

HERCUWALL 8" COMPOSITE WALL PANEL SYSTEM

SEE SHEET 2 FOR DESIGN LOAD RATINGS

COMPONENTS SPECIFICATIONS

CONCRETE

READY-MIXED CONCRETE FOR WALL PANELS SHALL MEET ALL REQUIREMENTS OF ACI 301, CEMENT, U.N.O. MINIMUM STRENGTH AT 28 DAYS OR 60 DAYS - SEE SHEET 2, MAXIMUM AGGREGATE SIZE IS 3/8" OR ROCK MIX.

HYDRAULIC GROUT PUMP WITH A 3" OR SMALLER DISCHARGE REDUCED TO 2" OR 1-1/2" HOSE AT DELIVERY POINT.

REBAR REINFORCEMENT

USE ASTM A615 GRADE 60 FOR REINFORCEMENT.

LAP SPLICES TO BE A MINIMUM OF 48 BAR DIAMETERS.

VERTICAL REBAR IS NOT REQUIRED WITH WALL PANELS AS VERTICAL REINFORCING IS INTEGRAL TO THE SYSTEM (SHEARSTRIP). ONE CONTINUOUS HORIZONTAL REBAR REINFORCEMENTS SHALL BE PLACED WITHIN THE BOND BEAM AT TOP OF THE WALL WITHIN INTEGRAL PLASTIC HANGERS.

BAR DIAMETERS SHALL BE MINIMUM 1/2" (#4) OR HIGHER AS SPECIFIED BY THE ENGINEER OF RECORD.

SHEET METAL COMPONENTS

ALL SHEET METAL COMPONENTS INCLUDING SHEARSTRIP®, TOP CAP, BASE TRACK, HEADER TRIM, WINDOW AND DOOR TRIM EXTERIOR AND INTERIOR SILL COVER SHALL BE MANUFACTURED FROM 24 GA. GALVANIZED COLD ROLLED STEEL.

GALVANIZED COATING SHALL BE A MINIMUM OF G-90 PER ASTM A653. ALTERNATE CORROSION RESISTANCE COATING MAY BE SPECIFIED AS APPROPRIATE, TO BE REVIEWED BY EOR.

STEEL USED IN THE MANUFACTURE OF SHEARSTRIPS IS SPECIFIED AT 44±6 KSI YIELD STRENGTH, PER AISI 1010, ASTM A 109.

STEEL USED IN ALL OTHER SHEET METAL COMPONENTS SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI.

OUTER PANEL SKIN COATED WITH LATEX PRIMER AND SEALER. UNLESS EXTERIOR COATING OPTIONS 1, 2 & 3 LISTED ON SHEET 2 ARE USED.

SCREWS

ALL SCREWS CONNECTING SHEET METAL COMPONENTS SHALL BE ZINC PLATED OR GALVANIZED STEEL, #8 DIAMETER MIN. 1/2" LENGTH, SELF DRILLING TAPPING AND SHALL CONFORM TO SAE J 78 OR EQUAL.

SCREWS FOR STEEL-TO-STEEL CONNECTIONS SHALL BE INSTALLED WITH A MIN. EDGE DISTANCE AND CENTER-TO-CENTER SPACING OF 1/2", SHALL BE SELF DRILLING TAPPING AND SHALL CONFORM TO SAE J 78.

FOAM OPTIONS:

1. FOAM FOR WALL PANELS IS MANUFACTURED FROM EXPANDED POLYSTYRENE (EPS) AND SHALL HAVE
MINIMUM DENSITY = 1.11 PCF
MAX. FLAME SPREAD RATING = 10 AS PER ASTM E-84
SMOKE DEVELOPED INDEX = 130
SPONTANEOUS IGNITION TEMPERATURE = 752° F.
2. 'NEOPOR' RIGID FOAM INSULATION BOARD BY 'BASF'
MINIMUM DENSITY = 1.35 PCF
MAX. FLAME SPREAD RATING = 25 AS PER ASTM E-84
SMOKE DEVELOPED INDEX = 450
SPONTANEOUS IGNITION TEMPERATURE = 880° F.

CAULK

CONTINUOUS 1/8" BEAD OF CAULK APPLIED ON ALL JOINTS BETWEEN PANEL FORMS FROM T.O.W. TO BASE.

CAULK SHALL BE SILICONE VARIETY WITH A 100 YEAR WARRANTY.

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC) AND 2018 INTERNATIONAL BUILDING CODE (IBC).

ALL ELECTRICAL, MECHANICAL DETAILS AND FIRE RATING PROVISIONS ARE NOT PART OF THIS APPROVAL AND SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND REVIEWED BY CORRESPONDING BUILDING DEPARTMENT.

HERCUWALL COMPOSITE WALL SYSTEM IS DESIGNED AND TO BE INSTALLED AS AN EXTERIOR OR INTERIOR BEARING OR NON BEARING WALL.

THIS PRODUCT CONTROL APPROVAL IS FOR THE WALL PANELS AS SHOWN ON THESE APPROVED DRAWINGS. BUILDING DIMENSIONS, DETAILS, UPLIFT, FOUNDATIONS, ROOF AND OTHER ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER AND REVIEWED BY THE STRUCTURAL PLANS EXAMINAR OF THE CORRESPONDING BUILDING DEPARTMENT.

DISSIMILAR MATERIALS IN CONTACT WITH EACH OTHER SHALL BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2017/2020 FLORIDA BLDG. CODE. AND THE 2018 IBC.

DESIGN IS BASED ON TESTING IN ACCORDANCE WITH FLORIDA BUILDING CODE LARGE MISSILE IMPACT TEST, ASTM E1886-13A/ASTM E1996-14.

CYCLIC WIND PRESSURE TEST, ASTM E1886-13A/ASTM E1996-14.

STATIC AIR PRESSURE TEST, TAS 202.

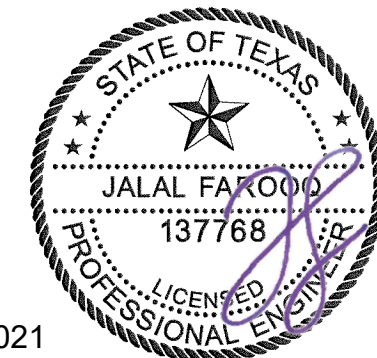
AIR INFILTRATION TEST, ASTM E283-04

WATER INFILTRATION TEST, ASTM E331-00

HERCUWALL COMPOSITE PANELS HAVE BEEN TESTED WITH INTERIOR 1/2" THK. GYPSUM BOARDS ATTACHED TO SHEAR STRIPS WITH #6 X 1-1/4" S.M.S. AT 12" O.C. VERTICALLY.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC.

CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.



Sealed: 5/21/2021

af c
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
 TEL. (305) 264-8100 FAX. (305) 262-6978

WALL - PANELS \ 19 - 43T

EPS/CONCRETE 8" COMPOSITE WALL SYSTEM
HercuTech Inc.
 8980 S. McKemy Street, Suite 101
 Tempe, Arizona, 85284
 Tel. (480) 284-4535 Fax. (480) 284-6535

no	date	by	description
A	07.01.20	ML	REV. PER TDI COMMENTS
B	05.11.21	ML	GENERAL REVISION

date: 05-15-19
 scale: -
 dr. by: MLS
 chk. by:

drawing no.

19-43T

sheet 1 of 4

4000 PSI. AT 28 DAYS CONCRETE STUDS AT 12" O.C.

MAX. DESIGN LOAD RATING = ±86.0 PSF (MAX. WALL HT. = 108")
 EXTERIOR COATING OPTION #1
 ±72.5 PSF (MAX. WALL HT. = 114")
 ±61.7 PSF (MAX. WALL HT. = 120")
 ±55.0 PSF (MAX. WALL HT. = 132")

5270 PSI. AT 60 DAYS CONCRETE STUDS AT 12" O.C.

±50.0 PSF (MAX. WALL HT. = 144")

5270 PSI. AT 60 DAYS CONCRETE STUDS AT 8" O.C.

±110.0 PSF (MAX. WALL HT. = 108")
 ±92.7 PSF (MAX. WALL HT. = 114")
 ±78.9 PSF (MAX. WALL HT. = 120")
 ±58.6 PSF (MAX. WALL HT. = 132")
 ±50.0 PSF (MAX. WALL HT. = 144")

WALL PANEL MAX. ALLOWABLE LOADS- CONCRETE STUDS AT 12" O.C.

WALL HEIGHT	AXIAL COMPRESSION Lbs Per Linear Ft.	AXIAL-TRANSVERSE LOAD CAPACITY Lbs Per Linear Ft.	RACKING SHEAR LOAD CAPACITY Lbs Per Linear Ft.
UPTO 9 FT.	6430	6330	180
UPTO 12 FT.	5150	3990	180

EXTERIOR COATING OPTION:

1. VERTICAL SHEAR STRIPS COVERED WITH 90 MM SHEATHING TAPE BY 'SAUNDERS'.
 EPS PANELS COVERED WITH 'HERCU-TECH' POLYESTER LAMINATING FILM.

WALL PANEL MAX. ALLOWABLE LOADS- CONCRETE STUDS AT 8" O.C.

WALL HEIGHT	AXIAL COMPRESSION Lbs Per Linear Ft.	AXIAL-TRANSVERSE LOAD CAPACITY Lbs Per Linear Ft.	RACKING SHEAR LOAD CAPACITY Lbs Per Linear Ft.
UPTO 9 FT.	9645	9495	180
UPTO 12 FT.	7725	5895	180

4000 PSI. AT 28 DAYS CONCRETE STUDS AT 12" O.C.

MAX. DESIGN LOAD RATING = ±86.0 PSF (MAX. WALL HT. = 108")
 EXTERIOR COATING OPTIONS #2 & 3
 ±72.5 PSF (MAX. WALL HT. = 114")
 ±61.7 PSF (MAX. WALL HT. = 120")
 ±55.0 PSF (MAX. WALL HT. = 132")

5270 PSI. AT 60 DAYS CONCRETE STUDS AT 12" O.C.

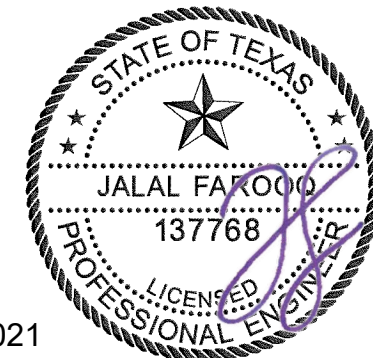
±50.0 PSF (MAX. WALL HT. = 144")

WALL PANEL MAX. ALLOWABLE LOADS- CONCRETE STUDS AT 12" O.C.

WALL HEIGHT	AXIAL COMPRESSION Lbs Per Linear Ft.	AXIAL-TRANSVERSE LOAD CAPACITY Lbs Per Linear Ft.	RACKING SHEAR LOAD CAPACITY Lbs Per Linear Ft.
UPTO 9 FT.	6430	6330	180
UPTO 12 FT.	5150	3990	180

EXTERIOR COATING OPTION:

2. 1/8" BASE COAT APPLIED TO EPS PANELS CONSISTING OF 'MasterSeal 579' CEMENTITIOUS WATER PROOF COATING BY 'BASF' AND 'MasterEmaco A660' BONDING MIXTURE BY 'BASF'.
 FIBERGLASS MESH SHEET EMBEDDED INTO BASE COAT.
 1/8" LAYER OF 'MasterSeal 584' CEMENTITIOUS WATER PROOF COATING BY 'BASF' APPLIED ON TOP OF MESH.
 1/16" TOP COAT CONSISTING OF 'MasterSeal 582 WATER PROOF CEMENT-BASED COATING BY 'BASF', AND 'MasterEmaco A660' BONDING MIXTURE BY 'BASF' MIXED 2:1 WITH #20 SAND.
 'MasterProtect HB200' WATER PROOF COATING BY 'BASF' AS EXTERIOR FINISH.
 (1/4" OVERALL STUCCO THICKNESS)
3. 3/16" THICK 'STO Stolit' ACRYLIC TEXTURED TOP FINISH BONDED TO EPS CORE (WALL PANELS) WITH COATED GLASS FIBER FABRIC MESH EMBEDDED IN 1/8" THICK 'STO Adhesive-B' BASECOAT



Sealed: 5/21/2021

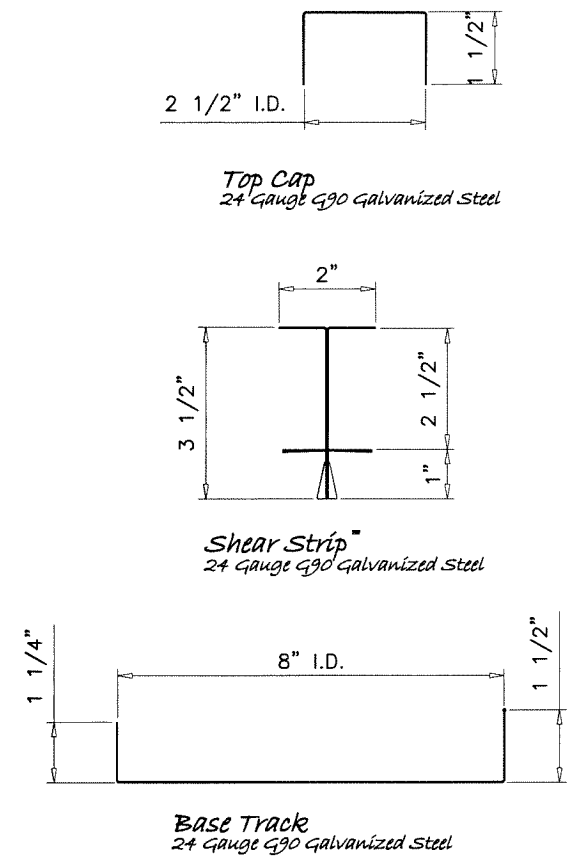
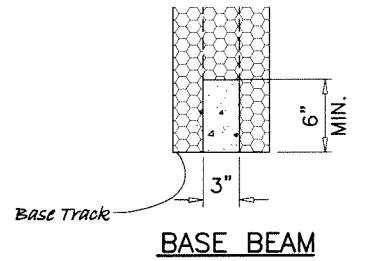
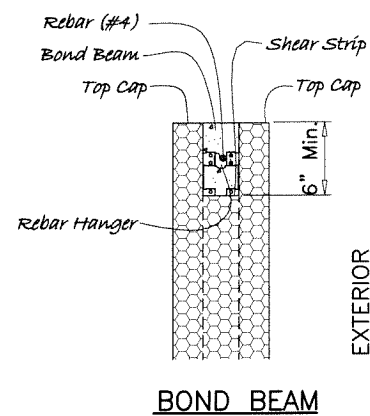
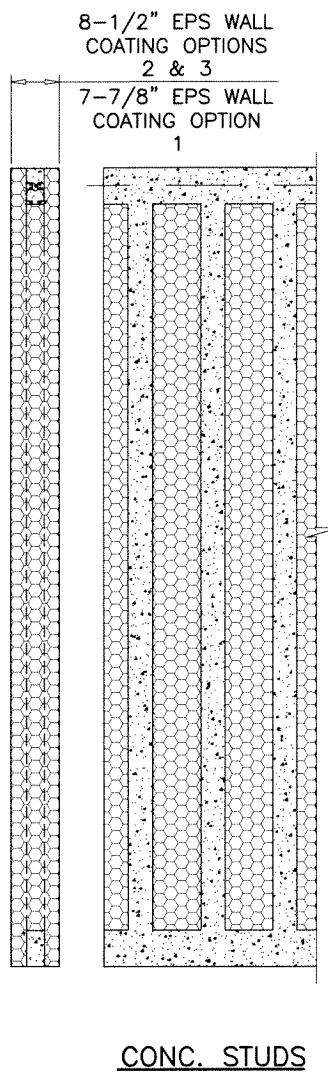
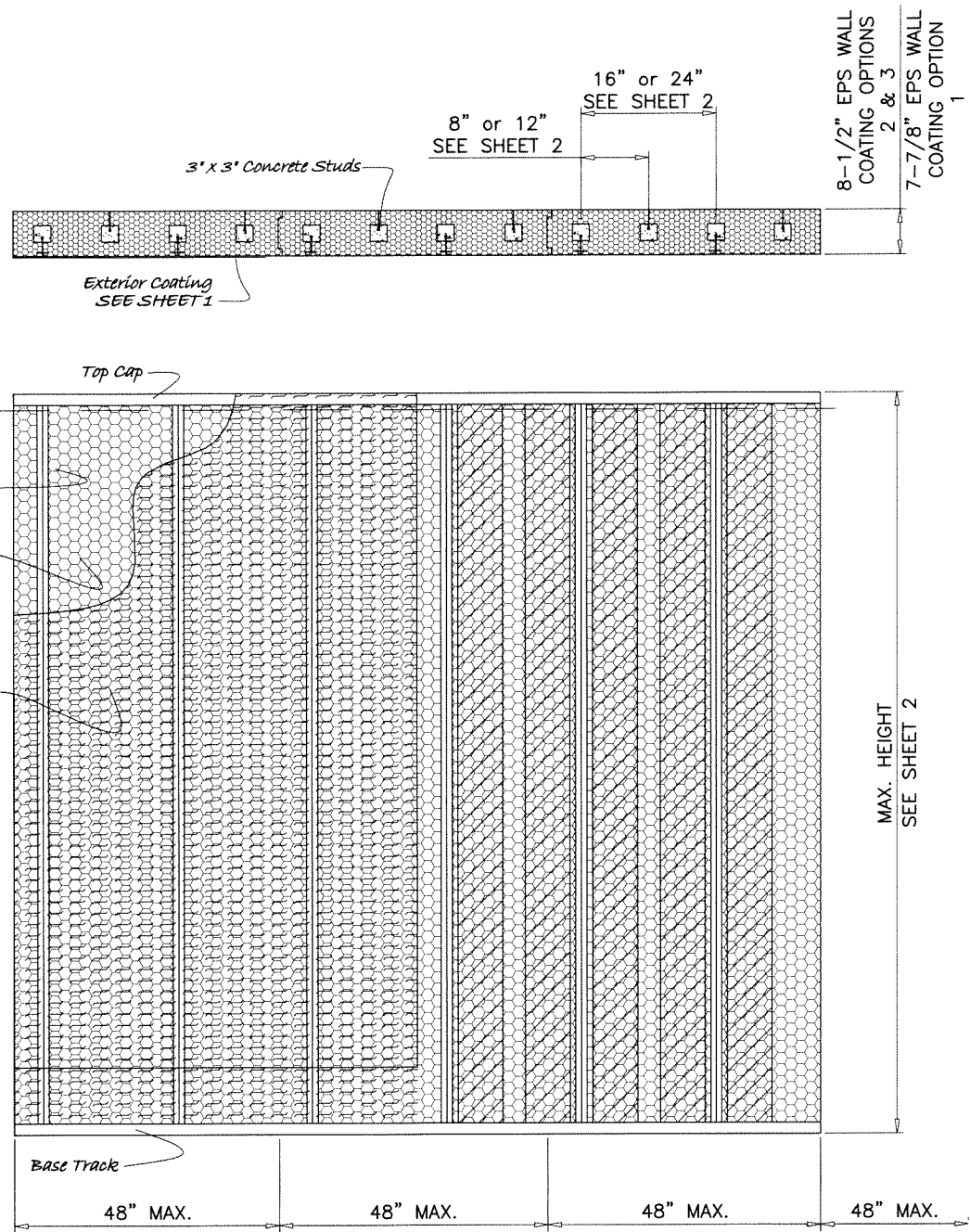
af c
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
 TEL. (305) 264-8100 FAX. (305) 262-6978
 WALL - PANELS \ 19-43T

EPS/CONCRETE 8" COMPOSITE WALL SYSTEM
HercuTech Inc.
 8980 S. McKemy Street, Suite 101
 Tempe, Arizona, 85284
 Tel. (480) 284-4535 Fax. (480) 284-6535

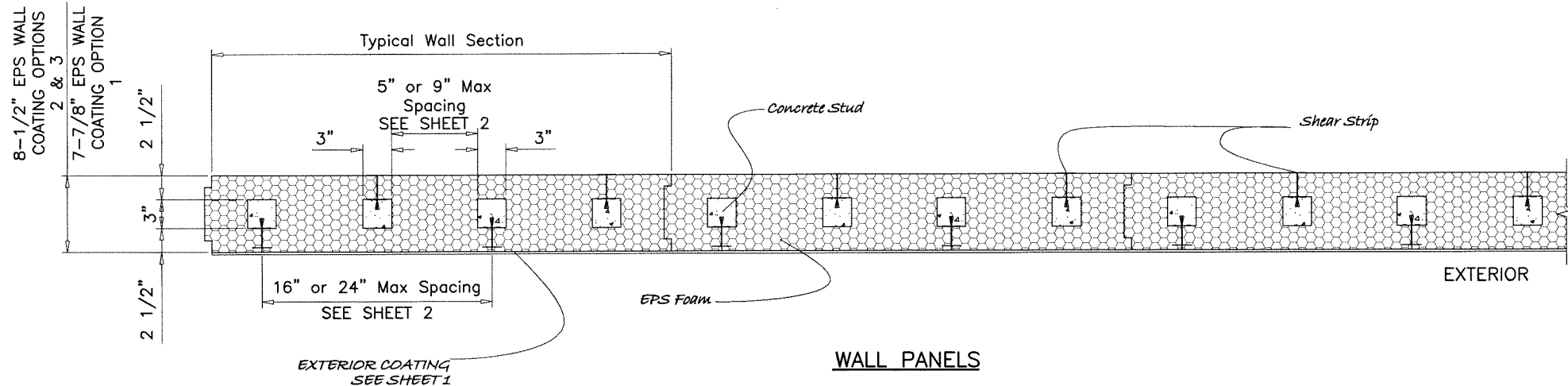
no	date	by	description
B	05.11.21	ML	GENERAL REVISION

date: 05-15-19
 scale: -
 dr. by: MLS
 chk. by:

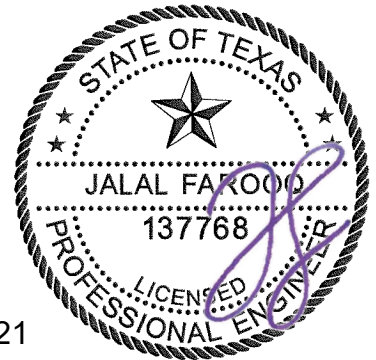
drawing no.
19-43T
 sheet 2 of 4



WALL EXTERIOR ELEVATION



WALL PANELS



Sealed: 5/21/2021

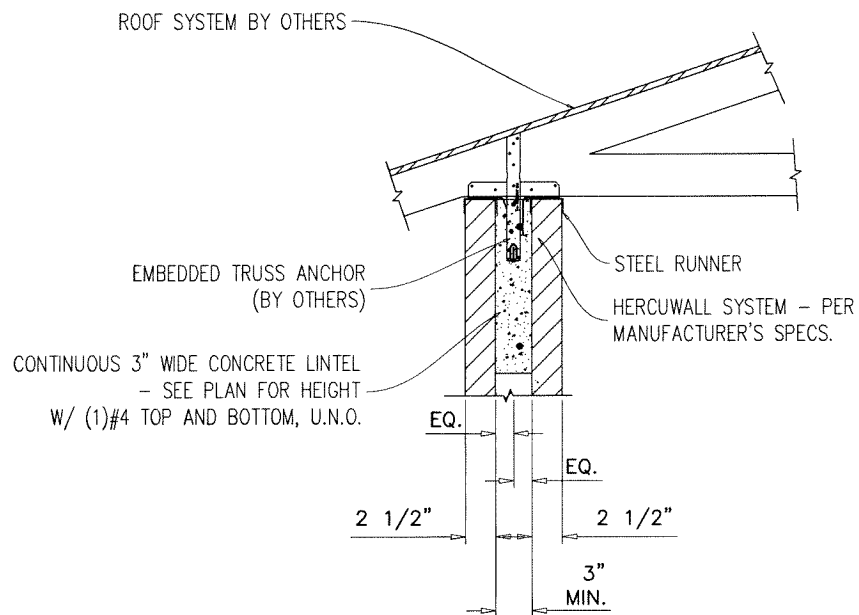
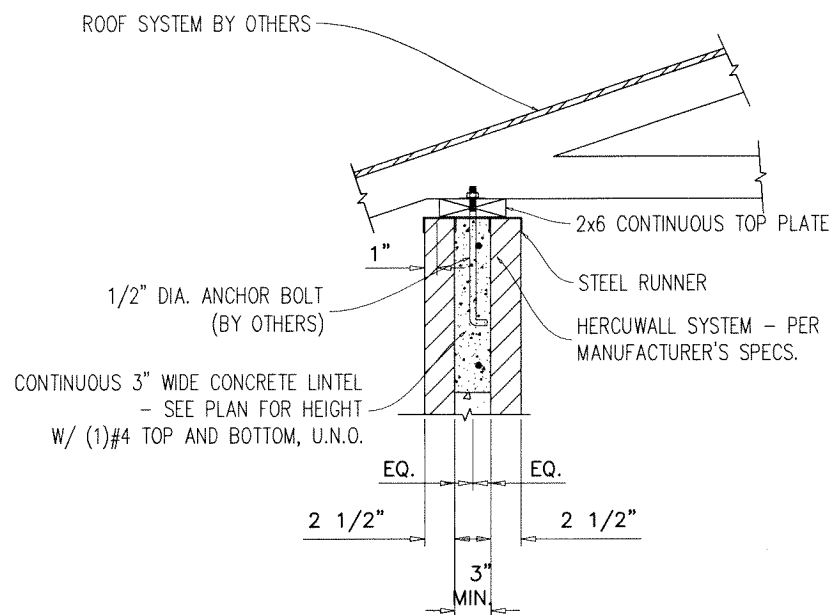
af c
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
 TEL. (305) 264-8100 FAX. (305) 262-6978
 WALL - PANELS \ 19-43T

EPS/CONCRETE 8" COMPOSITE WALL SYSTEM
HercuTech Inc.
 8980 S. McKemy Street, Suite 101
 Tempe, Arizona, 85284
 Tel. (480) 284-4535 Fax. (480) 284-6535

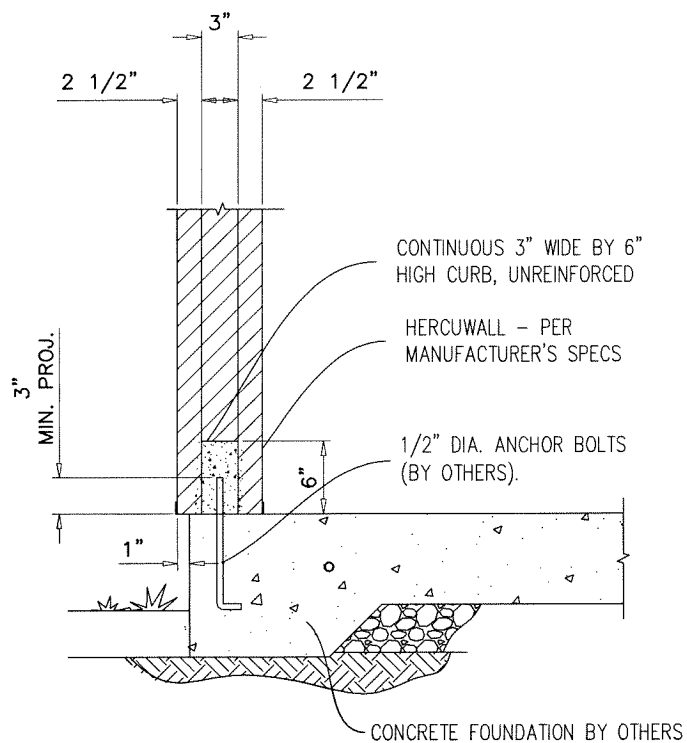
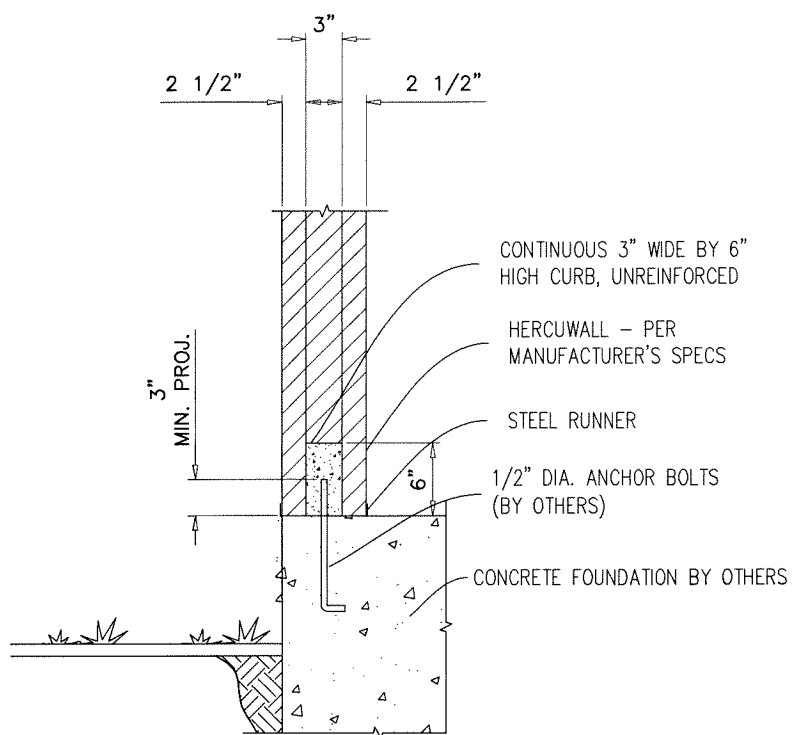
no	date	by	description
B	05.11.21	ML	GENERAL REVISION

date: 05-15-19
 scale: 1/16" = 1"
 dr. by: MLS
 chk. by:

drawing no.
19-43T
 sheet 3 of 4

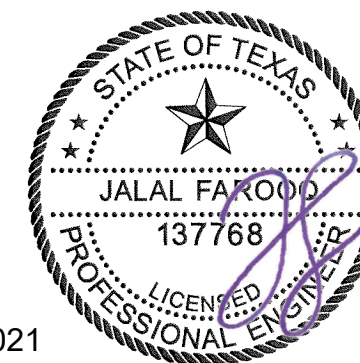


TYPICAL TOP CONNECTIONS



TYPICAL BOTTOM CONNECTIONS

Sealed: 5/21/2021



af c
AL-FAROOQ CORPORATION
 ENGINEERS & PRODUCT DEVELOPMENT
 9360 SUNSET DRIVE, SUITE 220
 MIAMI, FLORIDA 33173 (C.A.N. 3538)
 TEL. (305) 264-8100 FAX. (305) 262-6978

EPS/CONCRETE 8" COMPOSITE WALL SYSTEM
HercuTech Inc.
 8980 S. McKemy Street, Suite 101
 Tempe, Arizona, 85284
 Tel. (480) 284-4535 Fax. (480) 284-6535

no	date	by	description
B	05.11.21	ML	GENERAL REVISION

date: 05-15-19
 scale: 1/16" = 1"
 dr. by: MLS
 chk. by:

drawing no.
19-43T

sheet 4 of 4

WALL - PANELS \ 19-43T