

Protest Letter

Subject: Protest against First Bidder: **OPTIMA RPM Inc.**

Project Name: LAZY CREEK CENTER IMPROVEMENTS PROJECT

CIP No. 19-16

To Whom it May Concern:

it just Brought To my Attention that first Bidder (OPTIMA RPM Inc. is not responsive for Following Reasons:

First bidder: OPTIMA RMP Inc. CA License No.961714

1- After reviewing the Bid Package, Optima RPM did not include the right number of fire Alarm portion in their proposal per your knowledge for Existing Building and the new Building there is no possibility of \$1,000 only fire alarm would be right number for that portion and per Spec on this project and attached paperwork from the Spec, if the numbers are not accurate, the Contractor will be not responsive. Please see attached page from the Specification (Page 2)

- 2- Per Attached Plan (page 3to 10) on this file and Green book and Government Job laws, for all the Specialty Portion of the work, Such as fire Alarm and fire Sprinkler and others, they have to have a specialty Subcontractor to take care of the trades, Bu t They haven't included any Fire Alarm Company to do the Design and Procedure regarding that Also they are not even qualified to hire a Specialty Subcontractor based on General A and B license which they have, because its specialty and needs to be done b required Subcontractor. We know that Optima RPM have A and B License and Can hire most of the Subcontractors to do the work, But for the Specialty portion like fire Alarm, they need to have a C-16 License in their Licenses or Name a Subcontractor which the didn't include and it makes them non responsive (Attached the Contractor License Board Pages as well)
- **3-** In Regard to Roofing System that Plan call for it and installation Method and Manufacture requirement, the hasn't include the Roofing Company in their bid package, we know they can hire a Roofer under their license but there is some qualification per Specification on this project which is going to be:

5 Year Contractor Warranty and 20 Year NDL Manufacturer's Registered Warranty

if the General Contractor Company doesn't carry the Roofing License, then they can't get a NDL Manufacture warranty because they are not qualified from the Manufacture and it's not what Specification call for it. (Please See Page 11 to 27, Roofing Section)

With All the respect, these are the Line Items that makes Optima RMP Non Responsive on this project.

"responsible" is defined by California law, but generally means that the Bidder is able to demonstrate: (1) the capacity to perform the Work required by these Contract Documents with respect to financial strength, resources available, and experience; and (2) its integrity and trustworthiness to complete performance of the Work in accordance with the Contract Documents.

The Agency will make its determination of responsibility based upon information submitted by the Bidder contained in the Bid Forms and interviews with previous agencies, clients, design professionals, or subcontractors with whom the Bidder has worked.

The Agency in its absolute discretion reserves the right to reject any or all bids, and to waive any informalities or minor irregularities in any Bid. The Agency may require Bidders to submit additional or clarifying information. A bid shall not be binding upon the Agency until after the Contract is signed by both the Contractor and the Agency and delivered to the Bidder by the Agency's authorized representative.

20. DISQUALIFICATION OF BIDDERS

There are several reasons that the Agency may disqualify a Bidder. Some of the more common reasons Bidders are disqualified include, but are not limited to:

- a) Bidder submits or has a financial interest in more than one bid. However, a person, firm, corporation or other entity that has submitted a proposal to a Bidder, or that has quoted prices of materials to a Bidder, is not thereby disqualified from submitting a proposal or quoting prices to other Bidders submitting a bid to the Agency. No person, firm, corporation, or other entity may submit a proposal to a Bidder, or quote prices of materials to a Bidder, when also submitting a prime bid for the Work.
- b) Submittal of unbalanced bids in which the prices for some items are out of proportion to the prices for other items of work.
- c) Lack of responsibility as shown by past work judged from the standpoint of workmanship and progress.
- d) Uncompleted projects of similar scope and size or poor safety record, which, in the judgment of the Agency, might hinder or prevent the prompt completion of additional work if awarded.
- e) For being in arrears on existing contracts, history of claims, in litigation with the Agency, or having defaulted on a previous contract.
- f) Lack of competency as revealed by the financial statements or statements of experience, plant, and equipment.

MENIFEE LAZY CREEK COMMUNITY CENTER

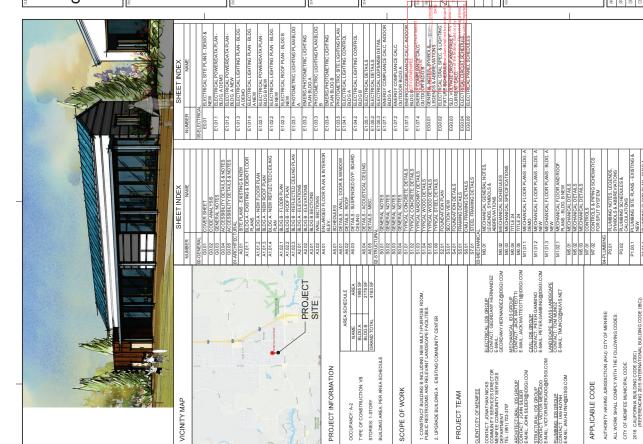
26480 LAZY CREEK ROAD, MENIFEE, CA 92586

LEGEND - SYMBOLS

ABBREVIATIONS

WORK POINT, CONTROL POINT, DATUM POINT OF START POINT FOR LAYING OUT CEILING GRID

TOP OF CONCRETE OR CURB ABOVE REFERENCE GRADE OR FLOOR LEVEL TOP OF WALL ABOVE REFERENCE GRADE OR FLOOR LEVE



CITY OF MENIFEE

29844 HAUN RD, MENIFEE, CA 92586

MENIFEE LAZY

CREEK COMMUNITY CENTER

26480 LAZY CREEK ROAD MENIFEE, CA 92586

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1 PETERS CANYON ROAD, SUITE 13 IRVINE, CA, 92606 IEL: 949-387-8500, FAX: 949-387-090 IDS GROUP

Approved EsGI

COVER SHEET

G0.01

2016 CALIFORNIA EXISTING BUILDING CODE (REFERENCING 2015 INTERNATIONAL EXISTING BUILDING CODE (ICC))

CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS

2016 CALIFORNIA GREEN BUILDING STANDARDS CODE 2016 CALIFORNIA BUILDING ENERGY EFFICIENCY STAN

2016 CALIFORNIA PLUMBING CODE (CPC) (REFERENCING 2015 UNIFORM PLUMBING CODE (IAPMO) 2016 CALIFORNIA ELECTRICAL CODE (CEC) (REFERENCING 2017 NATIONAL ELECTRICAL CODE (NFPA

> RED CURBING FOR FIRE LANE SIAMESE CONNECTION

SURFACE-MOUNTED FIRE EXTINGUISHER W/ 2A-(08:C (U.N.O.)

FIRE SPRINKLER HEAD

WINDOW TYPES REFER TO WINDOW SCHEDUL

KEY NOTE REFERENCE, REFER TO SAME OR REFERENCED DRAWING

<u>‡</u>

EXTERIOR ELEVATION REFERENCE

a101) — ELEVATION NUMBER

DETAIL REFERENCE

T DETAIL NUMBER

A101

SHEET WHERE DRAWN

A101) --- SHEET WHERE DRAW

INTERIOR ELEVATION REFERE

-ELEVATION NUMBER

DOOR TYPES REFER TO DOOR SCHEDULI

COMPONENT SYMBOLS LEGEND PARTITION & WALL TYPES

FIRE PROTECTION

2016 CALIFORNIA MECHANICAL CODE (CMC) (REFERENCING 2015 UNIFORM MECHANICAL CODE

AND ANY APPLICABLE FEDERAL, STATE CODES AND LOCAL ORDINANCES

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FIBROUS INSULATION

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			SWITCHBOARD SWITCH GEAR	SYSTEM TEMPORARY	TELEPHONE	THE RIAD STAT TELEPHONE TERMINAL BACKBOARD	TELEPHONE TERANAL CABNET	I WICH BUILDING CODE	UNDERWRITERS LABORATORY	VOLT OR VOLTAGE	VOLT AMPERE	WEAR PROOF	WATT, WIFE	WITHSTAND CURRENT MAINS U.L. LISTED WEATHERPROOF, NEWASR	TRANSFORMER																																																		
			SWBD	SNS	TBLE	T-STAT	TIC.	UBC .	3 3		\$ 9		3 3	W WCK	XFMR																																																		
		STANDARD ABBREVIATIONS	AMP GRE ABOVE FINISHED FLOOR	ARCFAULT, AMP FUSE ABOVE FINISHED GRADE	AMPERE INTERRUPTING CAPACITY ALLMINIM		AMERICAN WIRE GAUGE BULDING	0 0	CIRCUIT BREAKER	CELING	CONDUITONLY	COPPER	TO DEMOUTION / DEMOUSH	DISCONNECT	DRAWING	ELECTRICAL	ELEVATOR	ELECTRICAL METALLIC TUBING	T EXSTING	FIXTURE FLEXIBLE METALLIC CONDUIT (STEB.)	t FLUORESCENT	GROUND FAULT CIRCUIT INTERRUPTER	GROUND	HEATING, VENTILATING & AR COND.	INTERNATIONAL BULDING CODE INTERMEDIATE METAL CONDUIT	INCH(ES)	INTERNATIONAL RESIDENTIAL CODE SHORT CROUF AMPERES	X JUNCTION BOX	ICM THOUSAND CIRCULAR MLS	KILOWATT	LIGHTING	ž	MECHANCAL	MAIN LUGS ONLY	MOUNTED UNDERGROUND PULL SECTION	NORMALLY CLOSED	NATIONAL BLECTRICAL CODE	NATIONAL BLECTRICAL CONTRACTOR'S AS SOCIATION	NATIONAL BLECTRICAL MANUFACTURERS ASSOCIATION	NBJTRAL	NATIONAL FRE CODE NON-FUSIBLE	NOT IN CONTRACT	NOT TO SCALE	OVERHEAD OVERHEAD	POLE	PHASE	PANEL POLE POWER	PV PHOTOVOLTMC	POWER	GUANITY P RECEPTACLE	RIGID STEEL CONDUIT	RBLOCATED D SCHEDULE	SECTION	SOLD NEUTRAL	SHUNT TRP	SWILCH									
		STA	A AFF	<i>₩</i>	WC 7	ર શ	M/VG BLDG	0 0	CB	CIG CKT	CO, EC	OC COMM	MBQ(Q)	DISC.	DWG	BLECT	B BEV	EMI	(E)EXIS	FKT FEX	FLUOR	F 59	GND H	HWC	DB 078	z	BC BC	JB, J-BOX	KCML, M	¥ &	LTG XMX	MCB	MECH.	MLO	MTD UGPS	2	NEC	NECA	NBWA	NBUT	N NFC	NC	NTS	OCP	۵. 8	E E	ž &	ž i	PWR	RECE	RSC	(R) SCHE	® &c⊥	8 8 S	15.0	Ē.									
	SEND	¥.	SINGLE RECEPTACLE, NEMA 5208, 204, 235V PAIDS EV BEYERT AND READ ON A 198V	CONTROL OF THE SECOND SAN SAN 130 CONTROL OF THE SECOND SAN TO SA	GFCI DUPLEX RECEPTAQLE, NEMA 6-20R, 20A, 125V, +42* AF FOR ABOVE BACK SPASH.	DOUBLE DUPLEX RECEPTACLE, NBAA 6-208, 204, 125V DUIN.EX RECEPTACLE / HALF.SWITGHED		GFCI RECEPTACLE, ABOVE COUNTER, BACK SPLASH CODY/ULD INDOORS OLITHIC TOWNS OF MATERIAL		ALTHORY JURY OF WORD DUPLEX RECEPTACLE NEMA 5-20R, 20A, 125V	DUPLEX RECEPT ACLE, MOUNTED FLUSH IN FLOOR BOX WITH BITTINGS, PROVIDE BATTING AS BEIGHED, "PP DESCRAMTS."	PEDESTAL TYPE	FLOOR OUTLET W DEWCE AS INDICATED COMBINATION FLOOR OUTLET W DEWCES AS INDICATED					PULLBOX - EXTERIOR OR INTERIOR AS INDICATED	TELEPHONE TERMINAL CABINETAT+72*TO TOP TELEPHONE BACKBOARD	PANELBO ARD - SURFICE MOUNT	PANELBOARD - FLUSHMOUNT SMITCHBOARD OR DISTRIBUTION BOARD		NON-FUSED DISCONNECT SMITCH ELICED FROM MILE OF BALLYOL	MOTOR CONTROLLER OR STARTER	COMBINATION CONTROLLERDISCONNECT SWITCH	VENDOR FLENISHED COMBINATION CONTROLLER/DIS CONNECT SMITCH	REMOTE BATTERY AS NOTES.	AUXILINRY DATA FRAIAE AFG DUPLEX RECEPT ACLE	AFCI DUPLEX RECEPTACLE / HALF-SWITCHED	Living	SINGLE LINE	CIRCUIT BREAKER		FUSED DISCONNECT SMITCH	SWITCH CONTRACTOR	SUNGE SUPPRESSOR CURRENT TRANSFORMER	POTENTIAL TRANSFORMER	GROUNDING BLECTRODE POWER METER	MOTOR	GENERATOR SHUNT TRIP	GROUND FAULT INTERRUPT	TRANSFER SMITCH CONTACT MORMALLY OPEN	CONTACT (NORMALLY CLOSED)	TIME SWILGH CONTROL SWILGH	PUSH BUTTON	9	CONDUIT ROUTED UNDERFLOOR / UNDERFCROUND	MACEWAY IN CELLING ON CONCEALED IN WALLS. RACEWAY TURNED UP	RACEMAY TURNED DOWN HOMERUN TO PAMELBOARD 34YC W34Y2 CONDUCTORS UNO	CONDUIT CAP-OFF	CONDUIT SEAL WITENOUTS COMPOUND SEALWIT. 34" BAT RACEWAY, AINDICATES CONDUCTOR SIZE.	MINEUTRAL HOT, GROUND N 344* U.N.O. LOW NOLTAGE WIRNO	4 44 7 41 7 40 41 7 4 40 7 4 4 7 4 7	CODES AND STANDARDS 20% CALFORNA ADMINISTRATIVE CODE (CAC)	PART 1, TITLE 24, CALF CRINA CODE OF REGULATIONS (CCR) 20% CALFORNA BULDING CODE (CBC)	PART 2. TITLE 34, CALPORNA, CODE, OF REGULATIONS (CCR.) 20% CALFORNALECTRICAL CODE (CEC.)	PART 3. TITLE 24, CALFORNA CODE OF REGULATIONS (CCR.) 20% CALFORNA MECHANICA, CODE (CMC.)	PART 4. TITLE 34, CALFORNA CODE OF REGULATIONS (CCR) • 2016 CALIFORNIA PLUMBING CODE (CPC)	MART 5, TITLE 34, CALFORMA CODE OF REGULATIONS (CCR) - 2016 CALIFORNIA ENERGY CODE (CCR) PART 6 TITLE 37, CALFORMA CODE (CF)	20% CALFORNA FIRE CODE (CFG) PART 9, TITLE 31, CALFORNA, CODE OF REGULATIONS (CCR)	 20 90 CALFORNA GREEN BUILDING CODE (CGBC)) PART 11, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR) 	2016 NEPA 72.98.11 1000 000 000 000 000 000 000 000	CMC, CEC, CPC AND 2016 BULDING BNERGY ODDE.		
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	ELECTRICAL LEGEND	97	LINE AR FLUORESCENT FIXTURE	LNEAR FLUORESCENT FIXTURE SUSPENDED LINEAR FLUORESCENT FIXTURE	FLUCRES GENT WALL MOUNT FIXTURE LINEAR FLUCRESCENT STRP FIXTURE	LIGHT FIXTURE - RECESSED OR SURFACE	PENDANT FIXTURE WALL MOUNTED LIGHT FIXTURE	WALLSCONCE	WALL WASHER LETTERREFERS TO FIXTURE TYPE	MONO-POINT LIGHT FIXTURE	PARKING LOTP OLE MOUNTED LIGHT FIXTURE	BOLLARD LIGHT FIXTURE	EXIT SIGN - CELLING MOUNTED EXIT SIGN - WALL MOUNTED	EXIT SIGN - W/ARROWS INDICATE DIRECTION	BABRIGENCY BATTERY UNIT WITH HEADS FIXTURE W/FMERCENCY BATTERY OR GENERATOR	SINGLE POLE SMITCH, 20A, 120277V	TWO POLE SWITCH, 20A, 20/27/V	FOUR-WAY SWITCH, 20A, 120/277V	DMMBR SWIEGH, MN. 2000W, 12027W up bytechnoring quarter und the pass	OVERLOAD PROTECTION	CONTROLLED DISCUSSION OF SAME ANSWER	PUSHBUTTON CONTROL STATION	OCCUPANCY MACANCY SENSOR - CELLING	OCCUPANCY SENSOR WORMARD WALL MOUNTED	TRASH CHUTES	LIGHTING CONTACTOR	TIME CLOCK	WALL WASHLIGHT FIXTURE	CBLNG OCCUPANCY SENSOR JOW VOLTAGE DAM, TECHNOLOGY			THERMOSTATOUTLET AT +64" (HVAC UNIT DESIGNATION	ENCLO SED CIRCUIT BRE MER	RELAY TMESWICH	CONTACTOR	TRANSFORMER ALITOMATIC TRANSFER SWITCH	AUTOMATIC TRANSPERSWITCH T.B.EPHONE OUTLET AT *13*	DATA OUTLET AT +18"	TO MAIN TO THE TO THE TO THE TAIL TO THE TAIL TO THE TAIL	TELEDATA OUTLET ABONE COUNTER	DATA GUILLET ABOVE COUNTBY FLUSHFLOOR BOX WITH COMBINATION TELEDATA	TELEVISIONOUTLET	FEEVISION CAMERA (CCTV)	CARD READER - 4" SQUARE LUNCTION BOX (+ 48" AFF) W 34" C.O.STUP-UP IMTP AN	ACCESSIBLE CELLING SPACE. DEVICE AND CABLING BY OTHERS.	PROXIMITY READER - 4" SQUARE JUNCTION BOX (+ 48" AFFI WAY CO, CYTOP - UP INT PA NACCESSBUE	CELING SPACE, DEVICE AND CABLING BY OTHERS. KNOX BOX - COORDINATE EXACT LOCATIONS WITH	FRE DEPARTMENT.	T AMPER SWITCH SALVAGE TOT TOTATOR	FRESMOVE DAMPER	CARBON MONOXIDE DETECTOR (SPECIFIED BY MECHANICAL ENGINEER)	DUCT MOUNTED SMOKE DETECTOR. HEAT DETECTOR	SPEAKER, CBLING OR WALL MOUNTED DOORHOLD OPEN	COMBNATION DATA / POWER / AUDIO. VISUAL FLISH FLOOR BOX WIREMOLD	OMNIBOX SERIES FLOOR BOX M80S3 CONTROL STATION	COMBINATION DOOR BELL/STROBE + 32" AFF COMPLETE WITH LY TRANSFORMER	PUSH BUTTONFOR DOOR BELL + 48" AFF	NOTE: FORPHONE AND DATA OUTLETS PROVIDE ONE (1) ALF.CO. RUSE NU WALL WITH PULSTRING TO ACESSBLE CRILINGS SPACE.	MISCELLANEOUS			DIASPAM TAG REVISION SYMBOL		SCHEDGER TAG	
		LIGHTING			<u> </u>	0 1	⊕ Q	۵	o	8 0	□ ₽	0 (8 &	đ	1	s	ທິບ	ກິທັ	ທິທ	ī v	s ú	i On	ه 😑	ກິທີ	5	9	<u> </u>	② ♀	3	VIVOIO	SIGNAL	Θ		e g	<u></u>	- 6] ▼	∨ '	* *	* .	₩	Ē [3 8			E	Α		•♦€	0	8	(⊚≣	A (Q)	8	ě	ē	3/4°C.O.R CELINGS	MISCE			•	10	(€)	
		8		31	8i			33. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REMEW OF THE FOLLOWING EQUIPMENT.	e 10	C. DY PROLUMENT THE CHICKES, CHICAL I PRE-PARTS AND TO BE INCLUDING THE CLIPTERT THE CLIPTES. L. CHITING FIXTURES: INDOORACUTDOOR AS SPECIFIED, PHOTOMETRIC	1. PERFORMANCE DATA AND LAMPS. DEVICES, SWITCHES, PECEPTACLES, MOTOR CONTROLLERS AND h. DEVICE PLATES.	LEE SAFTYFINE ALARM SYSTEM: CONTROL PANEL, ANNUNCIATOR PANEL, INTINITION AND NOTIFICATION DEVICES AND MACES, SYSTEM WIREWS, SY		34. EQUIPMENT ELECTRICAL TERMINATIONS TO UNDERSO A TORQUE TEST, ELECTRICAL CONTRACTOR IS RESPONSELE FOR MANUFACTURENS RECOMMENDED TORQUE DOCUMENTATION AND TOY OF DESCRIPINATIONS TO DESCRIPINATIONS.	UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NECARTICLE 230-8	36. PLOOR MOUNTED BLECTRICAL EQUIPMENT SHALL BE MOUNTED ON A 4" HIGH CONCRETE PAD.	INSTALL TRANSFORMER FOLLOWING MANUFACTURER'S RECOMMENDATIONS FOLL ARANGES.	COORDINATE ELECTRICAL REQUIREMENTS FOR PLUMBING AND MECHANICAL EQUIPMENT WITH THE PINK CONTRACTIONS RELECTION. THE CONTRACTION SHALL SEE DECONNECTS BASED UPON CAPAIN SIGNATURE DECONNECTS BASED UPON CAPAIN SIGNATURE SIGNAT	MANUFACTURER RECOMMENDATIONS AND U.L. LISTING REQUIREMENTS.	39. PROVINE IN TWO CONDUCTORS PLAD A PREMIUE, LAD REMACH CHICLE IS CLONGER TIME OF AND A MAD CONDUCTORS FOR 20 MAPRIEE, 23TV BRANCH CRICLIES CONGER THAN 200. PROVIDE 10 M/H CONDUCTORS FOR 20 MAPRIEE, 27TV BRANCH CRICLIES CONGER THAN 200.			SHEET INDEX	-	SHEET INDEX SHEET NAME SHEET NAME	E001 GENERAL NOTES, SYMBOLS, LEGENDS & ABBREMATIONS	E002 BLEC E003 SLD./	E004 BLECTRICAL CIRCUIT SCHEDUL E006 BLECTRICAL PANEL SCHEDULB E1003 BLECTRICAL SITE PLAN - DEMO		E 1013 B. ECTRICAL POWIENZIA TA PLAN - B.DG. A NEW E 1014 B. ECTRICAL LICHTING PLAN - B.DG. A NEW	E 102.1 BLC: POWERDATA PLANS - BLDG. B NEW E 102.2 BLC/TRICAL LICHTING PLAN - BLDG. B NEW	E1023 BECINCALNOS PARS E1033 PHOTOMETRIC LIGHTING PI PARS DECINCAL	_	TRC SITE LIGHT	E 1042 B.ECTRCALLICHTING CONTR E 1051 B.ECTRCAL DETALS	E1052 BLECTRICALD E1053 BLECTRICALD E1071 BNEBGY COM	E1072 E1072	E1074 ENERGY COM	OF			99	×.		*	25					۵														
	GENERAL ELECTRICAL NOTES	2. If IS THE INTENT OF THE REPRAYMENCES AND SPECIFICATIONS OF STRAIGHT A STANDARD OF	UJALIT, THE ENGINEER PRESENTED IN THE MAIN TO ALLOW A THE METHODS AND WITH HEAVES NOT THE RECORDER THE STANDARDS OF A SHALL BE RESPONSIBLE TO RECORD STANDARD S	BEGINNING THE PROJECT: CONTRACT DOCUMENT THE MISONS TO ACCOMMODATE INSTALLED CONDITIONS WITHOUT PROR APPROVIL, WILL RESULT IN ADDITIONAL DESIGN CHARGES TO THE CONTRACTOR.	 BLECTRICAL WORK SHALL BE PERFORMED IN A WORMANLINE MANNERIN ACCORDANCE WITH THE MICKLINSTALLATION STANDARDS TO THE SATISFACTION OF THE ARCHITECT AND PARAMER 	4. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE CURRENTLY ACCEPTED EDITION	G. PELCTRICAL SYSTEM COMPONENTS SHALL BE LISTED OR LABLED BY LL OR OTHER 6. BECTRICAL SYSTEM COMPONENTS SHALL BE LISTED OR LABLED BY LL OR OTHER	RECOGNIZED TESTING FACILITY AS ALLOWED BY AUTHORITY MANNG JURISDICTION 6. WHERE AN APPARENT DISCREPANCY EXISTS BETWEEN THE REQUIREMENTS OF THE GENERAL.	NOTES AND INFORMATION PORTRAYED IN THE BLECTRICAL DRAWINGS, THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF THE GREATER QUALITY OR QUANTITY.	7. CONTRACTOR SHALL WIST JOB SITE PRORTO BD AND VERIEY EXISTING CONDITIONS. CONTRACTOR SHALL INCLUDE IN BASE BID COSTS REQUIRED FOR PERMITS AND INSPECTIONS.	8. CONTRACTOR SHALL VERIFY, WITH OWNER'S REPRESENT ATIVE PRIOR TO SUBMITTING BD. ALLOWARE E WORKING HOURS, BARLONE E PARKING AREAS, MATERIAL DELIVERY, STORAGE	REQUIREMENTS, DEMOLTTON AND REMOVAL, OF CONSTRUCTION DEBIES, AS WELL AS DALLY QLEAN UP REQUIREMENTS, INCLUDE COSTS IN BIDE FOR DUST SHARBIES, DUMPSTERS ETC. AS REQUIRED FOR THE DUMP, TOX OF THE PROJECT, PERFORM WORK AS DRECTED BY OWNERS.	REPRESENTATIVE AND ARCHTECT. a protonal evertuals about the treaton and proton propositives in treats guinning that winds	 ELECTRICALS YS I BARS SHALLES. ISS I ED FOR PROPER OF BALLIAN I PLES I S SHOW I HALL WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE NECESSARY CORRECTIONS. 	 ONTINICIOR SHALL GUARANTEE WORK AGAINST DEFECTS IN MATERIALS AND WORKNAMENEN WHICHMAN OCQUE UNGER NO RAAL LUIS FOR A PERIOD OF ONE YEAR AFTER OWNER IS ACCEPTANCE DIFFECTS SAALI RE REMOMEN Y CORRECTED BY CONTRACTOR WITHOUT 	ADDITIONAL CHARGE TO OWNER.	AND ELVCE LOCATIONS DIMENSIONED FROM PERMANENT LANDMANKS SUCH AS BUILDING WALLS.	12. DO NOT SCALE ELECTRICAL DRAWINGS. VERIFY EXACT LOCATION OF ALL DRIVERS, JUNCTION BOXIES, LIGHTNG PIXTURES, WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS PROR TC	NSTALLATION CONTRACTOR SHALL VEHEY THE EXACT LOCATON OF MECHANICAL EQUIPMENT AND OTHER EQUIPMENT REVOIRING A ESCRIBACAL CONNECTION PRIOR TO ROUGHNE EVERY CONTRACT HEROPE A MANING AND DESIGN CONTRACT BY THE FOREIGN ANNING AND DESIGN.	DRAWINGS, COORDINATE, WITH CABNET SHOP DRAWINGS TO ENSURE PROPER HEIGHT AND LOCATION WITH RESPECT TO MALWORK, EQUIPMENT.	 THE SE DRAWINGS INDICATE THE FINISHED REQUIREMENT S FOR THE BLECTRICAL SYSTEMS. EQUIPMENT, LIGHTING FIXTURES, QUITETS AND DEVICES, DUE TO STRUCTURAL CONDITIONS. 	MECHANICAL LUCCI, PINNOS CONFLICTS, CK OTHER LEGSISMATE REASONS, THE CONTINCTOR MAY DESTRET ON NSTALL THE WORK INDOCATED INA MANNER DEFERRAT FROM THAT SHOWN SUCH CHANGES MALLE BY PRESIDENT TO THE OWNERS BY PRESIDENT ROWN AND	APPROVILE PROFIT TO PROCEEDING UPON APPROVIL, THE WORK SHALL BE PERFORMED AND THE MABIL TO AVAILABLY THE WORK AS ACTURATELY REFLECT THE WORK AS ACTURAL TO NOT HE TO A COURTELY REFLECT THE WORK AS	14. RACEWAY SYSTEMS ARE SHOWN DIAGRAMMATCALLY. ACTUAL LOCATION AND ROUTING SHALL	15. PROVIDE DEDICATED NEUTRACTOR TO SUIT FIELD CONDUCTORS MAY BE	COMBINED INTO CAME CONDUIT NO RACEMAY OR CABLE SHALL CONTAIN MARKE THAN NINE (9) CURRENT CARRYING CONDUCTORS, WHERE MALTIPLE CONDUCTORS IN EXCESS OF THREE (3) ARE INDICATED ON THESE DRAWINGS. THE YAME BEEN DERATED AS REQUIRED BY NIC	ARTICLE 310 RECURENENTS.	10. WHERE ALLOYRU, MICKARE AND HE ROWINDED TO FORCE AND HERE MULLIPLE CARLES ARE ROUTED ALLACOUT TO BICKHOTTER (BINDLED). AMMIMJIM SEPARATION OF ONE (1) CARLE DIMMETER (JARGEST) SHALL BE RECUIRED.	17. PLASTIC CABLE TIES SHALL NOT BE USED AS AMEANS OF SUPPORT FORMIC CABLE. USE CAN'Y APPROVED CARE ESTIPPO CATS DER CARE E MANIFACTIREES INSTALLATION REQUIREMENTS.	18. IACENIA'S SAUL EL INSTALED CONCEALED IN CAU OR OTHER WALLI WHENEVER POSSBILE. AS CRIMINO BACKLE EN EVENOUED SAUL BE DATIETA OUT OR OTHER WALLI WALLI FOR LITTURE.	POSSIBLE RACEWAYS SHALL BE RUNPARALLE. WITH, OR AT ROHTANGE TO WALLS.	 PROVIDE RAPPROVEDE EXPANSION PITTINGS WHERE RAZEWAYS CROSS BAILDING EXPANSION JOINTS, PROVIDE BONDING JUMPER(S) SIZED PER CODE WHERE REQUIRED. PROVIDE FITTINGS REQUIRED FOR A COMPLETE NSTALLATION REFER TO APPLIED THAT DAMMICS FOR 	EXPANSION JOINT LOCATION(5).	20. MINIMAIN PACENAY SE SHALLE HE TO A MINIMAIN POWER NEATED SHALLEE SHI HINDAM CONDUCTOR SEES SHALL BE AT 2 MINI UN OI TYPICAL POWER RELATED CONDUITS SHALL HAVE A CODE SEE GROUND WIFE INSTALLED IN EACH RUIN.	21. CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL EMPTY CONDUITS. WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX, THE CONTRACTOR SHALL INFINITY EACH CONDUIT	AND JUNCTON BOX IN A MANNER ALLOWING IDENTFICATION AFTER WALL FINISHES HAVE BEEN APLED.	22. CONTRACTOR SHALL PROVDE RACEMAN SYSTEMS INDICATED ON THE DRAWING PER NEC PEQUIREMENTS AND GENERAL NOTES. ANY DEVIATION PROM THE WIRNO METHODS NDICATED.	SHALL BE ALLOHED ONLY BY SPECIFIC WRITTEN APPROVAL FROM ETHER THE ARCHITECT, BECKNERE OF CHANNER, COPYRINGLYCHES BO SHALL INCLUDE COSTS FOR RACING MAY SYSTERS AS CORDINATED THE MADERIAL FOR AN ATTENAMINE MEDING METHOD RETURNED.	OBTAINED FROM EITHER THE JACHTECT, ENGINEER OR OWNER AND IS SUBMITTED AS PART C CONTRACTOR'S FORMAL BD PROPOSAL.	23. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT SIZE AND NISTALLATION OF OUTLET. PULL AND JUNCTION BOXES IN ACCORDANCE WITH NEC 314-9; BOXES SHALL BE MINIMARM 4*	SOLATE BY 1-1/2 DE POR AS INDICATED ON THE DRAWINGS. BOXES SHALL BE RECESSED WITH CONER PLATE TO SUIT THE INTENDED APPLICATION.	 REFER TO THE ARCHITECTURAL REFLECTED CELLING PLAN'S) FOR EXACT LOCATION OF CELLING MOUNTED LIGHTING PRIVILES ARCHITECTURAL DRAWINGS SHALL GOVERNIN CASE OF CONFLICT WITH THESE DRAWINGS. 	25. PRIOR TO NSTALLATION, CONTRACTOR SHALL PENEW THE COMPLETE SETOF CONSTRUCTOR PROCESSOR ON STALLATION CONTRACTOR SHALL RESPRESSOR OF TO CONTRACTOR SHALL BE RESPONSED FOR	CO ORDINA TE WORK WITH OTHER TRADES TO AVOID CONFLICT DURING INSTALLATION. NO PITING TORS SHALL MANE MINOR ADJUSTMENTS IN EQUPMENT LOCATION AND ROUTING AS NO STORS ALEY.	26. CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY CUT AND PATCH EXSTING CONSTRUCTION AS REQUIRED TO INSTALL NEW BLECTRICAL WORK PATCHING SHALL BE OF THE	SAME MATERIALS, WORKLANSHIP AND FINSH AS THE EXSTING WORK AND SHALL ACCURATEL MATCH SURROUNDING WORK TO THE SATISFACTION OF THE ARCHTEGT.	27. BECTRICAL EQUIPMENT SHALL HAVE SUFFICIENT GUTTER SPACE, AND LUGS TO ACCOUNT A NO SUFFICIENT GOVERNOOMED, CONTRACTORS SHALL BROADER ON BIBET ON BEST ON BES	PYOUND ENGINEERY WITH OVERSAZEDEINGLOSUNES WHERE REGUNEER AND HAVE 28. NEW PARE BOARDS AND SWITCHBOARDS SHALL BE OF THE SAME IMMUFACTURER AND HAVE	29. PROVIDE TYPE WRITTEN UPDATE DAREL DIRECTORY TO BE MOUNTED ON INSIDE OF PARIL. TYPE OF STATES DIRECTORY SALE HERE ECT MATITIONS OR AND INSTANCES TO EXSTEND.	PARELS AND SHALL REFLECT ACTUAL "ASBUILT" CONDITIONS. 30 VERBEY DRIVER CCC CR AND MICHINING CRIENTATION VIRBITION CR HORSZONTALL MITH.	ACHITE CTURAL AND INTERIOR DISSON DRAWINGS PRIOR TO ORDERING ANY EQUIPMENT AND PROVIDE DRAWS AS REQUIRED. UNLESS NOTED OTHERWISE, DEVICES AND DEVICE PLATES SHALL BE WHITE N CCL.OR.														
	GENERAL ELECTR	2. If IS THE INTENT OF THE	NOT REFLECTED HEREI BOGINEER WANTE THE	DEG NATIONS THE PROJECT ON THE CONTRACTOR.	3. BLECTRICAL WORK SHA THE NECA INSTALLATIO PACINFFE	4. WORK, MATERALS AND	5. BLECTRICAL SYSTEM OX	RECOGNIZED TESTING 6. WHERE AN APPARENT	NOTES AND INFORMATION SHALL INCLUDE IN HIS E	7. CONTRACTOR SHALL VI CONTRACTOR SHALL IN	8. CONTRACTOR SHALL VE ALLOWABLE WORKING	AEQUIREMENTS, DEMO QLEAN UP REQUIREMEN REQUIRED FOR THE DU	REPRESENTATIVE AND	9. BEECHICAL STSTEMS: IS DEFECTIVE, CONTRA	10. OONTRACTOR SHALL G WHICHMAY OCCUR UN	ADDITIONAL CHARGE TO	AND DEVICE LOCATIONS WALLS.	12. DO NOT SCALE ELECTR BOXES, LIGHTING FIXTU	NSTALLATION, CONTRA AND OTHER EQUIPMEN CUTTET HEIGHT SHALL	DRAWINGS. COOPDINAT LOCATION WITH RESPE	13. THE SE DRAWINGS INDIC EQUIPMENT, LIGHTING F	MAY DESIRE TO INSTALL SUCH CHANGES SHALL	APPROVAL PRIOR TO PR THE AS-BUILTDRAWING ACTUAL Y NOTAL ED	14. RACEWAY SYSTEMS AR	15. PROVIDE DEDICATED N	OOMBNED INTO ONE OC CURRENT CARRYING CO ARE INDICATED ON THE	ARTICLE 310 REGUIREM	OABLES ARE ROUTEDA (1) CABLE DIAMETER (J.	17. PLASTIC CABLE TIES SH APPROVED CARLE SUPP	18. RACEWAYS SHALL BE IN	POSSIBLE RACEWAYS	19. PROVIDE APPROVEDED JOINTS: PROVIDE BOND REQUIRED FOR A COMF	DP ANSION JOINT LOCA	20. MANIMUM HACEWAY SEZ CONDUCTOR SIZE SHAL A CODE SIZE GROUNDY	21. CONTRACTOR SHALL PI CONDUIT TERMINATES	AND JUNCTION BOX IN A APPLED.	22. CONTRACTOR SHALL PI REQUIREMENTS AND GR	SHALL BE ALLOWED ON ENGINEER OR OWNER.	OBTAINED FROM EITHE CONTRACTOR'S FORM	23. CONTRACTOR SHALL BI PULL AND JUNCTION BC	SQUARE BY 1-1/2 DEEP WITH COVER PLATE TO	24. REFER TO THE ARCHITE MOUNTED LIGHTING FIX CONFLICT WITH THESE	26. PRIOR TO NSTALLATION	COORDINATE WORK WE CONTRACTOR SHALL M NECESSARY	26. CONTRACTOR SHALL BI CONSTRUCTONAS REC	SAME MATERIALS, WOR MATCH SURROUNDING	27. BLECTRICAL EQUIPMEN ACCOMMODATE QUANT	28. NEW PANEL BOARDS AN	29. PROVDE TYPE WRITTED DOOR ONERS INBECT	20 VERIEY DEVICE COLOR	ARCHITECTURAL ANDIN PROVIDE DEVICES AS R SHALL BE WHITE IN COL										_				

CITY OF MENIFEE

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GENERAL NOTES, SYMBOLS, LEGENDS & ABBREVIATIONS

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1. THE CONTRACTOR SHALL INST ALL A VISUAL BARROLES CONSTRUCTION SITES FOR VERTICAL CONSTRUCTION SITES FOR VERTICAL CONSTRUCTION OF THE SUBMITTED TO ARCHITECT AS A CONTRACTOR SUBMITTAL MIN VERSIES SITES OF THE COMMANITY DEVELOPMENT DEPARTMENT.

10 COMPT OWNER OF THE CONTRACTOR SHALL BE RECURED TO COMPT WHITH SCORD ON THE STAR AND SHALL BE RECURED TO COMPT WHITH SCORD ON SHALL BE RECURED THE STAR SPOLLLANT BEISSONS SCORD ON THE AND SECURED THAT SHALL BE RECURED THAT SHALL BE RECURED THAT SHALL BE RECURED THAT SHALL BE SOND THE RECURED THAT SHALL BE SOND THAT FRESHOLD OF SUCH TOUST TO SEE SON THAT FRESHOLD ON SHALL BE RECURED THAT SHALL BE SHALL BE SHALL BE RECURED THAT SHALL BE SH

3. AGMIEDTRAL CENTRAL CANTHIGS ROCHIECTURAL COATINGS SHALL BE SELECTED SO THANTHE VOCADIES TO FINE COATINGS IS COMPARION WITH SCHOOL RECORD REAL FIRST THIS THIS REQUIREMENT SHALL BESIGNATIFED TO AGCHIECTARA COMPRACTOR SUBMITTAL MAD VERRIEDED BY THE COMPANY TO EVELCAMENT DEPARTMENT PROOR TO COATING WORK

4. COUNTMEMORY DEBLOG PROJECT OWN IN COUNTMEMORY OF COUNTMEMORY OF BEINGERING TO WORK TO CONSTRUCT ON THE COUNTMEMORY OF BEINGERING TO CONTRACT OR DURING CONSTRUCTION WHO TO BE INVESTIGATION OF THE CONTRACT OR DURING CONSTRUCTION OF THE CONTRACT OR DURING CONSTRUCTION OF THE CONTRACT OR THE CONTRACT O

S. MOIGE CREMEATING, POLICIT COMPRIENT THE MOURS OF ACTIVITIES SHALL I YARE PLACE BETYMERN THE MOURS OF TOO MANN BOO PON ON MAN YON, AND ARE NOT PREMITED ON SUNDAY'S OR A CITY-RECOGNAZED HOLDAY. THIS RECURREMENT BE INSECTION IS ENGINED.

6. CONTRALL WINDOW SEEBALES THAT ARE TESTED AND CREME TO THE WRENGE WHEN WE RETESTED AND CREME TO THE WINDOW SEEBALES WITH WITH WINDOWS SCHOOL ATTIMET AND ET OF THE WORN WINDOWS SCHOOL ATTIMET AND THE WAY HAVE TO WANT WE SCHOOL WINDOWS SCHOOL WINDOWS SCHOOL WINDOWS SCHOOL WINDOWS SCHOOL WEND WAY BE WENTED TO WAS THE WORN WINDOWS SCHOOL WEND WAS THE WAS THE WORN WINDOWS SCHOOL WINDOWS SCHOOL WEND THE WORN WINDOWS SCHOOL WIN

17 CONTROCKO TO GRANIE INCREASE, TO THE REQUESTED MANDOWINER THAT THE CILLLOWNER MOST STEEL SHEEL STEEL STEEL SHEEL SHEE

CUTTING AND PATCHAINS.

1-FE CONTINGATION SHALL IN THE WORK OF ALL TRACES.

FERFORM ALL CUTTING, FEATHORING, FERSTORING, RESTORING, AND

HES LIKE ALEKT SHARLY TO COMPLETE THE WORK AND IN

FESTOR AND PAMAGED OF PRECIDED SUBFACES RESULTING

FROM THE WORK OF THIS CONTINGATION THE MENDING THE OWNERS AND THE

COMMITTION TO THE SATISFACTION OF THE CONNERS AND THE

2 CONTRACTOR SHALL BE RESPONSBLE FOR ALL CUTING, FITTING, PATCHING, AND FRE SAFING METHODS REQUIRED TO OWNELTE HE WORK INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

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I. PROCEDURES FOR NON-STRUCTURAL CUTTING AND PATCHING:

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FIRE PROTECTION FOR NEW BULDING SHALL BE FROWDED STREAM COMPLETED AND STREAM ST CONTRACTOR GBLIGATIONS
1. CONTRACTOR FOR THE PROJECT SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED BUILDING PERMITS PRIOR TO

2 THE CONTRACTOR SHALL INSURE THAT ALL WORK IS DONE IN MEDICESSIONS. WORKAMALHICE ANNINER BY SKILLED MECHANICS AND SHALL REPLACE ANY NEW ANDONE RISTING METHANGE ANY MADONE RISTING METHANGEN BY SKILLED TO REMAIN DAMAGED BY ANY CAUSE DIGING CONSTRUCTION. FOR OBTAINING ALL COMMENCING WORK

ALE CORRECTORS SALL ADITOT TO EFFORM.

AE CONSISTERED USGOLIDAD, UNASATE, NOT WATERSPROOD, ON ANY WHICH ACCOUNTER, IT WORKED TO WATERSPROOD FOR WATER TRACE PROCEED. BY WORKED THAT IT HERE IS NO SHOWN THE ALE ALL ME THAT ALL AND THAT AND THAT ALL AND THAT AND THAT ALL AND THAT ALL AND THAT ALL AND THAT AND THAT AND THAT ALL AND THAT AND THAT ALL AND THAT 3. THE CONTRACTOR ANDORS BUBCONTREACT OR SHALL PPERON NONTRY THE CONVERS OF ANY WORK CALLED OUT OUT HE PORAWNES OR IN THE SPECIFICATIONS IN HIS TRADE THAT CAMANT BE LLU CAURANTEEO OR WARRANTED FROM DEFECTIVE WOORKANSHIP OR MATTERED OR WARRANTED FROM

CONTRACTOR SHALL BE RESPONDED. EXP. RAIL FINDINGS AN STRUCTURAL MANUEL STRUCTURAL MANUEL STRUCTURAL STRUCTURAL MANUEL STRUCTURAL STRUCTURAL MEDIANOLA, INSINES WILL STRUCTURAL MANUEL STRUCTURAL STRUCTURE AND STRUCTURAL STRUCTURE STRUCTUR

COORDINATOR TO GENERA, ADD. CACH SIG CONTRACTOR
SHALL BE RESPONSIBLE FOR HER FEATUR AND COORDINATION
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BOWNINGS AND SPECIFICATIONS, AND THE ACCUPANT,
BOWNINGS AND SPECIFICATIONS, AND THE ACCUPANT,
BELLOTION OF PROPERTING AND SPECIFICATIONS, BUILDING ELBERTST. THEIR RECURED DEFININGS
AND COORDINATED. WLESS OTHERWISE NOTED, ALL MATERIALS SHALL BE NEW WOOF GOOD OLAWITY WHERE EXISTING MATERIALS ARE NOTIONALLY OF SEALL MEANION SHALL INVENTORY. ACCURED SHALL NOTION SHALL INVENTORY SHALL SHALL SHALL SHALL SHALL INVENTORY SHALL SHALL

ACMINICACIÓN DE RESPONSABLE FOR COCRIDARAN FER VOINC OF L. TRADES AND FOR BEILDS WINGE OF LIN HER VOINC OF LAT THE SEA TO FREE BEILD WINGE OF WINT YOUNGE IN WINTIMS, WITHIN YOUNG OF ALMRO OF COATROCT, HE REPOSOBLE DELEMEN SENDELE CE ANN ECOLOMBERI. IN FINSHES OR MARTERAL, FOR WHOCH THAT SCHEDLE WILL FINSHES OR MARTERAL, FOR WHOCH THAT SCHEDLE WILL THE CHERCH THE WISTANTIAN PRODUBLE WILL THE OFFICE OF THE SCHEDLE WILL WILL THE OFFICE OF THE SCHEDLE WILL WILL

COORDINATION OF WORK:

3. PREMENTON OF THE ARTHOUSE ARTHOUSE AND ASSESSMENT WHICH PROPERTY OF SHALE BY RESTORATE THE ARTHOUSE AND ASSESSMENT WHITH CASE ARTHOUSE AND ASSESSMENT AND ASSESSMENT AND ASSESSMENT AND ASSESSMENT ASSESSMENT AS A FREE KINNED SHEED WICE OF TAKENDOWN 24 DEFENT OF SYSTEMS AND ASSESSMENT ASSES THE CONTIDUES ROBE AND TROPINE AND CORDANATTHE TEXT TO DIMESSESS SETS AND POSTITIONS OF ALLS SYETENS EQUIPMENT MOUNTED AND ATTACHERS RELLANGE TO THE WORK.

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TO RESENT MOUNTED AND THOUGH THE RELLANGE TO THE WORK AND THOUGH THE WORK AND THOUGH THE WORK AND THOUGH THE WORK AND THOUGH THE WORK AND THE THE RESENT TO THE INSTALLING OF THE POSTITIONS FOR SHEED MOSTITION OF SHEED AND THE WORK AND THE WO

B. THE CONTROLOGN HALL VERFOR ALL DIMENSIONS AND OF CONSTITUTIONS OF EXISTS THE PRINT TO BINAL PRESENT TO THE TO CONSTITUTIONS ON THE CONSTITUTION OF THE CONTROL ON THE PROPER EXECUTION OF ITS WORK. THE DRAWMINGS SHALL NOT BE SCALED.

10 ALL SYMBOLS AND ABBREVATTONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTOR TRADARDS. IF THE CONTRACTOR HAS DUEST TOORS REGARDING ABBREWATONS OF THE REACTOR HAS DUEST TOORS REGARDING ABBREWATONS OF THE REACTOR MACHINE TO SAML BE NOT FIED FOL CALARTICATION.

IT CONTRACTOR SHALL PROUGH AND BYEND AND ALL STETEMERS, BRACANG, BACK-UP PLYTES, AND SUPPORTING BRACKETS GRECHIED FOR PARTHERS MAIL SHOWS STARF MAIL MINS, TOLLE TACGESSORIES, PARETTHONS, AND OF ALL WHIN MAIL MINS, TOLLE TACGESSORIES, PARETTHONS, AND OF ALL WHIN MAIL MINS, TOLLE TACGESSORIES, PARETTHONS, AND OF ALL WHIN MAIL MAIL SHOWS TO BE SUPPORTED MECHANICAL, ELECTRICAL, OR MING, EQUIPMENT.

2. COMPREGOR SHALL VERBEY SIZES AND DAKES TO OWNER.

GLAZING 1. ALL GLAZING SHALL COMPLY WITH C.P.S.C. 16 C.F.R. AND

2. GLASS DOORS, ADJACENT PANELS AND ALL GLAZED OPENINGS SHALL BE APPROVED FOR MPACT HAZARD PER CB.C. SECTION 2406. PROVIDE IDENTIFICATION OF GLAZING PER SECTION 2406.2

3. PROVIDE TEMPERED GLASS AS REQUIRED BY C<u>BC SECTION</u> 2406 AND BY OTHER APPLICABLE CODES.

SIGNAGES

1. FURNISH AND INSTALL SUPPORTS AND OTHER NECESSARY FINISH MATERIALS FOR A COMPLETE SIGNAGE INSTALLATION.

THE STREAM AND SHALL CONDENDMENT ALL CONDENDME

1. THE MYRENGERS INSURPTION OF A STATE OF A

4. CONTRACTOR TO COORDINATE LOCATIONS OF ALL SPRINKLEH EACHY OF ALL CELLING FLANS, DUCT WORK, AND ELECTRICAL ENTIRE LAYOUT. AND FLORE OF TO FRANKINGS FOR ARCHITECTURAL FATUREL AND ARCHITECTURAL APPROVIA.

3. BUILDING AND SAFETY DEPARTMENT APPROVALS FOR FIRE SPRINKLER SYSTEMS SHALL BE OF STAME OF TO, INSTALLATION. THE FIRE SPRINKLER SYSTEM SHALL BE INSPECIED AND APPROVED PRIOR TO BUILDING PERMIT FINAL.

5. If SHALL BETTE RESPONSEILTY OF THE CONTRACTOR TO INSTILL PIPE A NEW LET HE RESPONSEILTY OF THE STREET HE SHALL SHALL

6. THE CONTRACTOR SHALL PROVIDE PORT ABLE FREE PETTING SHALL PROVIDE PORT OF THE BULDING ON HAMNS LUBBERS AS REQUIRED BY CODE AND ALLI PORTON HAMNS LUBBERS TO THE BULDING ON EACH FLOOR THESE EXTRACUSIONS APPROVED BY THE FIRE DEPARTMENT AND THE ARCHITECT.

7. WHERE TESTING LABORATORY DESIGN NUMBERS ARE LI FORF FIRE RATED CONSTRUCTION, THE COMPONENTS AND INSTALLATION DETAILS MUST CONFORM WITH THE DESIGN UNMBER SPECIFIED.

5. AN APPROVED SIGN SHALL BE LOCATED AT EACH FLOOR LEYEL LAWDING IN ALL ENCLOSED STRIKWAYS. THE SIGN SHALL INCLOSED STRIKWAYS. THE SIGN SHALL INCLOSE LEVEL, TERMINIS OF THE TOP AND BOTTOM OF THE STARKWAY, AND THE IDENTIFICATION OF THE STARKWAY. 4 EXT SIGNS SHALL BE POSTED OVER EXITS DOORS SERVING ON MADER AND ALL HAZAROOUS ARREAS, MINIMUM ETTER HEIGHT IS AND SHALL CONFORM WITH CBIC AND LOCAL CODES, CODE SERVICTION 1002, SEA MO LIFC SERVING 12TLAS, SEE ELECTRICAL PLANS FOR LOCATIONS AND PURTHER INFO. 3. AREA AND OCCUPANCY SIGNAGE REQUIREMENTS OCCUI LOAD SIGN SHALL LE FOSTED INE ACH MEETING ROOM, ASSEMBLY ROOM OR SIMILAR PURPOSE ROOM HAVING AN OCCUPANT LOAD OF 50 OR MORE.

LENTS OF THE PHYOTED OR IDE.

I. EXIT SOME SHALL BE OF THE PHYOTED OR IDE.

HINGEDSWINGING TYPE EXIT DOORS SHALL SWING IN THE

FINE STOT TO NO FEATT TRANEL WERN THE AREA SERVED HAS AN

OCCUPANT LOAD OF 50 ORMORE.

RACTO, SESSUBLY DEVENTATIONS

I. MECHANICAL DUTS, ETC. PREMETATION FINE RATED
CELINGS AND PIER WALLS, SETC. PREMETS, CHARLS, LICHAR, PARED
CORNERS, SEAL, RECORDOR, PARELS, LICHAR, SETC.
RECESSED INTO PIER RATED VALLS OF CHARLS, LICHAR, SETC.
COMPRIENTING AS RECORDED TO MAINTAIN THE INTEGRITY OF
THE FIRE PROTECTION.

2. FIRE RESISTIVE ASSEMBLIES FOR PROTECTION OF OPENINGS SHALL COMPLY WITH CBC CHAPTER 7.

2. EVERY EXIT DOOR SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ARY SPECIAL KNOWLEDGE OR EFFORT. NOTE ALSO THAT FLUSH BOLTS OR SUIFACE. BOLTS ARE PROHIBITED.

4. EXT SIGNS SHALL BE INSTALLED AT REQUIRED EXT DOORWAYS AND WHERE OTHERWISE NECESSARY TO CLEARLY NINICATE THE DRECTION OF EGRESS IN COMPLANCE WITH THE CODE OF JURISDICTION. 3. PANIC HARDWARE SHALL BE PROVIDED ON EXIT DOORS OF ROOMS, CORRIDORS, STARWAYS, HANDLING AN OCCUPANT CAPACITY OF 50 OR MORE PERSONS.

5. EGRESS DOORS SHALL BE SET IN MOTIONWHEN SUBJECTED TO A 20LB, FORCE, THE DOOR SHALL SWING TO THE PULLY OPEN POSITION WHEN AN OPENING FORCE NOT EXCREDING 15 LBS IS APPLIED TO THE LATCH SIDE.

4. SWAT PECLOSKIES OF PROMASE STRUMONG VEHTCALLY THROUGH FLOORS SHALL BE INJUDGED IN SAWAT OF 1-HOUR FIBER STRUM CONSTITUTION RE PERCHANKING A 1-HOUR FIBER STRUM CONSTITUTION RE PERCHANKING A 1-HOUR FIBER STRUMONG THE STRUMONG S

6. EACH DOOR IN A MEANS OF EGRESS FROM A GROUP 'A'
OCCUPANCY SHALL NOT BE PROVIDED WITH A LATCH OR LOCK
UNLESS IT IS PANIC HARDWARE OR FIRE EXIT HARDWARE (GBC
10081.39). 7. DOOR HANDLES, LOCK AND OTHER OPERATING DEVICES SHALL BE INSTALLED AT A MIN. 34" AND A MAX. 48" A.F.F.

8. EXT SIGNS SHALL BE CONNECTED TO AN EMERGENCY POWER SYSTEM THAT WILL PROVIDE AN ILLUMINATION OF NOT LESS THAT SOMIN. IN CASE OF PRIMARY POWERLOSS (CBC 10112 - 1011.5.3)

). THE MEANS OF EGRESS, INCLUDING THE EXIT DISCHARGE SHALL BE ILLUMINATED AT ALL TIMES THE BUILDING SPACE SERVED BY THE MEANS OF EGRESS IS OCCUPIED.

THERMAL INSTALTON REPROPERANCE TO MEET LOCAL MINIMALIAN THERMAL INSTALTON REBERGY CORES. INSULATION ASSERBLIST, AS TESTERD IN ACCORDANCE WITH ASTINCT SIS, TO PROVING A CONTINUOUS THERMAL BEFORD REMACE THE OF THE WORK OF THE OFFICIAL STATEMENT AS THE OF

R-30 AT CELINGANDATTIC SPACES
R-14 AT EXTERIOR WALLS
R-14 AT NITEROR WALLS WHERE INSULATION IS USED FOR
R-13 AT EAONE CONFINE.

GENERAL THESE PLANS ARE THE PROPERTY OF IDS GROUP INC., AND ARE NOT TO BE USED FOR ANY OTHER THAN THE LOCATION SHOWN HEREON.

2. DONOT SCHE DRAWINGS, ALI DIMENSIONS NEET OF PACE OF COUNCETTE, FACE OF CONCYETTE MASSIVEY WHITS, CENTERINE OF COLUMNY AND BEANS, CONFECTED SILDS, UNLESS OF COLUMNES AND STAN CONCRETE TO FOR CONCRETE SILD OF OF CONCRETE SILDS OF THE PACE OF THE STANDARD WILESS OF CONCRETE SILDS OF THE PACE O 1. NO CHANGES ARE TO BE MADE ON THESE PLANS WITHOUT THE KNOWLEDGE OR CONSENT OF THE ARCHITECT OR ENGINEER WHOSE SIGNATURE APPEARS HEREON.

CITY OF MENIFEE

29844 HAUN RD, MENIFEE, CA 92586

MENIFEE LAZ COMMUNITY

3. ALL LEVELS REFERENCE POINTS ABOVE PODIUM LEVEL ARE TAKEN PROM TOP OF SEHEATHING, DIMENSIONS ON ELEVATIONS SECTIONS AND WALL SECTIONS ARE REFERENCED TO THESE POINTS, UNLESS NOTED.

WAS INSTITUTIONS WITH BE ALLOWED INFOURTHOOF ROAD WHEN THE MAN BEEN WELL OF THE STATE OF THE STA

CONSTRUCTION SHALL COMPLY WITH APPLICABLE EDITION(OF COLUMPRICATION SHALL COMPLIANCE TO CALL STATE
ANY FEDERAL CODES, ORDANGES, LINES, REGULATIONS AND
PROTECTINE CONCENSIVE SOMEWING THE WORK, IN CASE OF CONTACT, IN CASE OF CONTACT OF CONTA

26480 LAZY CREEK ROAD MENIFEE, CA 92586

CENTER CREEK

1 THE CONSTRUCTION OR DEACLITON OF ANY BULLDING, STRUCTURE, SORFICIDING, OR FALZBOYDEN MORE THAN 19 STORES OR 36-0" IN HEIGHT, REQUIRES A PERMIT FROM THE STATE OF CALL FROM DIVISION OF INDUSTRIAL SHETTY PROPRIOR TO THE SISUANCE OF A BULLDING PERMIT. (1°C.B.8)

2. A SEPARATE INTERIOR IMPROVEMENT PERMIT IS REQUIRED FOR ANY TENANT IMPROVEMENT IN THIS BUILDING.

1 PETERS CANYON ROAD, SUITE 130 IRVINE, CA. 92606 TEL: 949-387-8500, FAX: 949-387-0800

IDS GROUP

4. ALL ROOMS ARE REQUIRED TO BE MARKED WITH APPROVED SIGNAGE. 5. OBTAIN PERMIT FROM CITY ENGINEER PRIOR TO DOING ANY SIDEWALK AND CURB WORK.

A FREMIT FRANT HE EDEATMENT OF PULLG WORKS IS REQUIRED FOR A PROTIECTION FENGE OR CANODY ON OR OVER ANY STREET OR PUBLIC SPACE. PROTECTION OF PEDESTRANS SECTION 3333.

Colons + 1

6. SEPARATE PERMITS SHALL BE OBTAINED FOR SIGNS, FENCES, TRASH ENCLOSURES, RETAINING WALLS, PLANTERS, AND POOLS.

7. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL'THEN DESIGNAND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BULLDING OFFICIAL. "REFER TO SHEET GEN-1.0a FOR LIST OF DEFERRED SUBMITTALS.

Approved

EsGil

8. ALL LEVELS REFERENCE POINTS ABOVE PODIUM LEVEL ARE TAKEN REGATOP OF SHEATHING. DIMENSIONS ON ELEVATIONS SECTIONS AND WALL SECTIONS ARE REFERENCED TO THESE POINTS, UNLESS NOTED.

2. CONTACT BETWEEN DISSIMILAR METAUSBHALLABEC PROTECTED.

WOOD WORK

1. OFSET STUDS WHERE REQUIRED SO THAT FINISH WALL
SURFACE WILL BE FLUSH IF STRUCTURAL PAMELS ARE
BEDORDED ON A WALL PAMEL I FEET THE ENTIRE WALL PLANE SHALL
BE FORSED OR FINISHED FLUSH.

2. INSTALL METAL CORNER BEADS AT ALL EXPOSED MALBOARD FORCES. INSTALL CASNO BEADS WHEREVER WALBOARD, PLASTER, ETC. ABUT'S A DISSIMILAR FINISH MATERIAL AND PROVIDE SEALANT AS REQUIRED. 3. GYPSUM BOARD SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE AT ALL EXTERIOR PERIMETER WALLS 2. DOOR SIZES SHOWN ON DOOR SCHEDULE ARE OPENING SIZES, ALLOWANGE FOR THRESHOLDS, ECT. SHALL BET AVEN OFF THE DOOR. DOORS AND FRAMES SHALL BE REINFORCE WHERE REQUIRED FOR CLOSERS, STOPS, AND HARDWARE

a An IL DODGS SHALE BE UNITED BY THE PLANMAGO.

a ALD DODGS SHALE BE ROODED WITH ASEA, ASTROAGA,

DO ROWTH ATTHE BEROODED WITH ASEA, ASTROAGA,

DO ROWTH ATTHE BEROODED WITH ASEA, ASTROAGA,

BY ALD STERPON WITH ASEA, ASTROAGA,

EDGA JAME TO SHOW THE SHALE WAS AND WITH ASEA,

EDGA JAME TO SHOW THE SHALE WAS AND WITH ASEA

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GENERAL NOTES

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SECTION 28 3111 - DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM

1.1 SUMMARY

A. System Description: Noncoded, UL-certified FM Global-placarded addressable system with multiplexed signal transmission.

1.2 QUALITY ASSURANCE

- A. Quality Standard: NFPA 72.
- B. Installer Qualifications: Certified by NICET as fire-alarm Level IV technician.

1.3 SYSTEMS OPERATIONAL DESCRIPTION

- A. Signal initiation from:
 - 1. Manual stations.
 - 2. Heat detectors.
 - 3. Smoke detectors.
 - 4. Duct smoke detectors.
 - 5. Carbon monoxide detectors.
 - 6. Automatic sprinkler system water flow.
 - 7. Preaction system.
 - 8. Fire-extinguishing system operation.
 - 9. Fire standpipe system.
 - 10. Dry system pressure flow switch.

B. Signal initiates the following actions:

- 1. Continuously operate alarm notification appliances.
- 2. Identify alarm at the fire-alarm control unit and remote annunciators.
- 3. Transmit an alarm signal to the remote alarm receiving station.
- 4. Unlock electric door locks in designated egress paths.
- 5. Release fire and smoke doors held open by magnetic door holders.
- 6. Activate voice/alarm communication system.
- 7. Switch heating, ventilating, and air-conditioning equipment controls to fire-alarm mode.
- 8. Activate smoke-control system at firefighters smoke-control system panel.
- 9. Activate stairwell and elevator shaft pressurization systems.
- 10. Close smoke dampers in air ducts of designated air-conditioning duct systems.
- 11. Activate preaction system.
- 12. Recall elevators.
- 13. Activate elevator power shunt trip.
- 14. Activate emergency lighting control.
- 15. Activate emergency shutoffs for gas and fuel supplies.
- 16. Record events in the system memory.
- 17. Record events by the system printer.

- 18. Indicate device in alarm on the graphic annunciator.
- C. Supervisory signal initiation by:
 - 1. Valve supervisory switch.
 - 2. High- or low-air-pressure switch of a dry-pipe sprinkler system.
 - 3. Alert and Action signals of air-sampling detector system.
 - 4. Elevator shunt-trip supervision.
 - 5. Fire pump running.
 - 6. Fire-pump loss of power.
 - 7. Fire-pump power phase reversal.
 - 8. Independent fire-detection and -suppression systems.
 - 9. User disabling of zones or individual devices.
 - 10. Loss of communication with any panel on the network.
- D. Trouble signal initiation by:
 - 1. Open circuits, shorts, and grounds, in designated circuits.
 - 2. Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
 - 3. Loss of communication with any addressable sensor, input module, relay, control module, remote annunciator, printer interface, or Ethernet module.
 - 4. Loss of primary power at fire-alarm control unit.
 - 5. Ground or a single break in fire-alarm control unit internal circuits.
 - 6. Abnormal ac voltage at fire-alarm control unit.
 - 7. Break in standby battery circuitry.
 - 8. Failure of battery charging.
 - 9. Abnormal position of any switch at the fire-alarm control unit or annunciator.
 - 10. Voice signal amplifier failure.
 - 11. Hose cabinet door open.
- E. System Trouble and Supervisory Signal Actions: Initiate notification appliances and annunciate at fire-alarm control unit and remote annunciators. Record the event on system printer.

1.4 PRODUCTS

- A. Fire-Alarm Control Unit: Field-programmable, microprocessor-based, modular, power-limited design with electronic modules, addressable initiation device circuits, and addressable control circuits.
 - 1. Alphanumeric liquid-crystal display, system controls and keypad.
 - 2. Initiating Device, Notification Appliance, and Signaling-Line Circuits:
 - a. Pathway Class Designations: Class A.
 - b. Pathway Survivability: Level 1.
- B. Smoke-alarm verification.
- C. System Smoke Detectors: Base mounted, self-restoring, with integral visual-indicating light.

- D. Non-system single-station duct smoke detectors.
- E. Heat Detectors.
- F. Carbon monoxide detector.
- G. Elevator recall initiated by elevator lobby, elevator machine room, or elevator hoistway detectors.
- H. Preaction system.
- I. Notification Appliances:
 - 1. Audible appliances.
 - 2. Output chimes.
 - 3. Electric-vibrating-polarized type, 24-V dc horns.
 - 4. Xenon strobe lights.
 - 5. Exit marking audible notification appliance.
- J. Firefighters telephones.
- K. Firefighters smoke-control system.
- L. Magnetic Door Holders: Wall- or floor-mounted units; 24-V ac or dc.
- M. Remote annunciator.
- N. Radio alarm transmitter.
- O. Maintenance Service: 12 months full maintenance.

END OF SECTION 28 3111

September 2018

The Contractors
State License Board,
which operates under
the umbrella of the
California Department
of Consumer Affairs,
licenses and regulates
California's 285,000
contractors, and is
regarded as one of
the leading consumer
protection agencies in
the United States.

"B" General Building Contractor License

The "B" General Building Contractor license is the most common contractor license classification in California, with almost 104,000 active licenses.* As a result, the Contractors State License Board (CSLB) often receives questions about what jobs a B General Building licensee can legally perform.

The purpose of this *Fast* Facts sheet is to provide basic information regarding the permissible scope of work for contractors holding a B General Building Contractor license.

Business and Professions Code (BPC) section 7057 defines a General Building contractor as someone whose principal contracting business is in connection with "any structure built, being built, or to be built for the support, shelter, and enclosure of persons, animals, chattels or movable property of any kind, requiring in its construction the use of at least two unrelated building trades or crafts, or to do or superintend the whole or any part thereof." The BPC provides additional clarification as summarized below.

A "B" General Building Contractor Can...

- Enter a prime or sub-contract for a framing or carpentry project and selfperform the work.
- Enter a prime or sub-contract for two or more separate and unrelated trades and self-perform the work (framing and carpentry cannot count as one of the trades).
- Enter a prime or sub-contract for a single trade. However, unless the "B" holds the appropriate specialty classification, the performance of the work (other than carpentry or framing that can be self-performed) must be subcontracted to a contractor that holds the appropriate classification.

A "B" General Building Contractor Cannot...

- Enter a prime contract for any project involving trades other than framing or carpentry <u>unless</u>:
 - The prime contract requires at least two other, unrelated building trades or crafts; or
 - The "B" General Building contractor holds the appropriate license classification or subcontracts with an appropriately licensed specialty contractor to perform the work.
- Enter a sub-contract involving trades other than framing or carpentry unless:
 - The sub-contract requires at least two other, unrelated trades or crafts; or
 - The "B" General Building contractor holds the appropriate license classification.
- Include framing or carpentry in calculating the two unrelated trades necessary for the B General Building contractor to be able to take a prime or sub-contract for a project involving other trades.

9821 Business Park Drive Sacramento California 95827

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P.O. Box 26000 Sacramento California 95826-0026

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800.321.CSLB (2752)

www.cslb.ca.gov CheckTheLicenseFirst.com

- Enter a contract for any project which includes the C-16 Fire Protection or C-57 Well Drilling specialty classifications <u>unless</u>:
 - The "B" General Building contractor holds the specialty license, or
 - The "B" General Building contractor sub-contracts with the appropriately licensed specialty contractor (pursuant to Sections 7026.12 and 7026.13 of the BPC and Section 13750.5 of the Water Code, respectively).

Additional Authorization and Limitations

A "B" General Building contractor that contracts for work that includes framing, carpentry or two unrelated trades may perform the following work as follows:

- Hazardous Substances "B" General Building contractors can perform hazardous substance removal if they have a Hazardous Substances Removal Certification.
- Underground Storage Tanks "B" General Building contractors can remove an underground storage if they have a Hazardous Substances Removal Certification.
- Asbestos "B" General Building contractors cannot contract for jobs involving asbestos abatement unless they:
 - Hold a C-22 Asbestos Abatement specialty license, or
 - Hold an asbestos certification (pursuant to BPC section 7058.5)
 <u>and</u> are registered with the Department of Industrial Relation's Division of Occupational Safety and Health, or
 - Subcontract with an appropriately licensed contractor.
- Solar Energy Systems A "B" General Building contractor may contract and self-perform installation of a solar energy system on a structure because installation of the solar energy system constitutes two or more unrelated trades pursuant to Title 16, California Code of Regulations Section 832.62(b)
- Roofing A "B" General Building contractor may contract for projects that include roofing. However, they must subcontract to a C-39 roofing contractor if the roofing is a standalone contract – not included in a larger project that includes two unrelated trades such as home construction, room addition, or remodeling.

Additional Information

This information is simply a summary of the permissible scope of work for "B" General Building contractors. Additional information regarding license classifications is available on CSLB's website (www.cslb.ca.gov).

Specific questions about the permissible scope of work for "B" General Building contractors should be directed to CSLB's Classifications Deputy via email at cslb.ca.gov. Those writing on behalf of a government agency should include your agency name in the subject line to ensure priority handling.

Representatives of government agencies with questions can contact CSLB's Executive Office at (916) 255-4000.

SECTION 075419

POLYVINYL-CHLORIDE (PVC) ROOFING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope:

- 1. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section
- 2. To install a complete mechanically fastened Polyvinyl-Chloride (PVC) Roofing System including substrate boards, membrane, flashings and other components.

B. Related Work

- 1. The work includes but is not limited to the installation of:
- a. Substrate Preparation
- b. Substrate Boards
- c. Vapor Barrier
- d. Wood Blocking
- e. Separation Layers
- f. Roof Membrane
- g. Fasteners
- h. Adhesive for Flashings
- i. Roof Membrane Flashings
- j. Metal Flashings
- k. Sealants
- C. Upon successful completion of work the following warranties may be obtained:
 - 1. Roofing Warranty
 - 2. Roofing Applicator Warranty

1.2 QUALITY ASSURANCE

- A. This roofing system shall be applied only by a Roofing Applicator authorized by Manufacturer prior to bid (Manufacturer "Applicator").
- B. Upon completion of the installation and the delivery to Manufacturer by the Applicator of certification that all work has been done in strict accordance with the contract specifications and Manufacturer's requirements, a Sika Corporation Technical Service Representative will review the installed roof system wherever a System Warranty has been specified.
- C. There shall be no deviation made from the Project Specification or the approved shop

- drawings without prior written approval by the Owner, the Owner's Representative and Sika Corporation.
- D. All work pertaining to the installation of roof membrane and flashings shall only be completed by Applicator personnel trained and authorized by Manufacturer in those procedures.
- E. Roofing membrane manufacturer must have a demonstrated performance history of producing PVC roof membranes no less, in duration of years, than the warranty duration specified.
- F. Product to be manufactured by membrane supplier and not private labeled.
- G. Manufacturer to have a minimum of five years' experience recycling their membranes at the end of their service life back into new membrane products.

1.3 SUBMITTALS

- A. At the time of bidding, the Applicator shall submit to the Owner (or Representative) the following:
 - 1. Sample copy of Manufacturer's warranty.
 - 2. Sample copy of Applicator's warranty.
 - 3. Certifications by manufacturers of roofing and insulating materials that all materials supplied comply with all requirements of the identified ASTM and other industry standards or practices.
 - 4. Certification from the Applicator that the system specified meets all identified code and insurance requirements as required by the Specification.
 - 5. Safety Data Sheets (SDS)

1.4 CODE REQUIREMENTS

- A. System shall be designed to meet a minimum wind design requirements of the most recent version of ASCE 7.
 - 1. Class A assembly

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.
- C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.

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- D. As a general rule all adhesives shall be stored at temperatures between 40°F (4°C) and 80°F (27°C). Read instructions contained on adhesive canister for specific storage instructions.
- E. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.
- F. Any materials which the Owner's representative or Sika Corporation determines to be damaged are to be removed from the job site and replaced at no cost to the Owner.

1.6 JOB CONDITIONS

- A. Manufactures materials may be installed under certain adverse weather conditions but only after consultation with Manufacture, as installation time and system integrity may be affected.
- B. Only as much of the new roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. All seams shall be heat welded before leaving the job site that day.
- C. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks.
- D. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- E. Uninterrupted waterstops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Waterstops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses. Contaminated membrane shall be replaced at no cost to the Owner.
- F. The Applicator is cautioned that certain Manufacturer membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials. Such materials shall not remain in contact with Manufacturer membranes. The Applicator shall consult Sika Corporation regarding compatibility, precautions and recommendations.
- G. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Applicator shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over roof felt or plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.
- H. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air or similar methods.

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- I. The Applicator shall follow all safety regulations as required by OSHA and any other applicable authority having jurisdiction.
- J. All roofing, insulation, flashings and metal work removed during construction shall be immediately taken off site to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.
- K. All new roofing waste material (i.e., scrap roof membrane, empty cans of adhesive) shall be immediately removed from the site by the Applicator and properly transported to a legal dumping area authorized to receive such material.
- L. The Applicator shall take precautions that storage and application of materials and equipment does not overload the roof deck or building structure.
- M. Flammable adhesives and deck primers shall not be stored and not be used in the vicinity of open flames, sparks and excessive heat.
- N. All rooftop contamination that is anticipated or that is occurring shall be reported to Sika Corporation to determine the corrective steps to be taken.
- O. Applicator shall immediately stop work if any unusual or concealed condition is discovered and shall immediately notify Owner of such condition in writing for correction at the Owner's expense (letter copy to Sika Corporation).
- P. Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be completed to the Owner's satisfaction.
- Q. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.
- R. The roof membrane shall not be installed under the following conditions without consulting Sika Corporation's Technical Dept. for precautionary steps:
 - 1. The roof assembly permits interior air to pressurize the membrane underside.
 - 2. Any exterior wall has 10 percent or more of the surface area comprised of opening doors or windows.
 - 3. The wall/deck intersection permits air entry into the wall flashing area.
- S. Precautions shall be taken when using adhesives at or near rooftop vents or air intakes. Adhesive odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive odor while ventilating the building. Keep lids on unused cans at all times.
- T. Protective wear shall be worn when using solvents or adhesives or as required by job conditions.
- U. Roof membranes are slippery when wet or covered with snow, frost, or ice. Working on surfaces under these conditions is hazardous. Appropriate safety measures must be implemented prior to working on such surfaces. Always follow OSHA and other relevant fall protection standards when working on roofs.

1.7 BIDDING REQUIREMENTS

A. Site Visit: Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the Applicator. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative.

1.8 WARRANTIES

- A. Manufacture Warranty
 - 1. Upon successful completion of the work to Manufacturer's satisfaction and receipt of final payment, the Manufacturer Warranty shall be issued.
- B. Membrane Warranty
- C. Applicator/Roofing Contractor Warranty
 - Applicator shall supply Owner with a separate workmanship warranty. In the event any work related to roofing, flashing, or metal is found to be within the Applicator warranty term, defective or otherwise not in accordance with Contract Documents, the Applicator shall repair that defect at no cost to the Owner. Applicator's warranty obligation shall run directly to Owner, and a copy shall be sent to Manufacture.
- D. Owner Responsibility
 - 1. Owner shall notify both Sika Corporation and the Applicator of any leaks as they occur during the time period when both warranties are in effect.

1.9 WARRANTY DURATIONS

- A. Manufacturer's warranty shall be in effect for a 20 year duration.
- B. Applicator's/Roofing Contractor's Warranty shall be in effect for a 5 year duration.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Components of the roof system are to be products of Manufacture as indicated on the Detail Drawings and specified in the Contract Documents.
- B. Components to be used that are other than those supplied or manufactured by Manufacturer may be submitted for review and acceptance by Manufacture. Manufacture's acceptance of any other product is only for a determination of compatibility with Manufacture products and not for inclusion in the Manufacturer warranty. The specifications, installation instructions, limitations, and restrictions of the respective manufacturers must be reviewed by the Owner's Representative for acceptability for the

intended use with Manufacture's products.

C. Special consideration should be given to construction related moisture. An example is the significant amount of moisture generated when concrete floor slabs are poured after the roof has been installed. Sika Corporation is not responsible for damage to the insulation when exposed to construction related moisture.

2.2 MANUFACTURER

- A. Manufacturer / Product:
 - 1. Acceptable Manufacturer: Subject to compliance with requirements, provide one of the following:
 - a. Sika Sarnafil:
 - b. GAF Materials Corporation
 - c. Johns Manville
 - 2. Products: Subject to compliance with requirements, provide one of the following products include or approved equal will be acceptable, subject to review by Architect.
 - a. Sarnafil G410 thermoplastic membrane with fiberglass reinforcement and lacquer coating (Basis-of-Design Product).
- B. Membrane shall conform to:
 - 1. ASTM D4434 (latest version), "Standard for Polyvinyl Chloride Sheet Roofing". Classification: Type II, Grade I.
 - 2. NSF/ANSI Standard 347, "Sustainability Assessment for Single Ply Roofing Membranes". Certification Level: Platinum.
 - 3. The manufacture to guarantee that the membrane thickness meets or exceeds [the specified thickness] when tested according to ASTM D751
- C. Sarnafil G410 thermoplastic membrane with fiberglass reinforcement and lacquer coating.
 - 1. Thickness
 - a. Sarnafil G410-12, 48 mil (1.2 mm)
 - 2. Color of Membrane
 - a. EnergySmart White, initial solar reflectance of 0.83, emittance of 0.90, and solar reflective index (SRI) of 104 (ENERGY STAR listed).
 - 3. Typical Physical Properties (1)

	ASTM Test Method	ASTM Type II D4434 Spec	Typical Physical
Parameters		Requirements	Properties
Overall	D638	45	48
Thickness, mil Reinforcing Material			Fiberglass
Thickness Above		16	24
Scrim, mil			0
Felt Weight, oz/yd2			9

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Tensile Strength min.	D638	1500	1500
Direction, psi Elongation at	D638		
Break, min. Machine		250	250
Direction,% Cross		220	220
Direction, % Seam Strength min., (% of original)*	D638	75	Pass
Retention of Properties After Heat Aging Tensile	D3045		
Strength min., (% of original)	D638	90	Pass
Elongation min., (% of original)	D639	90	Pass
Tearing Resistance (M.D.) min., lbf (N)	D1004	10 (45.0)	15 (67)
Low Temperature Bend -40 °F (-40 °C)	D2136	Pass	Pass
Accelerated Weathering Test (Florescent Light, UV exposure),	G154	5,000	10,000
Hours Cracking (7x		None	None
magnification) Discoloration (by		Negligible	Negligible
observation) Crazing (7x		None	None
magnification) Linear Dimensional	D1204	0.10 max.	-0.02
Change (C.D.), % Weight Change After Immersion in	D570	± 3.0 max.	2.4
Water, % Static Puncture Resistance, 33 lbf (15 kg)	D5602	Pass	Pass
Dynamic Puncture Resistance,	D5635	Pass	Pass
7.3 ft-lbf (10 J) Recycled Content (10' & 5' sheet only)	9% Pre-Co	onsumer / 1% Post-Consumer	

2.3 FLASHING MATERIALS

A. Wall / Curb Flashing

- 1. Sarnafil G410 Flashing Membrane
 - a. A fiberglass reinforced membrane adhered to approved substrates using Sarnacol adhesive. Sarnafil G410 Flashing Membrane comes in 8" and 12" widths and is 60 mil (1.5 mm) thick. Consult Product Data Sheets for adhesive options and additional information.

2. Sarnaclad

a. A PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles. Sarnaclad is a 24 gauge, G90 galvanized metal sheet with a 20 mil (0.5 mm) unsupported Sarnafil membrane laminated on one side. The dimensions of Sarnaclad are 4 ft x 8 ft (1.2 m x 2.4 m) or 4 ft x 10 ft (1.2 m x 3.0 m). Consult Product Data Sheet for additional information.

B. Perimeter Edge Flashing

- 1. Edge Grip Fascia
 - a. A prefabricated perimeter edge system provided by Sika Corporation. The system has concealed fasteners with no penetrations on the horizontal roof surface and includes fasteners and splice plates. Edge Grip is made from two distinct parts. A rigid retainer base plate and a decorative snap-on fascia cover. The retainer is made from 20 gauge galvanized steel in 10 foot (3048 mm) standard lengths and is provided with 9/32 inch (7 mm) slotted prepunched holes for fastener spacing at 12 inches (152 mm) on center. As an option the retainer base plate is also available in 0.05 inch (1.3 mm) aluminum. The snap-on fascia cover is available in 10 foot (3048 mm) lengths and in a variety of thickness, colors, finishes, and widths.
 - 1) Retainer base plate shall be 20 gauge galvanized steel in 10 ft. lengths.
 - 2) Snap-on fascia cover color shall be to match existing.

C. Miscellaneous Flashing

- 1. Detail Membrane
 - a. A 60 mil (1.5 mm) fiberglass reinforced membrane, available 12" x 50' (30.5 cm x 15.2 m) roll and 24" x 50' (61 cm x 15.2 m) roll, more pliable than Sarnafil G410 membrane, good use for flashing pipes, corners, and unusual shaped penetrations. Consult Product Data Sheet for additional information.
- 2. Sarnacircles
 - a. A 60 mil (1.5mm) thick prefabricated 4 1/2 in. round circle patch injection molded. Consult Product Data Sheet for additional information.
- 3. Sarnacorners Inside
 - a. A 60 mil (1.5 mm) thick prefabricated inside corner injection molded. Consult Product Data Sheet for additional information.
- 4. Sarnacorners Outside
 - a. A 60 mil (1.5 mm) thick prefabricated outside corner injection molded. Consult Product Data Sheet for additional information.
- 5. Sarnastack Universal, A. B. or C
 - a. A 60 mil (1.5 mm) thick prefabricated stack/pipe boot injection molded. Consult Product Data Sheets for additional information.
- 6. Sarnacol 2170 VC Adhesive
 - a. A solvent-based, VOC compliant, reactivating adhesive used to attach

membrane to flashing substrate. Typical flashing substrate coverage rate is 45-

60ft²/gal (1.10–1.47m²/L). Consult Product Data Sheets for additional information.

2.4 ATTACHMENT COMPONENTS

- A. Coverage Typical coverage rates for the 5 gallon (18.9 L) box sets are 1,800 to 2,200 sq.ft. (167 204 m2). All coverage rates are based on 12 inch (30cm) on center maximum spacing. The minimum ambient and surface temperatures should be 40F (4.4C) and rising.
- B. Approximate Set-Time Designed to provide approximately 5 10 minutes of open time during a typical summer day. The open time will be shorter on hot humid days and longer on cold dry days.
- C. Storage For ease of application, maintain a minimum material temperature of 70°F (21°C) prior to use. Store in a cool dry location at temperatures between 55°F (12.7°C) and 85°F (29.4°C), protect from freezing at all times. Shelf life is 12 months from the date of manufacture.
 - 1. Sarnastop
 - a. An extruded aluminum, low profile bar used with certain Sarnafasteners to attach to the roof deck or to walls/curbs at terminations, penetrations and at incline changes of the substrate. Sarnastop is a 1 inch (25 mm) wide, flat aluminum bar 1/8 inch (3 mm) thick that has predrilled holes every 6 inches (152 mm) on center.
 - 2. Sarnabar
 - a. An FM-approved, heavy-duty, 14 gauge, galvanized or stainless, roll-formed steel bar used to attach membrane to roof decks. The formed steel is prepunched with holes every 1 inch (25 mm) on center to allow various Sarnafastener spacing options. Consult Product Data Sheet for additional information.
 - 3. Sarnacord
 - a. A 5/32 inch (4 mm) diameter, red-colored, flexible thermoplastic extrusion that is welded to the top surface of the Sarnafil membrane and against the side of the Sarnabar, used to hold the membrane in position. Consult Product Data Sheet for additional information.

D. SUBSTRATE BOARDS

- E. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch thick.
 - 1. Product: Subject to compliance with requirements, provide "Dens-Deck" by Georgia-Pacific Corporation, or accepted alternate (no known equal).

2. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening substrate panel to roof deck.

2.5 MISCELLANEOUS ACCESSORIES

A. Sarnamatic 641mc or 661

1. 220 volt, self-propelled, hot-air welding machine used to seal Sarnafil membrane seams.

B. Aluminum Tape

1. A 2 inch (50 mm) wide pressure-sensitive aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as a bond- breaker under the coverstrip at Sarnaclad joints.

C. Multi-Purpose Tape

1. A high performance sealant tape used with metal flashings as a preventive measure against air and windblown moisture entry.

D. Perimeter Warning Tape

 Designed for use on PVC membranes as a reflective, highly visible pressure sensitive tape used to draw attention to roof perimeters and potential hazardous areas. The tape is available in 2 inch wide rolls by 30 feet long and comes on a release liner for easy application. Perimeter Warning Tape exceeds reflectivity 3 requirements and Federal spec. L-S-300, Class 1.

E. Seam Cleaner

1. Seam Cleaner is used on PVC membranes to clean the in the seam area only.

2.6 SEALANTS

- A. Sikaflex-1a (for termination details and pitch pocket toppings).
- B. Depending on substrates, the following sealants are options for temporary overnight tie-ins:
 - 1. Type III hot asphalt conforming to ASTM D312 (latest version).
 - 2. Sarnafiller.
 - 3. Multiple layers of roofing cement and felt.
 - 4. Spray-applied, water-resistant urethane foam.
 - 5. Mechanical attachment with rigid bars and compressed sealant.

2.7 MISCELLANEOUS FASTENERS AND ANCHORS

A. All fasteners, anchors, nails, straps, bars, etc. shall be post-galvanized steel, aluminum or stainless steel. Mixing metal types and methods of contact shall be assembled in such a manner as to avoid galvanic corrosion. Fasteners for attachment of metal to masonry shall be expansion type fasteners with stainless steel pins. All concrete fasteners and anchors shall have a minimum embedment of 1-1/4 inch (32 mm) and shall be approved for such use by the fastener manufacturer. All miscellaneous wood fasteners and anchors

used for flashings shall have a minimum embedment of 1 inch (25 mm) and shall be approved for such use by the fastener manufacturer.

PART 3 - EXECUTION

3.1 SUBSTRATE CONDITION

- A. Applicator shall be responsible for acceptance or provision of proper substrate to receive new roofing materials.
- B. Applicator shall verify that the work done under related sections meets the following conditions:
 - 1. Roof curbs, nailers, equipment supports, vents and other roof penetrations are properly secured and prepared to receive new roofing materials.
 - 2. All surfaces are smooth and free of dirt, debris and incompatible materials.
 - All roof surfaces shall be free of moisture.
 - 4. Roofing substrate not meeting manufactures requirements for new work shall be replaced.
 - 5. Verify the existing roofing substrate contains no existing mastic deemed to contain asbestos. Upon identification of condition, encapsulate existing mastic or remove and replace existing substrate for new work.

3.2 SUBSTRATE PREPARATION

A. The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Applicator shall load materials on the rooftop in such a manner as to eliminate risk of deck overload due to concentrated weight. The Owner's Representative shall ensure that the roof deck is secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind loads in that location.

3.3 SUBSTRATE INSPECTION

- A. A dry, clean and smooth substrate shall be prepared to receive the Sarnafil G410 Adhered roof system.
- B. The Applicator shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.
- C. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease. Roofing shall not start until all defects have been corrected.
- D. All roof surfaces shall be free of water, ice and snow.
- E. Sarnafil shall be applied over compatible and accepted substrates only.

3.4 VAPOR BARRIER / AIR BARRIER INSTALLATION

A. General Criteria:

- 1. Sarnavap-10
 - a. Wood Deck (New Construction):
 - b. Sarnavap-10 is loose-laid over suitable substrate. Overlap all edges 4 inches (100 mm) and seal with butyl tape. Extend Sarnavap-10 to perimeter and deck penetrations and seal to provide continuity of the building's air/vapor envelope. Sarnavap-10 must be sealed on the vertical surface at roof penetrations also.

3.5 MECHANICALLY FASTENED ROOFING MEMBRANE INSTALLATION

- a. Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
 - 1. Install sheet according to ASTM D 5082.
- b. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- c. Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- d. Mechanically or adhesively fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.
- e. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- f. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
 - 2. Verify field strength of seams a minimum of three times daily and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
- g. Spread sealant or mastic bed over deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.
- h. In-Splice Attachment: Secure one edge of roofing membrane using fastening plates or metal battens centered within membrane splice and mechanically fasten roofing membrane to roof deck. Field-splice seam.

- i. Through-Membrane Attachment: Secure roofing membrane using fastening plates or metal battens and mechanically fasten roofing membrane to roof deck. Cover battens and fasteners with a continuous cover strip.
- j. Install roofing membrane and auxiliary materials to tie in to existing roofing.

3.2 INSTALLATION OF MEMBRANE

A. The surface of the insulation or substrate shall be inspected prior to installation of the Sarnafil roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.

3.3 HOT-AIR WELDING OF SEAM OVERLAPS

A. General

- 1. All seams shall be hot-air welded. Seam overlaps should be 3 inches (76 mm) wide when automatic machine-welding and 4 inches (100 mm) wide when hand-welding, except for certain details.
- 2. Welding equipment shall be provided by or approved by Sika Corporation. All mechanics intending to use the equipment shall have successfully completed a training course provided by a Sika Corporation Technical Service Representative prior to welding.
- 3. All membrane to be welded shall be clean and dry.

B. Hand-Welding

- 1. Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.
- 2. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.
- 3. The nozzle shall be inserted into the seam at a 45 degree angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to "flow", the hand roller is positioned perpendicular to the nozzle and rolled lightly. For straight seams, the 1-1/2 inch (40 mm) wide nozzle is recommended for use. For corners and compound connections, the 3/4 inch (20 mm) wide nozzle shall be used.

C. Machine Welding

- Machine welded seams are achieved by the use of Sika Corporation's automatic welding equipment. When using this equipment, Sika Corporation's instructions shall be followed and local codes for electric supply, grounding and over current protection observed. Dedicated circuit house power or a dedicated portable generator is recommended. No other equipment shall be operated simultaneously off the generator.
- 2. Metal tracks may be used over the deck membrane and under the machine welder to minimize or eliminate wrinkles.
- D. Quality Control of Welded Seams

1. The Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark gray material from the underside of the top membrane. On-site evaluation of welded seams shall be made daily by the Applicator at locations as directed by the Owner's Representative or Sika Corporation's representative. One inch (25 mm) wide cross- section samples of welded seams shall be taken at least three times a day. Correct welds display failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Applicator at no extra cost to the Owner.

3.4 MEMBRANE FLASHINGS

- A. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Sika Corporation. Approval shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing, the affected area shall be removed and replaced at the Applicator's expense. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.
 - 1. Sarnacol Adhesive for Membrane Flashings
 - a. Over the properly installed and prepared flashing substrate, the Sarnacol adhesive shall be applied in smooth, even coats with no gaps, globs or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be flashed. The bonded sheet shall be pressed firmly in place with a hand roller.
 - b. No adhesive shall be applied in seam areas that are to be welded. All panels of membrane shall be applied in the same manner, overlapping the edges of the panels as required by welding techniques.
 - 2. Install Sarnastop/Sarnabar/Sarnacord according to the Detail Drawings with approved fasteners into the structural deck at the base of parapets, walls and curbs. Sarnastop is required by Sika Corporation at the base of all tapered edge strips and at transitions, peaks, and valleys according to Sika Corporation's details.
 - 3. Sika Corporation's requirements and recommendations and the specifications shall be followed. All material submittals shall have been accepted by Sika Corporation prior to installation.
 - 4. All flashings should extend a minimum of 8 inches (0.2 m) above roofing level, exceptions to this might be pipe boots and/or sealant pockets, etc. If in question, submit in writing to the Owner's Representative and Sika Corporation Technical Department for signed approval.
 - 5. All flashing membranes shall be consistently adhered to substrates. All interior and exterior corners and miters shall be cut and hot-air welded into place. No bitumen shall be in contact with the Sarnafil membrane.
 - 6. All flashing membranes shall be mechanically fastened along the counter-flashed top edge with Sarnastop at 6 to 8 inches (0.15 to 0.20 m) on center.
 - 7. Sarnafil flashings shall be terminated according to Sika Corporation recommended details.
 - 8. All adhered flashings that exceed 30 inches (0.75 m) in height shall receive additional securement. Consult Sika Corporation Technical Department for securement methods.

3.5 METAL FLASHINGS

- A. Metal details, fabrication practices and installation methods shall conform to the applicable requirements of the following:
 - 1. Factory Mutual Loss Prevention Data Sheet 1-49 (latest issue).
 - 2. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) latest issue.
- B. Metal, other than that provided by Sika Corporation, is not covered under the Sika Corporation warranty.
- C. Complete all metal work in conjunction with roofing and flashings so that a watertight condition exists daily.
- D. Metal shall be installed to provide adequate resistance to bending to allow for normal thermal expansion and contraction.
- E. Metal joints shall be watertight.
- F. Metal flashings shall be securely fastened into solid wood blocking. Fasteners shall penetrate the wood nailer a minimum of 1 inch (25 mm).
- G. Airtight and continuous metal hook strips are required behind metal fascias. Hook strips are to be fastened 12 inches (0.3 m) on center into the wood nailer or masonry wall.
- H. Counter flashings shall overlap base flashings at least 4 inches (100 mm).
- I. Hook strips shall extend past wood nailers over wall surfaces by 1-1/2 inch (38 mm) minimum and shall be securely sealed from air entry.

3.6 SARNACLAD METAL BASE FLASHINGS / EDGE METAL

- A. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Sika Corporation. Acceptance shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing due to incomplete flashings, the affected area shall be removed and replaced at the Applicator's expense.
 - 1. Sarnaclad metal flashings shall be formed and installed per the Detail Drawings.
 - a. All metal flashings shall be fastened into solid wood nailers with two rows of post galvanized flat head annular ring nails, 4 inches (100 mm) on center staggered. Fasteners shall penetrate the nailer a minimum of 1 inch (25 mm).
 - b. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.
 - 2. Adjacent sheets of Sarnaclad shall be spaced 1/4 inch (6 mm) apart. The joint shall be covered with 2 inch (50 mm) wide aluminum tape. A 4 inch minimum (100

mm) wide strip of Sarnafil flashing membrane shall be hot-air welded over the joint. Exercise caution at perimeter of roof.

3.7 EDGE METAL

- A. All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Sika Corporation. Acceptance shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing due to incomplete flashings, the affected area shall be removed and replaced at the Applicator's expense.
 - 1. Edge Grip Fascia
 - a. Position the roof membrane over edge of roof and down outside face of wall covering wood nailer(s) completely. Allow 1/2 inch (13 mm) of excess membrane to extend down past the wood nailer. Hot-air weld all seams making sure there are no voids in welds.
 - b. Apply a 3/8 inch (10 mm) continuous bead of Sikaflex 1a sealant to the clean bottom of formed retainer. Install formed retainer from right to left as seen from rooftop. Overlap joints of straight run sections a minimum of 1 inch (25 mm) and corner sections a minimum of 5 inches (127 mm). Field cut sections as necessary.
 - c. Fasten formed retainer into side of nailer 12 inches (0.3 m) on center. Use fasteners provided with Edge Grip system; 1-1/2 inch (38 mm) hex head stainless steel fasteners with neoprene washers.
 - d. Fasteners shall provide a minimum 240 lbs. (109 kg) pull-out resistance; suitable for the substrates to which being installed.
 - e. Install concealed joint splice plates intersecting sections of snap-on fascia cover joints.
 - f. Position snap-on fascia cover so that it's top engages the formed retainer top. Rotate downward engaging bottoms of snap-on fascia cover and formed retainer. Allow 1/4 inch (6 mm) gap between snap-on fascia sections for thermal expansion. Field cut where necessary.

2. Edge Grip Extruded Fascia

- a. Position the roof membrane over edge of roof and down outside face of wall covering wood nailer(s) completely. Allow 1/2 inch (13 mm) of excess membrane to extend down past the wood nailer. Hot-air weld all seams making sure there are no voids in welds.
 - Apply a 3/8 inch (10 mm) continuous bead of Sikaflex 1a sealant to the clean bottom of heavy-duty extruded retainer. Install extruded retainer from right to left as seen from rooftop. Field cut sections as necessary.
 - 2) Install retainer splice under intersecting sections of extruded retainer.
 - 3) Fasten extruded retainer into side of nailer 12 inches (0.3 m) on center. Use fasteners provided with Edge Grip Extruded system; 1-1/2 inch (38 mm) hex head stainless steel fasteners with neoprene washers. Allow 1/8 inch (3 mm) gap between extruded retainer sections for thermal expansion [1/4 inch (6 mm) if temperature is below 40°F (4°C)].
 - 4) Fasteners shall provide a minimum 240 lbs. (109 kg) pull-out resistance; suitable for the substrates to which being installed.

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- 5) Install concealed joint splice plates at intersecting sections of snap-on fascia cover joints.
- 6) Position snap-on fascia cover so that it's top engages the extruded retainer top. Rotate downward engaging bottoms of snap-on fascia cover and extruded retainer base plate. Allow 1/4 inch (6 mm) gap between snap-on fascia sections for thermal expansion. Field cut where necessary.

3.8 TEMPORARY CUT-OFF

- A. All flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses. All temporary waterstops shall be constructed to provide a 100 percent watertight seal. The stagger of the insulation joints shall be made even by installing partial panels of insulation. The new membrane shall be carried into the waterstop. Waterstop shall be sealed to the deck or substrate so that water will not be allowed to travel under the new or existing roofing. The edge of the membrane shall be sealed in a continuous heavy application of sealant as described in Section 2.7. When work resumes, the contaminated membrane shall be cut out. All sealant, contaminated membrane, insulation fillers, etc. shall be removed from the work area and properly disposed of off-site. None of these materials shall be used in the new work.
- B. If inclement weather occurs while a temporary waterstop is in place, the Applicator shall provide the labor necessary to monitor the situation to maintain a watertight condition.
- C. If any water is allowed to enter under the newly-completed roofing, the affected area shall be removed and replaced at the Applicator's expense.

3.9 COMPLETION

- A. Prior to demobilization from the site, the work shall be reviewed by the Owner's Representative and the Applicator. All defects noted and non-compliances with the Specifications or the recommendations of Sika Corporation shall be itemized in a punch list. These items must be corrected immediately by the Applicator to the satisfaction of the Owner's Representative and Sika Corporation prior to demobilization.
- B. All Warranties referenced in this Specification shall have been submitted and have been accepted at time of contract award.

3.10 DETAILS

A. Refer to Typical System Details section or usa.sarnafil.sika.com.

END OF SECTION 075419