Additions & Renovations For:

Pharmco - Production Building

1600 Armstrong Drive, Titusville, Florida 32780

PERMIT SET
REVISED/RE-ISSUED 3/30/22

Schedule of Drawings

A-1	Cover Sheet, Project Summary, and Schedule of Drawings
A-2	Production Building Demolition Plan, Schedules, Notes, and Details
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A-4	Proposed Production Building Floor Plan, Schedules, Notes, and Details
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City of Titusville, FL
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FIRE ALARM/FIRE SPRINKLER NOTE:

1. FIRE SPRINKLER SYSTEM WORK REQUIRES A SEPARATE PERMIT WITH PLAN SUBMITTAL.
2. FIRE ALARM SYSTEM WORK REQUIRES A SEPARATE PERMIT WITH PLAN SUBMITTAL.

PROJECT DATA SUMMARY: PRODUCTION BUILDING

APPLICABLE CODES

BUILDING CODE :	FLORIDA BUILDING CODE, BUILDING, 7th. EDITION (2020) and FLORIDA BUILDING CODE, EXISTING BUILDING, 7th. EDITION (2020)
MECHANICAL CODE :	FLORIDA BUILDING CODE, MECHANICAL, 7th. EDITION (2020)
PLUMBING CODE :	FLORIDA BUILDING CODE, PLUMBING, 7th. EDITION (2020)
ELECTRICAL CODE :	NATIONAL ELECTRICAL CODE, NFPA-70 (2014)
FIRE CODE :	FLORIDA FIRE PREVENTION CODE, 7th. EDITION (2020)
ACCESSIBILITY CODE :	FLORIDA BUILDING CODE, ACCESSIBILITY, 7th. EDITION (2020)
ENERGY CODE :	FLORIDA BUILDING CODE, ENERGY CONSERVATION, 7th. EDITION (2020)

BUILDING PLANNING

OCCUPANCY :	GROUP F-1 (MODERATE-HAZARD FACTORY INDUSTRIAL)(UNCHANGED) & GROUP B (BUSINESS)(UNCHANGED per F.B.C. and SPECIAL PURPOSE INDUSTRIAL (UNCHANGED) & BUSINESS(UNCHANGED) PER F.F.P.C.
MIXED OCCUPANCY :	No
REQUIRED SEPARATION.	No (Non-separated Occupancy per Section 508.3 of the Florida Building Code - Building and Section 6.1.4.3/13) of the Florida Fire Prevention Code.
CONSTRUCTION TYPE :	Type II-B, Unprotected, Sprinklered (Unchanged)

OCCUPANT LOAD: (PER TABLE 1004.1.1 FBC & TABLE 7.3.1.2 NFPA 101)
GROUP B AREA: 4,250 SQ. FT. (EXISTING) / 100 SQ. FT PER PERSON = 43 PEOPLE
GROUP F-1 AREA: 36,250 SQ. FT. (EXISTING) / 100 SQ. FT PER PERSON = 363 PEOPLE
NEW F-1 AREA: 467 SQ. FT. (ADDITION) / 300 SQ. FT PER PERSON = 2 PEOPLE
TOTAL OCCUPANT LOAD = 408 PEOPLE
SEE LIFE SAFETY PLAN FOR ACTUAL OCCUPANT LOAD.

GENERAL BUILDING LIMITATIONS GROUP F-1 (TABLES 504.3a 504.4, & 506.2):

FLOOR AREA :	ALLOWED : 62,000 sq. ft.	PROPOSED : See Below
HEIGHT OF BLDG. :	ALLOWED : 75'-0"	PROPOSED : Unchanged
NO. OF STORIES :	ALLOWED : 3 STORIES	PROPOSED : Unchanged
AREA INCREASES :	No	
HEIGHT INCREASES :	No	

FLOOR AREA ANALYSIS:

*EXISTING AREA:	40500 SQ. FT.
NEW ADDITION AREA:	467 SQ. FT.
TOTAL AREA (UNDER ROOF):	40967 SQ. FT.

*EXISTING AREAS ARE AS PER THE PREVIOUSLY PERMITTED PLANS AND ARE, TO THE BEST OF THE ARCHITECT'S KNOWLEDGE, ACCURATE.

STRUCTURAL FORCES

FLOOR DESIGN :	LIVE LOAD :	50 psf
	DEAD LOAD :	15 psf
ROOF DESIGN :	LIVE LOAD :	20 psf
	DEAD LOAD :	15 psf

WIND DESIGN : BASIC WIND SPEED (3 SECOND GUST): 130 mph
RISK CATEGORY: II
EXPOSURE: B
INTERNAL PRESS. COEFFICIENT: 0.18 FOR ENCLOSED

COMPONENTS AND CLADDING DESIGN PRESSURES :

(HIP ROOF) ZONE 1 :	+18.1 psf / -40.8 psf
(HIP ROOF) ZONE 2r :	+18.1 psf / -88.1 psf
(HIP ROOF),ZONE 2e & 3 :	+18.1 psf / -97.2 psf
ZONE 4 :	+24.3 psf / -26.3 psf
ZONE 5 :	+24.3 psf / -32.5 psf

GENERAL NOTES:

1. TO THE BEST OF OUR KNOWLEDGE, THESE PLANS COMPLY WITH APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY AND I.A.W. 633 FLORIDA STATUTES.
2. AIA DOCUMENT A01 "THE GENERAL CONDITIONS OF THE CONTRACT FOR THE CONSTRUCTION OF BUILDINGS" SHALL BE CONSIDERED PART OF THESE DOCUMENTS AND SHALL GOVERN ALL WORK OF CONTRACTOR AND SUBCONTRACTOR.
3. EACH BIDDER SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
4. ALL WORK SHALL BE IN ACCORDANCE WITH STATE, LOCAL, AND ALL APPLICABLE CODES AND ORDINANCES.
5. ALL DIMENSIONS SHALL BE FIELD VERIFIED, AND ALL ROUGH OPENING DIMENSIONS FOR WINDOW AND DOOR OPENINGS, EQUIPMENT, ETC..
6. THE ARCHITECT IS NOT RESPONSIBLE FOR CHANGES OR DEVIATIONS FROM THESE PLANS UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT IN WRITING.
7. MATERIALS AND EQUIPMENT ARE TO BE INSTALLED IN STRICT ACCORD WITH MANUFACTURER'S WRITTEN SPECIFICATIONS AND IN CONFORMANCE WITH STANDARDS OF THE TRADE.
8. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION. CONTRACTOR ASSUMES LIABILITY FOR DAMAGES INCURRED DURING CONSTRUCTION.
9. CONTRACTOR SHALL ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL, AND PLUMBING WITH ALL APPROPRIATE TRADES.
10. CONTRACTORS SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING, SHORING, GUYING, OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
11. TYPICAL DETAILS APPLY, WHETHER SPECIFICALLY REFERRED TO OR NOT IN THE DRAWINGS AND SPECIFICATIONS.
12. THE STARTING OF WORK BY ANY SUBCONTRACTOR SHALL BE CONSIDERED PRIMA FACIE EVIDENCE THAT HE HAS INSPECTED AND ACCEPTED ALL CONDITIONS INVOLVED IN HIS WORK AND FINDS THEM SATISFACTORY.
13. THESE PLANS ARE THE PROPERTY OF THE ARCHITECT. THEY ARE AN INSTRUMENT OF SERVICE AND SHALL NOT BE RE-USED, REVISED, REPRODUCED, OR COPIED WITHOUT WRITTEN CONSENT FROM THE ARCHITECT.

PROJECT NOTES:

1. THESE DRAWINGS ARE TO BE CONSIDERED A "CONTRACTOR'S PERMIT DOCUMENT", AND ARE NOT INTENDED TO COVER ALL AREAS OF CONTRACTUAL AGREEMENT BETWEEN OWNER AND THE CONTRACTOR. SPECIFIC MATERIALS, FINISHES, FIXTURES, ALLOWANCES, ETC. NOT COVERED BY THESE PLANS SHOULD BE INCLUDED IN THE WRITTEN AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR.

EXISTING BUILDING NOTE:

THIS PROJECT IS TO BE CONSIDERED AN ALTERATION-LEVEL 2 (ADMINISTRATION BUILDING) AND AN ALTERATION-LEVEL 2 and ADDITION (PRODUCTION BUILDING) PER THE FLORIDA BUILDING CODE 2020 - EXISTING BUILDING AND SHALL UTILIZE THE WORK AREA COMPLIANCE METHOD PER SECTION 301.3.3 and CHAPTERS 7, 8, and 10 OF THE FLORIDA BUILDING CODE 2020 - EXISTING BUILDING.

FIRE ALARM/FIRE SPRINKLER NOTE:

SEE SHOP DRAWINGS FROM FIRE PROTECTION ENGINEER FOR ALL REQUIRED MODIFICATIONS TO THE EXISTING FIRE ALARM AND/OR FIRE SPRINKLER SYSTEM AS REQUIRED BY THE ADDITIONS AND BY THE RENOVATIONS.

REVISIONS	NO.
BLDG. DEPT. COMMENTS A.J.K. 6/15/22	1

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COVER SHEET, PROJECT SUMMARY, and SCHEDULE OF DRAWINGS

Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

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Date: 2022.07.15 10:51:56 -04'00'
Allen J. Kiesel License # AR95683

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SPECIFICATION FOR LIGHT GAGE STEEL FRAMING

ASTM STANDARDS:
1. STANDARD SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) BY THE HOT-DIP PROCESS, STRUCTURAL (PHYSICAL) QUALITY.
2. STANDARD SPECIFICATION FOR STEEL DRILL SCREWS FOR THE APPLICATION OF GYPSUM BOARD OR METAL PLASTER BASES TO STEEL STUDS FROM 0.033 IN. TO 0.112 IN. THICKNESS.
3. STANDARD SPECIFICATIONS FOR LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS, RUNNERS (TRACK) AND BRACING OR BRIDGING FOR SCREW APPLICATION OF GYPSUM BOARD AND METAL PLASTER BASES.
4. STANDARD SPECIFICATION FOR THE INSTALLATION OF LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS AND RELATED ACCESSORIES.

SPECIFICATIONS:
5. AMERICAN IRON AND STEEL INSTITUTE (AISI) "COLD-FORMED STEEL DESIGN MANUAL", LATEST EDITION.
6. MILITARY SPECIFICATION (MILSPEC.) MIL-P-21035, PAINT, HIGH ZINC DUST CONTENT, GALVANIZING REPAIR.
7. FEDERAL SPECIFICATIONS (FED. SPEC.) FF-P-395, PIN, DRIVE, GUIDED AND PIN DRIVE, POWER ACTUATED (FASTENERS FOR POWER ACTUATED AND HAND ACTUATED FASTENING TOOLS) FF-S-325, SHIELD, EXPANSION, NAIL EXPANSION, AND NAIL, DRIVE SCREW (DEVICES, ANCHORING MASONRY).

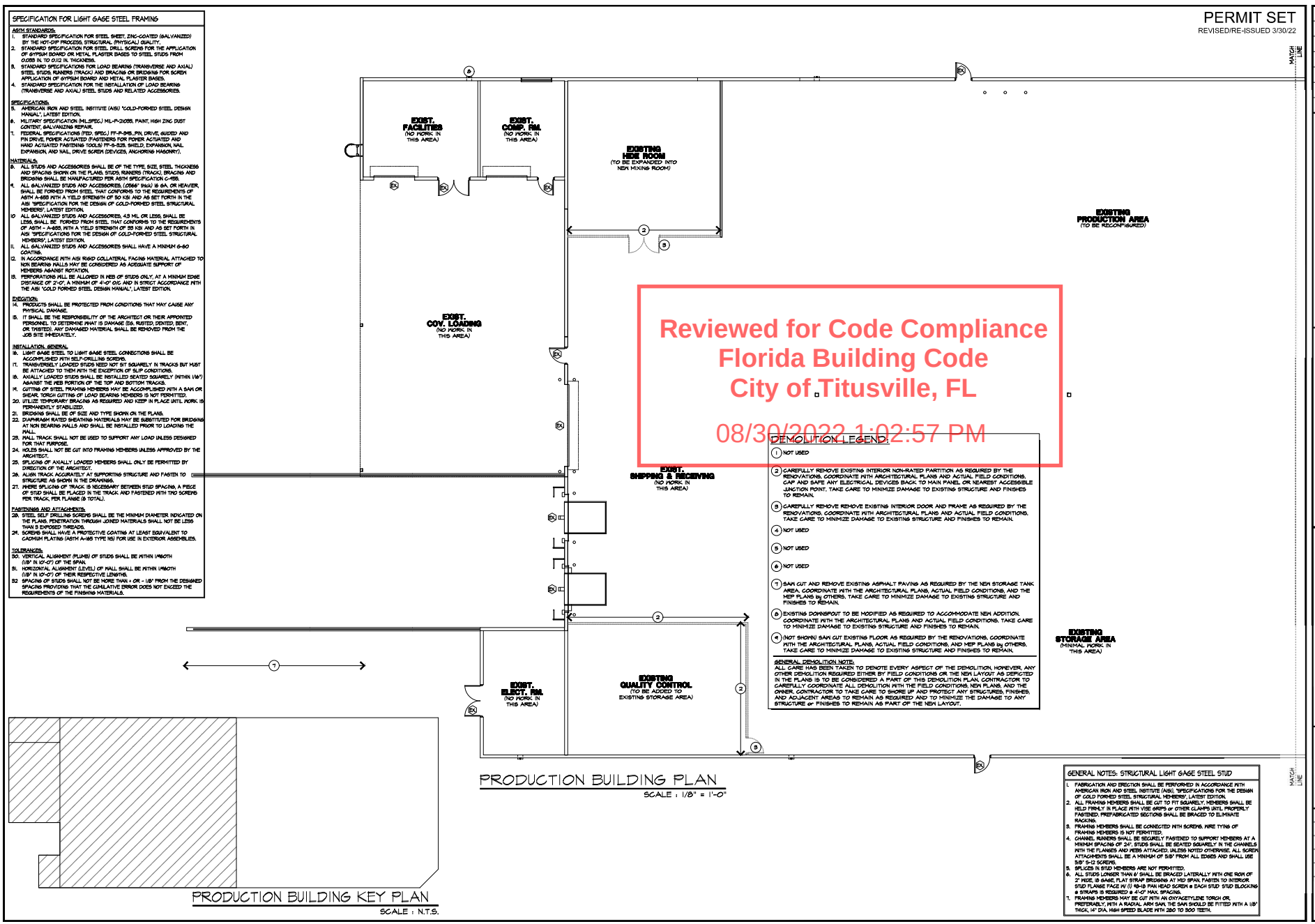
MATERIALS:
9. ALL STUDS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, STEEL THICKNESS AND SPACING SHOWN ON THE PLANS. STUDS, RUNNERS (TRACK), BRACING AND BRIDGING SHALL BE MANUFACTURED PER ASTM SPECIFICATION C-955.
10. ALL GALVANIZED STUDS AND ACCESSORIES, (.0566" thick) 16 GA. OR HEAVIER, SHALL BE FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A-653 WITH A YIELD STRENGTH OF 50 KSI AND AS SET FORTH IN THE AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
11. ALL GALVANIZED STUDS AND ACCESSORIES, 43 MIL OR LESS, SHALL BE LESS, SHALL BE "FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM – A-653, WITH A YIELD STRENGTH OF 33 KSI AND AS SET FORTH IN AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
11. ALL GALVANIZED STUDS AND ACCESSORIES SHALL HAVE A MINIMUM G-60 COATING.
12. IN ACCORDANCE WITH AISI RIGID COLLATERAL FACING MATERIAL ATTACHED TO NON BEARING WALLS MAY BE CONSIDERED AS ADEQUATE SUPPORT OF MEMBERS AGAINST ROTATION.
13. PERFORATIONS WILL BE ALLOWED IN WEB OF STUDS ONLY, AT A MINIMUM EDGE DISTANCE OF 2'-0", A MINIMUM OF 4'-0" O/C AND IN STRICT ACCORDANCE WITH THE AISI "COLD FORMED STEEL DESIGN MANUAL", LATEST EDITION.

ERECTION:
14. PRODUCTS SHALL BE PROTECTED FROM CONDITIONS THAT MAY CAUSE ANY PHYSICAL DAMAGE.
15. IT SHALL BE THE RESPONSIBILITY OF THE ARCHITECT OR THEIR APPOINTED PERSONNEL TO DETERMINE WHAT IS DAMAGE (EG. RUSTED, DENTED, BENT, OR TWISTED). ANY DAMAGED MATERIAL SHALL BE REMOVED FROM THE JOB SITE IMMEDIATELY.

INSTALLATION, GENERAL:
16. LIGHT GAGE STEEL TO LIGHT GAGE STEEL CONNECTIONS SHALL BE ACCOMPLISHED WITH SELF-DRILLING SCREWS.
17. TRANSVERSELY LOADED STUDS NEED NOT SIT SQUARELY IN TRACKS BUT MUST BE ATTACHED TO THEM WITH THE EXCEPTION OF SLIP CONDITIONS.
18. AXIALLY LOADED STUDS SHALL BE INSTALLED SEATED SQUARELY (WITHIN 1/8") AGAINST THE WEB PORTION OF THE TOP AND BOTTOM TRACKS.
19. CUTTING OF STEEL FRAMING MEMBERS MAY BE ACCOMPLISHED WITH A SAW OR SHEAR, TORCH CUTTING OF LOAD BEARING MEMBERS IS NOT PERMITTED.
20. UTILIZE TEMPORARY BRACING AS REQUIRED AND KEEP IN PLACE UNTIL WORK IS PERMANENTLY STABILIZED.
21. BRIDGING SHALL BE OF SIZE AND TYPE SHOWN ON THE PLANS.
22. DIAPHRAGM RATED SHEATHING MATERIALS MAY BE SUBSTITUTED FOR BRIDGING AT NON BEARING WALLS AND SHALL BE INSTALLED PRIOR TO LOADING THE WALL.
23. WALL TRACK SHALL NOT BE USED TO SUPPORT ANY LOAD UNLESS DESIGNED FOR THAT PURPOSE.
24. HOLES SHALL NOT BE CUT INTO FRAMING MEMBERS UNLESS APPROVED BY THE ARCHITECT.
25. SPLICING OF AXIALLY LOADED MEMBERS SHALL ONLY BE PERMITTED BY DIRECTION OF THE ARCHITECT.
26. ALIGN TRACK ACCURATELY AT SUPPORTING STRUCTURE AND FASTEN TO STRUCTURE AS SHOWN IN THE DRAWINGS.
27. WHERE SPLICING OF TRACK IS NECESSARY BETWEEN STUD SPACING, A PIECE OF STUD SHALL BE PLACED IN THE TRACK AND FASTENED WITH TWO SCREWS PER TRACK, PER FLANGE (8 TOTAL).

FASTENINGS AND ATTACHMENTS:
28. STEEL SELF DRILLING SCREWS SHALL BE THE MINIMUM DIAMETER INDICATED ON THE PLANS. PENETRATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN 3 EXPOSED THREADS.
29. SCREWS SHALL HAVE A PROTECTIVE COATING AT LEAST EQUIVALENT TO CADMIUM PLATING (ASTM A-165 TYPE NS) FOR USE IN EXTERIOR ASSEMBLIES.

TOLERANCES:
30. VERTICAL ALIGNMENT (PLUMB) OF STUDS SHALL BE WITHIN 1/960TH (1/8" IN 10'-0") OF THE SPAN.
31. HORIZONTAL ALIGNMENT (LEVEL) OF WALL SHALL BE WITHIN 1/960TH (1/8" IN 10'-0") OF THEIR RESPECTIVE LENGTHS.
32. SPACING OF STUDS SHALL NOT BE MORE THAN + OR - 1/8" FROM THE DESIGNED SPACING PROVIDING THAT THE CUMULATIVE ERROR DOES NOT EXCEED THE REQUIREMENTS OF THE FINISHING MATERIALS.



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DEMOLITION LEGEND:

1. NOT USED
2. CAREFULLY REMOVE EXISTING INTERIOR NON-RATED PARTITION AS REQUIRED BY THE RENOVATIONS. COORDINATE WITH ARCHITECTURAL PLANS AND ACTUAL FIELD CONDITIONS. CAP AND SAFE ANY ELECTRICAL DEVICES BACK TO MAIN PANEL OR NEAREST ACCESSIBLE JUNCTION POINT. TAKE CARE TO MINIMIZE DAMAGE TO EXISTING STRUCTURE AND FINISHES TO REMAIN.
3. CAREFULLY REMOVE REMOVE EXISTING INTERIOR DOOR AND FRAME AS REQUIRED BY THE RENOVATIONS. COORDINATE WITH ARCHITECTURAL PLANS AND ACTUAL FIELD CONDITIONS. TAKE CARE TO MINIMIZE DAMAGE TO EXISTING STRUCTURE AND FINISHES TO REMAIN.
4. NOT USED
5. NOT USED
6. NOT USED
7. SAW CUT AND REMOVE EXISTING ASPHALT PAVING AS REQUIRED BY THE NEW STORAGE TANK AREA. COORDINATE WITH THE ARCHITECTURAL PLANS, ACTUAL FIELD CONDITIONS, AND THE MEP PLANS by OTHERS. TAKE CARE TO MINIMIZE DAMAGE TO EXISTING STRUCTURE AND FINISHES TO REMAIN.
8. EXISTING DOWNSPOUT TO BE MODIFIED AS REQUIRED TO ACCOMMODATE NEW ADDITION. COORDINATE WITH THE ARCHITECTURAL PLANS AND ACTUAL FIELD CONDITIONS. TAKE CARE TO MINIMIZE DAMAGE TO EXISTING STRUCTURE AND FINISHES TO REMAIN.
9. (NOT SHOWN) SAW CUT EXISTING FLOOR AS REQUIRED BY THE RENOVATIONS. COORDINATE WITH THE ARCHITECTURAL PLANS, ACTUAL FIELD CONDITIONS, AND MEP PLANS by OTHERS. TAKE CARE TO MINIMIZE DAMAGE TO EXISTING STRUCTURE AND FINISHES TO REMAIN.

GENERAL DEMOLITION NOTE:
ALL CARE HAS BEEN TAKEN TO DENOTE EVERY ASPECT OF THE DEMOLITION, HOWEVER, ANY OTHER DEMOLITION REQUIRED EITHER BY FIELD CONDITIONS OR THE NEW LAYOUT AS DEPICTED IN THE PLANS IS TO BE CONSIDERED A PART OF THIS DEMOLITION PLAN. CONTRACTOR TO CAREFULLY COORDINATE ALL DEMOLITION WITH THE FIELD CONDITIONS, NEW PLANS, AND THE OWNER. CONTRACTOR TO TAKE CARE TO SHORE UP AND PROTECT ANY STRUCTURES, FINISHES, AND ADJACENT AREAS TO REMAIN AS REQUIRED AND TO MINIMIZE THE DAMAGE TO ANY STRUCTURE or FINISHES TO REMAIN AS PART OF THE NEW LAYOUT.

PRODUCTION BUILDING PLAN
SCALE : 1/8" = 1'-0"

PRODUCTION BUILDING KEY PLAN
SCALE : N.T.S.

GENERAL NOTES: STRUCTURAL LIGHT GAGE STEEL STUD

1. FABRICATION AND ERECTION SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI), "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
2. ALL FRAMING MEMBERS SHALL BE CUT TO FIT SQUARELY. MEMBERS SHALL BE HELD FIRMLY IN PLACE WITH VISE GRIPS or OTHER CLAMPS UNTIL PROPERLY FASTENED. PREFABRICATED SECTIONS SHALL BE BRACED TO ELIMINATE RACKING.
3. FRAMING MEMBERS SHALL BE CONNECTED WITH SCREWS. WIRE TYING OF FRAMING MEMBERS IS NOT PERMITTED.
4. CHANNEL RUNNERS SHALL BE SECURELY FASTENED TO SUPPORT MEMBERS AT A MINIMUM SPACING OF 24". STUDS SHALL BE SEATED SQUARELY IN THE CHANNELS WITH THE FLANGES AND WEBS ATTACHED, UNLESS NOTED OTHERWISE. ALL SCREW ATTACHMENTS SHALL BE A MINIMUM OF 5/8" FROM ALL EDGES AND SHALL USE 5/8" S-12 SCREWS.
5. SPLICES IN STUD MEMBERS ARE NOT PERMITTED.
6. ALL STUDS LONGER THAN 8' SHALL BE BRACED LATERALLY WITH ONE ROW OF 2" WIDE, 18 GAGE, FLAT STRAP BRIDGING AT MID SPAN. FASTEN TO INTERIOR STUD FLANGE FACE W/ (1) #8-18 PAN HEAD SCREW @ EACH STUD. STUD BLOCKING @ STRAPS IS REQUIRED @ 4'-0" MAX. SPACING.
7. FRAMING MEMBERS MAY BE CUT WITH AN OXYACETYLENE TORCH OR, PREFERABLY, WITH A RADIAL ARM SAW. THE SAW SHOULD BE FITTED WITH A 1/8" THICK, 14" DIA. HIGH SPEED BLADE WITH 280 TO 300 TEETH.

REVISIONS	NO.

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PRODUCTION BUILDING DEMOLITION PLAN, SCHEDULES, NOTES, and DETAILS

Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:52:32 -04'00'
Allen J. Kiesel License # AR96683

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DOOR SCHEDULE

MARK	DOOR NOMINAL SIZE (WIDTH x HEIGHT)	TRANSOM NOMINAL SIZE (WIDTH x HEIGHT)	SIDELIGHT NOMINAL SIZE (WIDTH x HEIGHT)	DOOR STYLE/TYPE	DOOR MATERIAL	HARDWARE TYPE/USEAGE	DOOR FRAME	DOOR THRESHOLD	FIRE RATING	DOOR REMARKS
1	*3'-0"x7'-0"	N/A	N/A	*FLUSH	*INSULATED METAL	OFFICE W/ DEADBOLT & SELF-CLOSER	*METAL	ADA ALUM.	N/A	*MATCH EXISTING (VERIFY IN FIELD)
2	8'-0"x10'-0"	N/A	N/A	ROLL-UP GARAGE DOOR	INSULATED METAL	N/A	by MANUF.	by MANUF.	N/A	
3	*3'-0"x7'-0"	N/A	N/A	*FLUSH	*METAL	OFFICE W/ DEADBOLT & SELF-CLOSER	*METAL	N/A	N/A	*MATCH EXISTING (VERIFY IN FIELD)
4	NOT USED									
5	NOT USED									
6	*PR. 3'-0"x7'-0"	N/A	N/A	*FLUSH	*WOOD	OFFICE W/ SELF-CLOSER	*METAL	N/A	3/4 HR. 'C' LABEL	*MATCH EXISTING (VERIFY IN FIELD)
7	*PR. 3'-0"x8'-0"	N/A	N/A	*FLUSH W/ 24"x24" LOUVER	*INSULATED METAL	OFFICE W/ DEADBOLT & SELF-CLOSER	*METAL	ADA ALUM.	N/A	*MATCH EXISTING (VERIFY IN FIELD)
8										
EX	EXISTING DOOR (TO REMAIN)									

NOTE:
1. CONTRACTOR TO PROVIDE PRODUCT APPROVALS FOR ALL EXTERIOR DOORS.
2. ALL LATCHING HARDWARE SHALL BE "LEVER" TYPE TO COMPLY WITH ADA AND FBC 2020 REQUIREMENTS.
3. ALL DOOR STYLES AND HARDWARE AS SELECTED BY OWNER / GENERAL CONTRACTOR.

INTERIOR WALL AND FINISH CLASSIFICATIONS
PER TABLE 803.11 FBC 2020

GROUP F AREAS:
INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS, AND EXIT PASSAGEWAYS: CLASS C

CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS: CLASS C

ROOMS AND ENCLOSED SPACES: CLASS C

GROUP B AREAS:
INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS, AND EXIT PASSAGEWAYS: CLASS B

CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS: CLASS C

ROOMS AND ENCLOSED SPACES: CLASS C

ROOM FINISH SCHEDULE

LOCATION	FLOOR	BASE	WALLS	CEILING	CEILING HEIGHT	REMARKS
NEW BOILER ROOM	EXPOSED SEALED CONC.	N/A	STRUCK BLOCK (PAINTED)	MR. 6YP. BRD. (PAINTED)	10'-0"	
NEW R.O. WATER ROOM	EXPOSED SEALED CONC.	N/A	STRUCK BLOCK (PAINTED)	MR. 6YP. BRD. (PAINTED)	10'-0"	
NEW MIXING ROOM	VCT (EXISTING)	VINYL (AS SELECTED)	MR. 6YP. BRD. (PAINTED)	N/A	*VARIES	*OPEN TO STRUCTURE
NEW FIRE PUMP ROOM	VCT (EXISTING)	VINYL (AS SELECTED)	MR. 6YP. BRD. (PAINTED)	N/A	*VARIES	*OPEN TO STRUCTURE

WINDBORNE DEBRIS PROTECTION NOTE:
ALL EXTERIOR DOORS AND WINDOWS SHALL BE PROVIDED WITH WINDBORNE DEBRIS PROTECTION PER THE FBC 2020 (LATEST ADOPTED EDITION) IN ANY ONE OF THE FOLLOWING MANNERS OT THE OWNER/DEVELOPERS CHOOSING:
1. IMPACT RATED DOORS AND WINDOWS. (OWNER/CONTRACTOR TO PROVIDE PRODUCT APPROVALS OF SELECTED PRODUCT(S)).
2. IMPACT RATED SHUTTERS. (OWNER/CONTRACTOR TO PROVIDE PRODUCT APPROVALS OF SELECTED PRODUCT(S)).

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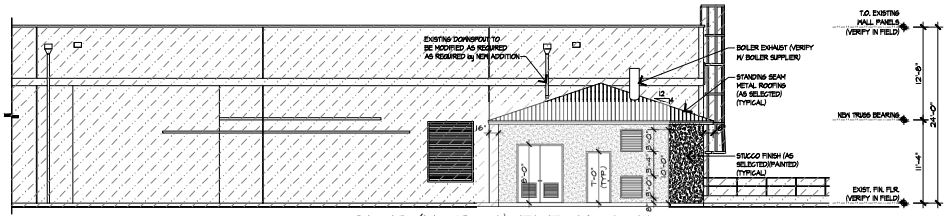
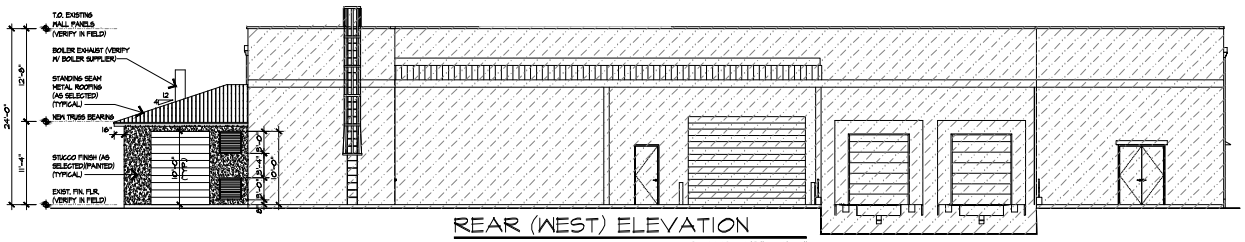
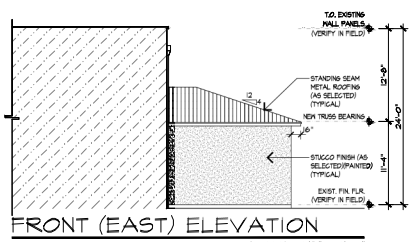


SIDE (NORTH) ELEVATION
SCALE : 1/8" = 1'-0"



REAR (WEST) ELEVATION
SCALE : 1/8" = 1'-0"



FRONT (EAST) ELEVATION
SCALE : 1/8" = 1'-0"

REVISIONS | NO.

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PROPOSED PRODUCTION BUILDING ELEVATIONS, SCHEDULES, NOTES, and DETAILS

Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:53:06 -04'00'
Allen J. Kiesel License # AR95683

Date:	3/30/22
Scale:	As Noted
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Checked	A.J.K.
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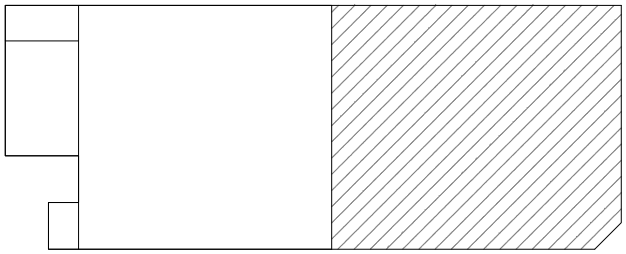
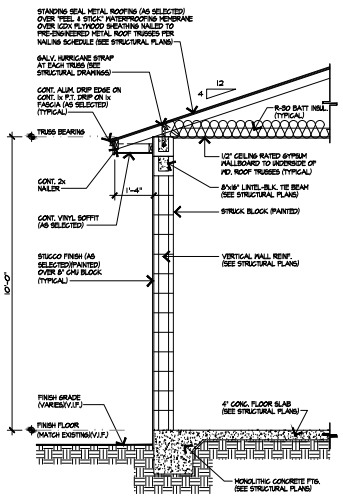
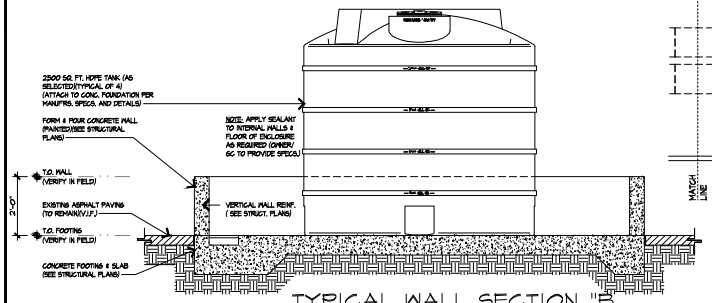
REVISED/RE-ISSUED 3/30/22



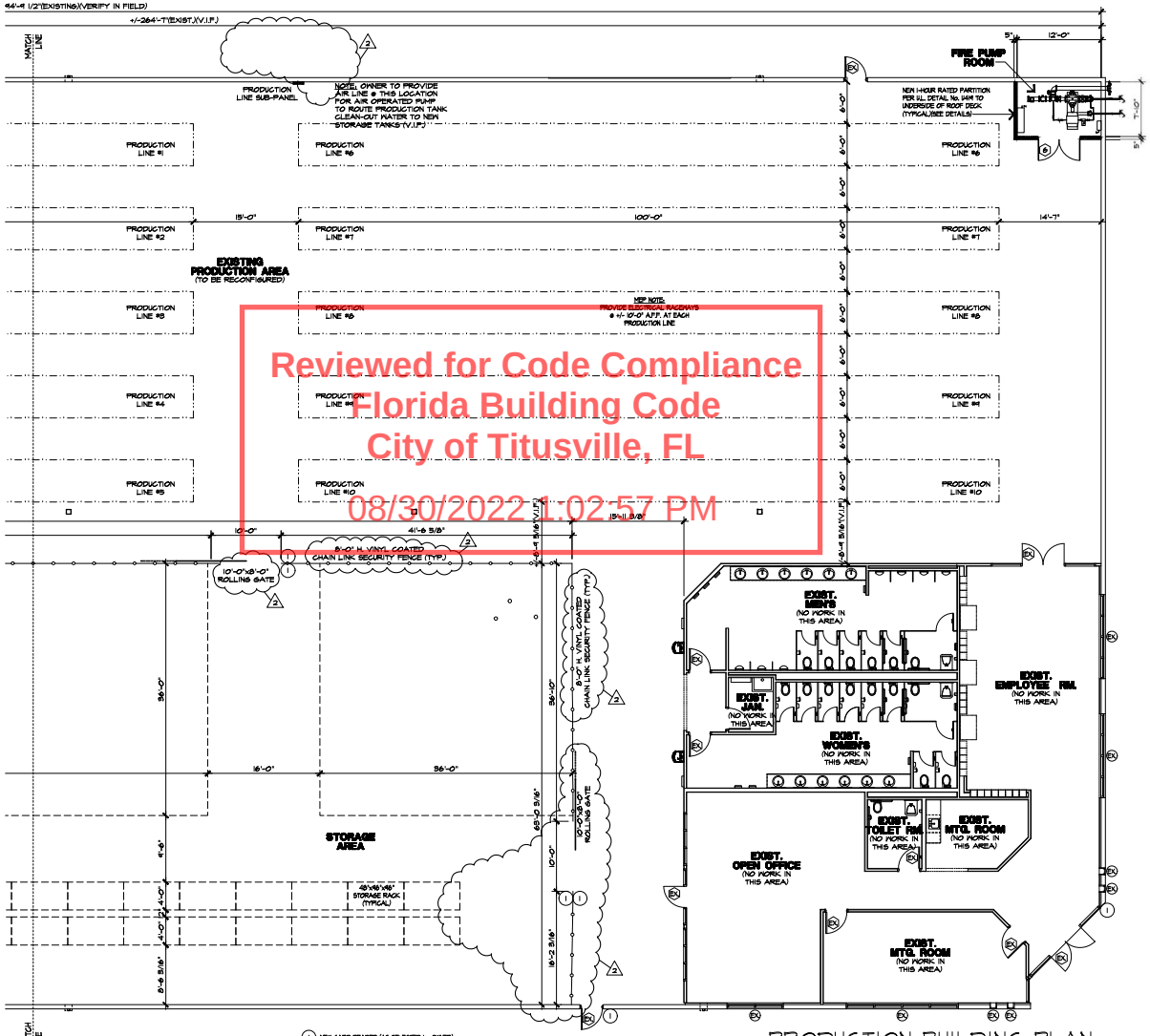
PRODUCTION BUILDING KEY PLAN
SCALE : N.T.S.



TYPICAL WALL SECTION "A"
SCALE : 1/2" = 1'-0"



TYPICAL WALL SECTION "B"
SCALE : 1/2" = 1'-0"



1 NEW CARD READER (AS SELECTED by OWNER) (VERIFY ELECTRICAL REQUIREMENTS W/ EQUIPMENT (AS SELECTED) AND OWNER'S REPRESENTATIVE.

2 NEW CARD READER PANEL (AS SELECTED by OWNER) (VERIFY ELECTRICAL REQUIREMENTS W/ EQUIPMENT (AS SELECTED) AND OWNER'S REPRESENTATIVE.

PRODUCTION BUILDING PLAN
SCALE : 1/8" = 1'-0"

REVISIONS	NO.
OWNER REQ. REVISIONS A.J.K. 5/25/22	1

ALLEN KIESEL & ASSOCIATES, P.A.
ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
321.264.1366 • AKiesel@AKArchitecture.com
Florida Reg. AA26012732 • NCARB Cert. 74632

PROPOSED PARTIAL (EAST) PRODUCTION BUILDING FLOOR PLAN, SCHEDULES, NOTES, and DETAILS

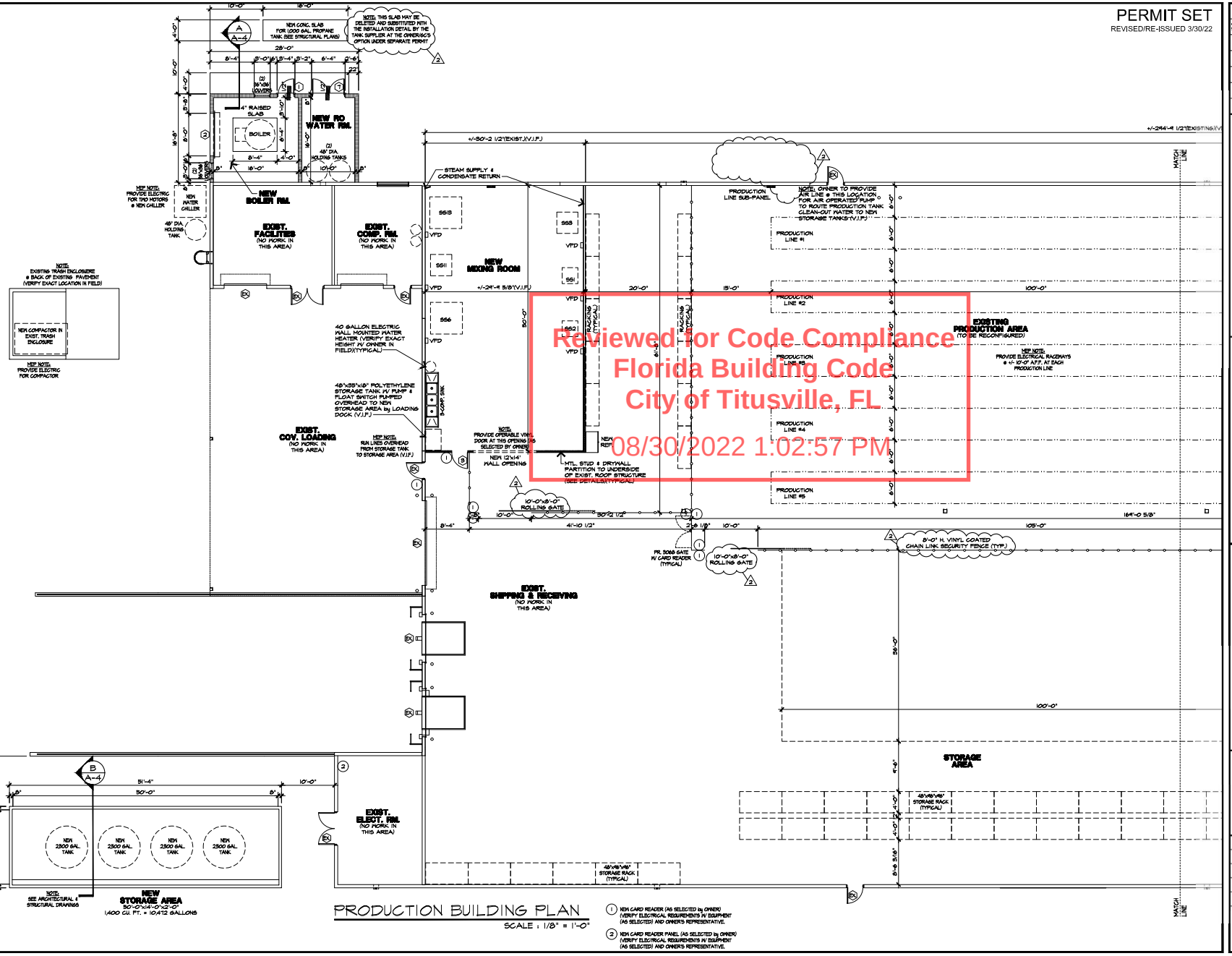
Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:53:47 -04'00'
Allen J. Kiesel License # AR96683

Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221

Sheet A-4
Of 10 Sheets

PERMIT SET
REVISED/RE-ISSUED 3/30/22



PRODUCTION BUILDING PLAN

SCALE : 1/8" = 1'-0"

1. NEW CARD READER (AS SELECTED by OWNER) (VERIFY ELECTRICAL REQUIREMENTS W/ EQUIPMENT (AS SELECTED) AND OWNER'S REPRESENTATIVE.
2. NEW CARD READER PANEL (AS SELECTED by OWNER) (VERIFY ELECTRICAL REQUIREMENTS W/ EQUIPMENT (AS SELECTED) AND OWNER'S REPRESENTATIVE.

REVISIONS	NO.
OWNER REQ. REVISIONS A.J.K. 9/28/22	2

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ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
321.264.1366 • AkieselAArchitecture.com
Florida Reg. AA26012732 • NCARB Cert. 74612

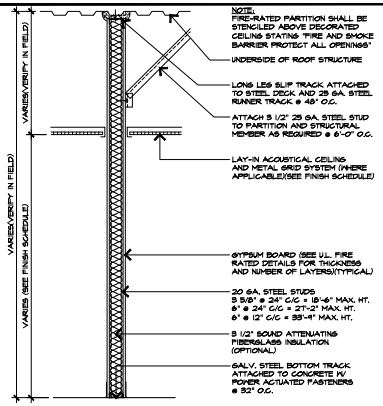
PROPOSED PARTIAL (WEST) PRODUCTION BUILDING FLOOR PLAN, SCHEDULES, NOTES, and DETAILS

Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:54:26 -04'00'
Allen J. Kiesel License # AR96683

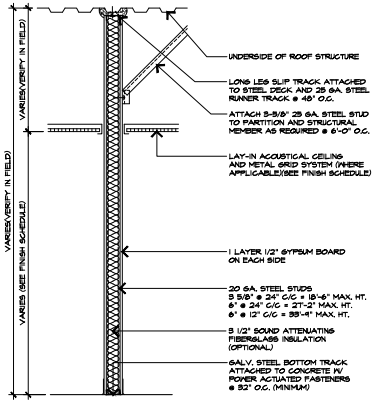
Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221

Sheet A-5
Of 10 Sheets



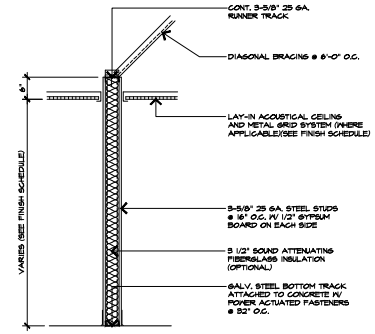
TYP. FIRE PARTITION DETAIL

U.L. DESIGN NO. U419 SCALE : N.T.S.



TYP. INTERIOR PARTITION DETAIL

@ PARTITIONS TO ROOF DECK SCALE : N.T.S.



TYP. INTERIOR PARTITION DETAIL

@ PARTITIONS NOT TO ROOF DECK SCALE : N.T.S.

PERMIT SET

REVISED/RE-ISSUED 3/30/22

Reviewed for Code Compliance
Florida Building Code
City of Titusville, FL

08/30/2022 1:02:57 PM

REVISIONS	NO.

ALLEN KIESEL & ASSOCIATES, P.A.
ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
321.264.1366 • AKiesel@AKArchitecture.com
Florida Reg. AA26012732 • NCARB Cert. 74682

INTERIOR WALL DETAILS

Interior Renovations & Addition For:

Pharmco

1600 Armstrong Drive
Titusville, Florida 32780

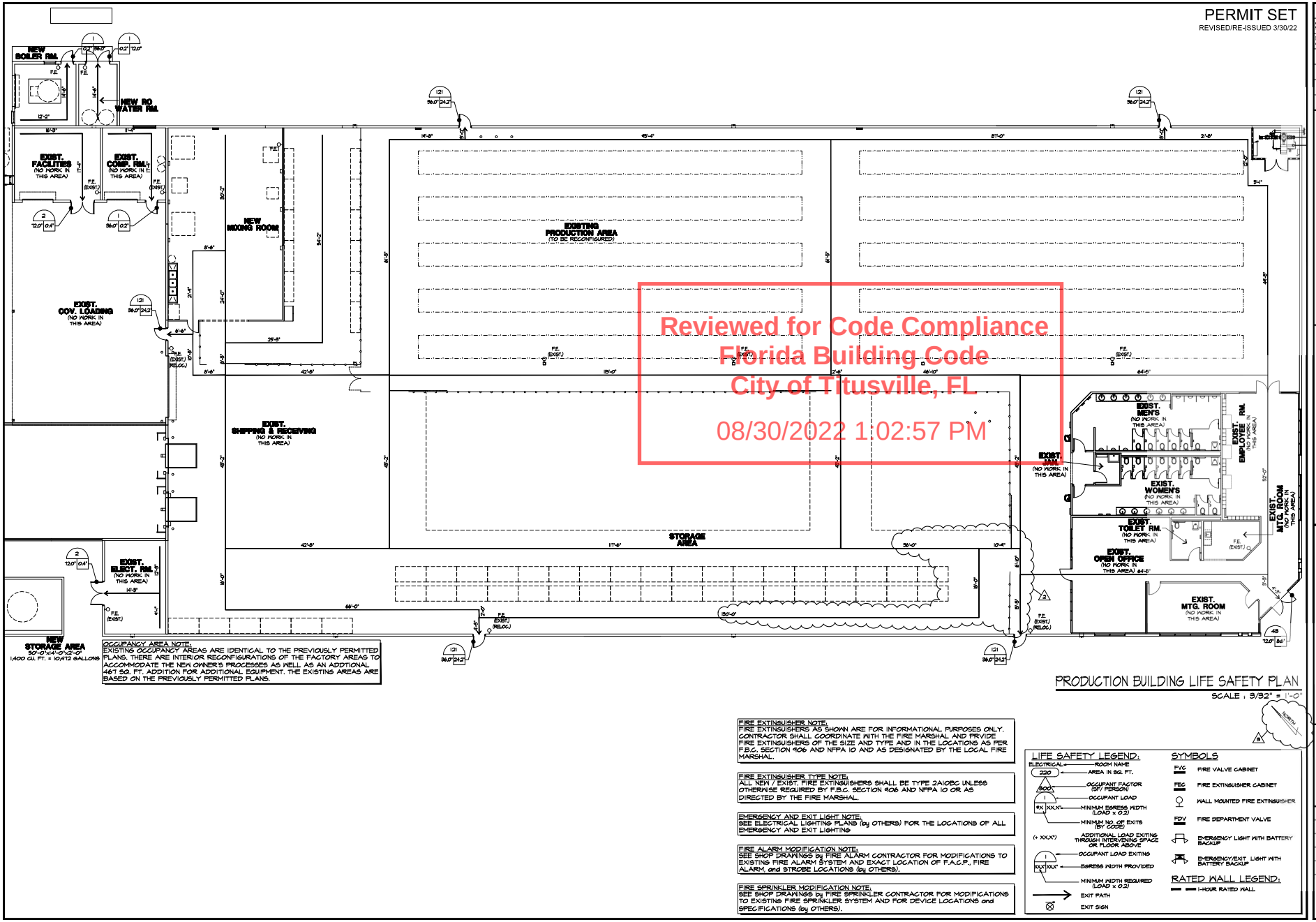
Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:55:03 -04'00'

Allen J. Kiesel License # AR96683

Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221

Sheet A-6

Of 10 Sheets



PERMIT SET
REVISED/RE-ISSUED 3/30/22

Reviewed for Code Compliance
Florida Building Code
City of Titusville, FL
08/30/2022 1:02:57 PM

OCCUPANCY AREA NOTE:
EXISTING OCCUPANCY AREAS ARE IDENTICAL TO THE PREVIOUSLY PERMITTED PLANS. THERE ARE INTERIOR RECONFIGURATIONS OF THE FACTORY AREAS TO ACCOMMODATE THE NEW OWNER'S PROCESSES AS WELL AS AN ADDTIONAL 467 SQ. FT. ADDITION FOR ADDITIONAL EQUIPMENT. THE EXISTING AREAS ARE BASED ON THE PREVIOUSLY PERMITTED PLANS.

PRODUCTION BUILDING LIFE SAFETY PLAN
SCALE : 3/32" = 1'-0"

FIRE EXTINGUISHER NOTE:
FIRE EXTINGUISHERS AS SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL COORDINATE WITH THE FIRE MARSHAL AND PROVIDE FIRE EXTINGUISHERS OF THE SIZE AND TYPE AND IN THE LOCATIONS AS PER F.B.C. SECTION 906 AND NFPA 10 AND AS DESIGNATED BY THE LOCAL FIRE MARSHAL.

FIRE EXTINGUISHER TYPE NOTE:
ALL NEW / EXIST. FIRE EXTINGUISHERS SHALL BE TYPE 2A10BC UNLESS OTHERWISE REQUIRED BY F.B.C. SECTION 906 AND NFPA 10 OR AS DIRECTED BY THE FIRE MARSHAL.

EMERGENCY AND EXIT LIGHT NOTE:
SEE ELECTRICAL LIGHTING PLANS (by OTHERS) FOR THE LOCATIONS OF ALL EMERGENCY AND EXIT LIGHTING

FIRE ALARM MODIFICATION NOTE:
SEE SHOP DRAWINGS by FIRE ALARM CONTRACTOR FOR MODIFICATIONS TO EXISTING FIRE ALARM SYSTEM AND EXACT LOCATION OF F.A.C.P., FIRE ALARM, and STROBE LOCATIONS (by OTHERS).

FIRE SPRINKLER MODIFICATION NOTE:
SEE SHOP DRAWINGS by FIRE SPRINKLER CONTRACTOR FOR MODIFICATIONS TO EXISTING FIRE SPRINKLER SYSTEM AND FOR DEVICE LOCATIONS and SPECIFICATIONS (by OTHERS).

LIFE SAFETY LEGEND:
ELECTRICAL
ROOM NAME
220 AREA IN SQ. FT.
300 OCCUPANT FACTOR (SF/ PERSON)
1 OCCUPANT LOAD
#X XXX" MINIMUM EGRESS WIDTH (LOAD x 0.2)
1 MINIMUM NO. OF EXITS (BY CODE)
(+ XXX") ADDITIONAL LOAD EXITING THROUGH INTERVENING SPACE OR FLOOR ABOVE
1 OCCUPANT LOAD EXITING
XXX" XXX" EGRESS WIDTH PROVIDED
1 MINIMUM WIDTH REQUIRED (LOAD x 0.2)
EXIT PATH
EXIT SIGN

SYMBOLS
FVC FIRE VALVE CABINET
FEC FIRE EXTINGUISHER CABINET
WALL MOUNTED FIRE EXTINGUISHER
FDV FIRE DEPARTMENT VALVE
EMERGENCY LIGHT WITH BATTERY BACKUP
EMERGENCY/EXIT LIGHT WITH BATTERY BACKUP

RATED WALL LEGEND:
1-HOUR RATED WALL

REVISIONS	NO.
OWNER REQ. REVISIONS A.J.K. 5/25/22	2
BLDG. DEPT. COMMENTS A.J.K. 6/15/22	3

ALLEN KIESEL & ASSOCIATES, P.A.
ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
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Florida Reg. AA26002732 • NCARB Cert. 74612

PRODUCTION BUILDING LIFE SAFETY PLAN, NOTES, and DETAILS

Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:55:42 -04'00'
Allen J. Kiesel License # AR96683

Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221
Sheet	A-7
Of	10 Sheets

PERMIT SET

REVISED/RE-ISSUED 3/30/22

UL Product iQ™

BXUV.U419

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

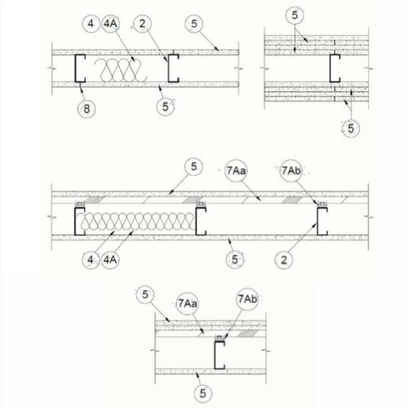
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U419

July 31, 2021

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5 through 5J)

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™ Track

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

FUSION BUILDING PRODUCTS — Viper25™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper25™ Track

1B. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

FUSION BUILDING PRODUCTS — Viper20™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track

1C. **Framing Members* — Floor and Ceiling Runners —** (Not Shown) — In lieu of Item 1 — Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

1D. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2A — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC.

1E. **Framing Members* — Floor and Ceiling Runners —** (Not Shown, As an alternate to Item 1) — For use with Items 2E, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C — ProTRAK

MBA METAL FRAMING — ProTRAK

RAM SALES L L C — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

1F. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2F, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
SUPER STUD BUILDING PRODUCTS — The Edge

1G. **Framing Members* — Floor and Ceiling Runner —** For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size attached to floor and ceiling with fasteners 24 in. OC max.
STUDCO BUILDING SYSTEMS — CROCSTUD Track

1H. **Floor and Ceiling Runners —** (Not Shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.018 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100

FUSION BUILDING PRODUCTS — Viper20™ Track VT100

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track VT100

1I. **Framing Members* — Floor and Ceiling Runners —** (Not Shown, As an alternate to Item 1) — For use with Items 2H, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC. max.
TELLING INDUSTRIES L L C — TRUE-TRACK™

1J. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2I, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.

1K. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2J, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

1L. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2N, proprietary channel shaped runners, 1-1/4 in. wide by min. 3-1/2 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
RESCUE METAL FRAMING, L L C — AlphaTRAK

1M. **Framing Members* — Floor and Ceiling Runners —** Not Shown — As an alternate to Item 1 — For use with Item 2O, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Wall Track

1N. **Framing Members* — Floor and Ceiling Runners —** Not Shown — As an alternate to Item 1 — For use with Item 2P, proprietary channel shaped runners, min width to accommodate stud size, galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Track

1O. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2Q, proprietary channel shaped runners, min width to accommodate stud size, fabricated from min. 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with fasteners spaced 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X Track

2. **Steel Studs —** Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. **Steel Studs —** (As an alternate to Item 2, For use with Items 5B, 5E, 5H, 5J or Type ULIX) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2B. **Framing Members* - Steel Studs —** (As an alternate to Item 2, For use with Items 5C, 5I or Type ULIX) — Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a 1/2 in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™

CRACO MFG INC — SmartStud25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™

FUSION BUILDING PRODUCTS — Viper25™

IMPERIAL MANUFACTURING GROUP INC — Viper25™

2C. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™

FUSION BUILDING PRODUCTS — Viper20™

IMPERIAL MANUFACTURING GROUP INC — Viper20™

2D. **Framing Members* — Steel Studs —** In lieu of Item 2 — Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2E. **Framing Members* — Steel Studs —** (Not Shown, As an alternate to Item 2) — For use with Items 5F or 5G or 5I or Type ULIX only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
CLARKDIETRICH BUILDING SYSTEMS — CD ProSTUD

DMFCWBS L L C — ProSTUD

MBA METAL FRAMING — ProSTUD

RAM SALES L L C — Ram ProSTUD

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProSTUD

2F. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.
SUPER STUD BUILDING PRODUCTS — The Edge

2G. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped studs, minimum width indicated under Item 5, Studs to be cut 3/8 to 3/4 in less than the assembly height.
STUDCO BUILDING SYSTEMS — CROCSTUD

2H. **Framing Members* — Steel Studs —** (Not Shown, As an alternate to Item 2) — Fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.
TELLING INDUSTRIES L L C — TRUE-STUD™

2I. **Framing Members* — Steel Studs —**

2J. **Framing Members* — Metal Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights

2K. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
EB METAL INC — NITROSTUD

2L. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
OLMAR SUPPLY INC — PRIMESTUD

2M. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™

2N. **Framing Members*— Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min depth 3-1/2 in. and as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in length than assembly height.
RESCUE METAL FRAMING, L L C — AlphaSTUD

2O. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Lipped Wall Stud

2P. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Stud

2Q. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1O, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X

3. **Wood Structural Panel Sheathing —** (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

4. **Batts and Blankets* —** (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4A. **Batts and Blankets* —** (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4B. **Fiber, Sprayed* —** (Optional, for use with Type ULIX) Where insulation is required - Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the wall cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

4C. **Foamed Plastic* —** (Where Batts and Blankets*, Item 4, are optional, for use with Item 5K) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in.

CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

5. **Gypsum Board* —** Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULIX need not be staggered. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2C, 2D, 2F, 2G, 2O	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, ULIX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, **Steel Framing Members***, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.
CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type FRX-G, SHX.

USG MEXICO S A DE C V — Type SHX.

5B. **Gypsum Board* —** (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 in. or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2A with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).
RAY-BAR ENGINEERING CORP — Type RB-LBG

5C. **Gypsum Board* —** (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.
CGC INC — Type SCX, ULIX.

WALL ASSEMBLY: U419

REVISIONS	NO.

ALLEN KIESEL & ASSOCIATES, P.A.
ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
321 264 1366 • AKiesel@AKAarchitecture.com
Florida Reg. AA26002782 • NCARB Cert. 76692

TYPICAL FIRE RATED DETAILS

Interior Renovations & Addition For:

Pharmco

1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:56:47 -04'00'
Allen J. Kiesel
License # AR96683

Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221

Sheet A-8 Of 10 Sheets

PERMIT SET
REVISED/RE-ISSUED 3/30/22

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — Type SCX, SGX, ULIX.

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type SCX

5D. **Gypsum Board*** — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 8. For use with Items 1 and 2 only.
CGC INC — Type USGX

UNITED STATES GYPSUM CO — Type LSGX

USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

5E. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Nelco

5F. **Gypsum Board*** — (As an alternate to Item 5) — For use with Items 1E and 2E and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud deoth shall be a minimum 3-5/8 in.
THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — 5/8 in. thick Type SCX, SGX, ULIX

USG BORAL DRYWALL SFZ LLC — 5/8 in. thick Type SCX, SGX

5G. **Gypsum Board*** — (As an alternate to Item 5) — For use with Items 1E and 2E only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Item 2E	No. of Layers & Thickness of Panel	Min Thkns of Insulation (Item 4)
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX or 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Types C and 5/8 in. thick SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, , FRX-G, IP-AR, IP-X2, IPC-AR, ULIX; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C, 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

5H. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5I. **Gypsum Board*** — (As an alternate to Item 5) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.
CGC INC — Type ULIX, ULX

UNITED STATES GYPSUM CO — Type ULIX

USG MEXICO S A DE C V — Type ULX

5J. **Gypsum Board*** — (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in. or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips, nominal 1/8 in. thick lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long, with a max thickness cf 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Comoression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP Lead Lined Drywall

5K. **Gypsum Board*** — (As an alternate to Item 5 when Foam Plastic Insulation (Item 4C) is used) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-5/8 in. long steel screws spaced 8 in. OC.

6. **Fasteners —** (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Single layer system with Type ULIX:** 1 in. long, spaced 12 in. OC in the field and perimeter, when panels are appliec horizontally or vertically.**Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.**Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/6 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. **Furring Channels —** (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A.

7A. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Nor: for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC.RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet, RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, ISIC-V, RSIC-1 (2.75), RSIC-V (2.75).

7B. **Framing Members* —** (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Items, Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

7C. **Framing Members* —** (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in tem b. Gypsum board attached to furring channels as described in Item 6. Not:for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC.GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minmum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

11. **Lead Batten Strips —** (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness cf 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints.

11A. **Lead Batten Strips —** (Not Shown, For Use With Item 5H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

12. **Lead Discs or Tabs —** (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strios (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

12A. **Lead Discs —** (Not Shown, for use with Item 5H) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

13. **Lead Batten Strips —** (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. **Lead Tabs —** (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

15. **Barrier Mesh —** (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.
CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2021-07-31

7D. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

7E. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Eb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

7F. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below:
a. **Resilien: Channels —** Formed of No.25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 7Fa) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

7G. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. or 1-1/2 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Nor: for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ga) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

8. **Joint Tape and Compound —** Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. **Siding, Brick or Stucco —** (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. **Caulking and Sealants* —** (Optional, Not Shown) — A bead of acoustical sealant applied around the partition permeter for sound conrol.
UNITED STATES GYPSUM CO — Type AS

WALL ASSEMBLY: U419 (CONT.)

REVISIONS	NO.

ALLEN KIESEL & ASSOCIATES, P.A.
ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
321.268.1366 / AKiesel@AKarchitecture.com
Florida Reg # AA26002752 - WOSB Cert 71622

TYPICAL FIRE RATED DETAILS

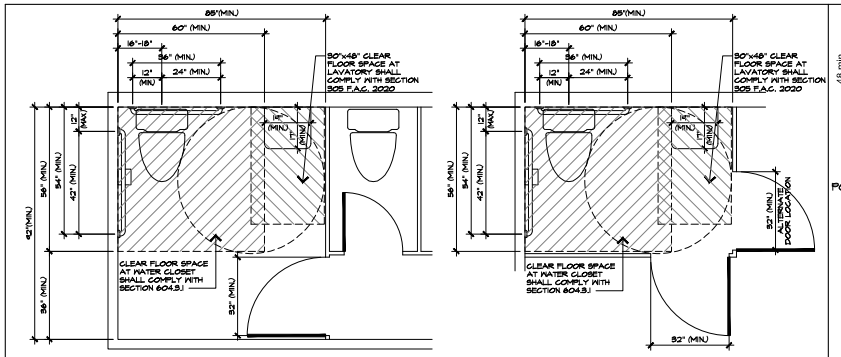
Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:57:50 -04'00'
Allen J. Kiesel License # AR96683

Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221

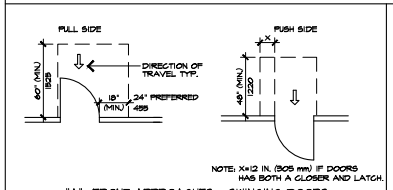
Sheet A-9
Of 10 Sheets

PERMIT SET
REVISED/RE-ISSUED 3/30/22



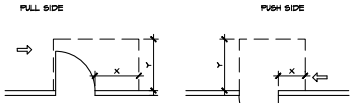
IN NEW CONSTRUCTION, A LAVATORY SHALL BE PROVIDED WITHIN THE TOILET COMPARTMENT.
THE LAVATORY SHALL NOT ENCROACH INTO THE REQUIRED CLEAR FLOOR SPACE FOR THE WATER CLOSET
SEE ABOVE DIAGRAMS FOR THE REQUIRED CLEAR FLOOR SPACE FOR THE WATER CLOSET
THE LOCATION SHOWN FOR THE LAVATORY IS ONLY ONE OF MANY POSSIBLE LOCATIONS WITHIN THE ACCESSIBLE TOILET COMPARTMENT
THAT WATER CLOSET SHALL BE LOCATED IN THE CORNER DIAGONAL TO THE DOOR
THE TOILET COMPARTMENT DOOR SHALL NOT SWING INTO THE REQUIRED CLEAR FLOOR SPACE FOR ANY FIXTURE
FLUSH CONTROL SHALL COMPLY WITH SECTION(S) 309 and 604.6 F.A.C. 2020
DOORS TO TOILET COMPARTMENTS FOR INDIVIDUALS WITH DISABILITIES SHALL PROVIDE 32 INCHES OF CLEAR OPENING AND BE SELF CLOSING PER SECTION 604.8.1.2 F.A.C. 2020
MANEUVERING CLEARANCES ON PUSH AND PULL SIDES OF TOILET COMPARTMENT DOORS SHALL COMPLY WITH SECTION 404.2.4 F.A.C. 2020

TYP. ACCESSIBLE TOILET COMPARTMENT



NOTE: X=12 IN. (305 mm) IF DOORS HAS BOTH A CLOSER AND LATCH.

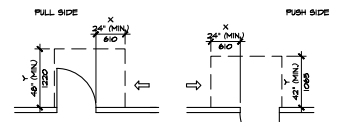
"A" FRONT APPROACHES - SWINGING DOORS



NOTE: X=36 IN. (915 mm) MINIMUM IF Y= 60 IN. (1525 mm); X=42 IN. (1065 mm) MINIMUM IF Y=54 IN. (1370 mm)

NOTE: X=22 IN. (560 mm) MINIMUM IF Y= 42 IN. (1525 mm); X=22 IN. (560 mm) MINIMUM IF Y=48 IN. (1220 mm) IF DOOR HAS BOTH A CLOSER AND LATCH

"B" HINGE SIDE APPROACHES - SWINGING DOORS



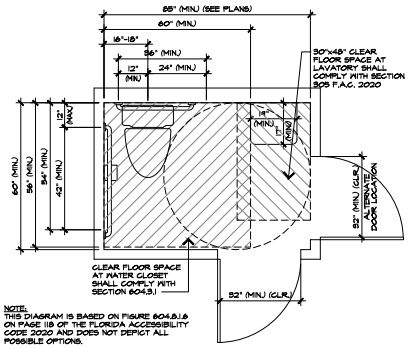
NOTE: Y=54 IN. (1370 mm) IF DOOR HAS CLOSER.

NOTE: Y=48 IN. (1220 mm) IF DOOR HAS CLOSER.

"C" LATCH SIDE APPROACHES - SWINGING DOORS

NOTE: ALL DOORS IN ALCOVES SHALL COMPLY WITH THE CLEARANCE FOR FRONT APPROACHES.

MANEUVERING CLEARANCE AT DOORS



NOTE:
THIS DIAGRAM IS BASED ON FIGURE 604.8.1.8 ON PAGE 118 OF THE FLORIDA ACCESSIBILITY CODE 2020 AND DOES NOT DEPICT ALL POSSIBLE OPTIONS.

-DOORS TO TOILET COMPARTMENTS FOR INDIVIDUALS WITH DISABILITIES SHALL PROVIDE 32 INCHES OF CLEAR OPENING AND BE SELF CLOSING PER SECTION 604.8.1.2 F.A.C. 2020

-MANEUVERING CLEARANCES ON PUSH AND PULL SIDES OF TOILET COMPARTMENT DOORS SHALL COMPLY WITH SECTION 404.2.4 F.A.C. 2020

TYP. ACCESIBLE TOILET ROOM

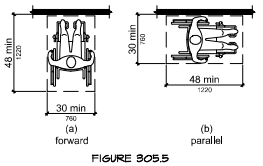


FIGURE 305.5
POSITION OF CLEAR FLOOR OR GROUND SPACE

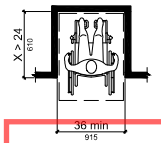


FIGURE 305.7.1
MANEUVERING CLEARANCE IN AN ALCOVE, FORWARD APPROACH

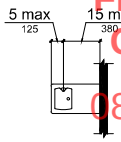


FIGURE 602.5
DRINKING FOUNTAIN SPOUT LOCATION

SECTION 211.2 MINIMUM NUMBER
NO FEWER THAN TWO DRINKING FOUNTAINS SHALL BE PROVIDED. ONE DRINKING FOUNTAIN SHALL COMPLY WITH SECTION 602.1 THRU 602.6 AND ONE DRINKING FOUNTAIN SHALL COMPLY WITH 602.7

602.1 GENERAL
DRINKING FOUNTAINS SHALL COMPLY WITH 307 AND 602.

602.2 CLEAR FLOOR SPACE
UNITS SHALL HAVE A CLEAR FLOOR OR GROUND SPACE COMPLYING WITH SECTION 305 POSITIONED FOR A FORWARD APPROACH AND CENTERED ON THE UNIT. KNEE AND TOE CLEARANCE COMPLYING WITH SECTION 306 SHALL BE PROVIDED.

EXCEPTION: A PARALLEL APPROACH COMPLYING WITH 305 SHALL BE PERMITTED AT UNITS FOR CHILDREN'S USE WHERE THE SPOUT IS 30 INCHES (760 mm) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND AND IS 3-1/2 INCHES (90 mm) MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS.

602.3 OPERABLE PARTS
OPERABLE PARTS SHALL COMPLY WITH 309.

602.4 SPOUT HEIGHT
SPOUT OUTLETS SHALL BE 36 INCHES (915 mm) MAXIMUM ABOVE THE FINISHED FLOOR OR GROUND.

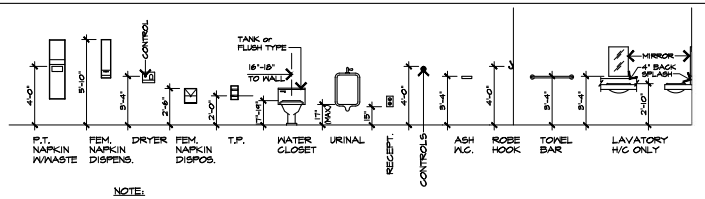
602.5 SPOUT LOCATION
THE SPOUT SHALL BE LOCATED 15 INCHES (380 mm) MINIMUM FROM THE VERTICAL SUPPORT AND 5 INCHES (125 mm) MAXIMUM FROM THE FRONT EDGE OF THE UNIT, INCLUDING BUMPERS.

602.6 WATER FLOW
THE SPOUT SHALL SUPPLY A FLOW OF WATER 4 INCHES (100 mm) HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES (125 mm) MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT, WHERE SPOUTS ARE LOCATED LESS THAN 9 INCHES (178 mm) OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 9 INCHES (178 mm) AND 5 INCHES (125 mm) MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM.

ADVISORY 602.6 WATER FLOW
THE PURPOSE OF REQUIRING THE DRINKING FOUNTAIN SPOUT TO PROVIDE A FLOW OF WATER 4 INCHES (100 mm) HIGH IS SO THAT A CUP CAN BE INSERTED UNDER THE FLOW OF WATER TO PROVIDE A DRINK OF WATER FOR AN INDIVIDUAL WHO, BECAUSE OF A DISABILITY, WOULD OTHERWISE BE INCAPABLE OF USING THE DRINKING FOUNTAIN.

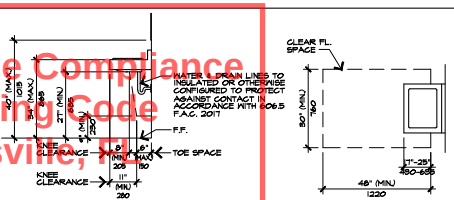
602.7 DRINKING FOUNTAINS FOR STANDING PERSONS
SPOUT OUTLETS FOR DRINKING FOUNTAINS FOR STANDING PERSONS SHALL BE 38-43 INCHES (965 mm - 1090 MM) MAXIMUM ABOVE THE FINISH FLOOR OR GROUND

DRINKING FOUNTAINS

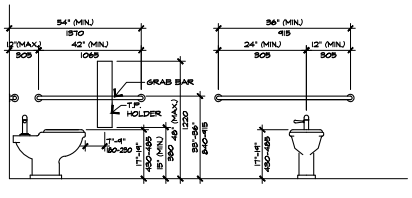


NOTE:
1. ALL DIMENSIONS AE ABOVE FINISHED FLOOR (AFF).
2. ALL TOILET PARTITIONS ARE FLOOR MOUNTED. BOTTOMS OF PARTITIONS AND DOORS TO BE @ 1'-0" AFF, AND TOPS OF DOORS AND SIDES OR BE @ 5'-10" AFF.
3. GRAB BARS SHALL HAVE AN OUTSIDE DIAMETER OF 1 1/2".
4. PROVIDE 1 1/2" OF CLEARANCE BETWEEN THE RAIL AND THE WALL.
5. GRAB BARS SHALL BE ABLE TO SUPPORT NOT LESS THAN 250lb. MIN.
6. TILT MIRROR AT H/C TOILET AREA ONLY.

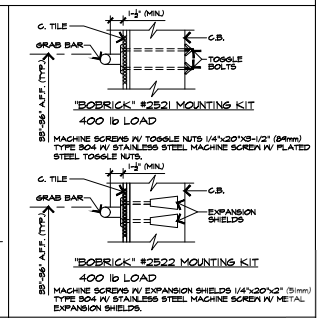
HANDICAP DESIGN CRITERIA



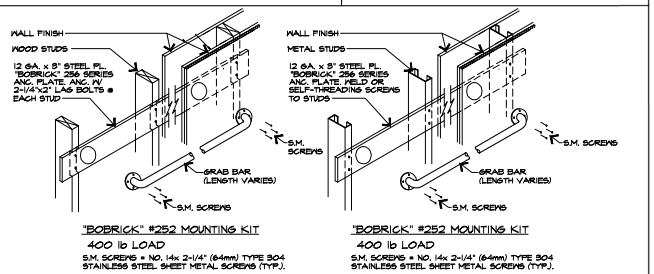
LAVATORY CLEARANCES



TYP. GRAB BAR ELEVATIONS



MOUNTING ON CONC. BLOCK



TYP. GRAB BAR MOUNTING DETAILS

REVISIONS	NO.

ALLEN KIESEL & ASSOCIATES, P.A.
ARCHITECTURE + DESIGN
213 Broad Street, Titusville Florida 32796
321.264.1366 • AKieselAkArchitecture.com
Florida Reg. AA26010752 • NCARB Cert. 74622

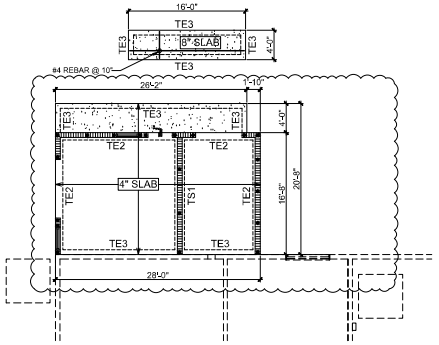
TYPICAL HANDICAPPED DETAILS

Interior Renovations & Addition For:
Pharmco
1600 Armstrong Drive
Titusville, Florida 32780

Digitally signed by Allen J Kiesel
Date: 2022.07.15 10:58:44 -04'00'

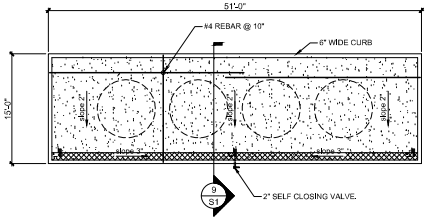
Allen J. Kiesel License # AR96683

Date:	3/30/22
Scale:	As Noted
Drawn:	A.J.K.
Checked	A.J.K.
Job:	50221
Sheet	A-10
Of	10 Sheets



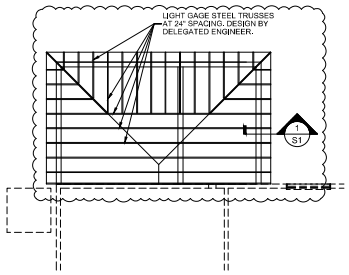
FOUNDATION PLAN

3/8" = 1'-0"



CONTAINMENT BASIN PLAN

3/8" = 1'-0"



ROOF FRAMING PLAN

1/4" = 1'-0"

COMPONENT AND CLADDING DESIGN WIND PRESSURES EXPOSURE CATEGORY B RISK CATEGORY II ENCLOSED BUILDING			
ZONE	EFFECTIVE WIND AREA (FT^2)	NET DESIGN WIND PRESSURE (PSF) MAX. (-)	MAX. (+)
1	10	-41.7	24.8
	20	-41.7	21.4
	50	-36.8	16.9
	100	-33.2	16.0
2e	10	-55.7	24.8
	20	-51.2	21.4
	50	-45.1	16.9
	100	-40.6	16.0
2r	10	-72.6	24.8
	20	-65.4	21.4
	50	-55.9	16.9
	100	-48.8	16.0
3	10	-55.7	24.8
	20	-51.2	21.4
	50	-45.1	16.9
	100	-40.6	16.0
4	10	-72.6	24.8
	20	-65.4	21.4
	50	-55.9	16.9
	100	-48.8	16.0
5	10	-36.0	33.2
	20	-34.5	37.9
	50	-32.6	29.7
	100	-31.0	28.2
	10	-44.4	33.2
	20	-41.4	37.9
	50	-37.5	29.7
	100	-34.5	28.2

GENERAL NOTES:

01. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS LISTED.
02. THE GENERAL CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION SHOWN ON THE DRAWINGS. ANY QUESTIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE STARTING CONSTRUCTION.
03. THE STRUCTURE HAS BEEN DESIGNED TO MEET THE REQUIREMENTS OF ASCE 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES," AND THE 2020 FLORIDA BUILDING CODE.
04. ALL FOUNDATIONS ARE TO BE FORMED UPON SOIL WITH A MINIMUM SAFE UNIFORM BEARING CAPACITY OF 2,000 PSF.
05. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THE UNIFORM BEARING CAPACITY UNDER THESE FOUNDATIONS. THE OWNER SHALL HIRE A GEOTECHNICAL ENGINEER TO PREPARE RECOMMENDATIONS FOR NECESSARY SOIL IMPROVEMENTS AND/OR COMPACTION.
06. SUPERIMPOSED GRAVITY LOADS:

AREA	LIVE	DEAD
MECHANICAL EQUIPMENT	150 PSF	0 PSF

Digitally signed by Joseph Gerding

GENERAL NOTES: CONCRETE

01. ALL CONCRETE CONSTRUCTION, WORKMANSHIP AND MATERIAL SHALL COMPLY WITH THE REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
02. ALL CONCRETE SHALL BE TYPE I OR II PORTLAND CEMENT COMPLYING WITH ASTM C150 AND SHALL HAVE COMPRESSIVE STRENGTH AND WATER TO CEMENT RATIO (W/C) SHOWN BELOW:

CONCRETE USE	EXPOSURE CLASS F	S	P	C	MAXIMUM W/C RATIO	28 DAY COMPRESSIVE STRENGTH (PSI)
FOUNDATIONS, SLABS ON GRADE	0	0	0	0	0.55	3,000
MASONRY GROUT	0	0	0	0	0.60	3,000

03. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. BARS SHALL BE FREE OF COATINGS THAT WILL REDUCE CONCRETE BOND.
04. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."
05. ALL BAR SPLICES, DOWELS AND CONCRETE COVERAGE SHALL MEET THE REQUIREMENTS OF ACI 318/318M "BUILDING CODE AND COMMENTARY FOR REINFORCED CONCRETE."
06. CAST IN PLACE BEAMS SHALL HAVE CONTINUOUS TOP AND BOTTOM REINFORCEMENT. LAP SPLICES IN BOTTOM BARS SHALL OCCUR OVER SUPPORTS. TOP BARS SHALL LAP AT MID-SPAN.
07. CONCRETE BEAMS AND SLABS SHALL BE FINISHED LEVEL AND TO THE ELEVATIONS SHOWN ON THE DRAWINGS.
08. CALCIUM CHLORIDE SHALL NOT BE USED IN ANY FORM.
09. UNLESS OTHERWISE PERMITTED OR SPECIFIED, 3000 PSI CONCRETE SHALL BE PRODUCED TO HAVE A SLUMP OF 6 INCHES +/- 1.5".
10. FIVE SETS OF TEST CYLINDERS SHALL BE MADE AND TESTED FOR EACH 50 YARDS OR LESS OF CONCRETE POURED IN ANY DAY FOR EACH DESIGN MIX. TESTS SHALL BE PERFORMED AT 3 DAYS, 7 DAYS, AND TWO AT 28 DAYS WITH ONE HELD IN RESERVE. THE CONTRACTOR SHALL SUBMIT ALL DESIGN MIXES FOR REVIEW AND APPROVAL BY THE ENGINEER.

GENERAL NOTES: MASONRY

01. ALL CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530/ASCE 6/TMS 602)."
02. COURSE GROUT (SIZE 8) SHALL BE USED CONFORMING TO THE REQUIREMENTS OF ASTM C476 "STANDARD SPECIFICATIONS FOR GROUT FOR REINFORCED AND NON-REINFORCED MASONRY."
03. CONCRETE MASONRY SHALL BE NORMAL WEIGHT, GRADE N, TYPE 1 OR II, CONFORMING WITH ASTM C90 "STANDARD SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS."
04. THE NET AREA COMPRESSIVE STRENGTH OF MASONRY (f'm) SHALL BE 1500 PSI USING TYPE M OR S MORTAR.
05. THICKNESS OF MORTAR BED SHALL NOT EXCEED 5/8".
06. MASONRY REINFORCING STEEL BARS SHALL BE CONTINUOUS WITH LAP SPLICES OF 48 BAR DIAMETERS UNLESS INDICATED OTHERWISE.
07. OPENINGS IN MASONRY WALLS SHALL BE REINFORCED WITH A MINIMUM OF ONE #5 REBAR ON ALL SIDES AND SHALL BE REINFORCED WITH A PRECAST LINTEL (BEARING 8" ON EACH END) WHERE CAST IN PLACE CONCRETE BEAMS ARE NOT INDICATED.
08. ALL MASONRY CELLS ADJACENT TO DOORS, WINDOWS, CORNERS OR ENDS OF WALLS SHALL BE REINFORCED WITH ONE #5 REBAR AND GROUTED SOLID.
09. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL MASONRY STRUCTURAL ELEMENTS ARE ADEQUATELY BRACED TO RESIST WIND, BACKFILLING, SOIL COMPACTION AND OTHER NATURAL AND CONSTRUCTION FORCES OCCURRING DURING CONSTRUCTION. BRACING SHALL REMAIN IN PLACE UNTIL THE STRUCTURE IS COMPLETED.
10. MASONRY GROUT SHALL BE PROPORTIONED AND PRODUCED TO HAVE A SLUMP BETWEEN 8 AND 11 INCHES.
11. WHEN GROUT POURS EXCEED 5 FEET IN HEIGHT, PROVIDE A CLEAN-OUT HOLE AT THE BOTTOM CELL. CLEAN THE CELL BY REMOVING ALL MORTAR, DEBRIS, LOOSE AGGREGATES AND ANY MATERIAL DETRIMENTAL TO MASONRY GROUT. INSTALL AND SECURELY TIE THE VERTICAL REBAR TOGETHER, CLOSE THE OPENING AFTER INSPECTION.
12. ALL WALLS SHALL BE REINFORCED HORIZONTALLY WITH 9 GAGE LADDER TYPE GALVANIZED JOINT REINFORCING AT 16" VERTICAL SPACING. JOINT REINFORCING SHALL CONFORM TO ASTM A82.

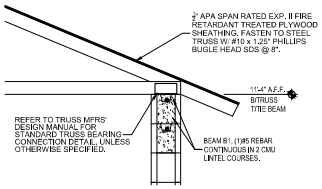
GENERAL NOTES: STRUCTURAL LIGHT GAGE STEEL

01 STANDARD SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) BY THE HOT DIP PROCESS, STRUCTURAL (PHYSICAL) QUALITY.
02. STANDARD SPECIFICATION FOR THE INSTALLATION OF LOAD BEARING (TRANSVERSE AND AXIAL) STEEL STUDS AND RELATED ACCESSORIES.
03. AMERICAN IRON AND STEEL INSTITUTE (AISI) COLD-FORMED STEEL DESIGN MANUAL", LATEST EDITION.
04. ALL GALVANIZED FRAMING MEMBERS AND ACCESSORIES, (.056" thick) 16ga. OR HEAVIER, SHALL BE FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A-653 WITH A YIELD OF 50 KSI AND AS SET FORTH IN AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
05. ALL GALVANIZED FRAMING MEMBERS AND ACCESSORIES, 43 MIL OR LESS, SHALL BE FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A-653, WITH A YIELD OF 33 KSI AND AS SET FORTH IN AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
06. ALL GALVANIZED FRAMING MEMBERS AND ACCESSORIES SHALL HAVE A MINIMUM G-90 COATING.
07. PERFORATIONS WILL BE ALLOWED IN WEB OF STUDS ONLY, AT A MINIMUM EDGE DISTANCE OF 1"-0", A MINIMUM OF 24" O.C. AND IN STRICT ACCORDANCE WITH THE AISI "COLD FORMED STEEL DESIGN MANUAL".
08. PRODUCTS SHALL BE PROTECTED FROM CONDITIONS THAT MAY CAUSE ANY PHYSICAL DAMAGE.
09. MATERIALS SHALL BE STORED ON A FLAT PLANE.
10. IT SHALL BE THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER OR THEIR APPOINTED PERSONNEL TO DETERMINE WHAT IS DAMAGED (ER, RUSTED, DENTED, BENT OR TWISTED). ANY DAMAGED MATERIALS SHALL NOT BE USED IN THE STRUCTURE.
11. LIGHT GAGE STEEL TO LIGHT GAGE STEEL CONNECTIONS SHALL BE ACCOMPLISHED WITH SELF-DRILLING SCREWS (SDS).
12. UTILIZE TEMPORARY BRACING AS REQUIRED AND KEEP FRAMING IN PLACE UNTIL WORK IS PERMANENTLY STABILIZED.
13. BRIDGING SHALL BE OF SIZE AND TYPE SHOWN IN THE PLANS.
14. HOLES SHALL NOT BE CUT INTO STEEL FRAMING MEMBERS UNLESS APPROVED BY STRUCTURAL ENGINEER.
15. SPLICING OF AXIALLY LOADED MEMBERS SHALL ONLY BE PERMITTED BY DIRECTION OF THE STRUCTURAL ENGINEER.
16. STEEL SELF DRILL SCREWS SHALL BE THE MINIMUM DIAMETER INDICATED ON THE PLANS. PENETRATION THROUGH JOINED MATERIALS SHALL NOT BE LESS THAN 3 EXPOSED THREADS.
17. SCREWS SHALL HAVE A PROTECTIVE COATING AT LEAST EQUIVALENT TO CADMIUM PLATING (ASTM A-165 TYPE NS) FOR USE IN EXTERIOR ASSEMBLIES.
18. VERTICAL ALIGNMENT (PLUMB) OF STUDS SHALL BE WITHIN 1/960TH (1/8" IN 10'-0") OF THE SPAN.
19. HORIZONTAL ALIGNMENT (LEVEL) OF WALL SHALL BE WITHIN 1/960TH (1/8" IN 10'-0") OF THE RESPECTIVE LENGTHS.

TRUSSES:

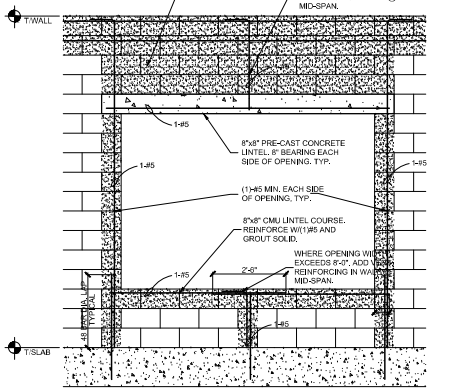
20. LIGHT GAGE STEEL SHOP DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
21. THE GENERAL CONTRACTOR'S SPECIALTY ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN OF THE LIGHT GAGE STEEL TRUSSES. THE DELEGATED ENGINEER SHALL PREPARE AND SUBMIT SIGNED & SEALED CALCULATIONS & SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO FABRICATION. THE DELEGATED ENGINEER SHALL SPECIFY BLOCKING AND BRACING NECESSARY TO WITHSTAND WIND LOADS DETERMINED USING ASCE 7-16 USING A BASIC WIND SPEED OF 150 MPH.
22. DESIGN GRAVITY LOADING:

	ROOF
SUPERIMPOSED DEAD LOADS	
TOP CHORD	10 PSF
BOTTOM CHORD	5 PSF
SUPERIMPOSED LIVE LOADS	
TOP CHORD	20 PSF
BOTTOM CHORD	0 PSF



1 S1 TYPICAL ROOF TRUSS CONNECTION

1/2" = 1'-0"

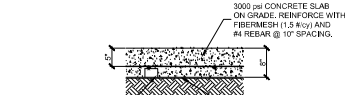


2 S1 TYPICAL CMU WALL OPENING REINFORCING

NO SCALE

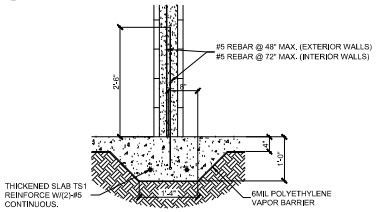
3 S1 TYPICAL 4" SLAB ON GRADE

3/4" = 1'-0"



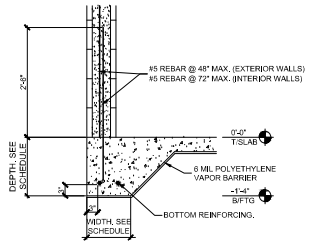
4 S1 8" STORAGE TANK SLABS

3/4" = 1'-0"



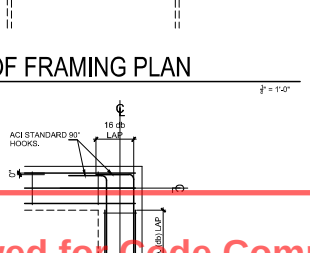
5 S1 TYPICAL THICKENED SLAB (TS1)

3/4" = 1'-0"



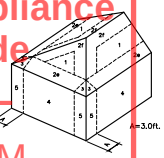
6 S1 TYPICAL THICKENED SLAB EDGE

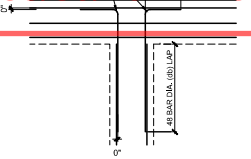
3/4" = 1'-0"



TYPICAL REINF. @ CORNERS

(TOP VIEW)





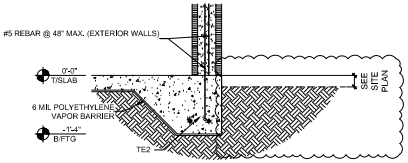
TYPICAL REINF. @ INTERSECTION

(TOP VIEW)

DESIGN WIND LOAD CRITERIA

ROOF ANGLE ($7° \le \theta \le 20°$)	
BASIC WIND SPEED (Vult) ASCE 7-16	150 MPH
ENCLOSED BUILDING	
EXPOSURE CATEGORY (MWFRS)	B
(COMPONENTS & CLADDING)	B
STRUCTURE RISK CATEGORY	II
STRUCTURE HEIGHT	<15'
VELOCITY PRESSURE (z=15',MWFRS)	27.9 PSF

NOTES:
1. POSITIVE AND NEGATIVE SIGNS INDICATE PRESSURES ACTING TOWARD AND AWAY FROM EXTERIOR SURFACES, RESPECTIVELY.
2. VALUES ABOVE ARE FOR USE WITH ALLOWABLE STRENGTH DESIGN LOAD COMBINATIONS. MULTIPLY VALUES BY 0.6 FOR USE WITH ALLOWABLE STRESS DESIGN LOAD COMBINATIONS.

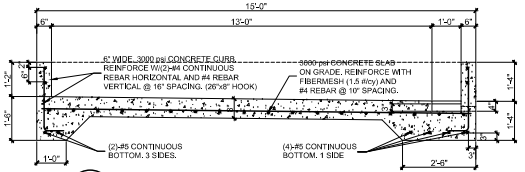


7 S1 TYPICAL TE FOOTING REINFORCING

NO SCALE

8 S1 TYPICAL FOUNDATION SECTION

1/2" = 1'-0"



9 S1 CONTAINMENT BASIN SECTION

1/2" = 1'-0"

FOUNDATION SCHEDULE

fy = 60,000 psi (rebar)
f'c = 3,000 psi

MARK	DIMENSIONS WIDTH	LENGTH	DEPTH	REINFORCEMENT TOP	BOTTOM	TIES	REMARKS
TE2	12"	——	16"	——	2-#5	#3 @ 48"	(20"x15" TIES) SEE 3/S1
TE3	8"	——	12"	——	1-#5	——	
TS1	16"	——	12"	——	2-#5	——	

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CA 7308

BUILDING ADDITION FOR:
Pharmco
ARMSTRONG DRIVE
TITUSVILLE FLORIDA

DATE:	30 SEPTEMBER 2021	REVISIONS
		10/11/21 SUBMITTAL ISSUE
DESIGN:	J. GERDING	2/17/22 REVISIONS PER CLIENT REQUEST
DRAWN:	J. GERDING	
PROJECT:	#18321	

S1

1 OF 1

PLUMBING GENERAL NOTES

1.0 PROVIDE ALL LABOR AND MATERIALS AS REQUIRED TO PROVIDE A FULLY FUNCTIONING AND COMPLETE DOMESTIC WATER DISTRIBUTION, AND SANITARY DRAINAGE SYSTEM AS INDICATED ON DRAWINGS. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND EQUIPMENT. FINAL LOCATIONS OF EQUIPMENT SHALL BE FIELD DETERMINED. ALL DISCREPANCIES ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO SUBMISSION OF BIDS. SUBMISSION OF A BID CONSTITUTES ACCEPTANCE OF FIELD CONDITIONS.

2.0 UNLESS OTHERWISE NOTED, PROVIDE NEW MATERIALS FREE OF DEFECTS. WHERE NOT SPECIFIC WEIGHTS OR GRADES ARE SPECIFIED PROVIDE MATERIALS OF AN ACCEPTED STANDARD WEIGHT AND GRADE ACCORDING TO CODE AND GOVERNING STANDARDS BY NFPA, ASTM, CISPI, FM, AND UL. INSTALL ALL EQUIPMENT, PIPING, DUCTWORK, AND CONTROLS IN ACCORDANCE WITH CODE, GOVERNING STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS

3.0 ALL MATERIALS SHALL BE NEW AND APPROVED BY APPROPRIATE CODES.

4.0 PLUMBING CONTRACTOR TO PROVIDE ALL REQUIRED PLUMBING PERMITS.

5.0 FURNISH AND INSTALL WATER AND SANITARY TO THE BUILDING IAW LOCAL GOVERNING CODES. ALL DOMESTIC WATER PIPING (ABOVE GROUND) SHALL BE HARD COPPER TUBING, ASTM B-88 TYPE L & M. WATER TUBE, DRAWN TEMPER WITH COPPER PRESSURE FITTINGS AND SOLDERED JOINTS OR PVC/CPVC AS CODE PERMITS. ALL SANITARY PIPING SHALL BE HUBLESS C.I. OR PVC AS CODE PERMITS. ALL CONNECTIONS SHALL BE WATER TIGHT.

6.0 THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR ONE(1) YEAR AFTER FINAL ACCEPTANCE.

7.0 EXTEND SERVICE TO WATER METER AND PROVIDE SHUT OFF VALVE IN VALVE BOX OUTSIDE BUILDING. FIELD VERIFY.

8.0 PROVIDE AND INSTALL PLUMBING FIXTURES AS SCHEDULED ON DRAWINGS.

9.0 ALL EXCAVATION AND BACK FILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.

10.0 DO NOT SCALE FOR THE EXACT FIXTURES, PIPING, EQUIPMENT, ETC.

11.0 COORDINATE WORK WITH OTHER TRADES TO AVOID INTERFERENCE WITH CONSTRUCTION PROGRESS.

12.0 WATER PIPING TO BE TYPE "M" COPPER WITH WROUGHT SOLDER, PVC OR CPVC AS CODE PERMITS. (PVC, CPVC NOT ALLOWED FOR FIRE RATED PENETRATIONS)

13.0 FURNISH AND INSTALL APPROVED AIR CHAMBERS OR SHOCK ABSORBERS AT EACH PLUMBING FIXTURE GROUP.

14.0 USE APPROVED INSULATING UNION FOR JOINED DISSIMILAR METALS.

15.0 FURNISH AND INSTALL CONDENSATE DRAIN PIPING TO A POINT WITHIN 5 FT OF A/C UNIT AND ON TO AN APPROVED DISCHARGE POINT.

16.0 CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.

17.0 ALL PLUMBING SHALL BE INSTALLED SO AS NOT TO CONFLICT WITH EXISTING UNDER FLOOR ELECTRICAL DUCTS.

18.0 INSTALL SANITARY LINES WITH SLOPE IAW FBC 2020 PLUMBING TABLE 704.1.

19.0 IT IS THE CONTRACTORS RESPONSIBILITY TO SURVEY EXISTING UNDERGROUND POWER, TELEPHONE, SANITARY, FRESH WATER OR ANY OTHER UTILITIES THAT MAY BE LOCATED IN THEIR IMMEDIATE WORK AREA. CONTRACTOR WILL ENSURE THAT THESE UTILITIES ARE NOT DAMAGED AND SHALL REPAIR OR REPLACE SUCH UTILITIES IF DAMAGED BY THE CONTRACTOR.

PLUMBING LEGEND

- POINT OF CONNECTION
- POINT OF DISCONNECT
- DIRECTION OF FLOW
- CAP PIPE
- PRESSURE REGULATOR
- PRESSURE/TEMPERATURE RELIEF VALVE
- TEMPERATURE GAUGE
- PRESSURE GAUGE
- GAS SHUTOFF VALVE
- BALL VALVE
- UNION
- SHUTOFF VALVE ON VERTICAL POSITION
- ELBOW DOWN
- PIPE OFF BOTTOM OF PIPE
- PIPE OFF TOP OF PIPE
- GATE VALVE
- PIPE TO FLOOR DRAIN
- REDUCER/INCREASER
- SOLENOID OPERATED VALVE
- COLD WATER
- HW HW — HOT WATER
- SANITARY WASTE
- VENT
- GAS GAS — NATURAL GAS

FUEL GAS PIPING SPECIFICATIONS

PART 1.00 - GENERAL

1.01 SECTION INCLUDES
A. FUEL GAS SYSTEM, INCLUDING:
1. CONNECTIONS TO UTILITIES.
2. GAS PIPING FOR PLUMBING, AIR CONDITIONING, KITCHEN, AND OTHER EQUIPMENT AS INDICATED ON DRAWINGS OR SPECIFIED.

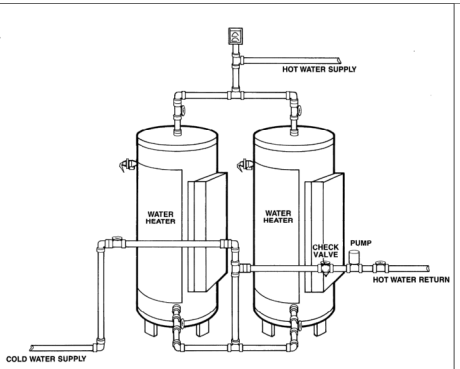
PART 2.00 - PRODUCTS

2.01 PIPE AND FITTINGS
A. SIZE 2 IN. AND SMALLER LOW PRESSURE: SCHEDULE 40 BLACK STEEL PIPE AND WITH BLACK MALLEABLE IRON SCREWED FITTINGS.
B. SIZE 2-1/2 IN. AND LARGER LOW PRESSURE, AND ALL MEDIUM PRESSURE: SCHEDULE 40 BLACK STEEL PIPE WITH WELDING FITTINGS.

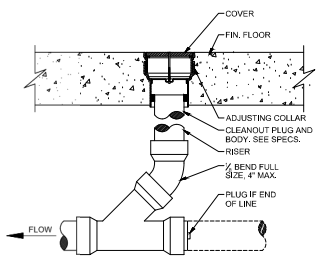
2.02 VALVES
A. SHUTOFF AND THROTTLING: GAS COCKS, U.O.N.

PART 3.00 - EXECUTION

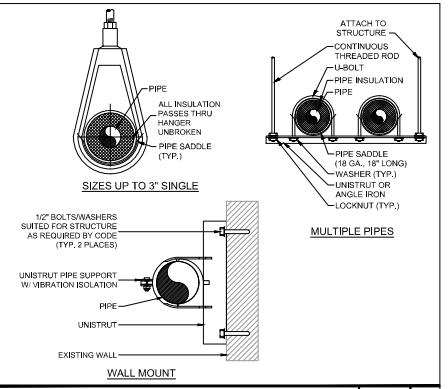
3.01 GAS SERVICE
A. MAKE CONNECTIONS TO GAS MAINS AS INDICATED AND AS REQUIRED FOR A COMPLETE OPERATING SYSTEM, INCLUDING ALL CONCRETE CUTTING AND PATCHING AND ALL REQUIRED VALVE BOXES.



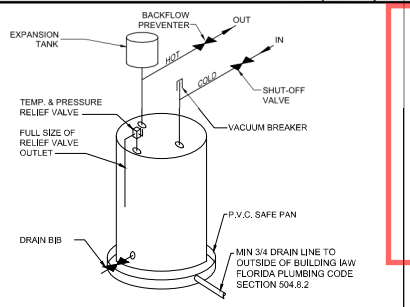
DUAL WATER HEATER SYSTEM | NO SCALE | 1



FLOOR CLEANOUT DETAIL | NO SCALE | 2

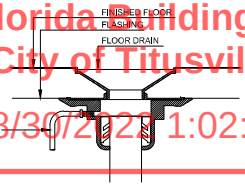


PIPE HANGER DETAIL | NO SCALE | 3

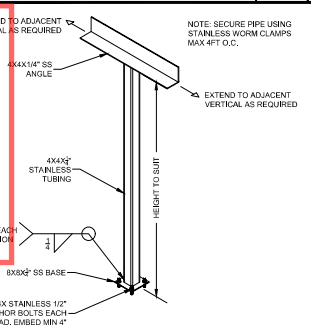


NOTE: PER FBC 2020 ENERGY CONSERVATION, SECTION C404.3: PROVIDE HEAT TRAPS ON SUPPLY AND DISCHARGE PIPING IF INTEGRAL HEAT TRAPS ARE NOT SUPPLIED

WATER HEATER DETAIL | NO SCALE | 4

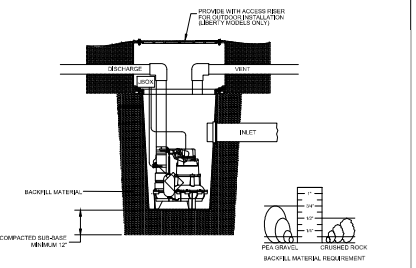


FLOOR DRAIN DETAIL | NO SCALE | 5



NOTE: ALTERNATIVELY USE GALVANIZED STEEL AT OWNER'S DISCRETION

STANDING PIPE SUPPORT DETAIL | NO SCALE | 6



NOTE: DETAIL IS GENERIC. CONSULT MFR INSTALLATION INSTRUCTION FOR EXACT REQUIREMENTS

IN-GROUNG WASTE PUMP DETAIL | NO SCALE | 7

PLUMBING FIXTURE SCHEDULE

MARK	HOT WATER	COLD WATER	VENT	WASTE	DESCRIPTION	REMARKS	WASTE TYPE	NOTES
P-1	1/2"	1/2"	-	2"	3 COMPARTMENT SINK	FLOOR MOUNT	TO HOLDING TANKS	1 & 2

1. PROVIDE SHUT OFF VALVES AND P-TRAPS AT ALL SINKS, LAVATORIES, AND FIXTURES.
2. PROVIDE ANTI SCALD DEVICE.

PUMP SCHEDULE

MARK	SUCTION /INLET	OUTLET	MAX FLOW (GPM)	MAX HEAD (FT)	HP	VOLTAGE/ PHASE	FLA	MOCP	MFG/ BASIS OF DESIGN
AP-1	1"	1"	75	275	N/A (AIR ACTUATED)	N/A	N/A	N/A	OWNER SELECTED
WP-3	4"	2"	150	28	0.75	120/1	13.8	30	LIBERTY PRO380 P382LE71 W/ FLOAT SWITCH, CHECK VALVE AND ACCESS RISER
WP-4	-	2"	106	50	0.5	120/1	9.8	20	ZOELLER HIGH TEMP 3000 SERIES M3161 W/ FLOAT SWITCH, CHECK VALVE AND HIGH TEMP CATCH BASIN

NOTE: SCHEDULE IS A BASIS OF DESIGN. PROVIDE MOCP AND MCA FOR EXACT EQUIPMENT BEING INSTALLED.

WATER HEATER SCHEDULE

MARK	QUANTITY	TYPE	TAP TEMP	KW PER ELEMENT	NUMBER ELEMENT	TOTAL KW	VOLTAGE/PHASE	MOCPD	CONNECTION	CAPACITY (GAL)	MANUFACTURE / MODEL (BASIS OF DESIGN)
WH-1	2	ELECTRIC	105 °F	4.5	3	13.5	480/3	20A	1-1/4"	80	AO SMITH DRE-80

NOTE: SCHEDULE IS A BASIS OF DESIGN. PROVIDE MOCP AND MCA FOR EXACT EQUIPMENT BEING INSTALLED.

CIRCULATION PUMP SCHEDULE

MARK	QUANTITY	TYPE	TOTAL KW	VOLTAGE/PHASE	CONNECTION SIZE	GPM	MANUFACTURE / MODEL (BASIS OF DESIGN)
CP-1	1	ELECTRIC	0.05	115V/1	1-1/2"	11.5 GPM @ 7.5FT	GRUNDFOS ALPHA1 15-55F

NOTE: SCHEDULE IS A BASIS OF DESIGN. PROVIDE MOCP AND MCA FOR EXACT EQUIPMENT BEING INSTALLED.

REVISIONS

REV	DESCRIPTION	DATE

C&H Merrill, Inc.
Engineering & Design
1418 Norman St NE #2, Palm Bay FL 32907
P: 321-725-4269 F: 321-725-4269 www.c-hmerrill.com
CA# 29952
PROJECT NO: 0902

PROJECT NAME AND ADDRESS:
INTERIOR RENOVATIONS & ADDITIONS FOR:
PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE, FLORIDA, 32780

SHEET TITLE:
PLUMBING NOTES, LEGEND, SCHEDULES, AND DETAILS

DRAWN BY: W.M.
CHECKED BY: D.M.
DATE: 07/19/22
SCALE: AS SHOWN
SHEET: P1

GENERAL NOTES

1. ALL BOILER DISTRIBUTION PIPING, CONDENSATE RETURN TANK PIPING, AND BLOWDOWN SEPARATOR PIPING BY BOILER INSTALLER.
2. ALL WASTE TO BE PUMPED TO HOLDING TANKS LOCATED OUTSIDE FOR DISPOSAL BY OTHERS.

KEY INSTALLATION NOTES

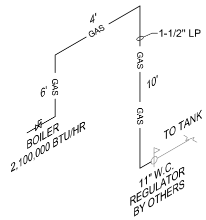
1. LOW PRESSURE REGULATOR (11 IN. W.C.) AND LIQUID PROPANE LINE FROM SITE PROPANE TANK BY OTHERS.
2. CONNECT NEW LP LINE TO P.O.C. AT GAS TRAIN ON BOILER.
3. DELETED
4. PROVIDE SHUTOFF VALVE AND CAP. COORDINATE FOR EXACT LOCATION.
5. SEE KEY PLAN FOR CONTINUATION
6. PROVIDE 2" PVC WASTE LINE FROM AIR PUMP. REFER TO ISOMETRIC FOR PIPING AND VALVE LAYOUT. SUCTION PIPING BY OTHERS.
7. PROVIDE 2" PVC WASTE LINE FROM WASTE PUMP. REFER TO ISOMETRIC FOR PIPING AND VALVE LAYOUT.
8. ROUTE 2" DRAIN FROM SINK TO HOLDING TANK.
9. PROVIDE FLOAT SWITCH IN HOLDING TANK. TIE IN WITH PUMP.
10. ROUTE 3" PVC WASTE THRU WALL TO EXTERIOR BELOW CANOPY THIS LOCATION. ALL PIPE LOCATED OUTSIDE SHALL BE PAINTED (TYPICAL).
11. PROVIDE STANDING PIPE SUPPORT PER DETAIL SHEET P1 OR SECURE BY OTHER APPROVED METHOD IAW FBC PLUMBING SECTION 308.
12. PROVIDE UNISTRUT PIPE SUPPORT ALONG EXTERIOR WALL AND ANCHOR TO WALL IAW FBC PLUMBING SECTION 308.
13. COORDINATE W/ BOILER INSTALLER FOR LOCATION OF FLOOR DRAIN. FLOOR DRAIN AND PIPING TO BE CAST IRON.
14. COORDINATE W/ OWNER FOR EXACT ROUTING PATH FOR HW RECIRC. LOOP. BASIS OF DESIGN 11.5GPM W/ 500FT EQUIV. RUN WITH SELECTED CIRCULATION PUMP. COORDINATE W/ OWNER FOR EXACT REQUIREMENTS AND ALTERNATE CIRCULATION PUMP IF REQUIRED.
15. PROVIDE WYE FITTINGS AT WASTE PIPE JUNCTIONS (TYPICAL)

GAS SIZING CALCULATION

LENGTH FROM REGULATOR TO BOILER	= 20'
NATURAL GAS DEMAND OF LINE	= 2100 CFH (MBTUH)
EQUIVALENT LENGTH IN FEET	= 20'
SIZE NEW PIPE (TABLE 402.4(28))	= 1-1/2"
CAPACITY OF NEW PIPE (20' EQUIV)	= 2420 MBTUH
DEMAND OF NEW UNITS	= 2100 MBTUH
REMAINING LINE CAPACITY	= 320 MBTUH

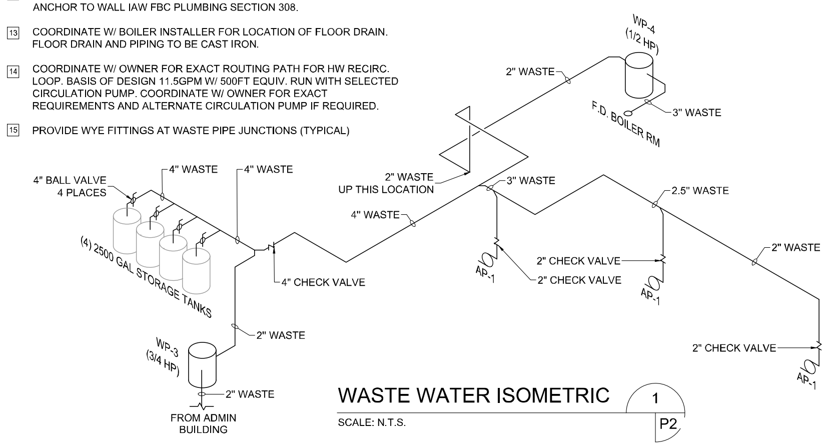
NOTE: REMAINING LINE CAPACITY MEASURED AT MOST REMOTE GAS OUTLET.

GAS PIPE SIZING IS BASED UPON 20 EQUIVALENT FEET OF RUN FROM TEE TO MOST REMOTE GAS OUTLET. DESIGN CRITERIA: 1.5 SPECIFIC GRAVITY UNDILUTED PROPANE, SCHEDULE 40 STEEL PIPE, DESIGN PRESSURE OF 11" WATER COLUMN WITH A MAXIMUM PRESSURE DROP OF 0.5 IN WC PER FBC 2020 FUEL GAS TABLE 402.4(28).



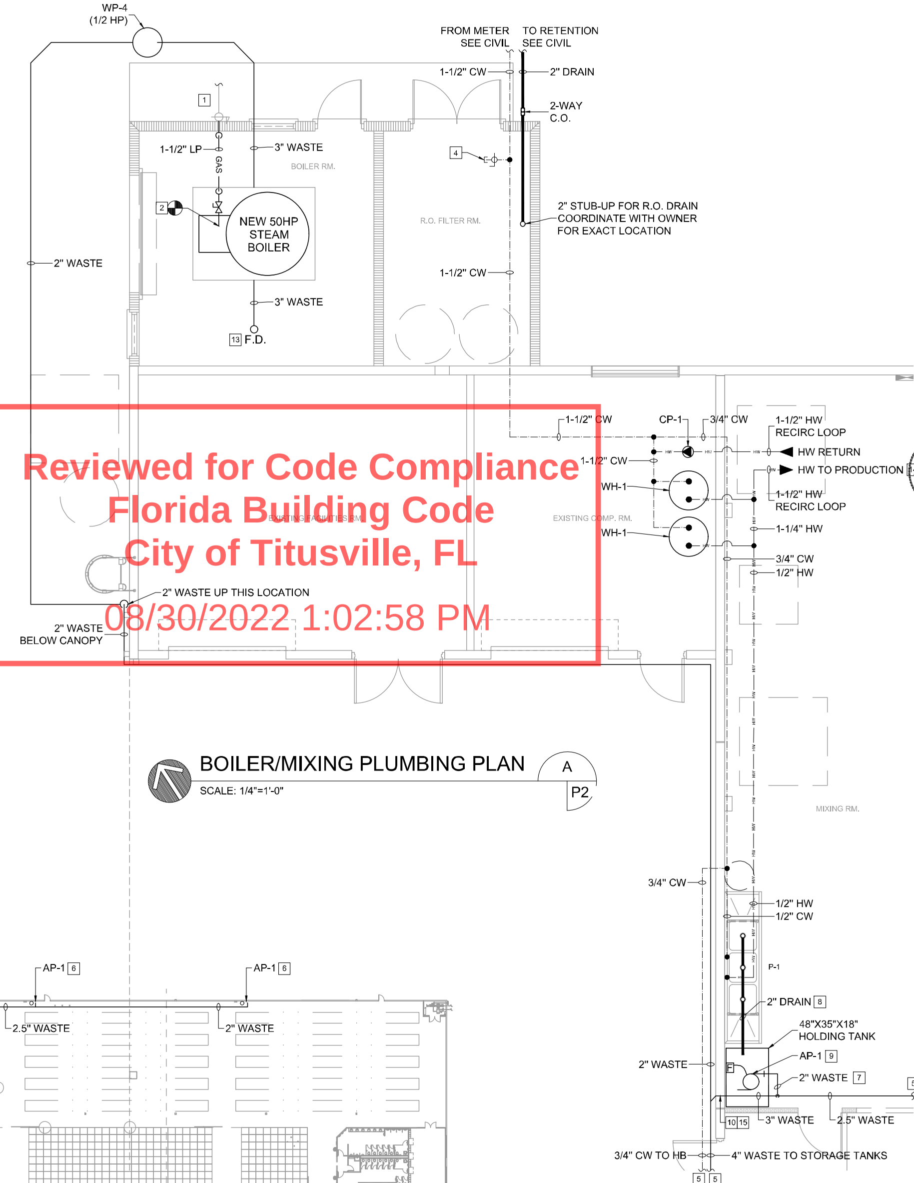
LIQUID PROPANE RISER 2 P2

SCALE: N.T.S.



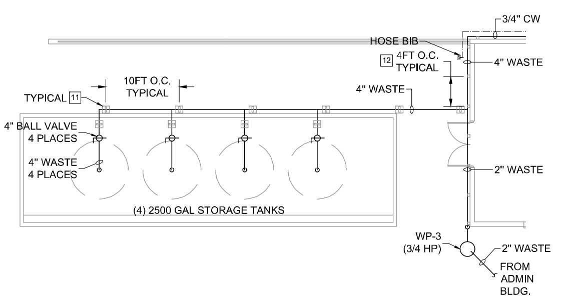
WASTE WATER ISOMETRIC 1 P2

SCALE: N.T.S.



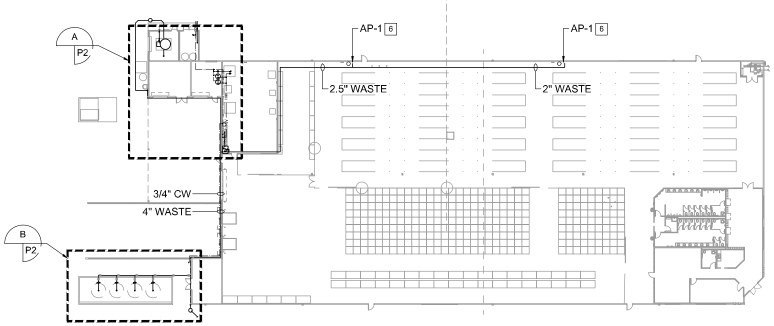
BOILER/MIXING PLUMBING PLAN A P2

SCALE: 1/4"=1'-0"



STORAGE TANK PLUMBING PLAN B P2

SCALE: 1/4"=1'-0"



KEY PLAN

SCALE: N.T.S.

REV | DESCRIPTION | DATE
REVISIONS

DAVID A. MERRILL LICENSE No. 56888 STATE OF FLORIDA PROFESSIONAL ENGINEER

David Merrill
c=US, o=Florida, dnQualifier=A01410D0000017F88758CCD00038218, cn=David Merrill
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES
DAVID A. MERRILL PE, LICENSED FLORIDA ENGINEER, NO:56888
2022.07.19 12:04:41 -04'00'

P: 321 725 4309 F:321-725-3390 www.ch-merrill.com
C&H Merrill, Inc.
Engineering & Design
1418 Norman St NE #2, Palm Bay FL 32907
COA:25952

PROJECT NO.: 6902

PROJECT NAME AND ADDRESS
INTERIOR RENOVATIONS & ADDITIONS FOR: PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE, FLORIDA, 32780

SHEET TITLE
PRODUCTION BLDG PLUMBING PLAN

DRAWN BY: W.M.	SHEET
CHECKED BY: D.M.	P2
DATE: 07/19/22	
SCALE: AS SHOWN	

HVAC GENERAL NOTES

1.0 GENERAL CONDITIONS

1.1 THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND DEVICES NECESSARY TO PROVIDE COMPLETE AND OPERATIONAL HVAC SYSTEM THAT COMPLIES WITH THE STANDARD BUILDING AND MECHANICAL CODES, ASHRAE, SMACNA, NFPA, FLORIDA ENERGY EFFICIENCY CODE AND ALL OTHER APPLICABLE CODES AND REGULATIONS EVEN IF NOT SHOWN BUT NO LESS THAN SHOWN ON THE PLANS, DIAGRAMS, AND SPECIFICATIONS. IF IN THE OPINION OF THE CONTRACTOR THE SYSTEMS SPECIFIED WILL NOT OPERATE OR PERFORM ADEQUATELY, THE CONTRACTOR SHALL BRING SUCH CONCERNS TO THE ATTENTION OF THE ENGINEER OR ARCHITECT BEFORE ORDERING EQUIPMENT.

1.2 THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE JOB CONDITIONS. DRAWINGS ARE DIAGRAMMATIC AND NOT INTENDED TO SHOW EVERY DETAIL. DO NOT SCALE DRAWINGS. USE FIELD MEASUREMENTS OR ARCHITECT DIMENSIONED DRAWINGS FOR DETERMINING EXACT LOCATIONS AND CLEARANCES.

1.3 ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER BY EXPERIENCED INSTALLER USING METHODS AND MATERIALS IN KEEPING WITH INDUSTRY STANDARDS AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.

1.4 ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE UL APPROVED WHERE APPLICABLE. SUBSTITUTIONS FOR SPECIFIED EQUIPMENT SHALL REQUIRE SUBMITTAL APPROVAL BY THE ENGINEER BEFORE PURCHASING.

1.5 THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE. DURING THIS PERIOD ANY DEFECTS SHALL BE CORRECTED WITHOUT CHARGE.

2.0 ALL WORK SHALL BE IN CONFORMANCE WITH THE FOLLOWING:

2.1) THE LATEST EDITION OF THE STANDARD MECHANICAL CODE.
2.2) LOCAL BUILDING DEPARTMENT REGULATIONS.
2.3) NFPA 13

3.0 DUCTWORK

3.1 PROVIDE TURNING VANES IN ALL RECTANGULAR DUCT ELBOWS, Ts, AND CHANGES OF DIRECTION GREATER THAN 45 DEGREES.

3.2 PROVIDE AIR EXTRACTORS WITH VOLUME CONTROL IN ALL RECTANGULAR DUCT CONNECTIONS WHERE SIDE BRANCHES T INTO THE MAIN TRUNK LINE.

3.3 COORDINATE ROUTING OF THE DUCTWORK WITH JOISTS AND BEAMS AND PROVIDE SPECIAL FABRICATION WHERE NECESSARY TO ROUTE DUCTWORK IN AVAILABLE SPACE. FLEX DUCT SHALL NOT BE SUBSTITUTED FOR RIGID DUCT UNLESS APPROVED BY THE ENGINEER.

3.4 ALL DUCTING AND EQUIPMENT INSULATION SHALL COMPLY WITH THE FLORIDA ENERGY EFFICIENCY CODE (R=4,5 W/INSTALLED IN NON AIR CONDITIONED SPACE; R=6.0 IN ATTICS. ALL DUCT AND DUCT CLOSURE MATERIAL SHALL COMPLY WITH UL 181 AND NFPA 90A STANDARDS AND HAVE A FLAME SPREAD RATING <25 AND SMOKE DEVELOPMENT RATING <50 IN ACCORDANCE WITH ASTM E84.

3.5 PROVIDE ACCESS DOORS FOR SMOKE DETECTOR CLEANING, TURNING VANES AND DUCT CLEANING IN ACCORDANCE WITH NFPA 90A, 2-3.4.

3.6 FIRE DAMPERS SHALL BE PROVIDED WHERE REQUIRED AS SHOWN AND SHALL MEET ALL APPLICABLE UL AND NFPA REQUIREMENTS AND SHALL BE 100% FREE AREA WITH DUCT ACCESS DOOR PROVIDED FOR FUSE LINK.

3.7 DUCTWORK SHALL BE 24 GAGE GALVANIZED METAL, UNLESS OTHERWISE NOTED, AND SHALL BE INSTALLED PER THE LATEST EDITION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS". FIBERGLASS DUCT BOARD MAY BE USED IN LIE OF SHEET METAL AND SHALL CONFORM TO FBC 2020, MECHANICAL CODE, SECTION 603.4

3.8 INSTALL HVAC EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. SIZE REFRIGERATION PIPING SIZE PER MANUFACTURER'S RECOMMENDATIONS. EXTEND 1" CONDENSATE PIPING FROM AHU'S TO EXTERIOR EXISTING LANDSCAPING.

3.9 ALL DUCTWORK SIZES ARE NET INSIDE DIMENSIONS. DUCT DIMENSIONS SHALL NOT BE REDUCED UNLESS APPROVED BY THE ENGINEER

3.10 PROVIDE APPROVED SUPPLY AND RETURN AIR DIFFUSERS, GRILLES AND REGISTERS AS SPECIFIED OR APPROVED EQUALS.

3.11 ALL OUTSIDE AIR AND EXHAUST DUCTING SHALL BE GALVANIZED SHEET METAL INSTALLED AS RECOMMENDED BY THE LATEST SMACNA STANDARDS. OUTSIDE AIR DUCT SHALL BE WRAPPED WITH APPROVED 1" THICK DUCT WRAP INSULATION WITH VAPOR BARRIER INSTALLED AS RECOMMENDED BY THE MANUFACTURER.

4.0 AIR CONDITIONING EQUIPMENT

4.1 ALL AHU UNITS SHALL BE PROVIDED WITH APPROVED CONDENSATE DRAINS WITH CONDENSATE PUMPS IF NEEDED. CONDENSATE DRAINS SHALL BE A MINIMUM OF 3/4" PVC AND WHERE ABOVE CEILING SHALL BE INSULATED WITH APPROVED 3/4" ELASTOMERIC PIPE INSULATION. CONDENSATE DRAIN TRAPS SHALL BE PROVIDED SIZED PER THE UNITS MANUFACTURES RECOMMENDATION AND CLEAN OUTS SHALL BE PROVIDED IN ALL DRAIN LINES. ROUTE PIPING BY BEST METHOD BUT COORDINATE THE ROUTING WITH THE ARCHITECT AND GENERAL CONTRACTOR.

4.2 PROVIDE UNISTRUT SUPPORT AND STRAPS FOR ALL PIPING.

4.3 WHERE LENGTH OF PIPING RESULTS IN OVER 2 DEGREE FAHRENHEIT PRESSURE DROP, PIPING SHALL BE INCREASED IN SIZE PER MANUFACTURER'S RECOMMENDATIONS TO MAINTAIN RATED COOLING CAPACITIES. COORDINATE PIPE ROUTING WITH THE ARCHITECT.

4.4 PROVIDE "ACR" COPPER PIPE FOR REFRIGERANT PIPING. PROVIDE 3/4" ARMAFLEX INSULATION.

5.0 CONTROLS

5.1 PROVIDE AND INSTALL COMPLETE TEMPERATURE CONTROL SYSTEM NO LESS THAN SPECIFIED. PROVIDE TIMER CONTROL ON ALL AIR HANDLERS, TO SHUT DOWN DURING BUILDING UNOCCUPIED CYCLE.

5.2 ALL AIR SYSTEMS WITH A FAN CAPACITY OF 2000 CFM AND OVER AND ALL UNITS SERVING AREAS CONSIDERED A MEANS OF EGRESS SHALL AUTOMATICALLY SHUT DOWN WHEN THE HEAT IN THE SYSTEM EXCEEDS 135 DEGREES FARENHEIT. LOCATE THE SMOKE DETECTOR IN THE SUPPLY STREAM AND RETURN AIR DUCT WHERE REQUIRED. (FBC 2020, MECH CODE SECTION 606).

5.3 APPROVED SMOKE DETECTORS SHALL BE PROVIDED IN THE SUPPLY AND RETURN AIR DUCTS WIAND AS REQUIRED UNDER THE STANDARD MECHANICAL CODE OR AS OTHERWISE NOTED ON THE DRAWINGS. COORDINATE THIS INSTALLATION WITH THE ELECTRICAL CONTRACTOR.

5.4 PROVIDE SMOKE DETECTORS IN RETURN AIR PLENUM PER FBC 2020 MECH CODE 606.2.2

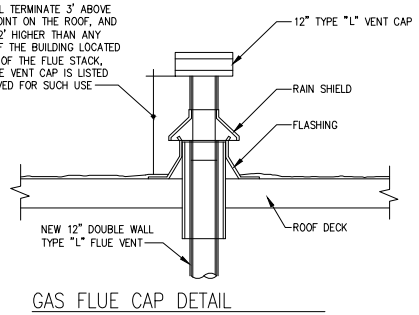
5.5 UPON FINAL COMPLETION OF THE WORK PROVIDE A COMPLETE TEST, ADJUST AND BALANCE OF THE HVAC SYSTEM, CORRECT ALL DEFICIENCIES FOUND AND PROVIDE THE OWNER W/ 6 COPIES OF THE FINAL REPORT. ALL TAB WORK TO BE PERFORMED BY CERTIFIED TECHNICIANS IN ACCORDANCE WITH THE STANDARDS DEVELOPED BY AABC AND NEBB.

HVAC LEGEND

- CEILING SUPPLY AIR DIFFUSER
- SUPPLY DIFFUSER WITH VOLUME DAMPER
- VOLUME DAMPER
- SPIN-IN COLLAR WITH VOLUME DAMPER
- FD — FIRE DAMPER
- F/SD — FIRE/SMOKE DAMPER
- SD — SMOKE DETECTOR
- T — THERMOSTAT
- FLEX DUCT
- INFRARED CO2 SENSOR
- ROUND SUPPLY DIFFUSER
- EXHAUST FAN & GRILLE
- EXHAUST DUCT UP
- SIDE WALL OR FLOOR SUPPLY DIFFUSER
- RETURN GRILLE
- WALL MOUNTED RETURN
- SIDE WALL EXHAUST FAN

FLEX DUCT AND GRILLE SIZE SCHEDULE
(UNLESS OTHERWISE NOTED)

CFM	DIAMETER (SUPPLY)	DIAMETER (RETURN)	SUPPLY GRILLE	RETURN GRILLE
50	5"	6"	6"X6"	8"X6"
100	6"	7"	8"X6"	12"X6"
150	7"	8"	10"X6"	12"X8"
200	8"	9"	12"X6"	12"X10"
250	9"	10"	10"X8"	12"X12"
300	9"	10"	14"X8"	16"X10"
350	10"	12"	10"X10"	16"X12"
400	10"	12"	12"X10"	16"X16"
450	12"	14"	12"X12"	16"X16"
500	12"	14"	12"X12"	16"X16"
1000	14"	16"	20"X12"	20"X20"



GAS FLUE CAP DETAIL
SCALE: NTS

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Florida Building Code
City of Titusville, FL

08/30/2022 1:02:58 PM

REVISIONS

REV	DESCRIPTION	DATE

DAVID A. MERRILL — No. 56888 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

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PROJECT NO: 0902
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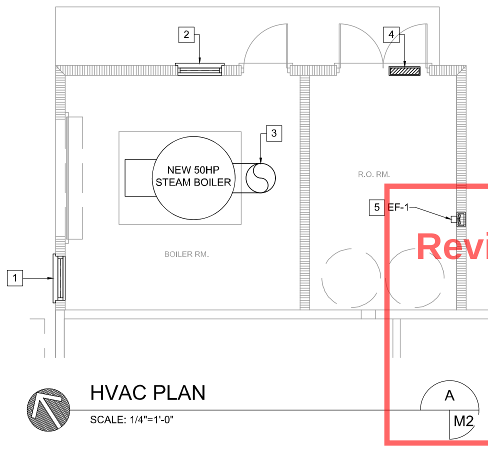
PROJECT NAME AND ADDRESS:
INTERIOR RENOVATIONS & ADDITIONS FOR:
PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE, FLORIDA
32780

SHEET TITLE:
MECHANICAL NOTES, SCHEDULES, LEGEND & DETAILS

DRAWN BY:	D. HOCHEIMY
CHECKED BY:	D. MERRILL
DATE:	07/19/22
SCALE:	AS SHOWN
SHEET	M1

FLAG NOTES

1. PROVIDE 36"X36" LOUVERS (MINIMUM 525 SQ. IN FREE AREA) WITH RAIN GUARD AND INSECT SCREEN LOCATED WITHIN 12" OF TOP OF ENCLOSURE.
2. PROVIDE 36"X36" LOUVERS (MINIMUM 525 SQ. IN FREE AREA) WITH RAIN GUARD AND INSECT SCREEN LOCATED WITHIN 12" OF BOTTOM OF ENCLOSURE.
3. 12" TYPE 'L' DOUBLE WALL GAS EXHAUST VENT. PROVIDE VERTICAL INSTALLATION TO 12" TYPE 'L' VENT CAP PER MFG'S INSTRUCTIONS. REFER TO BOILER MANUAL AND DETAIL SHEET M-100 FOR INSTALLATION NOTES AND DETAILS. SUPPORT PER MFG INSTRUCTION AND DETAIL SHEET M-100.
4. PROVIDE 24"X24" LOUVERS IN DOOR WITH RAIN GUARD AND INSECT SCREEN.
5. PROVIDE WALL MOUNTED 1500CFM EXHAUST FAN EF-1 (1/30HP, 120V/1Ø) WITH WEIGHTED LOUVERS.



HVAC PLAN

SCALE: 1/4"=1'-0"

FREE AREA CALCULATION

TWO PERMANENT OPENINGS METHOD (FBC FUEL GAS SECTION 304.6.1)

TOTAL INPUT RATING OF APPLIANCES IN ENCLOSURE = 2,100,000 BTU/HR

MINIMUM FREE AREA OF EACH OPENING = (1 SQ. IN/4000 BTU/HR) * 2,100,000 BTU/HR = 525 SQ. IN

LOUVERED OPENING SIZE = 36" X 36" = 1296 SQ. IN

OPENING FREE AREA = 1296 SQ. IN * 0.5 = 648 SQ. IN

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City of Titusville, FL

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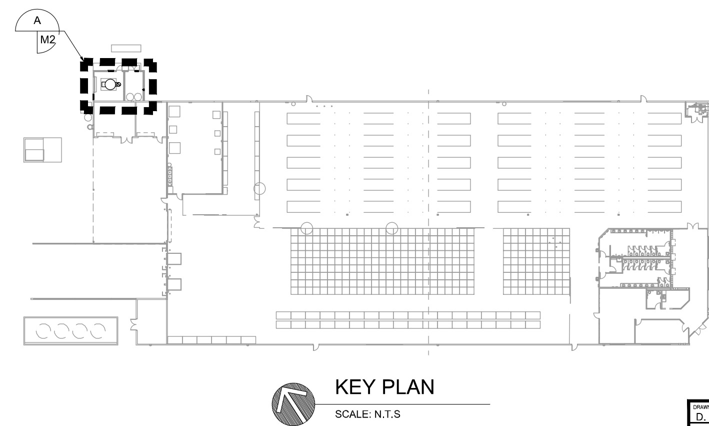

KEY PLAN

SCALE: N.T.S

REV	DESCRIPTION	DATE

REVISIONS

David Merrill
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COA: 25952

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INTERIOR RENOVATIONS & ADDITIONS FOR:
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SHEET TITLE
PRODUCTION BLDG
HVAC PLAN

DRAWN BY: D. HOCHEIMY	SHEET
CHECKED BY: D. MERRILL	M2
DATE: 07/19/22	
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LEGEND

LIGHTING (SEE LIGHTING SCHEDULE)

- FIXTURE 'A': 8FT SURFACE/SUSPENSION MOUNTED LED FIXTURE. SLASH DENOTES PROVIDE EMERGENCY BALLAST.
- FIXTURE 'B': WALL PACK FOR OUTDOOR LOCATION.
- EMERGENCY LIGHT.
- COMBINATION EMERGENCY LIGHT/EXIT LIGHT.
- SURFACE MOUNTED EXIT LIGHT WITH EMERGENCY BATTERY BACKUP.
- EXHAUST FAN
- 20 AMP OCCUPANCY SENSOR, MANUAL ON 30 MIN OFF.
- S — 20 AMP MANUAL LIGHT SWITCH
- D — 20 AMP DIMMER LIGHT SWITCH
- 20AMP LARGE AREA CEILING MOUNTED OCCUPANCY SENSOR. AUTO ON/OFF, TIED IN WITH MANUAL SWITCH.
- TC — ASTRONOMICAL TIME CLOCK
- J — JUNCTION BOX

POWER

- DISCONNECT SWITCH WITH OCPD
- NON-FUSED DISCONNECT SWITCH
- COMBINATION MOTOR STARTER/DISCONNECT
- ELECTRICAL ENCLOSURE/PANELBOARD WITH OCPD
- ABOVE COUNTER DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- ABOVE COUNTER GFCI DUPLEX RECEPTACLE
- GFCI DUPLEX RECEPTACLE
- ABOVE COUNTER QUAD RECEPTACLE
- QUAD RECEPTACLE
- GFCI QUADRAPLEX RECEPTACLE
- 3-PHASE RECEPTACLE
- USB CHARGER, 4 PORT
- 2-POLE RECEPTACLE

OTHER

- ELECTRICAL HOME RUN, SLASH MARKS INDICATE NUMBER OF CONDUCTORS, LONGER SLASH IS NEUTRAL, GROUND WIRE NOT SHOWN. QUANTITY OF ARROWS INDICATE QUANTITY OF HOMERUNS TO PANELBOARD. PROVIDE EQUIPMENT GROUNDING CONDUCTOR IN ALL BRANCH CIRCUITS.
- COMMUNICATIONS OUTLET/PHONE OUTLET
- TV — COAX DIGITAL CABLE OR SATELLITE TELEVISION SIGNAL JUNCTION BOX

ELECTRICAL NOTES

1.0 PROVIDE ALL LABOR, MATERIALS EQUIPMENT AND TOOLS TO PERFORM ALL WORK NECESSARY FOR THE COMPLETE EXECUTION OF THE ELECTRICAL WORK AS SHOWN ON THE DRAWINGS.

2.0 PROVIDE WORK NOT SPECIFICALLY SHOWN OR SPECIFIED BUT STILL REQUIRED TO INSURE PROPER AND COMPLETE OPERATIONS OF ALL SYSTEMS AND TO SATISFY THE DESIGN INTENT IN THE WORK AND TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS.

3.0 EXPERIENCED ELECTRICIANS SHALL PROVIDE ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED UNDER THE ELECTRICAL CONTRACTORS, SCOPE OF WORK. ALL WORKMANSHIP SHALL BE FIRST CLASS AND SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DRAWINGS.

4.0 SUBMIT ALL DISCREPANCIES IN WRITING TO THE A/E PRIOR TO SUBMITTING BID. BID SUBMISSION CONSTITUTES ACCEPTANCE OF FIELD CONDITIONS.

5.0 ALL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING LATEST CODES AND STANDARDS: NFPA, NEC, NEMA, NECA, ANSI, UL, LOCAL CODES, ORDINANCES, REGULATIONS, FPL STANDARDS AND JURISDICTION HAVING AUTHORITY.

6.0 ALL CONTRACTOR PROVIDED MATERIALS SHALL BE NEW AND FREE OF DEFECTS AND UL LISTED FOR INTENDED APPLICATION.

7.0 DO NOT SCALE ELECTRICAL DRAWINGS. WHERE SPECIFIC DETAILS AND DIMENSIONS FOR ELECTRICAL WORK ARE NOT SHOWN ON DRAWINGS, CONTRACTOR SHALL TAKE MEASUREMENTS AND MAKE LAYOUTS AS REQUIRED FOR THE PROPER INSTALLATION AND COMPLETION OF WORK.

8.0 THE ELECTRICAL CONTRACTOR SHALL PROVIDE FOR ALL REQUIRED INSURANCE COVERAGE, PERMITS, FEES INSPECTION AND TESTING.

9.0 ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH CONSTRUCTION PROGRESS.

10.0 CONTRACTOR SHALL FIELD SURVEY THE SITE FOR VERIFICATION FOR ALL ASPECTS OF THE PROJECT PRIOR TO BIDDING.

11.0 FIELD VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION. CONTRACT DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS, OUTLETS, SWITCHES, PANEL BOARDS, CONDUITS AND OTHER WORK.

12.0 MOTOR STARTERS AND DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT SHALL BE SIZED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

13.0 LOAD DATA AND SYSTEM SIZING IS BASED ON INFORMATION PROVIDED AT THE TIME OF DESIGN. VERIFY EQUIPMENT LOCATIONS, SIZES AND REQUIREMENTS BEFORE ORDERING MATERIALS AND DEVICES. ROUTE CIRCUITS BY BEST METHOD TO SUIT JOB CONDITIONS AND INSTALL PULL BOXES AS MAY BE NECESSARY TO FACILITATE INSTALLATION.

14.0 ELECTRICAL CONNECTION LOCATIONS TO EQUIPMENT SHALL BE FIELD VERIFIED PRIOR TO ROUGH IN OR COMPONENTS.

15.0 PROVIDE SWITCHED LIGHTING AND 120V RECEPTACLE WITHIN 3 FT OF THE SERVICING SIDE OF ALL ELECTRICALLY OPERATED MECHANICAL EQUIPMENT INSTALLED IN ATTICS AND CRAWL SPACES.

16.0 COORDINATE MOUNTING LOCATIONS OF LIGHTING SWITCHES, F/A DEVICES, TV, DAT/TEL OUTLETS AND RECEPTACLES WITH MILLWORK PRIOR TO ROUGH-IN.

17.0 CONTRACTOR SHALL PROVIDE ALL MATERIAL TO SUPPORT AND SECURE ALL ELECTRICAL COMPONENTS PER NEC FROM THE BUILDING STRUCTURE.

18.0 CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS.

19.0 CONTRACTOR SHALL INSPECT ALL EXISTING EQUIPMENT TO REMAIN TO INCLUDE MAIN DISTRIBUTION PANELS AND BRANCH CIRCUIT PANELS. PROVIDE UPDATED PANEL DIRECTORIES
THAT REFLECT NEW WORK.

20.0 ALL WORK SHALL BE IN CONFORMANCE WITH THE FOLLOWING:

THE 2020 FLORIDA BUILDING CODE - BUILDING 7TH EDITION
THE 2020 FLORIDA BUILDING CODE - ENERGY CONSERVATION
THE FLORIDA FIRE PREVENTION CODE 6TH EDITION
THE 2017 NATIONAL ELECTRICAL CODE

21.0 THE ELECTRICAL DESIGN PROVIDED FOR OWNER SUPPLIED EQUIPMENT IS BASED ON DOCUMENTATION SUBMITTED TO THIS OFFICE. ELECTRICAL CONTRACTOR TO FIELD VERIFY ALL EQUIPMENT NAMEPLATE REQUIREMENTS PRIOR TO INSTALLATION; MAINTAIN MOCP AND MCA IN ACCORDANCE WITH THE NAMEPLATE DATA OR RATED HORSEPOWER.

ABBREVIATIONS

ACH	ABOVE COUNTER HEIGHT
A/E	ARCHITECT/ENGINEER
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AIC	AMP INTERRUPTING CURRENT
AHU	AIR HANDLING UNIT
AWG	AMERICAN WIRE GAGE
BCH	BELOW COUNTER HEIGHT
CLG	IN CEILING, CEILING MOUNTED DEVICE
CU	COPPER OR CONDENSING UNIT
ETR	EXISTING TO REMAIN
GFCI	GROUND FAULT CURRENT INTERRUPTING
IAW	IN ACCORDANCE WITH
INC	INCANDESCENT
LED	LIGHT EMITTING DIODE
MB	MAIN BREAKER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
RTI	REMOTE TEST INDICATOR
SCCR	SHORT CIRCUIT CURRENT RATING
WP	WEATHER PROOF
UC	UNDER THE COUNTER
UON	UNLESS OTHERWISE NOTED
VFD	VARIABLE FREQUENCY DRIVE

ELECTRICAL MATERIAL

1.0 WIRE SIZES SHOWN ARE FOR COPPER CONDUCTORS.

2.0 UNLESS OTHERWISE STATED, UNDERGROUND CONDUITS SHALL BE EITHER GRC, GRC01 OR SCHEDULE 40 PVC AS INDICATED ON THE DRAWINGS AND SHALL BE INSTALLED IN COMPLIANCE WITH LOCAL CODE.

3.0 ALL CONDUIT OTHER THAN SPECIFIED IN NOTE 2 ABOVE SHALL BE ELECTRICAL METALLIC TUBING (EMT) OR RIGID STEEL (3/4" MIN.)

4.0 ALL EXTERIOR EQUIPMENT CONNECTION CONDUCTORS SHALL BE PROTECTED WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT WITH WEATHERPROOF FITTINGS.

5.0 OUTLET BOXES SHALL BE PRESSED OR WELDED STEEL IN DRY LOCATIONS AND CAST ALLOY WITH THREADED HUBS IN DAMP OR WET LOCATIONS.

6.0 ALL BOXES SHALL BE RECESSED FLUSH IN WALLS AND/OR CONCEALED ABOVE CEILINGS.

7.0 THE ELECTRICAL SYSTEM SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED AS REQUIRED BY THE NEC AND AS DETAILED ON THE PLANS. GROUND FAULT PROTECTED OUTLETS AND CIRCUITS SHALL BE INSTALLED AS REQUIRED BY NEC. ALL CIRCUITS TO HAVE SEPARATE GROUND CONDUCTOR.

8.0 ALL MATERIAL AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR NOT LESS THAN ONE YEAR FROM THE DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE MADE WITHOUT ADDITIONAL CHARGE.

9.0 DISCONNECT SWITCHES SHALL BE RATED HEAVY DUTY.

10.0 CONCEAL CONDUIT WHERE POSSIBLE.

11.0 USE MC CABLE WHERE CONCEALED INSIDE WALLS BETWEEN RECEPTACLES AND ABOVE CEILINGS FOR FIXTURES.
ALL OTHER USES PER NEC, SECTION 330-10.

12.0 HOMERUNS IN CONDUIT SHALL HAVE MAXIMUM SIX (6) CURRENT CARRIERS PER RACEWAY.

13.0 MAINTAIN WORKING CLEARANCES AROUND EQUIPMENT AS REQUIRED BY NEC.

14.0 ALL DISCONNECT SWITCHES, PANELBOARDS AND SYSTEM PANELS SHALL HAVE PLASTIC LAMINATE NAMEPLATES FOR IDENTIFYING SYSTEM FUNCTION AND CHARACTERISTICS.

LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	LAMPS QTY	LAMPS WATTS	LAMPS TYPE/COLOR/LUMENS	FIXTURE WATTS	MFG/PN (BASIS OF DESIGN)	REMARKS
A	8' SURFACE MOUNTED/SUSPENDED, VAPOR-TIGHT LED	1	88	LED/5000K/13000	88	LITHONIA FEM-L96-12000LM-LPAC1-WD-120-50K	PROVIDE W/ EMERGENCY BALLAST WHERE SHOWN.
B	WALL PACK, LED	1	48	LED/5000K/5984	48	LITHONIA WDGE2-LED-P5-50K	-

NOTE: SCHEDULE SHOWN IS A BASIS OF DESIGN. CONTRACTOR TO PROVIDE FULL LIGHTING PACKAGE TO OWNER. MAINTAIN WATTAGE AND LUMENS FOR SUBSTITUTIONS.

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Florida Building Code
City of Titusville, FL
08/30/2022 1:02:58 PM

REVISIONS

REV	DESCRIPTION	DATE

STATE OF FLORIDA — No. 56888 — REGISTERED PROFESSIONAL ENGINEER
David Merrill
c=US, o=Florida, dnQualifier=A01410D0001FF875ACCD00000718, cn=David Merrill
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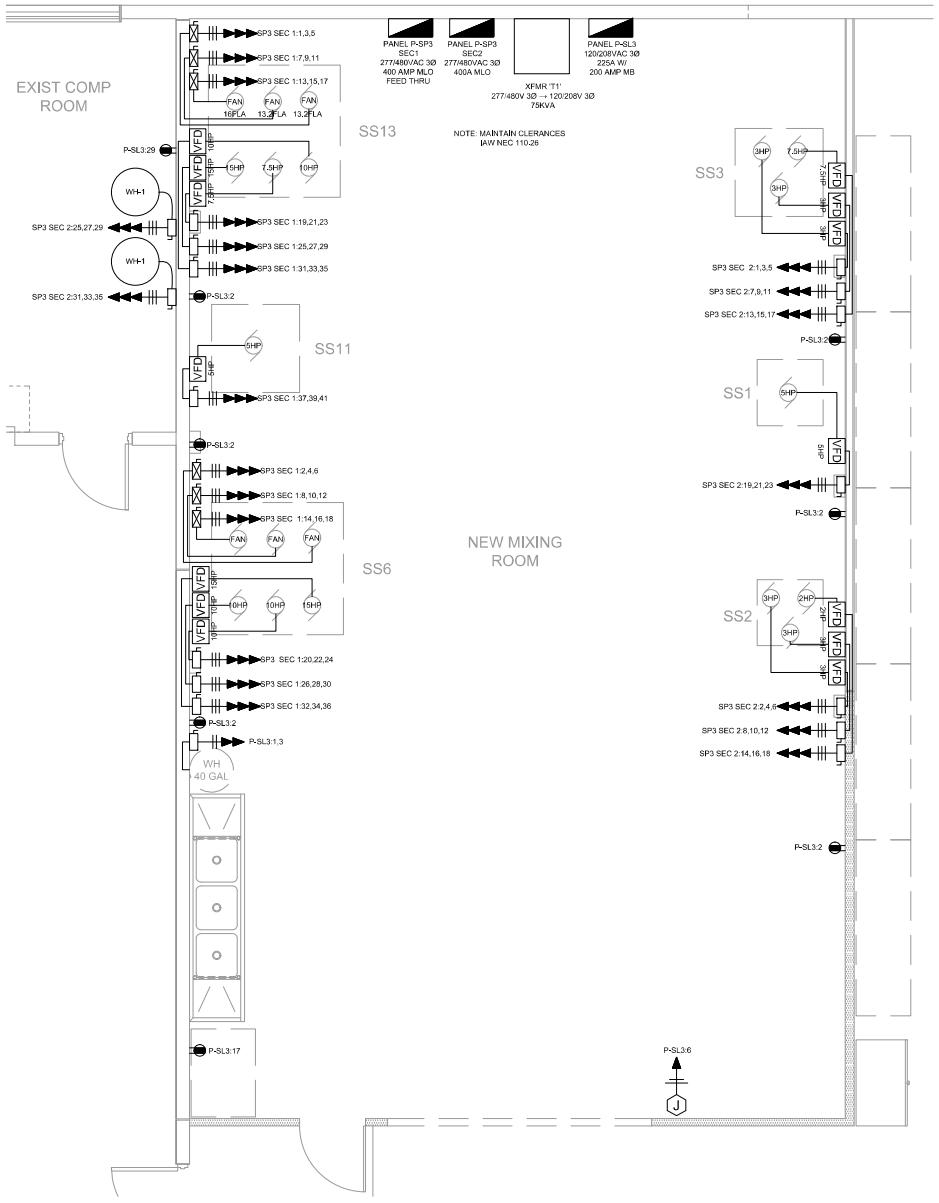
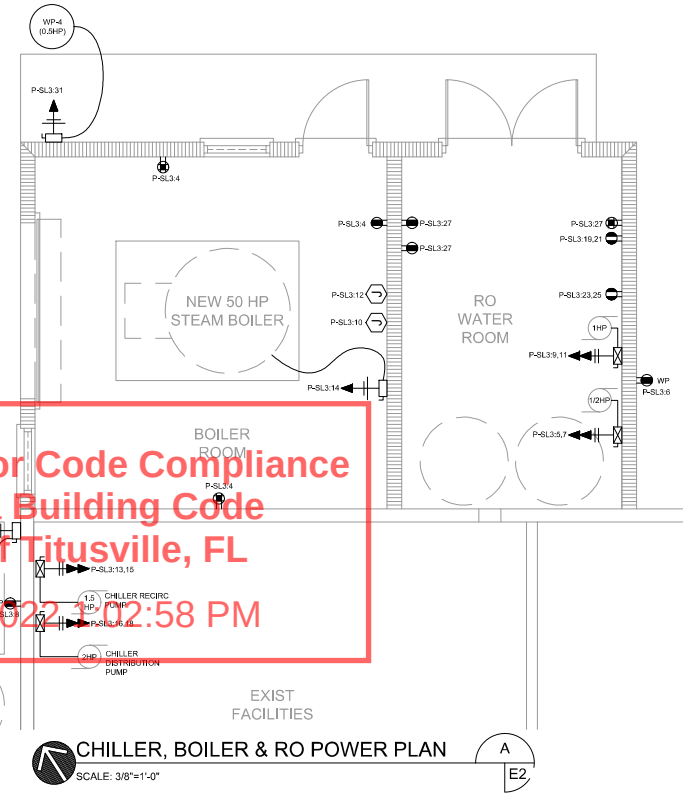
1600 ARMSTRONG DRIVE
TITUSVILLE,
FLORIDA, 32780

SHEET TITLE:
ELECTRICAL NOTES, LEGENDS, ABBREVIATIONS & SCHEDULES

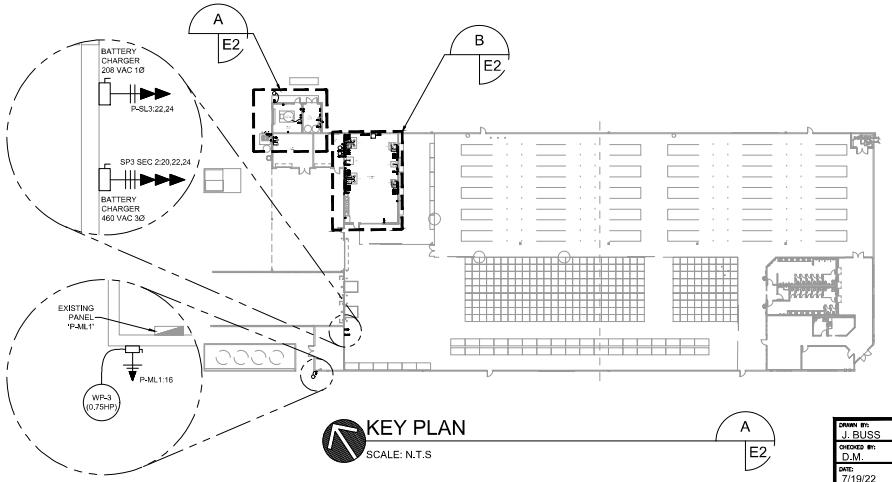
DRAWN BY:	D. HOCHEIMY
CHECKED BY:	D.M.
DATE:	7/19/22
SCALE:	AS SHOWN
SHEET	E1



MIXING ROOM POWER PLAN
SCALE: 3/8"=1'-0"
B
E2



CHILLER, BOILER & RO POWER PLAN
SCALE: 3/8"=1'-0"
A
E2



KEY PLAN
SCALE: N.T.S
A
E2

REVISIONS

REV	DESCRIPTION	DATE
1		

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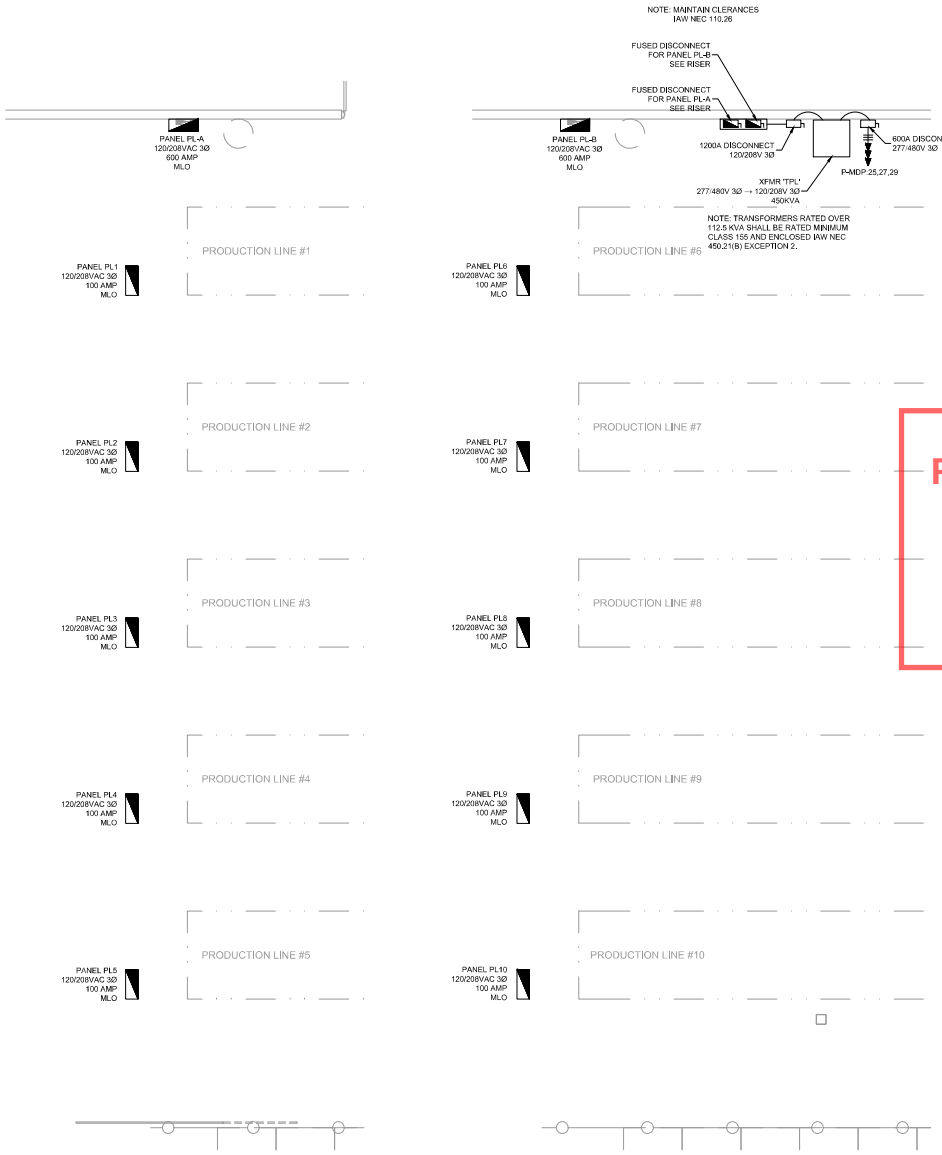
INTERIOR RENOVATIONS & ADDITIONS FOR:
PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE, FLORIDA, 32780

SHEET TITLE:
PRODUCTION BUILDING POWER PLAN

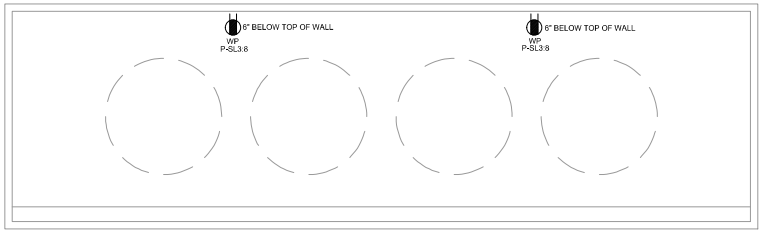
DRAWN BY:	J. BUSS
CHECKED BY:	D.M.
DATE:	7/19/22
SCALE:	AS SHOWN

SHEET: E2

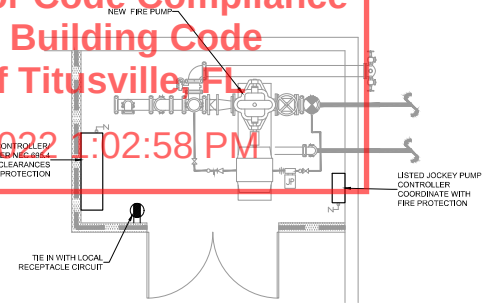


PROD. LINES 1 THRU 5 POWER — A — E3
SCALE: 1/4"=1'-0"

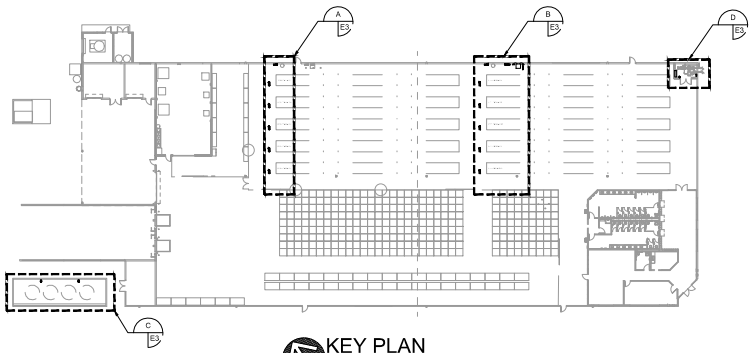
PROD. LINES 6 THRU 10 POWER — B — E3
SCALE: 1/4"=1'-0"



RETAINING AREA POWER — C — E3
SCALE: 1/4"=1'-0"



FIRE PUMP ROOM POWER — D — E3
SCALE: 3/8"=1'-0"



KEY PLAN
SCALE: N.T.S

REVISIONS

REV	DESCRIPTION	DATE

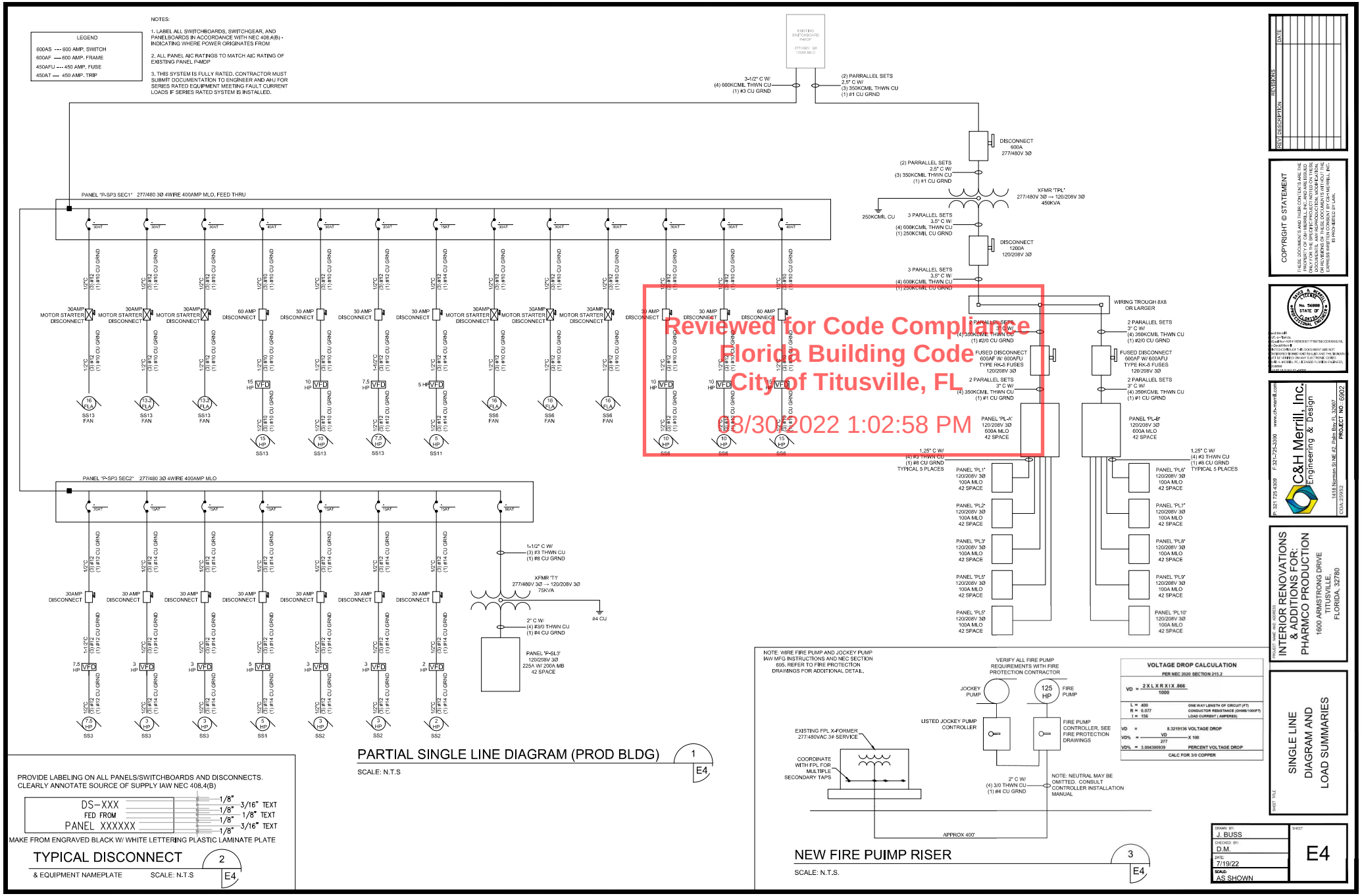
No. 56888 STATE OF
David Merrill
C&H Merrill, Inc.
P: 321-725-4269 F: 321-725-5099 www.c-hmerrill.com
1418 Norman St NE #2 Palm Bay FL 32907
COA: 29952
PROJECT NO: 0902

PROJECT NAME AND ADDRESS:
INTERIOR RENOVATIONS & ADDITIONS FOR:
PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE,
FLORIDA, 32780

SHEET TITLE:
PRODUCTION BUILDING POWER PLAN CONTINUED

DRAWN BY:	J. BUSS
CHECKED BY:	D.M.
DATE:	7/19/22
SCALE:	AS SHOWN

SHEET: E3



PARTIAL SINGLE LINE DIAGRAM (PROD BLDG) 1 E4

SCALE: N.T.S

PROVIDE LABELING ON ALL PANELS/SWITCHBOARDS AND DISCONNECTS. CLEARLY ANNOTATE SOURCE OF SUPPLY IAW NEC 408.4(B)

DS-XXX
FED FROM
PANEL XXXXXX

1/8" — 3/16" TEXT
1/8" — 1/8" TEXT
1/8" — 3/16" TEXT
1/8"

MAKE FROM ENGRAVED BLACK W/ WHITE LETTERING PLASTIC LAMINATE PLATE

TYPICAL DISCONNECT & EQUIPMENT NAMEPLATE 2 E4

SCALE: N.T.S

NEW FIRE PUIMP RISER 3 E4

SCALE: N.T.S.

REVISIONS

REV	DESCRIPTION	DATE

C&H Merrill, Inc.
Engineering & Design
1418 Norman St NE #2, Palm Bay FL 32907
P: 321-725-4269 F: 321-725-4269 www.ch-merrill.com
CA# 29952
PROJECT NO: 0902

PROJECT NAME AND ADDRESS
INTERIOR RENOVATIONS & ADDITIONS FOR:
PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE,
FLORIDA, 32780

SHEET TITLE
SINGLE LINE DIAGRAM AND LOAD SUMMARIES

DRAWN BY:	J. BUSS
CHECKED BY:	D.M.
DATE:	7/19/22
SCALE:	AS SHOWN
SHEET	E4

EXISTING SWITCH BOARD "P-MDP"

277/480 VOLTS, 3Ø, 4WIRE, SN, 65K AIC, 1200 AMP MLO

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1						8400								2
3	XFMR TPL	3	600	6	350	27433	27433		250	3	250	3	CHILLER	4
5								27433						6
7						34361								8
9	PANEL P-SP3	3	400	4	600		30956					3	SPARE	10
11								30956						12
13	SPARE	1												14
15	TAU RL	3	40								60	3	SPD	16
17														18
19														20
21	TP5	3	60								100	3	LP1	22
23														24
25														26
27	PANEL P-MP1	4	400								125	3	SP1	28
29														30
31														32
33											150	3	COMPRESSOR 1	34
35														36
37	TP2	4	400											38
39											150	3	SPARE	40
41														42
	LOAD ADDED					205794	205398	208932					YA	
						743	743	726					AMPS	

PANEL "P-SL3"

120/208 VOLTS, 3Ø, 4WIRE, WYE, SN, 225A W/ 200A MB

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1	WH-1	2	30	2	10	2260			12	2	20	1	RECEPTACLE	2
3							1680							
5								2350	12	2	20	1	RECEPTACLE	4
7	RO PUMP 1HP	2	20	2	12	1088								6
9							540		12	2	20	1	RECEPTACLE	8
11	RO PUMP 1/2 HP	2	15	2	12			1680	12	2	20	1	SPARE	10
13						1089								12
15	CHILLER RECIRC PUMP	2	20	2	12		1190		12	2	20	1	BOILER CONTROL	14
17	RECEPTACLE	1	20	2	12			1320	12	2	20	1	BOILER BLOWER	16
19						4160								18
21	RECEPTACLE	2	50	2	8		4160		12	2	20	1	BOILER IGNITION	20
23								4160						22
25	RECEPTACLE	2	50	2	8	4160			6	2	40	2	BATTERY CHARGER	24
27	RECEPTACLE	1	20	2	12		993							26
29	CP-1	1	20	2	12			180						28
31	WP-4	1	20	2	12	1176								30
33														32
35														34
37														36
39														38
41														40
														42
	CONNECTED LOAD					18842	18270	11638	WATTS					
						140	127	97	AMPS					
	DEMAND LOAD					18842	18270	11638	WATTS					
						140	127	97	AMPS					

ELECTRICAL LOAD SUMMARY - LOAD ADDED

RECEPTACLES	180 VA	X	20	EA	= 3600 VA
WATER HEATER	13500 VA	X	2	EA	= 27000 VA
PRODUCTION LINES	25200 VA	X	10	EA	= 252000 VA
MIXERS (LOT)	194622 VA	X	1	EA	= 194622 VA
BATTERY CHARGERS (LOT)	18623 VA	X	1	EA	= 18623 VA
CHILLER PUMP (LOT)	5808 VA	X	1	EA	= 5808 VA
RO PUMP (LOT)	3408 VA	X	1	EA	= 3408 VA
BOILER CIRCUITS (LOT)	1780 VA	X	1	EA	= 1780 VA
50A RECEPTACLES	8320 VA	X	2	EA	= 16640 VA
CHILLER	82300 VA	X	1	EA	= 82300 VA
WASTE PUMPS (LOT)	2832 VA	X	1	EA	= 2832 VA
	TOTAL LOAD ADDED				= 608613 VA
	608613 VA / 480 X 1.73 VOLTS				= 732 AMPS

LOAD SUMMARY

SCALE: N.T.S.

2 / E5

PANEL "PL-A"

120/208 VOLTS 3Ø, 4WIRE, WYE, SN, 600 AMP MLO

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1						8400								2
3	PL-1	3	100	4	3	8400	8400		3	4	100	3	PL-2	4
5								8400						6
7						8400								8
9	PL-3	3	100	4	3		8400		3	4	100	3	PL-4	10
11								8400						12
13						8400								14
15	PL-5	3	100	4	3		8400							16
17								8400						18
19														20
21														22
23														24
25														26
27														28
29														30
31														32
33														34
35														36
37														38
39														40
41														42
	CONNECTED LOAD					42000	42000	42000	WATTS					
						350	350	350	AMPS					
	DEMAND LOAD					42000	42000	42000	WATTS					
						350	350	350	AMPS					

PANEL "P-SP3 SEC1"

277/480 VOLTS, 3Ø, 4WIRE, SN, 400 AMP FEED THRU

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1						4432								2
3	SS13 FAN 16 FLA	3	30	3	12		4432		12	3	30	3	SS6 Fan	4
5								4432						6
7						3686								8
9	SS13 FAN	3	30	3	12		3686		12	3	30	3	SS6 Fan	10
11								3686						12
13						3686								14
15	SS13 FAN	3	30	3	12		3686		12	3	30	3	SS6 Fan	16
17								3686						18
19						3017								20
21	SS13 VFD 15 HP	3	40	3	10		3017		12	3	30	3	SS6 VFD 10 HP	22
23								3017						24
25						3078								26
27	SS13 VFD 10 HP	3	30	3	12		3078		12	3	30	3	SS6 VFD 10 HP	28
29								3078						30
31						3047								32
33	SS13 VFD 7.5 HP	3	20	3	12		3047		10	3	40	3	SS6 VFD 15 HP	34
35								3047						36
37						3105								38
39	SS11 VFD	3	15	3	12		3105							40
41								3105						42
	CONNECTED LOAD					53460	53460	53469	WATTS					
						193	193	193	AMPS					
	DEMAND LOAD					53460	53460	53469	WATTS					
						193	193	193	AMPS					

PANEL "PL-B"

120/208 VOLTS 3Ø, 4WIRE, WYE, SN, 600 AMP MLO

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1						8400								2
3	PL-6	3	100	4	3	8400	8400		3	4	100	3	PL-7	4
5								8400						6
7						8400								8
9	PL-8	3	100	4	3		8400		3	4	100	3	PL-9	10
11								8400						12
13						8400								14
15	PL-10	3	100	4	3		8400							16
17								8400						18
19														20
21														22
23														24
25														26
27														28
29														30
31														32
33														34
35														36
37														38
39														40
41														42
	CONNECTED LOAD					42000	42000	42000	WATTS					
						350	350	350	AMPS					
	DEMAND LOAD					42000	42000	42000	WATTS					
						350	350	350	AMPS					

PANEL "P-SP3 SEC2"

277/480 VOLTS, 3Ø, 4WIRE, SN, 400 AMP MLO

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1						3047								2
3	SS3 VFD 7.5 HP	3	20	3	12		3047		12	3	15	3	SS2 VFD 3HP	4
5								3047						6
7						1330								8
9	SS3 VFD 3 HP	3	15	3	12		1330		12	3	15	3	SS2 VFD 3 HP	10
11								1330						12
13						1330								14
15	SS3 VFD 3 HP	3	15	3	12		1330		12	3	15	3	SS2 VFD 2 HP	16
17								1330						18
19						3105								20
21	SS1 VFD 5HP	3	15	3	12		3105		12	3	20	3	BATTERY CHARGER	22
23								3105						24
25						4800								26
27	WH-1	3	20	3	12		4800							28
29								4800						30
31						4800								32
33	WH-1	3	20	3	12		4800							34
35								4800						36
37						16542								38
39							15273		3	3	90	3	PANEL 'P-SL3' VIA XFMR 'T1'	40
41								11636						42
	CONNECTED LOAD					41245	39673	36039	WATTS					
						149	143	130	AMPS					
	DEMAND LOAD					41245	39673	36039	WATTS					
						149	143	130	AMPS					

EXISTING PANEL "P-ML1"

120/208 VOLTS, 3Ø, 4WIRE, WYE, SN, 10K AIC, 225A W/ 100 AMP MB

CKT.	SERVING	BREAKER POLE	BREAKER TRIP	WIRE NO.	WIRE SIZE	ØA	ØB	ØC	WIRE SIZE	WIRE NO.	BREAKER TRIP	BREAKER POLE	SERVING	CKT.
1	RECEPTACLES								12	2	20	1	RECEPTACLES	2
3	RECEPTACLES	1	20	2	12				12	2	20	1	RECEPTACLES	4
5	RECEPTACLES	1	20	2	12				12	2	20	1	RECEPTACLES	6
7	RECEPTACLES	1	20	2	12				12	2	20	1	RECEPTACLES	8
9	RECEPTACLES	1	20	2	12				12	2	20	1	RECEPTACLES	10
11	CU-1, AS-1	2	25	2	10				12	2	20	1	LOADING DOOR MOTOR	12
13									12	2	20	1	CNP-1	14
15	CU-2, AS-2	2	25	2	10		1656		10	2	30	1	WP-3	16
17														18
19	HIGH SPEED LOADING DOOR #3	2	15	2	12									20
21														22
23	DOCK DOOR MOTOR	1	20	2	12									24
25	DOCK LEVELER	1	20	2	12									26
27	DOCK DOOR MOTOR	1	20	2	12									28
29	DOCK LEVELER	1	20	2	12									30
31														32
33														34
35														36
37														38
39														40
41														42
	EXISTING LOAD					6400	7500	8303	WATTS					
						70	59	69	AMPS					
	EXISTING LOAD + ADDED LOAD					6400	8656	8303	WATTS					
						70	72	69	AMPS					

NOTE: CIRCUITS SHOWN IN GRAY ARE EXISTING TO REMAIN

PANEL SCHEDULES

SCALE: N.T.S

1 / E5

C&H Merrill, Inc.
Engineering & Design
1418 Norman St NE #2, Palm Bay FL 32907
P 321-725-3369 F 321-725-4369 www.chmerrill.com
COA-29952
PROJECT NO: 0902

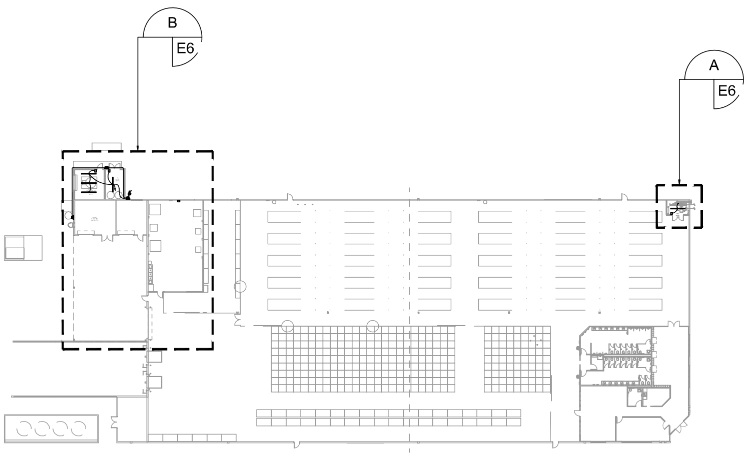
PROJECT NAME AND ADDRESS
INTERIOR RENOVATIONS & ADDITIONS FOR:
PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE, FLORIDA, 32780

SHEET TITLE
PANEL SCHEDULES, & LOAD SUMMARY

DRAWN BY: D. HOCHEIMY
CHECKED BY: D.M.
DATE: 7/19/22
SCALE: AS SHOWN
SHEET: E5

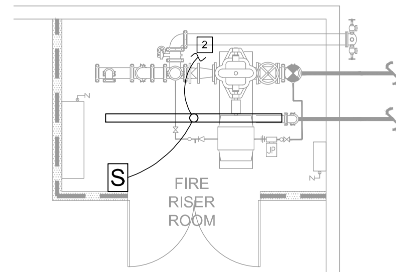
FLAG NOTES

1. PROVIDE PHOTO-SENSOR AND TIMECLOCK IAW FBC-EC C405.2.5.
2. TIE INTO EXISTING LOCAL LIGHTING CIRCUIT



KEY PLAN

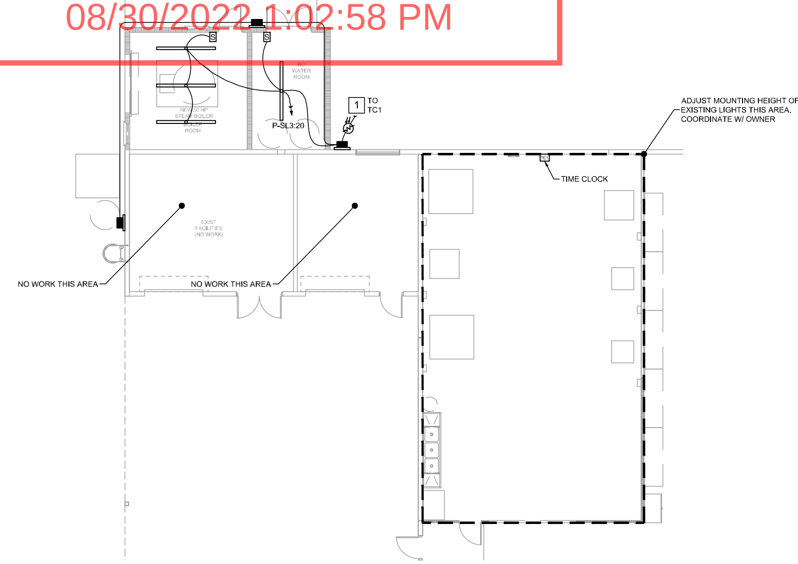
SCALE: N.T.S



LIGHTING PLAN

SCALE: 3/8"=1'-0"

A E6



LIGHTING PLAN

SCALE: 1/8"=1'-0"

B E6

REV	DESCRIPTION	DATE

REVISIONS

DAVID A. MERRILL LICENSE No. 56888 STATE OF FLORIDA PROFESSIONAL ENGINEER

David Merrill c=US, o=Florida, dnQualifier=A01410D000 0017F88758CCD0003321 8, cn=David Merrill PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES DAVID A. MERRILL PE LICENSED FLORIDA ENGINEER, NO:56888 2022.07.19 12:03:08 -04'00'

P: 321 725 4309 F:321-725-3390 www.ch-merrill.com
C&H Merrill, Inc.
Engineering & Design
1418 Norman St NE #2, Palm Bay FL 32907
COA:25952

PROJECT NO.: 6902

PROJECT NAME AND ADDRESS

INTERIOR RENOVATIONS & ADDITIONS FOR: PHARMCO PRODUCTION
1600 ARMSTRONG DRIVE
TITUSVILLE,
FLORIDA, 32780

SHEET TITLE

PRODUCTION BLDG
LIGHTING PLAN

DRAWN BY: D. HOCHEIMY	SHEET	E6
CHECKED BY: D.M.		
DATE: 7/19/22		
SCALE: AS SHOWN		

(ENGINEER'S)

SUBMITTAL DATA

MODEL WLF-DA15: 6" DEEP FIXED HURRICANE LOUVER

MIAMI-DADE, FLORIDA, NOA NO. 17-0919.08
EXPIRATION DATE: JUNE 30, 2020
APPROVAL DATE: DECEMER 28, 2017

MAXIMUM DESIGN PRESSURE RATING

SINGLE UNIT: +/- 140.0 PSF
MULTIPLE UNIT: +/- 140.0 PSF

PRODUCT APPROVAL IS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AS OF 6/10/2010. DESIGN WIND LOADS SHALL BE AS PER SECTIONS 1619 AND 1620 OF 2007 BUILDING CODE AND ALSO SHALL BE IN ACCORDANCE WITH ASCE-7.

APPLICATIONS

THE MODEL WLF-DA15 IS A STATIONARY LOUVER DESIGNED TO PROTECT EITHER EXHAUST OR INTAKE OPENINGS IN A BUILDINGS EXTERIOR WALLS. THIS LOUVER HAS BEEN REVIEWED BY THE MIAMI-DADE COUNTY FLORIDA PRODUCT CONTROL DIVISION AND ACCEPTED BY THE BOARD OF RULES AND APPEALS (BORA) TO BE USED IN HIGH VELOCITY HURRICANE ZONES (HVHZ) AS WELL AS OTHER REGIONS AS LONG AS THEY DO NOT EXCEED THE +/- 140 PSF RATING. THE LOUVER HAS ALSO BEEN TESTED TO PROVIDE LARGE MISSLE IMPACT RESISTANCE AND IS CONSTRUCTED OF ALUMINUM TO RESIST RUST OXIDATION.

FEATURES

HEAVY EXTRUDED ALUMINUM PROVIDES SUPERIOR PROTECTION FROM LARGE, WIND-BOURNE MISSILE IMPACT.

ONE VERTICLE CENTER REINFORCEMENT ADDED AFTER 30"W TO PROVIDE ADDITIONAL SUPPORT.

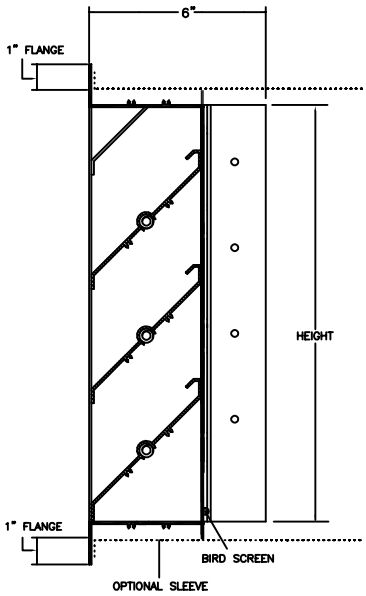
LOUVER DESIGNED FOR LOCATIONS THAT DRAIN WATER WHICH HAS PENETRATED THE ROOM. THE ROOM SHOULD HOUSE WATER RESISTANT OR WATER PROOF EQUIPMENT, COMPONENTS AND/OR SUPPLIES.

FLANGED FACE ALLOWS FOR INSTALLATION IN ANY WALL THICKNESS, AND ANY MATERIAL SUBSTRATE.

2" EXTENDED JAM WITH PREDRILLED HOLES TO ALLOW MULTIPLE ANCHORAGE LOCATIONS.

MAXIMUM SINGLE UNIT DIMENSIONS ARE 60"W x 96"H. FOR LARGER OPENINGS, LOUVERS CAN BE COMBINED USING OUR APPROVED ALUMINUM MULLIONS.

PERFORMANCE RATINGS BASED ON TESTING IN ACCORDANCE WITH FLORIDA BUILDING CODES TAS 201, 202, AND 203

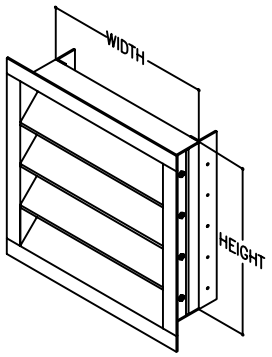


JOB NAME:
LOCATION:
ARCHITECT:
ENGINEER:
CONTRACTOR:

CONTACT GRILLE TECH INC. FOR ADDITIONAL INFORMATION OR WITH SPECIAL REQUIREMENTS.

5101 NW 36TH AVE
MIAMI, FL 33142
PHONE: 305-537-0053
FAX: 305-537-0064

WEB: WWW.GRILLETECHINC.COM
EMAIL: SALES@GRILLETECHINC.COM



STANDARD CONSTRUCTION

FRAME:
6063T5 EXTRUDED ALUMINUM
NOMINAL WALL THICKNESS OF 0.081"
UNIVERSAL 1.5" FLANGE WITH A 4" DEEP FRAME
CAULKING SURFACE PROVIDED

BLADES:
6063T5 EXTRUDED ALUMINUM
NOMINAL WALL THICKNESS OF 0.081"
BLADES ARE POSITIONED AT 45 DEGREE ANGLE
SPACED AT APPROXIMATELY 4" CENTERS

BIRD SCREEN:
3/4" x 0.051" EXPANDED ALUMINUM BIRD SCREEN
REMOVABLE FRAME
REAR (INSIDE) MOUNTING POSITION

FINISH:
MILL ALUMINUM (STANDARD)
SKY WHITE POWDER COAT (100% POLYESTER)
AVAILABLE FOR ADDITIONAL FEE

MINIMUM SIZE:**
10"W x 10"H

MAXIMUM SIZE:**
- 60"W x 96"H SINGLE SECTION
- 60"W x 192"H TWO SINGLE SECTIOIN STACKED WITH A HORIZONTAL MULLION
- LARGER SIZES CAN BE MADE USING UP TO THREE 60"W x 96"H SECTIONS WITH VERTICLE MULLIONS

APPROXIMATE SHIPPING WEIGHT:
10 LBS/SQ.FT. (49 KG/SQ.M.)

OPTIONS (AT ADDITIONAL COST**:**
INSECT SCREEN
SKY WHITE POWDER COAT BY AXALTA (100% POLYESTER)
11" DEEP x 0.125 ALUMINUM SLEEVE

INSTALLATION:
MUST COMPLY WITH INSTRUCTIONS TO MEET MIAMI-DADE PRODUCT STANDARDS.

**NOTE: ACTUAL WIDTH AND HEIGHT DIMENSIONS ARE APPROX. 1/4" LESS THAN LISTED TO ALLOW FOR CLEARANCE

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Grille Tech, Inc.
5101 NW 36 Avenue
Miami, FL 33142

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model WLF-DA15 Aluminum Louver

APPROVAL DOCUMENT: Drawing No. **0551-0402-10**, titled "WLF-DA15 Aluminum Wall Louver", sheets 1 through 6 of 6, dated 04/30/2009, with revision 2 dated 09/08/2017, prepared by Wolters Engineering, Inc, signed and sealed by Scott Wolters, P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA #15-0218.08** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

MIAMI-DADE COUNTY APPROVED

12/19/2017

NOA No. 17-0919.08
Expiration Date: June 30, 2020
Approval Date: December 28, 2017

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. Evidence submitted under previous NOA's

A. DRAWINGS ***"Submitted under NOA #15-0218.08"***

1. Drawing No. **0551-0402-10**, titled "WLF-DA15 Aluminum Wall Louver", sheets 1 through 6 of 6, dated 04/30/2009, with revision 1 dated 02/10/2015, prepared Wolters Engineering, Inc, signed and sealed by Scott Wolters, P.E.

B. TESTS ***"Submitted under NOA # 10-0518.05"***

1. Test reports on 1) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
   2) Large Missile Impact Test per FBC, TAS 201-94
   3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
   along with marked-up drawings and installation diagram of WLF-DA15 Aluminum Louver Systems", prepared by Hurricane Test Laboratory, Inc., Report No. **0551-0204-10**, dated 04/30/2010, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS ***"Submitted under NOA #10-0518.05"***

1. Anchor verification calculations and structural analysis prepared by Wolters Engineering, Inc, dated 05/12/2010, signed and sealed by Scott Wolters, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS ***"Submitted under NOA #15-0218.08"***

1. Statement letter of code conformance with 2010 and 5th edition (2014) FBC issued by Wolters Engineering, Inc, dated 05/20/2015, signed and sealed by Scott Wolters, P.E.

"Submitted under NOA # 10-0518.05"

2. No financial interest letter issued by Wolters Engineering, Inc, dated 10/13/2009, signed and sealed by Scott Wolters, P.E.
3. Code compliance letter issued by Hurricane Test Laboratory, Inc., dated 04/29/2010, signed and sealed by Vinu J. Abraham, P.E.

12/19/2017

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 17-0919.08
Expiration Date: June 30, 2020
Approval Date: December 28, 2017

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. New evidence submitted

A. DRAWINGS

1. Drawing No. **0551-0402-10**, titled "WLF-DA15 Aluminum Wall Louver", sheets 1 through 6 of 6, dated 04/30/09, with revision 2 dated 09/08/2017, prepared Wolters Engineering, Inc, signed and sealed by Scott Wolters, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance with the 6th Edition (2017) FBC issued by Wolters Engineering, Inc, dated 09/08/2017, signed and sealed by Scott Wolters, P.E.

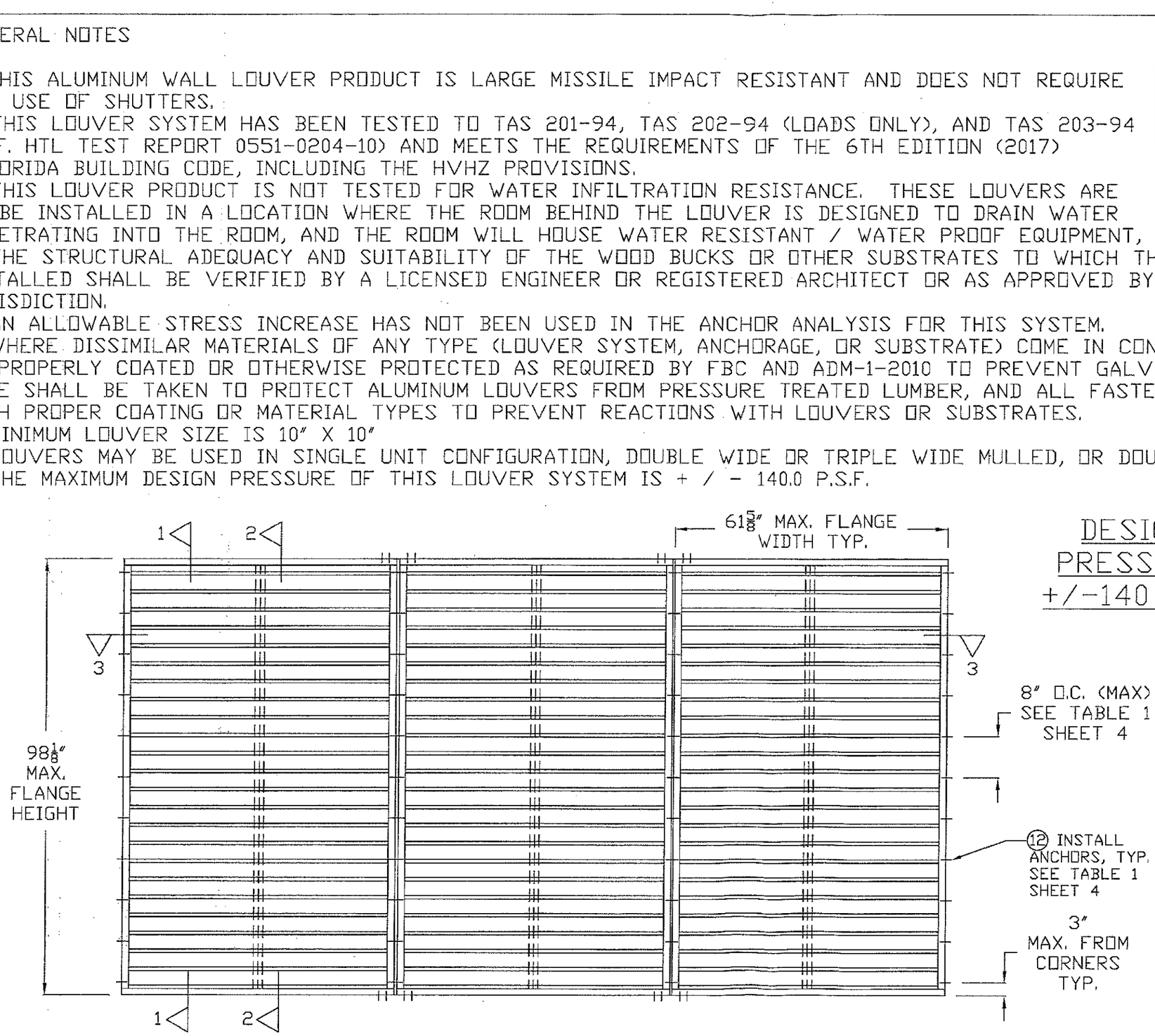
12/19/2017

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 17-0919.08
Expiration Date: June 30, 2020
Approval Date: December 28, 2017

GENERAL NOTES

1. THIS ALUMINUM WALL LOUVER PRODUCT IS LARGE MISSILE IMPACT RESISTANT AND DOES NOT REQUIRE THE USE OF SHUTTERS.
2. THIS LOUVER SYSTEM HAS BEEN TESTED TO TAS 201-94, TAS 202-94 (LOADS ONLY), AND TAS 203-94 (REF. HTL TEST REPORT 0551-0204-10) AND MEETS THE REQUIREMENTS OF THE 6TH EDITION (2017) FLORIDA BUILDING CODE, INCLUDING THE HVHZ PROVISIONS.
3. THIS LOUVER PRODUCT IS NOT TESTED FOR WATER INFILTRATION RESISTANCE. THESE LOUVERS ARE TO BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM WILL HOUSE WATER RESISTANT / WATER PROOF EQUIPMENT, COMPONENTS, OR SUPPLIES.
4. THE STRUCTURAL ADEQUACY AND SUITABILITY OF THE WOOD BUCKS OR OTHER SUBSTRATES TO WHICH THE LOUVER SYSTEM IS TO BE INSTALLED SHALL BE VERIFIED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
5. AN ALLOWABLE STRESS INCREASE HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM.
6. WHERE DISSIMILAR MATERIALS OF ANY TYPE (LOUVER SYSTEM, ANCHORAGE, OR SUBSTRATE) COME IN CONTACT, THE MATERIALS MUST BE PROPERLY COATED OR OTHERWISE PROTECTED AS REQUIRED BY FBC AND ADM-1-2010 TO PREVENT GALVANIC REACTIONS. SPECIAL CARE SHALL BE TAKEN TO PROTECT ALUMINUM LOUVERS FROM PRESSURE TREATED LUMBER, AND ALL FASTENERS SHALL BE SELECTED WITH PROPER COATING OR MATERIAL TYPES TO PREVENT REACTIONS WITH LOUVERS OR SUBSTRATES.
7. MINIMUM LOUVER SIZE IS 10" X 10"
8. LOUVERS MAY BE USED IN SINGLE UNIT CONFIGURATION, DOUBLE WIDE OR TRIPLE WIDE MULLED, OR DOUBLE HIGH MULLED CONFIG.
9. THE MAXIMUM DESIGN PRESSURE OF THIS LOUVER SYSTEM IS + / - 140.0 P.S.F.

INDEX	
SHEET	DESCRIPTION
1	NOTES, 3-WIDE ELEV.
2	SECTIONS, DETAILS
3	SECTIONS, DETAILS
4	DETAILS, ANCHOR TABLE
5	TWO-HIGH DETAILS, BOM
6	EXTRUSION PROFILES



HORIZONTAL MULLED CONDITION (SEE NOTE 8)

DESIGN PRESSURE +/-140 PSF

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 17-0919.08
Expiration Date 06/30/2020
By
Miami-Dade Product Control

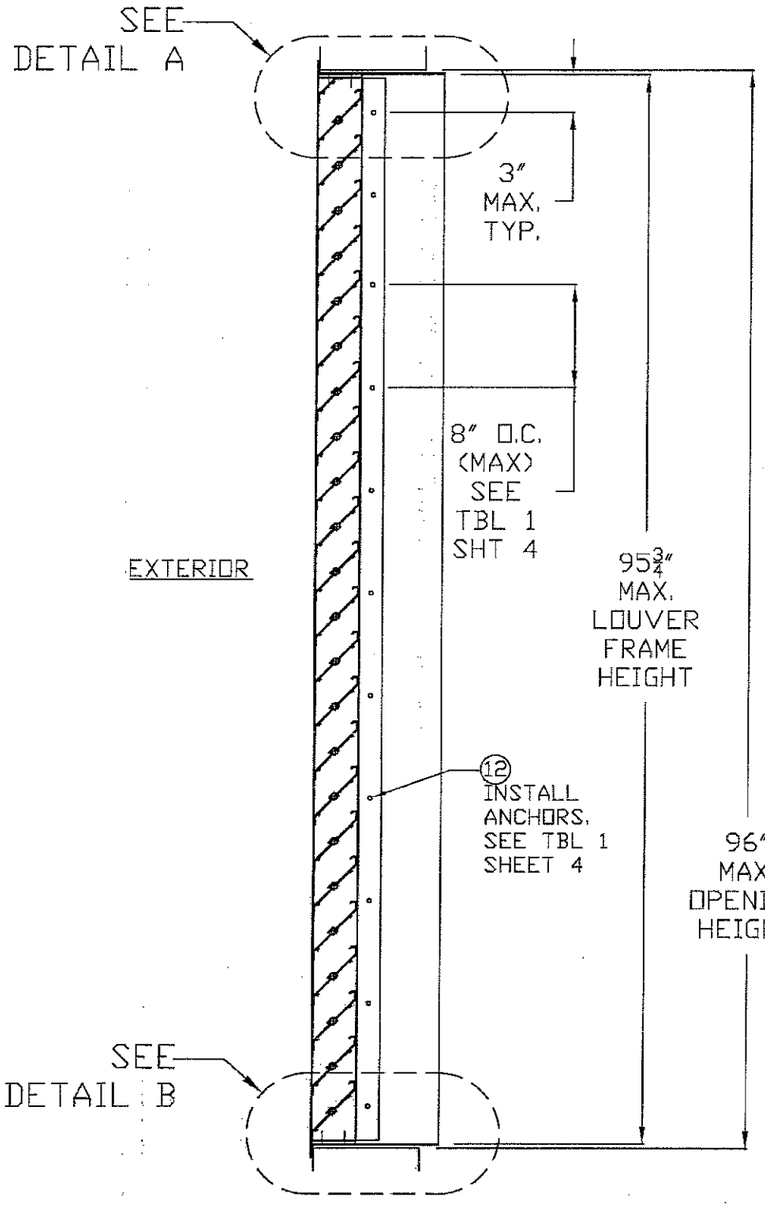
SCOTT WOLTERS
LICENSE
SCOTT WOLTERS
FLPE# 62354
WOLTERS ENGINEERING, INC.
(COA# 27134)
15811 97TH ROAD N
WEST PALM BEACH, FL 33412
PROFESSIONAL ENGINEER
STATE OF FLORIDA
SEP 06 2017

REV.	DATE	DESCRIPTION	BY
0	4/30/2009	ORIGINAL RELEASE	LAT
1	2/10/2015	CODE UPDATE - BLADE REVISION	SW
2	9/8/2017	CODE UPDATE	SW

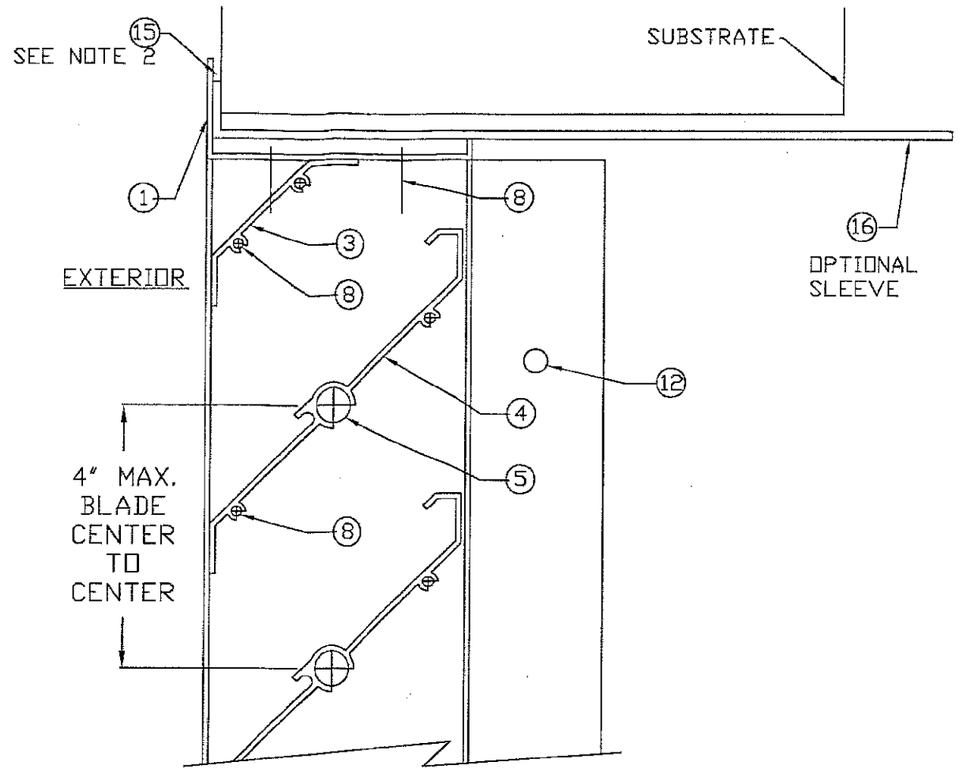
WLF-DA15 Aluminum Wall Louver
Large Missile Impact Resistant

Grille Tech, Inc.
5101 NW 36th AVE
MIAMI, FL 33142
PHONE: 305.537.0053
FAX: 305.537.0064

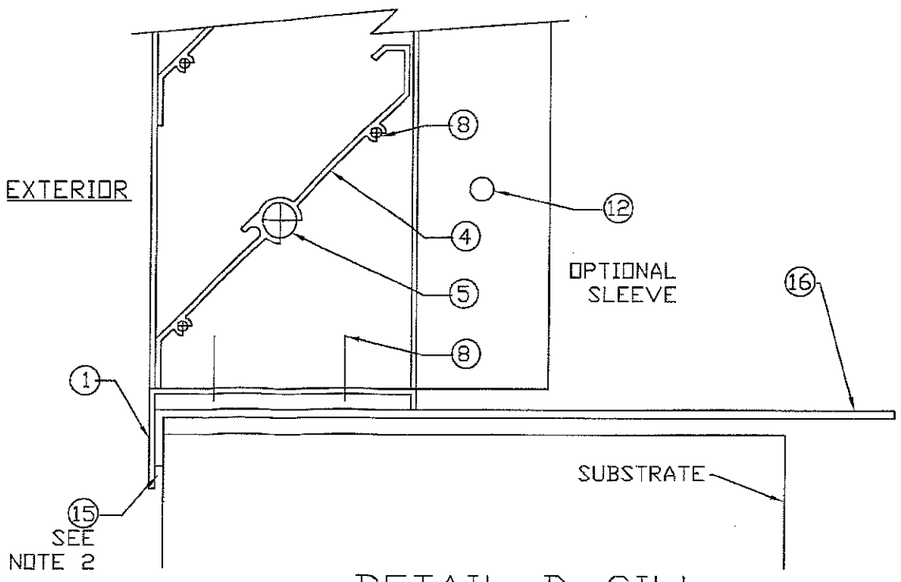
DRAWING # 0551-0402-10
SCALE: NTS
SHEET 1 of 6



SECTION 1-1



DETAIL A. HEAD



DETAIL B. SILL

NOTES
1. NO INSTALL. ANCHORS THROUGH LOUVER FRAME HEAD OR SILL.
2. FULL COVERAGE DOW 795 SILICONE BETWEEN SLEEVE FRONT FLANGE TO SUBSTRATE, AND LOUVER FRONT FLANGE TO SUBSTRATE AND/OR SLEEVE FLANGE

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 17-0919.08
Expiration Date 06/30/2020
By
Miami-Dade Product Control

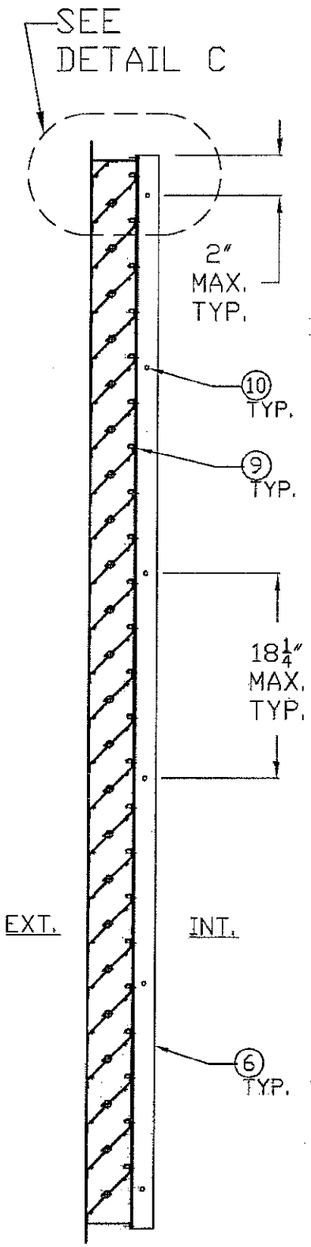
SCOTT WOLTERS
LICENSE
STATE OF FLORIDA
SCOTT WOLTERS
FLPE# 62354
WOLTERS ENGINEERING, INC.
(COA# 27194)
15211 97TH ROAD N.
WEST PALM BEACH, FL 33412
PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	BY
0	4/30/2009	ORIGINAL RELEASE	LAT
1	2/10/2015	CODE UPDATE - BLADE REVISION	SW
2	9/8/2017	CODE UPDATE	SW

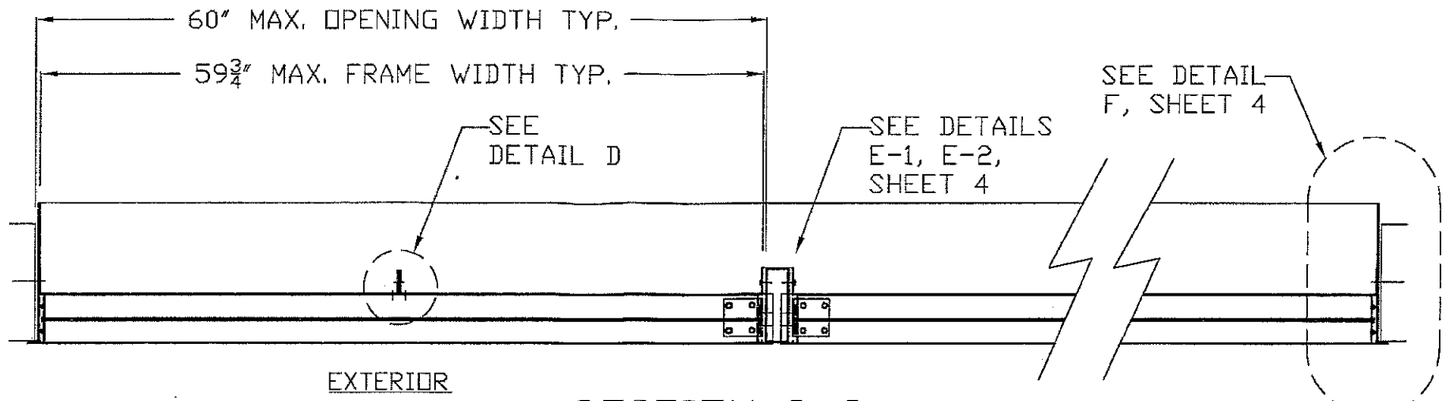
WLF-DA15 Aluminum Wall Louver
Large Missile Impact Resistant

Grille Tech, Inc.
5101 NW 36th AVE
MIAMI, FL 33142
PHONE: 305.537.0053
FAX: 305.537.0064

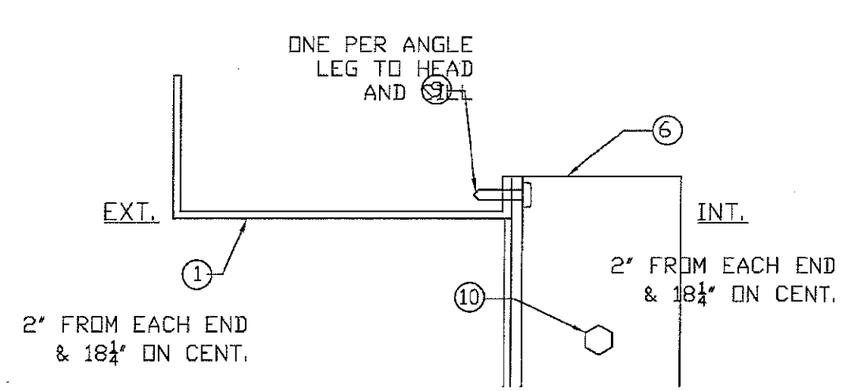
DRAWING # 0551-0402-10
SCALE: NTS
SHEET 2 of 6



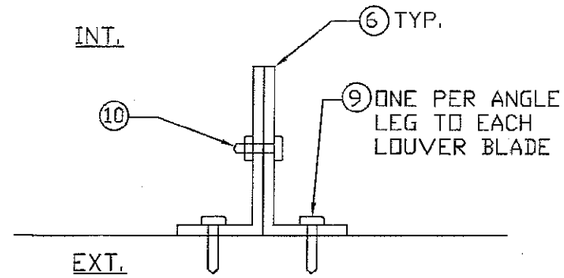
SECTION 2-2
VERTICAL REINF.



SECTION 3-3



DETAIL C.
VERT. REINF. TO HEAD/SILL



DETAIL D.
VERT. REINF. TO BLADE
(NOT REQ'D FOR LOUVER
WIDTHS LESS THAN OR
EQUAL TO 30" FRAME WIDTH
OR 31⅞" FLANGE WIDTH)

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 17-0919.08
Expiration Date 06/30/2020
By
Miami-Dade Product Control

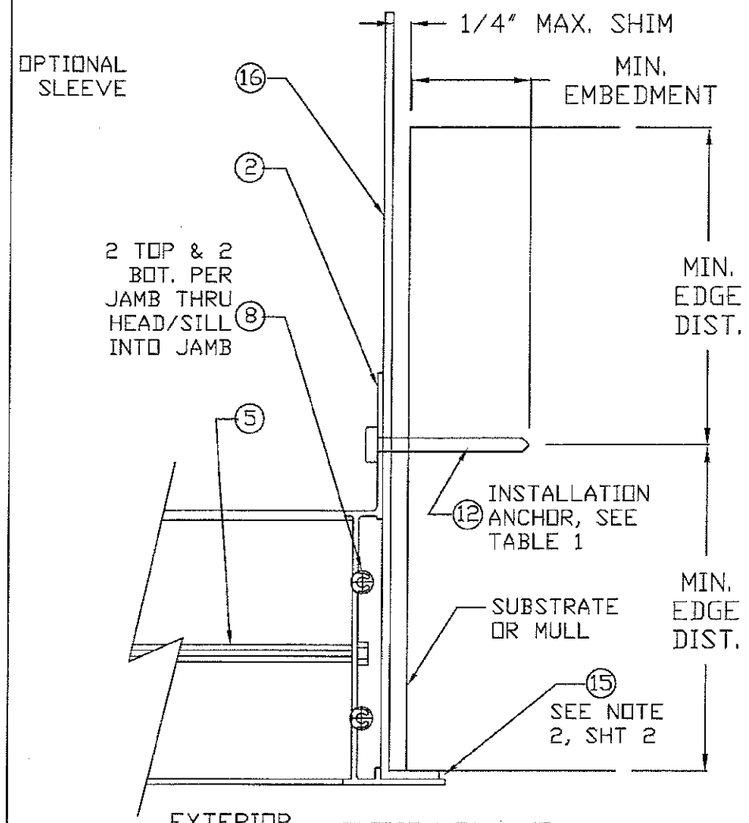
SCOTT WOLTERS
LICENSE
SCOTT WOLTERS
FLPE#62354
WOLTERS ENGINEERING, INC.
(COA# 27104)
15211 97TH ROAD N.
WEST PALM BEACH, FL 33412
STATE OF FLORIDA
PROFESSIONAL ENGINEER
SEP 07, 2017

REV.	DATE	DESCRIPTION	BY
0	4/30/2009	ORIGINAL RELEASE	LAT
1	2/10/2015	CODE UPDATE - BLADE REVISION	SW
2	9/8/2017	CODE UPDATE	SW

WLF-DA15 Aluminum Wall Louver
Large Missile Impact Resistant

Grille Tech, Inc.
5101 NW 36th AVE
MIAMI, FL 33142
PHONE: 305.537.0053
FAX: 305.537.0064

DRAWING # 0551-0402-10
SCALE: NTS
SHEET 3 of 6



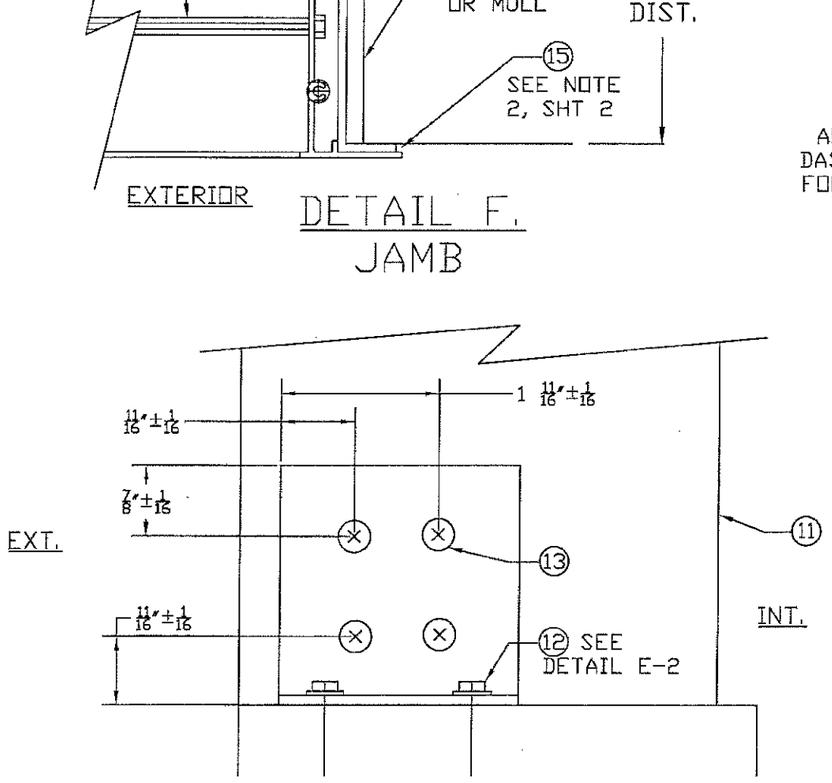
DETAIL F.
JAMB

TABLE 1. QUALIFIED INSTALLATION ANCHOR INFORMATION

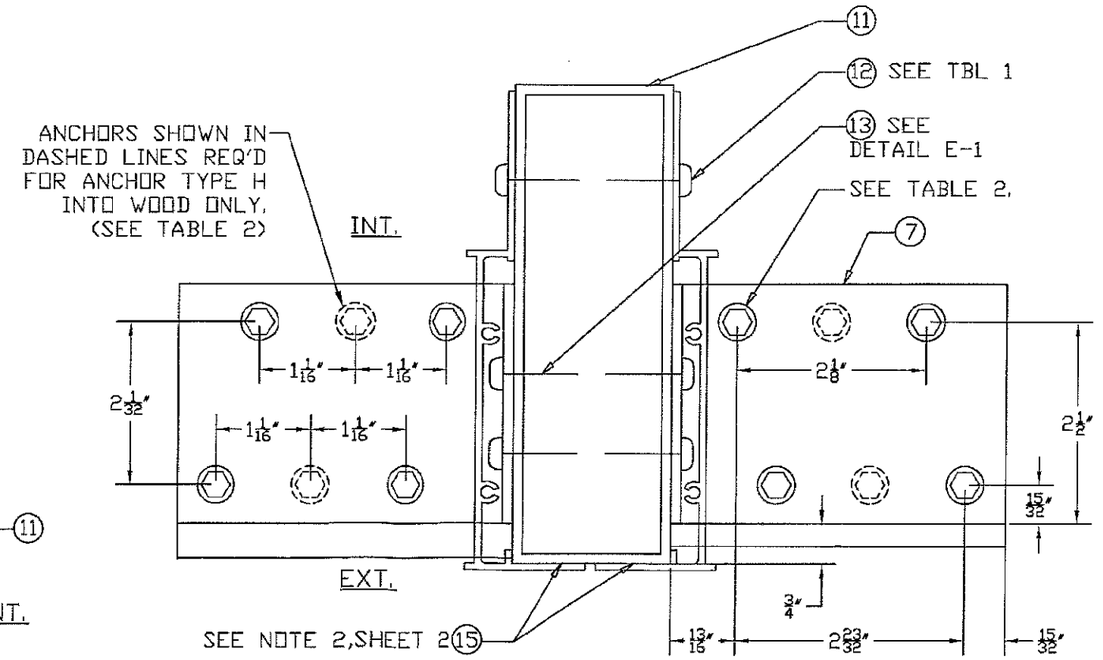
ID	ANCHOR	SUBSTRATE	MIN. EMBED.	MIN. EDGE DISTANCE
A	1/4" ITW TAPCON	CONCRETE (3.2 KSI MIN)	1"	2 1/2"
B	1/4" ITW TAPCON	GROUT FILLED CMU	1 1/4"	2 1/2"
C	1/4" ITW TAPCON	WOOD (G=0.42 MIN)	1 3/8"	1"
D	#12 WOOD SCREW GRADE 5	WOOD (G=0.42 MIN)	1 3/8"	1"
E	#12 TEK SMS GRADE 5	1/8" ALUM. 6063-T5 MIN.	-	1/2"
F	#12 TEK SMS GRADE 5	1/8" STEEL 36 KSI MIN.	-	1/2"

TABLE 2. QUALIFIED MULLION CLIP ANCHOR INFORMATION

ID	ANCHOR	SUBSTRATE	MIN. EMBED.	MIN. EDGE DISTANCE	QTY PER CLIP
96" MAX. LENGTH VERTICAL MULLION, 61 5/8" MAX. LOUVER FLANGE WIDTHS					
G	5/16" ITW TAPCON	CONCRETE (2.9 KSI MIN)	2 1/4"	2 1/2"	4
H	#14 WOOD SCREW GRADE 5	WOOD (G=0.42 MIN)	2 1/2"	2 1/2"	6
I	#12 TEK SMS GRADE 5	1/8" STEEL 36 KSI MIN.	-	1"	4
60" MAX. LENGTH HORIZONTAL MULLION, 98 1/8" MAX. LOUVER FLANGE HEIGHTS					
A	1/4" ITW TAPCON	CONCRETE (3.2 KSI MIN)	1"	2 1/2"	4
D	#12 WOOD SCREW GRADE 5	WOOD (G=0.42 MIN)	1 3/8"	1"	4
F	#12 TEK SMS GRADE 5	1/8" STEEL 36 KSI MIN.	-	1/2"	4



DETAIL E-1.
MULL CLIP TO MULL



DETAIL E-2.
MULL CLIP TO SUBSTRATE AND JAMB TO MULL

PRODUCT REVISED
as complying with the Florida Building Code
NOA–No. 17-0919.08
Expiration Date 06/30/2020
By
Miami–Dade Product Control

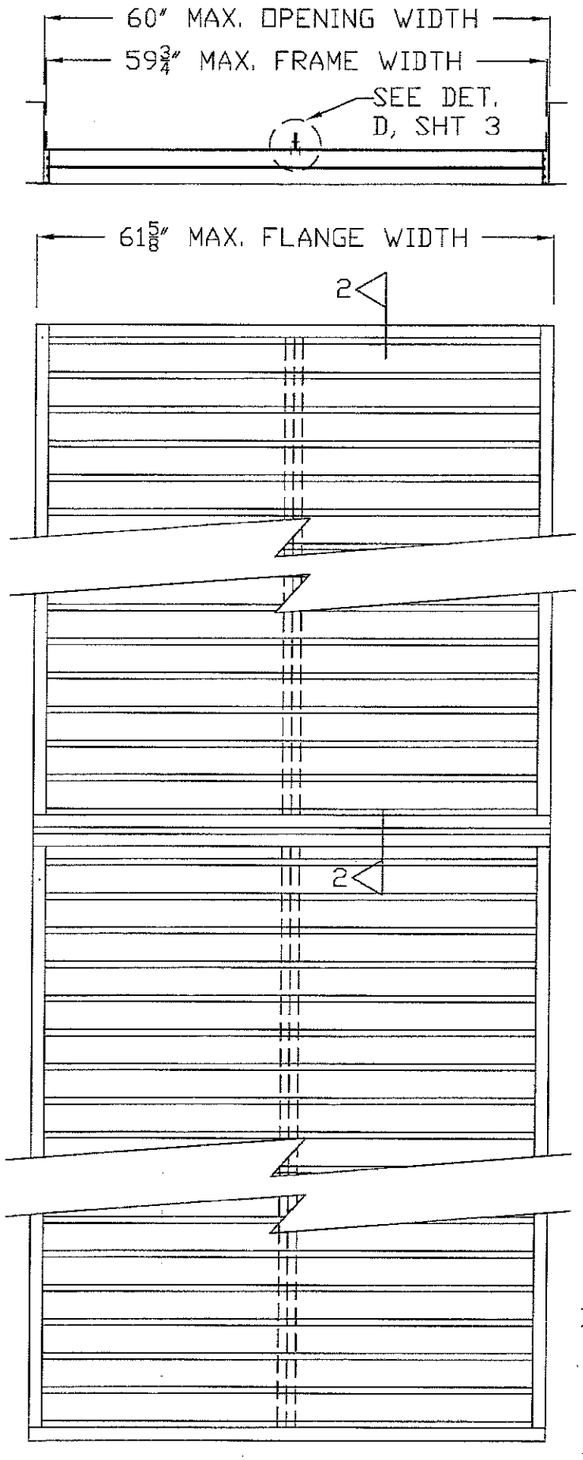
SCOTT WOLTERS LICENSE
SCOTT WOLTERS
FLPE# 62354
WOLTERS ENGINEERING, INC.
(COA# 27184)
15211 97TH ROAD N.
WEST PALM BEACH, FL 33412
SEP 07, 2017
STATE OF FLORIDA PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	BY
0	4/30/2009	ORIGINAL RELEASE	LAT
1	2/10/2015	CODE UPDATE - BLADE REVISION	SW
2	9/8/2017	CODE UPDATE	SW

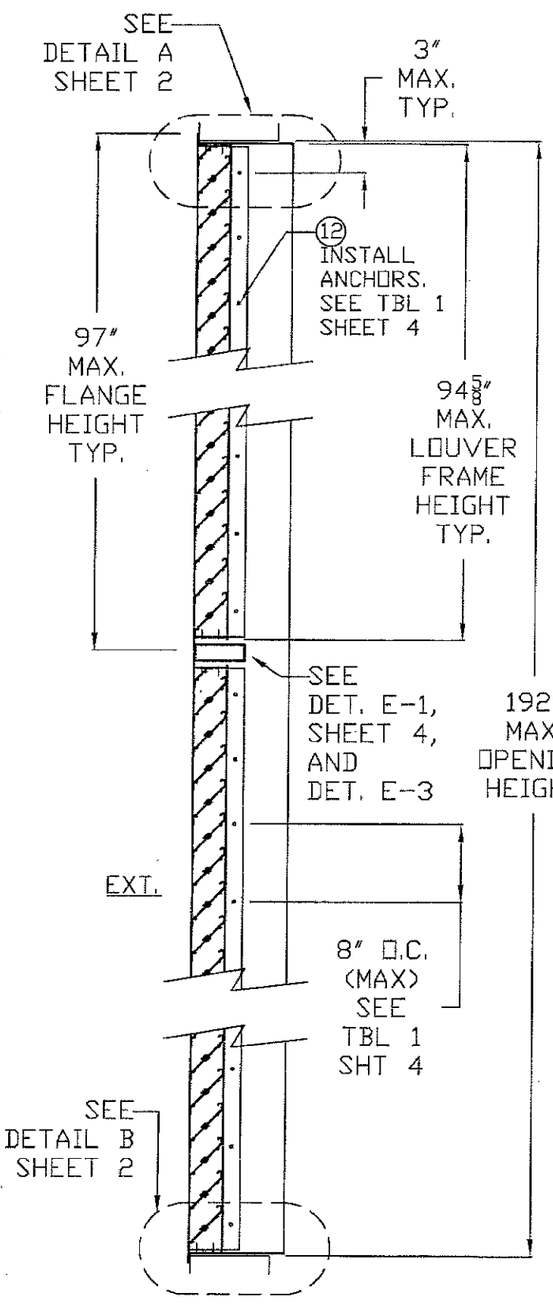
WLF-DA15 Aluminum Wall Louver
Large Missile Impact Resistant

Grille Tech, Inc.
5101 NW 36th AVE
MIAMI, FL 33142
PHONE: 305.537.0053
FAX: 305.537.0064

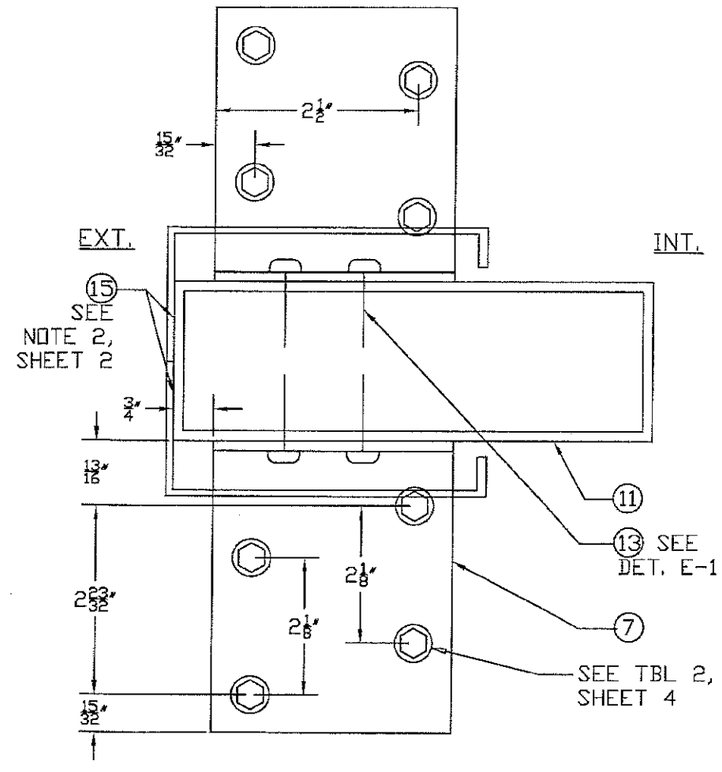
DRAWING # 0551-0402-10
SCALE: NTS
SHEET 4 of 6



TWO-HIGH MULLED CONDITION



BILL OF MATERIALS			
ITEM #	PART	DESCRIPTION	MATERIAL
1	4907A	FRAME HEAD AND SILL	6063-T5
2	5629	FRAME JAMB	6063-T5
3	4904	TOP BLADE	6063-T5
4	4903	BLADE	6063-T5
5		1/2"-14 ALL THREADED ZINC COATED ROD WITH WASHER AND NUT BOTH ENDS	AISI 1038
6	8149	1"X2"X1/8" (VERTICAL REINFORCING)	6063-T5
7	10029	3"X3"X1/8" ANGLE, 3" LONG	6061-T6
8		#10 P.P.H. X 1" SHEET METAL SCEW	
9		#8 H.W.H X 3/4" SHEET METAL SCREW	
10		1/4"-20 X 3/4" ZINC COATED BOLT WITH NUT	
11	10-0086	2"X6"X1/8" ALUMINUM MULL	6061-T6
12		INSTALLATION ANCHOR, SEE TABLE 1, SHEET 4	
13		#12 P.P.H. X 1" TEK SHEET METAL SCEW	
14		#12 P.P.H. X 2" TEK SHEET METAL SCEW	
15		DOW 795 SILICONE BUILDING SEALANT	
16		SLEEVE: 0.85"X11.15"X1/8" FORMED FROM ALUM. SHEET	3003-H14



DETAIL E-3.
MULL CLIP TO SUBSTRATE (NO HEAD/SILL ATTACHMENT)

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 17-0919.08
Expiration Date 06/30/2020
By
Miami-Dade Product Control

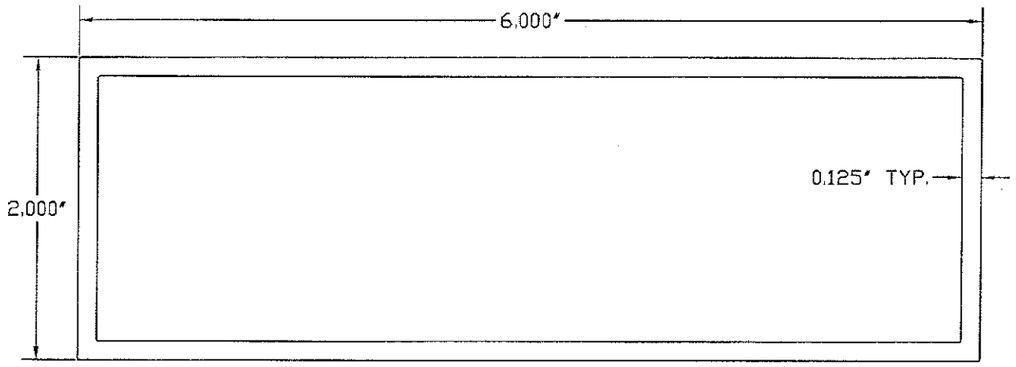
SCOTT WOLTERS LICENSE STATE OF FLORIDA SCOTT WOLTERS FLPE# 62354 WOLTERS ENGINEERING, INC. (COA# 27194) 15211 97TH ROAD N. WEST PALM BEACH, FL 33412 PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	BY
0	4/30/2009	ORIGINAL RELEASE	LAT
1	2/10/2015	CODE UPDATE - BLADE REVISION	SW
2	9/8/2017	CODE UPDATE	SW

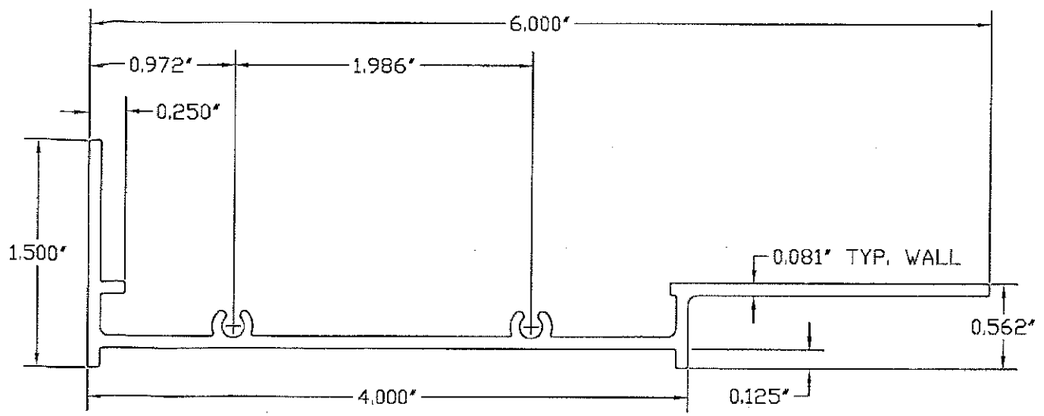
WLF-DA15 Aluminum Wall Louver
Large Missile Impact Resistant

Grille Tech, Inc.
5101 NW 36th AVE
MIAMI, FL 33142
PHONE: 305.537.0053
FAX: 305.537.0064

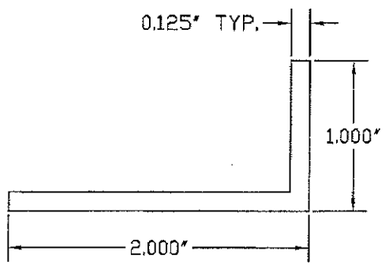
DRAWING # 0551-0402-10
SCALE: NTS
SHEET 5 of 6



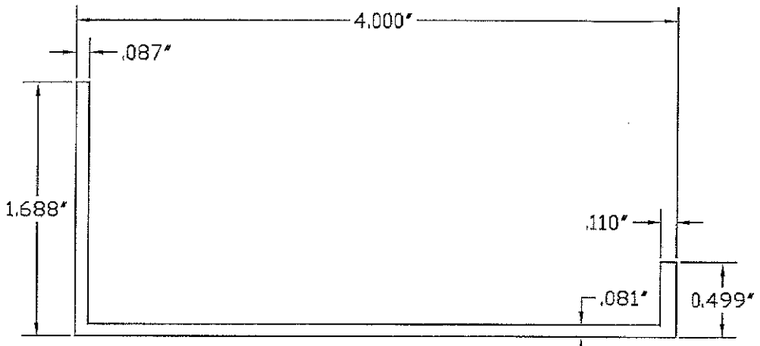
⑪ 2X6 MULL 6061-T6 ALUM.



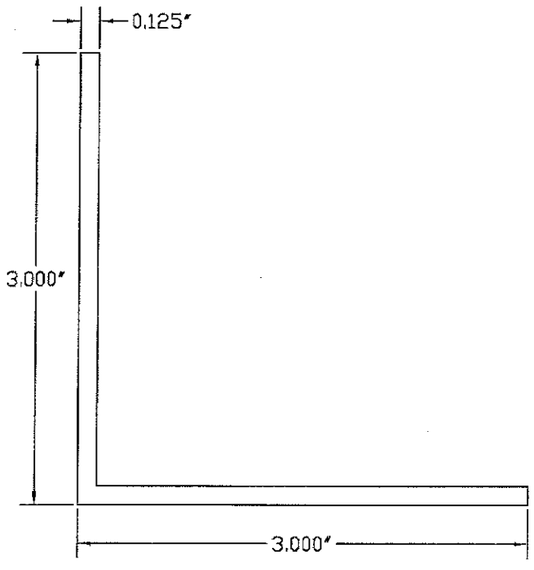
② FRAME JAMB 6063-T5 ALUM.



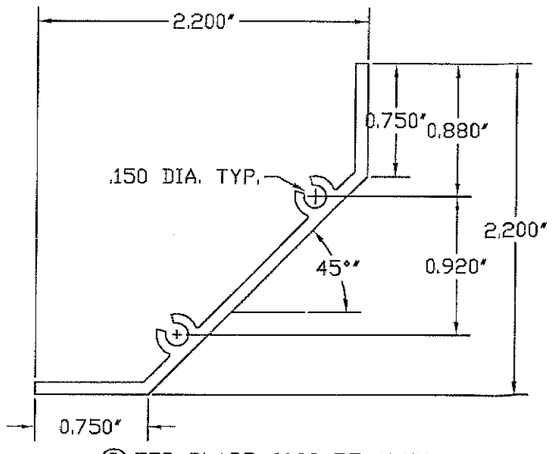
⑥ VERT. REINF. 6063-T5 ALUM.



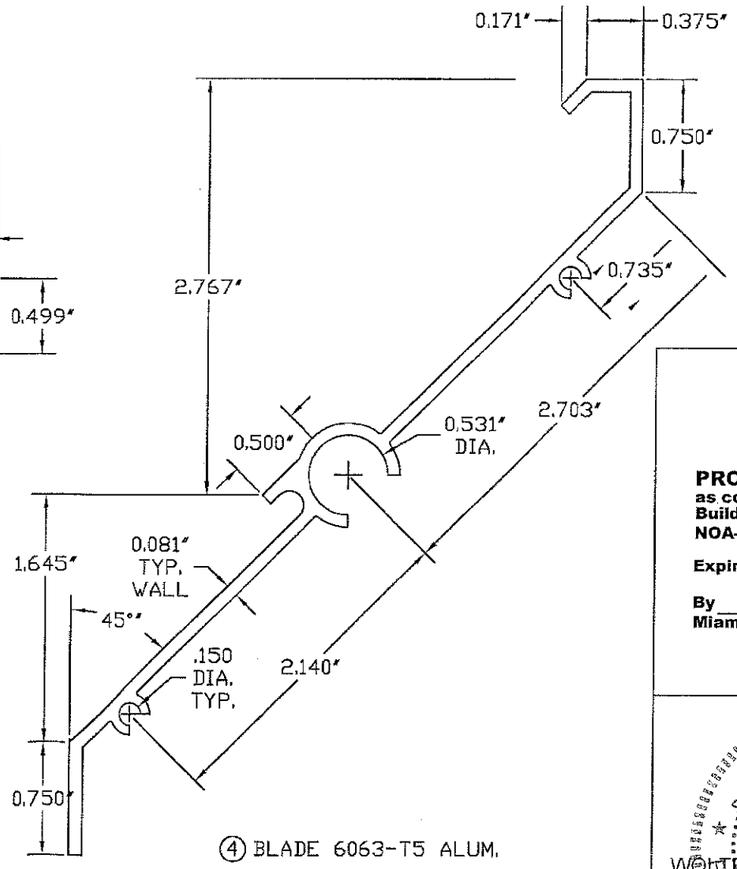
① HEAD AND SILL 6063-T5 ALUM.



⑦ 3X3 ANGLE 6061-T6 ALUM.



③ TOP BLADE 6063-T5 ALUM.



④ BLADE 6063-T5 ALUM.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 17-0919.08
Expiration Date 06/30/2020
By
Miami-Dade Product Control

SCOTT WOLTERS
LICENSE
SCOTT WOLTERS
FLPE#.62354
WOLTERS ENGINEERING, INC.
(COA# 27194)
1521 97TH ROAD N
WEST PALM BEACH, FL 33412
STATE OF FLORIDA
PROFESSIONAL ENGINEER

REV.	DATE	DESCRIPTION	BY
0	4/30/2009	ORIGINAL RELEASE	LAT
1	2/10/2015	CODE UPDATE - BLADE REVISION	SW
2	9/8/2017	CODE UPDATE	SW

WLF-DA15 Aluminum Wall Louver
Large Missile Impact Resistant

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DRAWING # 0551-0402-10
SCALE: FULL
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