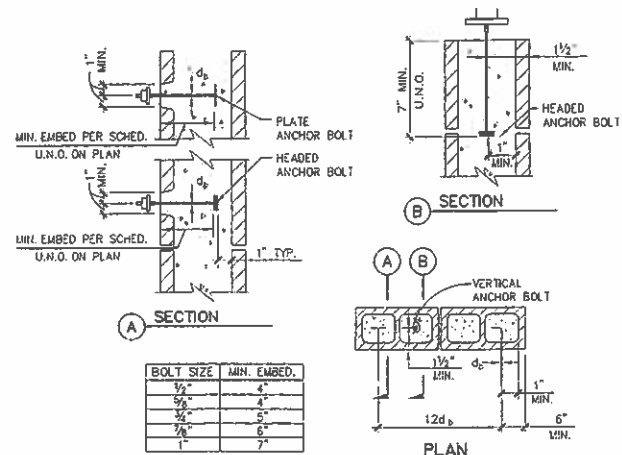
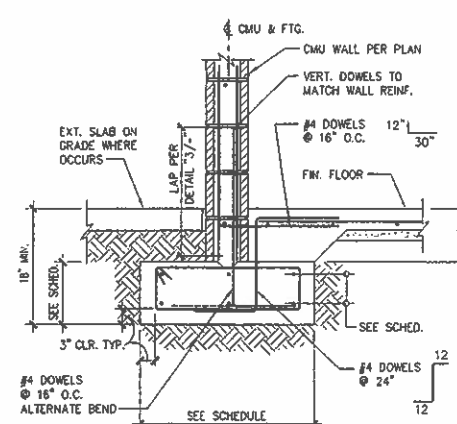
CONCRETE STEM w/ #5 @ 16" O.C. EACH FACE VERT. & #4 @ 16" O.C. EACH FACE HORIZ.

**12 DEEPENED FOOTING AT UNDERGROUND VAULT**



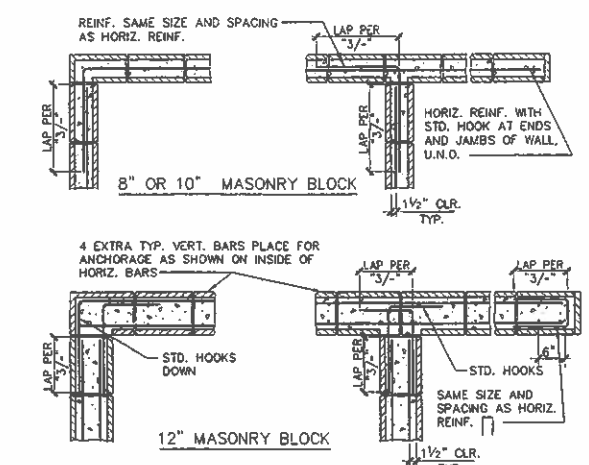
**8 INTERIOR CMU WALL FOOTING**

**9 EXTERIOR CMU WALL FOOTING**



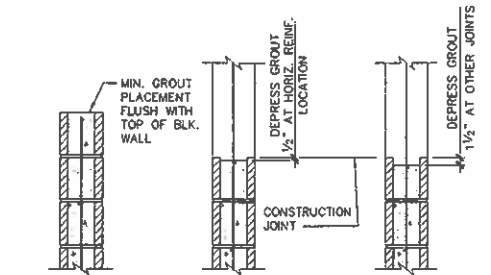
**NOTE:**  
MINIMUM BOLT SPACING SHALL BE 12 BOLT DIAMETERS WITH A MINIMUM EDGE DISTANCE OF 5 DIAMETERS AND WITH A MINIMUM OF 6" TO END OF WALL.

**4 TYPICAL CMU ANCHOR BOLT (A.B.) LAYOUT**

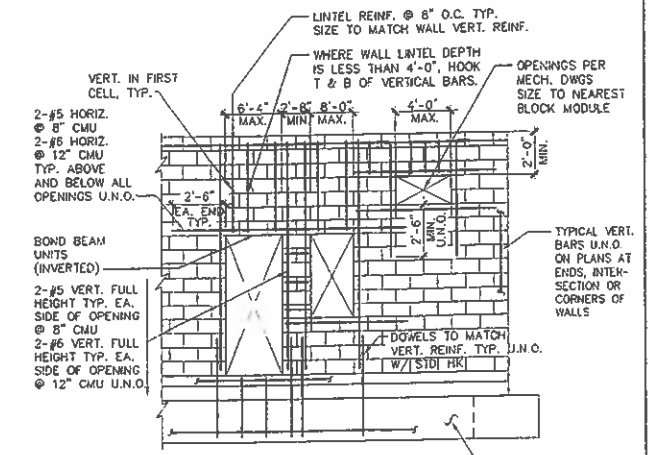


- NOTES:**
- GROUT ALL CELLS SOLID.
  - USE DOUBLE OPEN END BLOCKS TYP., USE SINGLE OPEN END UNITS AT CORNERS.

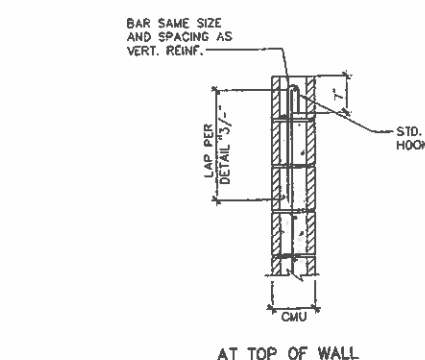
**5 CMU WALL INTERSECTIONS TYPICAL**



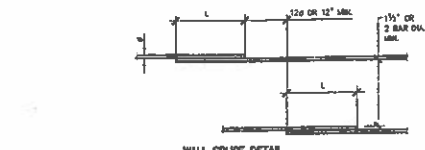
**6 TYPICAL GROUT CONSTRUCTION JOINTS**



**1 TYPICAL CMU WALL REINFORCEMENT AT OPENINGS**



**2 TOP OF CMU WALL**



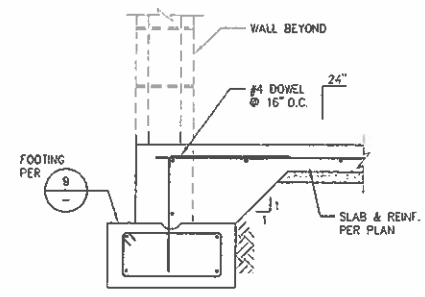
CMU STRENGTH	REINFORCEMENT LAP SPICE LENGTH "L"	
	f'm = 1500 PSI	f'm = 3000 PSI
#3	1'-4"	1'-0"
#4	2'-2"	1'-6"
#5	3'-4"	2'-4"
#6	6'-2"	4'-5"
#7	8'-5"	5'-11"
#8	12'-8"	8'-11"
#9	16'-0"	11'-4"

- NOTES:**
- THE LAP SPICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW
  - DEVELOPMENT LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE SCHEDULED LENGTH.
  - SPICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
  - SPICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.
  - LAP SPICE IN MASONRY SHALL BE MIN. 48 BAR DIA.

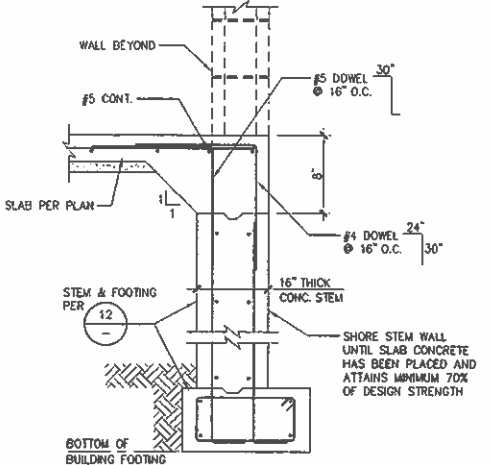
**3 MASONRY LAP SPICE**

<p>PROJECT ADDRESS: EL SEGUNDO, CA</p>	<p><b>RSSE</b> Structural Engineers Inc. 27942 Vienna Centre Dr. Suite 235 Foothill Ranch, CA 92610 949.443.1007 / 949.443.7006 Fax</p>	<p><b>rrm designgroup</b> creating environments people enjoy® 3115 South Higuera St., Ste. 101, San Luis Obispo, CA 93401 P: (805) 543-1704 / F: (805) 543-4028 / www.rdmgroup.com</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	BY				<p>CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION</p>	<p><b>S-6.1</b> 05/04/2010 SHEET 37 OF 68 JOB NO. 1109531</p>
			NO.	DATE	BY						
<p>EL SEGUNDO LS MASONRY DETAILS</p>	<p>APPROVED _____ DATE _____ CITY ENGINEER R.E.</p>	<p>PM DRAWN _____ CHECK _____</p>	<p>NO.</p>	<p>APPROVED _____ DATE _____ CITY ENGINEER R.E.</p>	<p>NO.</p>						

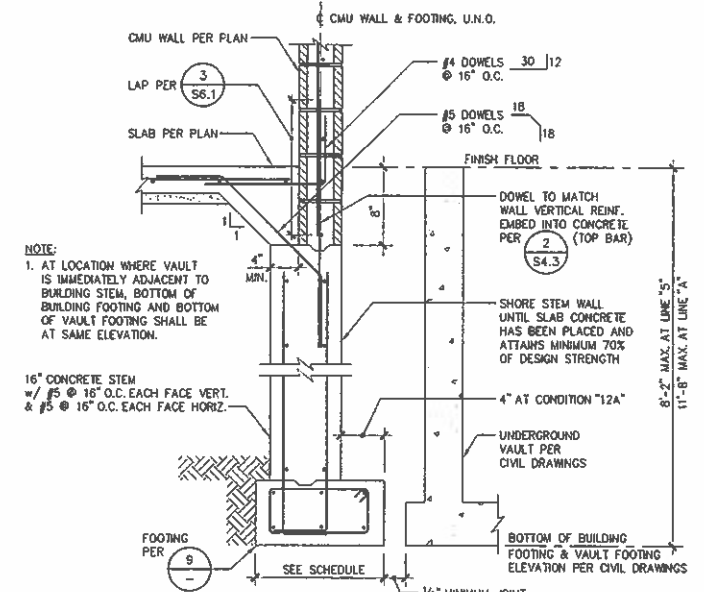
MASONRY  
 10 101/ 10101\_36/ 05/03/10



10 FOOTING DETAIL AT OPENINGS



11 DETAIL AT STEPPED FOOTING



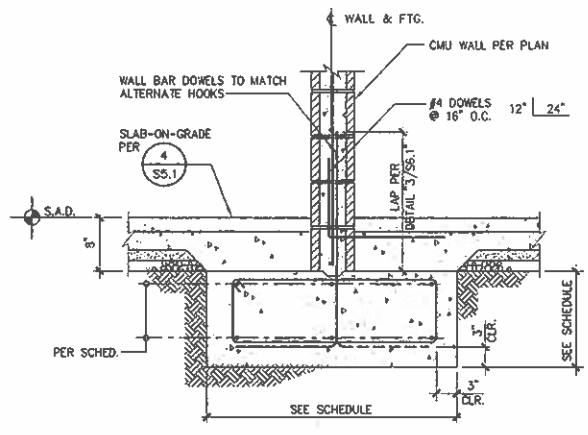
12 DEEPEMED BUILDING FOOTING AT UNDERGROUND VAULT

**CONTINUOUS FOOTING SCHEDULE**

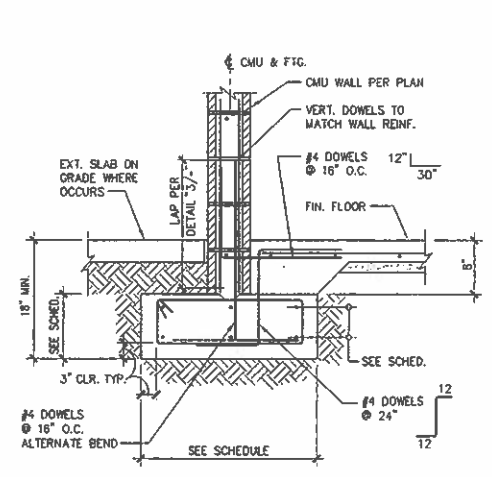
MARK	SIZE W x D	REINFORCING STEEL			
		LONGITUDINAL BARS TOP	LONGITUDINAL BARS BOTTOM	TIES <sup>(4)</sup> SIZE/SPACING	VERT. LEGS
CF-1	1'-4" x 1'-4"	2-#6	2-#6	----	----
CF-2	2'-0" x 1'-6"	2-#6	2-#6	#4 @ 1'-0" O.C.	(2)
CF-3	3'-0" x 1'-6"	3-#6	3-#6	#4 @ 1'-0" O.C.	(2)
CF-4	3'-0" x 2'-6"	4-#7	4-#7	#4 @ 1'-0" O.C.	(4)

- NOTES:**
- TYPICAL LONGITUDINAL REINFORCEMENT AND TIES PER SCHEDULE APPLY THE FULL LENGTH OF CONTINUOUS FOOTING U.N.O. STAGGER LAP SPLICES 2'-0" MINIMUM.
  - ALL LONGITUDINAL BARS TO TERMINATE WITH STD. 90° HOOKS AT ENDS OF CONTINUOUS FOOTINGS.
  - CONTINUOUS FOOTINGS AT INTERSECTIONS AND WHERE TERMINATING AT PAD FOOTINGS SHALL EXTEND LONGITUDINAL REBAR THE FULL WIDTH OF INTERSECTING FOOTING AND TERMINATE WITH STANDARD HOOKS TYP. U.N.O.
  - TIES MAY BE 2-PIECE SETS CONSISTING OF "U" STIRRUP WITH 135° HOOKS ENCLOSING OUTER MOST LONGIT. BARS AND CAP TIE WITH ALTERNATING 135° AND 90° HOOKS AT EACH END.

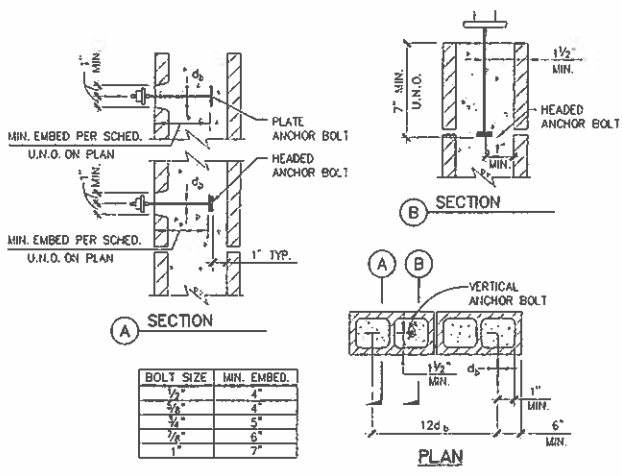
7 CMU WALL FOOTING SCHEDULE



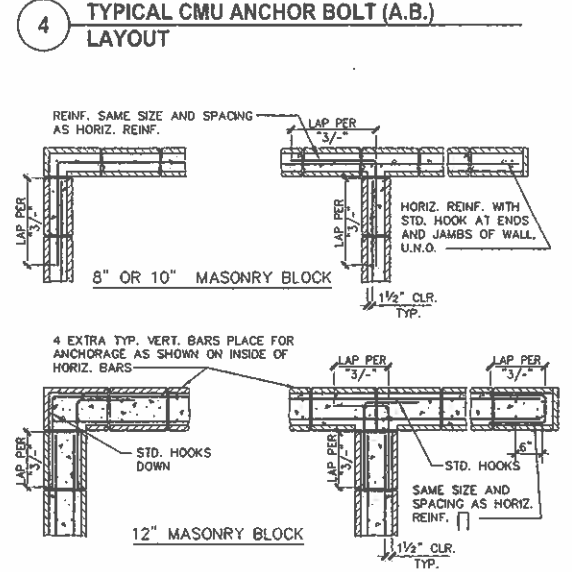
8 INTERIOR CMU WALL FOOTING



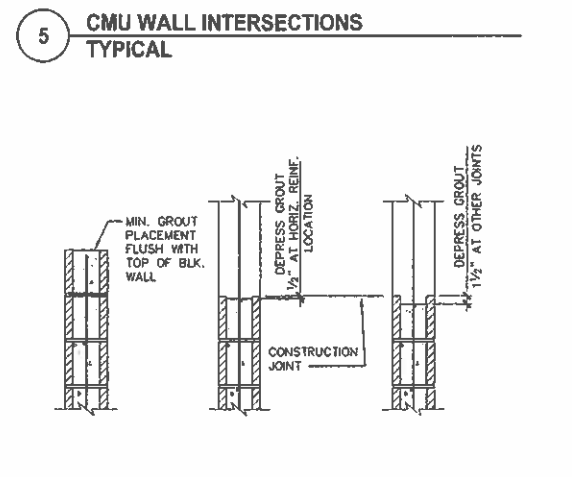
9 EXTERIOR CMU WALL FOOTING



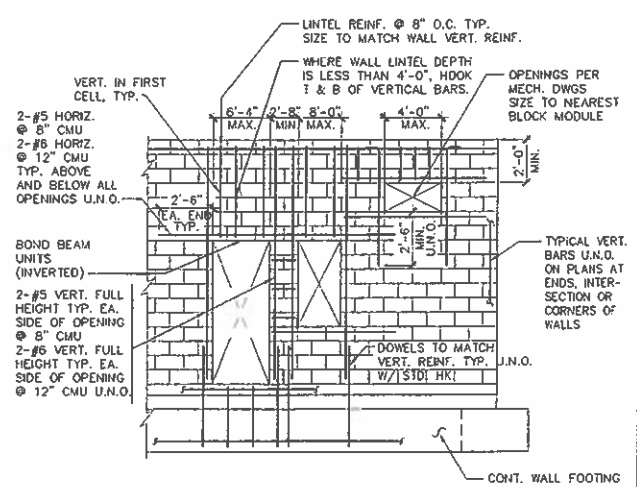
4 TYPICAL CMU ANCHOR BOLT (A.B.) LAYOUT



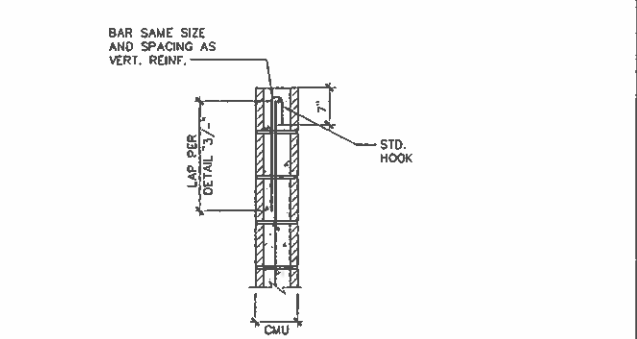
5 CMU WALL INTERSECTIONS TYPICAL



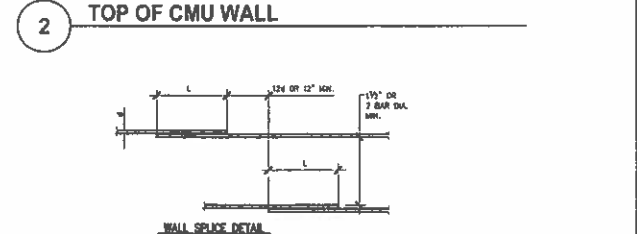
6 TYPICAL GROUT CONSTRUCTION JOINTS



1 TYPICAL CMU WALL REINFORCEMENT AT OPENINGS



2 TOP OF CMU WALL

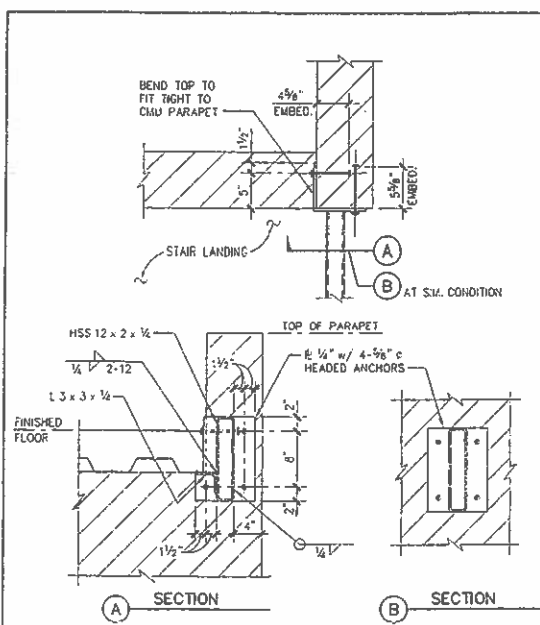


3 MASONRY LAP SPLICE

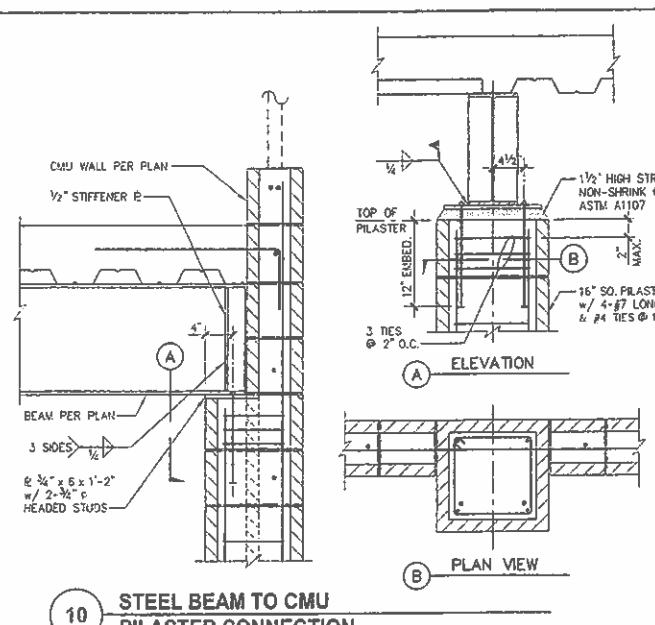
**REINFORCEMENT LAP SPICE LENGTH "L"**

CMU STRENGTH	F'm = 1500 PSI	F'm = 3000 PSI
BAR SIZE		
#5	1'-4"	1'-0"
#4	2'-2"	1'-6"
#5	3'-4"	2'-4"
#6	6'-2"	4'-5"
#7	8'-5"	6'-11"
#8	12'-8"	10'-11"
#9	16'-0"	14'-4"

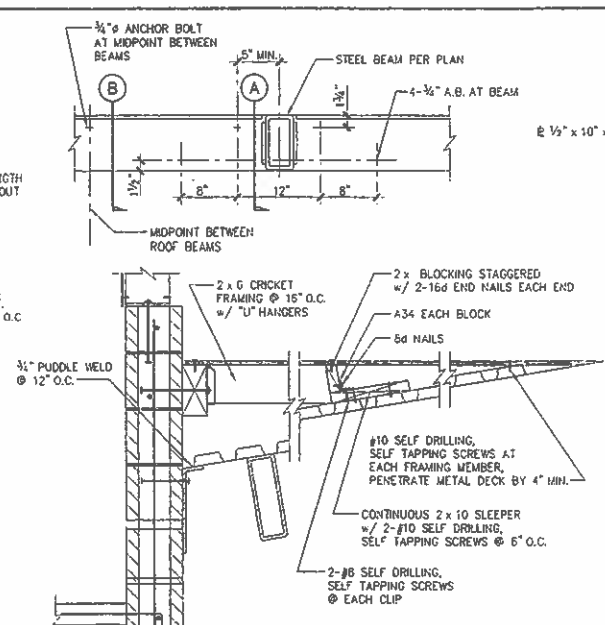
- NOTES:**
- THE LAP SPICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
  - DEVELOPMENT LENGTH OF EPOXY-COATED BARS SHALL BE TAKEN AS 150 PERCENT OF THE SCHEDULED LENGTH.
  - SPLICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
  - SPLICES IN WALLS CONTAINING TWO COURSES OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.
  - LAP SPICE IN MASONRY SHALL BE MIN. 48 BAR DIA.



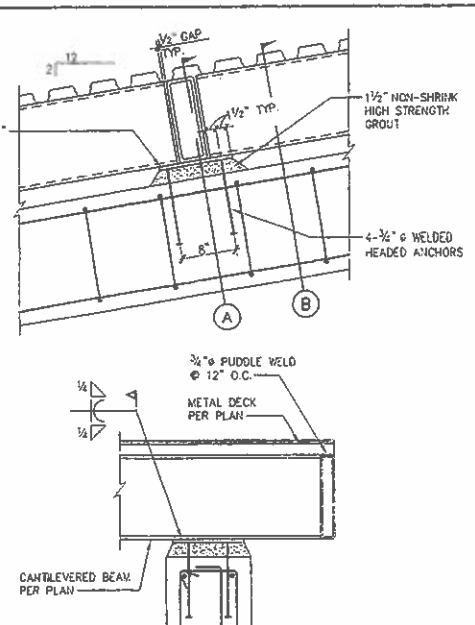
13 STAIR BEAM TO CMU WALL CONNECTION



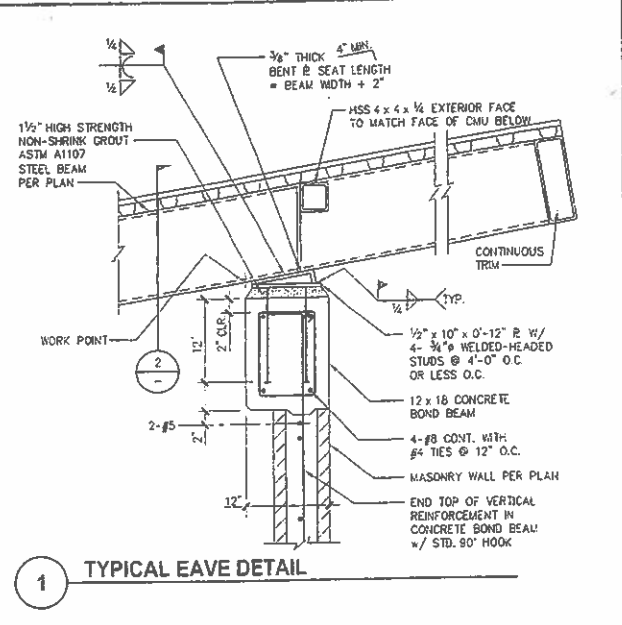
10 STEEL BEAM TO CMU PILASTER CONNECTION



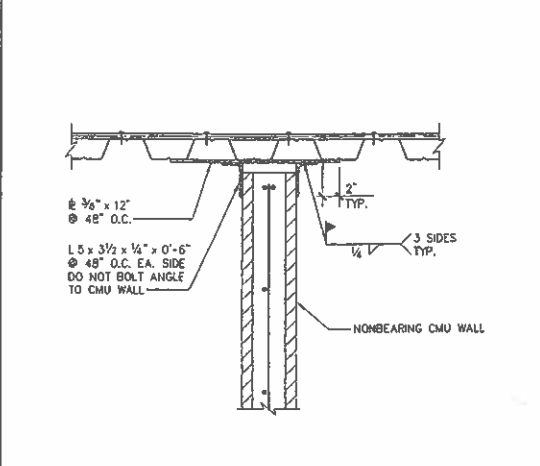
11 BEAM TO STEEL COLUMN INSIDE CMU WALL CONNECTION



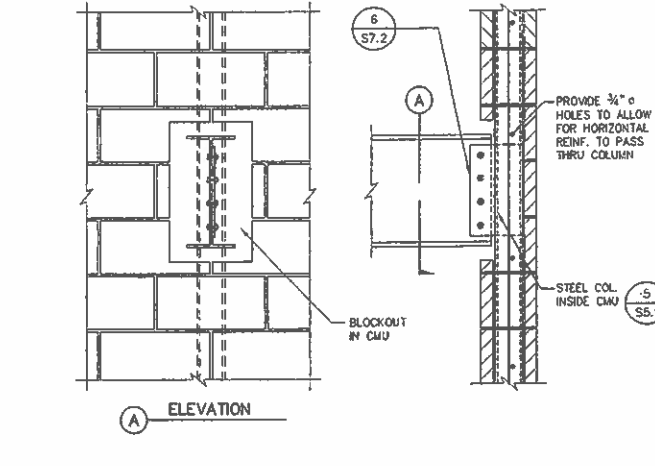
12 WALL SECTION



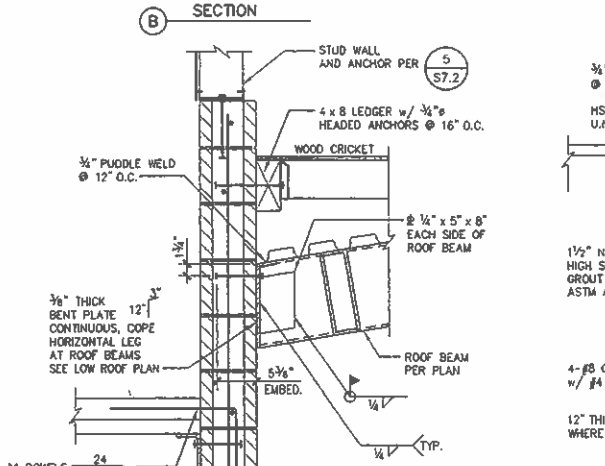
13 TYPICAL EAVE DETAIL



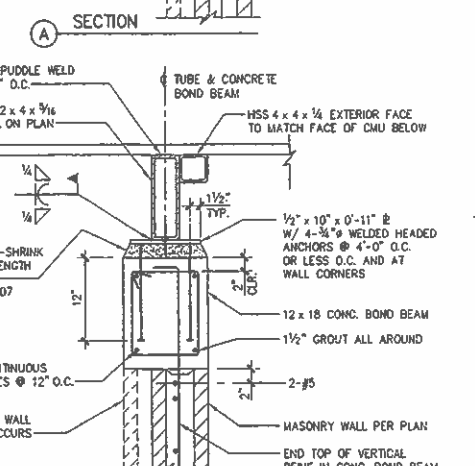
14 TOP OF NON-BEARING CMU WALL



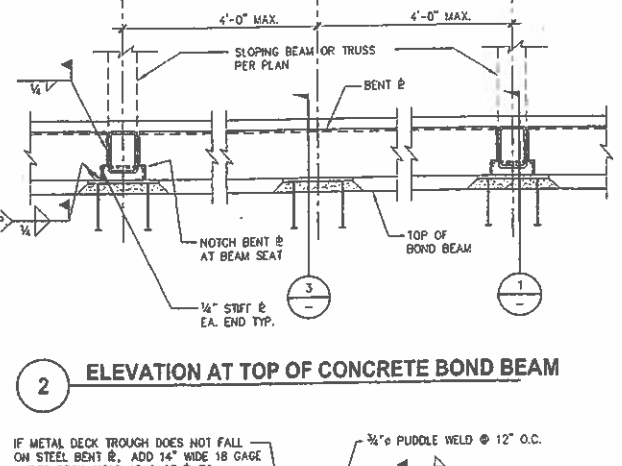
15 WALL SECTION



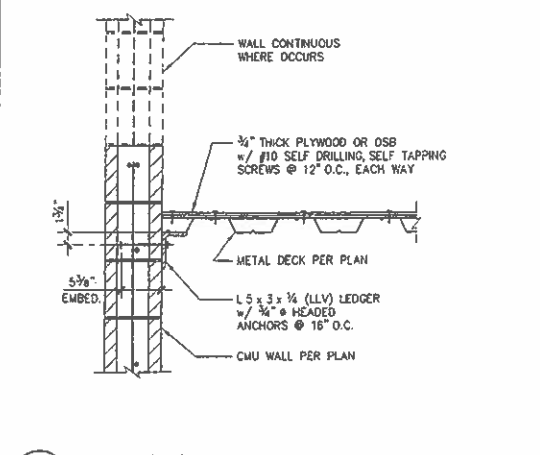
16 LOW ROOF TO WALL CONNECTION



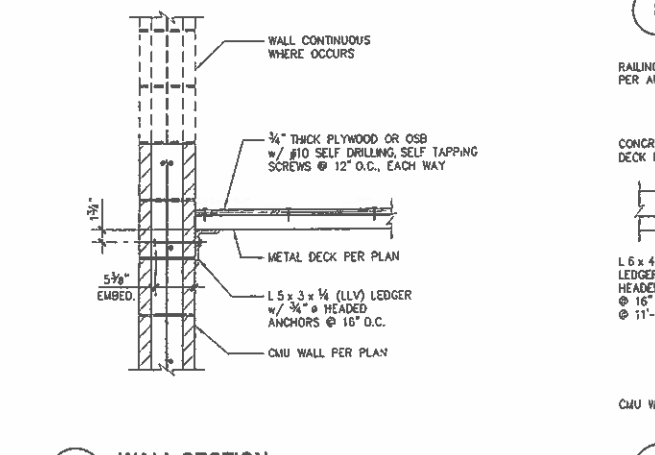
17 SECTION AT WALL ON RAKE SIDE OF ROOF



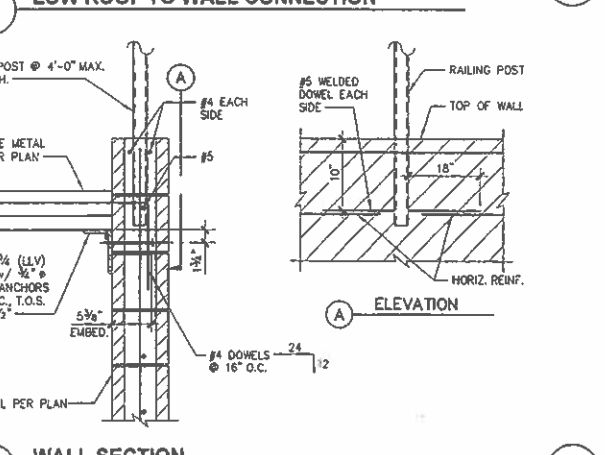
18 ELEVATION AT TOP OF CONCRETE BOND BEAM



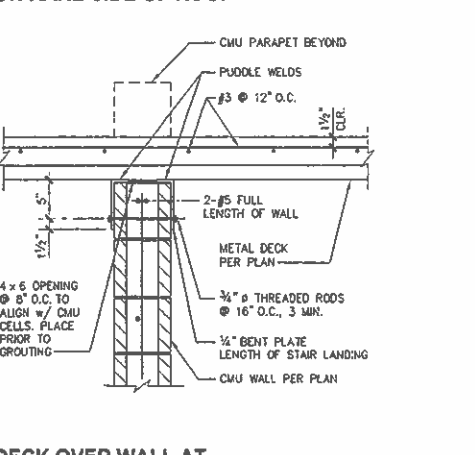
19 WALL SECTION



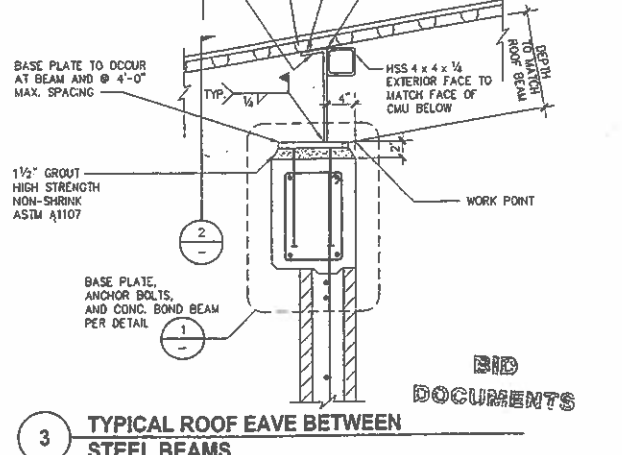
20 WALL SECTION



21 WALL SECTION



22 DECK OVER WALL AT STAIR LANDING



23 TYPICAL ROOF EAVE BETWEEN STEEL BEAMS

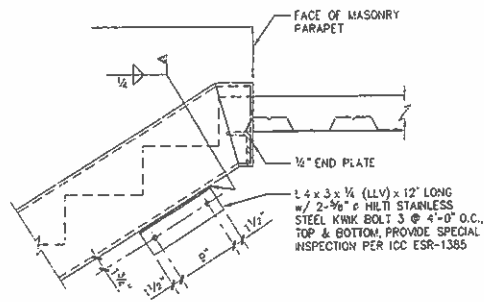
PROJECT ADDRESS:  
EL SEGUNDO, CA

RSSE  
Structural Engineers Inc.  
27642 Yuma Centre Dr.  
Suite 235  
Foothill Ranch, CA 92610  
949.461.7057 / 949.461.7059 Fax

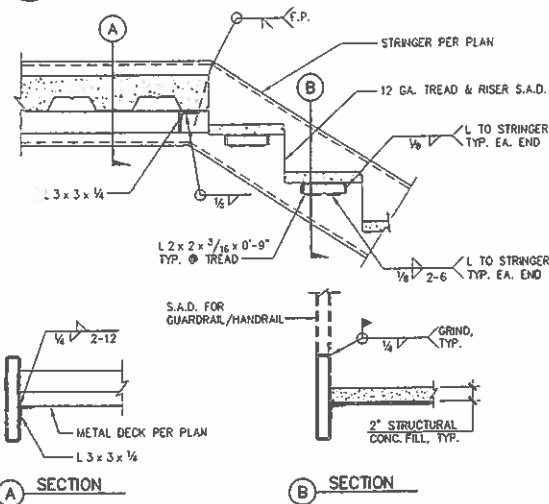
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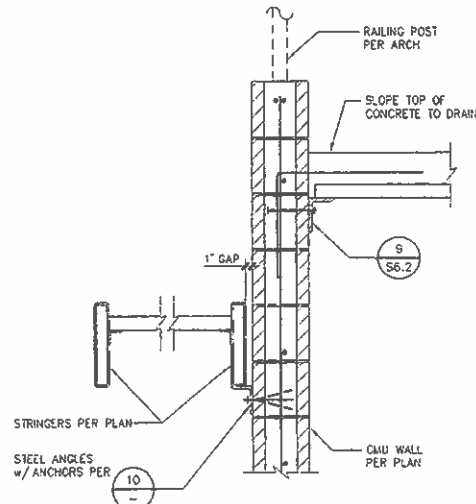
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
EL SEGUNDO LS  
MASONRY DETAILS  
S-6.2  
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SHEET 38 OF 68  
JOB NO. 1109531  
FILE NO.



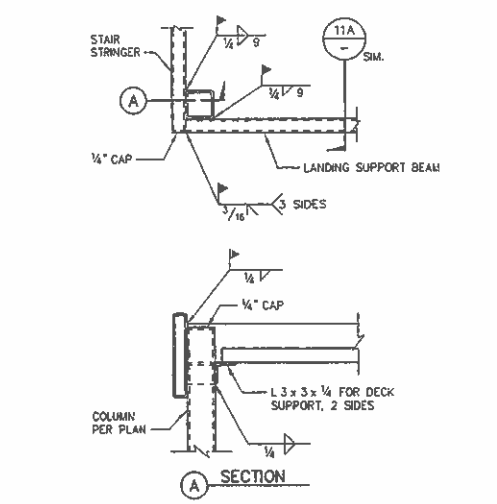
10 STAIR DETAIL



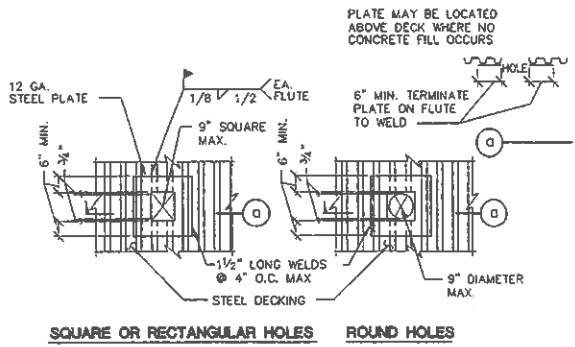
11 TYPICAL STAIR DETAIL



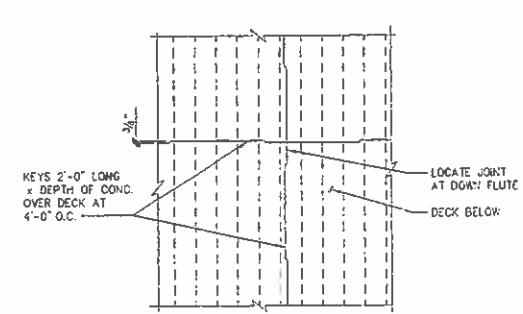
7 STAIR DETAIL



8 STAIR DETAIL

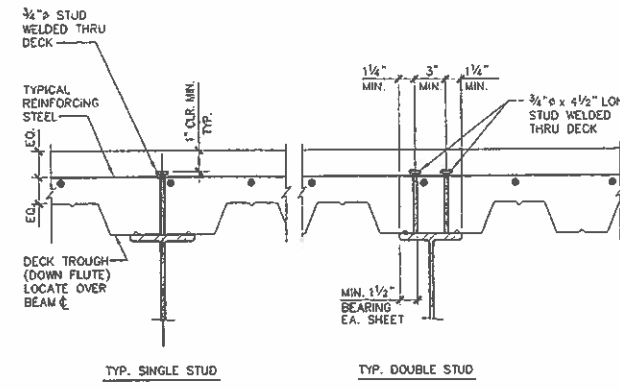


9 SMALL OPENINGS IN STEEL DECK



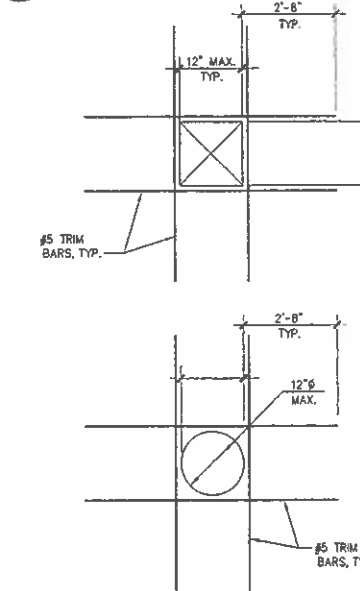
- NOTES:  
 1. SLAB REINF. CONT. THRU JOINT U.N.O.  
 2. SAW CUT, PLASTIC STRIP OR OTHER SIMILAR CONTROL JOINT SHALL NOT BE USED.

4 CONSTRUCTION JOINT AT CONCRETE FILL OVER STEEL DECK

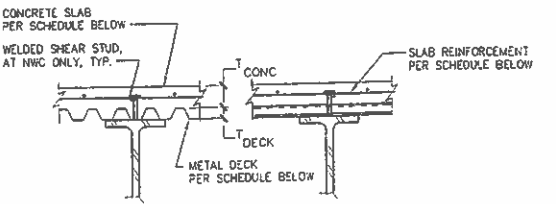


- NOTES:  
 1. ALL STUDS TO BE 3/4 inch phi x (LENGTH PER PLAN) WELDED HEADED STUD U.N.O.  
 2. SPLIT DECK LONGITUDINALLY WHERE REQ'D. TO ENLARGE TROUGH.  
 3. PROVIDE DOUBLE STUDS WHERE SINGLE STUD SPACING WOULD BE LESS THAN 4 1/2 inches O.C.

5 SHEAR STUD DETAIL



6 TYPICAL TRIM BARS AROUND OPENING IN METAL DECK



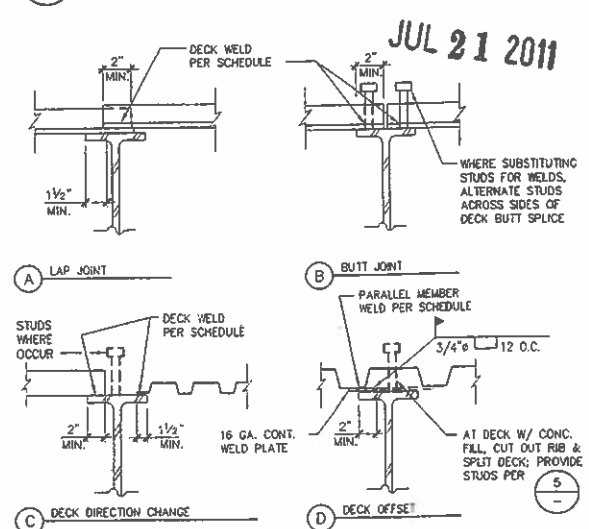
TYPE	LOCATION	METAL DECK		CONC. REINFORCEMENT	DECK WELD ATTACHMENT				
		DECK	GAUGE		AT SUPPORT	AT PARALLEL SUPPORT	AT SIDE LAP		
A	FLOOR	W2-36 FORMLOK VENTED	2"	18	3 1/2" NWC	#3 @ 12" O.C. EACH WAY	4 WELDS PER 35" SHEET	1/2" WELDS @ 12" O.C.	TOP SEAM WELD @ 24" O.C.
B	ROOF	HSB-36	1 1/2"	18	-	-	6 WELDS PER 35" SHEET	1/2" WELDS @ 12" O.C.	BUTT JOINT @ 24" O.C.
C	MEZZANINE	W2-36 FORMLOK VENTED	2"	18	-	-	4 WELDS PER 35" SHEET	1/2" WELDS @ 12" O.C.	TOP SEAM WELD @ 24" O.C.

NWC = NORMAL WEIGHT CONCRETE @ 145 PCF, f'c=4,000 PSI

- NOTES:  
 1. WELD ATTACHMENT FOR STEEL DECK AT SUPPORT MEMBER SHALL BE ARC SEAM OR SPOT (PUDDLE) WELDS AND SHALL HAVE AN EFFECTIVE FUSION AREA TO SUPPORTING MEMBER AT LEAST EQUIVALENT TO 3/8 INCH BY 1 INCH LONG OR 1/2 INCH IN DIAMETER, RESPECTIVELY. TWO LINES OF WELD REQUIRED AT ALL DRAG LINES FULL LENGTH OR WIDTH OF BUILDING.  
 2. SHEAR STUDS WELDED THROUGH THE DECK, WITH A MINIMUM CLEARANCE OF 1" FROM THE EDGE OF THE DECK TO THE STUD CENTER LINE, MAY BE SUBSTITUTED ONE FOR ONE FOR A DECK WELD.  
 3. WELD ATTACHMENT FOR STEEL DECK PANEL SEAMS AT SIDE LAPS WHERE SPECIFIED SHALL BE SEAM WELDS WITH A MINIMUM LENGTH OF 1 1/2" AT SPACING PER SCHEDULE ABOVE.  
 4. SCREWS SHALL BE #12-14 SELF-DRILLING SELF-TAPPING TYPE.  
 5. VERCO "PUNCHLOK SYSTEM" WITH "VSC" CONNECTIONS MAY BE SUBSTITUTED FOR TOP SEAM WELDS AT SIDE LAPS WITH DECK RECEIVING NWC.  
 6. DECKING SHALL BE CONTINUOUS OVER 3 OR MORE SUPPORTS WHEREVER POSSIBLE. OTHERWISE PROVIDE SHORING AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. SPLICES SHALL BE LOCATED OVER SUPPORTS.  
 7. STEEL DECKING TO BE AS NOTED: VERCO DECKS PER I.C.C. REPORT No. ER-2078P OR ACP (ASC) PER ICC REPORT No. ESR-2409 WITH MINIMUM SECTION PROPERTIES PER FOOT OF WIDTH AS FOLLOWS:

DECK TYPE	GAUGE	I(in <sup>2</sup> )	+S(in <sup>2</sup> )	-S(in <sup>2</sup> )	GALVANIZING
W2-36	18	0.555	0.510	0.511	680 ZINC COATING
HSB-36	18	0.302	0.322	0.335	680 ZINC COATING

2 STEEL DECK SCHEDULE AND NOTES



- NOTES:  
 1. SEE STEEL DECK NOTES AND DECK SCHEDULE FOR COMPLETE INFORMATION.

3 TYPICAL DECK WELDING DETAIL

BRUNNEN 12-66PH A307/10/11/11 S71 LOW STEEL

PROJECT ADDRESS:  
 EL SEGUNDO, CA



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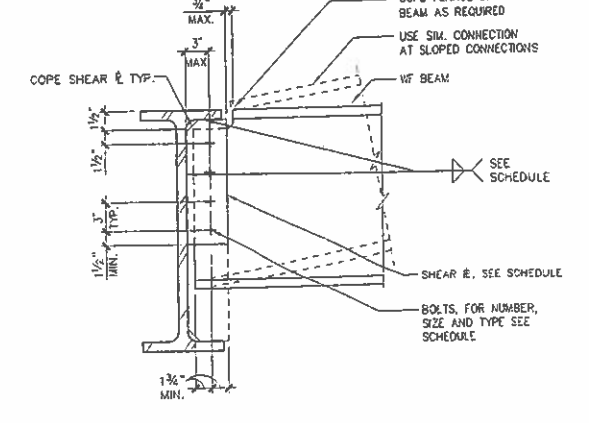
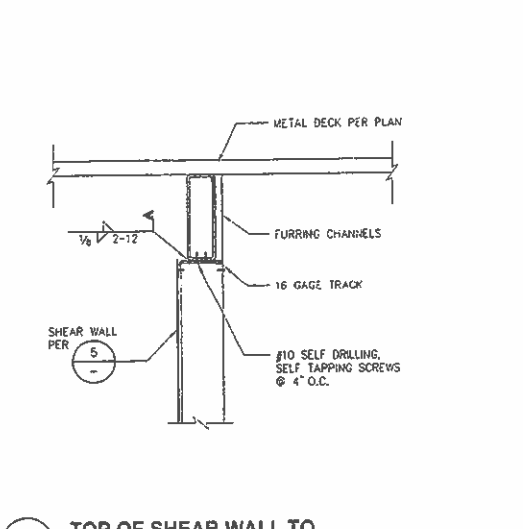
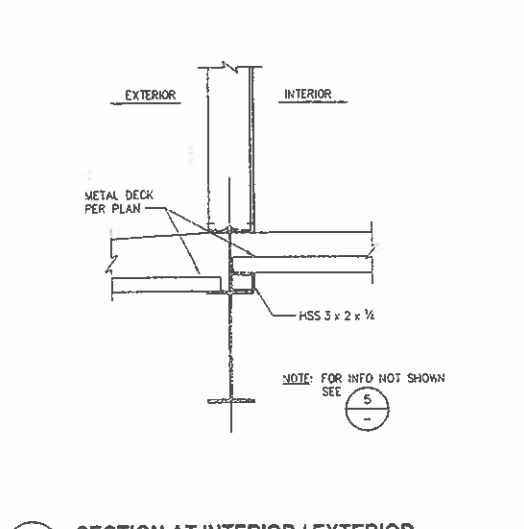
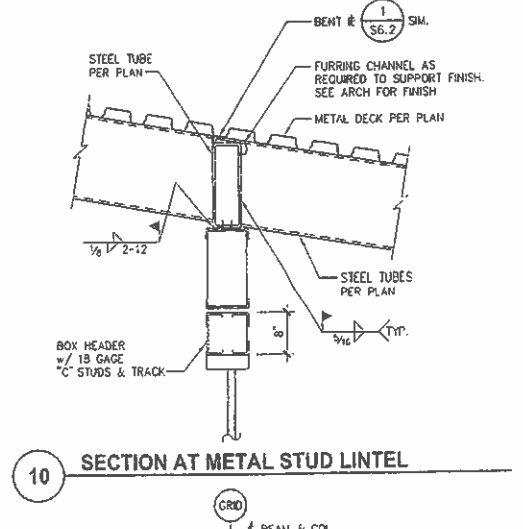
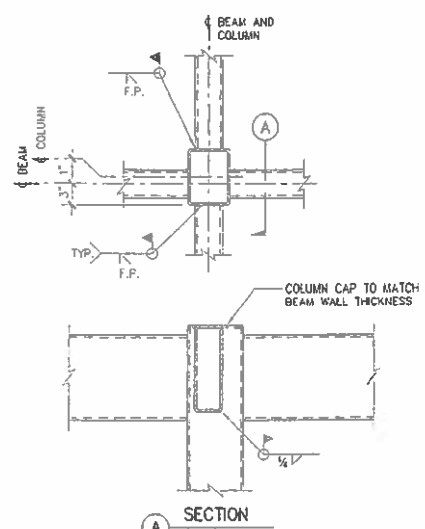
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 P: (805) 543-7794 | F: (805) 543-4299 | www.rrmdesign.com

REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
 EL SEGUNDO LS  
 STEEL DETAILS

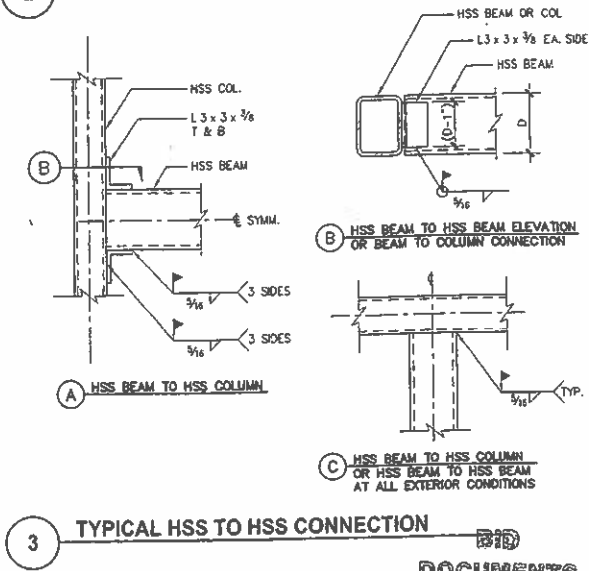
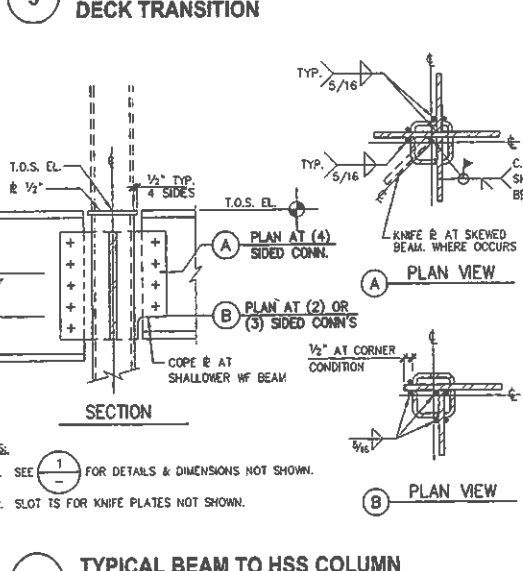
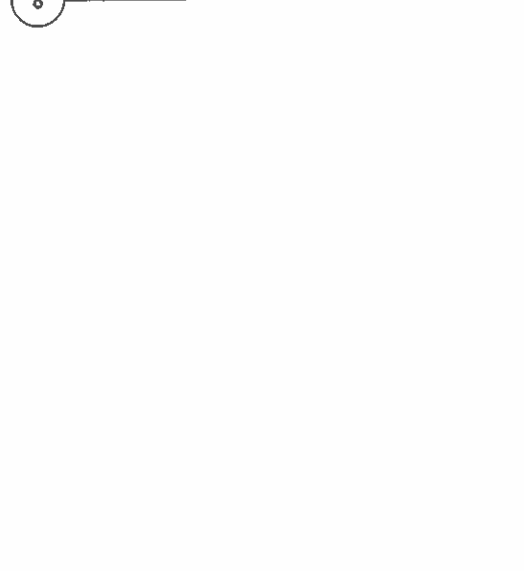
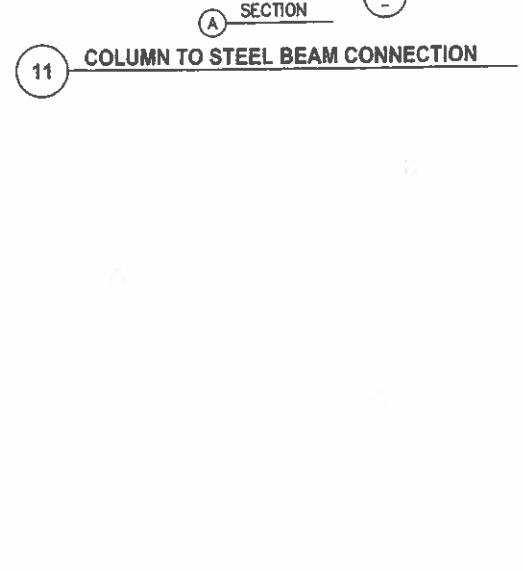
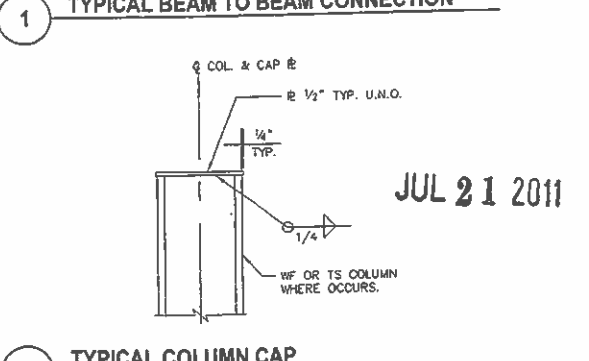
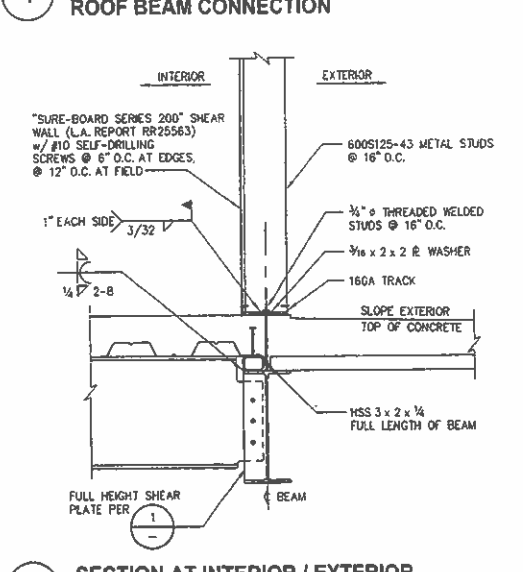
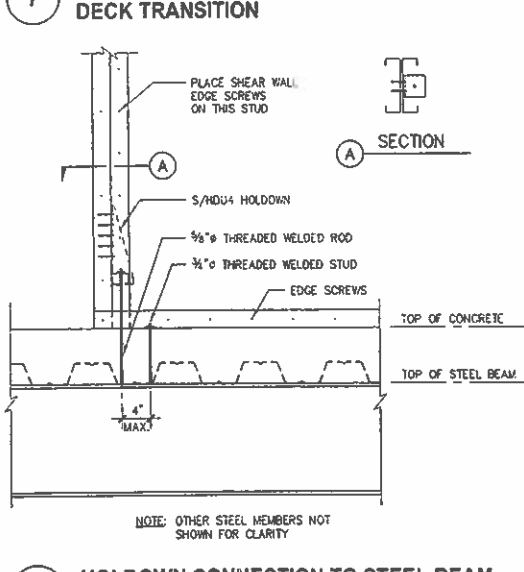
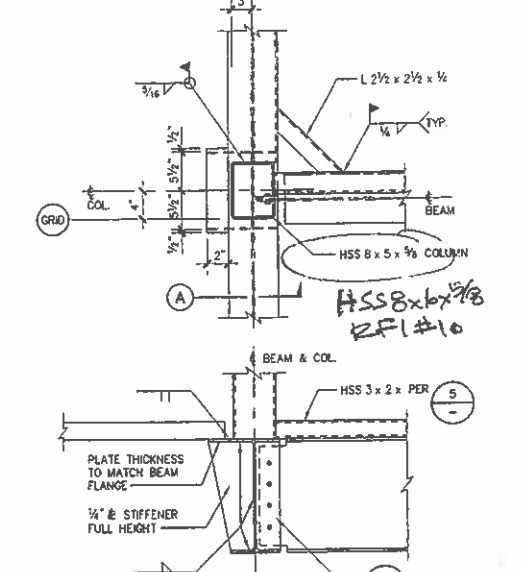
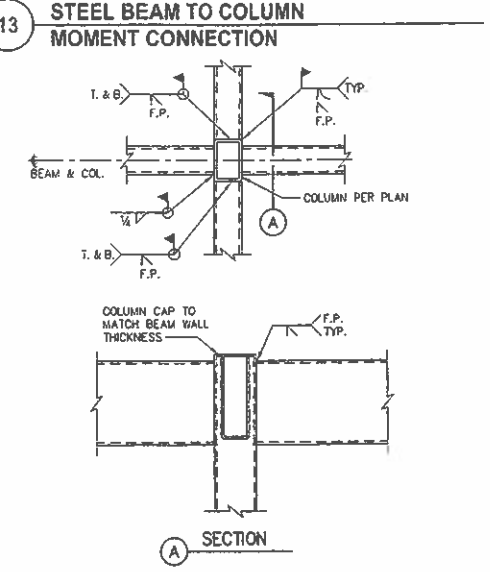
S-7.1  
 05/04/2010  
 SHEET 9 OF 88  
 JOB NO. 1109531

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 CITY ENGINEER P.E.



BEAM CONNECTION SCHEDULE			
DEPTH OR SIZE OF BEAM	NO. OF BOLTS (2) 3/4" A325SC U.N.O.	SHEAR PLATE	WELD (1) SIZE
8", 10", C8	2	1/4"	3/16"
12", 14", C12, MC12	3	3/8"	3/16"
16"	4	3/8"	3/16"
18"	5	3/8"	3/16"
21"	6	3/8"	3/16"
24"	7	1/2"	3/16"
27"	8	5/8"	3/16"

NOTES:  
 (1) USE COMPLETE PENETRATION WELDS AT ALL SKEWED CONNECTIONS WHERE ALSO PRE-QUALIFIED FILLET WELDS ARE NOT POSSIBLE  
 (2) REFER TO FRAMING PLANS FOR INCREASED BOLTING REQUIRED ON FRAME LINES WHERE NOTED.



REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
 STEEL DETAILS

DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
 DRAWN: \_\_\_\_\_ CITY ENGINEER R.E.: \_\_\_\_\_  
 CHECK: \_\_\_\_\_

**S-7.2**  
 0504/2010  
 SHEET 43 OF 68  
 JOB NO. 1109531

**RSSE**  
 STRUCTURAL ENGINEERS  
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 Suite 295  
 Fountain Valley, CA 92610  
 949.461.7007 / 949.461.7009-Fax



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PROJECT ADDRESS:  
 EL SEGUNDO, CA

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PLAN CHECK REQUIRED

**GENERAL NOTES**

1. THE SEISMIC BRACING AND ANCHORAGE OF ELECTRICAL CONDUITS, PIPING, DUCTWORK, WIREWAY, AND CABLE TRAY SHALL BE IN ACCORDANCE WITH THE OSHPD ANCHORAGE PRE-APPROVAL NO. R-010. THE BRACING GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEM, R-010 UNISTRUT "SEISMIC BRACING SYSTEMS"
2. **EQUIPMENT ANCHORAGE NOTE**  
ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED OR BRACED TO MEET THE HORIZONTAL AND VERTICAL FORCES PRESCRIBED IN THE 2007 CBC, SECTION 1634.1.13 AND ASCE 7-05 SECTIONS 13.3, 13.4 & 13.6  
  
THE ATTACHMENT OF THE FOLLOWING ITEMS SHALL BE DESIGNED TO RESIST THE FORCES PRESCRIBED ABOVE, BUT NEED NOT BE DETAILED ON THE PLANS:  
A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF  
B. FURNITURE REQUIRED TO BE ATTACHED IN ACCORDANCE WITH PART 2, TITLE 24, C.C.R.  
C. TEMPORARY OR MOVABLE EQUIPMENT  
D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS  
E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL  
  
FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE MECHANICAL/ELECTRICAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT  
  
**ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE**  
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05 SECTION 13.3 AS DEFINED IN ASCE 7-05 SECTION 13.6.8, 13.6.7, AND 13.6.5.5, ITEM 6, RESPECTIVELY  
  
THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS WITH AN OPA #, SUCH AS MASON INDUSTRIES (OPA 349) OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.  
  
COPIES OF THE MANUAL SHALL BE ON THE JOBSITE PRIOR TO STARTING HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.  
  
THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS
3. ALL ELECTRICAL PREFABRICATED EQUIPMENT SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER THAT ALL PORTIONS, ELEMENTS, SUB-ASSEMBLIES AND/OR PARTS OF SAID EQUIPMENT, AND THE EQUIPMENT AS A WHOLE INCLUDING ITS ATTACHMENTS, WILL RESIST A LOAD WHICH EXCEEDS THE FORCE LEVEL USED TO RESTRAIN AND ANCHOR THE EQUIPMENT TO THE SUPPORTING STRUCTURE
4. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATORIES (UL) AND BEAR THEIR LABEL, OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY WHERE UL DOES NOT HAVE A LISTING. CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER, ATTESTING TO ITS SAFETY. IN ADDITION, THE MATERIALS, EQUIPMENT, AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:  
  
AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)  
INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)  
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)  
AMERICAN STANDARD ASSOCIATION (ASA)  
NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)  
AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)  
CALIFORNIA ELECTRICAL CODE (CEC) - 2001 EDITION  
CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)  
INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)  
ALL LOCAL CODES HAVING JURISDICTION  
  
WHERE THE CODES HAVE DIFFERENT LEVELS OF REQUIREMENTS, THE MOST STRINGENT RULE SHALL APPLY.
5. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS, HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS, OR A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS, AND SPECIFICATIONS. HE SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM DOING THE WORK IN COMPLETE ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL ATTACH ALL REFERENCED OR APPLICABLE SECTIONS OF SPECIFICATIONS TO PLANS FOR THIS SUBMITTAL.
7. ALL UTILITY WORK (POWER, TELEPHONE, AND CABLE TELEVISION) SHALL BE IN COMPLIANCE WITH THESE DRAWINGS AND THE REQUIREMENTS OF THE SERVING UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE SERVING UTILITY TO RECEIVE COMPLETE INFORMATION ON THEIR REQUIREMENTS PRIOR TO THE SUBMISSION OF THE BID. THE ACT OF SUBMITTING THE BID SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO INSTALL SERVICE IN COMPLIANCE WITH THE SERVING UTILITY AND THE CONTRACT DOCUMENTS
8. ALL ITEMS SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, CONCRETE PADS, TRANSFORMERS, RISERS, MANHOLES, PULL BOXES, AND PROTECTIVE COVERING FROM SERVICE LOCATION SHALL BE PROVIDED AND INSTALLED, AND SHALL BE VERIFIED WITH THE SERVING UTILITY COMPANY. THE CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY COMPANY, AND SHALL PAY ALL CHARGES LEVIED BY THE SERVING UTILITY COMPANY FOR HIS SERVICE EXCEPT THE FIRST BILLING DEPOSIT. WHERE THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE, THE DOCUMENTS SHALL GOVERN
9. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.
10. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER, BUILDING AUTHORITY.
11. 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. FAILURE TO KEEP RECORD DRAWINGS UP-TO-DATE SHALL CONSTITUTE CAUSE FOR WITHHOLDING OF PROGRESS PAYMENTS
12. IN SOME INSTANCES, IT MAY BE NECESSARY TO DEFER WORK IN CERTAIN AREAS AND LOCATIONS UNTIL SUCH TIME AS EXISTING FACILITIES CAN BE TEMPORARILY OR PERMANENTLY REARRANGED BY THE OWNER. THEREFORE, WHENEVER IT BECOMES NECESSARY FOR THE CONTRACTOR TO PERFORM WORK UNDER THIS CONTRACT IN EXISTING AREAS IN WHICH THE OWNER'S WORK IS BEING PERFORMED, THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND THE OWNER RELATIVE TO THIS REQUIREMENT AND SHALL FOLLOW CLOSELY THE DIRECTIVE ISSUED BY THE ARCHITECT INsofar AS TIME AND PROCEDURE ARE CONCERNED. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL PRELIMINARY TIME TO WHICH HE MAY BE SUBJECT FOR PERFORMING WORK IN SUCH PROCEDURE AND AT SUCH TIMES AS MAY BE NECESSARY TO CAUSE THE LEAST INTERFERENCE WITH THE OPERATIONS OF THE OWNER
13. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ARCHITECT 14 CALENDAR DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANELBOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS OR SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION OR WHERE SAID FEEDERS OR SYSTEMS REQUIRE EMERGENCY STANDBY POWER.
15. SHOP DRAWINGS 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. PARTIAL, INCOMPLETE, OR UNBOUND SUBMITTALS WILL BE RETURNED WITHOUT REVIEW. CONTRACTOR SHALL SUBMIT A SCHEDULE OF ALL SHOP DRAWINGS AND SUBMITTALS WHICH ARE TO BE REVIEWED WITHIN FIFTEEN CALENDAR DAYS OF CONTRACT AWARD.
16. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
17. THE CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.
18. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND TO COORDINATE WITH THE MECHANICAL, FIRE PROTECTION AND PLUMBING DRAWINGS FOR DUCTS, LINES AND EQUIPMENT
19. ALL EQUIPMENT MOUNTED ON ROOF FOR CONNECTION OF HVAC EQUIPMENT SHALL BE MOUNTED ON UNISTRUT STANDS UTILIZING APPROVED FITCH POCKETS, FLASHING, ETC.
20. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.
21. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT, SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT, DISCONNECT SWITCHES, STARTERS, WIRING CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.
22. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.
23. CONNECTIONS TO VIBRATING EQUIPMENT AND SEISMIC SEPARATIONS SHALL BE MADE WITH LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS  
  
PROVIDE A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN FLEXIBLE CONDUIT RUNS. MAXIMUM LENGTH SHALL BE SIX FEET UNLESS OTHERWISE NOTED.
24. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE, AND CONNECTION METHODS IN HVAC AIR PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CEC
25. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL TO WALLS AND ADJACENT PIPING AND PERPENDICULAR TO WALLS AND ADJACENT PIPING ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.
26. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED IN WALLS, OR 18" BELOW BOTTOM SLAB ON GRADE UNLESS NOTED OTHERWISE
27. THE CONTRACTOR SHALL STRATEGICALLY LOCATE BOXES, ETC., IN AN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS.
28. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILING TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
29. 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.
30. WHENEVER A DISCREPANCY ARISES ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT
31. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMING.
32. ALL RECESSED LIGHTING FIXTURES, SPEAKERS, RECEPTACLES, SWITCHES, ETC., MOUNTED IN THE CEILING OR WALLS SHALL BE ENCLOSED WITH AN APPROVED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL
33. UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES, SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED MATERIAL SECURELY INSTALLED.  
  
STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILINGS, OR AREA SEPARATION UNLESS THEY:  
  
OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER. IN THIS CASE, ONLY ONE OUTLET BOX NEED TO BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.  
  
OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA. IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL.  
  
STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.  
  
FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS  
3M CONTRACTOR PRODUCTS  
MINNEAPOLIS, MN  
3M TEST REPORT NO. 1167  
DATED AUGUST 21, 1987  
  
FSP FIRESTOP PUTTY PADS  
HELVADUTY NELSON PRODUCTS  
TULSA, OK  
  
FLAMESAFE FSP 1077 FIRESTOP PADS  
INTERNATIONAL PROTECTIVE COATINGS  
OKMURST, NJ

DRAWING LIST	
DWG. NO.	DESCRIPTION
E-0.1	GENERAL NOTES
E-0.2	GENERAL NOTES & LEGEND
E-0.3	TITLE 24 CALCULATIONS & LIGHTING FIXTURE SCHEDULE
E-0.4	TITLE 24 CALCULATIONS
E-0.5	SINGLE LINE DIAGRAM
E-0.6	DETAILS
E-1.1	ELECTRICAL SITE PLAN
E-2.1	GROUND FLOOR LIGHTING PLAN
E-2.2	SECOND FLOOR LIGHTING PLAN
E-3.1	GROUND FLOOR POWER PLAN
E-3.2	SECOND FLOOR POWER PLAN
E-4.1	GROUND FLOOR SIGNAL PLAN
E-4.2	SECOND FLOOR SIGNAL PLAN
E-5.1	GROUND FLOOR FIRE ALARM PLAN
E-5.2	SECOND FLOOR FIRE ALARM PLAN
E-6.1	FIRST AND SECOND FLOOR LIGHTING CALCULATIONS

JUL 21 2011

INTERMEDIATE DUTY GRID SYSTEM. ALL FIXTURES SUPPORTED ON INTERMEDIATE DUTY GRID SYSTEMS SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR TAUT 12 GAUGE WIRES EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE.  
  
SURFACE MOUNTED FIXTURES: SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A 12 GAUGE WIRE SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT FEET OR LONGER  
  
PENDANT MOUNTED FIXTURES: SUPPORT PENDANT MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER, AND CAPABLE OF SUPPORTING FOUR TIMES THE WEIGHT OF THE FIXTURE.  
  
SUSPENDED DRYWALL CEILINGS:  
  
ALL RECESSED OR DROP-IN LIGHT FIXTURES SHALL BE SUPPORTED DIRECTLY BY MAIN RUNNERS OR BY SUPPLEMENTAL FRAMING WHICH IS SUPPORTED BY MAIN RUNNERS. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE CEILING CONTRACTOR TO PROVIDE APPROPRIATE FRAMING AND LOCATION FOR FIXTURES.  
  
SURFACE MOUNTED FIXTURES SHALL BE ATTACHED TO A MAIN RUNNER WITH A POSITIVE CLAMPING DEVICE MADE OF MATERIAL WITH A MINIMUM OF 14 GAUGE. ROTATIONAL SPRING CATCHES SHALL NOT BE ALLOWED.  
  
EXISTING CEILING FIXTURES REMOVED TO ACCOMPLISH THE WORK SHALL BE REINSTALLED AS FOR NEW WORK.

GENERAL NOTES CONTINUED ON SHEET E-02

**APPLICABLE CODES AND STANDARDS**

- 2007 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2007 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2006 INTERNATIONAL BUILDING CODE (IBC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2005 NATIONAL ELECTRICAL CODE (NEC) W/CALIFORNIA AMENDMENTS)
- 2005 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2007 CALIFORNIA FIRE CODE (FC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2006 INTERNATIONAL FIRE CODE (IFC) W/CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

**DOCUMENTS**

CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION		<b>E-0.1</b> 05/04/2010
EL SEGUNDO LS GENERAL NOTES		
DATE _____	APPROVED _____	SHEET _____ OF _____
DATE _____	CITY ENGINEER R.E.	JOB NO. 1109531

PROJECT ADDRESS  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
800 North Ferran Lane, Suite 100  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
www.tmgain.com Project No. 2010 030.00



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REVISIONS		
NO.	DATE	BY

11/02/2010 10:29:14 PM  
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GENERAL NOTES

38. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS

52. SWITCHES SHALL BE 20 AMP, 120/277 VOLT RATED SILENT TYPE SPECIFICATION GRADE HUBBELL #9300, OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY SWITCHES SHALL BE RED IN COLOR.

53. DEVICE PLATES SHALL BE NYLON FOR THE NUMBER OF GANGS AND TYPE OF OPENING NECESSARY. HUBBELL OR EQUAL BY PASS & SEYMOUR OR GENERAL ELECTRIC. COLOR SHALL BE SELECTED BY ARCHITECT. EMERGENCY RECEPTACLE PLATES SHALL BE RED IN COLOR. PLATES SHALL BE ENGRAVED WITH PANEL AND CIRCUIT NUMBER.

54. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT TREADED 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.

LEGEND

Table with columns: SYMBOL, DESCRIPTION, SYMBOL, DESCRIPTION. Includes sections for GENERAL SYMBOLS, POWER SYMBOLS, FIRE ALARM SYMBOLS, TELEPHONE SYSTEM SYMBOLS, COMPUTER SYSTEM SYMBOLS, LIGHTING SYMBOLS, and SECURITY AND INTRUSION SYSTEM SYMBOLS.

JUL 21 2011

PROJECT ADDRESS: EL SEGUNDO, CA. Includes logos for T M A D TAYLOR & GAINES and RRM DESIGN GROUP.

RRM DESIGN GROUP logo and contact information: 3785 South Higgins St., Ste. 102, San Jose, CA 95128. Phone: (408) 543-1794.

REVISIONS table with columns: NO., DATE, BY. Includes a row for revision 1 dated 10/06/2010 by MD.

CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION. EL SEGUNDO LS GENERAL NOTES & LEGEND. E-0.2. 10/06/2010. SHEET OF. JOB NO. 1109531.

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**LIGHTING MANDATORY MEASURES: NONRESIDENTIAL** LTG-MM

Project Name: El Segundo Life Guard Station Date: 8/10/2010

**Indoor Lighting Measures:**

§12001 Shut-off Controls  
For every floor, all interior lighting systems shall be equipped with a separate automatic control to shut off the lighting system or other device capable of electronically shutting off the lighting system.

§12002 Automatic Control Devices Certified  
All automatic control devices specified are certified. Alternative equipment shall be certified and installed as directed by the manufacturer.

§12003 Fluorescent Ballast and Luminaires Certified  
All fluorescent ballasts specified for the project are certified and listed in the UL directory. All installed ballasts shall be certified.

§12004 Individual Room/Area Control  
Each room and area in the building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.

§12005 Uniform Reduction for Individual Rooms  
All rooms and areas greater than 100 square feet and more than 8' high per square foot of lighting load shall be controlled with a level switching for uniform reduction of lighting within the room.

§12006 Daylight Area Control  
All rooms with windows and skylights that are greater than 250 square feet and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylight area controlled by a separate switch or via effective use of daylight cannot be accomplished because the windows are continuously shaded by a building on the adjacent lot. Daylighting shall be separately switched on circuits that are 20 amps or less.

§12007 Display Lighting  
Display lighting shall be separately switched on circuits that are 20 amps or less.

**Outdoor Lighting Measures:**

§12008 Mandatory lighting power determination for medium base sockets within permanently installed ballasts.

§12009 All permanently installed luminaires with lamps rated over 100 Watts shall have a lamp efficacy of at least 80 lumens per Watt or be controlled by a motion sensor.

§12010 All luminaires with lamps rated greater than 175 Watts on hard-to-reach areas including parking lots, loading areas, canopies, and all outdoor areas shall meet the Code Requirements.

§12011 All permanently installed outdoor lighting meets the code requirements listed.

§12012 Building facades, parking lots, garages, canopies, and outdoor sales areas meet the Table 14.4.4 Lighting Requirements listed.

EnergyPro 5.1 by EnergySoft User Number: 55574 RunCode: 2010-08-10T08:24:29 ID: 2010-030-00 Page 2 of 11

**CERTIFICATE OF COMPLIANCE (Part 1 of 4) OLTG-1C**

Project Name: El Segundo Life Guard Station Date: 8/10/2010

Project Address: 370 Total Enclosed Area: El Segundo, CA

**GENERAL INFORMATION**

Phase of Construction:  New Construction  Addition  Alteration

**Documentation Author's Declaration Statement**  
I certify that this Certificate of Compliance documentation is accurate and complete.

Name: Nestor Ignacio P.E.  
Company: TAYLOR & GAINES  
Address: 800 North Ferrar Lane, Suite 100, Ontario, CA 91764  
Phone: (951) 477-6915

**Principal Lighting Designer's Declaration Statement**  
I am eligible under Division 9 of the California Business and Professions Code to accept responsibility for the lighting design.  
This Certificate of Compliance certifies the lighting to comply and performance specifications required for compliance with Title 24, Part 2, Sections 117 and 118 of the California Code of Regulations.  
The design herein represented on this Certificate of Compliance is consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this outdoor permit application.

Name: Nestor Ignacio P.E.  
Company: TAYLOR & GAINES  
Address: 800 NORTH FERRAR LANE, SUITE 100, ONTARIO, CA 91764  
Phone: 951-477-6915  
Date: 8/10/10

**Principal Lighting Designer's Declaration**  
I certify that this Certificate of Compliance documentation is accurate and complete, and accounts for all outdoor lighting power including building-mounted, pole-mounted, as well as all other lighting designed for the site, and that Additional Lighting Power Allowance for Specific Applications or Additional Lighting Power Allowance for Ordinance Requirements have not been counted more than one time for the same area, in accordance with Section 117 of the Standards.

**Outdoor Lighting Mandatory Measure**  
Indicate location on building plans of Mandatory Measures Note Block:

**LIGHTING COMPLIANCE FORMS & WORKSHEETS** (check box if worksheets included)  
 OLTG-1C Certificate of Compliance. All 4 pages required on plans for all submissions.  
 OLTG-2C (Pages 1 & 2) Lighting Wastage Allowance for General Hardscapes, Easement or Ordinance Lighting. Easement on plans.  
 OLTG-2C (Pages 2 & 3) Lighting Wastage Allowance for Pavement or Pavement Area. Easement on plans.  
 OLTG-2C (Pages 3 & 4) Additional Lighting Power Allowance for Ordinance Requirements. Easement on plans.

EnergyPro 5.1 by EnergySoft User Number: 55574 RunCode: 2010-08-10T08:24:29 ID: 2010-030-00 Page 10 of 14

**CERTIFICATE OF COMPLIANCE (Part 2 of 4) OLTG-1C**

Project Name: El Segundo Life Guard Station Date: 8/10/2010

**COMPLIANCE FIXTURE/LIGHTING CONTROL SCHEDULE AND FIELD INSPECTION CHECKLIST**

**CERTIFICATE OF ACCEPTANCE OLTG-2A** (Pages 2 copy and verify form is completed and signed) Field Inspection:  Field Inspection:

Luminaire Schedule	Installed Watts	A	B	C	D	E	F	G	H	I	J
1. Lamp type: 1 lamp per pole, pole top, 400-watt metal halide	770										
2. 176 Compact Fluorescent Over 7' Pole	296										

Enter total into OLTG-1C, Page 2 of 4: After H, Total Installed Watts: 370

**EXEMPT LUMINAIRES**  
Name of Symbol: Description of exempt luminaires in accordance with §147

**MANDATORY CONTROLS**  
# Description Location F Description Location

**SPECIAL FEATURES INSPECTION CHECKLIST** (See Page 2 of 4 of OLTG-1C)  
The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification (with documentation) and special verification. The local enforcement agency determines the adequacy of the plan location and they sign a building design that otherwise complies based on the adequacy of the special justification and documentation submitted.

Field Inspector Notes or Discrepancies:

EnergyPro 5.1 by EnergySoft User Number: 55574 RunCode: 2010-08-10T08:24:29 ID: 2010-030-00 Page 11 of 14

**CERTIFICATE OF COMPLIANCE (Part 3 of 4) OLTG-1C**

Project Name: El Segundo Life Guard Station Date: 8/10/2010

**A. OUTDOOR LIGHTING ZONE**  
OUTDOOR LIGHTING ZONE:  OLT 1  OLT 2  OLT 3  OLT 4  
Is the Outdoor Lighting Zone:  Default in accordance with §10-114.4  Amended by IMA

Complete the information below if the default Outdoor Lighting Zone has been amended by the local jurisdiction having authority (LJA):  
 The site is a government designated park, recreational area, wildlife preserve, or parkland owned and has been designed as L1, L2 or L3 in accordance with Table 10-114.4, because the site is contained within such a zone.  
 The local jurisdiction having authority has officially adopted a change to the State Default Lighting Zone and has notified the Energy Commission by providing the materials required in §10-114(d) to the Executive Director.  
 The adopted change is posted on the Energy Commission website.

**B. ADDITIONAL LIGHTING POWER ALLOWANCE FOR ORDINANCE REQUIREMENTS**  
Are additional lighting power allowances for ordinance in Table 14.4.4, used?  Yes  No

Complete the information below if additional lighting power allowances for ordinance requirements are used:  
 The local jurisdiction having authority has officially adopted specific outdoor light levels when expressed as average or minimum footcandle levels, by following a public process that allowed for formal public notification, review and comment before the proposed change.  
 The local jurisdiction having authority which adopted specific outdoor light levels and has notified the Commission by providing the following materials required in §10-114(d) to the Executive Director.

**C. ACCEPTANCE FORMS**  
Required Acceptance Tests:  
**Designer:** This form is to be used by the designer and attached to the plans. Listed below is the acceptance test for the lighting system OLTG-2A. The designer is required to check the acceptance tests and list all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. If all the lighting system or control of a certain type requires a test, list the outdoor lighting and the number of systems. The IMA Section in the Appendix of the Ordinance Requirements Appendix (found in the Appendix) of this section will be part of the plans. Completion of this section will allow the responsible party to budget for the scope of work, appropriately. Forms can be grouped by type of luminaire controlled.

**Enforcement Agency:** Before occupancy permit is granted for a newly constructed building or space or when ever new lighting systems with controls is installed in the building or space shall be certified as meeting the Acceptance Requirements. The OLTG-2A form is not considered a complete form and is not to be accepted by the enforcement agency unless the boxes are checked and/or filled and signed. In addition, a Certificate of Acceptance forms shall be submitted to the enforcement agency that includes plans, specifications, installation certificates, and operating and maintenance information meet the requirements of §10-114(d) of Title 24 Part 6. The field inspector must receive the properly filled out and signed form before the building can receive final occupancy. A copy of the OLTG-2A for each different lighting luminaire controlled must be provided to the owner of the building for their records.

Equipment/Response Testing	Description	Luminaires Controlled		Outdoor Lighting Acceptance Test
		City of El Segundo	Location	

1. Insert: OMS for Outdoor Motion Sensor, OLSO for Outdoor Lighting Sensor Controls, OPI for Outdoor Photocontrol, ATS for Automatic Time Switch and, STS for Standard from-ast-to-ast Time Switch acceptance.

EnergyPro 5.1 by EnergySoft User Number: 55574 RunCode: 2010-08-10T08:24:29 ID: 2010-030-00 Page 12 of 14

**CERTIFICATE OF COMPLIANCE (Part 4 of 4) OLTG-1C**

Project Name: El Segundo Life Guard Station Date: 8/10/2010

**ALLOWED AND INSTALLED OUTDOOR LIGHTING POWER**

	Lighting Wastage Power Allowance	
A	Lighting power allowance for general hardscapes (from OLTG-2C Page 1 of 3)	64
B	Specific application lighting wastage allowance per unit length (from OLTG-2C Page 1 of 3)	0
C	Specific application lighting wastage allowance for ornamental lighting (from OLTG-2C Page 1 of 3)	0
D	Specific application lighting wastage allowance per application (from OLTG-2C Page 2 of 3)	0
E	Specific application lighting wastage allowance per area (from OLTG-2C Page 2 of 3)	0
F	Specific application lighting wastage allowance for ordinance requirements (from OLTG-2C Page 3 of 3)	0
G	Total Allowed Wastage - Sum of rows A through F	64
H	Total installed watts from Compliance Fixture Schedule (from OLTG-2C Page 1 of 3)	370

Complies if wattage in row H is less than or equal to the wattages in row G.  Yes  No

EnergyPro 5.1 by EnergySoft User Number: 55574 RunCode: 2010-08-10T08:24:29 ID: 2010-030-00 Page 13 of 14

**OUTDOOR LIGHTING WORKSHEET (Part 1 of 3) OLTG-2C**

Project Name: El Segundo Life Guard Station Date: 8/10/2010

**A. LIGHTING POWER ALLOWANCE FOR GENERAL HARDSCAPE**

AREA WATTAGE ALLOWANCE (AWA)			LINEAR WATTAGE ALLOWANCE (LWA)			INITIAL WATTAGE ALLOWANCE		TOTAL GENERAL HARDSCAPE LIGHTING ALLOWANCE	
A	B	C	D	E	F	G	H	I	J
Horizontal Hardscapes Area	Area For Square Foot	AWA (A x B)	Perimeter Length of General Hardscapes	LWA Per Linear Foot	LWA (D x E)	AWA (F x G)		C + F + G	604
370	0.892	330	0	0.800	0	770			

Enter total into OLTG-1C, Page 2 of 4: Row A, Lighting Power Allowance for General Hardscapes: 604

Yes AWA, LWA, and IWA from Table 147-A was used as appropriate for the Outdoor Lighting Zone.

**B. SPECIFIC APPLICATION LIGHTING WATTAGE ALLOWANCE PER UNIT LENGTH** (Available only for easement lighting)

DETERMINE WATTAGE ALLOWANCE			LUMINAIRE TYPE			DESIGN WATTS			
A	B	C	D	E	F	G	H	I	J
Specific Lighting Application	Linear Footage	Sales Footage Allowance for OLTG-2C (Watts per LF)	Wattage Allowance (B x C)	Name of Symbol	Luminaire Type	Luminaire Qty	Watts Per Luminaire	Design Watts (G x H)	Allowed Watts (Minimum of D or I)

**C. SPECIFIC APPLICATION WATTAGE ALLOWANCE FOR ORNAMENTAL LIGHTING**

DETERMINE WATTAGE ALLOWANCE			LUMINAIRE TYPE			DESIGN WATTS			
A	B	C	D	E	F	G	H	I	J
Specific Lighting Application	Square Footage	Ornamental Lighting Allowance for OLTG-2C (Watts per SF)	Wattage Allowance (B x C)	Name of Symbol	Luminaire Type	Luminaire Qty	Watts Per Luminaire	Design Watts (G x H)	Allowed Watts (Minimum of D or I)

Enter total into OLTG-1C, Page 2 of 4: Row C, Specific Application Lighting Wastage Allowance for Ornamental Lighting: 0

EnergyPro 5.1 by EnergySoft User Number: 55574 RunCode: 2010-08-10T08:24:29 ID: 2010-030-00 Page 14 of 14

JUL 21 2011

BID DOCUMENTS

PROJECT ADDRESS: EL SEGUNDO, CA

**T M A D TAYLOR & GAINES**  
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Phone: 909.477.6915 Fax: 909.477.6916  
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**CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION**  
EL SEGUNDO LS TITLE 24 CALCULATIONS

REVISIONS

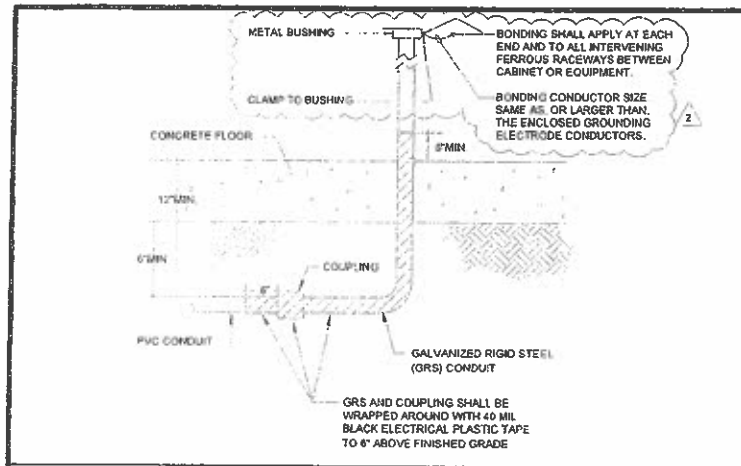
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DATE: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ CITY ENGINEER R.E.

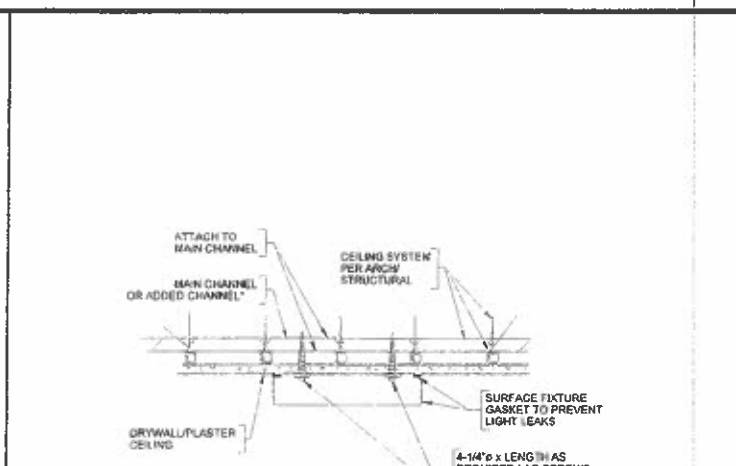
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05/04/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531



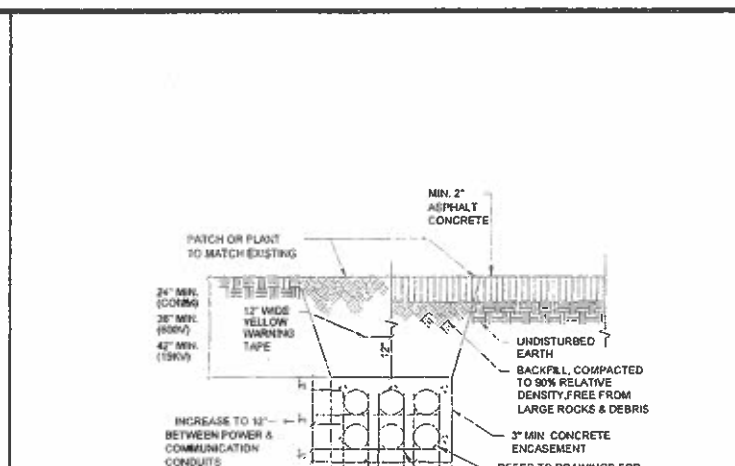




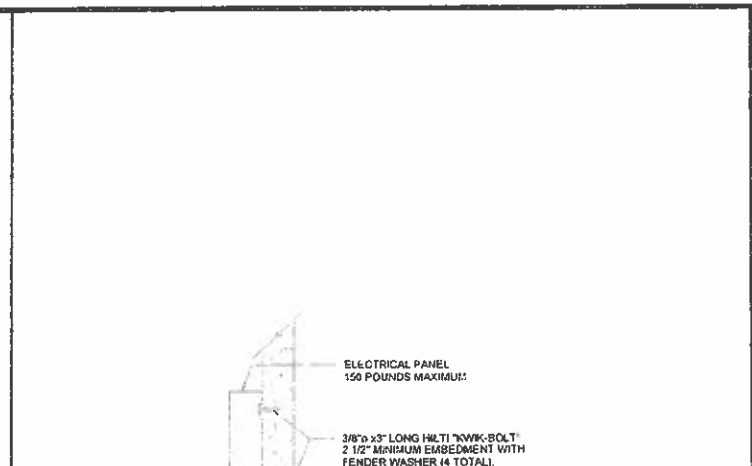
**CONDUIT INSTALLED BELOW CONCRETE INSIDE BUILDING DETAIL** NTS 7



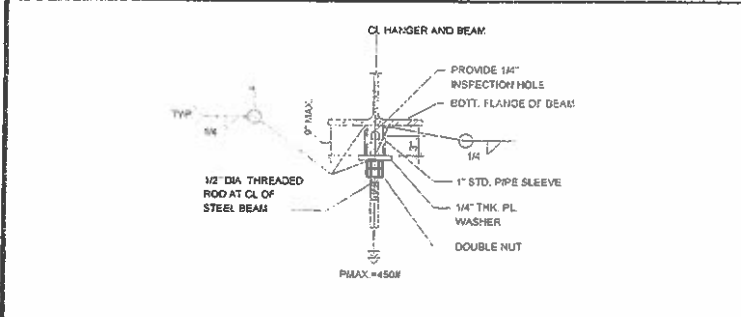
**SURFACE MOUNTED LIGHT FIXTURE DETAIL** NTS 5



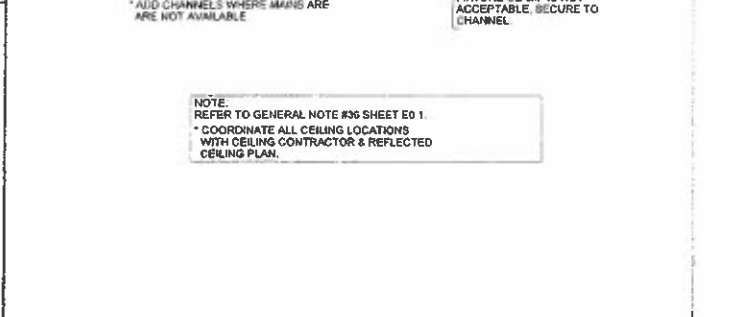
**UNDERGROUND MULTI-CONDUIT PLACEMENT DETAIL** NTS 3



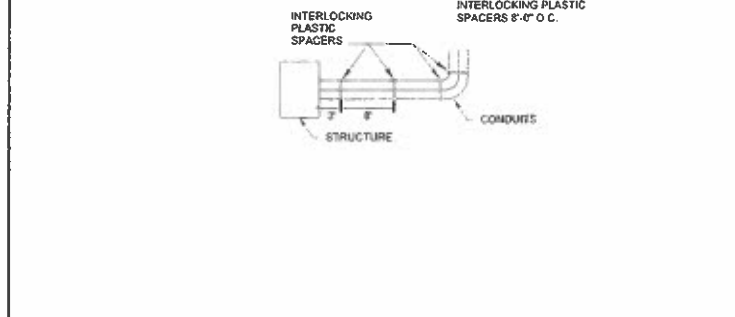
**SURFACE MOUNTED PANEL DETAIL** NTS 1



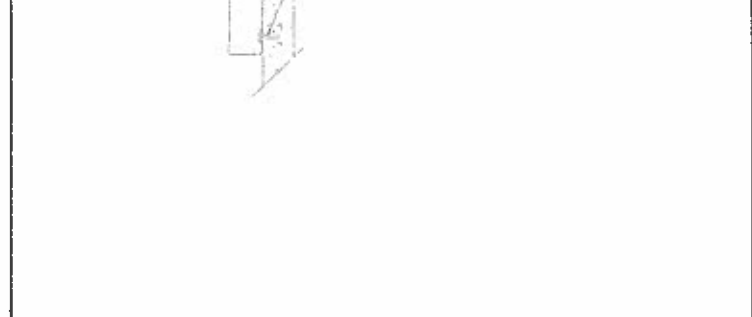
**HANGER ATTACHMENT DETAIL** NTS 8



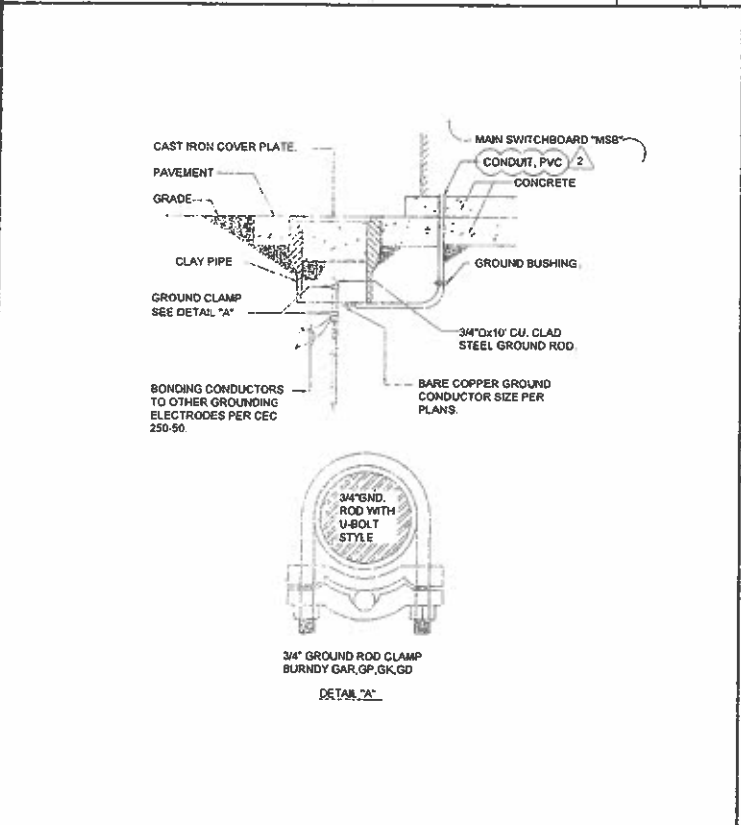
**PENDANT MTD. IND. FLUOR. SUPPORT DET.** NTS 6



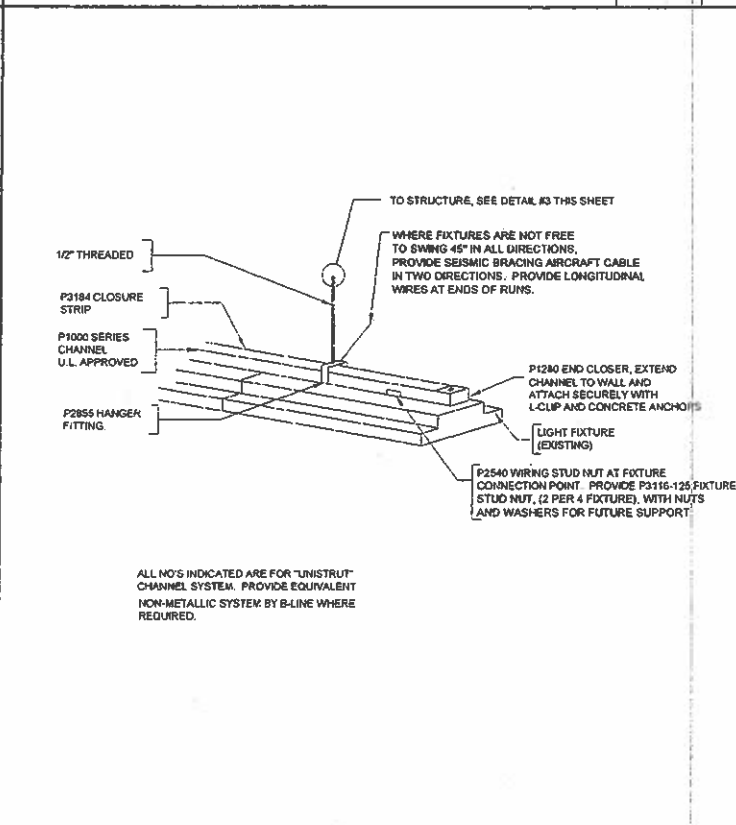
**SWITCHBOARD ANCHORAGE DETAIL** NTS 4



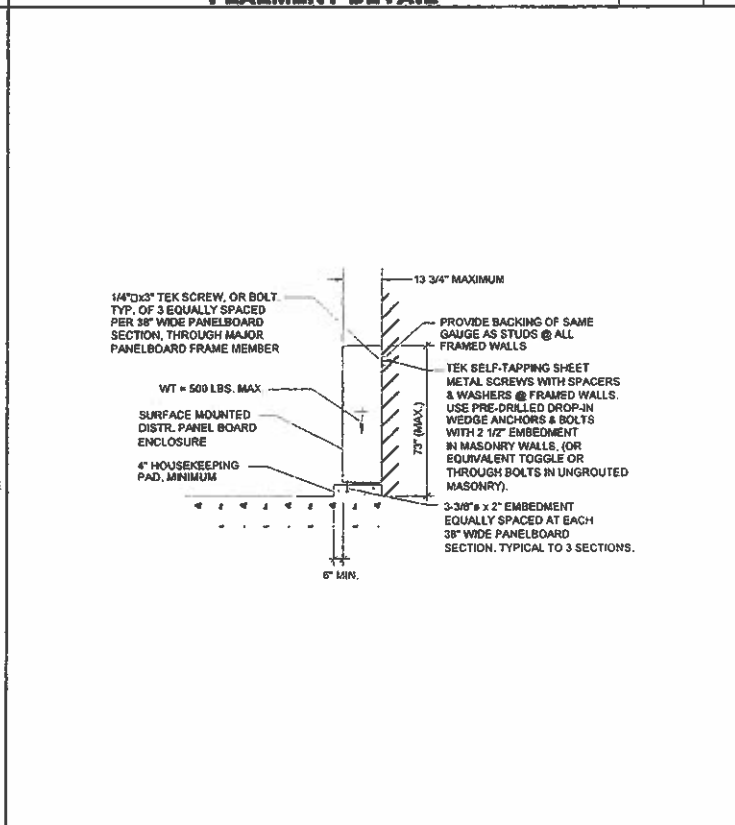
**CONDUIT PENETRATION THRU CONCRETE WALL DETAIL** NTS 2



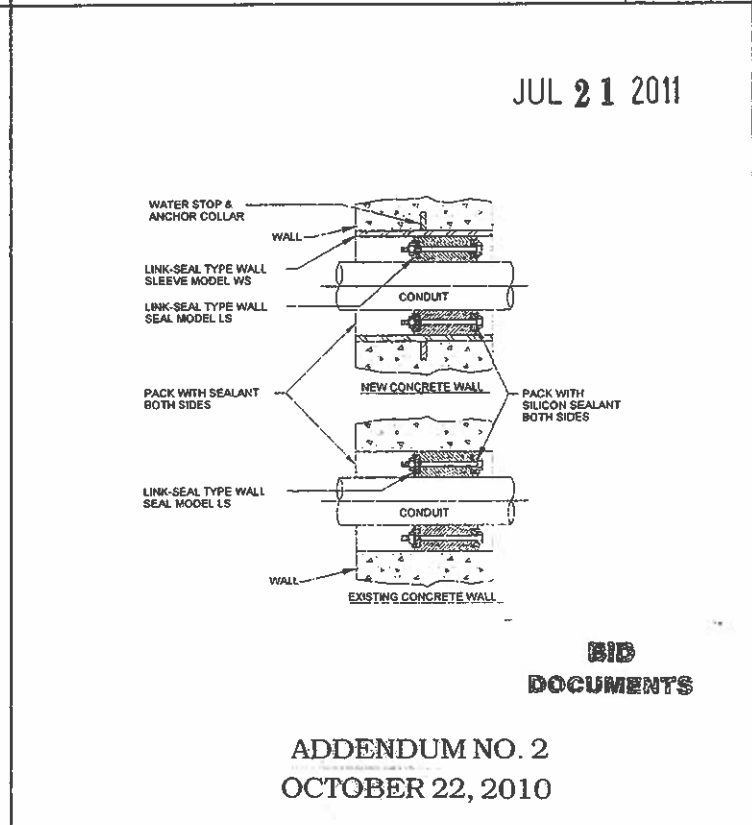
**GROUND ROD DETAIL** NTS 9



**PENDANT MTD. IND. FLUOR. SUPPORT DET.** NTS 6



**SWITCHBOARD ANCHORAGE DETAIL** NTS 4



**CONDUIT PENETRATION THRU CONCRETE WALL DETAIL** NTS 2

JUL 21 2011

BID DOCUMENTS

ADDENDUM NO. 2  
OCTOBER 22, 2010

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D TAYLOR & GAINES**  
STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL  
800 North Ferrari Lane, Suite 100  
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REVISIONS		
NO.	DATE	BY
2	10/22/2010	RA

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS DETAILS**

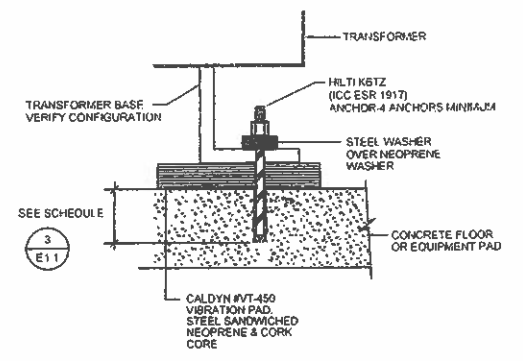
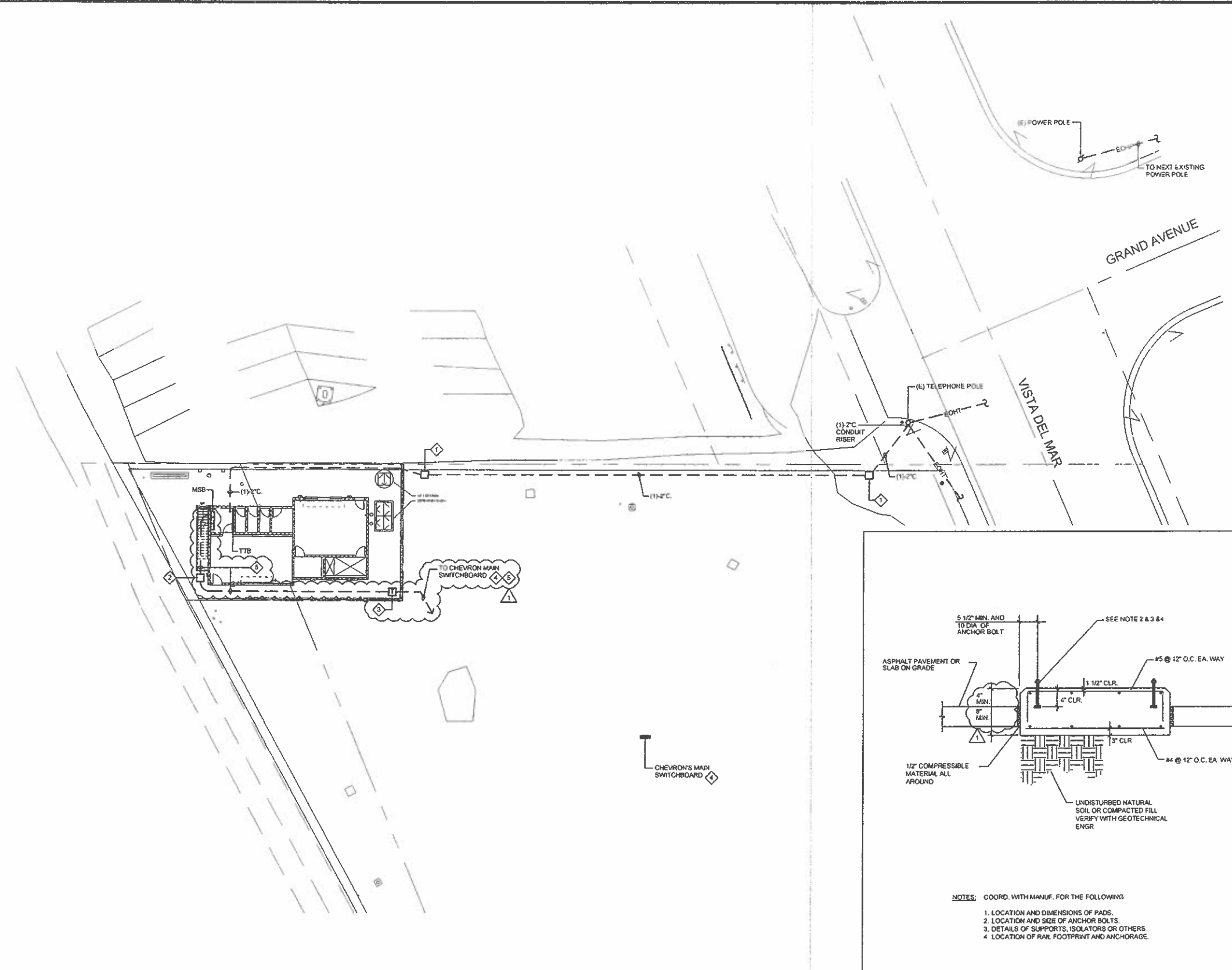
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10/06/2010  
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JOB NO. 1109531

FILE NO.

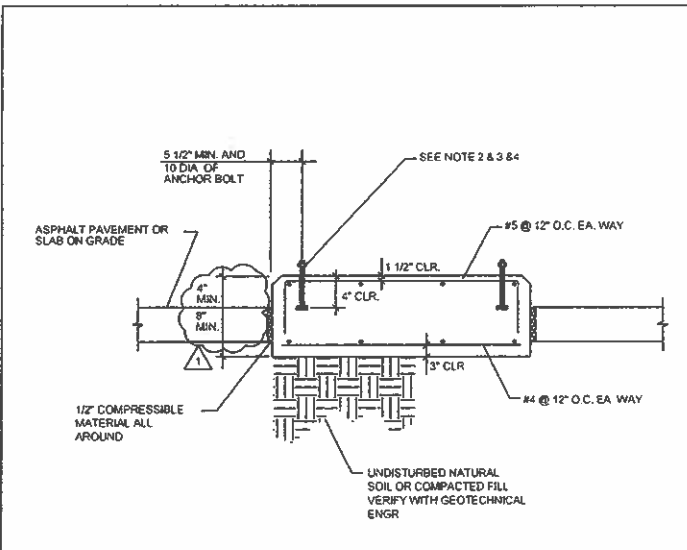
**KEY NOTES**

1. PROVIDE/INSTALL 2'x2'x3' CONCRETE PULLBOX FOR TELEPHONE SERVICE. COORDINATE WITH TELEPHONE COMPANY, SEE 2/E1.1.
2. PROVIDE/INSTALL 2.5'x3'x5' UNDERGROUND CONCRETE PULLBOX FOR POWER. SEE 2/E1.1.
3. REMOVE EXISTING UNUSED TRANSFORMER. PROVIDE NEW TRANSFORMER ON CONCRETE PAD. SEE 1/E1.1.
4. CONNECT TO CHEVRON'S MAIN SWITCHBOARD. VERIFY EXACT LOCATION OF MAIN SWITCHBOARD IN THE FIELD.
5. SEE SINGLE LINE DIAGRAM ON E-0.5 FOR CONDUIT & WIRE SIZES.

JUL 21 2011

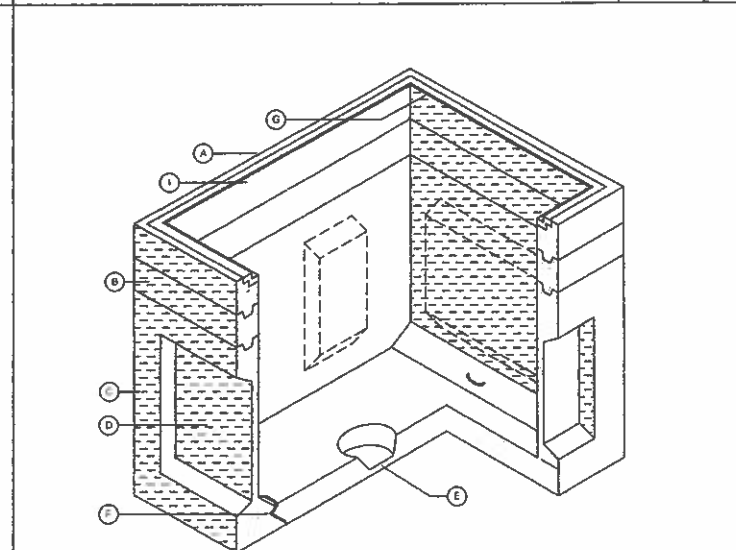


**TRANSFORMER MOUNTING DETAIL** NTS 1



**NOTES:** COORD. WITH MANUF. FOR THE FOLLOWING:  
 1. LOCATION AND DIMENSIONS OF PADS.  
 2. LOCATION AND SIZE OF ANCHOR BOLTS.  
 3. DETAILS OF SUPPORTS, ISOLATORS OR OTHERS.  
 4. LOCATION OF RAIL FOOTPRINT AND ANCHORAGE.

**CONCRETE EQUIPMENT PAD** NTS 3



ASSEMBLY TO BE PLACED ON 12" BASE COMPACTED ROCK TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE ON FLOOR.

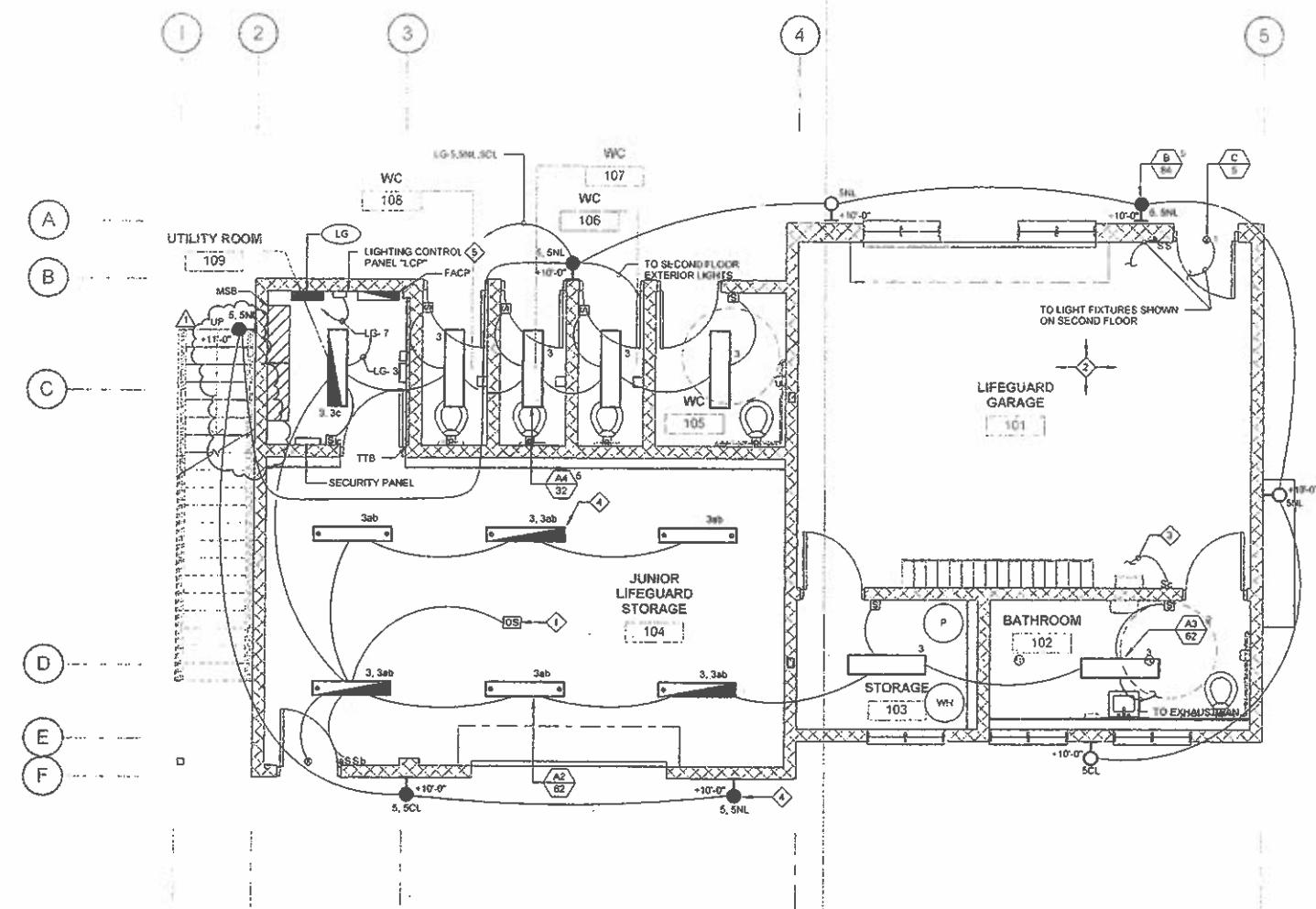
**UNDERGROUND CONCRETE PULLBOX** NTS 2

**1 POWER SITE PLAN**  
 A-1.1 1/16" = 1'-0"

PROJECT ADDRESS: EL SEGUNDO, CA	<b>T M A D</b> <b>TAYLOR &amp; GAINES</b> 800 North Ferrari Lane, Suite 100 Ontario, California 91764 Phone: 909.477.6915 Fax: 909.477.6916 www.tmgain.com Project No. 2010.030.00		<b>rrmdesigngroup</b> creating environments people enjoy® 3785 South Higgins St., Ste. 102, San Luis Obispo, CA 93401 P: (805) 543-1794   F: (805) 543-4800   www.rrmdesign.com	REVISIONS NO. DATE BY 1 10/06/2010 MD	CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION <b>EL SEGUNDO LS ELECTRICAL SITE PLAN</b>	<b>E-1.1</b> 10/06/2010 SHEET OF JOB NO. 1109531
				APPROVED DATE CITY ENGINEER R.E.	FILE NO.	

**KEY NOTES**

- 1 MOUNT ON BOTTOM OF STRUCTURAL BEAM
- 2 LIGHTING FIXTURES FOR THIS AREA ARE SHOWN ON SECOND FLOOR, SEE E2.2
- 3 UP TO MEZZANINE LIGHT FIXTURES.
- 4 PROVIDE 90 MINUTE EMERGENCY BATTERY PACK AT ALL SHADED LIGHT FIXTURES, TYPICAL
- 5 LIGHTING CONTROL PANEL "LCP" SHALL BE LUTRON "XPS4-12FT"



**LCP NOTES:**

1. OPERATION SHALL BE AS FOLLOWS:  
 NIGHT LIGHT (NL) = ON BY PHOTOCELL, OFF BY PHOTOCELL  
 CURFEW LIGHT (CL) = ON BY PHOTOCELL, OFF BY TIME SWITCH.  
 (OBTAIN SETTING FROM OWNER)
2. VERIFY MANUFACTURER WIRING REQUIREMENT FOR LUTRON "XPS4-12FT".

JUL 21 2011

**BID DOCUMENTS**

**1 GROUND FLOOR LIGHTING PLAN**  
 E-21 1/4" = 1'-0"

PROJECT ADDRESS:  
 EL SEGUNDO, CA

**T M A D TAYLOR & GAINES**  
 600 North Ferriss Lane, Suite 100  
 Ontario, California 91764  
 Phone: 909.477.6915 Fax: 909.477.6916  
 www.tmg.com Project No. 2010.030.00



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NO.	DATE	BY
1	10/06/2010	MD

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
 GROUND FLOOR LIGHTING PLAN

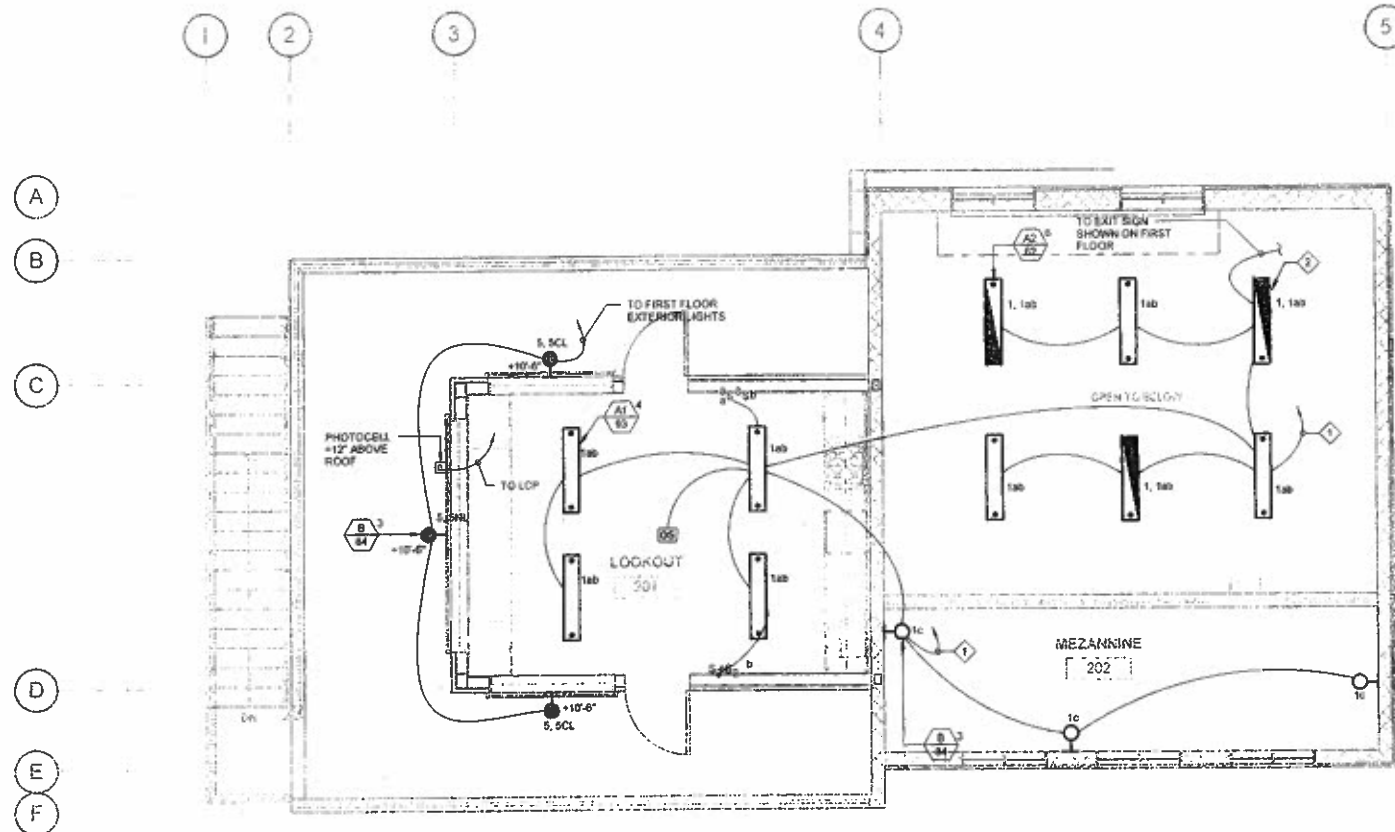
**E-2.1**  
 10/06/2010  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. 1109531

DATE \_\_\_\_\_  
 APPROVED \_\_\_\_\_  
 DATE \_\_\_\_\_  
 CITY ENGINEER R.E. \_\_\_\_\_

FILE NO.

**KEY NOTES**

- 1 TO LIGHT SWITCH SHOWN ON FIRST FLOOR, SEE SHEET E2.1.
- 2 PROVIDE 90 MINUTE EMERGENCY BATTERY PACK AT ALL SHADED LIGHT FIXTURES, TYPICAL.



**LCP NOTES:**

1. OPERATION SHALL BE AS FOLLOWS:  
 NIGHT LIGHT (NL) = ON BY PHOTOCELL, OFF BY PHOTOCELL  
 CURFEW LIGHT (CL) = ON BY PHOTOCELL, OFF BY TIME SWITCH.  
 (OBTAIN SETTING FROM OWNER)
2. VERIFY MANUFACTURER WIRING REQUIREMENT FOR LUTRON "XPS4-12FT"

JUL 21 2011

BID DOCUMENTS

**1 SECOND FLOOR LIGHTING PLAN**

E22 1/4" = 1'-0"

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D  
TAYLOR &  
GAINES**

• STRUCTURAL  
• MECHANICAL  
• ELECTRICAL  
• CIVIL

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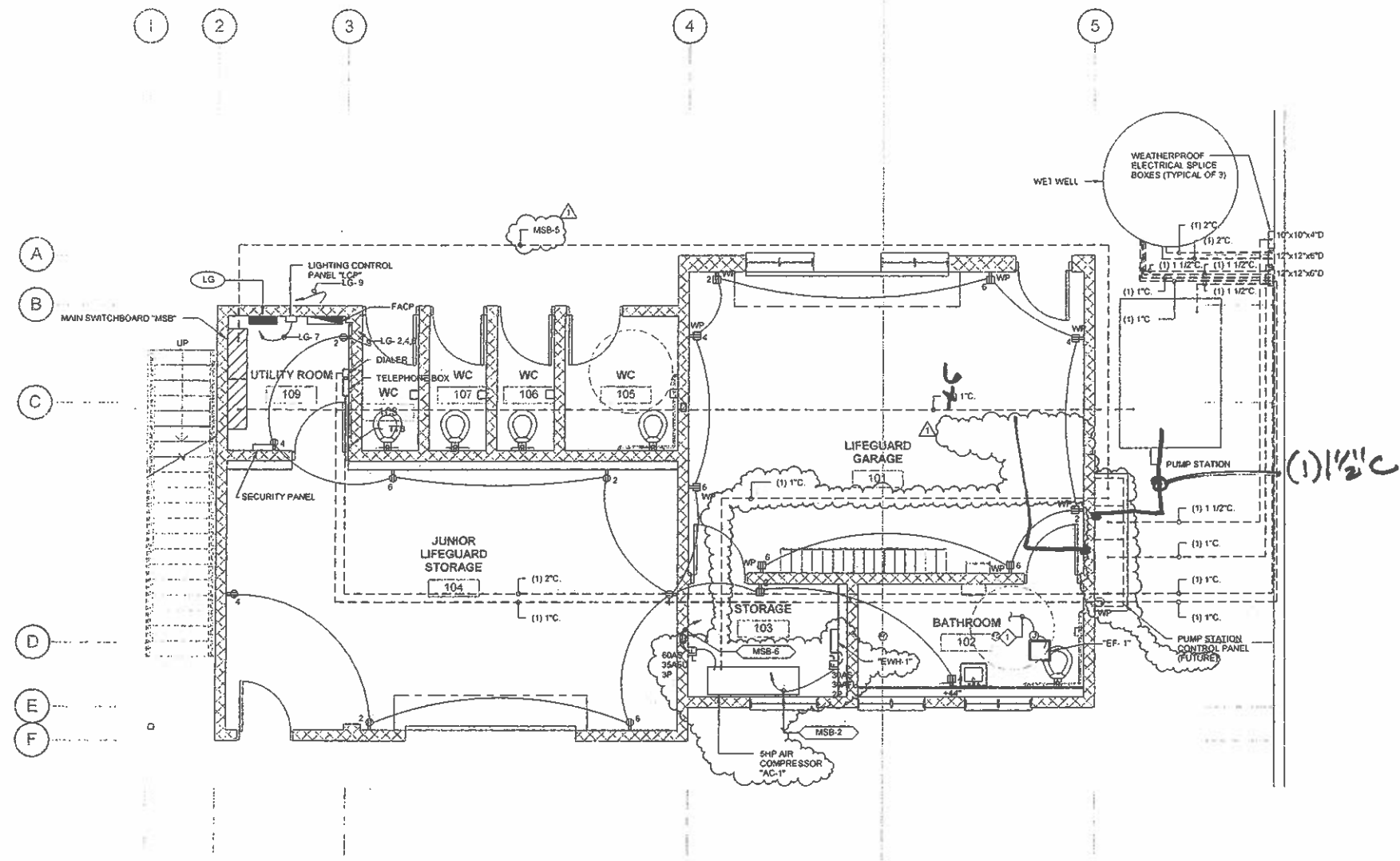
**EL SEGUNDO LS  
SECOND FLOOR LIGHTING PLAN**

**E-2.2**  
05/04/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

DATE \_\_\_\_\_  
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

KEY NOTES

1 INTERCONNECT WITH LIGHT SWITCH SEE SHEET E2.1



JUL 21 2011

1 GROUND FLOOR POWER PLAN  
E-3.1 1/4" = 1'-0"

BID DOCUMENTS

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
800 North Ferris Lane, Suite 100  
Ontario, California 91764  
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1	10/06/2010	MD

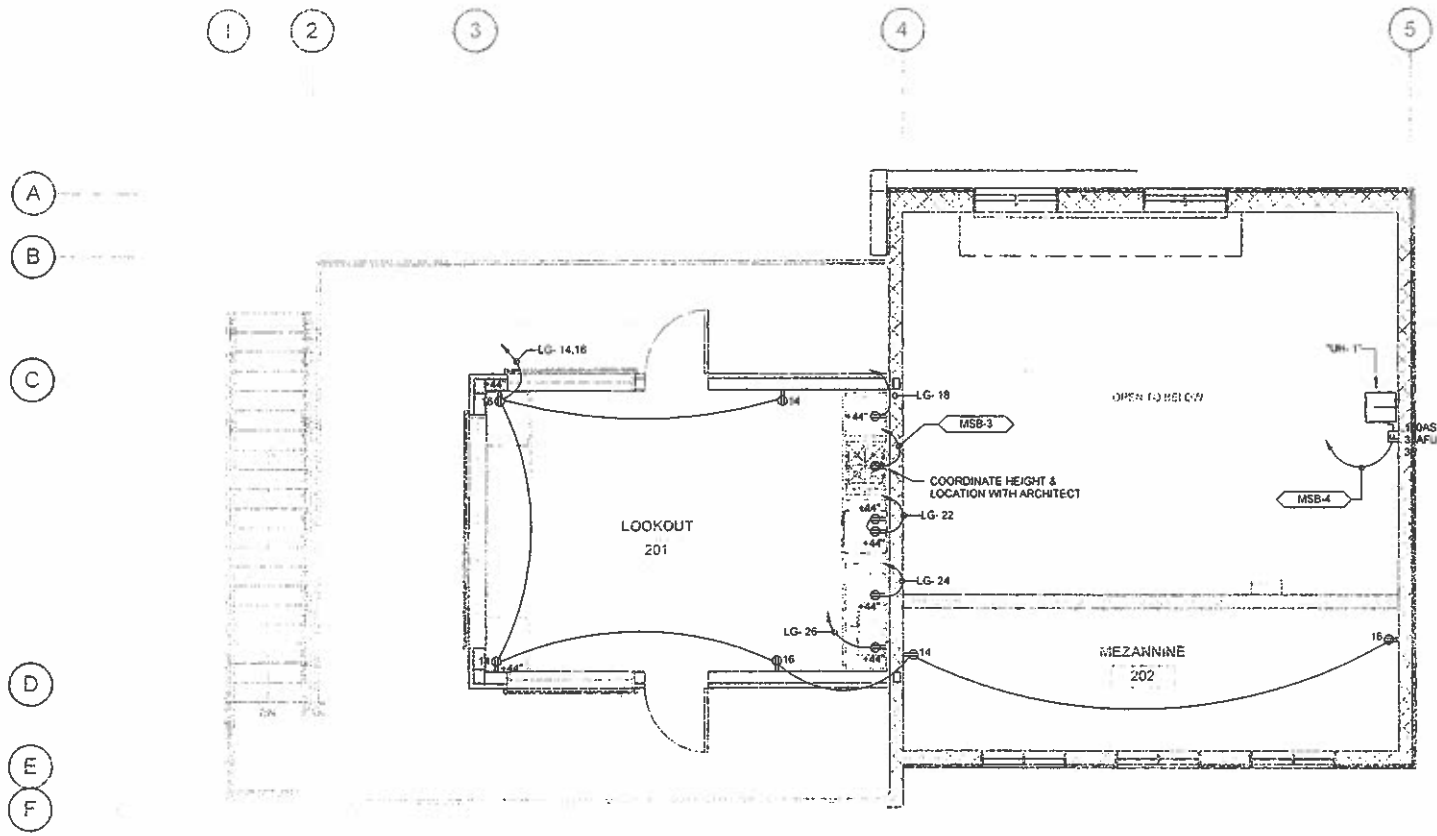
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
GROUND FLOOR POWER PLAN

**E-3.1**  
10/06/2010  
SHEET \_\_\_\_ OF \_\_\_\_  
JOB NO. 1109531

DATE \_\_\_\_\_  
DATE \_\_\_\_\_  
DATE \_\_\_\_\_  
DATE \_\_\_\_\_  
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

FILE NO

KEY NOTES



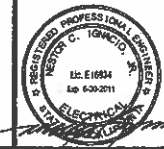
JUL 21 2011

**1 SECOND FLOOR POWER PLAN**  
E-3.2 1/4" = 1'-0"

RID DOCUMENTS

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
900 North Ferrari Lane, Suite 100  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
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NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
SECOND FLOOR POWER PLAN

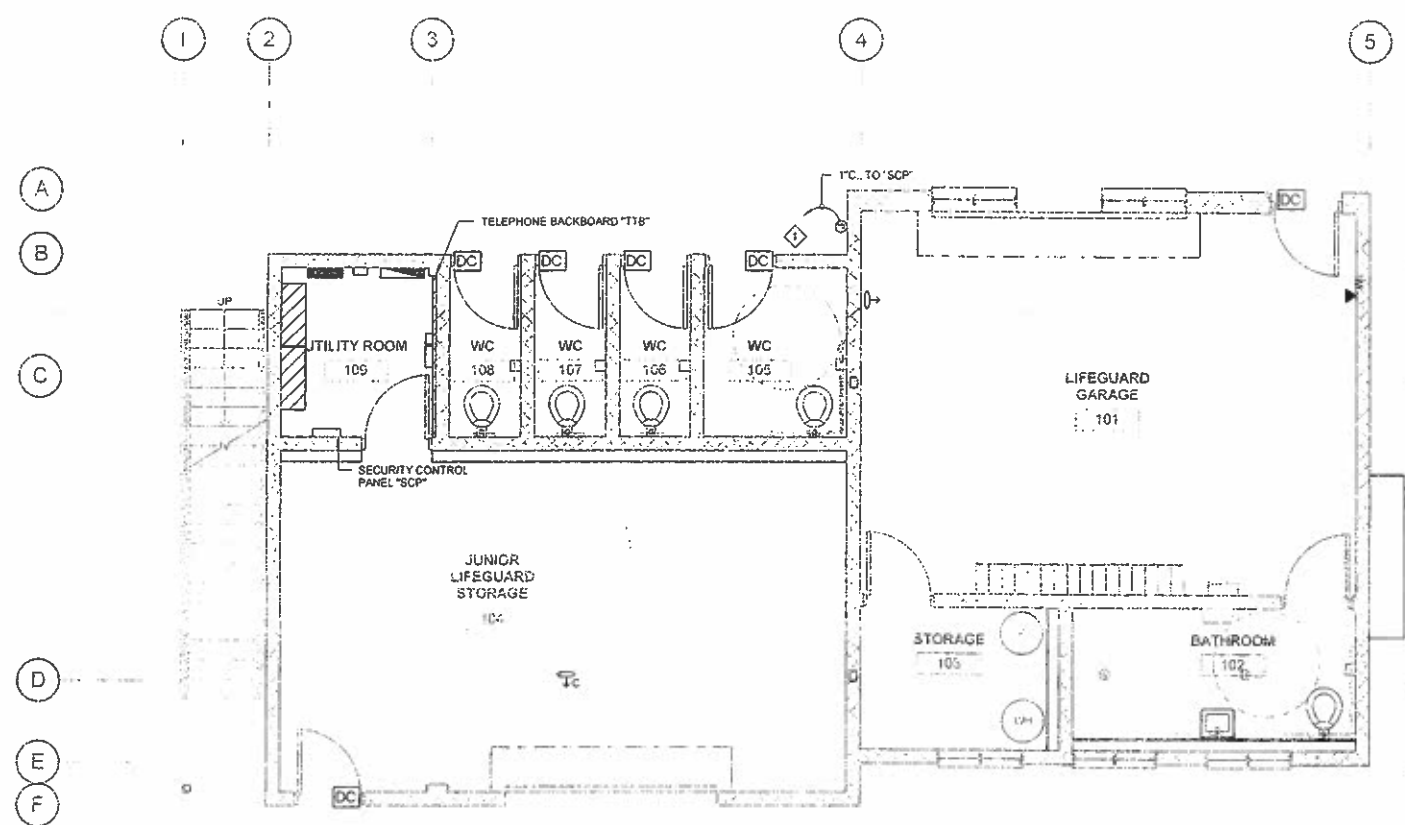
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CHECK: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

**E-3.2**  
05/04/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

**KEY NOTES**

1 JUNCTION BOX FOR SURVEILLANCE CAMERA. VERIFY EXACT LOCATION AND HEIGHT WITH THE OWNER/ARCHITECT. SURVEILLANCE CAMERA AND CABLES SHALL BE PROVIDED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR.



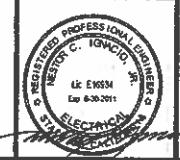
JUL 21 2011

BID DOCUMENTS

**1 GROUND FLOOR SIGNAL PLAN**  
E-4.1 1/4" = 1'-0"

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
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NO.	DATE	BY

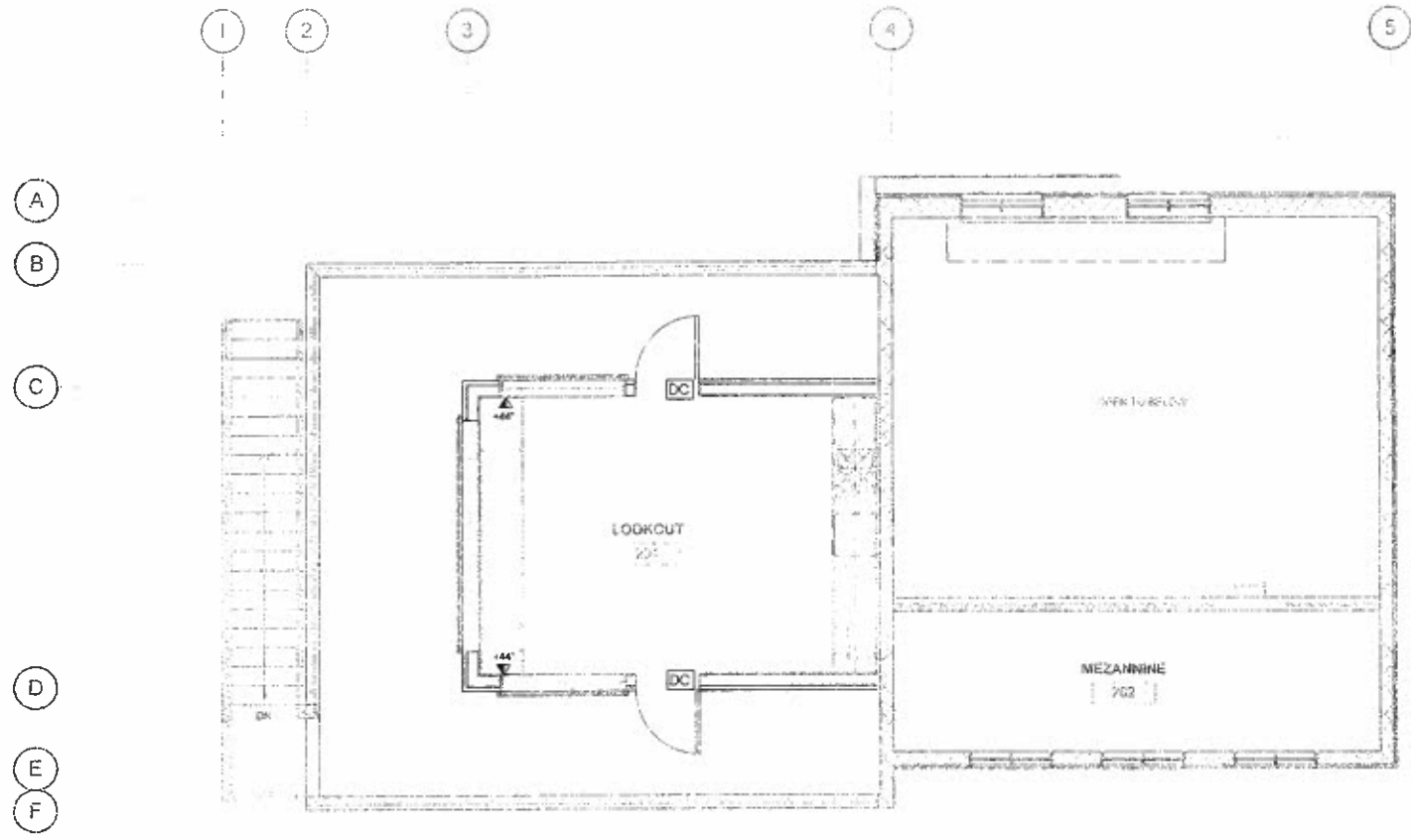
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
GROUND FLOOR SIGNAL PLAN

**E-4.1**  
05/04/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1108531

PM DRAWN: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHECK: \_\_\_\_\_ DATE: \_\_\_\_\_  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

05/04/2010 3:29:42 PM C:\Users\mcc\Documents\ElSegundoLS\ElSegundoLS.dwg

KEY NOTES



JUL 21 2011

1 SECOND FLOOR SIGNAL PLAN  
E-4.2 1/4" = 1'-0"

BID DOCUMENTS

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
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CITY OF EL SEGUNDO  
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**EL SEGUNDO LS**  
SECOND FLOOR SIGNAL PLAN

PH DATE \_\_\_\_\_  
DRAWN BY DATE \_\_\_\_\_  
CHECK BY DATE \_\_\_\_\_

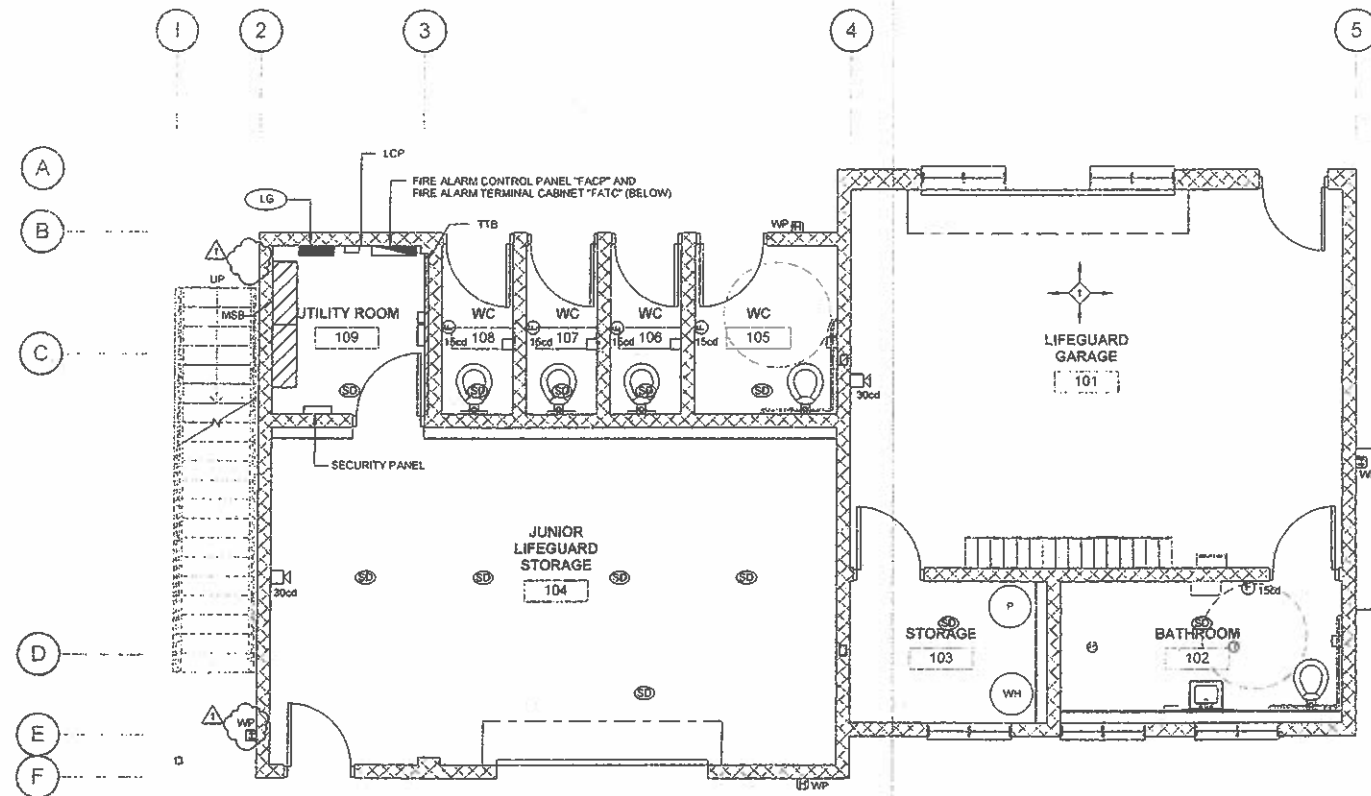
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CITY ENGINEER R.E. \_\_\_\_\_

**E-4.2**  
0504/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

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 11/23/2010 10:00:00 AM

**KEY NOTES**

1 SMOKE DETECTORS IN THIS ROOM ARE SHOWN ON SECOND FLOOR, SEE E5.2



JUL 21 2011

**1 GROUND FLOOR FIRE ALARM PLAN**  
E-5.1 1/4" = 1'-0"

**BID DOCUMENTS**

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS  
GROUND FLOOR FIRE ALARM  
PLAN**

**E-5.1**

10/06/2010

SHEET OF

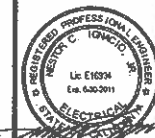
JOB NO. 1109531

REVISIONS		
NO.	DATE	BY
1	10/06/2010	MD

DATE \_\_\_\_\_  
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_  
CITY ENGINEER R.E.

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D  
TAYLOR &  
GAINES**  
800 North Ferran Lane, Suite 100  
Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
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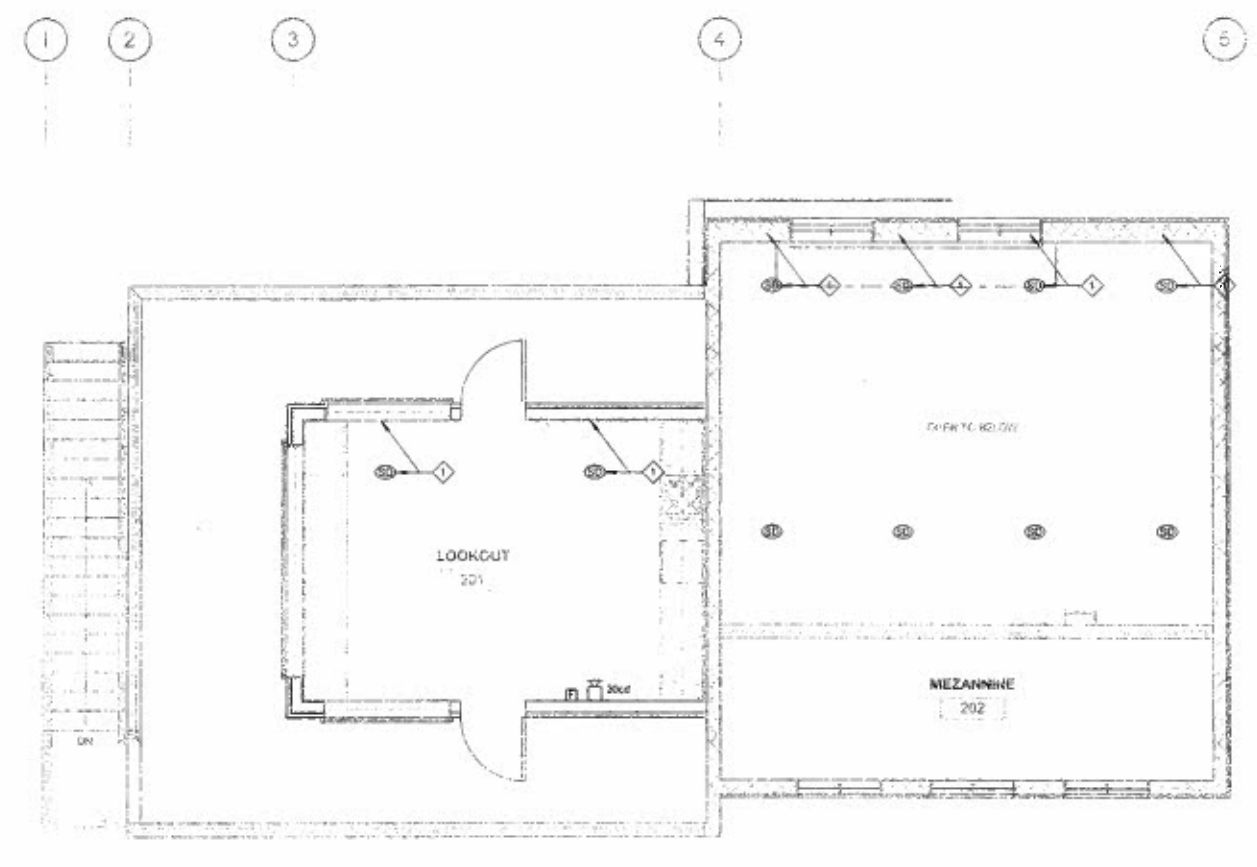
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C:\Users\jgallagher\Documents\EL SEGUNDO LS FIRE ALARM PLAN.dwg

KEY NOTES

1 SMOKE DETECTOR TO BE MOUNTED WITHIN 3 FEET OF WALL

JUL 21 2011

BID DOCUMENTS



1 SECOND FLOOR FIRE ALARM PLAN  
E-5.2 1/4" = 1'-0"

09/20/10 12:28:48 PM  
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PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
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THE INCLUDED DRAWINGS, SPECIFICATIONS, NOTES, SCHEDULES AND APPENDICES TO THIS CONTRACT SHALL BE CONSIDERED TO BE PART OF THE CONTRACT. ANY CHANGES TO THE CONTRACT SHALL BE MADE BY A CORRECTIVE ORDER OR A CHANGE ORDER. THIS CONTRACT IS VOID WITHOUT THESE CONDITIONS. ANY CONTRACTOR WHO ACCEPTS THIS CONTRACT SHALL BE DEEMED TO HAVE AGREED TO THESE CONDITIONS.

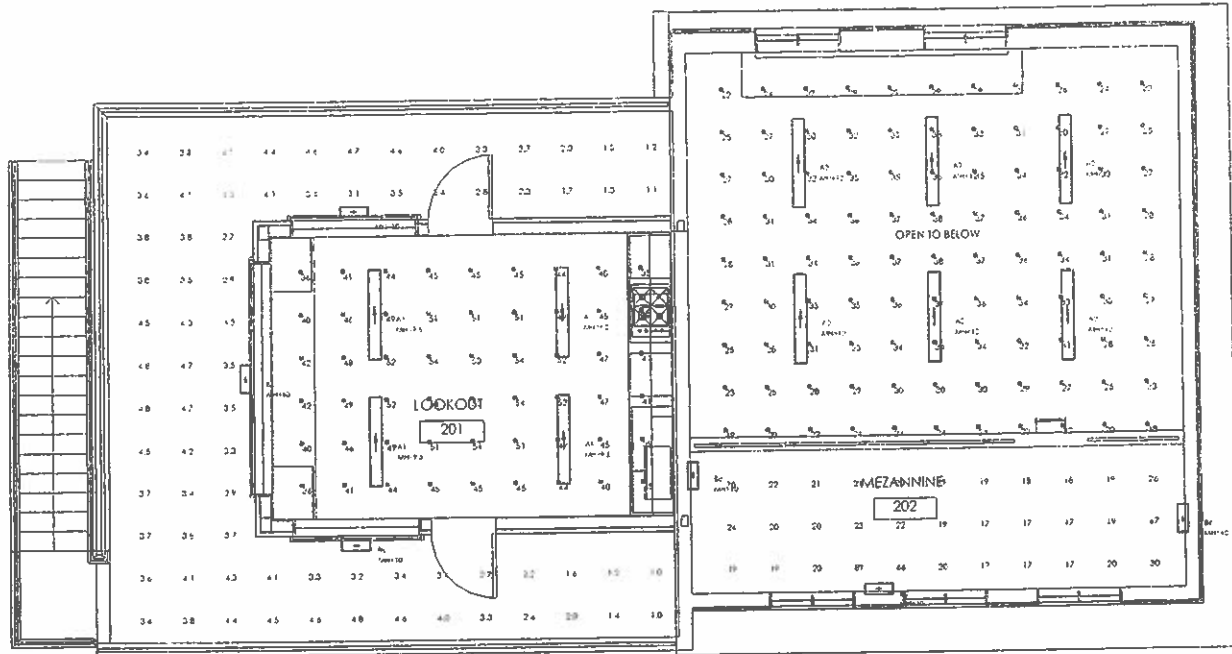
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 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
**SECOND FLOOR FIRE ALARM**  
**PLAN**

PM DRAWN: _____ CHECK: _____	DATE: _____ DATE: _____	APPROVED: _____ CITY ENGINEER P.E.	DATE: _____
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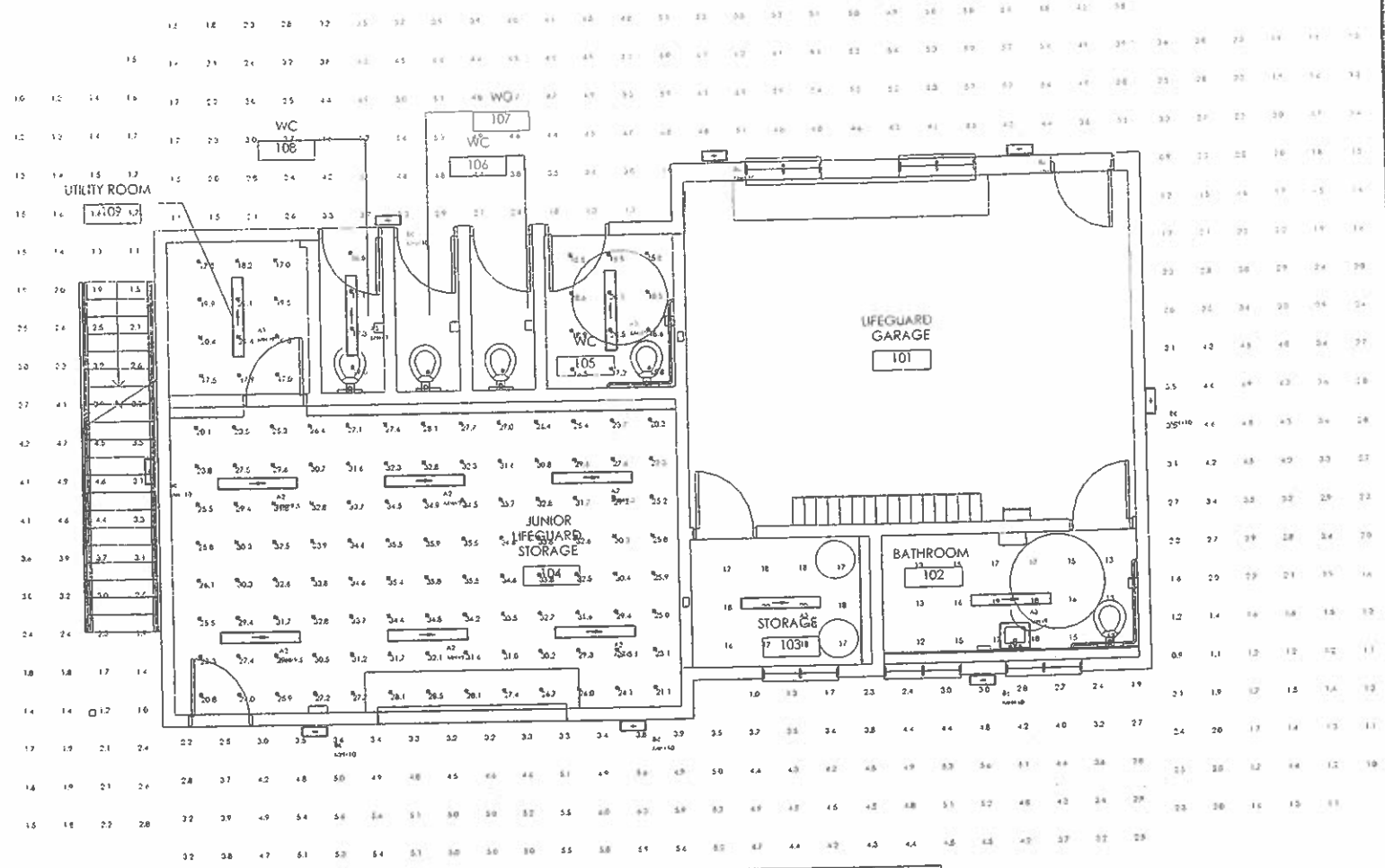
**E-5.2**  
 05/04/2010  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. 1108531



Symbol	Qty	Label	Assignment	Lumens	Description	LED	SP	LF
1	1	AL	SPICAL	275	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.88	0.748
2	1	NO	SPICAL	2500	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.98	0.748
3	1	BC	SPICAL	3000	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	1	0.950

Symbol	Qty	Label	Assignment	Lumens	Description	LED	SP	LF
1	1	AL	SPICAL	275	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.88	0.748
2	1	NO	SPICAL	2500	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.98	0.748
3	1	BC	SPICAL	3000	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	1	0.950

NOTES:  
 1. All lighting fixtures shall be installed in accordance with the manufacturer's instructions.  
 2. All lighting fixtures shall be installed in accordance with the manufacturer's instructions.  
 3. All lighting fixtures shall be installed in accordance with the manufacturer's instructions.



Symbol	Qty	Label	Assignment	Lumens	Description	LED	SP	LF
1	1	AL	SPICAL	275	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.88	0.748
2	1	NO	SPICAL	2500	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.98	0.748
3	1	BC	SPICAL	3000	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	1	0.950

Symbol	Qty	Label	Assignment	Lumens	Description	LED	SP	LF
1	1	AL	SPICAL	275	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.88	0.748
2	1	NO	SPICAL	2500	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	0.98	0.748
3	1	BC	SPICAL	3000	WORLDWIDE OF WEST 44-3 3D 16 100V E1 110V 120V 120V 120V	1	1	0.950

NOTES:  
 1. All lighting fixtures shall be installed in accordance with the manufacturer's instructions.  
 2. All lighting fixtures shall be installed in accordance with the manufacturer's instructions.  
 3. All lighting fixtures shall be installed in accordance with the manufacturer's instructions.

JUL 21 2011

2 LIGHTING CALCULATIONS - SECOND FLOOR

1 LIGHTING CALCULATIONS - FIRST FLOOR

BID DOCUMENTS

PROJECT ADDRESS:  
 EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
 800 North Ferrari Lane, Suite 100  
 Ontario, California 91764  
 Phone: 909.477.6915 Fax: 909.477.6916  
 www.tmgain.com Project No. 2010.030.00

**REGISTERED PROFESSIONAL ENGINEER**  
 L.C. ENEM  
 No. 64339H  
 ELECTRICAL

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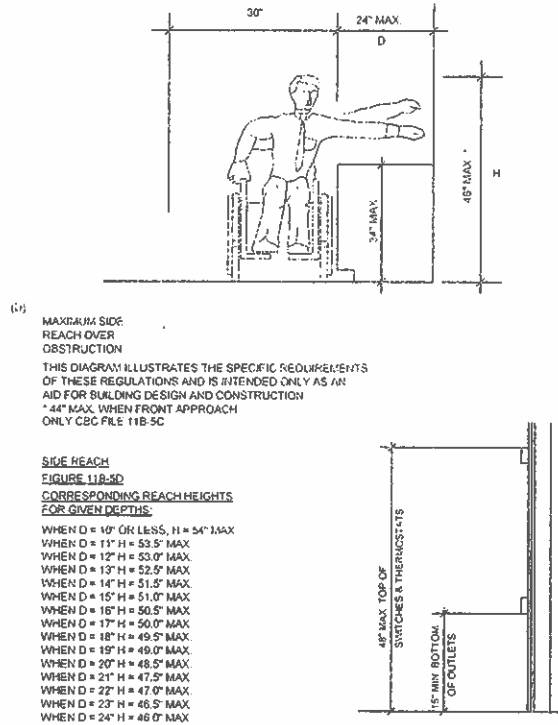
CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
**FIRST AND SECOND FLOOR**  
**LIGHTING CALCULATIONS**  
 PM DRAWN DATE \_\_\_\_\_  
 CHECK DATE \_\_\_\_\_  
 APPROVED DATE \_\_\_\_\_  
 CITY ENGINEER R.E. \_\_\_\_\_

**E-6.1**  
 05/04/2010  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. 1109531

**GENERAL NOTES**

- ALL INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. BEFORE PROCEEDING WITH THE WORK, THIS CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL DIMENSIONS, SIZES, REQUIRED CLEARANCES, AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF ALL EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK AND TO THE WORK OF OTHER TRADES.
- CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS IN LAYING OUT HIS WORK. EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED WITH REFERENCE TO THE FINISHED BLDG.
- DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH CHAPTER 6 OF THE CAC, 2007 EDITION AND SMACNA 1995 EDITION.
- ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH "SMACNA" GUIDELINES AS FOR SEISMIC RESTRAINTS OF MECHANICAL AND PLUMBING SYSTEMS. WHERE BRACING DETAILS ARE NOT SHOWN ON DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE TO THE APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, AND THE DSA FIELD ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY "SMACNA" AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.
- ALL FRESH AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10' FROM ANY SANITARY VENT, EXHAUST FAN DISCHARGE AND FLUE OF OTHER FURNACES. WHEN NECESSARY EXTEND VENTS OR PROVIDE ADDITIONAL FRESH AIR INTAKE DUCTWORK AS DIRECTED BY THE ENGINEER.
- THE INSTALLATION OF VALVES, THERMOMETERS, GAUGES, CLEANOUTS, DAMPERS, DUCT ACCESS DOORS OR OTHER INDICATING EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY AND ACCESSIBLY LOCATED.
- WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
- THE SIZES, WEIGHTS AND CAPACITIES OF ALL EQUIPMENT SCHEDULED ON THE DRAWING HAVE BEEN CAREFULLY COMPUTED. SHOULD EQUAL ITEMS BY DIFFERENT MANUFACTURERS BE SUBMITTED FOR APPROVAL, ALL SUCH SUBMITTALS SHALL INCLUDE 1/4" INCH SCALE SHOP DRAWINGS SHOWING METHOD OF INSTALLATION, PROVIDE LOAD RATINGS AND SEISMIC CALCULATIONS AS APPROVED BY A REGISTERED STRUCTURAL ENGINEER WITH EACH SUBMITTAL.
- REQUIRED ROUTINE MAINTENANCE ACTION SHALL BE CLEARLY STATED AND INCORPORATED ON A READILY ACCESSIBLE LABEL, WHICH MAY BE LIMITED TO IDENTIFYING BY TITLE AND/OR PUBLICATION NUMBER THE OPERATION AND MAINTENANCE MANUAL FOR THAT PARTICULAR MODEL AND TYPE OF PRODUCT. ONE COPY OF THIS INFORMATION SHALL BE FURNISHED BY THE CONTRACTOR TO THE OWNER.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE PLANS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM, TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DO ALL CURING, SAW CUTTING, PATCHING AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS SHALL BE SEALED TO MEET THE FIRE RATING OF THE PARTIAL WALL, FLOOR OR CEILING PENETRATED.
- CUTTING, BORING, SAW CUTTING OR DRILLING THROUGH THE STRUCTURAL ELEMENTS IS NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEW AND APPROVED BY THE ARCHITECT. IF THE DETAILS DO NOT SHOW OR CONFORM TO THE APPROVED DRAWINGS.
- WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF MECHANICAL EQUIPMENT MATERIAL ARISES ON THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICT CONDITIONS NOTED ON DRAWINGS AND/OR IN THE SPECIFICATION TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ENGINEER.
- BEFORE BIDDING THE PROJECT THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE CLEARANCES AVAILABLE TO BRING THE SPECIFIED EQUIPMENT AND MATERIAL TO THE SITE.

**THERMOSTAT HEIGHT SCHEDULE**



**NOTES:**  
ELECTRICAL OUTLETS AND SWITCHES SHALL BE MOUNTED A MAXIMUM OF 48" ABOVE FINISH FLOOR, MEASURED TO THE TOP OF THE ELECTRICAL BOX RATHER THAN THE CENTERLINE. (CBC SECTION 1117B 6 5).  
(IF DESIRED, A SINGLE DIMENSION OF 48" ABOVE FINISH FLOOR, TO CENTERLINE OF CONTROLS OR BOX WILL BE ACCEPTABLE FOR EITHER SWITCHES/OUTLETS AS WELL AS FOR THERMOSTATS AND SIMILAR CONTROLS).  
THE MINIMUM MOUNTING HEIGHT FOR SWITCHES AND OUTLETS IS 15" ABOVE FINISH FLOOR, MEASURED TO THE BOTTOM OF ELECTRICAL BOX RATHER THAN CENTERLINE.

**LEGEND**

SYMBOL	ABBREV.	DESCRIPTION
[Symbol]		SQUARE OR RECTANGULAR DUCT
[Symbol]		ROUND DUCT
[Symbol]		FLEXIBLE ROUND DUCT
[Symbol]		DUCT SLOPE DIRECTION
[Symbol]		DUCT UP OR DOWN
[Symbol]		DUCT TRANSITION
[Symbol]		RADIUS ELBOW (FIG. 2-2)
[Symbol]		RECTANGULAR/SQUARE DUCT THROAT ELBOW WITH VANES (FIG. 2-2)
[Symbol]		SQUARE 45° ENTRY BRANCH CONNECTION (FIG. 2-6)
[Symbol]		RECTANGULAR DUCT PARALLEL FLOW BRANCH (FIG. 2-7)
[Symbol]		DUCT TAKE-OFF FROM BOTTOM
[Symbol]		DUCT TAKE-OFF FROM TOP
[Symbol]	MVD	NEW MANUAL VOLUME DAMPER
[Symbol]	CR	CEILING REGISTER (RETURN OR OUTSIDE AIR)
[Symbol]	CD	CEILING DIFFUSER (SUPPLY AIR)
[Symbol]	CR	CEILING REGISTER (EXHAUST AIR)
[Symbol]		SUPPLY AIR DUCT UP THRU FLOOR OR ROOF
[Symbol]		RETURN OR OUTSIDE AIR DUCT UP THRU FLOOR OR ROOF
[Symbol]		EXHAUST AIR DUCT UP THRU FLOOR OR ROOF
[Symbol]	LVR	DOOR LOUVER AND SQUARE FOOT AREA
[Symbol]	S.P.	STATIC PRESSURE
[Symbol]	DIA	ROUND (DIAMETER)
[Symbol]	CFM	CUBIC FEET OF AIR PER MINUTE
[Symbol]	EA OR EXH	EXHAUST
[Symbol]	TYP	TYPICAL
[Symbol]	EQUIPMENT NUMBER	EQUIPMENT NUMBER
[Symbol]	TSTAT.	THERMOSTAT WITH ZONE NUMBER
[Symbol]		TIMER SWITCH

**DRAWING LIST**

DWG NO	DESCRIPTION
M-0.1	GENERAL NOTES, LEGEND, DRAWING LIST AND SCHEDULE
M-0.2	TITLE 24
M-2.1	GROUND FLOOR HVAC PLAN
M-2.2	SECOND FLOOR HVAC PLAN
M-2.3	ROOF HVAC PLAN
M-3.0	DETAILS

**APPLICABLE CODES & STANDARDS**

- 2007 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2007 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2007 INTERNATIONAL BUILDING CODE (IBC) CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA ELECTRICAL CODE (CEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2007 NATIONAL ELECTRICAL CODE (NEC) CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4 (2007 UNIFORM MECHANICAL CODE (UMC) CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA PLUMBING CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5 (2007 UNIFORM PLUMBING CODE (UPC) CALIFORNIA AMENDMENTS)
- 2008 CALIFORNIA ENERGY EFFICIENCY STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2007 CALIFORNIA FIRE CODE (FC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2007 INTERNATIONAL FIRE CODE (IFC) CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADA) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

**EXHAUST FAN SCHEDULE**

ITEM NO.	MANUFACTURER & MODEL NO.	SERVICE AREA	CFM	PD	POWER (HP)	MOTOR (HP)	FAN RPM	TSPD (FPM)	MOTOR VOLTAGE	APPROX. UNIT WT. (LBS.)	DETAIL	REMARKS
EF 1	COOK GN-162	BATHROOM 102	140	2	95.2 W	-	1200	2397	115-1-60	25	M3.0	COMPLETE WITH BIRD SCREEN, BACKDRAFT DAMPER AND ROOF CAP WITH SLOPE TYPE CURB. MOUNT P88 (PROVIDE BAKED POLYESTER POWDER COATING ON ROOF CAP). INTERCONNECT WITH LIGHT SWITCH

**ELECTRIC, FAN-TYPE UNIT HEATER SCHEDULE**

ITEM NO.	MANUFACTURER & MODEL NO.	AREA SERVED	BTU/HR OUTPUT	CFM	POWER KW	ELECTRICAL DATA					OPER. WT. (LBS.)	DETAIL	REMARKS
						RPM	HP	VOLTS	PH	HZ			
UH 1	REZNOR EGH8-10	LIFEGUARD GARAGE 101	34,120	700	10	1550	1/20	208	3	60	60	M3.0	COMPLETE WITH WALL MOUNTED THERMOSTAT, 24V RELAY KIT AND WALL MOUNTING BRACKETS.

JUL 21 2011

**BID DOCUMENTS**

PROJECT ADDRESS  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
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Ontario, California 91764  
Phone: 909.477.6915 Fax: 909.477.6916  
www.tmgain.com Project No. 2010.030.00

**REGISTERED PROFESSIONAL ENGINEER**  
COPIN E. RADTKE  
No. M24519  
Exp. 9/30/10

THE ARCHITECT'S RESPONSIBILITY IS TO PROVIDE A COMPLETE AND ACCURATE SET OF DRAWINGS AND SPECIFICATIONS THAT WILL BE USED TO CONSTRUCT THE PROJECT. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT.

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**REVISIONS**

NO.	DATE	BY

**CITY OF EL SEGUNDO**  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
GENERAL NOTES, LEGEND,  
DRAWING LIST AND SCHEDULE

**M-0.1**  
05/04/2010  
SHEET \_\_\_ OF \_\_\_  
JOB NO. 1109531

DATE \_\_\_\_\_ APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CITY ENGINEER H.E.

**2008 ENERGY EFFICIENCY STANDARDS  
MANDATORY MEASURES - HVAC**

ALL OCCUPANCIES MECHANICAL MANDATORY REQUIREMENTS FOR THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF SYSTEMS AND EQUIPMENT SECTION 110 - SYSTEMS AND EQUIPMENT - GENERAL

SECTION 111, 112 AND 115 ESTABLISH REQUIREMENTS FOR THE MANUFACTURE, CONSTRUCTION AND INSTALLATION OF CERTAIN SYSTEMS AND EQUIPMENT COMPONENTS THAT ARE INSTALLED IN BUILDINGS REGULATED BY TITLE 24, PART 6. SYSTEMS, EQUIPMENT AND BUILDING COMPONENTS LISTED BELOW MAY BE INSTALLED ONLY IF:

(A) THE MANUFACTURER HAS CERTIFIED THAT THE SYSTEM OR EQUIPMENT COMPLIES WITH THE APPLICABLE MANUFACTURE PROVISIONS OF SECTIONS 111, 112 AND 115, AND

(B) THE SYSTEM, EQUIPMENT OR BUILDING COMPONENT COMPLIES WITH THE APPLICABLE INSTALLATION PROVISIONS OF SECTIONS 111, 112 AND 115. NO SYSTEM, EQUIPMENT OR BUILDING COMPONENT COVERED BY THE PROVISIONS OF SECTIONS 111, 112 AND 115 THAT IS NOT CERTIFIED OR THAT FAILS TO COMPLY WITH THE APPLICABLE INSTALLATION REQUIREMENTS MAY BE INSTALLED IN A BUILDING REGULATED BY TITLE 24, PART 6.

THE SYSTEMS AND EQUIPMENT COMPONENTS COVERED ARE:

APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS (SECTION 111)

OTHER SPACE-CONDITIONING EQUIPMENT (SECTION 112)

GAS APPLIANCES (SECTION 115)

SECTION 111 - MANDATORY REQUIREMENTS FOR APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY REGULATIONS

ANY APPLIANCE FOR WHICH THERE IS A CALIFORNIA STANDARD ESTABLISHED IN THE APPLIANCE EFFICIENCY REGULATIONS MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED TO THE COMMISSION, AS SPECIFIED IN THOSE REGULATIONS, THAT THE APPLIANCE COMPLIES WITH THE APPLICABLE STANDARD FOR THAT APPLIANCE (SEE APPENDIX 1-A FOR AVAILABILITY OF DIRECTORIES OF CERTIFIED APPLIANCES)

SECTION 112 - MANDATORY REQUIREMENTS FOR SPACE-CONDITIONING EQUIPMENT CERTIFIED BY MANUFACTURERS

ANY SPACE-CONDITIONING EQUIPMENT LISTED IN THIS SECTION MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE EQUIPMENT COMPLIES WITH ALL THE APPLICABLE REQUIREMENTS OF THIS SECTION.

(A) EFFICIENCY

EQUIPMENT SHALL MEET THE APPLICABLE REQUIREMENTS TABLE 112-A THROUGH TABLE 112-M, SUBJECT TO THE FOLLOWING:

- IF MORE THAN ONE STANDARD IS LISTED IN TABLE 112-A THROUGH TABLE 112-M, THE EQUIPMENT SHALL MEET ALL THE STANDARDS LISTED, AND
- IF MORE THAN ONE TEST METHOD IS LISTED IN TABLE 112-A THROUGH TABLE 112-M, THE EQUIPMENT SHALL COMPLY WITH THE APPLICABLE STANDARD WHEN TESTED WITH EACH TEST METHOD, AND
- WHERE EQUIPMENT CAN SERVE MORE THAN ONE FUNCTION, SUCH AS BOTH HEATING AND COOLING, OR BOTH SPACE HEATING AND WATER HEATING, IT SHALL COMPLY WITH ALL THE REQUIREMENTS APPLICABLE TO EACH FUNCTION; AND
- WHERE A REQUIREMENT IS FOR EQUIPMENT RATED AT ITS "MAXIMUM RATED CAPACITY" OR "MINIMUM RATED CAPACITY," THE CAPACITY SHALL BE AS PROVIDED FOR AND ALLOWED BY THE CONTROLS, DURING STEADY-STATE OPERATION.

EXCEPTION TO SECTION 112

(A) WATER-COOLED CENTRIFUGAL WATER-CHILLING PACKAGES THAT ARE NOT DESIGNED FOR OPERATION AT ARI ST AND/OR 550 TEST CONDITIONS OF 44°F LEAVING CHILLED WATER TEMPERATURE AND 89°F ENTERING CONDENSER WATER TEMPERATURE SHALL HAVE A MINIMUM FULL LOAD COP RATING AS SHOWN IN TABLE 112-H, TABLE 112-I, AND TABLE 112-J, AND A MINIMUM NPLV RATING AS SHOWN IN TABLE 112-K, TABLE 112-L, AND TABLE 112-M. THE TABLE VALUES ARE ONLY APPLICABLE OVER THE FOLLOWING FULL LOAD DESIGN RANGES:

LEAVING CHILLER WATER TEMP. 40 TO 48°F  
ENTERING CONDENSER WATER TEMP. 75 TO 85°F  
CONDENSING WATER TEMP. RISE 5 TO 15°F

(B) CONTROLS FOR HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS

HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL HAVE CONTROLS:

- THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND
- IN WHICH THE CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING, AND THE CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING.

EXCEPTION TO SECTION 112

(B) THE CONTROLS MAY ALLOW SUPPLEMENTARY HEATER OPERATION DURING:

- DEFROST; AND
- TRANSIENT PERIODS SUCH AS START-UPS AND FOLLOWING ROOM THERMOSTAT SETPOINT ADVANCE, IF THE CONTROLS PROVIDE PREFERENTIAL RATE CONTROL, INTELLIGENT RECOVERY, STAGING, RAMPING OR ANOTHER CONTROL MECHANISM DESIGNED TO PRECLUDE THE UNNECESSARY OPERATION OF SUPPLEMENTARY HEATING.

(C) GAS- AND OIL-FIRED FURNACE STANDBY LOSS CONTROLS

GAS-FIRED AND OIL-FIRED FORCED AIR FURNACES WITH INPUT RATINGS  $\geq 225,000$  BTU/H SHALL ALSO HAVE AN INTERMITTENT IGNITION OR INTERRUPTED DEVICE (IID), AND HAVE EITHER POWER VENTING OR A FLUE DAMPER. A VEAT DAMPER IS AN ACCEPTABLE ALTERNATIVE TO A FLUE DAMPER FOR FURNACES WHERE COMBUSTION AIR IS DRAWN FROM THE CONDITIONED SPACE. ALL FURNACES WITH INPUT RATINGS  $\geq 225,000$  BTU/H, INCLUDING ELECTRIC FURNACES, THAT ARE NOT LOCATED WITHIN THE CONDITIONED SPACE SHALL HAVE JACKET LOSSES NOT EXCEEDING 0.75% OF THE INPUT RATING.

SECTION 115 - NATURAL GAS CENTRAL FURNACES, COOKING EQUIPMENT, AND POOL AND SPA HEATERS PILOT LIGHTS PROHIBITED

ANY NATURAL GAS SYSTEM OR EQUIPMENT LISTED BELOW MAY BE INSTALLED ONLY IF IT DOES NOT HAVE A CONTINUOUSLY BURNING PILOT LIGHT

(A) FAN-TYPE CENTRAL FURNACES.

(B) HOUSEHOLD COOKING APPLIANCES.

EXCEPTION TO SECTION 115 (B):

HOUSEHOLD COOKING APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION AND IN WHICH EACH PILOT CONSUMES LESS THAN 150 BTU/H.

**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 1 of 5) MECH-1C**

Project Name: El Segundo Life Guard Station Date: 5/4/2010

Project Address: El Segundo, CA 90245

General Information: Building Type: Nonresidential, Single-Family Residential, Hotel/Motel/Quest Room, Schools (Public School), Metropolitan Public School Bldg, Cond. Spaces, Unconditioned Spaces (Attic/Bldg).

Phase of Construction: New Construction, Addition, Alteration, Approach of Compliance: Composite, Overall Envelope EHV, Unconditioned (i.e. Attic/Bldg).

From Orientation: N, E, S, W or in Degrees: 0 deg.

Equipment	Inspection Criteria	Meets Criteria or Requirements	Special Feature	Pass	Fail
Equipment Type (e.g. AC-1, RTU-1, HP-1)	Other				
Number of Systems	7				
Max Allowed Heating Capacity	56,526 Btu/hr				
Minimum Heating Efficiency	3.50 HSPF				
Max Allowed Cooling Capacity	n/a				
Cooling Efficiency	n/a				
Duct Location R-Value	n/a				
Duct Leakage Testing - R Yes, a MECH-4A must be submitted	No				
Economizer	No Economizer				
Thermostat	PIA				
Fan Control	Constant Volume				

1. Indicate special feature DETAILS on Page 2 of the Inspection Checklist Form.  
2. If the Actual installed equipment performance efficiency and capacity is less than the Proposed from the energy compliance submittal or from the building plans, the responsible party shall resubmit energy compliance to include the new changes.  
3. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form.  
4. Indicate Equipment Type: Gas (Plg or Split), VAV, HP (Plg or split), Hydronic, P/AC, or other.

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**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 2 of 5) MECH-1C**

Project Name: El Segundo Life Guard Station Date: 5/4/2010

**SPECIAL FEATURES INSPECTION CHECKLIST**

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

NA

Discrepancies:

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**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 3 of 5) MECH-1C**

Project Name: El Segundo Life Guard Station Date: 5/4/2010

Required Acceptance Tests

Designer: This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Building Departments: Systems Acceptance: Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance. Systems Acceptance: Before occupancy permit is granted, all newly installed HVAC equipment must be tested using the Acceptance Requirements.

The MECH-1C form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing person performing the test (example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what acceptance test must be conducted. The following check-off forms are required for ALL newly installed equipment. In addition, a Certificate of Acceptance forms shall be submitted to the building department that certifies plans, specifications, installation, commissioning, and operating and maintenance information meet the requirements of §10.103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed forms before the building can receive final occupancy.

TEST DESCRIPTION	MECH-2A	MECH-3A	MECH-4A	MECH-5A	MECH-6A	MECH-7A	MECH-8A	MECH-9A	MECH-10A	MECH-11A
Equipment Requiring Testing or Verification	Chy									
Recirc. FGH-10										

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**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST (Part 4 of 5) MECH-1C**

Project Name: El Segundo Life Guard Station Date: 5/4/2010

TEST DESCRIPTION	MECH-12A	MECH-13A	MECH-14A	MECH-15A	Test Performed By
Equipment Requiring Testing	Chy				
Recirc. FGH-10					

EnergyPro 5.0 by EnergySoft User Number: 5557A RunCode: 2010-05-04T08:19:49 ID: 2010.030.00 Page 8 of 13

**CERTIFICATE OF COMPLIANCE (Part 5 of 5) MECH-1C**

Project Name: El Segundo Life Guard Station Date: 5/4/2010

Documentation Author's Declaration Statement

I certify that the Certificate of Compliance documentation is accurate and complete.

Name: Andy Cloud Signature: [Signature] Date: 5/4/2010

Company: TIG CBA # 124519 CCEPE # 809.477.6515

Address: 800 North Ferrari Lane #100 City/State/Zip: Qmario, Co 91764 Phone: 809.477.6515

The Principal Mechanical Designer's Declaration Statement

I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the mechanical design.

This Certificate of Compliance identifies the mechanical features and performance specifications required for compliance with Title 24, Parts 1 and 6 of the California Code of Regulations.

The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: Chris E. Radtke, P.E. Signature: [Signature] Date: 5/4/2010

Company: TIG License # 124519 Phone: 809.477.6515

Address: 800 North Ferrari Lane, #100 City/State/Zip: Qmario, CA 91764 Phone: 809.477.6515

Mandatory Measures indicate location on building plans of Note Book for Mandatory Measures.

Mechanical Compliance Forms & Worksheets (check box if worksheet is included)

MECH-1C Certificate of Compliance Required on plans for all submittals

MECH-2C Mechanical Equipment Summary is required for all submittals

MECH-3C Mechanical Ventilation and Reheat is required for all submittals with mechanical ventilation

MECH-4C Fan Power Consumption is required for all prescriptive submittals

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**NOTE:**  
BESIDES TESTING AND BALANCING, THE CONTRACTOR IS RESPONSIBLE TO PERFORM ALL TESTS INCLUDED IN MECH-1-C PART 3 FORMS THIS SHEET

JUL 21 2011

BID DOCUMENTS

05/02/2010 3:17:39 PM C:\Documents\119933\1\MECH-1C\MECH-1C.dwg

PROJECT ADDRESS  
EL SEGUNDO, CA

**TIG T M A D**  
**TAYLOR & GAINES**

800 North Ferrari Lane, Suite 100  
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Phone: 909.477.6515 Fax: 909.477.6519  
www.tigmad.com Project No. 2010.030.00

REGISTERED PROFESSIONAL ENGINEER  
No. 624519  
Exp. 9/30/10

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REVISIONS

NO.	DATE	BY

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS**  
TITLE 24

PH. DATE: \_\_\_\_\_  
DRAWN: DATE: \_\_\_\_\_  
CHECK: DATE: \_\_\_\_\_

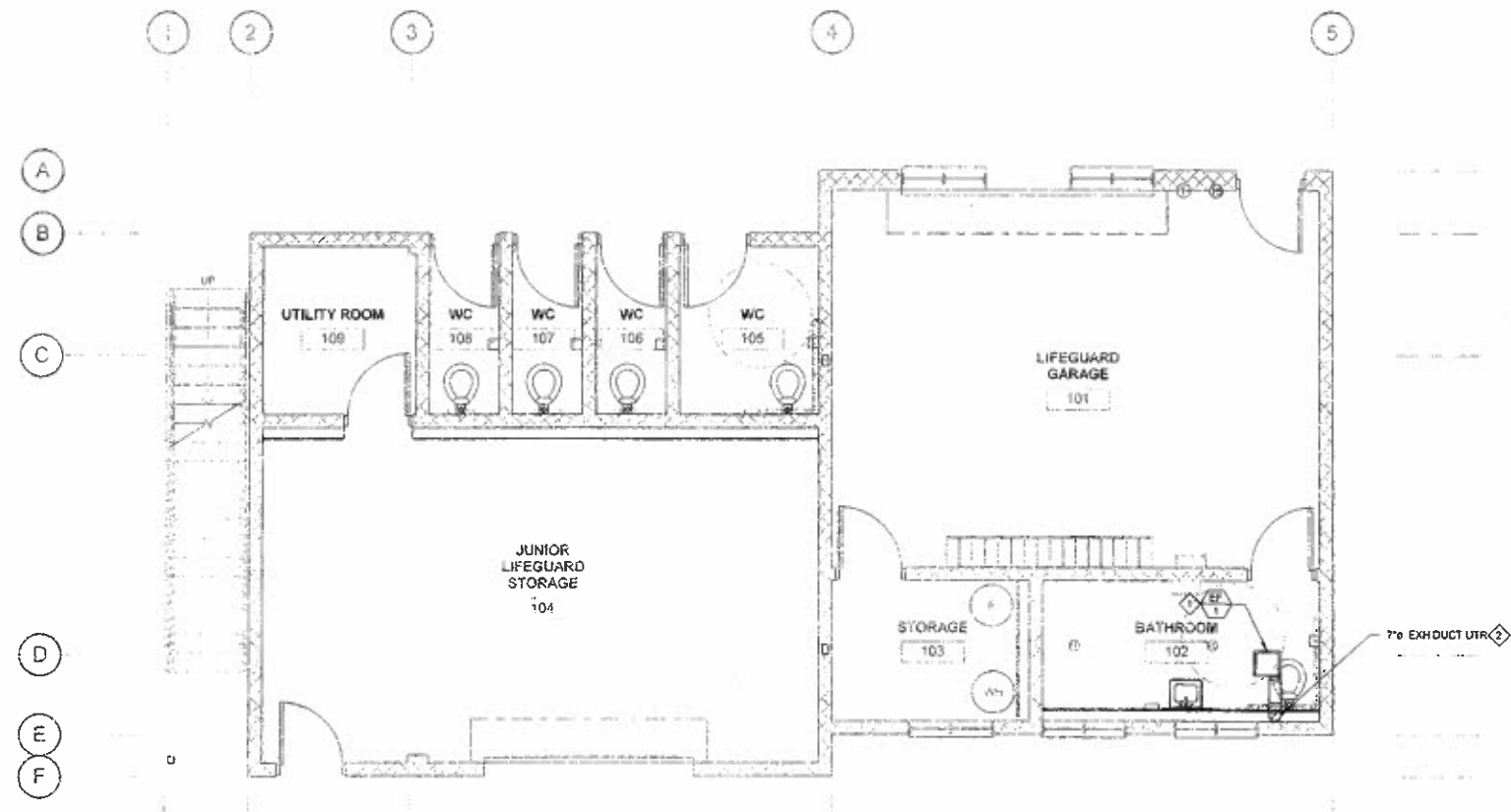
APPROVED: DATE: \_\_\_\_\_  
CITY ENGINEER R.E.

**M-0.2**  
05/04/2010

SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

**KEY NOTES**

- 1. FOR EQUIPMENT DETAIL REFERENCE SEE EQUIPMENT SCHEDULE ON M-0.1
- 2. FOR DUCT WORK SUPPORT, SEE DETAIL 3M-3.0



JUL 21 2011

BID DOCUMENTS

**1 GROUND FLOOR HVAC PLAN**  
M-2.1 1/4" = 1'-0"

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D TAYLOR & GAINES**  
 • STRUCTURAL  
 • MECHANICAL  
 • ELECTRICAL  
 • CIVIL  
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REVISIONS		
NO.	DATE	BY

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
 GROUND FLOOR HVAC PLAN

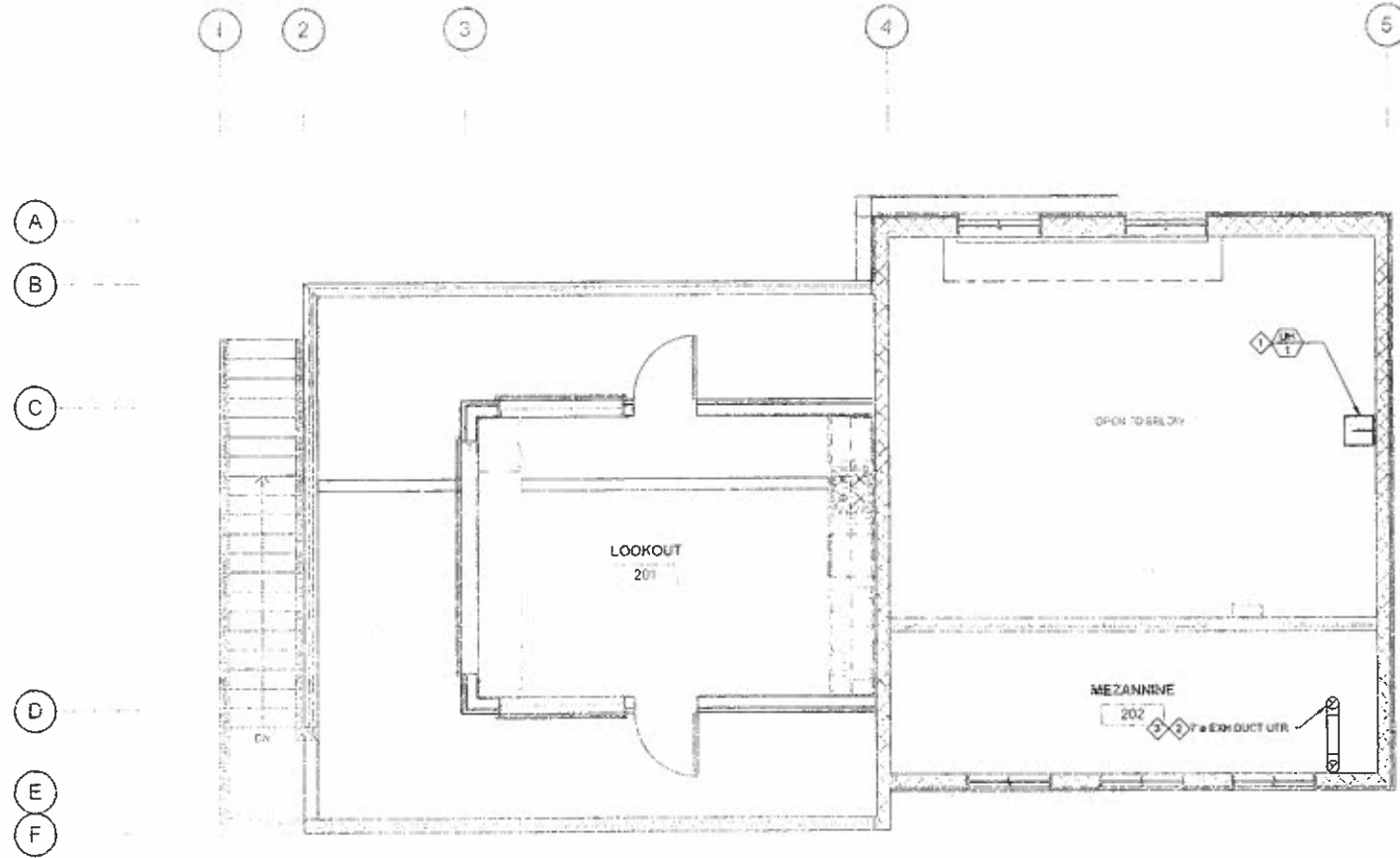
APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 CITY ENGINEER R.E.

**M-2.1**  
 05/04/2010  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. 1109531

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**KEY NOTES**

- 1 FOR EQUIPMENT DETAIL REFERENCE SEE EQUIPMENT SCHEDULE ON M-0.1
- 2 FOR DUCT WORK SUPPORT, SEE DETAIL 3M-3.0
- 3 FOR DUCT THRU ROOF SEE DETAIL 2M-3.0



JUL 21 2011

**BID DOCUMENTS**

**1 SECOND FLOOR HVAC PLAN**

M-2.2 1/4" = 1'-0"

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D TAYLOR & GAINES**  
 • STRUCTURAL  
 • MECHANICAL  
 • ELECTRICAL  
 • CIVIL  
 800 North Ferrari Lane, Suite 100  
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 Phone: 909.477.6915 Fax: 909.477.6916  
 www.tmgain.com Project No. 2010.030.00



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NO.	DATE	BY

CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS  
 SECOND FLOOR HVAC PLAN**

**M-2.2**  
 05/04/2010  
 SHEET \_\_\_ OF \_\_\_  
 JOB NO. 1109531

DATE \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED \_\_\_\_\_  
 CITY ENGINEER R.E. \_\_\_\_\_

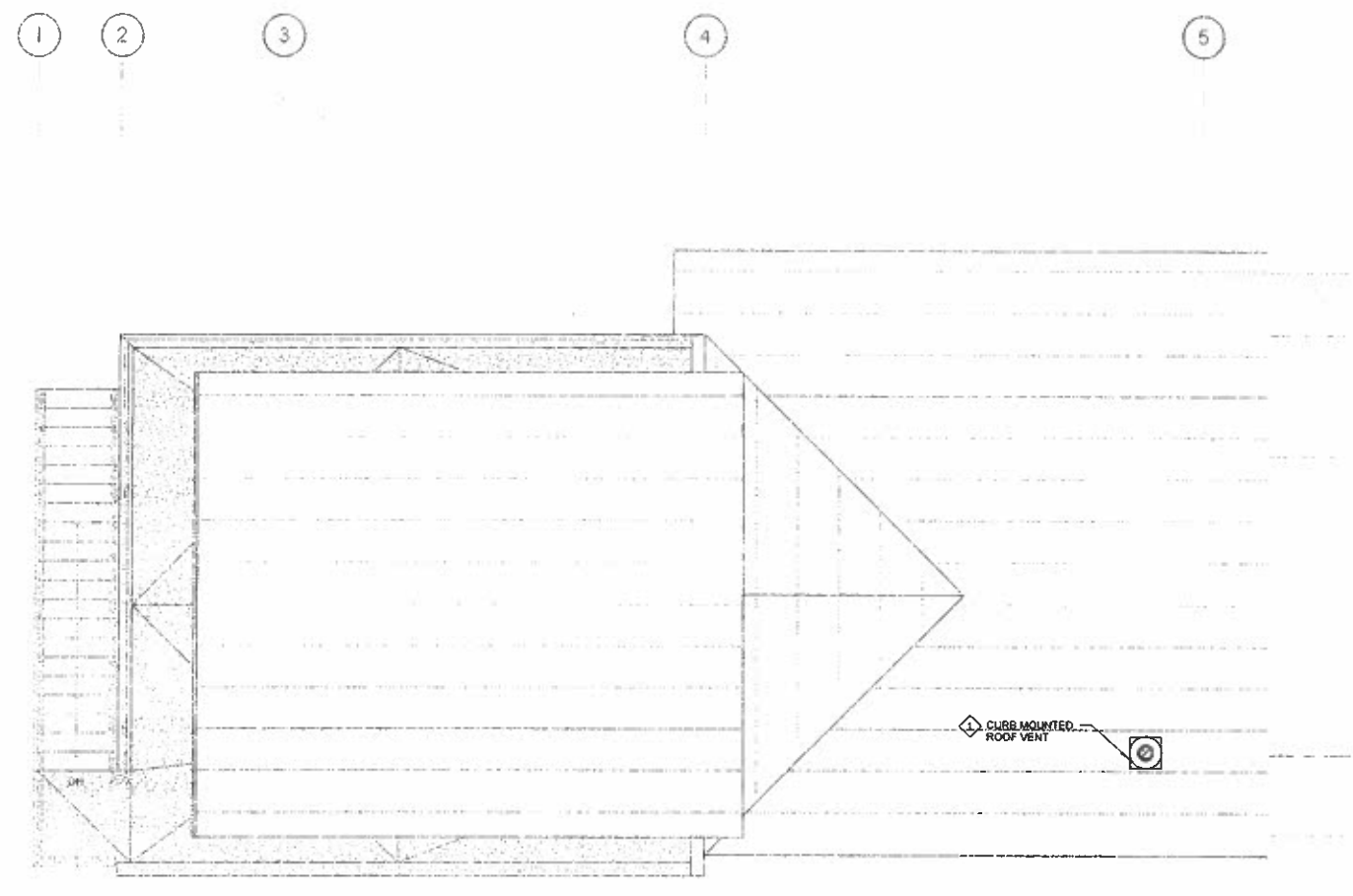
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**KEY NOTES**

FOR VENT ON ROOF SEE DETAIL 2M-3.0

JUL 21 2011

BID  
DOCUMENTS



**1 ROOF PLAN**  
M-2.3 1/4" = 1'-0"

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D  
TAYLOR &  
GAINES**

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www.tmgain.com Project No. 2010.030.00



The undersigned hereby certifies that he/she is a duly licensed Professional Engineer in the State of California, and that the design and construction of the project herein is in accordance with the laws and regulations of the State of California. The undersigned also certifies that the design and construction of the project herein is in accordance with the laws and regulations of the State of California. The undersigned also certifies that the design and construction of the project herein is in accordance with the laws and regulations of the State of California.

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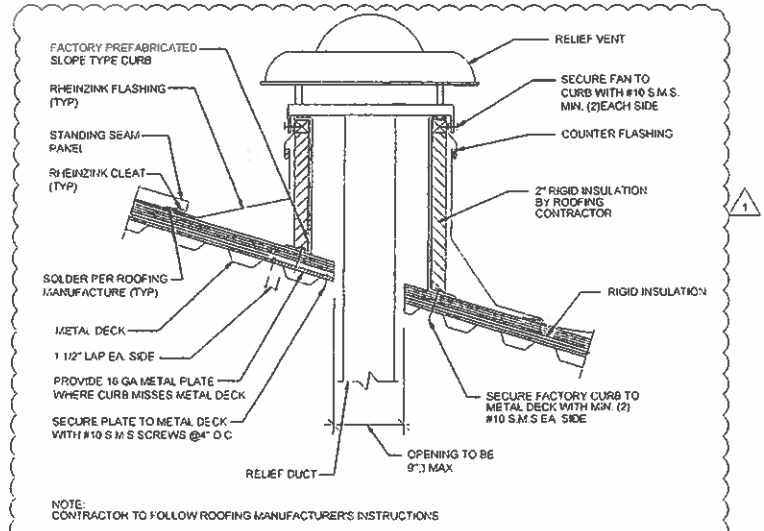
**EL SEGUNDO LS  
ROOF HVAC PLAN**

DATE: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_  
CITY ENGINEER R.L. \_\_\_\_\_

**M-2.3**  
05/04/2010

SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

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NOTE:  
CONTRACTOR TO FOLLOW ROOFING MANUFACTURER'S INSTRUCTIONS

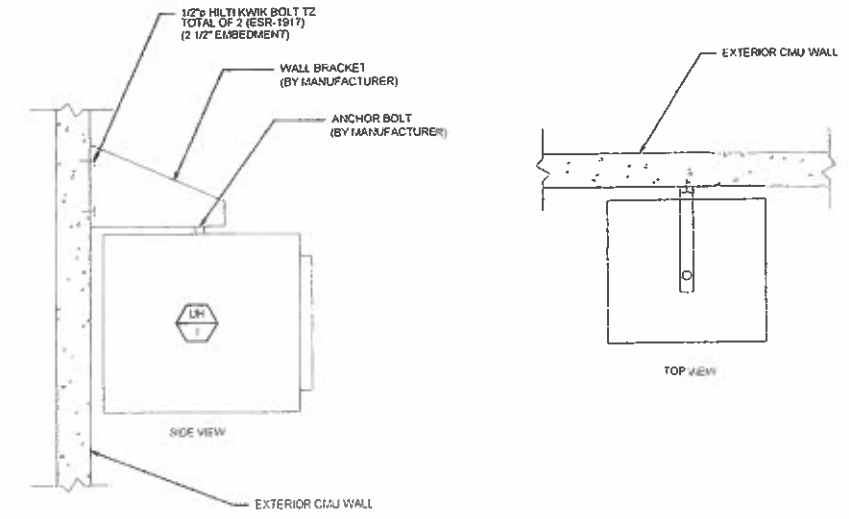
**RELIEF VENT MOUNTING DETAIL**

NTS 7

- ⑦ THERMOSTAT BY UNIT MANUFACTURER
- DISC ① MAGNETIC STARTER WITH H.O.A. SWITCH INTEGRAL 120V CONTROL POWER TRANSFORMER, 120V HOLDING COIL AND AUXILIARY CONTACTS FURNISHED, INSTALLED AND WIRED BY DIVISION 26 ELECTRICAL
- ② EQUIPMENT FURNISHED AND INSTALLED UNDER ELECTRICAL (DIVISION 26)
- ③ EQUIPMENT FURNISHED AND INSTALLED UNDER MECHANICAL (DIVISION 23)
- ④ LINE VOLTAGE WIRES AND CONDUIT FURNISHED UNDER ELECTRICAL (DIVISION 26)
- ⑤ LOW VOLTAGE WIRING AND CONDUIT FURNISHED AND INSTALLED UNDER MECHANICAL (DIVISION 23)
- DISC DISCONNECT SWITCH, BY ELECTRICAL
- CB CIRCUIT BREAKER, BY ELECTRICAL

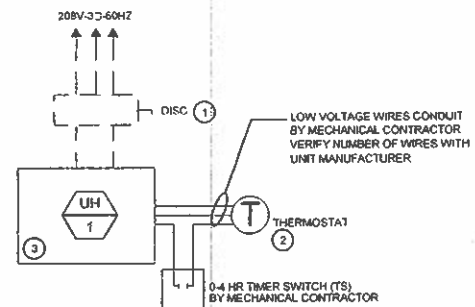
**CONTROL WIRING LEGEND**

NTS 4



**UNIT HEATER SUPPORT DETAIL**

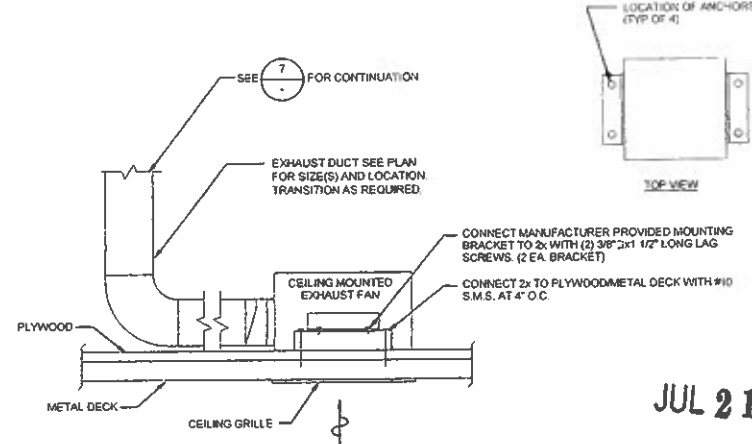
NTS 1



- DETAIL NOTES:**
- ① ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 - ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COMPLETE DETAILS.
- ② THERMOSTAT FURNISHED BY UNIT MANUFACTURER AND INSTALLED BY MECHANICAL CONTRACTOR
- ③ SEE CONTROL WIRING LEGEND #1 THIS SHEET.

**UNIT HEATER CONTROL WIRING DIAGRAM**

NTS 5

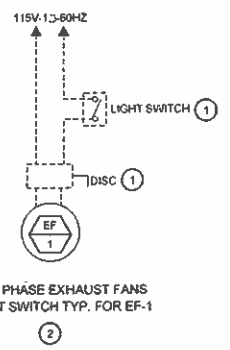


- NOTES:**
1. ALL EXHAUST OUTLETS SHALL BE 10'-0" FROM ANY OPENINGS OR AIR INTAKES.
2. SEE MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.

**CEILING MOUNTED EXHAUST FAN MOUNTING DETAIL**

NTS 2

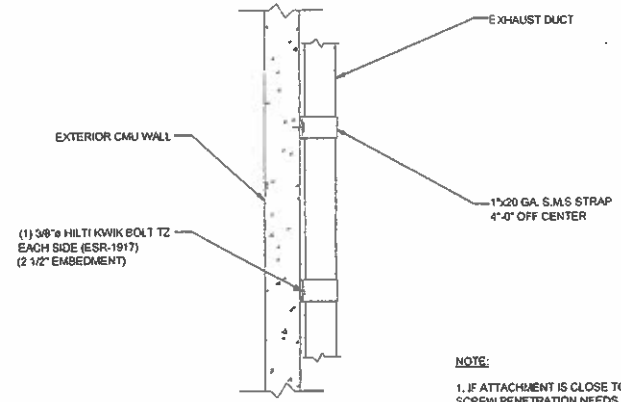
- DETAIL NOTES:**
- ① ALL WIRING AND EQUIPMENT SHOWN DASHED SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 - ELECTRICAL. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR COMPLETE DETAILS.
- ② SEE CONTROL WIRING LEGEND #1 THIS SHEET.



SINGLE PHASE EXHAUST FANS TO LIGHT SWITCH TYP. FOR EF-1

**EXHAUST FAN CONTROL WIRING DIAGRAM**

NTS 6



- NOTE:**
1. IF ATTACHMENT IS CLOSE TO WINDOW, LAG SCREW PENETRATION NEEDS TO BE 4" MIN AWAY FROM OPENING

**DUCT WALL SUPPORT**

NTS 3

PROJECT ADDRESS:  
EL SEGUNDO, CA

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1	10/06/2010	VR

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS DETAILS**

PM DRAWN: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHECK: \_\_\_\_\_ DATE: \_\_\_\_\_  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
CITY ENGINEER R.E. \_\_\_\_\_

**M-3.0**  
10/06/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

FILE NO.

**GENERAL NOTES**

- ALL WORK AND MATERIAL SHALL COMPLY WITH THE LATEST CALIFORNIA BUILDING CODE, CALIFORNIA PLUMBING CODE, 2007 CALIFORNIA ADMINISTRATIVE CODE TITLE 24, CALIFORNIA STATE FIRE MARSHAL APPLICABLE LOCAL CODES, AMENDMENTS AND REQUIREMENTS. ALL APPROVED ASTM, ACI, AND AISC DESIGNATIONS SHALL BE AMENDED TO MOST RECENT DATE.
- PROVIDE ALL SYSTEM COMPONENTS AND APPURTENANCES FOR A FULLY OPERATIONAL CODE COMPLIANT INSTALLATION.
- ALL WORK AND MATERIALS INDICATED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- PRIOR TO BIDDING, CONTRACTORS SHALL BECOME FAMILIAR WITH ALL PROJECT DOCUMENTS AND SURVEY THE SITE TO BECOME AWARE OF ALL EXISTING CONDITIONS AND SHALL NOTIFY THE OWNER IN WRITING ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN WITHIN THE DRAWINGS. NO EXTRA COMPENSATION SHALL BE AWARDED FOR THE CONTRACTOR'S FAILURE TO ALLOW FOR ANY EXISTING CONDITIONS THAT EFFECT HIS WORK SUBMISSION OF A PROPOSAL WILL BE CONSIDERED EVIDENCE OF THE FACT THAT THE CONTRACTOR IS FULLY AWARE OF THESE CONDITIONS AND IS ABLE TO COMPLETE ALL WORK REQUIRED.
- THE CONTRACTOR SHALL REVIEW ALL PROJECT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL, AND STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL CONFIRM ALL NECESSARY DIMENSIONS, SYSTEM COMPONENT SPACE REQUIREMENTS, AND POINTS OF CONNECTIONS TO ALL EXISTING SYSTEM COMPONENTS, FIXTURES, AND EQUIPMENT.
- THESE DRAWINGS AND LAYOUTS ARE DIAGRAMMATIC TO SHOW DESIGN INTENT AND INDICATE THE FINISHED REQUIREMENTS FOR THE PLUMBING. IF NECESSARY, THE CONTRACTOR SHALL MAKE ANY MINOR ADJUSTMENTS TO THE SYSTEM OR ITS APPURTENANCES TO AVOID ANY CONFLICTS WITH BUILDING STRUCTURE OR THE WORK OF OTHER TRADES. IF DUE TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, OR STRUCTURAL INTERFERENCE, THE RETENTION OF EXISTING FACILITIES, OR FOR OTHER REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK IN A MANNER DIFFERENT FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO IMPLEMENTATION.
- CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WHETHER SHOWN WITHIN THE DRAWINGS OR NOT AND SHALL PROTECT THEM FROM ANY DAMAGE. CONTRACTOR PAY FOR ALL REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY THE WORK.
- THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES TO ENSURE THAT THE PLUMBING SYSTEM IS FULLY COORDINATED WITH ALL OTHER TRADES, VERIFY ALL EXISTING UTILITIES, LOCATION, SIZE, DEPTH, PRESSURE AND AVAILABILITY PRIOR TO STARTING WORK.
- COORDINATE WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING ANY PLUMBING EQUIPMENT REQUIRING AN ELECTRICAL CONNECTION FOR AVAILABLE VOLTAGES PRIOR TO PURCHASING SAID EQUIPMENT.
- NO PLUMBING INSTALLATION THAT IS NOT DIRECTLY NECESSARY FOR ELECTRICAL ROOMS SHALL BE PLACED OR PASS THROUGH THE ELECTRICAL ROOM.
- KEEP ALL PIPING CLEAR OF ALL LOAD BEARING FOOTINGS.
- UNDERGROUND STEEL PIPING, BOLTS, FLANGES, JOINTS AND COUPLINGS SHALL BE GIVEN HIGH QUALITY PROTECTIVE COATINGS SUCH AS 40 MIL EXTRUDED POLYETHYLENE, 20 MIL PLASTIC TAPE OVER PRIMER PER AWWA STANDARD C209 OR HOT APPLIED COAL TAR ENAMEL OR TAPE PER AWWA C203.
- WHERE METALLIC PIPING PENETRATES CONCRETE STRUCTURE, SUCH AS FLOOR OR WALL, RUBBER SEALS, OR OTHER DIELECTRIC MATERIAL SHALL BE USED TO PREVENT PIPE CONTACT WITH CONCRETE AND REINFORCING STEEL.
- PENETRATION OF RATED ASSEMBLIES SHALL BE FIRE STOPPED USING AN APPROVED MATERIAL BY UL AND SHALL HAVE AN F OR T RATING AS DETERMINED BY TESTS CONDUCTED IN ACCORDANCE WITH UBC.
- ALL PIPE PENETRATIONS THAT ARE REQUIRED TO PASS THROUGH STRUCTURAL FOOTINGS, MEMBERS AND WALLS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO MAKING SUCH PENETRATIONS.
- PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING THROUGH MASONRY OR CONCRETE WALLS. ALL ANNULAR SPACE SHALL BE CAULKED APPROPRIATELY.
- HANGING, SUPPORT AND SEISMIC BRACING OF PLUMBING PIPING GREATER THAN 12 INCHES FROM THE HANGING SURFACE SHALL COMPLY WITH THE GUIDELINES FOR SEISMIC RESTRAINTS FOR PLUMBING SYSTEMS IN THE LATEST EDITION OF SMACNA. 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 THE ARCHITECT, THE STRUCTURAL ENGINEER, AND THE CITY OF EL SEGUNDO FIELD ENGINEER. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY CITY OF EL SEGUNDO SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES. INDEPENDENTLY ENGINEERED SYSTEMS MAY ALSO BE UTILIZED IF DESIGNED AND STAMPED BY A LICENSED CALIFORNIA STRUCTURAL ENGINEER.
- WHERE THERE IS A DISCREPANCY BETWEEN THE DRAWINGS AND THE PROJECT SPECIFICATIONS OR BUILDING STANDARDS, THE ARCHITECTS SHALL BE NOTIFIED OF THIS DISCREPANCY PRIOR TO PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND FEES REQUIRED FOR THE INSTALLATION AND APPROVAL OF THE FIRE PROTECTION AND PLUMBING WORK. THIS WOULD INCLUDING, BUT NOT LIMITED TO, CITY OF EL SEGUNDO DEPARTMENT OF BUILDING AND SAFETY, AND DEPARTMENT OF WATER AND POWER.
- IF ANY EQUIPMENT OR MATERIAL FOR WHICH THE CONTRACTOR IS PLANNING ON UTILIZING IS DIFFERENT FROM THAT SPECIFIED SHALL BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL. THE SUBMITTAL SHALL INDICATE THAT THE SUBMITTED IS A SUBSTITUTION AND THE CREDIT DUE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF ALL OTHER CHARGES RESULTING FROM THE SUBSTITUTION INCLUDING CHANGES IN THE WORK OF OTHER TRADES NECESSARY TO ACCOMMODATE THE REQUESTED SUBSTITUTION.

**GENERAL NOTES (CONTINUED)**

- THE CONTRACTOR SHALL PROVIDE A COORDINATED SET OF SHOP DRAWINGS AND PRODUCT DATA ACCORDING TO THE SPECIFICATIONS FOR REVIEW AND APPROVAL PRIOR TO THE STARTING OF WORK AND THE PROCUREMENT OF ANY MATERIALS.
- THE CONTRACTOR SHALL PROVIDE A COMPLETE AS-BUILT DRAWINGS PRIOR TO COMPLETION OF THE PROJECT FOR REVIEW BY THE ARCHITECT AND/OR ENGINEER.
- ALL SYMBOLS SHOWN ON THE SYMBOL LIST ARE NOT NECESSARILY USED ON THIS PROJECT.
- ALL PLANS APPROVED BY GOVERNING AGENCIES SHALL BE KEPT IN A SECURE PLACE AND SHALL NOT BE USED BY WORKMEN. THE CONTRACTOR SHALL PROVIDE ALL SUBCONTRACTORS' CONSTRUCTION SETS REFLECTING SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS, ON PREMISES AT ALL TIMES UNDER CARE OF THE JOB SUPERINTENDENT.
- THE CONTRACTOR OR SUBCONTRACTORS SHALL NOT TAKE SCALE MEASUREMENTS FROM THE DRAWINGS. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. DETAIL DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- ALL PLUMBING AND ELECTRICAL WORK SHALL BE ANCHORED AND SUPPORTED PER SMACNA GUIDELINES. PLUMBING PIPES SHALL BE SUPPORTED AND BRACED PER 2007 UNIFORM PLUMBING CODE, SECTION 316. ELECTRICAL WORK SHALL BE SUPPORTED AND BRACED PER C.E.C.
- PIPING AND EQUIPMENT SHALL BE SEISMICALLY BRACED ACCORDANCE WITH GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPE SYSTEMS PUBLISHED BY SMACNA FOR SEISMIC LEVEL "A". CONNECTIONS, HANGERS, BRACED MEMBERS, AND ANCHORAGE SHALL MEET SMACNA REQUIREMENTS FOR SEISMIC LEVEL "A".
- CONTRACTOR SHALL PROVIDE AND INSTALL ANY NECESSARY BLOCKING, BACKING, FURRING, AND FRAMING FOR ELECTRICAL, PLUMBING, EQUIPMENT, FIXTURES, AND OTHER MISCELLANEOUS ITEMS REQUIRING SAME.
- CONTRACTORS IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS CONTRACTOR SHALL MAINTAIN STRUCTURAL INTEGRITY OF ALL WORK UNTIL ALL WORK IS COMPLETE.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL REPLACEMENT OR REMEDY OF ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP WHICH APPEARS WITHIN ONE YEAR AFTER THE ACCEPTANCE OF THE WORK UNDER THIS CONTRACT, EXCEPT AS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PATCH AND REPAIR ALL EXISTING FINISHES THAT ARE AFFECTED BY THE WORK.
- PAINT ALL EXPOSED PIPING TO MATCH BACKGROUND OR AS DIRECTED BY THE ARCHITECT.

**PLUMBING NOTES**

- THE CONTRACTOR SHALL PROVIDE A COMPLETE PLUMBING SYSTEM FOR THOSE AREAS INDICATED ON THE DRAWINGS, INCLUDING BUT NOT LIMITED TO, FIXTURE ROUGH-INS AND ALL UTILITY PIPING.
- PROVIDE ROUGH-INS. EXTEND ALL PIPING (WASTE, VENT, COLD WATER, HOT WATER, ETC.) TO ALL FIXTURES AND APPLIANCES AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL FIXTURE HEIGHTS PRIOR TO ROUGH-IN. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS AND EXACT LOCATION OF ALL PLUMBING FIXTURES.
- PLUMBING FIXTURES FOR DISABLED PERSONS SHALL BE MOUNTED AT REQUIRED HEIGHTS AND WITH ALL RELATED ACCESSORIES AS REQUIRED BY THE CALIFORNIA OFFICE OF THE STATE ARCHITECT AND AMERICANS WITH DISABILITIES ACT (ADA). ALL FIXTURE TRAPS, PIPING AND VALVES UNDER THE FIXTURE SHALL BE INSULATED WITH A FACTORY PERFORMED INSTALLATION.
- PIPING WRAP BELOW ACCESSIBLE FIXTURES SHALL COVER P-TRAP, TAILPIECE, OFFSET AND HOT WATER SUPPLY AND STOPS THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES. THE COLD WATER SUPPLY SHALL ALSO BE WRAPPED TO COVER ANY SHARP OR ABRASIVE SURFACES.
- RUN ALL PLUMBING PIPING AS HIGH AS POSSIBLE TO STRUCTURE AND COORDINATE ROUTING WITH OTHER TRADES.
- ALL PIPE BRANCH CONNECTIONS SHALL OFFSET. NO "BULL HEAD" CONNECTIONS WILL BE ALLOWED.
- THE CONTRACTOR SHALL PROVIDE CHROME PLATED ANGLE STOPS ON ALL PLUMBING FIXTURES AND ISOLATION VALVES ON ALL EQUIPMENT.
- SECURE ALL ESCUTCHEONS TIGHT TO WALL, OR SPUD.
- SECURE WATER CLOSET BOLT CAPS TO BOLT HEADS WITH SILICONE SEALANT.
- COORDINATE INSTALLATION OF WATER CLOSET FLUSH VALVES WITH GRAB BAR AT ACCESSIBLE LOCATIONS. IF REQUIRED PROVIDE OFFSET SPUD CONNECTION AT NO ADDITIONAL COST.
- ALL SHUT-OFF VALVES, WATER HAMMER ARRESTORS AND TRAP PRIMERS SHALL BE ACCESSIBLE.
- PROVIDE AND INSTALL WATER HAMMER ARRESTERS WITH ACCESS PANELS OF REQUIRED SIZE AT ALL QUICK CLOSING VALVES INCLUDING CLOTHES WASHERS AND DISHWASHERS. MANUFACTURER AND MODEL NUMBER SHALL BE PER SPECIFICATIONS AND SIZES AND LOCATION PER POI STANDARD WH-201.
- CONTRACTOR SHALL PROVIDE TRAP PRIMER CONNECTIONS TO ALL FLOOR DRAINS AND FLOOR SINKS WHETHER OR NOT SHOWN ON THE PLANS.
- ALL SHUT-OFF VALVES BELOW GRADE SHALL BE INSTALLED IN CONCRETE YARD BOXES WITH NAME AND SERVICE CAST IN RAISED LETTERS ON TOP OF CAST IRON COVER.
- NOT ALL OF THE ACCESS PANELS MAY BE IDENTIFIED ON THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED ACCESS PANELS. THE CONTRACTOR SHALL PROVIDE ACCESS PANELS IN WALLS AND HARD LID CEILINGS FOR SHUT-OFF VALVES, TRAP PRIMERS AND WATER HAMMER ARRESTERS. THE ACCESS PANEL SHALL BE OF SUFFICIENT SIZE TO ACCESS THESE DEVICES. THE CONTRACTOR SHALL MAKE EVERY EFFORT NOT TO LOCATE THE ITEMS REQUIRING ACCESS ABOVE THE AREAS OF GYPSUM BOARD CEILING WITHOUT PRIOR APPROVAL OF THE ARCHITECT. PROPOSED ACCESS PANEL LOCATIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- ALL FAUCETS, STOPS AND SUPPLIES SHALL HAVE FIELD SERVICABLE AND REPAIRABLE COMPRESSION CARTRIDGE.
- NON REPAIRABLE CERAMIC DISC FAUCET CARTRIDGES ARE NOT TO BE USED.
- ALL FAUCET BODIES MUST BE MANUFACTURED OF ALL BRASS MATERIAL, COPPER OR PLASTIC WATERWAYS ARE NOT TO BE USED.
- ALL MOUNTING HARDWARE MUST BE OF METAL OR STEEL. NO PLASTIC HARDWARE TO BE USED.
- ALL LAVATORIES SHALL HAVE CLEANOUTS.
- ALL CLEANOUTS SHALL BE ACCESSIBLE. CLEANOUTS SHALL BE INSTALLED PER LATEST EDITION OF CALIFORNIA PLUMBING CODE SECTIONS 707 AND 719.
- THE CONTRACTOR SHALL PROVIDE WALL CLEANOUTS IN FINISHED AREAS WITH ACCESS COVERS. THE COLOR AND FINISH TYPE SHALL BE COORDINATED AND APPROVED BY THE ARCHITECT.
- THE CONTRACTOR SHALL INSULATE INDIRECT DRAIN LINES FROM MECHANICAL EQUIPMENT, REFRIGERATORS, FREEZERS, ICE BINS, ETC., TO PREVENT CONDENSATION. INSULATION SHALL ALSO BE PLACED ON THE WASTE PIPING AND DRAIN BODY RECEIVING THE INDIRECT WASTE.
- ALL SHOWER VALVES SHALL EACH HAVE HOT AND COLD WATER CHECK STOPS AND MAXIMUM TEMPERATURE LIMIT STOPS. AT INLET TO EACH SHOWER HEAD, NOT PROVIDED WITH A THERMOSTAT MIXING VALVE, PROVIDE AN ANTISCALD SAFETY VALVE WHICH SHALL AUTOMATICALLY SHUT DOWN WATER FLOW WITHIN 5 SECONDS AFTER THE WATER TEMPERATURE REACHES 110°F AND BEFORE IT EXCEEDS 120°F TO RESIDUAL TRICKLE OF LESS THAN 0.5 GPM, SIMILAR TO MEMORY METALS INC. MODEL V-110.
- A MINIMUM 1/2" CLEARANCE SHALL BE PROVIDED AROUND PIPES AT ALL PENETRATIONS THROUGH WALLS AND ROOF. THE GAP SHALL BE PACKED TIGHTLY WITH LOOSE, LIGHTWEIGHT INSULATION THROUGH NON RATED WALLS, AND APPROVED U L LISTED FIRE RATED MATERIAL RATED WALLS TO MATCH WALL RATINGS.
- PROVIDE PIPING ISOLATION ON STUD WALL 1/4" FELT OR NEOPRENE ISOLATION, OR APPROVED SIWIF ISOLATOR.
- DOMESTIC WATER HEATERS SHALL BE CERTIFIED AND LISTED BY THE CALIFORNIA ENERGY COMMISSION.
- ALL HOT WATER SUPPLY PIPING SHALL BE INSULATED PER ENERGY CODE. INSULATE ALL FITTINGS, VALVES, STRAINERS, ETC., BY EITHER PREFABRICATION OR BY FABRICATING FITTINGS FROM METERED SEGMENTS OF PIPE INSULATION TO AN EQUAL THICKNESS OF ADJOINING PIPE INSULATION.
- SERVICE WATER HEATING SYSTEM SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTMENT FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE SETTING.

**PLUMBING NOTES (CONTINUED)**

- ALL WATER FAUCETS AND SHOWER HEADS SHALL BE PROVIDED WITH CODE APPROVED FLOW RESTRICTORS. LAVATORY FAUCETS AND SINK FAUCETS (NOT INCLUDING SERVICE SINK FAUCETS) SHALL MEET THE FLOW REQUIREMENTS OUTLINED IN THE APPLIANCE EFFICIENCY STANDARDS AND SPECIFICATIONS.
- ALL PLUMBING FIXTURES SHALL BE CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION. A.E.S. SECTION 1605.1 TABLE H-1 (WATER CLOSET 1.6 GPF, SHOWER HEAD 2.5 GPM AND LAVATORY 2.2 GPM).
- POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE IN ACCORDANCE WITH THE METHOD SET FORTH IN THE LATEST EDITION OF THE CALIFORNIA PLUMBING CODE OR AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION, WHICHEVER IS MORE RESTRICTIVE.
- ALL STORM DRAINS AND OVERFLOW DRAINS TO BE SLOPED 2% UNLESS OTHERWISE NOTED.
- ALL VENTS THRU ROOF SHALL BE MINIMUM OF THREE FEET VERTICALLY OR TEN FEET HORIZONTALLY FROM AIR CONDITIONING EQUIPMENT FRESH AIR INTAKES, WINDOWS, DOORS OR OTHER OPENING, AND SHALL COMPLY WITH SECTION 906 (VENT TERMINATION) OF THE CURRENT CALIFORNIA PLUMBING CODE.
- SEAL AND FLASH ALL PENETRATIONS THROUGH ROOF WATERTIGHT. FLASHING SHALL BE ELI/DORSTONEMAN 900 SERIES, 4 POUND SEAMLESS LEAD WITH 9" SKIRT. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND FLASH PER ROOFING MATERIAL.
- CONTRACTOR TO PROVIDE WATER TIGHT SEAL AROUND ALL NEW PENETRATIONS THRU ROOF REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS OF ALL PENETRATIONS THRU ROOF.
- ALL SOIL AND WASTE PIPING TO BE SLOPED 2% UNLESS OTHERWISE NOTED.
- ALL BURIED ENDS OF (WATER) PIPING AND TUBING SHALL BE REAMED TO THE FULL BORE OF THE PIPE OR TUBE AND ALL CHIPS SHALL BE REMOVED (SEE CALIFORNIA PLUMBING CODE, 2007 EDITION). ADDITIONALLY, TOOLS USED IN CUTTING OR REAMING SHALL BE KEPT FREE FROM OIL OR GREASE AND WHERE SUCH CONTAMINATION HAS OCCURRED, THE ITEMS AFFECTED SHALL BE REWORKED AND RINSED.
- ROUGH-INS, CONNECTIONS AND TERMINATION OF PLUMBING WORK SHALL BE SEQUENCED IN COORDINATION WITH THE PROJECT SCHEDULE AND THE OWNER'S OTHER CONTRACTORS AND VENDORS.
- COORDINATE NEW WASTE PIPING BELOW FLOOR WITH THE EXISTING AND/OR NEW CONDITIONS.
- CONTRACTOR TO BED ALL PIPING WITHIN THE BUILDING IN SAND AND FILL TO 6 INCHES ABOVE TOP OF PIPE, COMPACT TO 95% BACKFILL TRENCH WITH NATIVE SOIL AND COMPACT TO 95%. AND INSTALL A VAPOR BARRIER BELOW THE CONCRETE SLAB. THE VAPOR BARRIER SHALL BE APPROPRIATELY SEALED TO THE EXISTING VAPOR BARRIER.
- CONTRACTOR TO BED ALL PIPING OUTSIDE THE BUILDING IN A BEDDING AND COVERAGE MATERIAL HAVING A SAND EQUIVALENT OF GREATER THAN 30 SAND, FILL TO 6 INCHES ABOVE TOP OF PIPE, COMPACT TO 95%. PLACE A MARKER TAPE ON TOP OF THE 6-INCH FILL MATERIAL, AND BACKFILL TRENCH WITH NATIVE SOIL AND COMPACT TO 95%.

**DRAWING LIST**

DWG NO	DESCRIPTION
P-0.1	COVER SHEET
P-0.2	SCHEDULES AND CALCULATIONS
P-2.1	GROUND FLOOR PLUMBING PLAN
P-2.2	SECOND FLOOR PLUMBING PLAN
P-2.3	ROOF PLUMBING PLAN
P-3.1	DETAILS

**LEGEND**

SYMBOL	ABBREV.	DESCRIPTION
---	S OR W	SEWER OR WASTE BELOW GRADE
---	S OR W	SEWER OR WASTE ABOVE GRADE
---	V	SANITARY VENT
---	CW	COLD WATER
---	HW	HOT WATER
---	CA	COMPRESSED AIR
---	CB	HOSE BIBB
---	FD	FLOOR DRAIN
---	WCO	WALL CLEANOUT
---	CO	CLEANOUT
---	FCO	FLOOR CLEANOUT
---	COTG	CLEANOUT TO GRADE
---	SOV	SHUT OFF VALVE
---	SOV/YB	SHUT OFF VALVE IN YARD BOX
---		VALVE/COCK IN RISE/DROP
(X)		PLUMBING FIXTURE IDENTIFICATION
(X)		PLUMBING EQUIPMENT IDENTIFICATION
&		AND
ABV		ABOVE
AP		ACCESS PANEL
BEL		BELOW
FU		FIXTURE UNIT(S) (CODE)
GR		GRADE OR GROUND
MAX		MAXIMUM
MIN		MINIMUM
TYP		TYPICAL
VTR		VENT THRU ROOF

JUL 21 2011

**APPLICABLE CODES AND STANDARDS**

- 2007 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1
- 2007 CALIFORNIA BUILDING CODE (CBC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 2 (2006 INTERNATIONAL BUILDING CODE (IBC) CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA ELECTRICAL CODE (EEC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3 (2005 NATIONAL ELECTRICAL CODE (NEC) CALIFORNIA AMENDMENTS)
- 2005 CALIFORNIA ENERGY CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6
- 2007 CALIFORNIA FIRE CODE (FC) CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 9 (2006 INTERNATIONAL FIRE CODE (IFC) CALIFORNIA AMENDMENTS)
- 2007 CALIFORNIA REFERENCED STANDARDS CODE CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 12
- AMERICANS WITH DISABILITIES ACT (ADA) TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG) 1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO DATE
- CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

**BID DOCUMENTS**

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS  
COVER SHEET**

**P-0.1**

05/04/2010

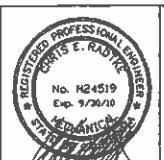
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DOMESTIC WATER FIXTURE UNIT LOADS					
BUILDING					
FIXTURE	QUANTITY	FIXTURE UNITS REQUIRED EA.		FIXTURE UNIT TOTAL	
		CW	HW	CW	HW
WATER CLOSET	5	5	-	25	-
EXTERIOR LAVATORY	3	1	-	3	-
EXTERIOR SHOWER	3	2	-	6	-
LAVATORY	1	1	1	1	1
SHOWER	1	2	2	2	2
HOSE BIBB	3	2.5+1	-	4.5	-
<b>TOTAL</b>				<b>41.5</b>	<b>3</b>

(FLUSH VALVE FIXTURE UNITS)

HYDRAULIC WATER CALCULATION	
TOTAL DEMAND (GPM):	41.5 FU = 47 GPM
BLDG. SERVICE SIZE:	2"
MINIMUM PRESSURE NEEDED AT BUILDING:	36.37 PSI
PRESSURE LOSSES:	
LOSS DUE TO BLDG. HEIGHT:	HEIGHT (FT.) 5 x 0.433 = 2.17
PRESSURE REQUIRED AT FIXTURE:	FLUSH VALVE = 30 PSI
OTHER LOSSES:	NA
REMAINING PRESSURE AVAILABLE (PSI):	4.20
PRESSURE AVAILABLE FOR FRICTION LOSS (PSI):	
AVAILABLE PSI:	4.20
LENGTH OF PIPE RUN + 50% FOR FITTINGS:	140 * 100 = PSI/100 FT. 3

DOMESTIC COLD WATER SIZING				
PIPE SIZE	FLOW RATE (GPM)	VELOCITY (FT/SEC.)	FIXTURE UNITS	
			FLUSH TANK	FLUSH VALVE
1/2"	2.02	2.78	1	-
3/4"	5.28	3.50	6	-
1"	10.64	4.14	13	-
1 1/4"	18.51	4.73	26	-
1 1/2"	29.23	5.27	51	12
2"	57.88	6.0	100	66
2 1/2"	89.25	6.0	320	190
3"	127.40	6.0	516	409
4"	223.99	6.0	1018	1009
6"	501.83	6.0	1018	1009

PIPE MATERIAL: TYPE L COPPER  
 MAXIMUM ACCEPTABLE PRESSURE LOSS: 3.0 PSI/100 FT.  
 MAXIMUM ACCEPTABLE VELOCITY: 6 FT./SEC.

DOMESTIC HOT WATER SIZING				
PIPE SIZE	FLOW RATE (GPM)	VELOCITY (FT/SEC.)	FIXTURE UNITS	
			FLUSH TANK	FLUSH VALVE
1/2"	2.02	2.78	1	-
3/4"	5.28	3.50	6	-
1"	10.29	4.0	13	-
1 1/4"	15.67	4.0	21	-
1 1/2"	22.18	4.0	34	-
2"	38.59	4.0	78	-
2 1/2"	59.50	4.0	170	-
3"	84.93	4.0	294	-

PIPE MATERIAL: TYPE L COPPER  
 MAXIMUM ACCEPTABLE PRESSURE LOSS: 3.0 PSI/100 FT.  
 MAXIMUM ACCEPTABLE VELOCITY: 4 FT./SEC.

PLUMBING FIXTURE SCHEDULE							
SYMBOL	DESCRIPTION	W	TRAP	V	CW	HW	REMARKS
WC 1	WATER CLOSET (STANDARD)	4"	INT.	2"	1 1/2"	-	ACORN PENAL-WARE 1680 SERIES, MODEL NUMBER 1680-W-1-ULF-FVBO-SW, WALL MOUNTED, TYPE 304 STAINLESS STEEL, EXTERIOR POLISHED TO A SATIN FINISH, ELONGATED BOWL, HYDRAULIC FLUSH VALVE. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
WC 2	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1 1/2"	-	ACORN PENAL-WARE 1680 SERIES, MODEL NUMBER 1680-W-1-ULF-FVBO-ADA-SW, WALL MOUNTED, TYPE 304 STAINLESS STEEL, EXTERIOR POLISHED TO A SATIN FINISH, ELONGATED BOWL, HYDRAULIC FLUSH VALVE. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
WC 3	WATER CLOSET (ACCESSIBLE)	4"	INT.	2"	1 1/2"	-	AMERICAN STANDARD AFWALL, ELONGATED FLUSH VALVE, MODEL NUMBER 2257.103, WALL MOUNTED, VITREOUS CHINA, ELONGATED BOWL, WITH OLSONITE #85CT OPEN FRONT SEAT. BATTERY POWERED SLOAN FLUSH VALVE G2 ROYAL II MODEL NO. 111. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS. ALL SCREWS, BOLTS, AND WASHERS SHALL BE OF CORROSION RESISTANCE LISTED TYPE.
L 1	LAVATORY (ACCESSIBLE)	2"	1 1/2"	1 1/2"	1/2"	-	ACORN PENAL-WARE, 1650FA SERIES, MODEL NUMBER 1650-ADA-FA-1-LF-3-4-OF, WALL HUNG, 14 3/4" x 9 1/2" x 4 1/2" DEEP, TYPE 304 STAINLESS STEEL, EXPOSED SURFACE POLISHED TO A SATIN FINISH, WITH STANDARD P-TRAP WASTE OUTLET, BUBBLER, PUSH BUTTON VALVE USING ATMOSPHERIC AIR, VALVE IS METERING. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
L 2	LAVATORY (ACCESSIBLE)	2"	1 1/2"	1 1/2"	1/2"	-	AMERICAN STANDARD, LUCERNE, MODEL NUMBER 653.01Y, WALL HUNG, 20" x 18" VITREOUS CHINA BOWL, AMERICAN STANDARD DRAIN MODEL NO. 2411.B15, CHICAGO FAUCET MODEL NO. 2200-4E280SCP, LA PATTERN P-TRAP WITH ACCESSIBLE INSULATION WRAP BY PLUMBEREX "HANDY SHIELD MAX" MODEL NO. 2003, MEETS AST E84-07 TESTING STANDARD 25 FLAME SPREAD/50 SMOKE INDEX, CHICAGO SUPPLY & STOPS MODEL NO. 1047CR. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
SH 1	SHOWER (ACCESSIBLE)	-	-	-	3/4"	3/4"	ACORN, PENAL-WARE 1741FA SERIES, MODEL NO. 1741-3-F, PUSHBUTTON PANEL IS 14 GAGE, TYPE 304 STAINLESS STEEL, EXTERIOR SURFACE POLISHED TO A SATIN FINISH, SHOWER HEAD AND PUSHBUTTON ESCUTCHEON ARE CHROME PLATED BRASS, PUSH BUTTON VALVE USING ATMOSPHERIC AIR, VALVE IS METERING. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
SH 2	SHOWER (ACCESSIBLE)	-	-	-	3/4"	3/4"	SYMMONS, SAFETYMIX PRESSURE BALANCING MIXING VALVE, MODEL NO. 1-25-FSB-X, INLET STOPS, LEVEL HANDLE, STANDARD ALL BRASS SUPER FLOW SHOWER HEAD WITH 2.5 GPM FLOW RESTRICTOR, DELUXE ARM AND FLANGE, FD-1 DRAIN, LESS TRAP PRIMER. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS.
HB 1	HOSE BIBB (INTERIOR)	-	-	-	3/4"	-	ACORN, MODEL NUMBER 8151, RECESSED WALL HOSE BOX WITH VACUUM BREAKER, 18 GA. STAINLESS STEEL BOX, 16 GA. FLANGE WITH POLISHED NO.4 SATIN FINISH, CARTRIDGE OPERATED, VANDAL RESISTANT LOCKSHIELD VALVE, SCREWS/RIVER STOP, 16 GA. SATIN FINISH DOOR WITH CYLINDER LOCK.
HB 2	HOSE BIBB (EXTERIOR)	-	-	-	3/4"	-	ACORN MODEL # 8104, RECESSED WALL HOSE BOX WITH VACUUM BREAKER, LUMALLOY BOX AND FRAME, REMOVABLE WALL FLANGE, FRAME DOOR WITH ANODIZED, SATIN FINISH, DOOR WITH CAM LATCH, CARTRIDGE OPERATED VALVE, SCREWS/RIVER STOP, VANDAL RESISTANT LOCKSHIELD BONNET.
FD 1	FLOOR DRAIN	2"	2"	2"	-	-	J.R. SMITH MODEL NO. 2005-A, DUCO CAST BODY, ROUND NICKEL-BRONZE HEEL PROOF ADJUSTABLE 6" STRAINER GRATE WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, 2" HUBLESS. PROVIDE WITH TRAP PRIMER CONNECTION.

EQUIPMENT SCHEDULE		
SYMBOL	DESCRIPTION	REMARKS
EWH 1	ELECTRIC WATER HEATER	STIEBEL ELTRON, TANKLESS ELECTRIC, MODEL NUMBER 223422, 4.14 KW, 208 V, 1 PH, 60 HZ, 66°F RECOVERY GALLONS PER HOUR, 16 5/8" x 14 1/2" x 4 5/8" DEEP.
WHA 1	WATER HAMMER ARRESTOR	PRECISION PLUMBING PRODUCTS, SC OR SWA SERIES. NOTE: INSTALL AT EACH PLUMBING FIXTURE OR BATTERY OF PLUMBING FIXTURES. INSTALL ON BOTH HOT AND COLD WATER BRANCH LINES IN AN UP RIGHT POSITION AS CLOSE AS POSSIBLE TO THE VALVE OR VALVES BEING SERVED. SIZE AND LOCATION PER P.D.I. STANDARD WH-201.
TP 1	AUTOMATIC TRAP PRIMER	PRECISION PLUMBING PRODUCTS "PPP" MODEL #P2-500 AND MODEL #DU-2 DISTRIBUTION BOX AS REQUIRED FOR MULTIPLE FLOOR DRAIN APPLICATIONS. TRAP PRIMER SHALL BE CONSTRUCTED OF CORROSION RESISTANT BRASS. PROVIDE AND INSTALL 1/2" COPPER PIPE FROM UNIT TO FLOOR DRAIN, ISOLATION VALVE AND ACCESS PANEL. TRAP PRIMER TO TAP OFF OF RECLAIMED WATER LINES ONLY.
AC 1	AIR COMPRESSOR AND TANK	SULLAIR "SHOPTEK" MODEL NO. ST-410, ELECTRIC DRIVEN, SINGLE STAGE, LUBRICATED, ROTARY SCREW COMPRESSOR TOTAL PACKAGE INCLUDES: INLET AIR FILTER, PRESSURE RELIEF, FLUID LEVEL, SIGHT GLASS, AIR/LIQUID SEPARATOR, CHECK VALVE, BELT DRIVE, COLLING LUBRICATING SYSTEM, DRAIN VALVE, 2 GALLON ASME RECEIVER, AND BELT GUARDS; SHP, 208V, 30.
AO 1	AIR OUTLET	"ARO" MODEL NO. 210, PART NO. ARCP22, FEMALE COUPLER, 1/4" BODY SIZE, 18CFM WITH "ARO" AIR 2000 PIGGYBACK FILTER/REGULATOR PART NO. P29221-614, GAUGE, FILTER WITH METAL BOWL AND SIGHT GLASS, 93 CFM, 1/4" PORT SIZE.
AL 1	AIR LINE	GRAINGER MODEL NO. PR14-108-B, COIL HOSE PNEUMATICS AIR HOSE, SWIVEL, 1/4" ID, 10 FOOT, BLUE.

PIPE MATERIAL SCHEDULE		
SERVICE	MATERIAL	REMARKS
WATER (CH) (HW)	ABY. GR. BEL. GR.	95/5 SOLDER, GRADE 95TA. LEAD FREE.
WASTE/SOIL AND VENT	ABY. GR. BEL. GR.	

MATERIAL: CAST IRON PIPE / FITTINGS SCHEDULE 40, 30#, EXPOSED HEIGHT; COPPER TYPE K, ASME B16.18; COPPER TYPE L, ASME B16.18; COPPER TYPE M, ASME B16.18; COPPER TYPE L, ASME B16.18; COPPER TYPE M, ASME B16.18; BLACK STEEL, SCHEDULE 40; BLACK STEEL, SCHEDULE 10; GALV. STEEL, SCHEDULE 40; GALV. STEEL, SCHEDULE 10; POLYETHYLENE TEREPHTHALATE (PET) 1/2" DIA. 100' ROLL; CAST IRON RIGID / ANCH. C111; SCHEDULE 40 ABS ASTM D2751; SCHEDULE 40 ABS 1/2" DIA. 100' ROLL; SCHEDULE 40 ABS 1/2" DIA. 100' ROLL.

**JUL 21 2011**  
 BID  
 DOCUMENTS

PROJECT ADDRESS:  
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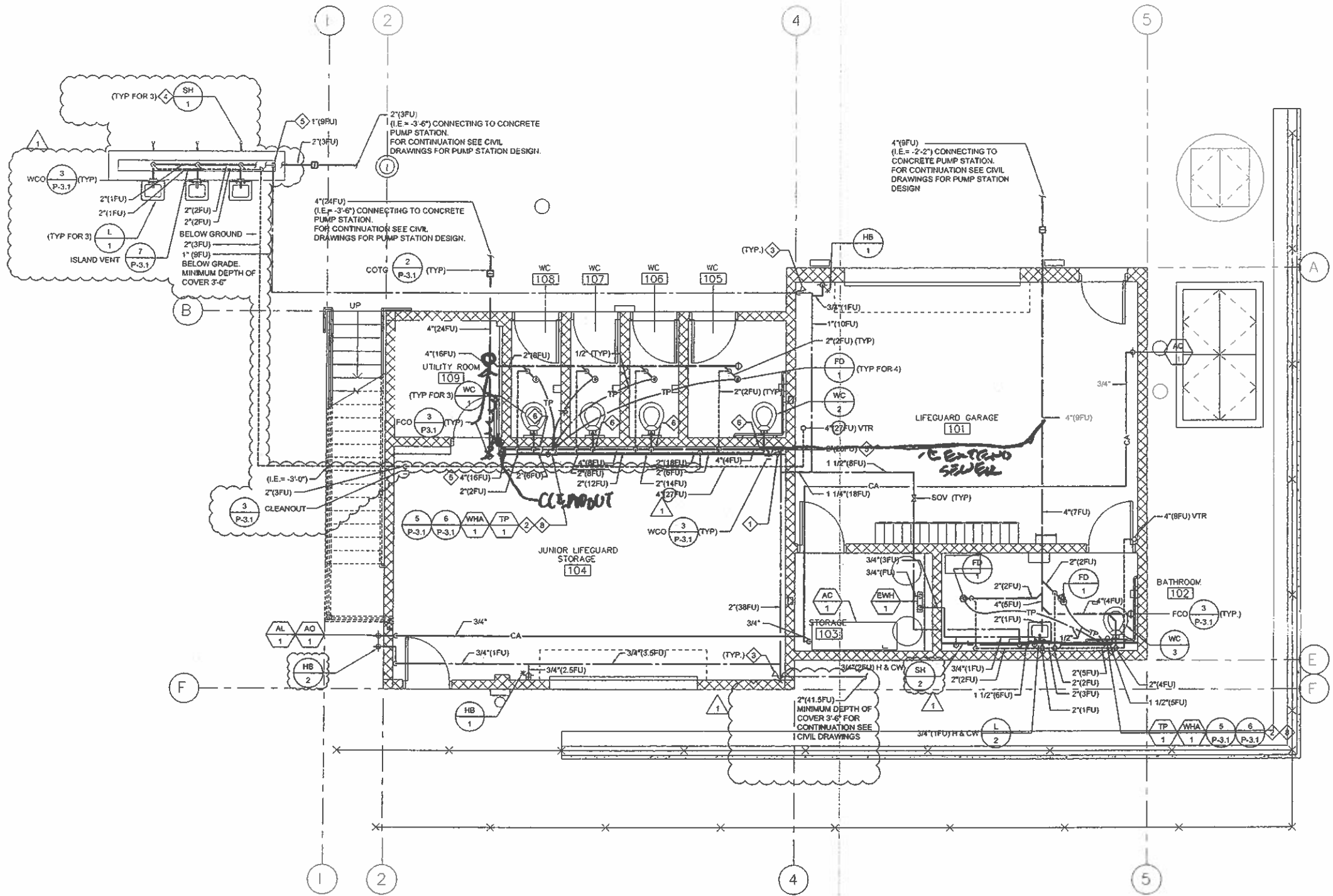
CITY OF EL SEGUNDO  
 CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS COVER SHEET**

**P-0.2**  
 10/06/2010  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. 1109531

PM \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECK \_\_\_\_\_ DATE \_\_\_\_\_  
 APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
 CITY ENGINEER R.E.

**KEY NOTES**

- 1 PROVIDE A SHUT-OFF VALVE IN THE VERTICAL SUPPLY BEHIND AN ACCESS PANEL
- 2 PROVIDE A COMMON ACCESS PANEL IN JUNIOR LIFEGUARD STORAGE TO ACCESS WATER HAMMER ARRESTOR AND TRAP PRIMER
- 3 PROVIDE AN EXPOSED SHUT-OFF VALVE IN THE VERTICAL SUPPLY
- 4 PROVIDE ACCESS PANEL ABOVE LAVATORIES TO ACCESS SHOWER VALVES
- 5 PROVIDE A FULL SIZED HEADER TO ALL FIXTURES
- 6 PROVIDE ACCESS PANELS IN THE JUNIOR LIFEGUARD STORAGE 104 FOR EACH WATER CLOSET TO PROVIDE ACCESS TO THE CONCEALED FLUSHVALVES AND PROVIDE OPENINGS IN THE BLOCK WALL FOR THE INSTALLATION OF THE MANUAL ACTIVATION OF THE WATER CLOSETS.



JUL 21 2011

**1 FLOOR PLAN**  
P-2.1 1/4" = 1'-0"

**BID DOCUMENTS**

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO L.S.  
PLUMBING GROUND FLOOR PLAN**

**P-2.1**  
10/06/2010  
SHEET \_\_\_\_ OF \_\_\_\_  
JOB NO. 1109531

PROJECT ADDRESS:  
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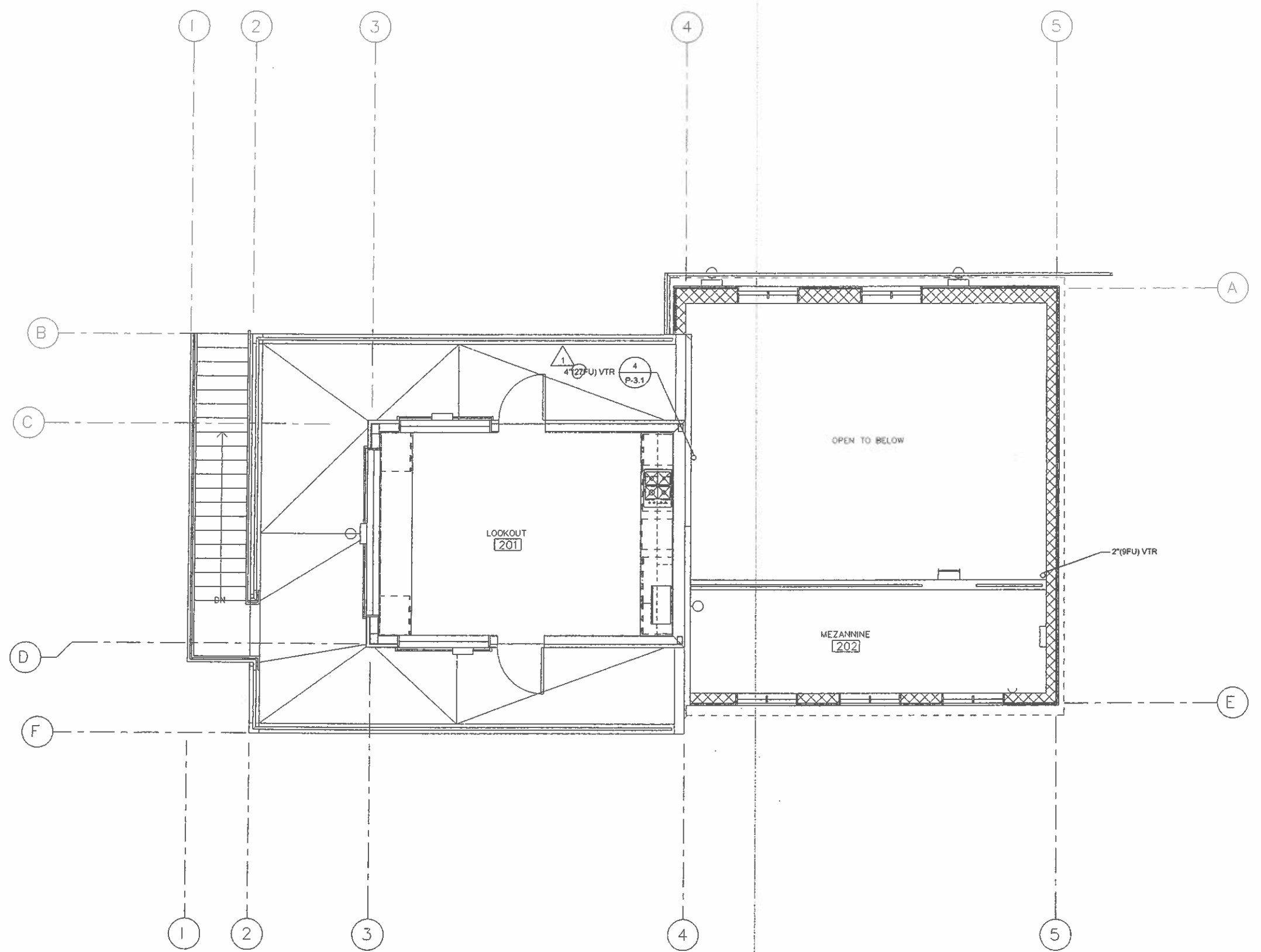
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KEY NOTES



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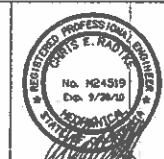
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**1 SECOND FLOOR PLAN**  
P-2.2 1/4" = 1'-0"

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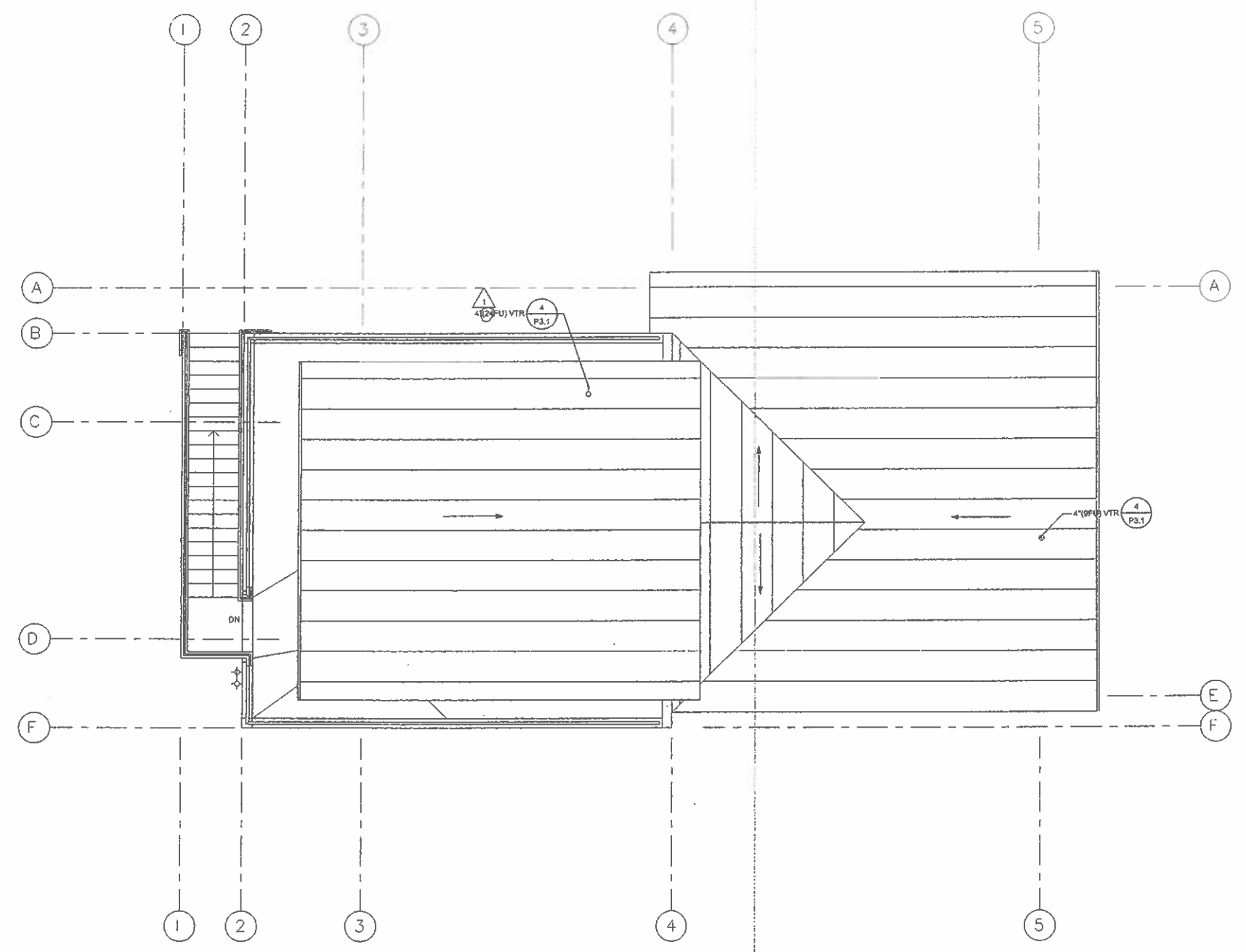
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**EL SEGUNDO LS**  
PLUMBING SECOND FLOOR PLAN

**P-2.2**  
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CITY ENGINEER R.E. \_\_\_\_\_

FILE NO.

KEY NOTES



JUL 21 2011

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1 ROOF PLAN  
P-2.3 3/4" = 1'-0"

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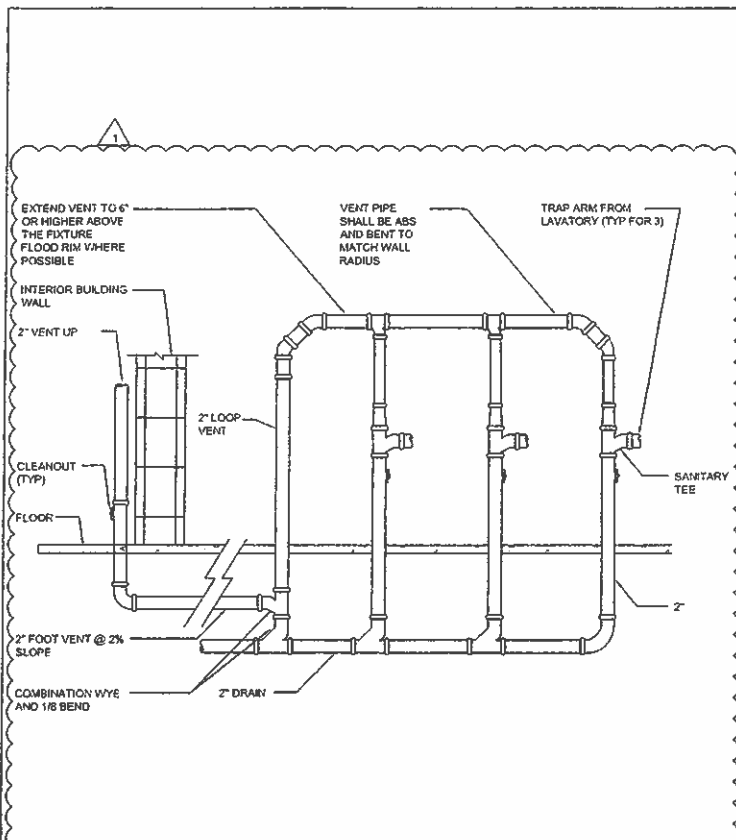
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS  
PLUMBING ROOF PLAN**

**P-2.3**  
10/06/2010  
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JOB NO. 1109531

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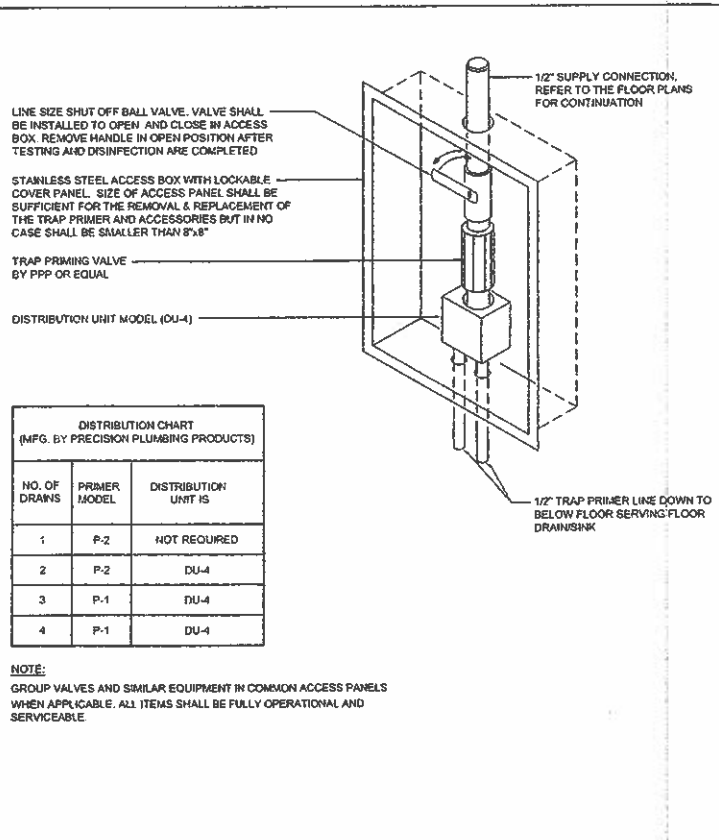
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**ISLAND DETAIL**

NTS 7



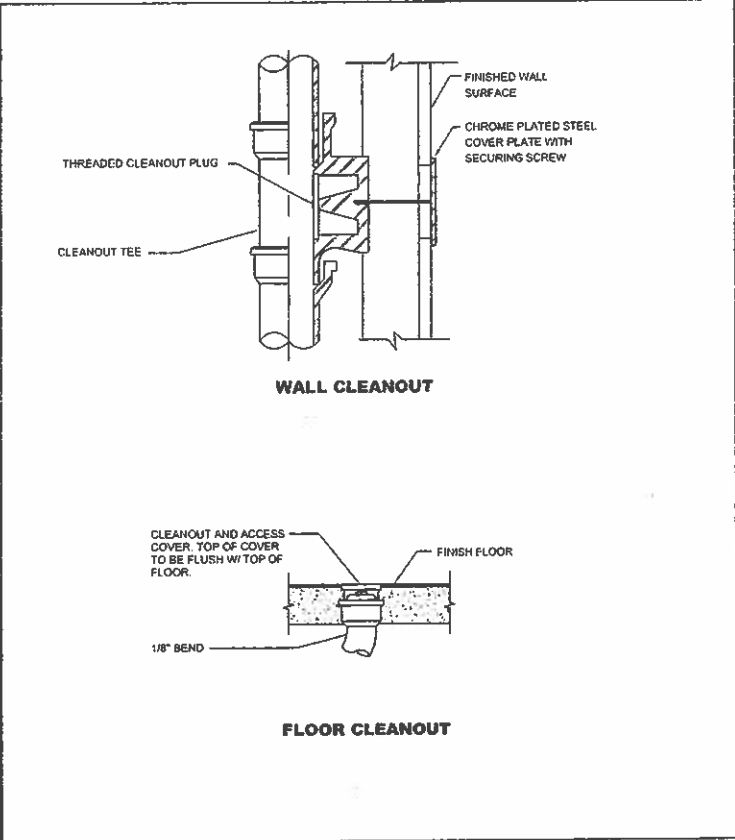
DISTRIBUTION CHART  
(MFG. BY PRECISION PLUMBING PRODUCTS)

NO. OF DRAINS	PRIMER MODEL	DISTRIBUTION UNIT IS
1	P-2	NOT REQUIRED
2	P-2	DU-4
3	P-1	DU-4
4	P-1	DU-4

NOTE:  
GROUP VALVES AND SIMILAR EQUIPMENT IN COMMON ACCESS PANELS WHEN APPLICABLE. ALL ITEMS SHALL BE FULLY OPERATIONAL AND SERVICEABLE.

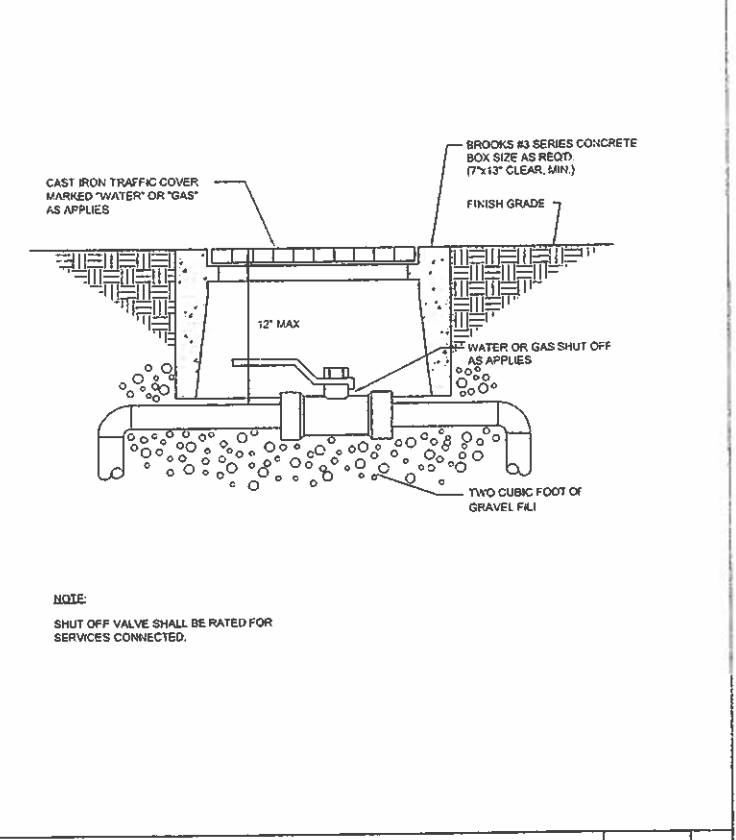
**TRAP PRIMER IN ACCESS BOX**

NTS 5



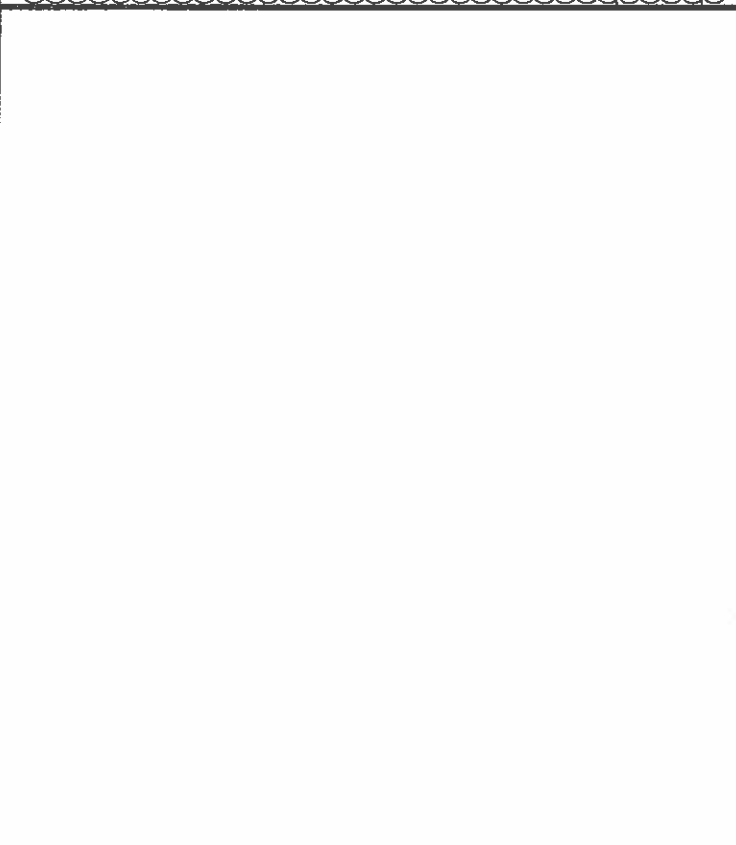
**WALL AND FLOOR CLEANOUT**

NTS 3



**EXTERIOR SHUT OFF VALVE IN YARD BOX**

NTS 1



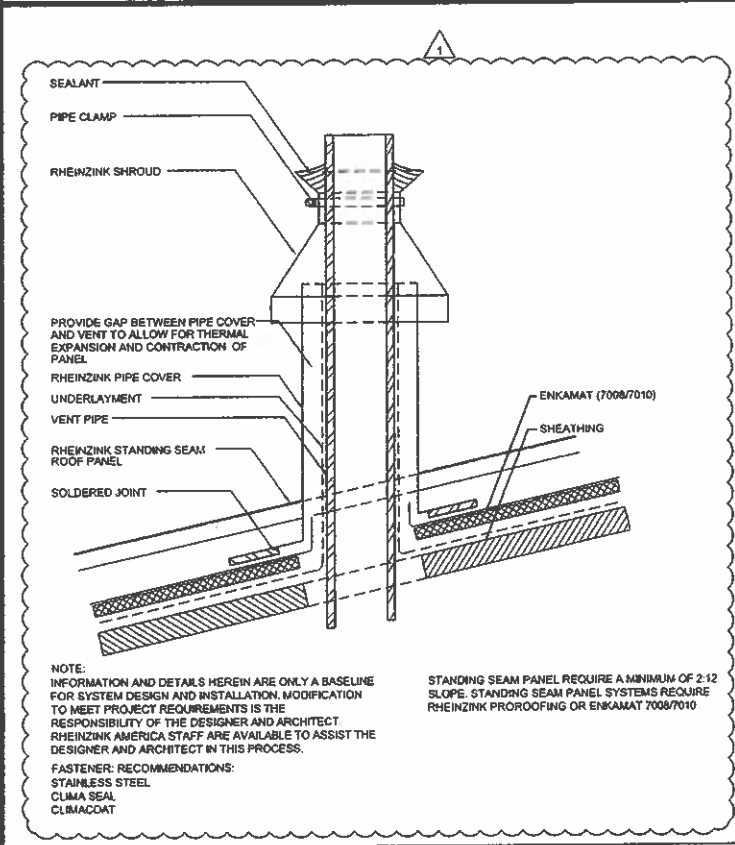
PIPE SIZING AND SELECTION TABLE

PPP SIZE	FIXTURE UNITS	CROSS REF. PDI
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C
1 1/4"	61-113	D
1 1/2"	114-154	E
2"	155-330	F

NOTE:  
GROUP VALVES AND SIMILAR EQUIPMENT IN COMMON ACCESS PANELS WHEN APPLICABLE. ALL ITEMS SHALL BE FULLY OPERATIONAL AND SERVICEABLE.  
FINAL SIZING AND MODEL SELECTION SHALL BE PER MANUFACTURERS RECOMMENDATIONS.  
WATER HAMMER ARRESTOR SHALL BE INSTALLED IN AN UPRIGHT POSITION  
WATER HAMMER ARRESTOR SHALL BE INSTALLED AT EACH QUICK CLOSING FAUCET OR FLUSH VALVE UNLESS USED IN A BANK OF FIXTURES.  
WHEN INSTALLING ON A BANK OF FIXTURES THE WATER HAMMER ARRESTOR SHALL BE INSTALLED BEFORE THE LAST FIXTURE ON THE BANK.

**WATER HAMMER ARRESTOR**

NTS 6

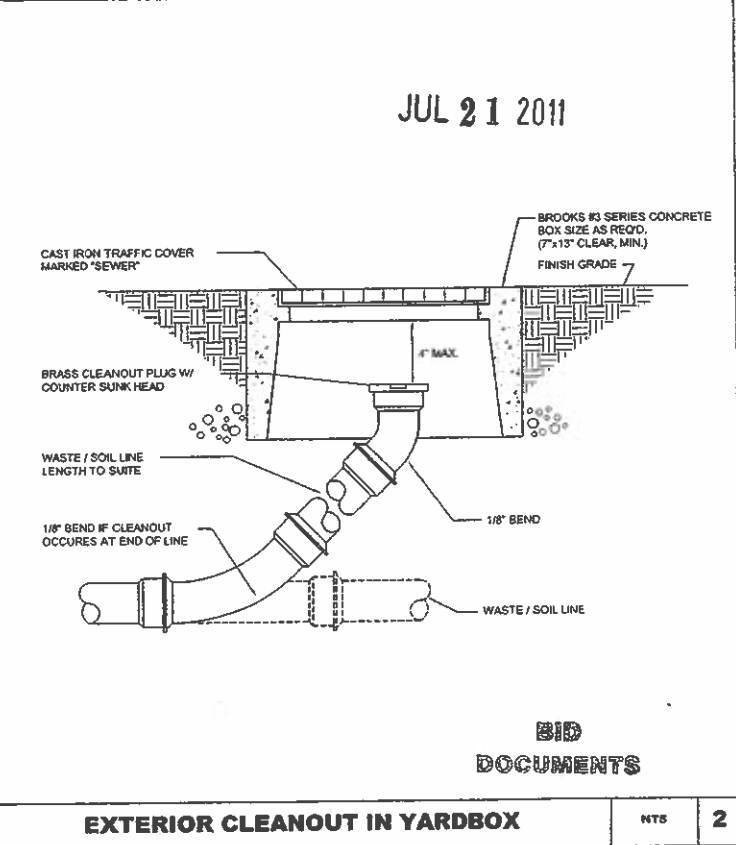


NOTE:  
INFORMATION AND DETAILS HEREIN ARE ONLY A BASELINE FOR SYSTEM DESIGN AND INSTALLATION. MODIFICATION TO MEET PROJECT REQUIREMENTS IS THE RESPONSIBILITY OF THE DESIGNER AND ARCHITECT. RHEINZINK AMERICA STAFF ARE AVAILABLE TO ASSIST THE DESIGNER AND ARCHITECT IN THIS PROCESS.  
FASTENER RECOMMENDATIONS:  
STAINLESS STEEL  
CLIMA SEAL  
CLIMACOAT

STANDING SEAM PANEL REQUIRE A MINIMUM OF 2:12 SLOPE. STANDING SEAM PANEL SYSTEMS REQUIRE RHEINZINK PROOFING OR ENKAMAT 7008/7010

**VENT THROUGH ROOF**

NTS 4



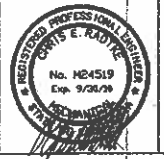
**EXTERIOR CLEANOUT IN YARDBOX**

NTS 2

N:\20.CAD\ITG\_PROJECTS\2010\2010-030-00\PLUMBING CAD\3-1.DWG 10/6/2010 8:14 AM

PROJECT ADDRESS:  
EL SEGUNDO, CA

**T M A D**  
**TAYLOR & GAINES**  
800 North Farrant Lane, Suite 100  
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www.tmg.com Project No. 2010.030.00



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REVISIONS		
NO.	DATE	BY
1	10/06/2010	AD

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS COVER SHEET**

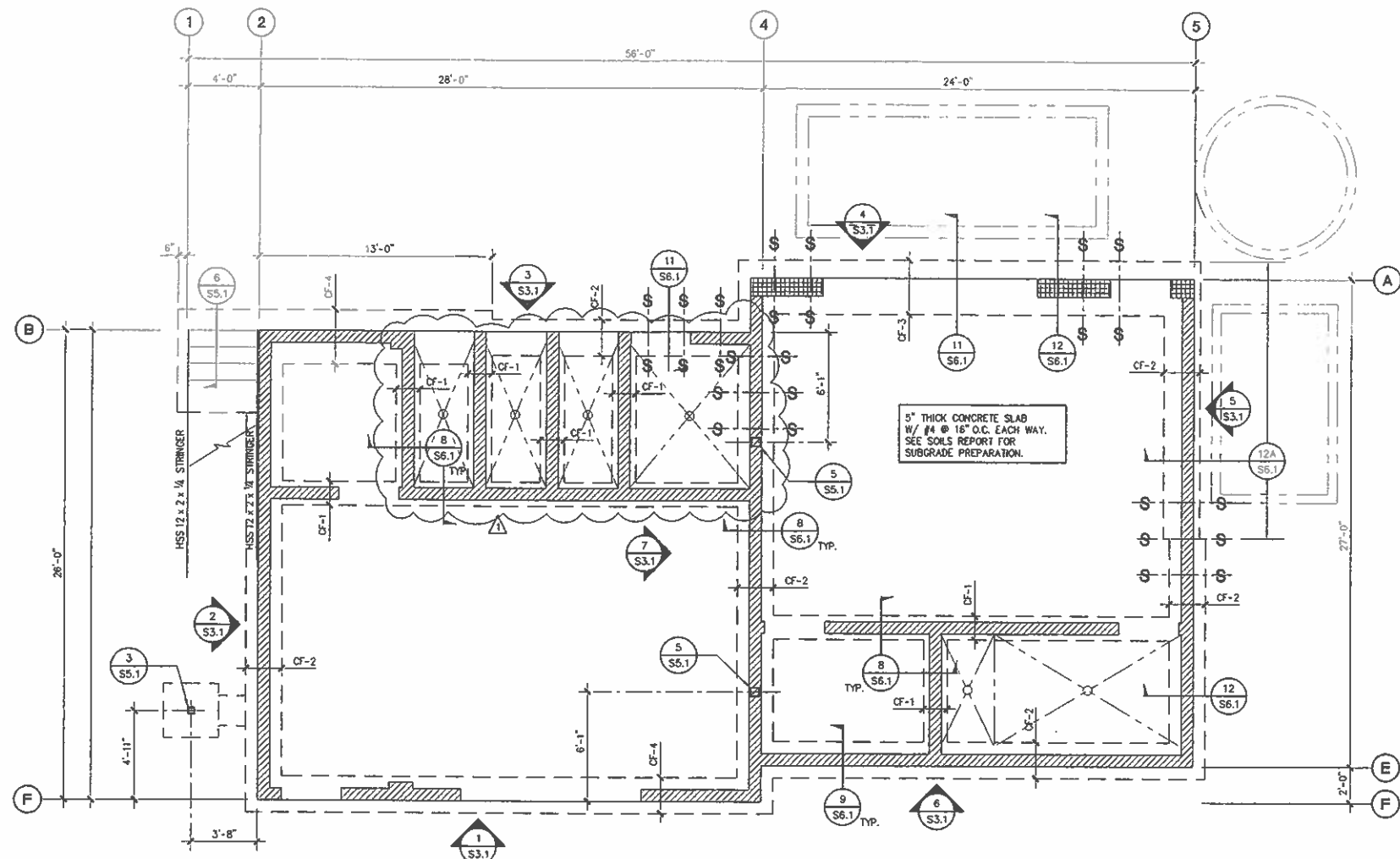
**P-3.1**  
10/06/2010  
SHEET \_\_\_\_\_ OF \_\_\_\_\_  
JOB NO. 1109531

DATE \_\_\_\_\_ DATE \_\_\_\_\_  
DATE \_\_\_\_\_ DATE \_\_\_\_\_  
CITY ENGINEER P. E.

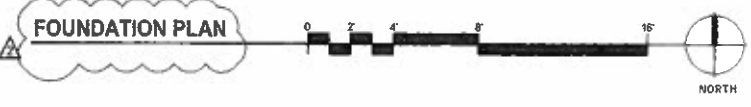
FILE NO.

**FOUNDATION NOTES:**

1. SEE GENERAL NOTES ON SHEET "S4.1".
2. FOR TYPICAL CONCRETE DETAILS SEE SHEET "S4.3". TYPICAL MASONRY DETAILS SEE SHEET "S6.1".
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
4. VERIFY ALL DIMENSIONS, DEPRESSIONS, PITS, SLOPES, CURBS, STEPS, ETC. WITH ARCHITECTURAL AND/OR MEP DRAWINGS.
5. DATUM ELEVATION OF [0'-0"] IS AT THE HIGHEST POINT OF SLAB ON GRADE.
6. VERIFY WITH ARCH. OR CIVIL DRAWINGS THE EXTENT OF EXTERIOR SLAB ON GRADE.
7. EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE. NO MATERIAL IS TO BE EXCAVATED UNNECESSARILY.
8. SPECIAL INSPECTION IS REQUIRED FOR PLACEMENT OF ALL CONCRETE AND MASONRY WALLS.
9. [Hatched pattern] INDICATES 8" CMU WALLS.
10. [Cross-hatched pattern] INDICATES 12" CMU WALLS.
11. [Dotted pattern] INDICATES CONCRETE WALLS.
12. [Stepped footing symbol] INDICATES STEPPED FOOTING PER DETAIL "11/S4.3".
13. CF-X INDICATES CONTINUOUS FOOTING, SEE SCHEDULE IN DETAIL "7/S6.1" FOR SIZE AND REINF.
14. FOR TYPICAL STAIR DETAILS SEE "S7.1".



5" THICK CONCRETE SLAB  
W/ #4 @ 18" O.C. EACH WAY.  
SEE SOILS REPORT FOR  
SUBGRADE PREPARATION.



JUL 21 2011

PROJECT ADDRESS:  
EL SEGUNDO, CA

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STRUCTURAL ENGINEERS  
1850E  
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27042 Yonkers Centre Dr.  
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949.441.7007 / 949.441.7000-Fax

REGISTERED PROFESSIONAL ENGINEER  
**ROBERT D. SCHUBERT**  
13 711  
STATE OF CALIFORNIA

THIS INCLUDES PLANNING, PRELIMINARY DESIGN, DESIGN AND CONSTRUCTION ADMINISTRATION THROUGH AND UP TO 90 DAYS AFTER THE COMPLETION OF THE PROJECT AND DOES NOT INCLUDE THE PROVISION OF AS-BUILT DRAWINGS AND/OR RECORD DRAWINGS. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED HEREIN AND DOES NOT INCLUDE THE DESIGN OF ANY STRUCTURE OR EQUIPMENT OR THE CONSTRUCTION OF ANY STRUCTURE OR EQUIPMENT. THE ENGINEER'S LIABILITY IS LIMITED TO THE PROFESSIONAL SERVICES PROVIDED HEREIN AND DOES NOT INCLUDE THE DESIGN OF ANY STRUCTURE OR EQUIPMENT OR THE CONSTRUCTION OF ANY STRUCTURE OR EQUIPMENT.

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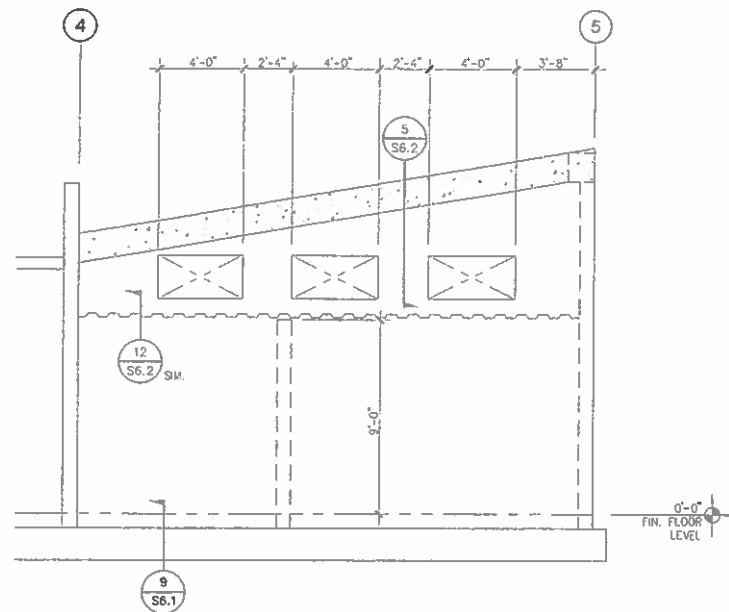
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NO.	DATE	BY
1	10/06/10	
2	02/08/11	

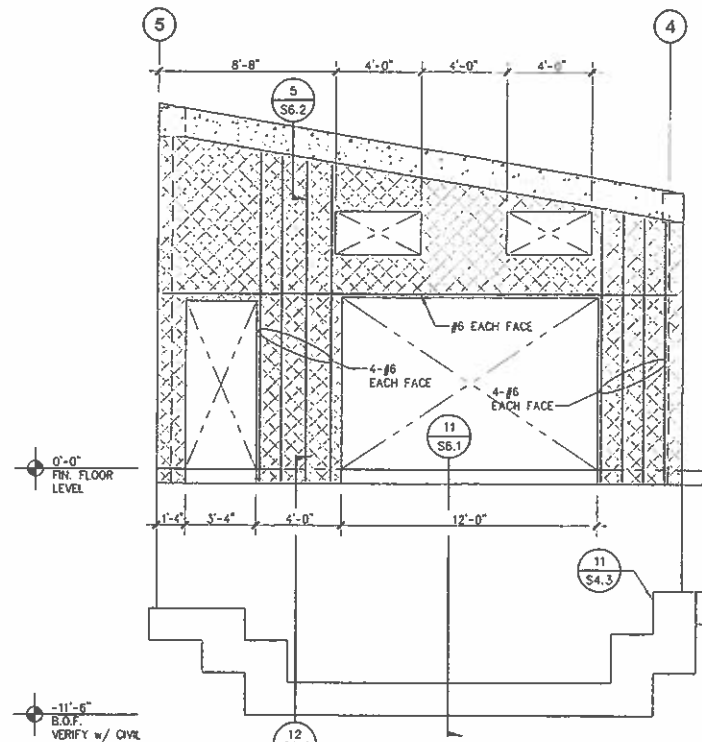
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION  
**EL SEGUNDO LS**  
FOUNDATION PLAN

**S-2.1**  
05/04/2010  
SHEET 20 OF 68  
JOB NO 1109531

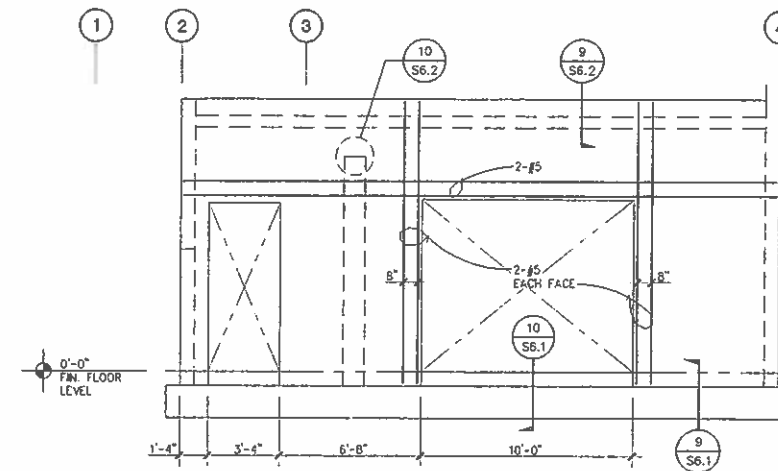
PM	DATE	APPROVED	DATE
DRAWN	DATE	CITY ENGINEER R.E.	
CHECK	DATE		



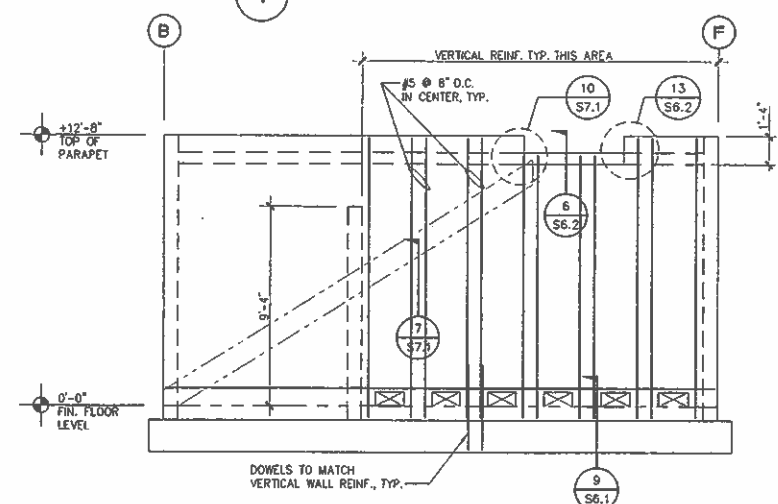
6 WALL ELEVATION



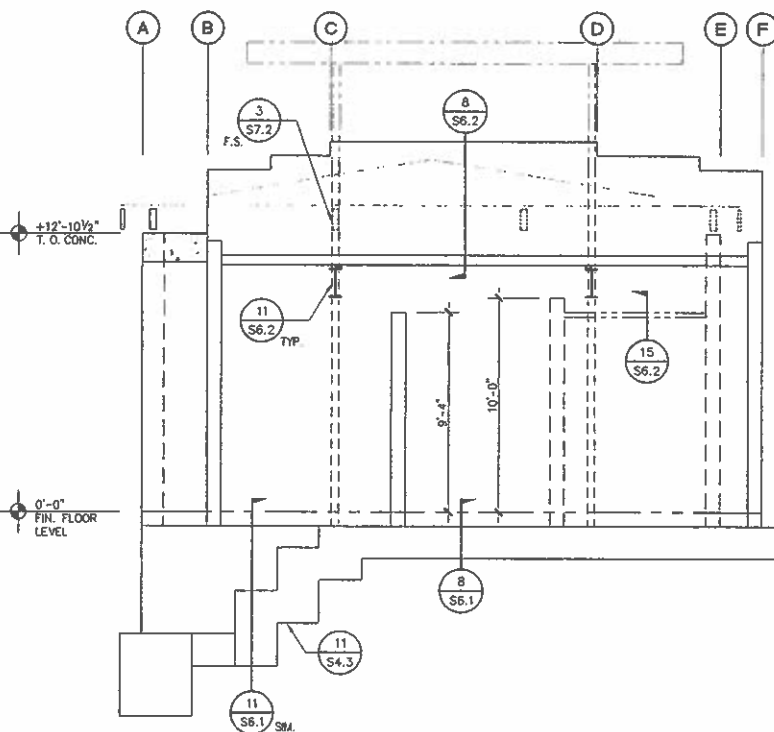
4 WALL ELEVATION



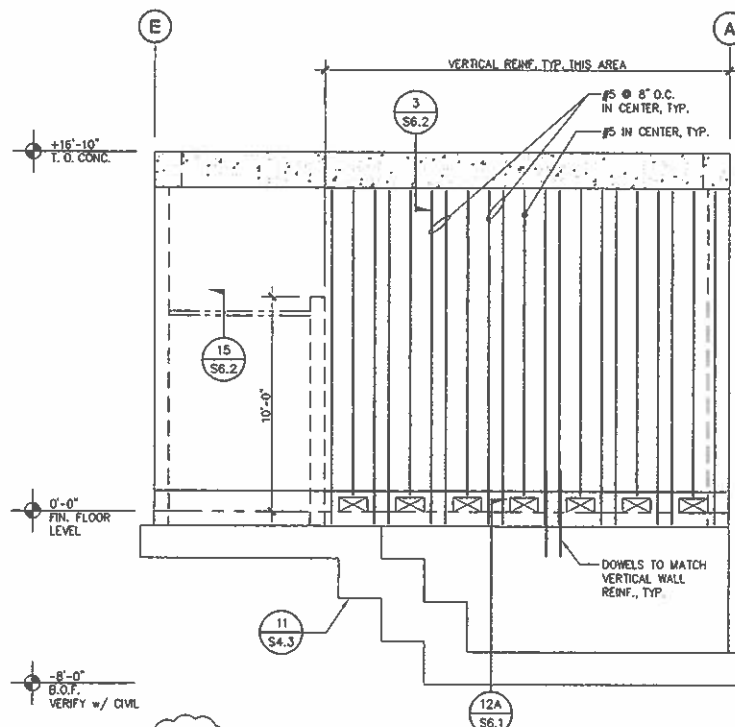
1 WALL ELEVATION



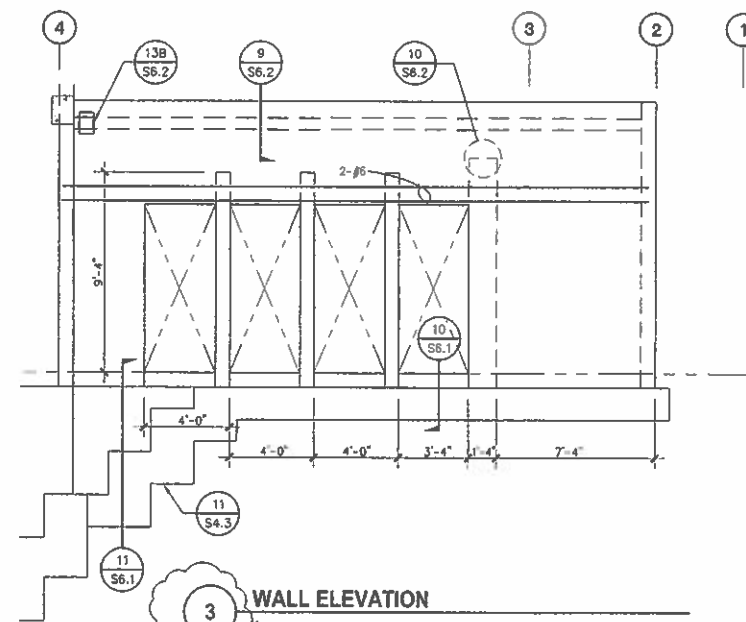
2 WALL ELEVATION



7 WALL ELEVATION



5 WALL ELEVATION



3 WALL ELEVATION

- TYPICAL WALL NOTES:**
- SEE GENERAL NOTES SHEET "S4.1" FOR MASONRY AND REINFORCEMENT NOTES.
  - SEE SHEET "S6.1" FOR TYPICAL MASONRY DETAILS.
  - ALL WALLS SHALL BE 8" THICK AND SOLID GRouted U.N.O.
  - INDICATES CONCRETE WALLS, LINTELS, AND PILASTERS.
  - INDICATES 12" CMU WALLS.
  - MINIMUM 28 DAY COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY:  
 $f_m = 1,500$  PSI (SPECIAL INSPECTION REQUIRED).
  - ALL MORTAR JOINTS SHALL BE FULLY BEDDED.
  - PROVIDE 2-#5 CONTINUOUS AT TOP OF PARAPET AND IN FIRST COURSE.
  - TYPICAL WALL REINFORCING U.N.O.:  
 FOR 8" CMU: #5 @ 16" O.C. VERTICAL IN CENTER  
 #5 @ 24" O.C. HORIZONTAL IN CENTER  
 FOR 12" CMU: #5 @ 16" O.C. VERTICAL EACH FACE  
 #5 @ 24" O.C. HORIZONTAL EA. FACE
  - TYPICAL REINFORCING AT WALL JAMB AND WALL ENDS FOR 8" CMU 2-#5 EACH SIDE OF EACH OPENING AND ENDS PER "S6.1".
  - REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GRouting BY WIRE POSITIONERS OR OTHER SUITABLE DEVICES AT INTERVALS NOT EXCEEDING 200 BAR DIAMETERS NOR 10'-0" O.C.
  - MAINTAIN 2" CLEAR FROM FACE OF MASONRY TO ALL REINFORCING.
  - SPECIAL INSPECTION PER OBC REQUIRED FOR ALL MASONRY.
  - ALL DIMENSIONS ARE TO FACE OF MASONRY (F.M). CONTRACTOR SHALL COORDINATE AND VERIFY ALL DIMENSIONS INCLUDING CLEAR OPENING DIMENSIONS AND LOCATIONS WITH ARCHITECTURAL PLANS, MECHANICAL PLANS AND DOOR AND WINDOW MANUFACTURER FOR REQUIRED CLEARANCE PRIOR TO ANY WALL CONSTRUCTION. NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
  - CONTRACTOR SHALL COORDINATE AND VERIFY ALL EMBEDDED BOLTS AND PLATES PRIOR TO ANY WALL CONSTRUCTION.

JUL 21 2011

PROJECT ADDRESS:  
EL SEGUNDO, CA

10/101/ 10101\_S31/ 02/08/11



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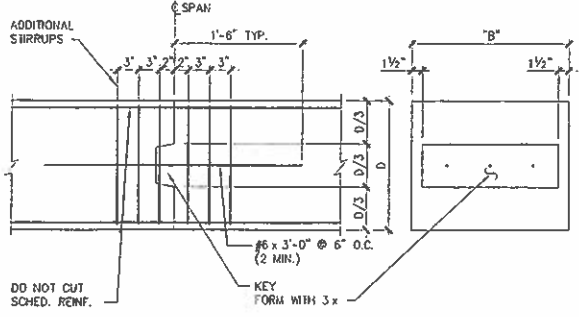
REVISIONS		
NO.	DATE	BY
1	02/08/11	

CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

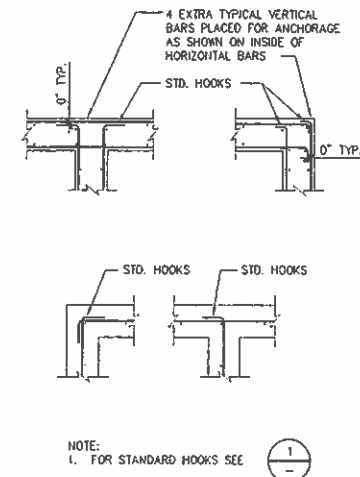
**EL SEGUNDO LS  
WALL ELEVATIONS**

**S-3.1**  
05/04/2010  
SHEET 32 OF 68  
JOB NO 1109531

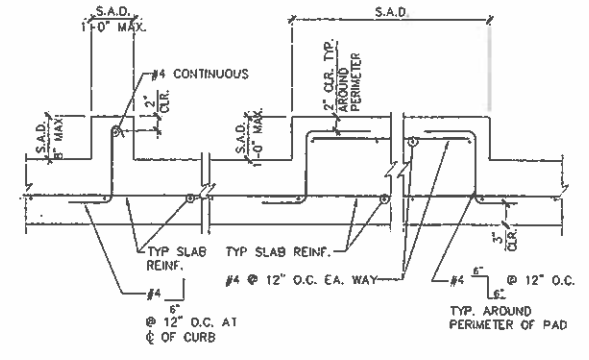
APPROVED \_\_\_\_\_ DATE \_\_\_\_\_  
CITY ENGINEER R E



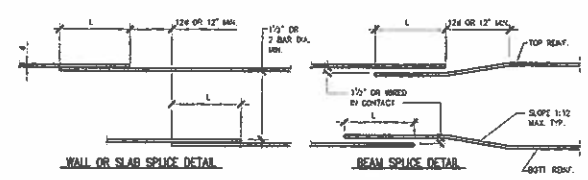
13 BEAMS AND GRADE BEAMS CONSTRUCTION JOINTS



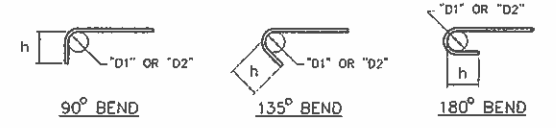
10 CONCRETE WALL AND FOOTING INTERSECTIONS



7 TYPICAL CURB AND RAISED PAD DETAILS



CONCRETE STRENGTH	F <sub>c</sub> = 2500 PSI		F <sub>c</sub> = 3000 PSI		F <sub>c</sub> = 4000 PSI		F <sub>c</sub> = 4500 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	2'-7"	2'-0"	2'-4"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"
#4	3'-5"	2'-8"	3'-1"	2'-5"	2'-8"	2'-1"	2'-7"	2'-0"
#5	4'-3"	3'-3"	3'-11"	3'-0"	3'-4"	2'-7"	3'-2"	2'-6"
#6	5'-1"	3'-11"	4'-8"	3'-7"	4'-0"	3'-1"	3'-10"	2'-11"
#7	7'-5"	5'-9"	6'-9"	5'-3"	5'-11"	4'-6"	5'-7"	4'-3"
#8	8'-6"	6'-6"	7'-9"	6'-0"	6'-9"	5'-2"	6'-4"	4'-11"
#9	9'-6"	7'-4"	8'-9"	6'-9"	7'-7"	5'-10"	7'-2"	5'-6"
#10	10'-7"	8'-2"	9'-8"	7'-5"	8'-5"	6'-6"	8'-11"	6'-1"

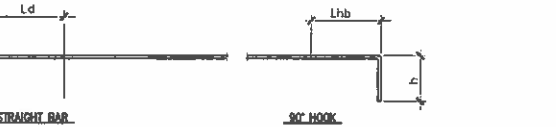


D1	1 1/2" FOR #3 BARS 2" FOR #4 BARS 2 1/2" FOR #5 BARS
D2	6d FOR #3 THRU #8 BARS 8d FOR #9, #10 & #11 BARS

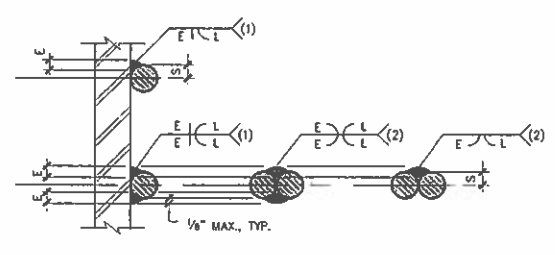
BAR SIZE	MAIN REINF.		STIRRUP & TIE HOOPS	
	90°	180°	90°	135°
#3	6"	4"	3"	4 1/2"
#4	8"	4"	4"	6"
#5	9 1/2"	4 1/2"	5"	7 1/2"
#6	11 1/2"	5 1/2"	11 1/2"	10"
#7	13 1/2"	6 1/2"	13 1/2"	11 1/2"
#8	15"	7"	15"	13"
#9	18"	9"	-	-
#10	20"	10"	-	-
#11	22"	11"	-	-

1 STANDARD HOOKS



- NOTES:
- THE LAP SPICE LENGTH ARE TO BE MULTIPLIED BY THE FACTOR(S) LISTED BELOW.
  - WHERE CLEAR SPACE BETWEEN BARS IS LESS THAN 2 BAR DIAMETERS AND/OR THE CLEAR COVER IS LESS THAN ONE BAR DIAMETER, THE LAP SPICE SHALL BE INCREASED BY 50%.
  - WHERE LIGHTWEIGHT AGGREGATE CONCRETE IS USED, INCREASE LAP SPICE LENGTH BY 30%.
  - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
  - SPICES OF HORIZONTAL REINFORCEMENT IN WALLS SHALL BE STAGGERED.
  - SPICES IN WALLS CONTAINING TWO CURTAINS OF REINFORCEMENT SHALL NOT OCCUR IN THE SAME LOCATION.

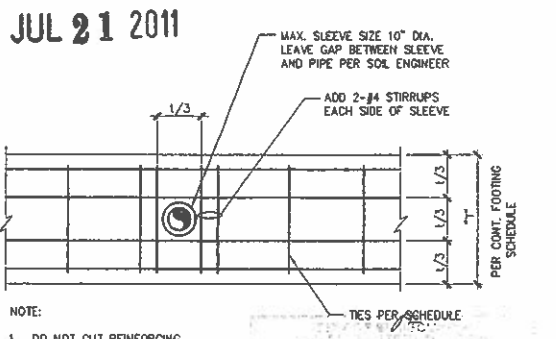
5 REBAR OFFSET AND LAP SPICE



CONCRETE STRENGTH	F <sub>c</sub> = 2500 PSI		F <sub>c</sub> = 3000 PSI		F <sub>c</sub> = 4000 PSI		F <sub>c</sub> = 4500 PSI	
	Ld	Lhb	Ld	Lhb	Ld	Lhb	Ld	Lhb
#3	2'-0"	1'-6"	1'-10"	1'-5"	1'-7"	1'-3"	6"	1'-6"
#4	2'-8"	2'-0"	2'-5"	1'-10"	2'-1"	1'-7"	8"	2'-0"
#5	3'-3"	2'-6"	3'-0"	2'-4"	2'-7"	2'-0"	10"	2'-6"
#6	3'-11"	3'-0"	3'-7"	3'-9"	3'-1"	2'-5"	11"	2'-11"
#7	5'-9"	4'-5"	5'-3"	4'-0"	4'-6"	3'-6"	11"	3'-4"
#8	6'-6"	5'-0"	6'-0"	4'-7"	5'-2"	4'-0"	13"	4'-11"
#9	8'-1"	6'-8"	7'-9"	6'-8"	6'-10"	4'-6"	15"	5'-6"
#10	9'-0"	7'-3"	8'-6"	7'-6"	8'-6"	5'-0"	17"	6'-11"

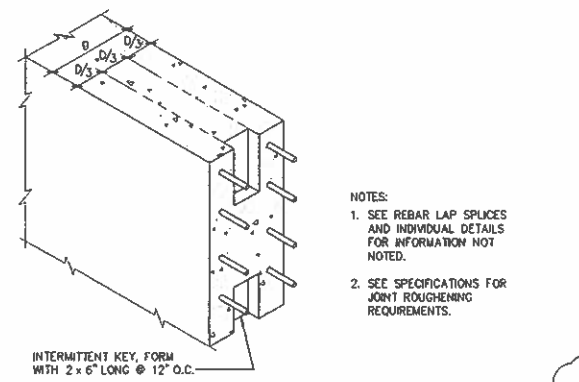
- NOTES:
- TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.

2 REBAR DEVELOPMENT LENGTH

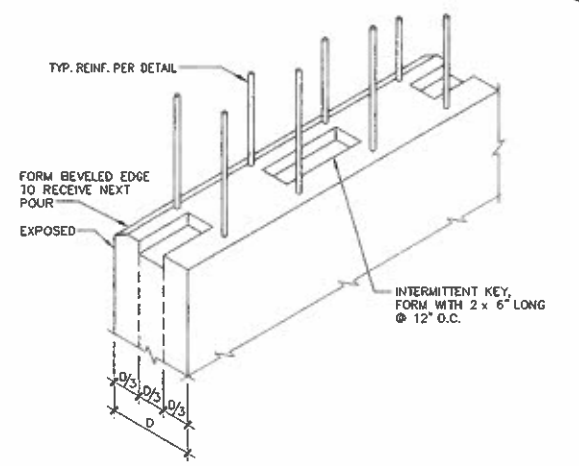


- NOTE:
- DO NOT CUT REINFORCING.
  - SLEEVE TO BE PLACED IN MIDDLE THIRD OF FOOTING DEPTH.

3 SLEEVE THRU FOOTING & GRADE-BEAM

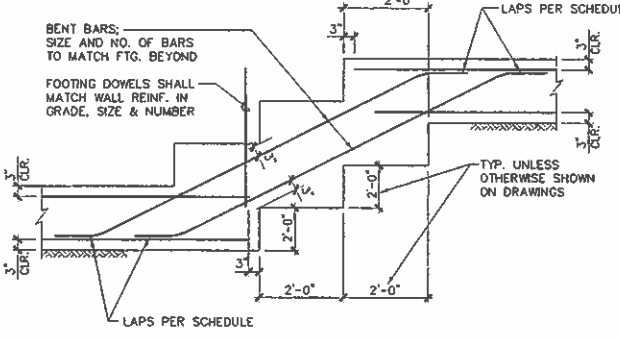


A VERTICAL JOINT

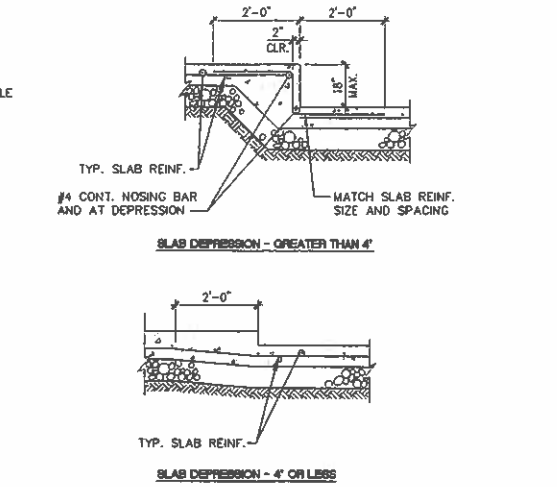


B HORIZONTAL JOINT

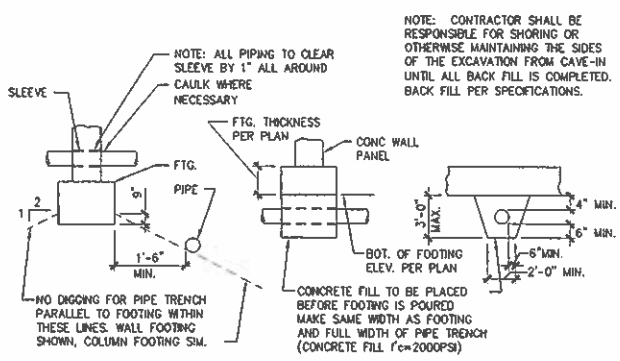
15 CONSTRUCTION JOINT IN CONCRETE WALL



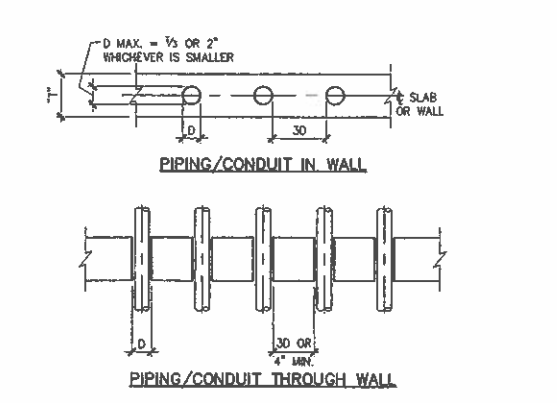
11 STEPS IN CONTINUOUS FOOTING



8 SLAB-ON-GRADE DEPRESSION



12 PIPE CLEARANCE AT FOOTING



9 PIPING AND CONDUIT IN OR THROUGH SLAB OR WALL

NOM. BAR SIZE	TYPE 1		TYPE 2	
	SIZE (E) (IN)	LENGTH (L) (IN)	SIZE (E) (IN)	LENGTH (L) (IN)
3	3/32	4	1/8	4
4	1/8	6	5/32	6
5	1/8	8	3/16	6
6	5/32	10	1/4	6
7	3/16	12	9/32	8
8	7/32	12	5/16	10
9	1/4	14	11/32	10
10	1/4	18	3/8	14
11	1/4	22	13/32	16

- NOTES:
- EFFECTIVE THROAT E = 0.4S FOR TYPE (1).
  - EFFECTIVE THROAT E = 0.6S FOR TYPE (2).
  - USE E70XX ELECTRODES FOR GRADE 40 BARS; USE E90XX ELECTRODES FOR GRADE 60/ A706 BARS.
  - WELDS BOTH SIDES OF BAR MAY BE 50% LENGTH (L) PER TABLE, 3" MINIMUM.
  - WELDABILITY OF ASTM A615 GR. 60 BARS TO BE DETERMINED PER ASTM TO VERIFY CONFORMANCE WITH AWS D1.2. PREHEAT REQUIRED FOR GRADE 60 BARS PER AWS D1.5, SECTION 5.2.
  - A706 BARS MAY BE USED IN LIEU OF GRADE 40.

6 TYPICAL REINFORCEMENT WELDS

PROJECT ADDRESS:  
EL SEGUNDO, CA

10 101/ 10101\_S43/ 02/10/11

**RSSE**  
STRUCTURAL ENGINEERS INC.  
RSSE Structural Engineers Inc.  
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**REGISTERED PROFESSIONAL ENGINEER**  
ROBERT D. SCHNEIDER  
2568  
19 # 31  
STRUCTURAL  
STATE OF CALIFORNIA  
EXP. 3.31.12

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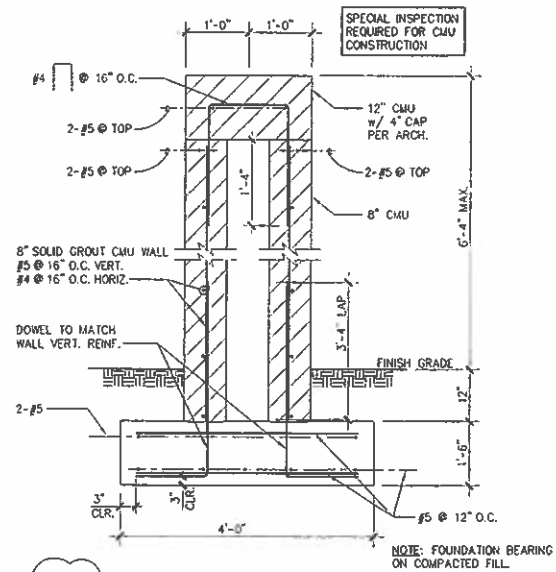
CITY OF EL SEGUNDO  
CALIFORNIA ENGINEERING DIVISION

**EL SEGUNDO LS**  
TYPICAL CONCRETE DETAILS

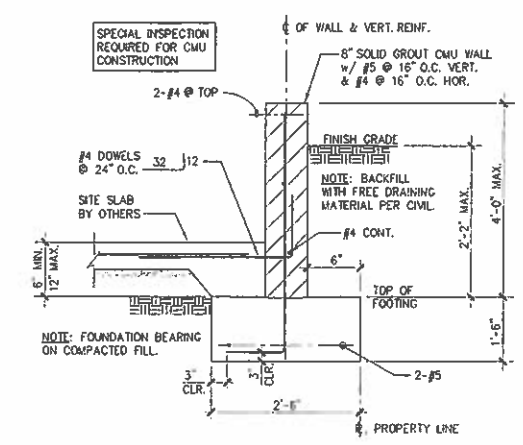
DATE: 02/08/11  
BY: [Signature]

APPROVED: [Signature]  
CITY ENGINEER R.E.

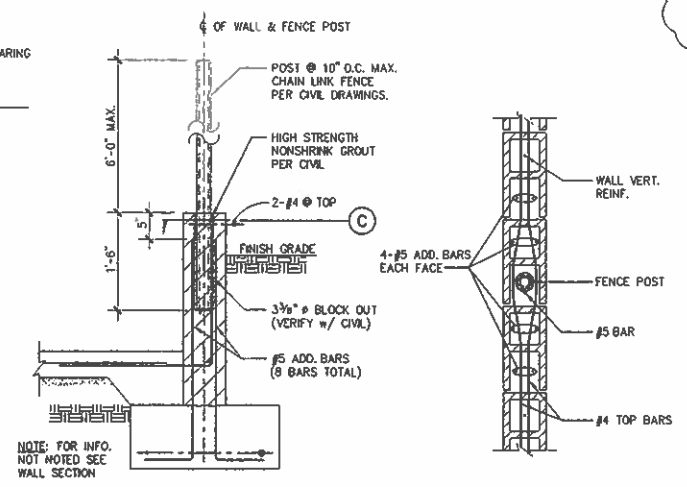
**S-4.3**  
05/04/2010  
SHEET 35 OF 68  
JOB NO. 1109531



10 FREE STANDING SITE SHOWER WALL

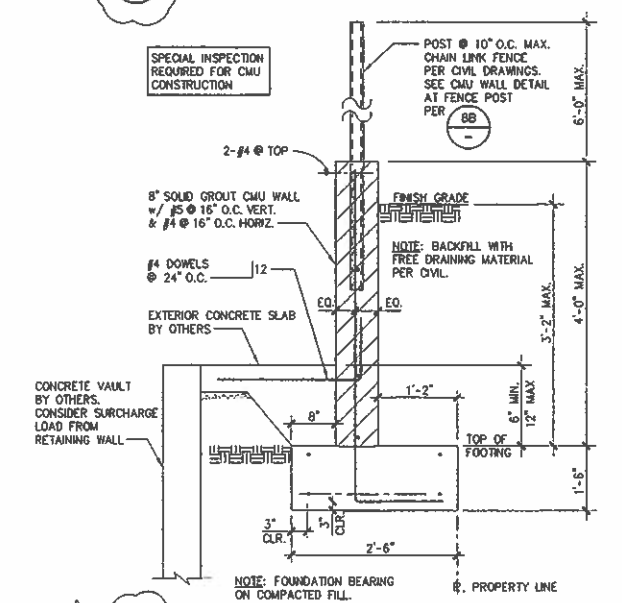


A TYPICAL WALL SECTION

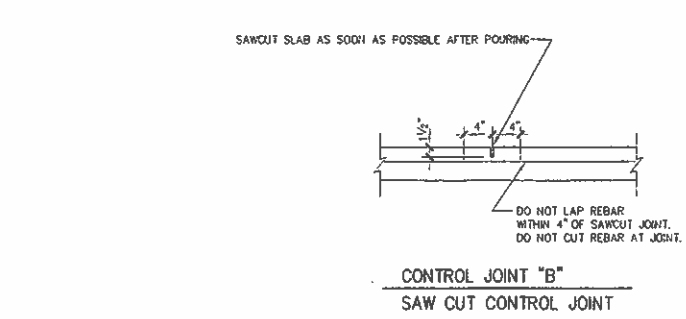


B SECTION AT FENCE POST C SECTION

8 SOUTH SITE RETAINING WALL DETAIL

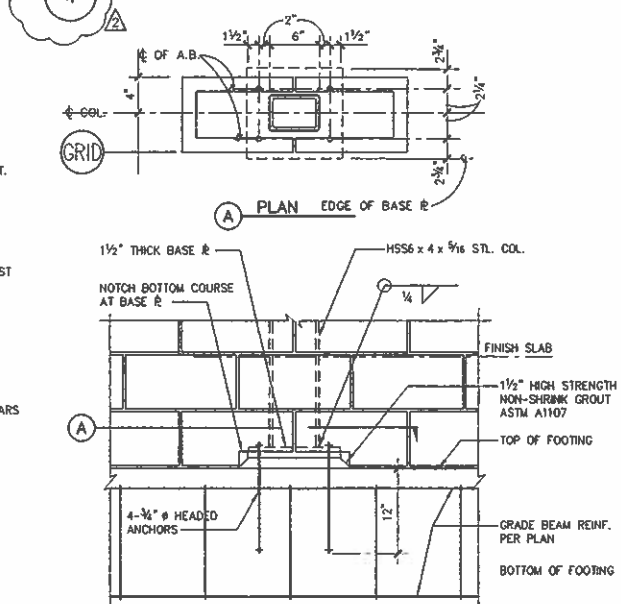


9 EAST SITE RETAINING WALL DETAIL

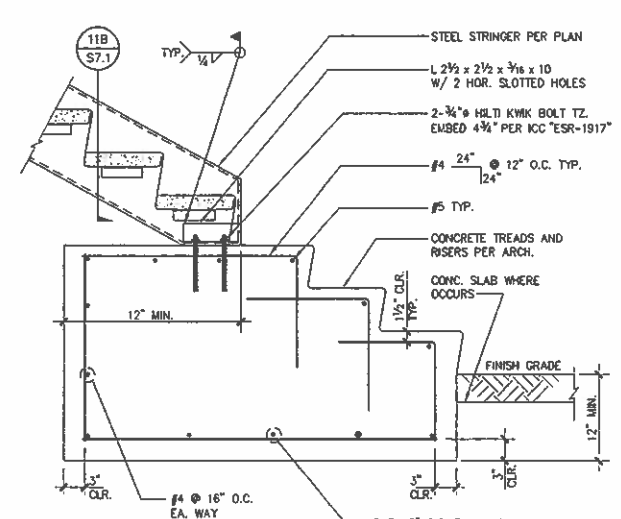


- NOTES:
1. SAWCUT CONTROL JOINTS MAY BE USED IN BOTH DIRECTIONS AND SPACED AT 14'-0" MAX.
  2. SAWCUT JOINTS SHALL BE MADE IMMEDIATELY AFTER FINISHING OPERATION AND PRIOR TO DRYING SHRINKAGE. SAW CUT JOINTS SHALL BE MADE WITH "EARLY ENTRY" SAW EQUIPMENT.
  3. FINISHING OF SLAB CONCRETE SHALL BE DONE AFTER SURFACE BLEED WATER HAS EVAPORATED.
  4. CONCRETE SHALL HAVE AIR ENTRAINMENT OF 2% TO 3% BY VOLUME.
  5. MOISTEN SUB-GRADE PRIOR TO PLACING CONCRETE.
  6. APPLY MEMBRANE CURING TO SLAB ON GRADE IMMEDIATELY AFTER FINISHING OPERATION.

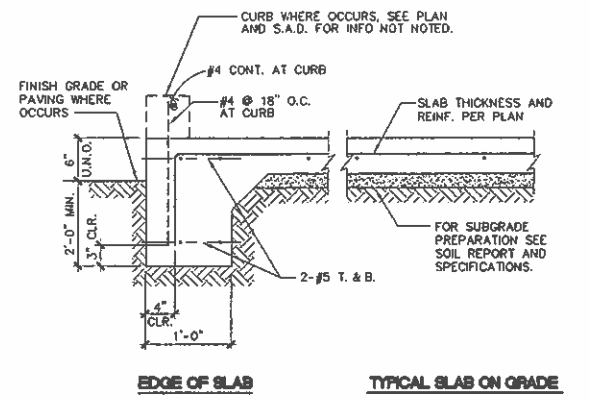
4 TYPICAL SLAB CONSTRUCTION JOINTS



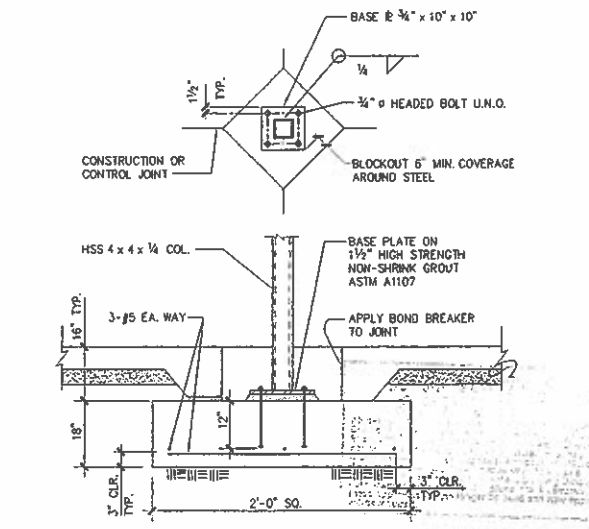
5 STEEL COLUMN INSIDE CMU WALL



6 STAIR LANDING DETAIL



2 TYPICAL SLAB EDGE



3 COLUMN BASE/PAD FOOTING

JUL 21 2011

PROJECT ADDRESS: EL SEGUNDO, CA

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EL SEGUNDO, CA

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REVISIONS		
NO.	DATE	BY
1	10/06/10	
2	02/08/11	

CITY OF EL SEGUNDO CALIFORNIA ENGINEERING DIVISION		<b>S-5.1</b> 05/04/2010 SHEET 36 OF 68
EL SEGUNDO LS DETAILS		
PM DRAWN	DATE	APPROVED DATE
CHECK	DATE	CITY ENGINEER R.E.
JOB NO. 1109531		FILE NO.