COMPONENT & CLADDING ULTIMATE WIND PRESSURE TABLES

ROOFS - COMBINED INTERNAL & EXTERNAL PRESSURES

EFFECTIVE WIND AREA (SQ. FT.)	ALL ZONES (+) PRESSURE (PSF)	ZONE 1 (-) PRESSURE (PSF)	ZONE 2 (-) PRESSURE (PSF)	ZONE 3 (-) PRESSURE (PSF)
10	22	-55	-67	-115
20	21	-53	-62	-105
50	19	-50	-56	-92
100	18	-48	-52	-82

WALLS - COMBINED INTERNAL & EXTERNAL PRESSURES

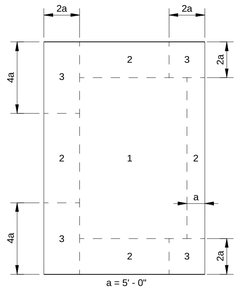
EFFECTIVE WIND AREA (SQ. FT.)	ALL ZONES (+) PRESSURE (PSF)	ZONE 4 (-) PRESSURE (PSF)	ZONE 5 (-) PRESSURE (PSF)
10	44	-48	-59
20	42	-46	-55
50	40	-43	-50
100	38	-41	-46
200	36	-39	-42
500	33	-37	-37

ULTIMATE WIND PRESSURE TABLES NOTES:

LINEAR INTERPOLATION FOR INTERMEDIATE VALUES OF EFFECTIVE AREAS IS ACCEPTABLE. OTHERWISE, USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.

ULTIMATE WIND LOAD PRESSURES ARE FOR USE IN LOAD COMBINATIONS LISTED IN FBC 7TH EDITION (2020) AND ASCE 7-16. THESE COMBINATIONS ARE LISTED IN FBC 7TH EDITION SECTION 1605 AND INCLUDE A WIND LOAD FACTOR OF 0.6 USING ALLOWABLE STRESS DESIGN.

WIND PRESSURE ZONES 2, 3 & 5 ARE EDGE AND CORNER ZONES. WALL ZONE 5 IS WITHIN 5'-0" OF BUILDING CORNERS. SEE DIAGRAM AT RIGHT FOR ROOF ZONES 2 & 3.



GENERAL STRUCTURAL NOTES:

1. MATERIALS TO CONFORM TO THE FOLLOWING:

CONCRETE	3,000 PSI AT 28 DAYS
REINF STEEL	ASTM A615 GRADE 60
WELDED WIRE FABRIC	ASTM A185 (FLAT SHEETS)
MISC STR STEEL	ASTM A36
ANCHOR BOLTS	ASTM A307 OR F1554, GR 36 MINIMUM

2. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 7TH EDITION (2020) AND ASCE 7-16 AS FOLLOWS.

ULTIMATE DESIGN WIND SPEED:	160 MPH
NOMINAL DESIGN WIND SPEED:	124 MPH
RISK CATEGORY:	IV
WIND EXPOSURE:	B
ENCLOSURE CLASSIFICATION:	ENCLOSED
INTERNAL PRESSURE COEFFICIENT:	±0.18
COMPONENT AND CLADDING FORCES:	AS SCHEDULED

FACILITY IS LOCATED WITHIN WIND-BORNE DEBRIS REGION & ALL GLAZED OPENINGS REQUIRE IMPACT PROTECTION.

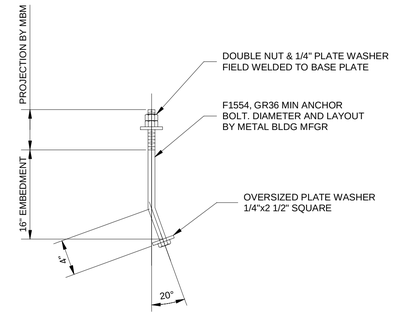
3. PREPARE SOIL BENEATH BUILDING IN ACCORDANCE WITH RECOMMENDATIONS CONTAINED IN PROJECT GEOTECHNICAL REPORT #1996767 PREPARED BY UNIVERSAL ENGINEERING SCIENCES (PROJECT NO. 1730.2200125) DATED JANUARY 9, 2023. COMPACT EXISTING SOIL AND FILL BENEATH BUILDING TO 95% MODIFIED PROCTOR PER GEOTECHNICAL REPORT. NOTE THAT SOME UNDERCUTTING AND COMPACTION IS REQUIRED. DESIGN SOIL BEARING PRESSURE = 2,000 PSF.

4. ALL ELEVATIONS REFERENCED ON THE STRUCTURAL DRAWINGS ARE ABOVE OR BELOW A FINISHED FLOOR ELEVATION OF +0'-0". SEE CIVIL SITE GRADING PLAN FOR THE ACTUAL ELEVATION.

5. PLACE REINFORCING IN CONCRETE IN ACCORDANCE WITH ACI 315 WITH A MINIMUM OF 3" CLEAR COVER WHEN CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH. PROVIDE CORNER BARS FOR ALL CONTINUOUS HORIZONTAL REINFORCING.

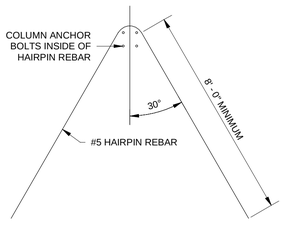
6. PRE-ENGINEERED METAL BUILDING SHALL CONFORM TO THE ABOVE WIND LOAD REQUIREMENTS. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION OF BUILDING. SUBMITTAL SHALL INCLUDE ANCHOR BOLT SETTING PLANS, ERECTION DRAWINGS, STEEL DETAIL SHEETS, AND FOUNDATION REACTIONS CALCULATED BY METAL BUILDING MANUFACTURER'S ENGINEER. ROOF COLLATERAL LOAD SHALL BE 3 PSF IN ADDITION TO BUILDING SELF WEIGHT. ROOF LIVE LOAD SHALL BE 20 PSF AND MAY BE REDUCED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.

7. FOUNDATION DESIGN SHOWN ON THESE DRAWINGS IS BASED ON THE PRELIMINARY REACTIONS AS SCHEDULED AND IS SUBJECT TO REVISION SHOULD ACTUAL METAL BUILDING REACTIONS EXCEED THOSE SHOWN.



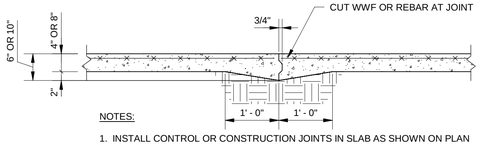
TYPICAL ANCHOR BOLT DETAIL

1 1/2" = 1'-0"



TYPICAL HAIRPIN REBAR DETAIL

3/8" = 1'-0"

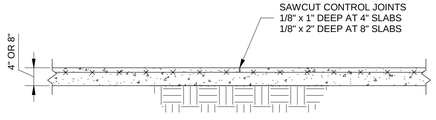


NOTES:

1. INSTALL CONTROL OR CONSTRUCTION JOINTS IN SLAB AS SHOWN ON PLAN OR AT LOCATIONS APPROVED BY ARCHITECT.

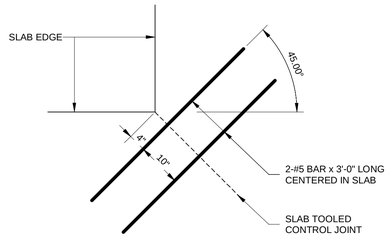
TYPICAL CONSTRUCTION JOINT DETAIL

3/4" = 1'-0"



TYPICAL CONTROL JOINT (CJ) DETAIL

3/4" = 1'-0"



TYP SLAB RE-ENTRANT CORNER DETAIL

3/4" = 1'-0"

TOWNES + ARCHITECTS, P.A.
ARCHITECTS - PLANNERS
2421 NORTH 12th AVENUE, PENSACOLA, FL 32503
PH: (850) 433-0203
AA-26001051

GENERAL NOTES & TYPICAL DETAILS

HOLT FIRE DISTRICT
CENTRAL FIRE STATION #1
US HIGHWAY 90 WEST, HOLT, FLORIDA

Revision	

NATHAN J. BERUBE
FL PE #55850

STRUCTURES
BERUBE LEONARD LLC
3101 NORTH 12TH AVE. PENSACOLA, FL. 32503
850.473.9955 www.BLSC.net EST. 2003
FL 9488 | AL OA2453E | GA PE7005473 | MS 32143

CONSTRUCTION DOCS	
Scale:	AS NOTED
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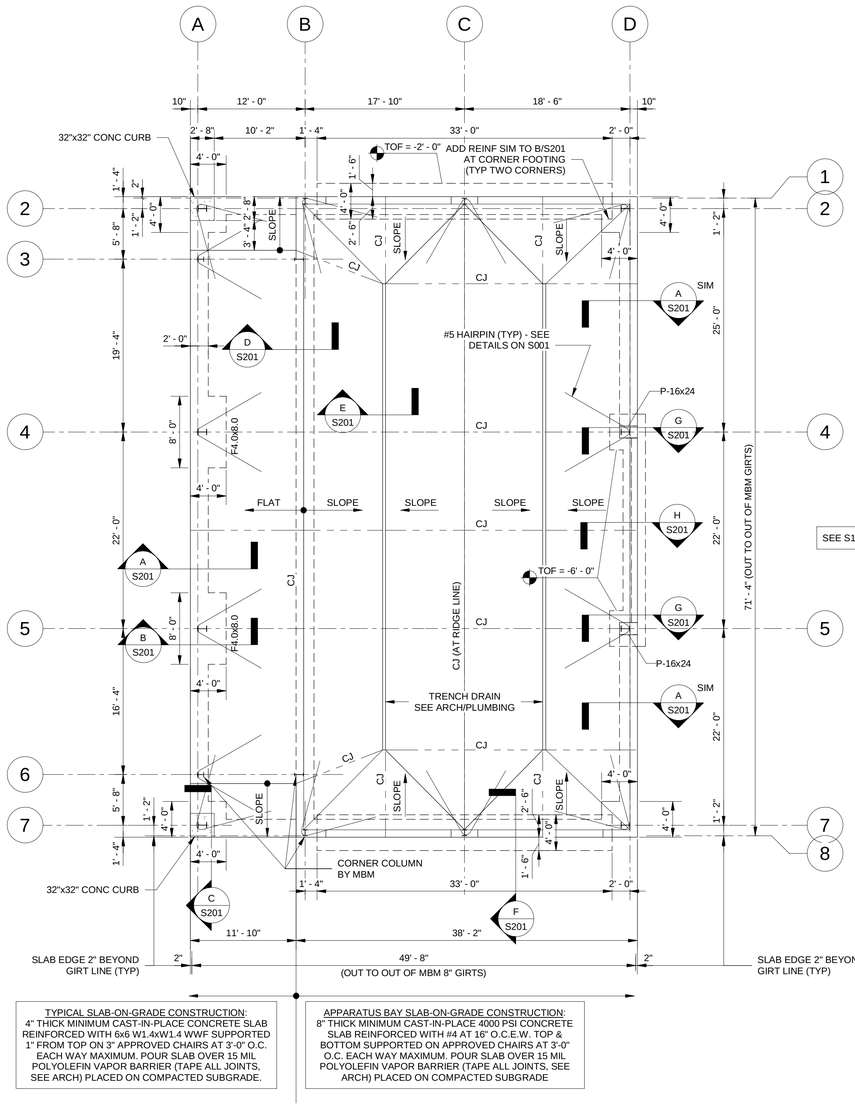
S001

G:\PROJECT FOLDERS\HOLT VFD\DRAWINGS\A100 HOLT VFD FLOORPLANS.DWG

METAL BUILDING COLUMN REACTION SCHEDULE (BASE BID)					
	DL + LL		0.6DL - 0.6WL		
COLUMN DESCRIPTION	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	ANCHOR BOLT EMBEDMENT
LINE A AT LINES 2 AND 7	15 KIPS	15 KIPS	-10 KIPS	-15 KIPS	16"
LINE A AT LINES 4 AND 5	25 KIPS	15 KIPS	-20 KIPS	-15 KIPS	16"
LINE D AT LINES 2 AND 7	15 KIPS	15 KIPS	-10 KIPS	-15 KIPS	16"
LINE D AT LINES 4 AND 5	25 KIPS	15 KIPS	-20 KIPS	-15 KIPS	16"
END COLS B-1, B-8, C-1, & C-8	10 KIPS	10 KIPS	-10 KIPS	-10 KIPS	16"
END COLS A-3 & A-6	10 KIPS	10 KIPS	-10 KIPS	-10 KIPS	16"
COLS B-3 & B-6	10 KIPS	10 KIPS	-10 KIPS	-10 KIPS	16"



SEE S102 FOR ALTERNATE #1 FOUNDATION PLAN THIS AREA

TYPICAL SLAB-ON-GRADE CONSTRUCTION:
4" THICK MINIMUM CAST-IN-PLACE CONCRETE SLAB REINFORCED WITH 6x6 W1.4xW1.4 WWF SUPPORTED 1" FROM TOP ON 3" APPROVED CHAIRS AT 3'-0" O.C. EACH WAY MAXIMUM. POUR SLAB OVER 15 MIL POLYOLEFIN VAPOR BARRIER (TAPE ALL JOINTS, SEE ARCH) PLACED ON COMPACTED SUBGRADE.

APPARATUS BAY SLAB-ON-GRADE CONSTRUCTION:
8" THICK MINIMUM CAST-IN-PLACE 4000 PSI CONCRETE SLAB REINFORCED WITH #4 AT 16" O.C.E.W. TOP & BOTTOM SUPPORTED ON APPROVED CHAIRS AT 3'-0" O.C. EACH WAY MAXIMUM. POUR SLAB OVER 15 MIL POLYOLEFIN VAPOR BARRIER (TAPE ALL JOINTS, SEE ARCH) PLACED ON COMPACTED SUBGRADE

1 S101 FOUNDATION PLAN - BASE BID
1/8" = 1'-0"
NORTH

FOUNDATION NOTES:

1. APPARATUS BAY SLAB-ON-GRADE CONSTRUCTION:

8" THICK MINIMUM CAST IN PLACE 4000 PSI CONCRETE SLAB REINFORCED WITH #4 AT 16" O.C.E.W. TOP & BOTTOM SUPPORTED ON APPROVED CHAIRS AT 3'-0" O.C.E.W. MAXIMUM. POUR SLAB OVER 15 MIL POLYOLEFIN VAPOR BARRIER (TAPE ALL JOINTS, SEE ARCH) PLACED ON COMPACTED SUBGRADE IN ACCORDANCE WITH PROJECT GEOTECHNICAL ENGINEERING RECOMMENDATIONS.

2. TYPICAL SLAB-ON-GRADE CONSTRUCTION:

4" THICK MINIMUM CAST IN PLACE CONCRETE SLAB REINFORCED WITH 6x6 W1.4xW1.4 WWF SUPPORTED ON 3" APPROVED CHAIRS AT 3' - 0" O.C.E.W. MAXIMUM. POUR SLAB OVER 15 MIL POLYOLEFIN VAPOR BARRIER (TAPE ALL JOINTS, SEE ARCH) VAPOR BARRIER PLACED ON COMPACTED SUBGRADE IN ACCORDANCE WITH PROJECT GEOTECHNICAL RECOMMENDATIONS.

LEGEND:

CJ	INDICATES SLAB CONTROL JOINT - SEE DETAIL ON S001
P-XX	INDICATES POURED CONCRETE PIER. SEE S201 FOR DETAILS
TOF	INDICATES TOP OF FOOTING
MBM	METAL BUILDING MANUFACTURER

TOWNES + ARCHITECTS, P.A.
ARCHITECTS - PLANNERS
2421 NORTH 12th AVENUE, PENSACOLA, FL 32503
PH: (850) 433-0203
AA-26001051

HOLT FIRE DISTRICT
CENTRAL FIRE STATION #1
US HIGHWAY 90 WEST, HOLT, FLORIDA

FOUNDATION PLAN - BASE BID

Revision	

NATHAN J. BERUBE
FL PE #55850

STRUCTURES
BERUBE LEONARD LLC
3101 NORTH 12TH AVE PENSACOLA, FL 32503
850.473.9955 www.BLSE.net EST. 2003
FL 9468 | AL OA2482E | GA PE7000473 | MS E0143

CONSTRUCTION DOCS	
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S101

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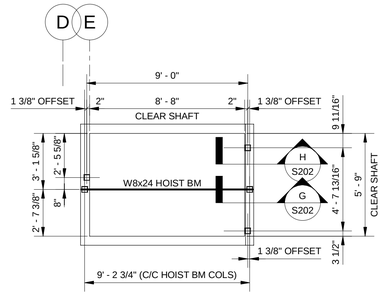
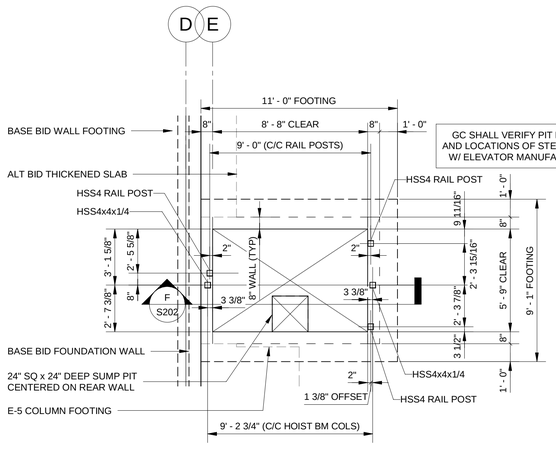


3 S102 TOP OF ELEVATOR PLAN
1/4" = 1'-0"
NORTH

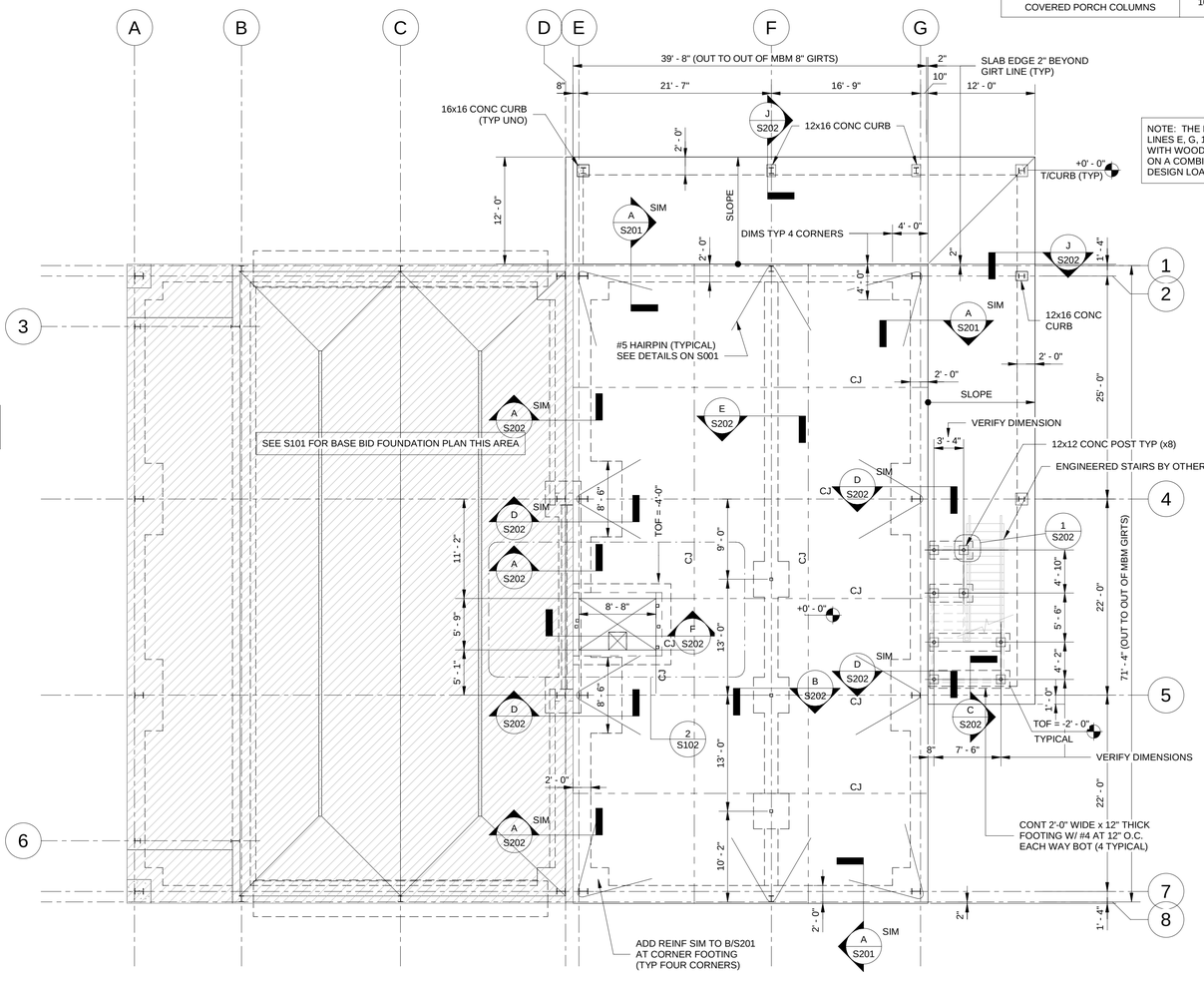


2 S102 ENLARGED ELEVATOR PIT
1/4" = 1'-0"
NORTH

METAL BUILDING COLUMN REACTION SCHEDULE (ALT #1)

	DL + LL		0.6DL + 0.6WL		
COLUMN DESCRIPTION	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	ANCHOR BOLT EMBEDMENT
LINE E AT LINES 2 AND 7	10 KIPS	10 KIPS	-10 KIPS	-10 KIPS	16"
LINE E AT LINES 4 AND 5	20 KIPS	10 KIPS	-20 KIPS	-10 KIPS	16"
LINE G AT LINES 2 AND 7	10 KIPS	10 KIPS	-10 KIPS	-10 KIPS	16"
LINE G AT LINES 4 AND 5	20 KIPS	10 KIPS	-20 KIPS	-10 KIPS	16"
END COLS F-1 & F-8 COVERED PORCH COLUMNS	10 KIPS	10 KIPS	-10 KIPS	-10 KIPS	16"

NOTE: THE FOUNDATION FOR ALTERNATE #1 BOUNDED BY GRID LINES E, G, 1, & 8 IS DESIGNED FOR A FUTURE SECOND FLOOR WITH WOOD FRAMING BEARING ON PERIMETER STUD WALLS AND ON A COMBINATION OF STUD WALL AND COLUMNS ALONG LINE F. DESIGN LOADS ARE 20 PSF DEAD LOAD AND 40 PSF LIVE LOAD.



1 S102 FOUNDATION PLAN - ALTERNATE #1
1/8" = 1'-0"
NORTH

FOUNDATION NOTES:

1. APPARATUS BAY SLAB-ON-GRADE CONSTRUCTION:

8" THICK MINIMUM CAST IN PLACE 4000 PSI CONCRETE SLAB REINFORCED WITH #4 AT 16" O.C.E.W. TOP & BOTTOM SUPPORTED ON APPROVED CHAIRS AT 3'-0" O.C.E.W. MAXIMUM. POUR SLAB OVER 15 MIL POLYOLEFIN VAPOR BARRIER (TAPE ALL JOINTS, SEE ARCH) PLACED ON COMPACTED SUBGRADE IN ACCORDANCE WITH PROJECT GEOTECHNICAL ENGINEERING RECOMMENDATIONS.

2. TYPICAL SLAB-ON-GRADE CONSTRUCTION:

4" THICK MINIMUM CAST IN PLACE CONCRETE SLAB REINFORCED WITH 6x6 W1.4xW1.4 WWF SUPPORTED ON 3" APPROVED CHAIRS AT 3' - 0" O.C.E.W. MAXIMUM . POUR SLAB OVER 15 MIL POLYOLEFIN VAPOR BARRIER (TAPE ALL JOINTS, SEE ARCH) VAPOR BARRIER PLACED ON COMPACTED SUBGRADE IN ACCORDANCE WITH PROJECT GEOTECHNICAL RECOMMENDATIONS.

LEGEND:

CJ	INDICATES SLAB CONTROL JOINT - SEE DETAIL ON S001
P-XX	INDICATES POURED CONCRETE PIER. SEE S201 FOR DETAILS
TOF	INDICATES TOP OF FOOTING
MBM	METAL BUILDING MANUFACTURER

TOWNES + ARCHITECTS, P.A.
ARCHITECTS - PLANNERS
2421 NORTH 12th AVENUE, PENSACOLA, FL 32503
PH: (850) 433-0203
AA-26001051

HOLT FIRE DISTRICT
CENTRAL FIRE STATION #1
US HIGHWAY 90 WEST, HOLT, FLORIDA

FOUNDATION PLAN - ALTERNATE #1

Revision	

NATHAN J. BERUBE
FL PE #55850

STRUCTURES
BERUBE LEONARD LLC
3101 NORTH 12TH AVE PENSACOLA, FL 32503
850.473.9955 www.BLSE.net EST. 2003
FL 9468 | AL OA2463E | GA PEF005473 | MS E0143

CONSTRUCTION DOCS

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S102

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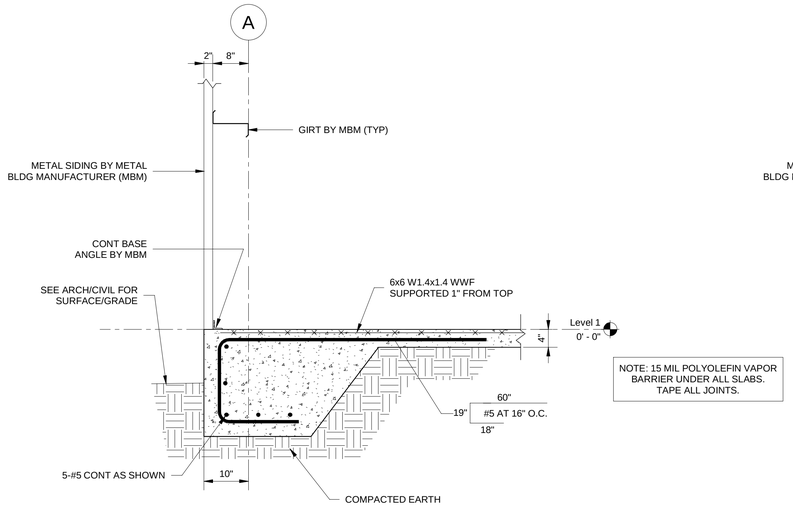
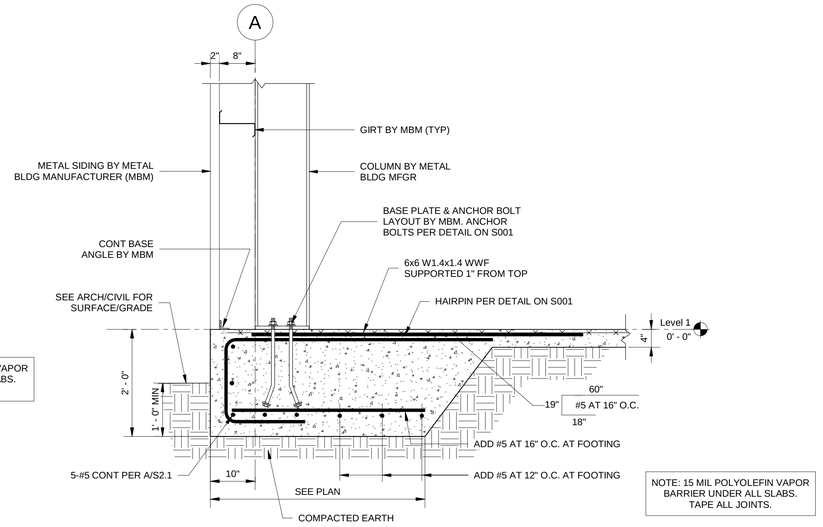


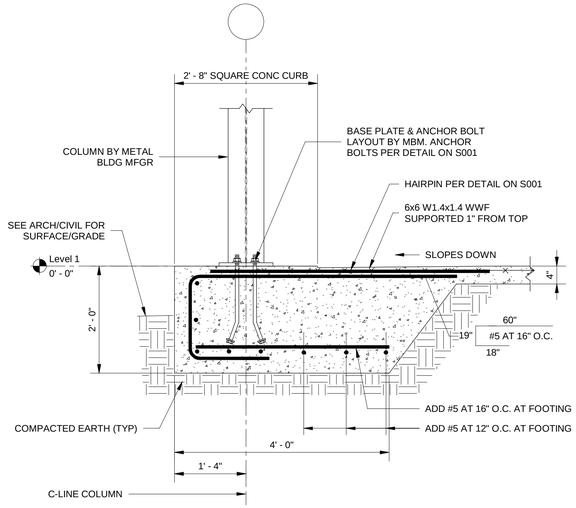
NOTE: 15 MIL POLYOLEFIN VAPOR BARRIER UNDER ALL SLABS. TAPE ALL JOINTS.

A SECTION
S201 3/4" = 1'-0"

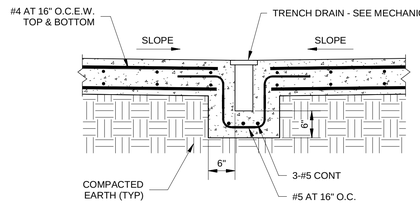


B SECTION
S201 3/4" = 1'-0"

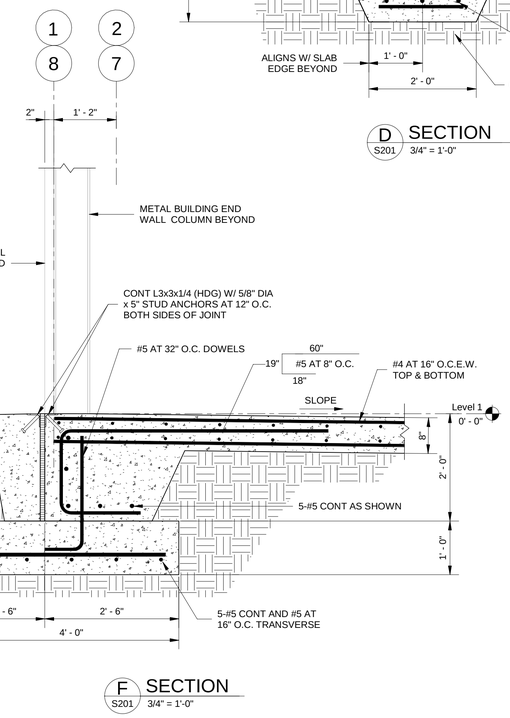
NOTE: 15 MIL POLYOLEFIN VAPOR BARRIER UNDER ALL SLABS. TAPE ALL JOINTS.



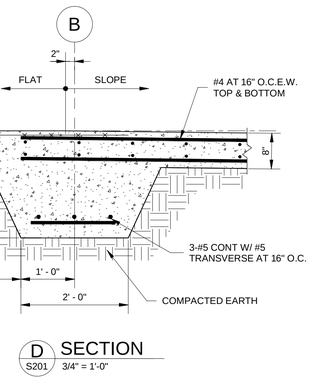
C SECTION
S201 3/4" = 1'-0"



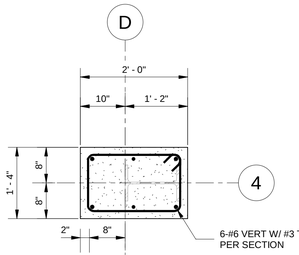
E SECTION
S201 3/4" = 1'-0"

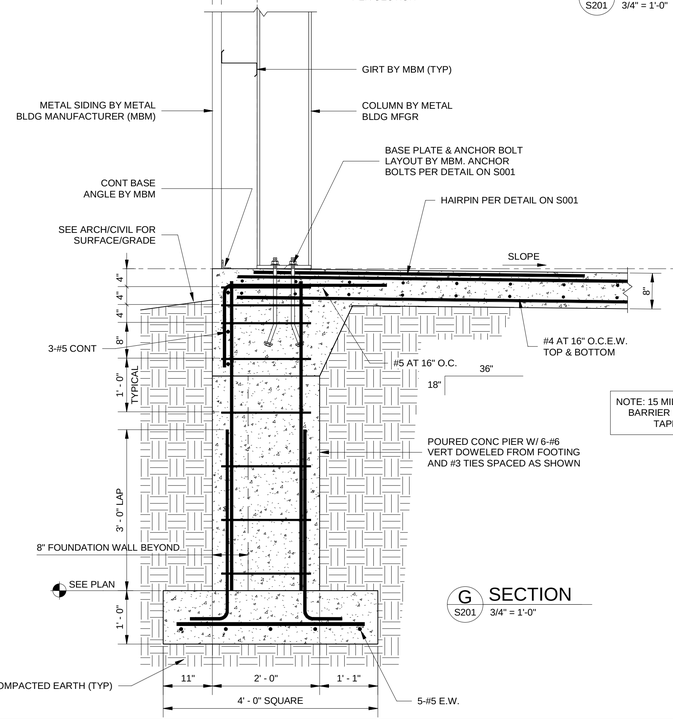


F SECTION
S201 3/4" = 1'-0"

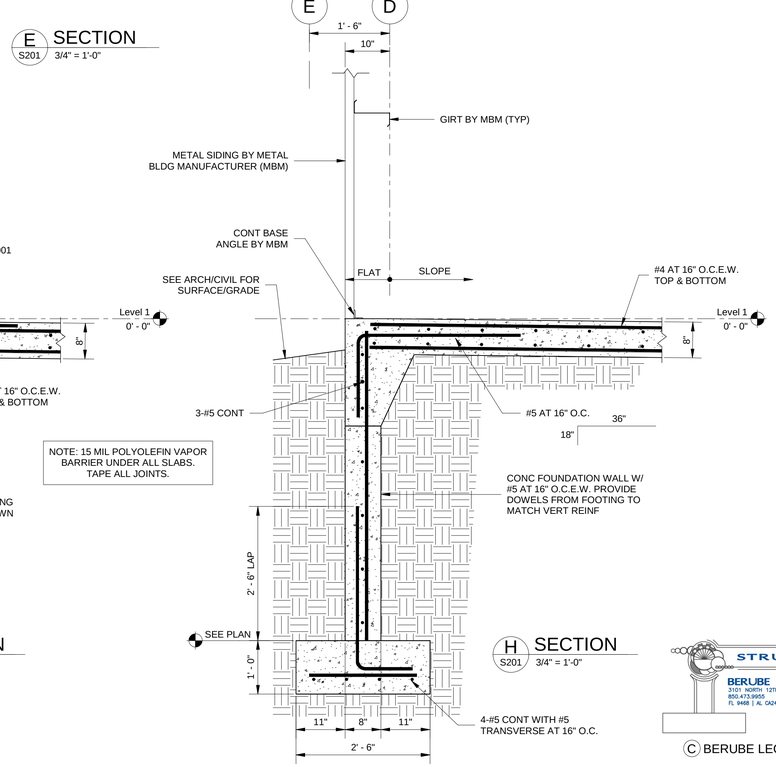


D SECTION
S201 3/4" = 1'-0"





G SECTION
S201 3/4" = 1'-0"



H SECTION
S201 3/4" = 1'-0"

TOWNES + ARCHITECTS, P.A.
ARCHITECTS - PLANNERS
2421 NORTH 12th AVENUE, PENSACOLA, FL 32503
PH: (850) 433-0203
AA-26001051

SECTIONS AND DETAILS

HOLT FIRE DISTRICT
CENTRAL FIRE STATION #1

US HIGHWAY 90 WEST, HOLT, FLORIDA

Revision

NATHAN J. BERUBE
FL PE #55850

STRUCTURES
BERUBE LEONARD LLC
3101 NORTH 12TH AVE PENSACOLA, FL 32503
850.473.9955 www.BLSE.net EST. 2003
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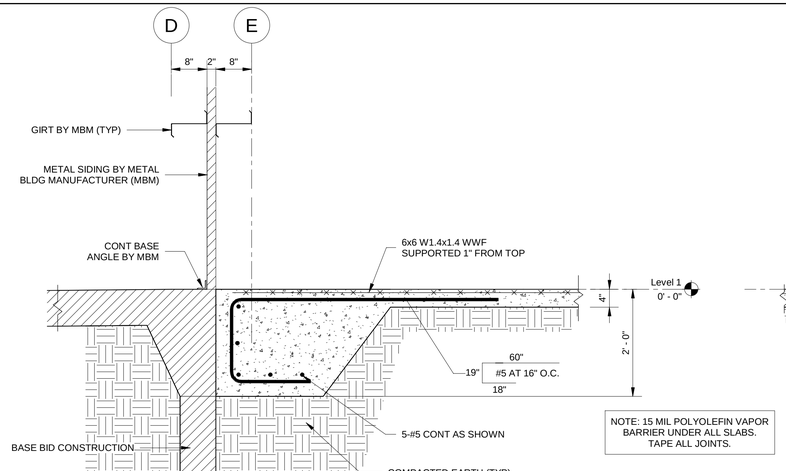
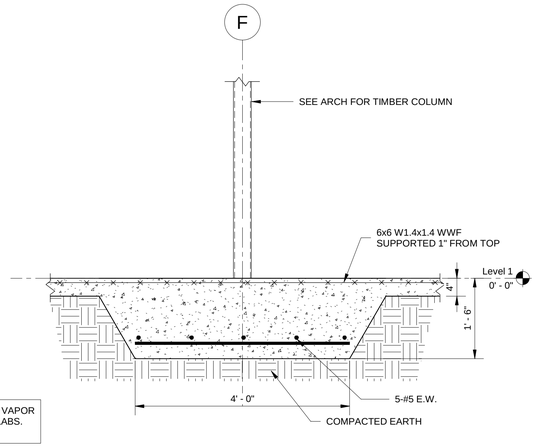
S201

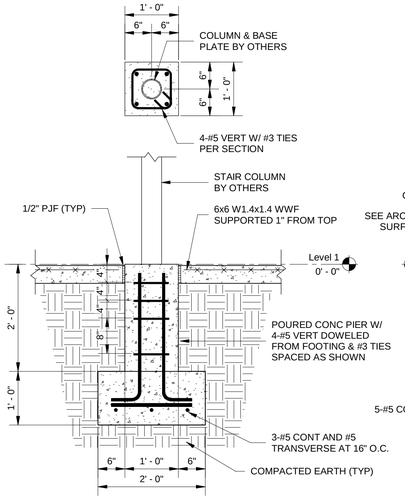
G:\PROJECT FOLDERS\HOLT VFD\DRAWINGS\A100 HOLT VFD FLOORPLANS.DWG



A SECTION
S202 3/4" = 1'-0"



B SECTION
S202 3/4" = 1'-0"



C SECTION
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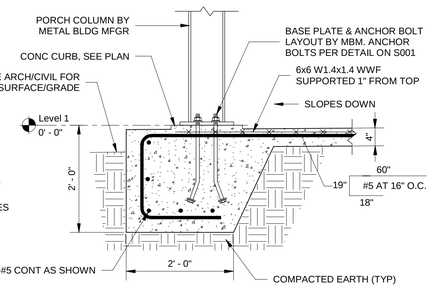

J SECTION
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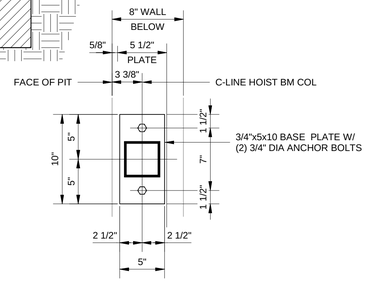
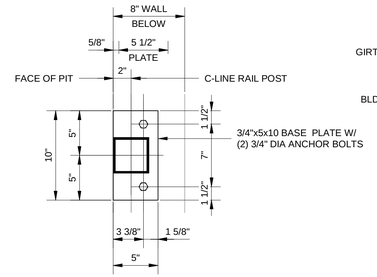
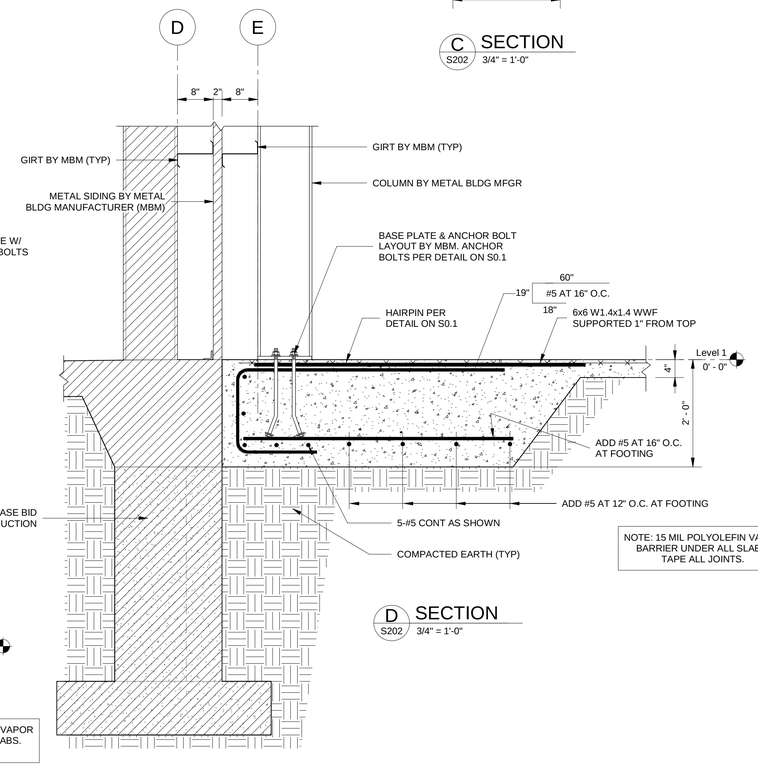


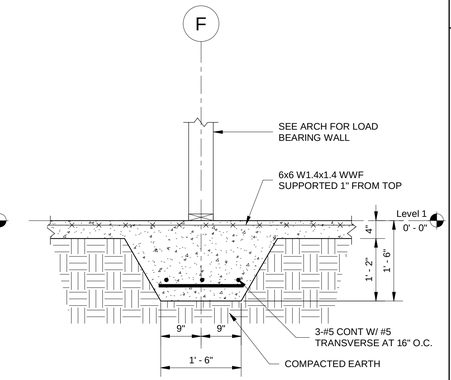
HOIST BM COL BASE PLATE



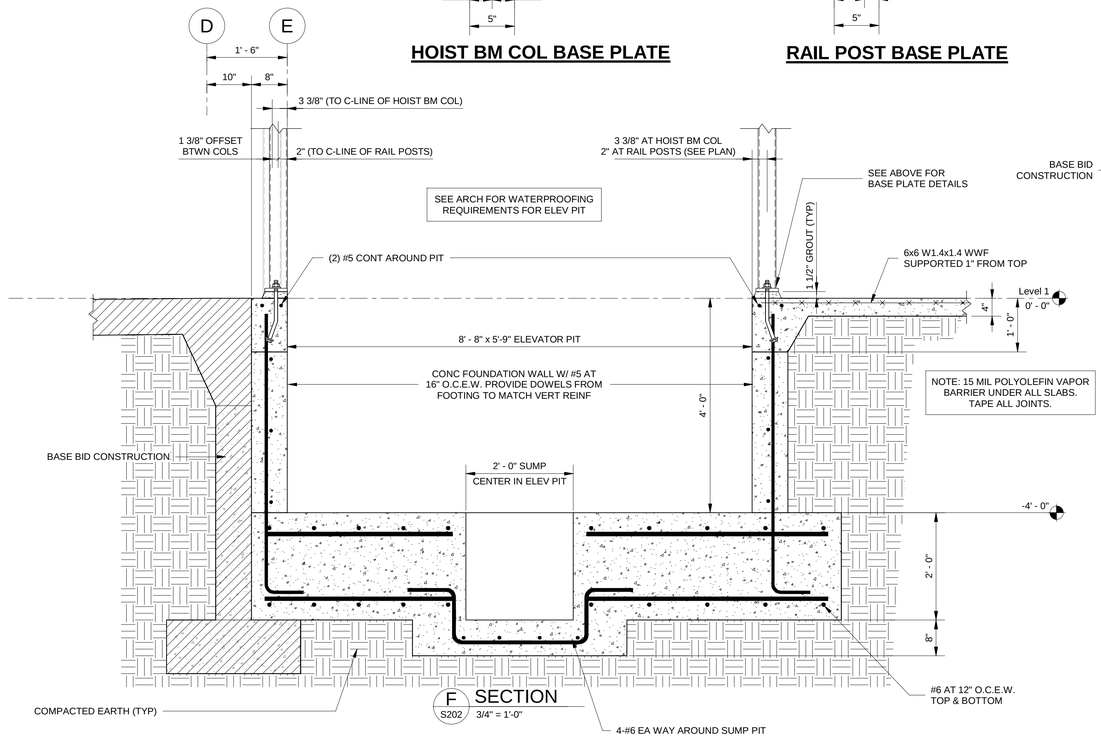
RAIL POST BASE PLATE



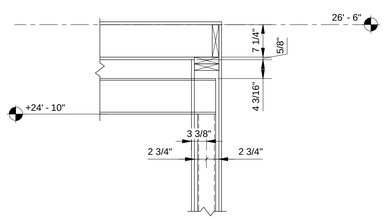
D SECTION
S202 3/4" = 1'-0"



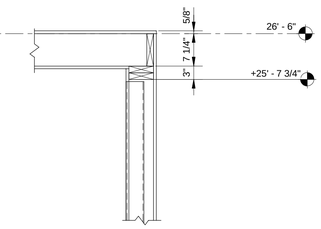
E SECTION
S202 3/4" = 1'-0"



F SECTION
S202 3/4" = 1'-0"



G SECTION
S202 3/4" = 1'-0"



H SECTION
S202 3/4" = 1'-0"

TOWNES + ARCHITECTS, P.A.
ARCHITECTS - PLANNERS
2421 NORTH 12th AVENUE, PENSACOLA, FL 32503
PH: (850) 433-0203
AA-26001051

SECTIONS AND DETAILS

HOLT FIRE DISTRICT CENTRAL FIRE STATION #1

US HIGHWAY 90 WEST, HOLT, FLORIDA

Revision	

NATHAN J. BERUBE
FL PE #55850

STRUCTURES
BERUBE LEONARD LLC
3101 NORTH 12TH AVE PENSACOLA, FL 32503
850.473.9955 www.BLSE.net EST. 2003
FL 9468 | AL OA2463E | GA PEF005473 | MS E0143

CONSTRUCTION DOCS	
Scale:	AS NOTED
Date:	12.18.2023
Drawn: NRL	Checked: NJB

S202

G:\PROJECT FOLDERS\HOLT VFD\DRAWINGS\A100 HOLT VFD FLOORPLANS.DWG