TEXAS
Health and Human Services

Attachment H2

Project Drawings

CONSTRUCTION PLANS FOR

RIO GRANDE STATE CENTER
ROOF REPLACEMENT AT BUILDING 511
PROJECT # 20-122-RSC

TEXAS Health and Human Services

PREPARED BY:

Amtech Solutions, Inc.

AMTECH SOLUTIONS
4444 CORONA DR. STE #207
CORPUS CHRISTI, TEXAS 78411
T 361.299.0000

RIO GRANDE STATE CENTER BUILDING 511

RIO GRANDE STATE CENTER

RIO GRANDE STATE CENTER
1401 SOUTH RANGERVILLE ROAD, HARLINGEN, TX 78552
Phone: 956-364-8000

Code Compliance

International Building Code Review Information

Edition:	IBC 2015
Address:	1401 South Rangerville Road Harlingen, TX 78552
Occupancy (Chapter 3):	Institutional Group I-I
Type of Construction (Table 601):	Type - II-B
	Roof Area "A" 3,293 SF
	GROSS ROOF AREA 3,293 SF

(CONTRACTOR MUST FIELD VERIFY ALL ROOF AREAS FOR BIDDING AND CONSTRUCTION)

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (CHAPTER 15):

PERFORMANCE REQUIREMENTS (SECTION 1504):

Wind Resistance of Nonballasted Roofs (Section 1504.3):
Roof coverings installed on roofs in accordance with Section 1507 that are mechanically attached or adhered to the roof deck shall be designed to resist the design wind load pressures for components and cladding in accordance with Section 1609.

Edge Securement for Low-Slope Roofs (Section 1504.5):
Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, except Vult wind speed shall be determined from Figure 1609.3(1), 1609.3(2) or 1609.3(3) as applicable.

Aggregate (Section 1504.8): **Not Permitted - 1609.2 Hurricane Prone Region**

FIRE CLASSIFICATION (SECTION 1505):

Minimum Roof Covering Classification (Table 1505.1):
B

REQUIREMENTS FOR ROOF COVERINGS (SECTION 1507):

Modfied Bitumen Roofing (Section 1507.11):

Slope (1507.11.1):
Roof replacement or roof recover of existing low- slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage.

Material standards (1507.11.2):
Modified bitumen roof coverings shall comply with CGSB 37-GP-56M, ASTM D6162, ASTM D6163, ASTM D6164, ASTM D6222, ASTM D6223, ASTM D6298 or ASTM D6509.

Vegetative Roofs, Roof Gardens, and Landscaped Roofs (Section 1507.16):
N/A

ROOF INSULATION (SECTION 1508):

Material standards (Table 1508.2):
Polyisocyanurate board
ASTM C1289, Type I or II

INTERNATIONAL ENERGY CONSERVATION CODE REVIEW INFORMATION

Edition:	IECC 2015
Gross Area:	3,293 SF
CLIMATE ZONE (Figure 301.1 or Table 301.1): Asterisk (*) Indicates a warm-Humid Climate	**Cameron-2A(*)**

BUILDING ENVELOPE REQUIREMENTS (SECTION C402):

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS (Table C402.1.3):

ROOF:	Insulation Entirely Above Roof Deck, R-25ci
WALLS, ABOVE GRADE:	N/A
WALLS, BELOW GRADE:	N/A
FLOORS:	N/A
SLAB-ON-GRADE FLOORS:	N/A
OPAQUE DOORS:	N/A

OPAQUE THERMAL ENVELOPE ASSEMBLY MAXIMUM REQUIREMENTS, U-FACTOR METHOD (Table C402.1.4):

ROOF:	Insulation Entirely Above Roof Deck, U-0.039
WALLS, ABOVE GRADE:	N/A
WALLS, BELOW GRADE:	N/A
FLOORS:	N/A
SLAB-ON-GRADE FLOORS:	N/A
OPAQUE DOORS:	N/A

SOLAR REFLECTANCE AND THERMAL EMITTANCE (Section C402.3):
Low-sloped roofs directly above cooled conditioned spaces in Climate Zones 1, 2 and 3 shall comply with one or more of the options in Table C402.3.

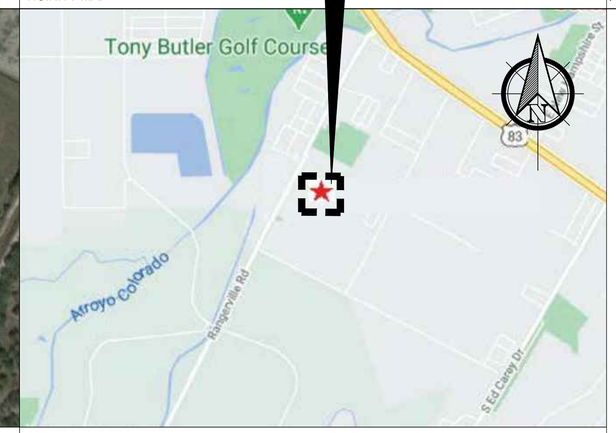
TOTAL BUILDING PERFORMANCE (SECTION C406): **ROOF ONLY - Alterations**

SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS (Table C407.5.1(1)):

ROOF - Reference	ROOF - Proposed	
Type:	Insulation Entirely Above Deck	
Gross Area:	3,293 SF	
U-Factor (from Table C402.1.4):	U-0.039 Exempt*	
Solar Absorbance:	0.75 Exempt*	
Emittance:	0.90 Exempt*	*Exemption: Neither Sheathing nor insulation is exposed.

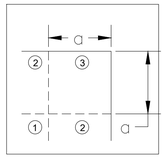
REGION MAP

VICINITY MAP



WIND PRESSURES
ENCLOSED
RISK CATEGORY: II
EXPOSURE CATEGORY: C

ROOF AREA	H	L	W	"a"
A	13	89	37	4



ZONE	PRESSURES
	A
1 field zone	-49 PSF
2 edge zone	-82.2 PSF
3 corner zone	-123.7 PSF

NOTE:
THESE DIMENSIONS AND HEIGHTS HAVE BEEN PROVIDED FOR BIDDING ONLY. FINAL DESIGN PRESSURES WILL VARY FOR EACH ROOF AREA

GENERAL NOTES

1 CONSULT W/OWNER AND REMOVE ALL ABANDONED OR NON-FUNCTIONAL ROOF MOUNTED EQUIPMENT AND ACCESSORIES. VOIDS IN ROOF DECK LEFT BY REMOVED EQUIPMENT SHALL BE REPAIRED AS SPECIFIED AND DETAILED

2 REPLACE ALL EXISTING NON-MECHANICALLY OPERATED VENTS AND VENTILATORS AND WITH NEW PRODUCTS OF IDENTICAL DESIGN, FUNCTION, AND CONFIGURATION, UNLESS OTHERWISE INDICATED.

3 PROVIDE CRICKETS ON THE HIGH SIDE OF ALL CURBS 24" OR GREATER WIDE TO DIVERT ROOF DRAINAGE TO DISCHARGE AREAS (SCUPPERS, ROOF DRAINS, ETC.) AT EQUIPMENT SUPPORT CURBS, PROVIDE CRICKETS ON HIGH SIDE OF CURB.

4 PROVIDE 4" LAP JOINTS FOR ALL SHEET METAL FLASHING RECEIVERS.

5 FLASH ALL ROUND ROOF PENETRATIONS AS DETAILED UNLESS OTHERWISE NOTED.

6 PROVIDE CURBS FOR ALL VENTILATORS WITH A DECK OPENING OF 12-INCHES OR GREATER.

7 RAISE ALL ROOF MOUNTED APPURTENANCES, EQUIPMENT, PIPING, ETC. TO 8-INCH MINIMUM HEIGHT ABOVE TOP OF ROOF MEMBRANE OR AS REQUIRED TO PROVIDE CLEARANCES AS RECOMMENDED BY NRCA STANDARDS.

8 INSTALL NEW GUTTERS AND DOWNSPOUTS. DO NOT INSTALL NEW DOWNSPOUTS OVER CONTROL JOINTS, WALL OPENINGS, HANDICAPPED RAMPS OR ANY WALL-MOUNT DEVICE. PROVIDE SPLASH BLOCKS FOR ALL DOWNSPOUTS.

9 ALL LUMBER INDICATED IN DRAWINGS IS NEW (UNLESS INDICATED AS EXISTING).

10 IF ASBESTOS CONTAINING MATERIALS ARE DETERMINED TO EXIST AT AREAS SCHEDULED FOR WORK, THE REMOVAL, HANDLING AND DISPOSAL OF THE ACM MUST TAKE PLACE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS.

11 ALL ROOFTOP APPURTENANCES, EQUIPMENT, PIPING, ETC. SHALL BE ATTACHED / REATTACHED IN A MANNER TO PROVIDE CODE REQUIRED WIND RESISTANCE AS CALCULATED BY ASCE-7.

12 CONSULT WITH OWNER FOR TRIMMING OF ALL TREES ON SITE. MAINTENANCE WILL BE AVAILABLE TO TRIM TREES AS NEEDED.

ABBREVIATIONS:

AB	ABANDONED	OSC	OVERFLOW SCUPPER
ABP	ABANDONED PENETRATION	PP	PITCH PAN
A/C CU	A/C OR CONDENSATION UNIT	PS	PENETRATION SEAL
ARD	ABANDONED ROOF DRAIN	PSL	PIPE SUPPORT LARGE
CD	CONDENSATION DRAIN	PSS	PIPE SUPPORT SMALL
CF	CENTRIFUGAL FAN	RD	ROOF DRAIN
CFMF	COLD FORMED METAL FRAMING	RH	ROOF HATCH
CL	CROSS OVER LADDER	RRV	RELEASE VENT
CW	CHILLED WATER	RTU	ROOF TOP UNIT
DS	DOWN SPOUT	SAT	SATELLITE
DXU	DISTRIBUTION SWITCH	SC	SCUPPER
EDS	ELECTRICAL DISCONNECT UNIT	SB	SPLASHBLOCK
EF	EXHAUST FAN	SL	SLOPE
EJ	BUILDING EXPANSION JOINT	SP	SOIL PIPE
EXP JT	BUILDING EXPANSION JOINT	SS	STAINLESS STEEL
EXTG	EXISTING	TC	THY CURB
GEJ	GUTTER EXPANSION JOINT	TG	TORCH GRADE
GN	GOOSE NECK VENT	T.O.D.	TOP OF DRAIN
HS	HOT STACK	T.O.E.	TOP OF EDGE
HW	HOT WATER	T.O.J.	TOP OF JOIST
JB	ELECTRICAL JUNCTION BOX	T.O.P.	TOP OF PARAPET
LWC	LIGHT WEIGHT CONCRETE	T.O.R.	TOP OF ROOF
LWIC	LIGHT WEIGHT INSULATED CONCRETE	T.O.S.	TOP OF STEEL
MAX	MAXIMUM	TYP.	TYPICAL
MIN	MINIMUM	V	VENT PIPE
MF	MECHANICALLY FASTENED	WMA	WALL-MOUNT ANTENNA
OC	ON CENTER	WMLF	WALL-MOUNT LIGHT FIXTURE
ORD	OVERFLOW ROOF DRAIN	WPS	WALL PENETRATION SEAL

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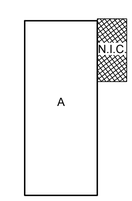
R1	OVERALL ROOF PLAN/ELEVATION
D1	ROOF DETAILS
D2	ROOF DETAILS

KEY PLAN



KEY PLAN

LEGEND
- ☒ NOT IN CONTRACT (N.I.C.)
- ☐ BASE BID

REVISIONS:
100% CDS

REGISTERED ARCHITECT RICK CANZONERI 11458 STATE OF TEXAS
12/11/2020

RIO GRANDE STATE CENTER
ROOF REPLACEMENT AT BUILDING 511
PROJECT # 20-122-RSC
HARLINGEN, TX

AMTECH SOLUTIONS, INC.
4444 CORONA DR. STE #207
CORPUS CHRISTI, TEXAS 78411
t 361 299.0000

TITLE SHEET

DRAWN BY:	C.C.G.
CHECKED BY:	J.R.,D.V, R.C
PROJECT NO.:	RGV.2020.001008
DATE: 12/18/2020	SCALE: AS NOTED
SHEET:	T1

SCOPE OF WORK (ROOFING)
BASE BID
INSTALL THE SPECIFIED PRODUCTS AND SYSTEMS AT THE FOLLOWING AREAS:

ROOF AREA "A"- NEW ROOF OVERLAY SYSTEM
* 2 PLY GRANULE SURFACE SBS MODIFIED BITUMEN MEMBRANE SYSTEM- (TORCH APPLIED OVER)
* ½" COVERBOARD (MECHANICALLY ATTACHED OVER)
* ½" PER FOOT TAPERED RIDGE POLYISOCYANURATE BOARD (MECHANICALLY ATTACHED OVER)
* 4.5" RIGID POLYISOCYANURATE BOARD (MECHANICAL FASTENED OVER) ADDED R-VALUE- 25.20
* METAL DECK (PROPERLY CLEANED, REPAIRED, AND PREPPED. ALL MOISTURE CONTAINING MATERIAL REMOVED AND REPLACED)
* INSTALL 24 GAUGE METAL PANELS AT SOFFIT

SCOPE OF WORK (ALTERNATES)
ALTERNATE #1
INSTALL THE SPECIFIED PRODUCTS AND SYSTEMS:
- EXTERIOR FIBER CEMENT MEDIUM DENSITY VERTICAL SIDING AND BATTEN TRIM STRIPS (OVER)
- VAPOR BARRIER (OVER)
- ¾" CDX FIRE RETARDANT TREATED WOOD (FRTW) PLYWOOD (OVER)
- EXISTING STUD WALL FRAMING (PROPERLY CLEANED, AND PREPPED, ALL MOISTURE CONTAINING MATERIAL REMOVED AND REPLACED).

ALTERNATE #2
- REMOVE MECHANICAL CONDENSER UNIT SUPPORT
- REPLACE ACCU STAND WITH WINDSTORM COMPLIANT AND ALUMINUM A/C STAND. NEW STAND TO BE MANUFACTURED BY MIAMI TECH INC. MODEL AST 6061-T6 ALUMINUM CONSTRUCTION. DIMENSIONS PROVIDED PER BIDDING PURPOSES WITH CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO ORDERING.

EXISTING ROOF SCHEDULE:
* FLOOD COAT AND GRAVEL (OVER)
* 4-PLY BUILT UP ROOF (OVER)
* 1.5" PERLITE BOARD (OVER)
* METAL DECK

WIND DESIGN NOTES:

1. DESIGN ASSUMPTIONS:

1.1. 2018 INTERNATIONAL EXISTING BUILDING CODE

1.2. 2018 INTERNATIONAL BUILDING CODE

1.3. ASCE 7-10 HAZARD WEB SITE CONSISTING OF :

1.3.1 WIND 150 MPH ULTIMATE
1.3.2 EXPOSURE C
1.3.3 CLIMATE ZONE 2A

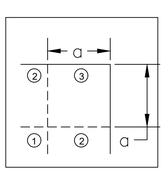
1.4 DESIGN DATA:

1.4.1 WIND PRESSURES PER ASCE 7-10 BUILDING UNDER 30 FEET IN HEIGHT
1.4.2 ENCLOSED; RISK CATEGORY III
1.4.3 WIND PRESSURES

1.4.3.1 EDGE DISTANCE a = 4'-0'. EDGE DISTANCE DEPEND ON ROOF AREA. SEE TABLE ON THIS PAGE FOR EDGE DISTANCE " a " VALUE FOR EACH ROOF AREA.
1.4.3.2 ZONE 1 FIELD = - 49.0 PSF
1.4.3.3 ZONE 2 EDGE = - 82.2 PSF
1.4.3.4 ZONE 3 CORNER = - 123.7 PSF

NOTE:
FINAL DESIGN PRESSURES WILL VARY FOR EACH ROOF AREA. CONTRACTOR IS REQUIRED TO PROVIDE CODE REQUIRED WIND RESISTANCE AS CALCULATED BY ASCE - 7

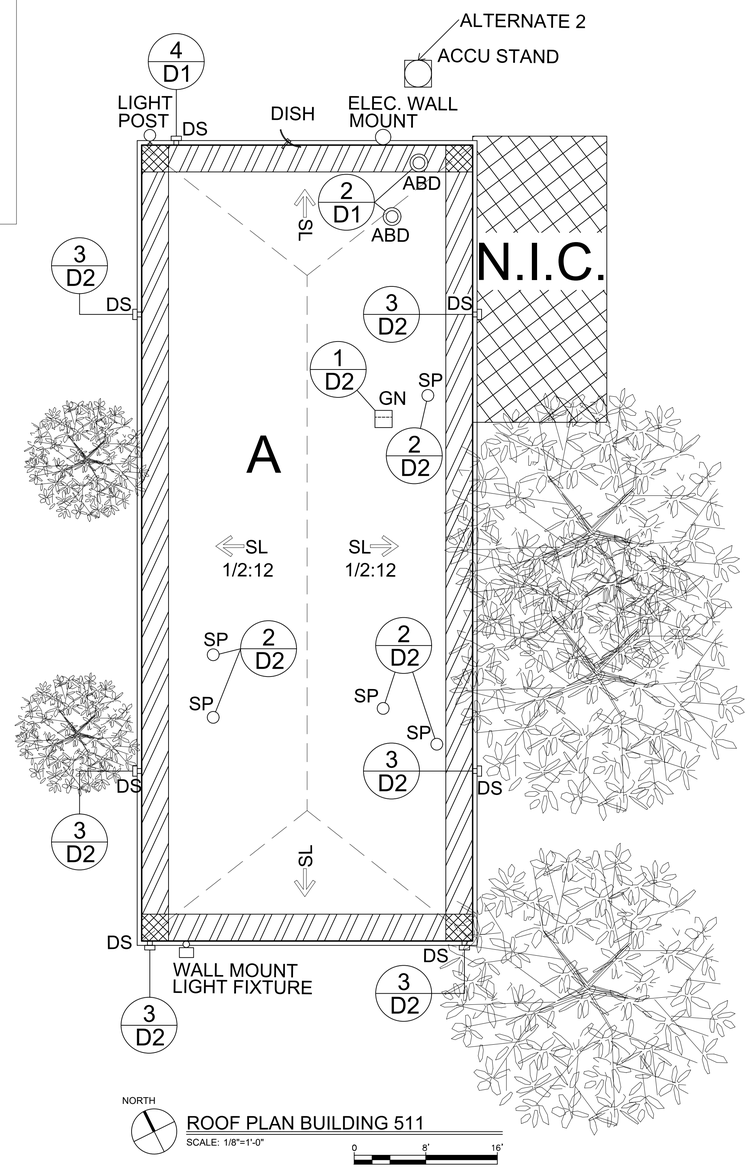
WIND PRESSURES ENCLOSED
RISK CATEGORY: II
EXPOSURE CATEGORY: C



SYMBOL LEGEND

	ZONE 1 FIELD
	ZONE 2 EDGE
	ZONE 3 CORNER

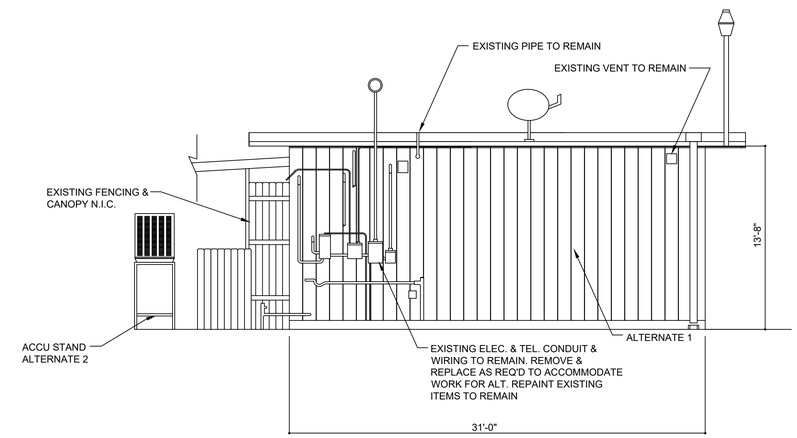
ZONE	PRESSURES (ALL ROOF AREAS)
1 field zone	- 49 PSF
2 edge zone	-82.2 PSF
3 corner zone	-123.7 PSF



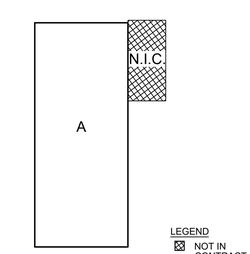
NORTH
ROOF PLAN BUILDING 511
SCALE: 1/8"=1'-0"
0 8' 16'

SYMBOL LEGEND

	SP	SOIL PIPE
	ABD	ABANDONED ROOF VENT
	DS	DOWNSPOUT
	GN	GOOSE NECK VENT
	DISH	SATELLITE DISH
		LIGHT POST



2 NORTH ELEVATION
SCALE: 3/16"=1'-0"



NORTH
KEY PLAN
NOT TO SCALE

LEGEND
☒ NOT IN CONTRACT (N.I.C.)
☐ BASE BID

REVISIONS:
100% CDS

REGISTERED ARCHITECT RICK CANZOI 71458 STATE OF TEXAS
02/11/2020

RIO GRANDE STATE CENTER
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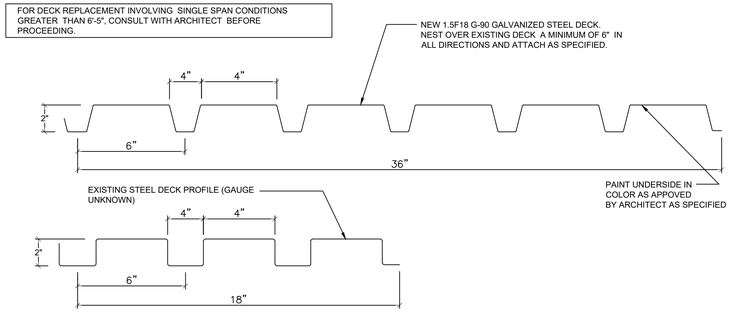
ROOF PLAN/ELEVATION
DRAWN BY: C.C.G.
CHECKED BY: J.R.,D.V, R.C
PROJECT NO.: RGV.2020.001008
DATE: 02/09/2021
SCALE: AS NOTED
SHEET: R1

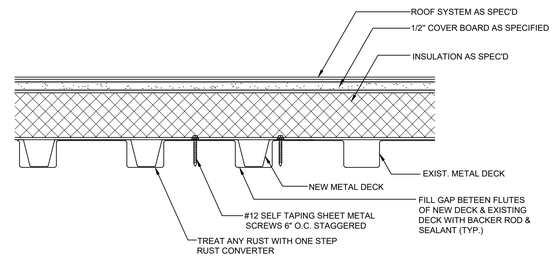
FILL GAP BETEEN FLUTES OF NEW DECK & EXISTING DECK WITH BACKER ROD & SEALANT (TYP.)

FOR DECK REPLACEMENT INVOLVING SINGLE SPAN CONDITIONS GREATER THAN 6'-5", CONSULT WITH ARCHITECT BEFORE PROCEEDING.



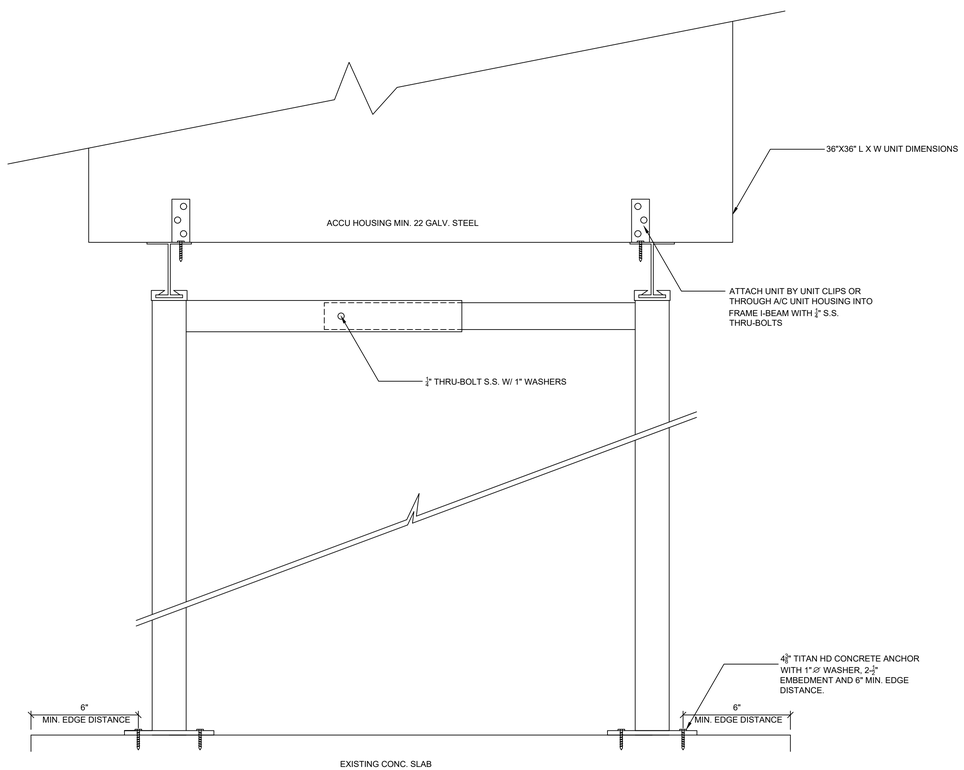
1 STEEL DECK PROFILES

NOT TO SCALE



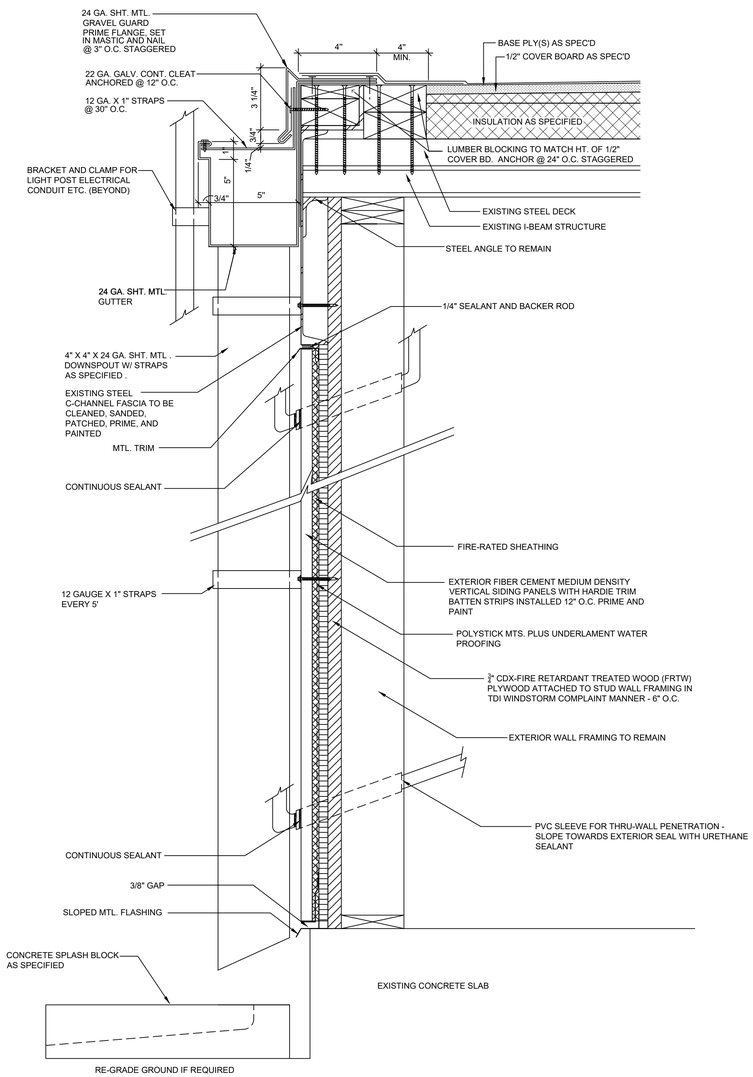
2 ABANDONED ROOF OPENING

3" = 1' - 0"



3 ALUMINUM A/C STAND

3" = 1' - 0"



4 NORTH WALL SECTION

3" = 1' - 0"

REVISIONS:

100% CDS

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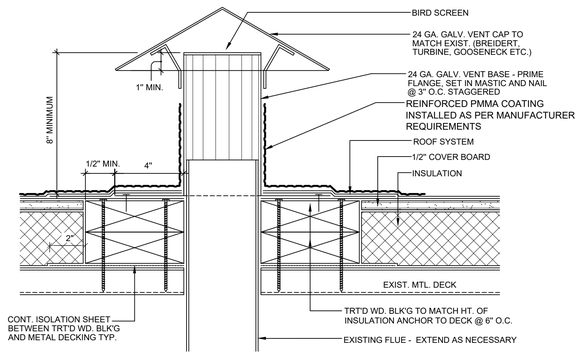
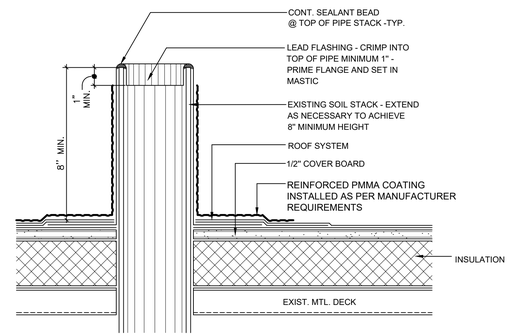
ROOF DETAILS

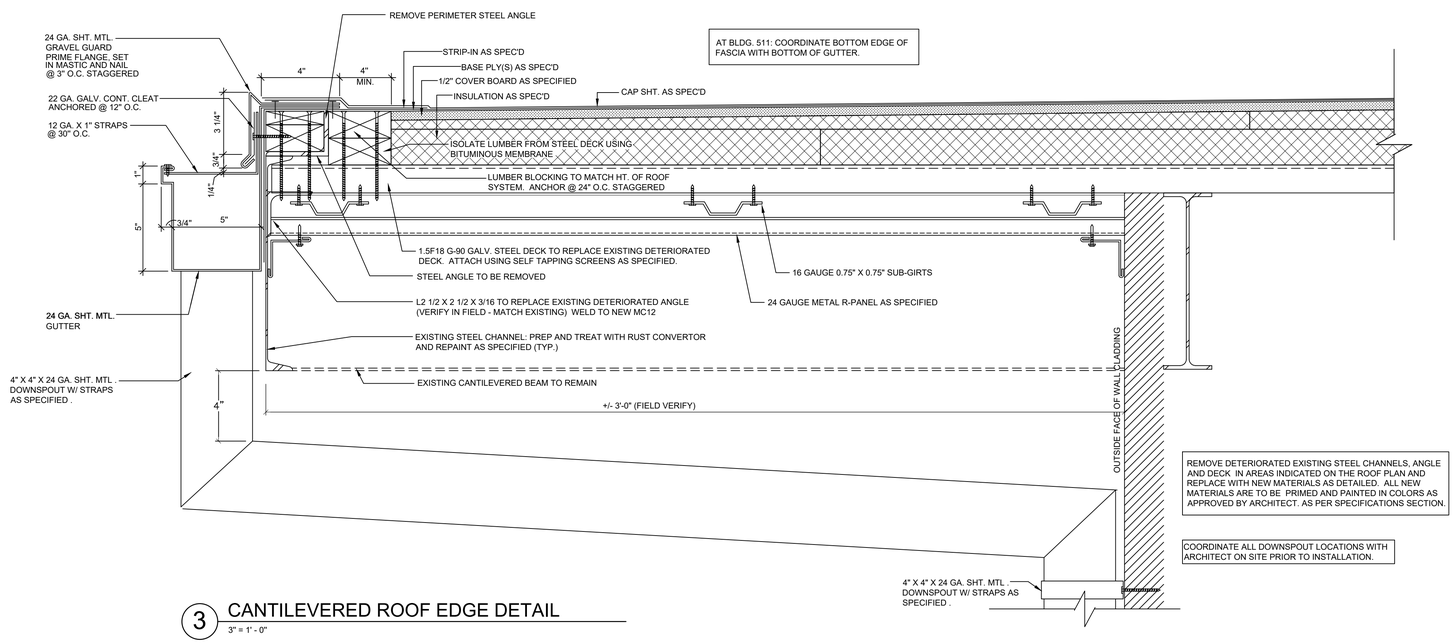
DRAWN BY:	C.C.G.
CHECKED BY:	J.R.,D.V, R.C
PROJECT NO.:	RGV.2020.001008
DATE: 12/18/2020	SCALE: AS NOTED
SHEET:	D1



1 VENT
3" = 1' - 0"



2 SOIL PIPE
3" = 1' - 0"



AT BLDG. 511: COORDINATE BOTTOM EDGE OF FASCIA WITH BOTTOM OF GUTTER.

REMOVE DETERIORATED EXISTING STEEL CHANNELS, ANGLE AND DECK IN AREAS INDICATED ON THE ROOF PLAN AND REPLACE WITH NEW MATERIALS AS DETAILED. ALL NEW MATERIALS ARE TO BE PRIMED AND PAINTED IN COLORS AS APPROVED BY ARCHITECT. AS PER SPECIFICATIONS SECTION.

COORDINATE ALL DOWNSPOUT LOCATIONS WITH ARCHITECT ON SITE PRIOR TO INSTALLATION.

3 CANTILEVERED ROOF EDGE DETAIL
3" = 1' - 0"

REVISIONS:
100% CDS

REGISTERED ARCHITECT NICK CANZONI 71458 STATE OF TEXAS
12/11/2020

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SHEET:	D2