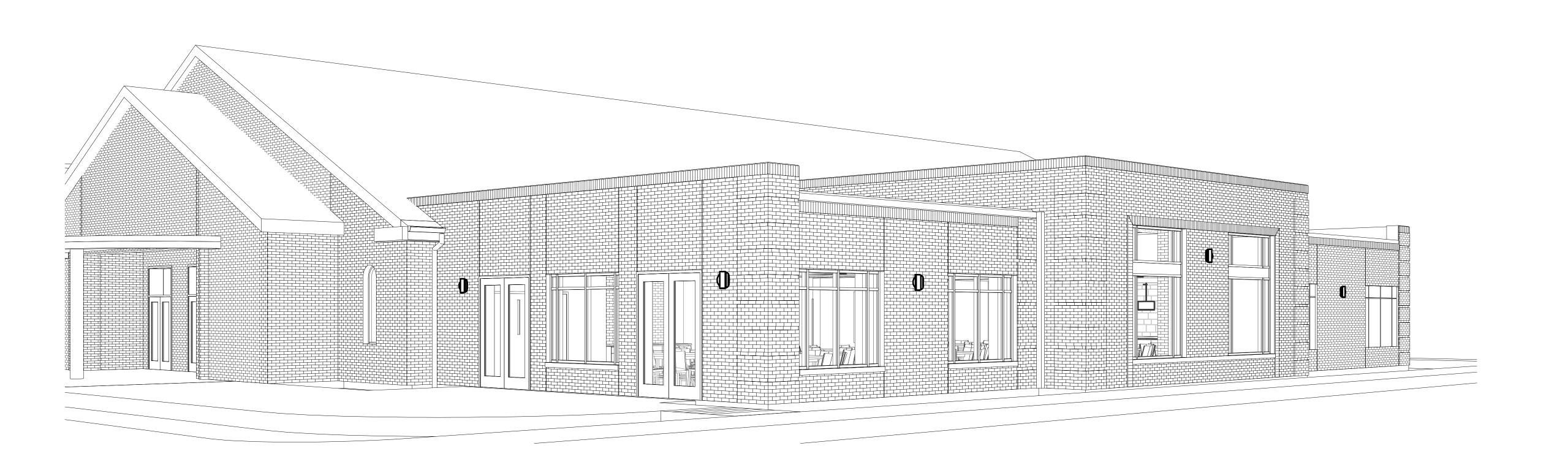
St. Pius X Catholic Church Addition

FOR PERMIT

14710 Annapolis Road Bowie, MD 20715



MICHAEL GRAVES

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OWNER / CLIENT

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MEP Engineer
SRBR Engineers

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Baltimore, MD 21228
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Structural Engineer
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Civil/Site Atwell

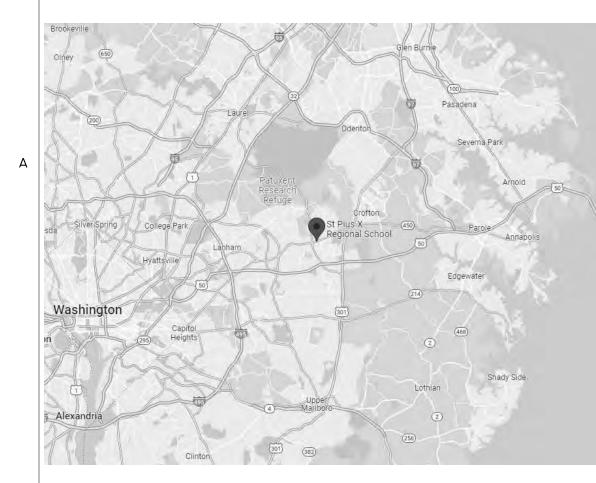
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REVISIONS
DATE NO. ISSUED FOR

VICINITY MAP



LOCATION MAP



SHEET INDEX

DRAWING LIST

NUMBER	SHEET NAME
A-603	Unnamed
Z-101	Template
G-001	COVER SHEET
A-001	CODE ANALYSIS, GENERAL NOTES AND LEGENDS
A-002	LIFE SAFETY PLAN
AD101	DEMOLITION VIEWS
A-101	FLOOR PLANS
A-121	FINISH AND FURNITURE PLANS
A-201	BUILDING ELEVATIONS
A-301	BUILDING SECTIONS
A-401	ENLARGED PLANS
A-411	INTERIOR ELEVATIONS
A-501	DETAILS - PLAN
A-511	DETAILS - SECTION
A-512	DETAILS - SECTION

S-101 FOUNDATION & ROOF FRAMING PLANS

A-601 WALL, FLOOR, CEILING TYPES AND SCHEDULE

S-200 SECTIONS
S-201 GENERAL NOTES
S-202 GENERAL NOTES

A-521 CASEWORK DETAILS

A-602 DOOR INFORMATION

S-202 GENERAL NOTES

M-001 COVER SHEET MECHANICAL
M-101 FLOOR PLAN - MECHANICAL

M-201 MECHANICAL SCHEDULE AND SPECIFICATIONS
P-001 COVER SHEET PLUMBING

P-001 COVER SHEET PLUMBING
P-101 FLOOR PLAN -PLUMBING
P-201 PLUMBING

E-001 COVER SHEET ELECTRICAL
E-101 FLOOR PLAN - POWER & LIGHTING
E-201 POWER RISER DIAGRAM & SCHEDULES
E-301 ELECTRICAL SPECIFICATIONS

St. Pius X Catholic Church

TREASON TO THE CHITTE CHITTEN

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a duly licensed professional Architect under the laws of the State of Maryland. License No. 18330; Expiration Date 12/09/2025

COVER SHEET

CHECKED BY

SS

ST DESCRIPTION

FOR PERM

FOR PERMIT

SCOPE OF WORK

This is the addition of a Banquet Room with a serving area, office and storage for the adjacent sanctuary, and toilet rooms. The addition will be its own sprinklered fire area separated from the existing building by a 2 hour fire wall. There is no change in use or occupant load for any existing space.

The area of the new addition is 3,930sf. The fire wall is 2 hours as per IBC table 706.4 note a.

CODE ANALYSIS

COUNTY: PRINCE GEORGE'S

MARYLAND

CITY: BOWIE

B) APPLICABLE CODES

Sprinkler System

2018 NFPA 1 Fire Code

Building/Structural Code

2010 ADA Standards

Mechanical/Energy Code

CONSTRUCTION TYPE:

ACTUAL BUILDING HEIGHT:

ACTUAL BUILDING AREA:

ALLOWED BUILDING AREA:

ENERGY INSULATION REQUIREMENTS PER IECC

ROOF WITH INSULATION ABOVE DECK: R-30 C.I.

D) FIRE RESISTANCE RATING REQUIREMENTS

NON BEARING WALLS AND PARTITIONS - EXTERIOR 0 HR

NON BEARING WALLS AND PARTITIONS - INTERIOR 0 HR

OCCUPANT LOAD CALCULATION (IBC 1004, NFPA 101 7.3.1)

NUMBER OF EXITS REQUIRED (IBC 1006 NFPA 101 7.4): 2

NUMBER OF EXITS PROVIDED: 3

EGRESS CAPACITY PROVIDED: 288"

CORRIDOR WIDTH PROVIDED: 78"

MINIMUM CORRIDOR WIDTH (IBC TABLE 1020.2, NFPA 101 7.3.4): 48"

COMMON PATH OF EGRESS TRAVEL (IBC 1006, NFPA 101 12.2.5.1.2): 75 FEET

MAXIMUM DEAD END CORRIDOR LENGTH (IBC 1020.4, NFPA 101 12.2.5.1.3): 20 FEET

MAXIMUM DEAD END CORRIDOR LENGTH PROVIDED: 0 FEET

COMMON PATH OF EGRESS TRAVEL PROVIDED: 29 FEET

EXIT ACCESS TRAVEL DISTANCE PROVIDED: 83 FEET

THIS ADDITION WILL BE EQUIPPED WITH THE FOLLOWING SYSTEMS:

AUTOMATIC SPRINKLER SYSTEM - IBC SECTION 903

PORTABLE FIRE EXTINGUISHERS - IBC SECTION 906

FIRE ALARM SYSTEM (SEE ELECTRICAL DRAWINGS) - NFPA 72

(IBC TABLE 602) FIRE SEPARATION DISTANCE GREATER THAN 0 FEET = 1 HR.

EGRESS CAPACITY REQUIRED (IBC 1005, NFPA 101 7.3.3.1 @ 0.2" PER OCCUPANT): 48.4"

EXIT ACCESS TRAVEL DISTANCE (IBC 1017, NFPA 101 12.2.6.2): 250 FEET WITH SPRINKLER SYSTEM

CORRIDOR FIRE RESISTANCE RATING (IBC 1020, NFPA 101 12.3.6 (2)): 0 HOURS WITH SPRINKLER SYSTEM

PRIMARY STRUCTURAL FRAME

BEARING WALLS - EXTERIOR

BEARING WALLS - INTERIOR

FLOOR CONSTRUCTION

ROOF CONSTRUCTION

E) MEANS OF EGRESS ANALYSIS

F) FIRE PROTECTION SYSTEMS

TOTAL OCCUPANTS = 242

METAL FRAMED WALLS: R-13 PLUS R-7.5 C.I.

OCCUPANCY TYPE:

Maryland State Fire Prevention Code

A) AUTHORITIES HAVING JURISDICTION

Fire Protection and Life Safety Review Codes

2018 International Building Code (IBC) and Subtitle 4

2018 International Existing Building Code (IEBC)

2018 NFPA 101 Life Safety Code and Subtitle 11

2016 NFPA 13 Installation of Sprinkler Systems

2018 International Energy Conservation Code

2018 International Existing Building Code

2018 IECC International Energy Conservation Code

COMAR 9.12.53 Maryland Accessibility Code

2018 International Mechanical Code (IMC-2018)

2016 NFPA 72 National Fire Alarm and Signaling Code

2017 NFPA 70 National Electrical Code and Subtitle 9 Prince George's County Electrical Code

2018 International Building Code and Subtitle 4 Prince George's County Building Code

Prince George's County Subtitle 4, Sec. 4-180 Chapter 11 - Accessibility.

2018 International Energy Conservation Code (IECC-2018) or (ASHRAE 90.1)

NEW ASSEMBLY A-2, BANQUET

NEW ADDITION: 3,930 SF

ALLOWABLE AREA: 38,000 SF (SPRINKLERED, SINGLE STORY A2)

ALLOWED BUILDING HEIGHT: 75' (COMPLIANT WITH NFPA 101 TABLE 12.1.6)

SLAB ON GRADE FLOOR: R-10 FOR 24" EXTENDING DOWN FROM THE TOP OF THE SLAB

FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

The fire wall terminates at the interior face of the exterior non-combustible brick finish as per IBC 706.5 exception 2. (NFPA 221 section 6.9.1.2) The fire wall terminates at the underside of the non-combustible roof deck as per IBC 706.6 exception 3 (NFPA 221 section 6.6.3.1). The existing side has asphalt shingles and the new side has standing seam metal roofing. Both are at least Class B roof coverings. VESTIBULES: This building is exempt as per IECC C402.5.7 Exception 4

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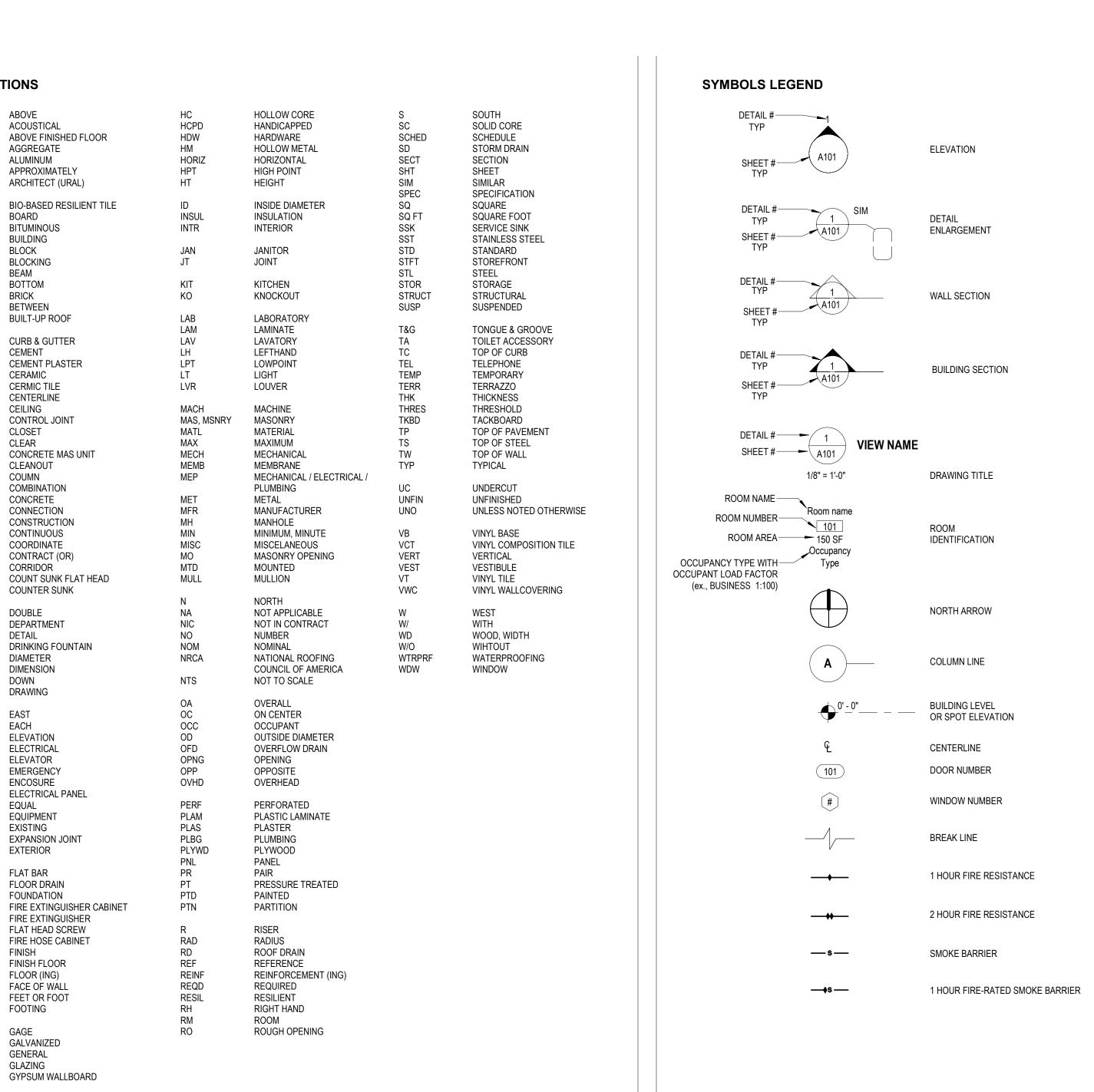
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CODE ANALYSIS, GENERAL NOTES AND



CEILING TYPES FINISHES, FURNISHINGS AND EQUIPMENT TYPES LEGEND BD# BUILDING DIRECTORY FE# FIRE EXTINGUISHER CABINET LOUVERS AND VENTS PL# PLASTIC LAMINATE PROJECTION SCREEN PT# PAINT - COLOR RESILIENT BASE RESILIENT FLOOR DIMENSIONAL CHARACTER PANEL TYPE SIGNAGE SOLID SURFACING TB# TACK BOARD VD# VISUAL DISPLAY SURFACE

BUILDING ASSEMBLY TYPES LEGEND

LETTER NOTES SIZE

STOREFRONT TYPES

CURTAIN WALL AND

ROOF TYPES

FLOOR TYPES

WALL AND PARTITION TYPES:

NOTES WALL OR PARTITION TYPE

FLOOR PLAN LEGEND EXISTING WALL OR

PARTITION _ _ _ _ TO BE REMOVED EXISTING GLAZED OPENING TO REMAIN **EXISTING GLAZED** □ □ □ □ OPENING TO BE EXISTING DOOR AND TO REMAIN EXISTING DOOR AND

EXISTING WALL OR

PARTITION

TO BE REMOVED

1. ALL PARTITIONS ARE DIMENSIONED FROM FINISH FACE TO FINISH FACE UNLESS OTHERWISE NOTED. ALL DIMENSIONS MARKED "HOLD" OR "CLEAR" SHALL BE NOT TO SCALE

2. DOOR FRAMES TO BE SET 4" FROM ADJACENT WALL UNLESS NOTED OTHERWISE OR DIMENSIONED. 3. LARGE SCALE DRAWINGS TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS AND DETAILS TAKE PRECEDENCE OVER ALL DRAWINGS. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING OF ANY DISCREPANCIES.

4. CONTRACTOR SHALL COORDINATE AND PROVIDE BLOCKING IN PARTITIONS FOR ALL MILLWORK AND WALL ATTACHED LIGHT FIXTURES, RAILINGS, SIGNAGE, ETC. 5. "TYPICAL" OR "TYP.," SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS NOTED OTHERWISE. DETAILS ARE USUALLY KEYED AND NOTED "TYP." ONLY ONCE, WHERE THEY FIRST OCCUR.

6. CONTRACTOR SHALL NOT MEASURE THESE DRAWINGS FOR THE PURPOSE OF CONSTRUCTION. 7. THE CONTRACTOR SHALL VERIFY THAT DRAWINGS ARE THE LATEST ISSUE PRIOR TO COMMENCING BIDDING OR CONSTRUCTION.

ABBREVIATIONS

ACOUS

AFF

AGGR

AL, ALUM

APPROX

ARCH

BITUM

BLDG

BLKG

BOT

BRK

BTWN

BUR

CEM PLAS

CER TILE

CER

CLO

CLR

COORD

CSFH

EXIST,

EXP JT

BLK

ABOVE

ACOUSTICAL

ALUMINUM

BOARD

BUILDING

BLOCKING

BLOCK

BEAM

BOTTOM

BRICK

BETWEEN

CERMIC TILE

CENTERLINE

CEILING

CLOSET

CLEANOUT

CONCRETE

COORDINATE

CORRIDOR

DEPARTMENT

DIAMETER

DIMENSION

DOWN

DRAWING

ELEVATION

FI FVATOR

EMERGENCY

ENCOSURE

EQUIPMENT

EXISTING

EXTERIOR

FLOOR DRAIN

FLOOR (ING)

GALVANIZED

GENERAL

GENERAL NOTES

FOOTING

COUMN

CLEAR

BITUMINOUS

8. THE CONTRACTOR SHALL APPLY, INSTALL, CONNECT, ERECT, CLEAN AND /OR CONDITION MANUFACTURED ARTICLES, MATERIALS, AND /OR EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. IN A CASE OF CONFLICT BETWEEN MANUFACTURER'S INSTRUCTIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL OBTAIN WRITTEN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING.

9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO COMMENCING THE WORK TO THE EXTENT PRACTICAL. ANY CONFLICTS, AND DISCREPANCIES SHALL BE REPORTED IN WRITING TO THE ARCHITECT.

10. IMMEDIATELY PRIOR TO THE OWNER'S OCCUPANCY, THE CONTRACTOR SHALL CLEAN ALL SURFACES OF DUST, DEBRIS, LOOSE CONSTRUCTION MATERIAL AND EQUIPMENT, AND LEAVE ALL FLOORS VACUUMED CLEAN. REMAINING CONSTRUCTION MATERIAL AND EQUIPMENT, IF ANY, SHALL BE MOVED AND TEMPORARILY SECURED IN AN AREA DIRECTED BY THE TENANT. 11. THE CONTRACTOR SHALL FILE, OBTAIN, AND PAY FOR ALL FEES FOR BUILDING DEPARTMENT APPROVALS AND PERMITS, WHERE REQUIRED, AND FINAL WRITE-

OFFS FOR PROJECT COMPLETION. COPIES OF ALL TRANSACTIONS ARE TO BE FORWARDED TO THE OWNER. 12. THE CONTRACTOR SHALL EXECUTE ALL INSPECTIONS NECESSARY TO OBTAIN A CERTIFICATE OF OCCUPANCY. 13. FIRE EXTINGUISHER LOCATIONS ARE TO BE COORDINATED IN THE FIELD WITH THE FIRE MARSHAL AND COORDINATED WITH THE TENANT PRIOR TO INSTALLATION.

14. ALL DIMENSIONS, NOTES, FINISHES, AND FIXTURES SHOWN ON TYPICAL FLOOR PLANS, SECTIONS, OR DETAILS SHALL APPLY TO ALL SIMILAR OR OPPOSITE HAND PLANS, SECTIONS OR DETAILS. 15. PROVIDE FIRE SAFING INSULATION OR FIRE SEALANT AROUND PIPES PENETRATING RATED WALLS OR FLOORS TO MAINTAIN AN APPLICABLE FIRE RATING AND OR

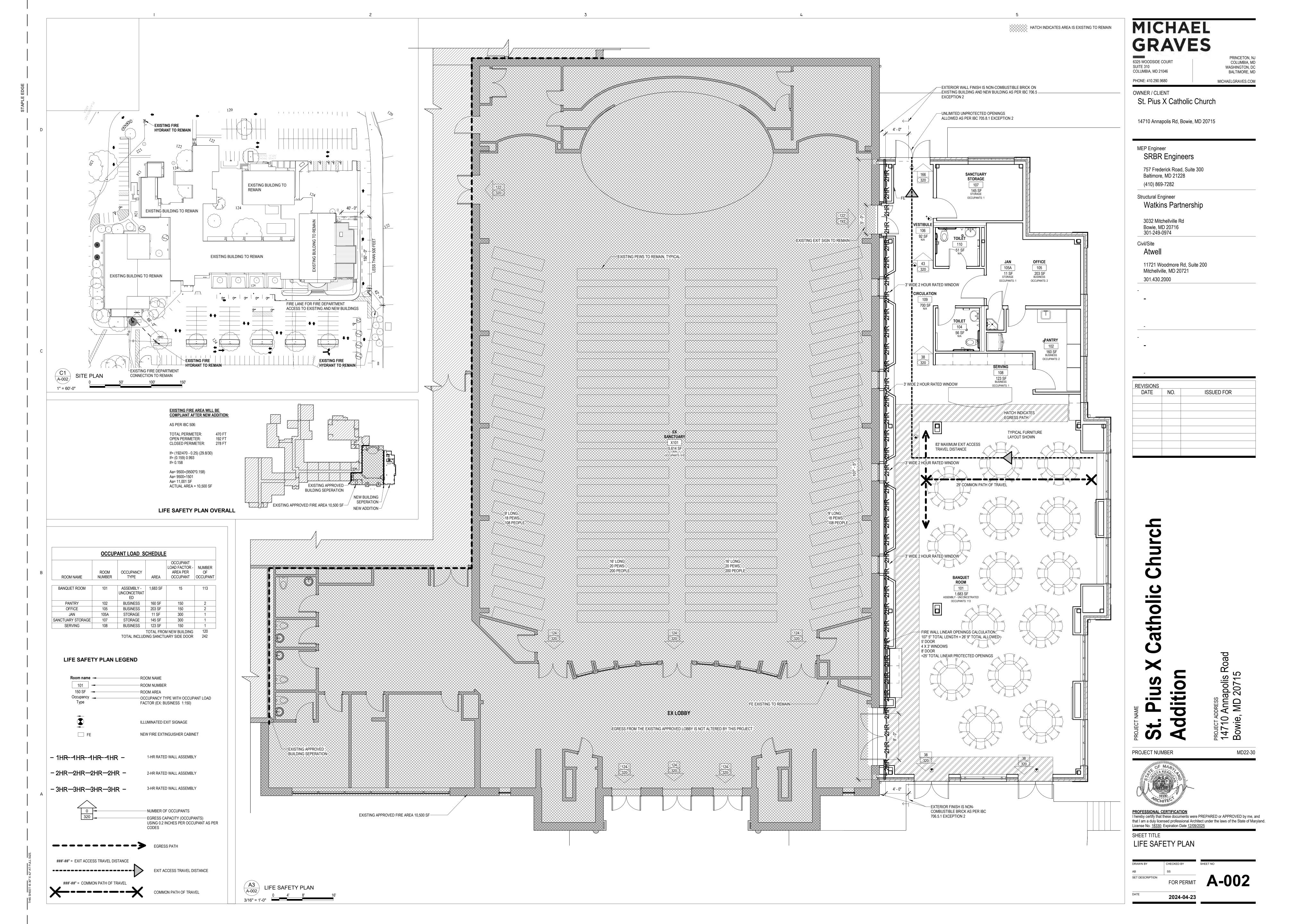
16. DRAWINGS AND SPECIFICATIONS ARE AND SHALL REMAIN THE PROPERTY OF WALDON STUDIO ARCHITECTS & PLANNERS, PC AND ARE NOT TO BE USED BY CLIENT OR CONTRACTOR ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING FROM WALDON STUDIO ARCHITECTS & PLANNERS, PC.

MATERIAL LEGEND TYPICAL MATERIAL HATCH PATTERNS UNLESS NOTED OTHERWISE IN DRAWINGS. THIS LEGEND IS

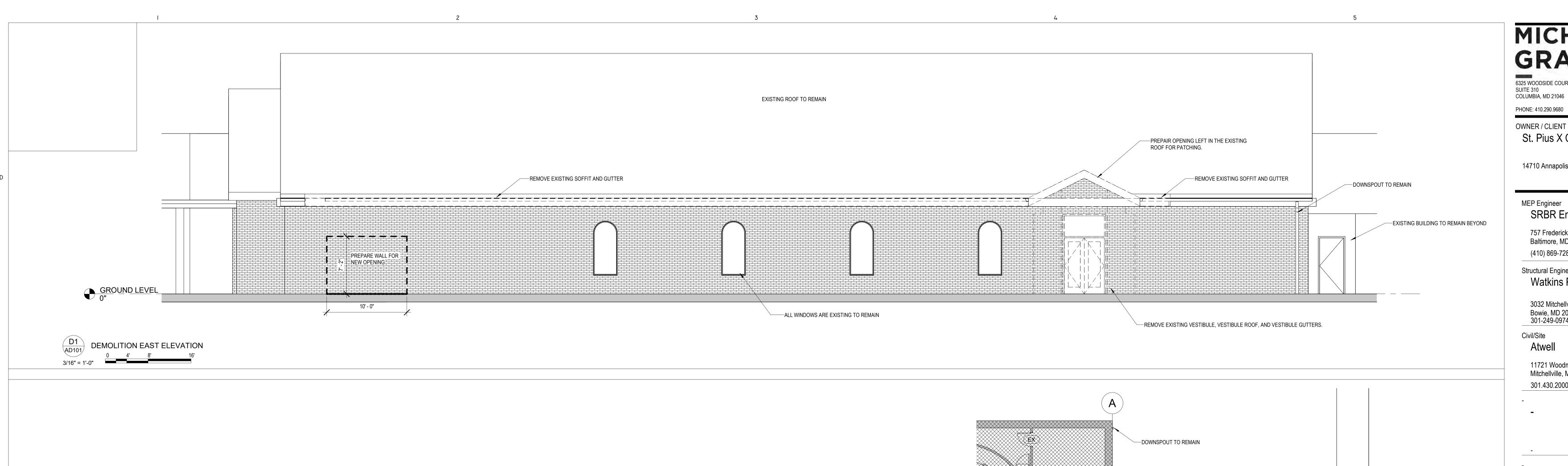
INSULATION FIRE SAFING GROUT

SUSPENDED ACOUSTIC CEILING TILE CERAMIC TILE

<u> </u>	MINIMUM REQUIRED PLUMBING FIXTURES FOR A2 BANQUET 120 OCCUPANTS. 1/2 = 60										
	WATER C	LOSETS	LAVA	TORIES	UNISEX	DRINKING FOUNTAINS	SERVICE SINK				
RATIOS	MALE 1 per 75	FEMALE 1 per 75	MALE 1 pe	FEMALE er 200	N/A	1 per 1000	N/A				
REQUIRED	1	1	1	1	0	1	1				
PROVIDED	1 UNISEX	1 UNISEX	1 UNISEX	1 UNISEX	2	EXISTING PROVIDED	1				



4/23/2024 2:21:15 PM C:\Temp\MD22-30.00 St Pius X r24_abennettTT2RP.rv



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PRINCETON, NJ COLUMBIA, MD WASHINGTON, DC BALTIMORE, MD MICHAELGRAVES.COM

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REMOVE EXISTING INTERIOR DOORS AND HARDWARE. RETURN DOORS TO OWNER. COORDINATE WITH OWNER. FRAME TO

RELOCATE EXISTING STATUE. COORDINATE WITH OWNER.

RELOCATE EXISTING BENCH. COORDINATE WITH OWNER.

REMAIN. TRANSOM WINDOW AND FRAME TO REMAIN.

REMOVE EXISTING VESTIBULE AND EXTERIOR DOORS

OPENING FOR NEW DOORS

STAINED GLASS WINDOWS TO REMAIN, TYPICAL

A4 AD101 FLOOR PLAN DEMOLITION 1/8" = 1'-0" 0 4' 8' 16'

3032 Mitchellville Rd

301-249-0974 Civil/Site

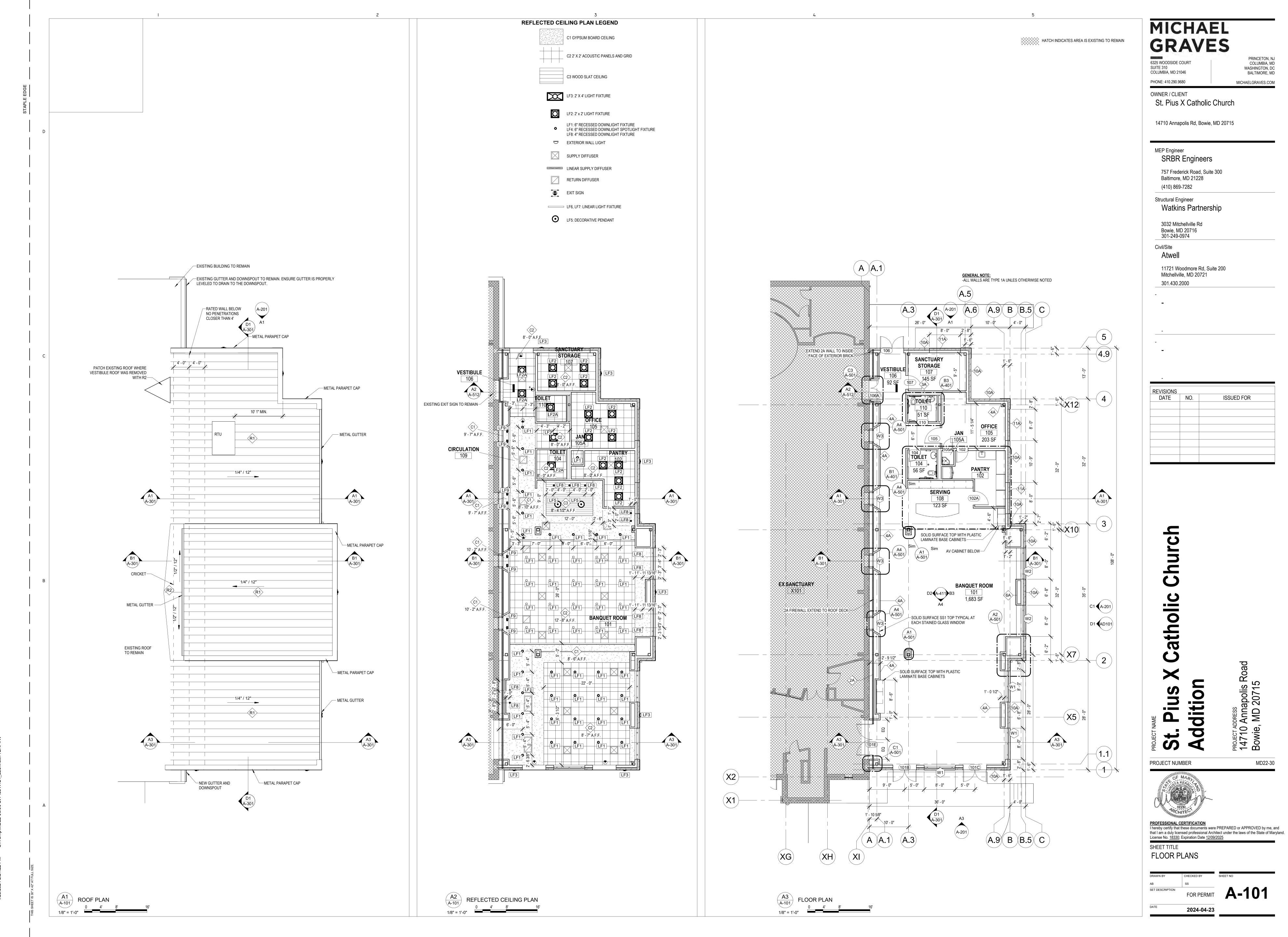
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DEMOLITION VIEWS



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WASHINGTON, DC

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RT-1 RESILIENT TILE- PLANK

MANUF: MOHAWK PATTERN: LIVING LOCAL COLLECTION PREMIUM WOOD COLOR: 123 WESTERN WOODS DIMS: 7.75" X 52" X 2.5MM GAUGE INSTALLATION: GLUE DOWN. 1/3 OFFSET BOND LOCATION: CIRCULATION, VESITBULES, SERVING ROOM, GATHERING ROOM

RS-1 RESILIENT SHEET MANUF: MANNINGTON PATTERN: DISCOVERY- REVEAL COLOR: FORTUITY DC303

DIMS: 12' WIDTH ROLL NOTE: WITH 4"H INTEGRAL COVE BASE HEAT WELD SEAMS LOCATION: STORAGES AND KITCHEN

TRANSITION STRIPS

TS-1 TRANSITION STRIP- PORCELAIN TO RESILIENT FLOOR- AT DOOR

MANUF: SCHLUTER MODEL: SCHIENE NOTE: INSTALL WITH TOP SURFACES FLUSH TO EACH OTHER INSTALL FEATHER FLOOR UNDER RESILIENT FLOOR TO ACHIEVE THIS

TS-2 TRANSITION STRIP- PORCELAIN TO PORCELAIN WALL TILE (I/S CORNER) MANUF: SCHLUTER MODEL: DILEX-HKS NOTE: INSERT TOP CAP TO WALL TILE

TS-3 TRANSITION STRIP- RESILIENT FLOOR TO RESILIENT FLOOR- LOBBY DOOR MANUF: SCHLUTER MODEL: VINPRO-S

NOTE: INSTALL WITH TOP SURFACES FLUSH TO EACH OTHER

WALL BASE

RB-1 RESILIENT BASE MANUF: JOHNSONITE COLOR: SILVER GREY 55 DIMS: 4"H COVED CONTINUOUS COIL LOCATION: STORAGE ROOMS

WB-1 WOOD BASE MANUF: N/A

PATTERN: N/A COLOR: STAIN TO MATCH PL-1 DIMS: 4"H

RSB-1 RESILIENT SHEET BASE

MANUF: MANNINGTON PATTERN: DISCOVERY- REVEAL COLOR: FORTUITY DC303 DIMS: 4"H NOTE: INTEGRAL COVE BASE HEAT WELD SEAMS

<u>WALLS</u>

PT-2 PORCELAIN TILE MANUF: DALTILE PATTERN: DELEGATE COLOR: OFF WHITE- DL25- RECTANGLE DIMS: 12" X 24" GROUT: MAPEI #5011 SAHARA BEIGE INSTALLATION: 1/3 OFFSET BOND LOCATION: ALL TOILET WALLS 48" +/- HEIGHT NOTE: TO INCLUDE ACCESSORY TOP CAP BULLNOSE- S43F9

P-1 WALL PAINT MANUF: SHERWIN WILLIAMS COLOR: PURE WHITE SW7005 FINISH: FLAT; SEMI-GLOSS WHEN IN TOILET ROOMS

P-2 DOOR FRAME PAINT

MANUF: SHERWIN WILLIAMS COLOR: GOSSAMER VEIL SW9165 FINISH: SEMI-GLOSS LOCATION: DOOR FRAMES

WALLS CONTINUED

WT-1 WALL TILE MANUF: ARCHITESSA

PATTERN: VENEER WORLD PRO LEDGESTONE- BLUESTONE COLOR: TUMBLED MATTE RECTIFIED FIELD TILE DIMS: 5.8" X 24" X 9MM GAUGE INSTALLATION: INSTALL 1/3 OFFSET BOND PATTERN. GROUT: MAPEI #5230 ARMOR LOCATION: SERVING ROOM ACCENT WALL

WP-1 WALL PROTECTION

MANUF: CONSTRUCTION SPECIALITIES PATTERN: ACROVYN WALL PROTECTION- SOLID COLOR COLOR: PEARL #934 DIMS: 4' X 8' (& X 10'); 0.60" GAUGE INSTALL: INSTALL PARTIAL WALL AT 5'-0"H, FULL SHEETS; BUTT SEAM USING ARCOVYN TRIM WC75VT VERTICAL; COLOR MATCHING; TOP CAP: COVE ADHESIVE MOUNT. SEE INSTALLATION GUIDE FOR FURTHER DETAILS. CAP BY TARKETT: MODEL SCC-01-A

MILLWORK

PL-1 PLASTIC LAMINATE

MANUF: PIONITE PATTERN: HARDROCK MAPLE WM791 FINISH: SUEDE INSTALLATION: VERTICAL SURFACES LOCATION: TYPICAL UNLESS NOTED OTHERWISE

PL-2 PLASTIC LAMINATE

MANUF: WILSONART PATTERN: TRACELESS- ICECAP VELVET 15516 FINISH: MATTE INSTALLATION: VERTICAL SURFACES LOCATION: SERVING ISLAND MILLWORK ONLY. NOTE: SEE ELEVATIONS AS NOTED.

CT-1 CERAMIC WALL TILE MANUF: ARCHITESSA

PATTERN: DAVENPORT- 2" X 2" HEXAGON MOSAIC COLOR: BLUE- MATTE DIMS: 2" X 2" HEXAGON ON MOSAIC SHEET GROUT: MAPEI #5038 AVALANCHE LOCATION: SERVING ISLAND MILLWORK - VERTICAL FACE, VISITOR SIDE **MISCELLANEOUS**

SERVING

CIRCULATION RT-1 WB-1 P-1

X101 EX SANCTUARY NO NEW NO NEW NO NEW NO NEW

PT-1 PT-2 PT-2 PT-2

GC TO PROVIDE TRANSITION STRIP WHERE EXISTING FINISH ABUTS TO NEW RESILIENT FLOOR, ARCHITECT RECOMMENDS

SCHULTER SYSTEMS

FINISHES FINISHES FINISHES FINISHES

SS-1 SOLID SURFACE

CEILINGS

MANUF: WILSONART

PATTERN: ASPEN QUARTZITE 9245SS

INSTALLATION: SEE DETAILS.

LOCATION: ALL COUNTERTOPS

ACT-1 ACOUSTICAL CEILING TILE

P-3 CEILING PAINT

WCB-1 "WOOD" BAFFLE

GC TO PROVIDE

FINISH: FLAT

MANUF: ARMSTRONG

MODEL: CIRRUS; SQUARE EDGE

MANUF: SHERWIN WILLIAMS

SPECS: MEDIUM TEXTURED; NRC:.70; CAC: 35

DIMS: 24" X 24"; 3/4" GAUAGE; 15/16" GRID

NOTE: TO MATCH EXISTING CEILING TILE

COLOR: CEILING BRIGHT WHITE SW7007

LOCATION: SOFFITS AND DRYWALL

WOOD: STAINED TO MATCH WB-1

STAINED GLASS ARCH SILL, BENCH

BR-1 BRICK VENEER- DARK RED

MANUF: BRICK IT PATTERN: ATASCADERO VELOUR DIMS: H 2 1/4" x L 7 5/8" x T 5/8 " INSTALLATION: RUNNING MORTAR: BRICK IT POINTING MORTAR TAUPE 402

CG-1 CORNER GUARD MANUF: ACROVYN MODEL: SSM-20N (1/4" RADIUS CORNER) COLOR: PEARL #934 DIMS: "L" - 6'-6"H (FROM TOP OF WALL BASE)

NOTES:

REFER TO THE ROOM FINISH TAGS FOR FINISH LOCATIONS. WHERE MORE THAN 1 WALL FINISH IS NOTED FOR A ROOM, LOCATION IS CLARIFIED ON THE FINISH PLAN AND/OR WALL NO APPLIED FINISH STRIPS TO BE USED EXCEPT AT PORCELAIN TILE TRANSITIONS. ALL INTERIOR WALLS SHALL BE PAINTED P-1 UNLESS OTHERWISE

WALL AND CEILING FINISHES SHALL HAVE A MAXIMUM FLAME

P-1

PT-2

NO NEW

ACT-1

NO NEW NO NEW FINISHES

SPREAD OF 75 (CLASS B) AND MAXIMUM SMOKE DEVELOPED OF 450 AS PER IBC TABLE 803.13 AND NFPA 101 SECTION 12.3.3.2 FLOOR FINISHES SHALL HAVE A MAXIMUM CRITICAL RADIANT FLUX OF CLASS II; AND COMPLY AS PER IBC 804.1 EXCEPTION AND NFPA 101 SECTION 12.3.3.5.2. LOCATION: ABOVE GATHERING ISLAND. SEE RCP FOR FRUTHER DETAILS. 7

ALL FINISHES SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL BEFORE PURCHASE AND INSTALLATION.

NO NEW

FINISHES

ROOM FINISH SCHEDULE
 NUMBER
 ROOM NAME
 FLOOR
 BASE
 WALL
 EAST WALL

 101
 BANQUET ROOM
 RT-1
 WB-1
 P-1
 P-1, BR-1

 102
 PANTRY
 RS-1
 RSB-1
 P-1, WP-1
 P-1, WP-1
 SEE FINISH PLAN FOR CORNER GUARD LOCATIONS. P-1, BR-1 ACT-1 SEE FINISH LEGEND FOR PAINT FINISH TYPES AND WALL PROTECTION TOILET PT-1 PT-2 PT-2 PT-2 PT-2 ACT-1 SEE FINISH LEGEND FOR PORCELAIN TILE WALL APPLICATION AND OFFICE RS-1 RSB-1 P-1 P-1 RS-1 RSB-1 P-1, WP-1 P-1, WP-1 P-1, WP-1 P-1, WP-1 ACT-1 WALL PROTECTION PANELS ON ALL WALLS. EX LOBBY NO NEW FINISHES **FINISHES** | FINISHES | FINISHES | FINISHES | FINISHES VESTIBULE RT-1 WB-1 P-1 P-1 SANCTUARY RS-1 RSB-1 P-1 P-1 RT-1 WB-1 WT-1 P-1

ROOM FINISH TAG LEGEND

FLOOR ---

BASE ---

WALL -

CEILING -

SEE FINISH LEGEND FOR PORCELAIN TILE WALL APPLICATION AND

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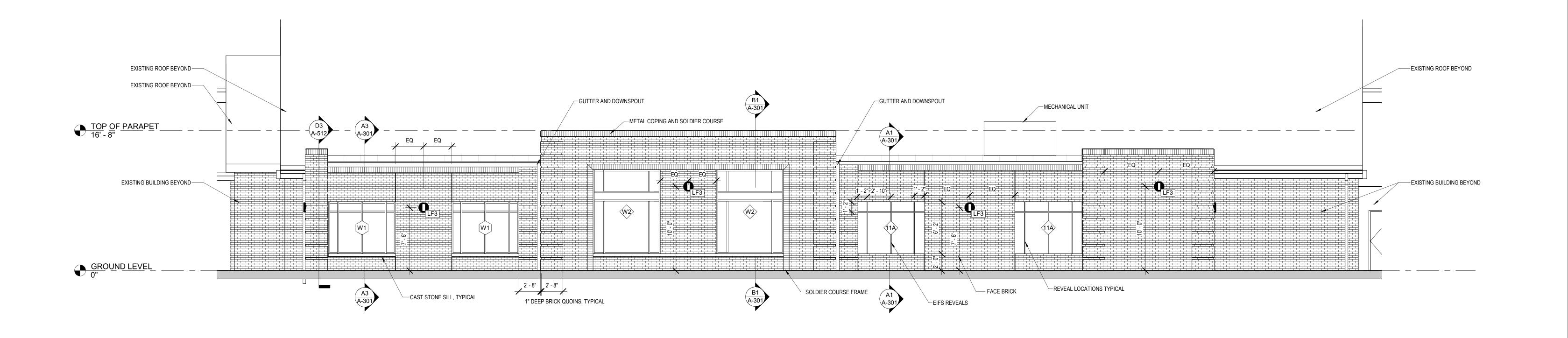
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BANQUET ROOM



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PRINCETON, NJ COLUMBIA, MD WASHINGTON, DC BALTIMORE, MD

COLUMBIA, MD 21046

PHONE: 410.290.9680

WASHINGTON, DC
BALTIMORE, MD

MICHAELGRAVES.COM

OWNER / CLIENT

St. Pius X Catholic Church

14710 Annapolis Rd, Bowie, MD 20715

MEP Engineer

SRBR Engineers

757 Frederick Road, Suite 300

Baltimore, MD 21228

(410) 869-7282

Structural Engineer

Structural Engineer

Watkins Partnership

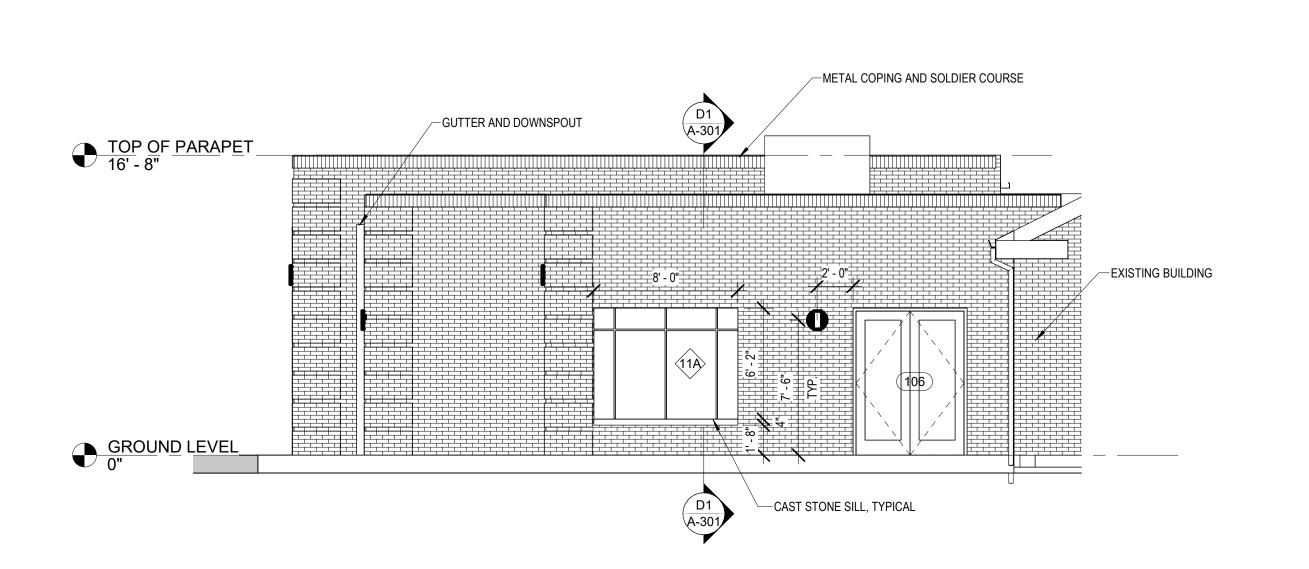
3032 Mitchellville Rd Bowie, MD 20716 301-249-0974

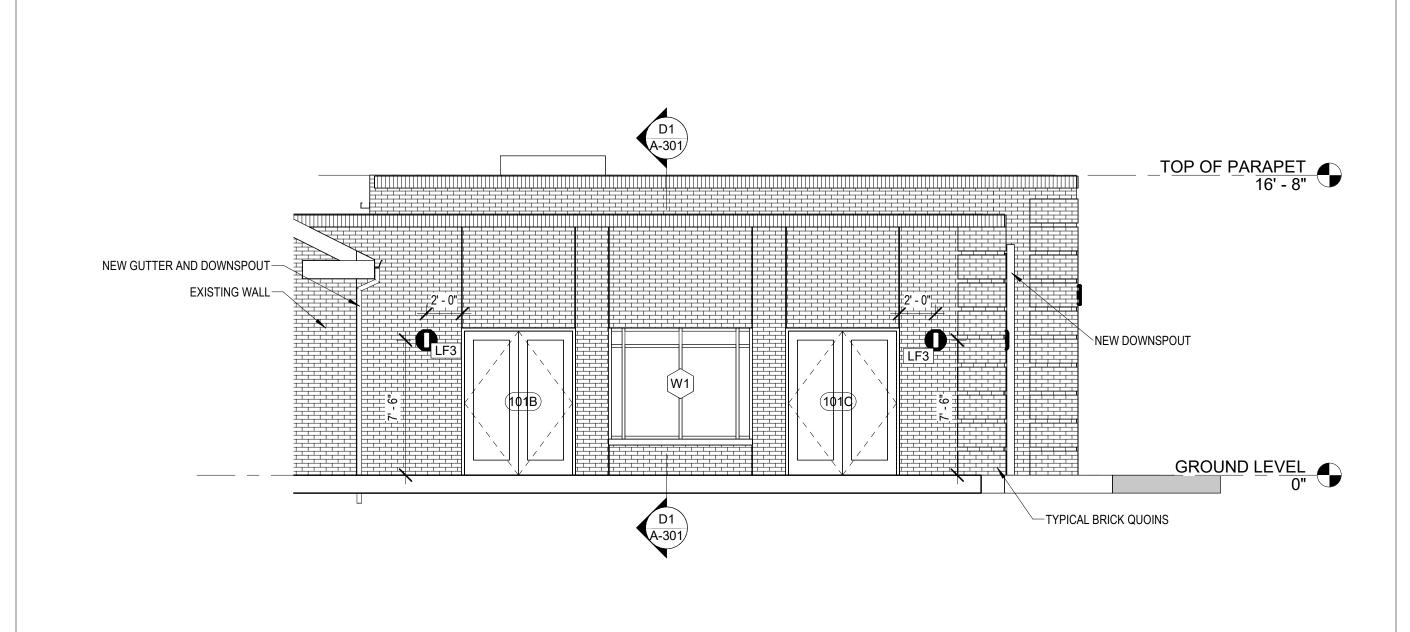
Civil/Site **Atwell**

11721 Woodmore Rd, Suite 200 Mitchellville, MD 20721 301.430.2000

REVISIONS
DATE NO. ISSUED FOR

C1 A-201 EAST ELEVATION 0 4' 8'





St. Pius X Catholic Chur Addition

PROJECT NUMBER

MD22-30

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a duly licensed professional Architect under the laws of the State of Maryland. License No. 18330; Expiration Date 12/09/2025

SHEET TITLE
BUILDING ELEVATIONS

CHECKED BY
SHEET NO
SS

DESCRIPTION
FOR PERMIT

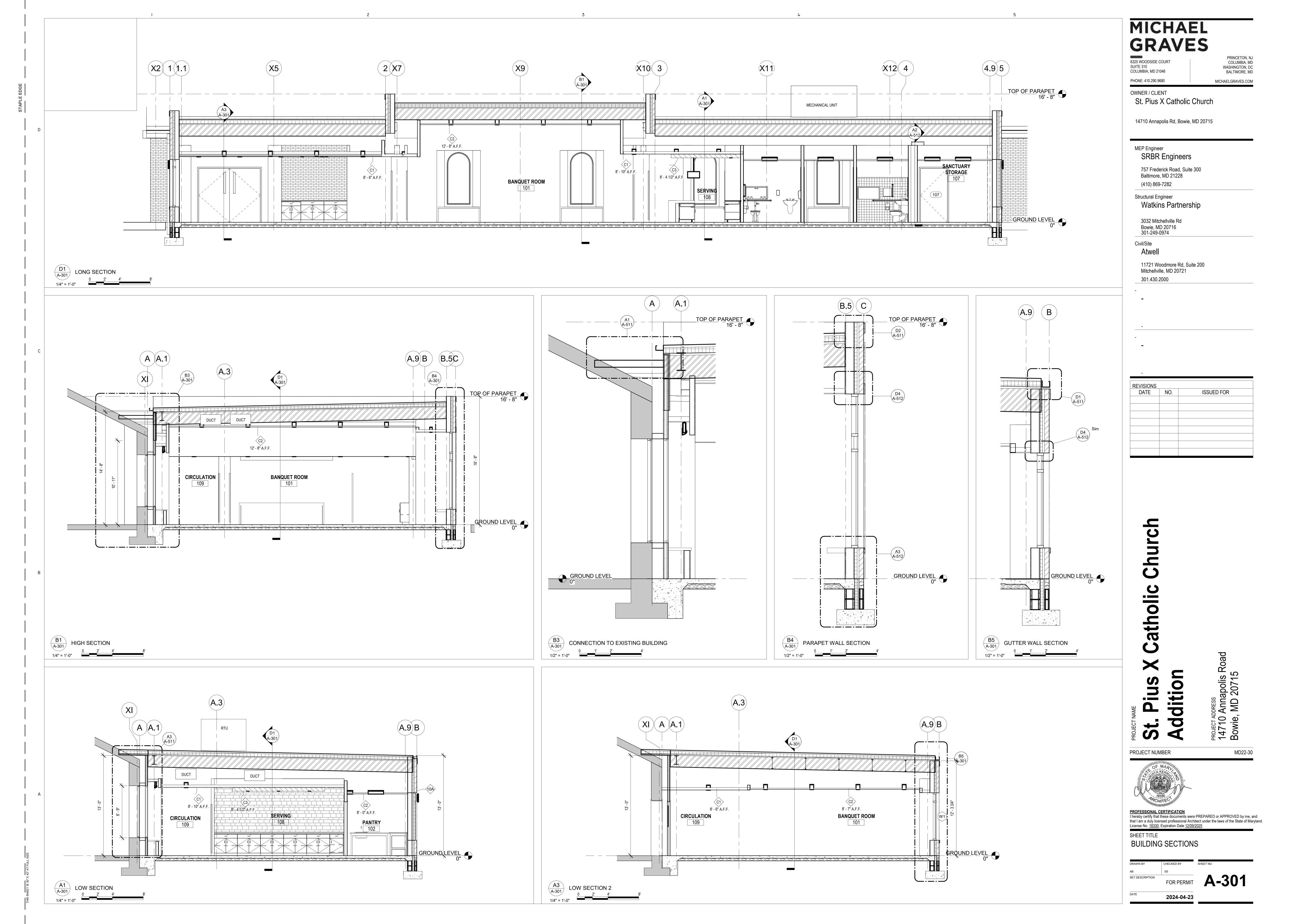
E
2024-04-23

A1 NORTH ELEVATION

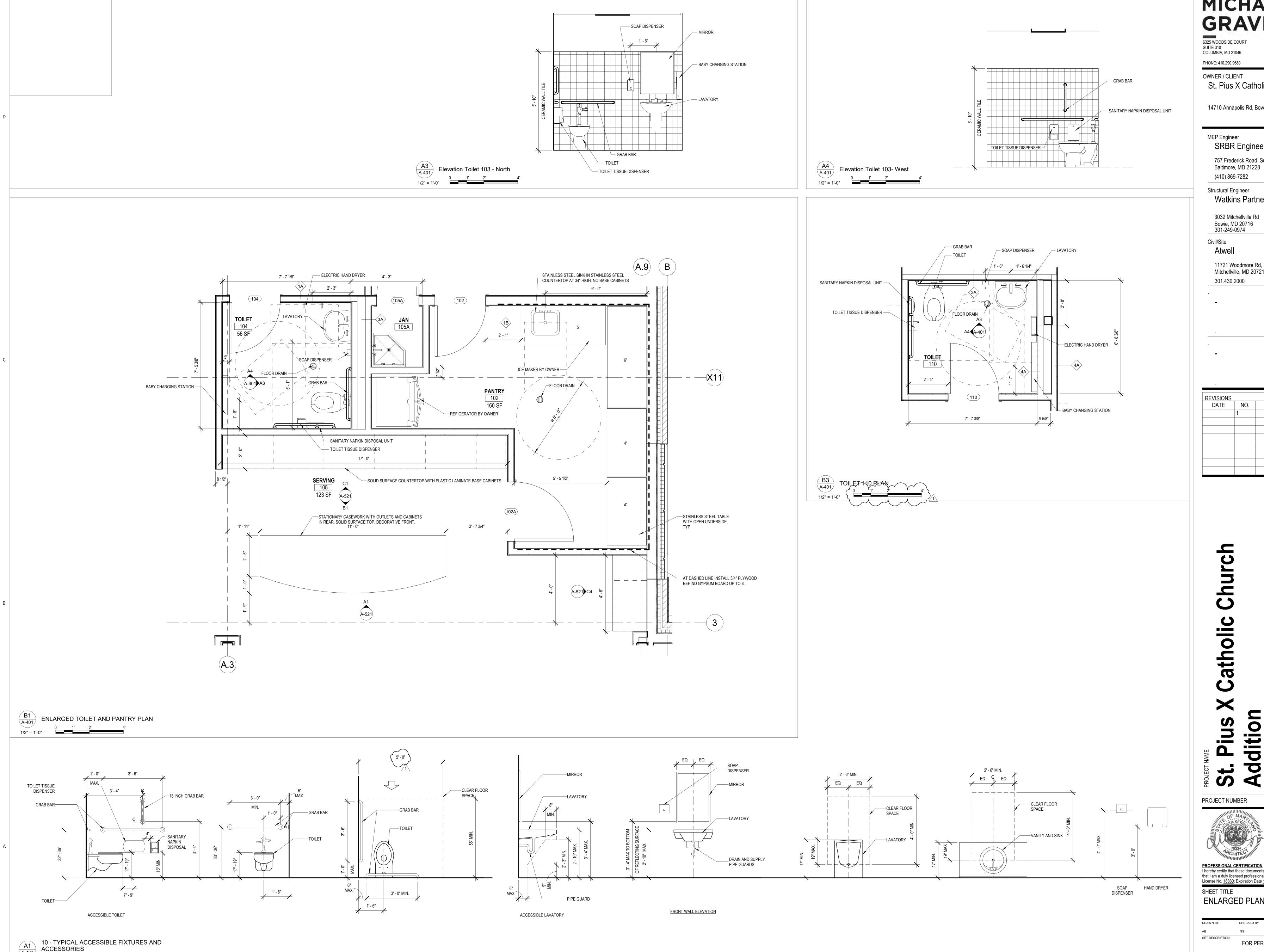
0 4' 8'

A3 SOUTH ELEVATION

3/16" = 1'-0"



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1/2" = 1'-0"

MICHAEL GRAVES

6325 WOODSIDE COURT SUITE 310 COLUMBIA, MD 21046

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St. Pius X Catholic Church

14710 Annapolis Rd, Bowie, MD 20715

MEP Engineer SRBR Engineers 757 Frederick Road, Suite 300

Structural Engineer Watkins Partnership

3032 Mitchellville Rd

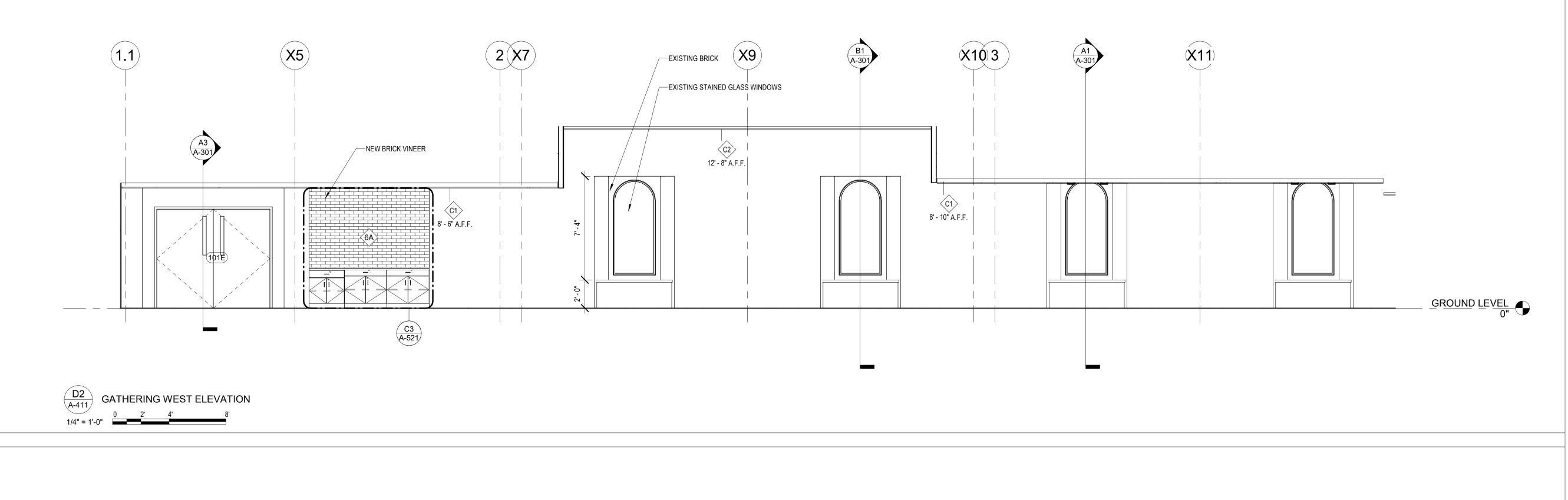
Bowie, MD 20716 301-249-0974

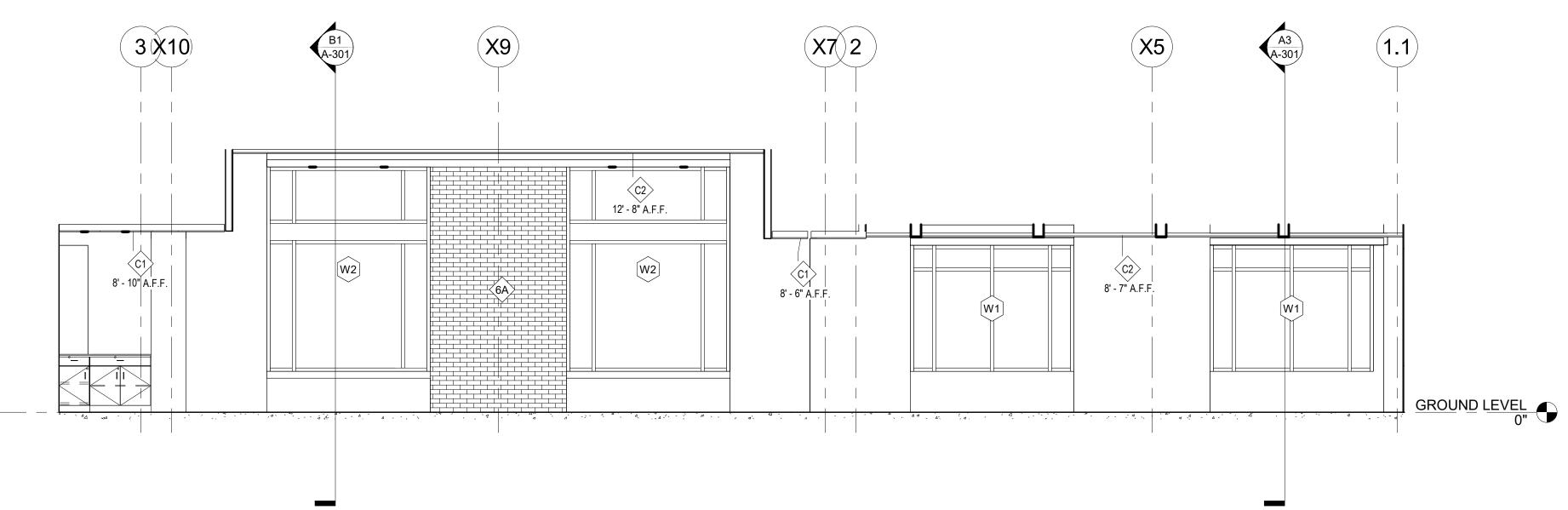
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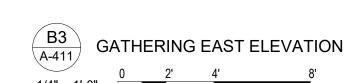
REVISIONS DATE NO. ISSUED FOR

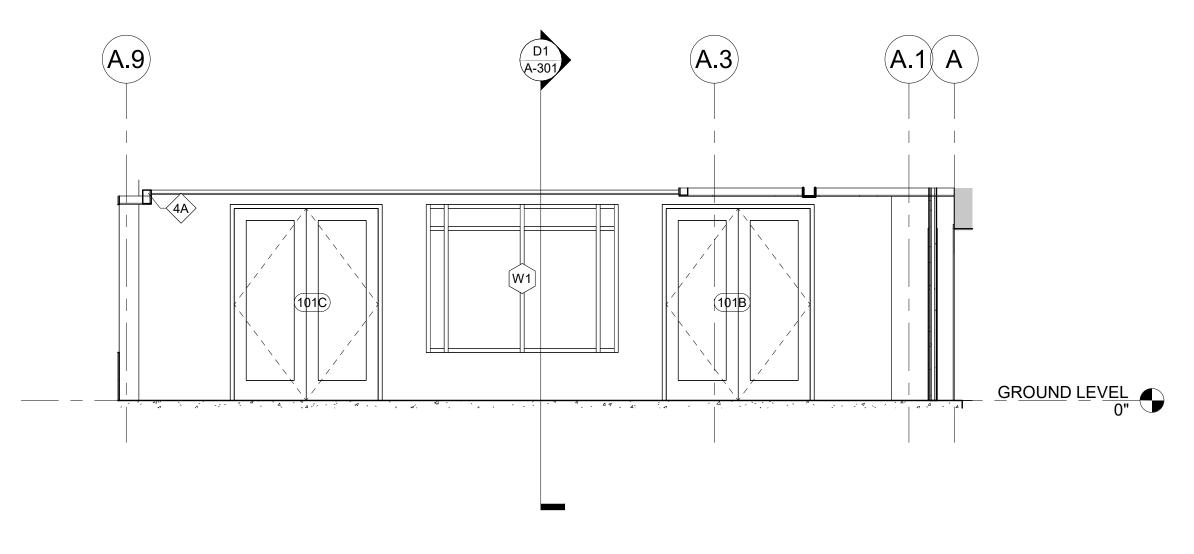
PROJECT NUMBER PROFESSIONAL CERTIFICATION I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a duly licensed professional Architect under the laws of the State of Maryland. License No. <u>18330</u>; Expiration Date <u>12/09/2025</u>

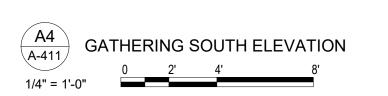
ENLARGED PLANS











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PRINCETON, NJ COLUMBIA, MD WASHINGTON, DC BALTIMORE, MD MICHAELGRAVES.COM

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St. Pius X Catholic Church

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Civil/Site **Atwell**

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REVISIONS
DATE NO. ISSUED FOR

St. Pius X Catholic Church

Addition
PROJECT ADDRESS
14710 Annapolis Road
Bowie, MD 20715

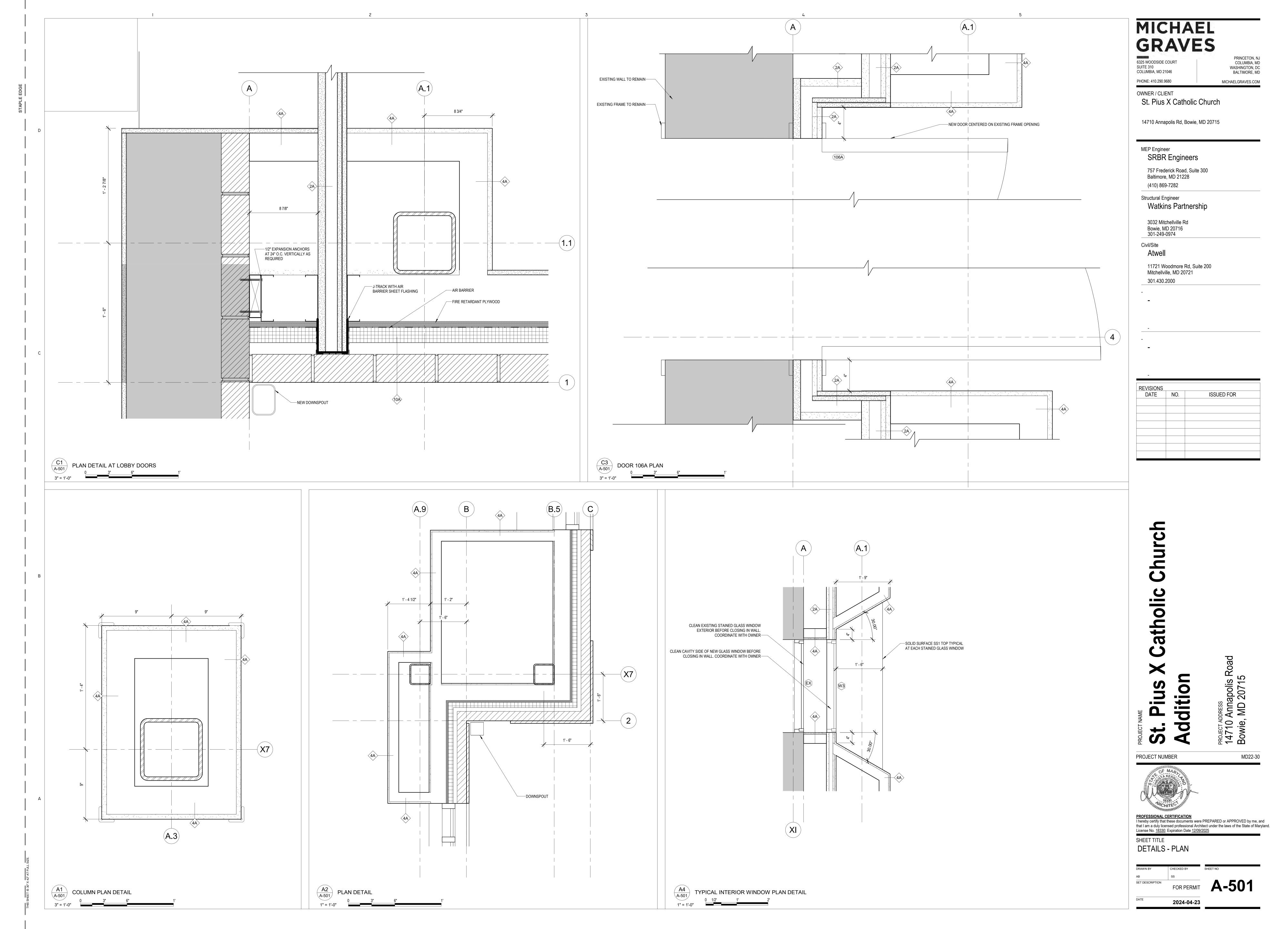
PROJECT NUMBER

MD22-30

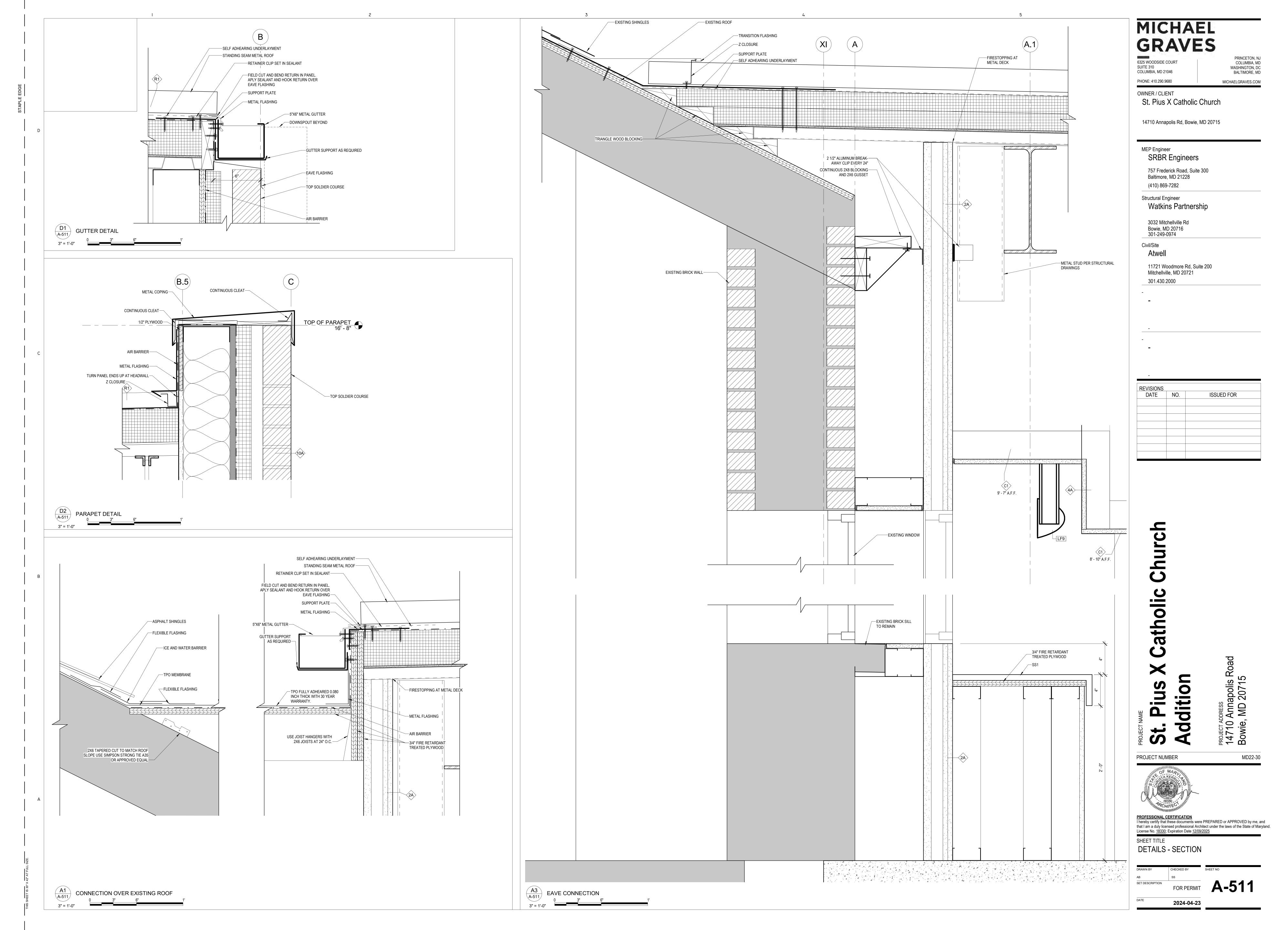
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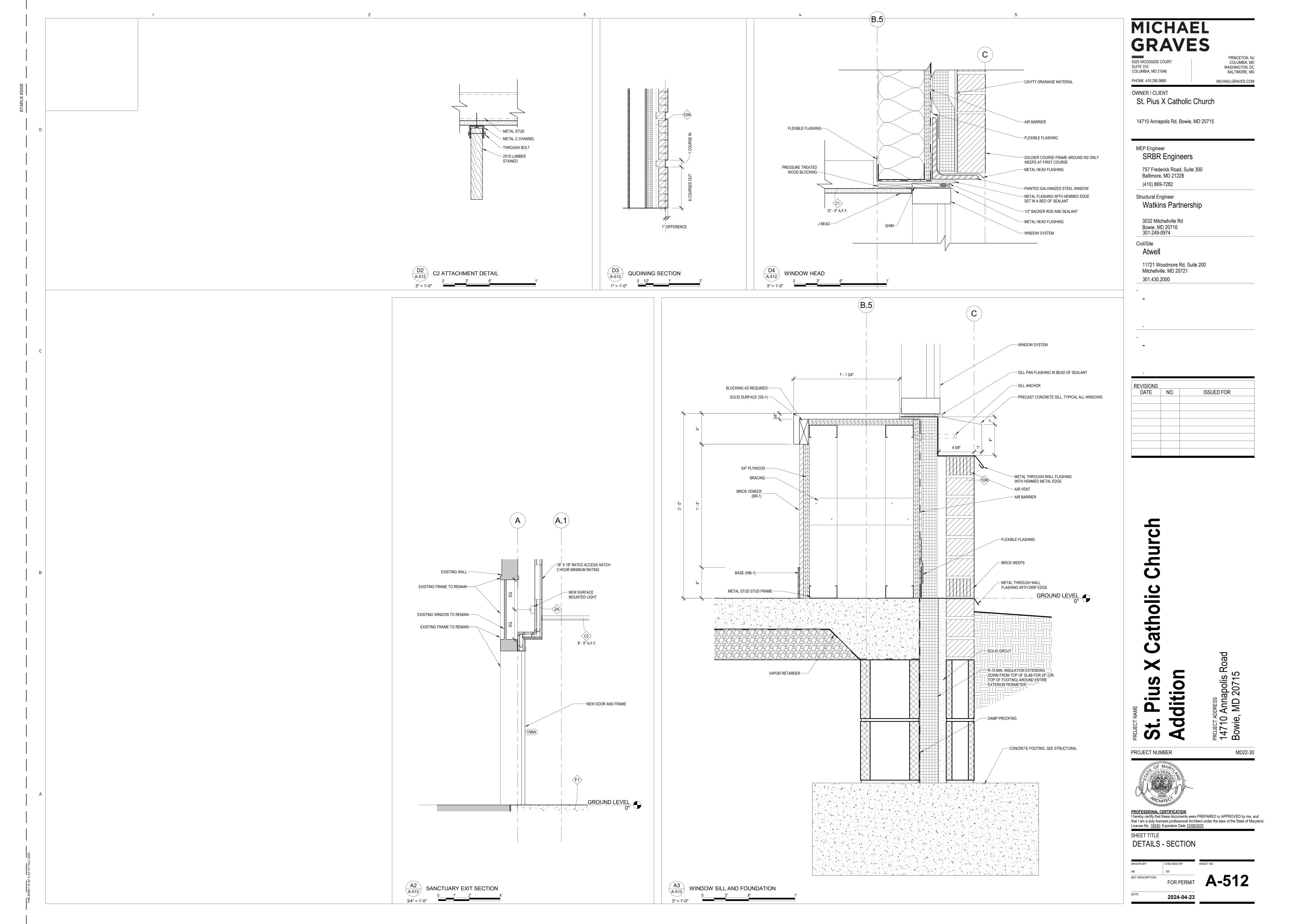
HEET TITLE
NTERIOR ELEVATIONS

INTERIOR ELEVATIONS

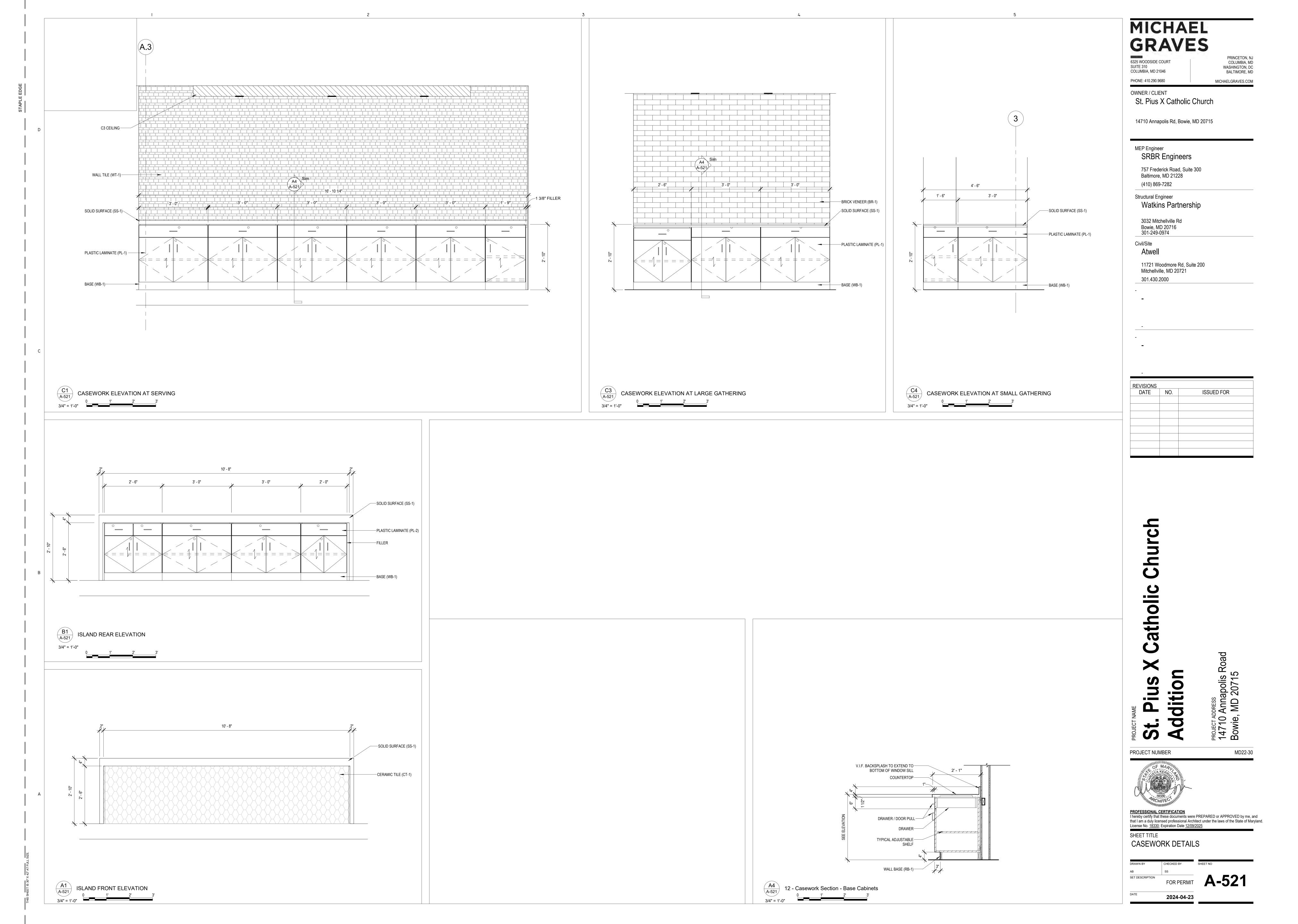


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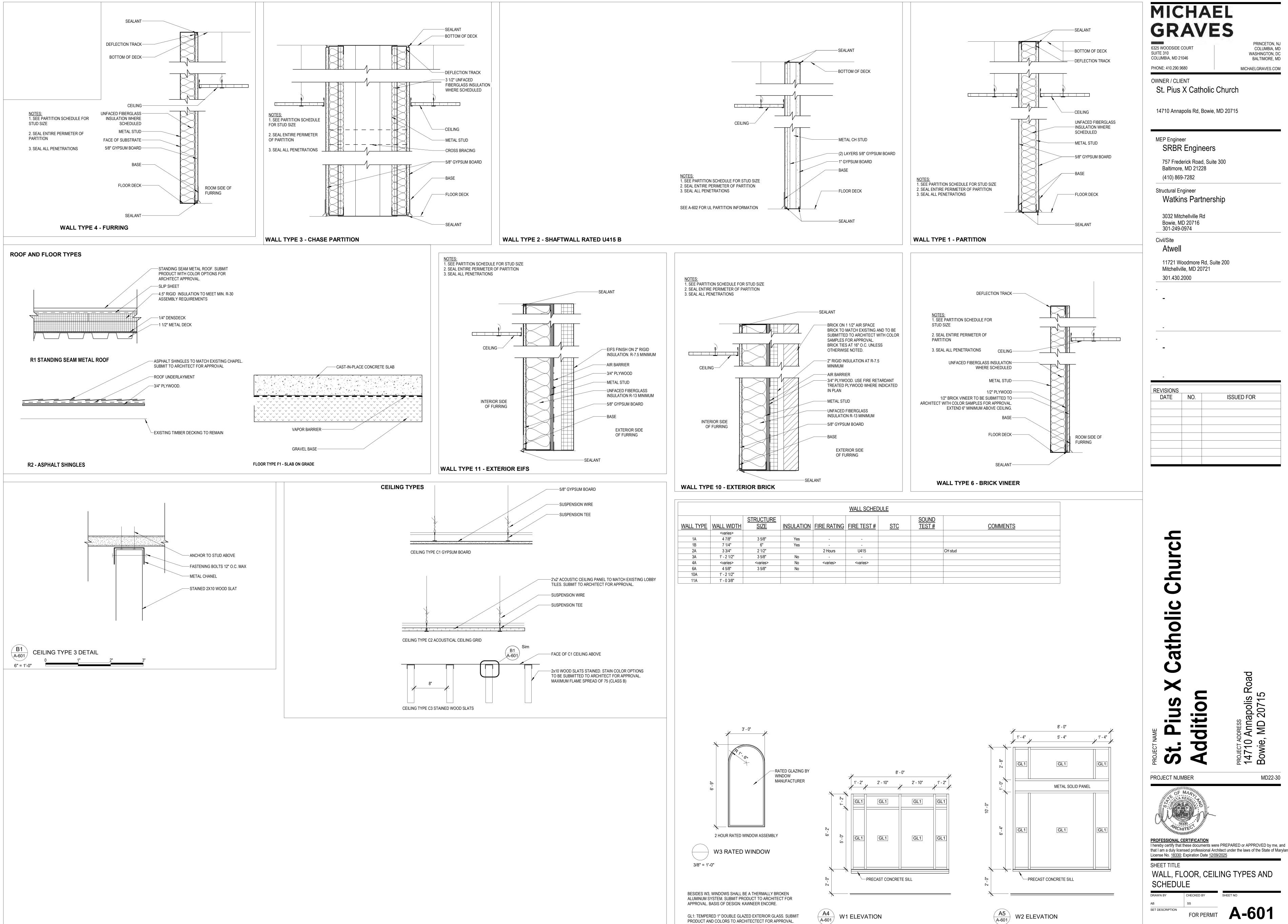




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GL1: TEMPERED 1" DOUBLE GLAZED EXTERIOR GLASS. SUBMIT

PRODUCT AND COLORS TO ARCHITECTECT FOR APPROVAL.

SHGC: 0.36 OR BETTER

U-FACTOR: 0.38 OR BETTER

W1 ELEVATION

2024-04-23

that I am a duly licensed professional Architect under the laws of the State of Maryland.

14710 Anna Bowie, MD

MD22-30

PRINCETON, NJ

COLUMBIA, MD

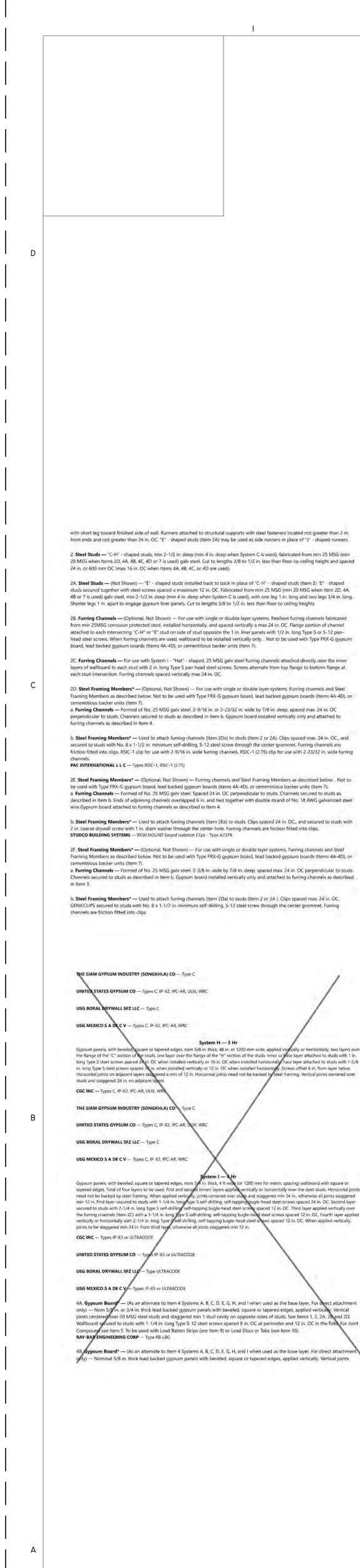
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ISSUED FOR

WALL, FLOOR, CEILING TYPES AND



UL Product iQ"

Design Criteria and Allowable Variances

Design Criteria and Allowable Variances

February 14, 2022

PLITEQ INC - Type GENIECLIP

REGUPOL AMERICA — Type SonusClip

cementitious backer units (Item 7).

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

studs with 1 in, long Type S steel screws spaced backed by steel framing

NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

MAYCO INDUSTRIES INC - Type X-Ray Shielded Gypsum

5. Joint Tape and Compound — (Not Shown)

ROCKWOOL Type AFB, min. density 1.8 pcf / 28.8 kg/m³

joints staggered a min of 12 in. from the gypsum wallboard jo

THERMAFIBER INC - Type SAFB, SAFB F

UNITED STATES GYPSUM CO — Type DCB

companies.

head steel screws, one at the top of the strip and one at the bottom of the strip.

RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

USG MEXICO S A DE C V — Type SLX

4. Gypsum Board* —

steel wire. Gypsum board attached to furring channels as described in Item 4.

KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

System A - 1 Hr

c-ateried over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type 5-12 (or. #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.

4C, Gypsum Board* — As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment

only) - Nom 5/8 or 3/4 in, thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints

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. For Joint

Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batter strips, min 2 in. wide,

max 10 ft long with a max thickness of 0.140 in, placed on the face of stods and attached to the stud with two 1 in, long Type S-8 pan

4D. Gypsum Board* — (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment

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, bead batten strips required behind

vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft

long with a max thickness of 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

Systems A, B, C, E, F, G, H, I

Systems A, B, E, F, G, H, I (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL

Systems C & D

Min. 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and celling runner

7 Cementitious Backer Units* — (System D) — Nom 1/2 or 5/8 in, thick panels, square edge, attached to study over gypsum wallboard with 1-5/8 in, long, Type 5-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board

screws. Joints covered with glass fiber mesh tape, Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal

B. Laminating Adhesive* — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136,1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See

Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified

9. Lead Batten Strips — (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max

5-12 ban 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%

of 0.125 in: Strips placed on the interior face of studs and attached from the exterior face of the stud with two Tia Jong Typ

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

by max 0.085 in thick. Compression fitted or adhered over the screw heads. Lead batter strips and discs to have a purity of \$9.9

only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints

centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D.

nstalled horizontally. Horizontal joints need not be

use of UL Certified products, equipment, system, devices, and materials.

· Authorities Having Jurisdiction should be consulted before construction.

Only products which bear UL's Mark are considered Certified.

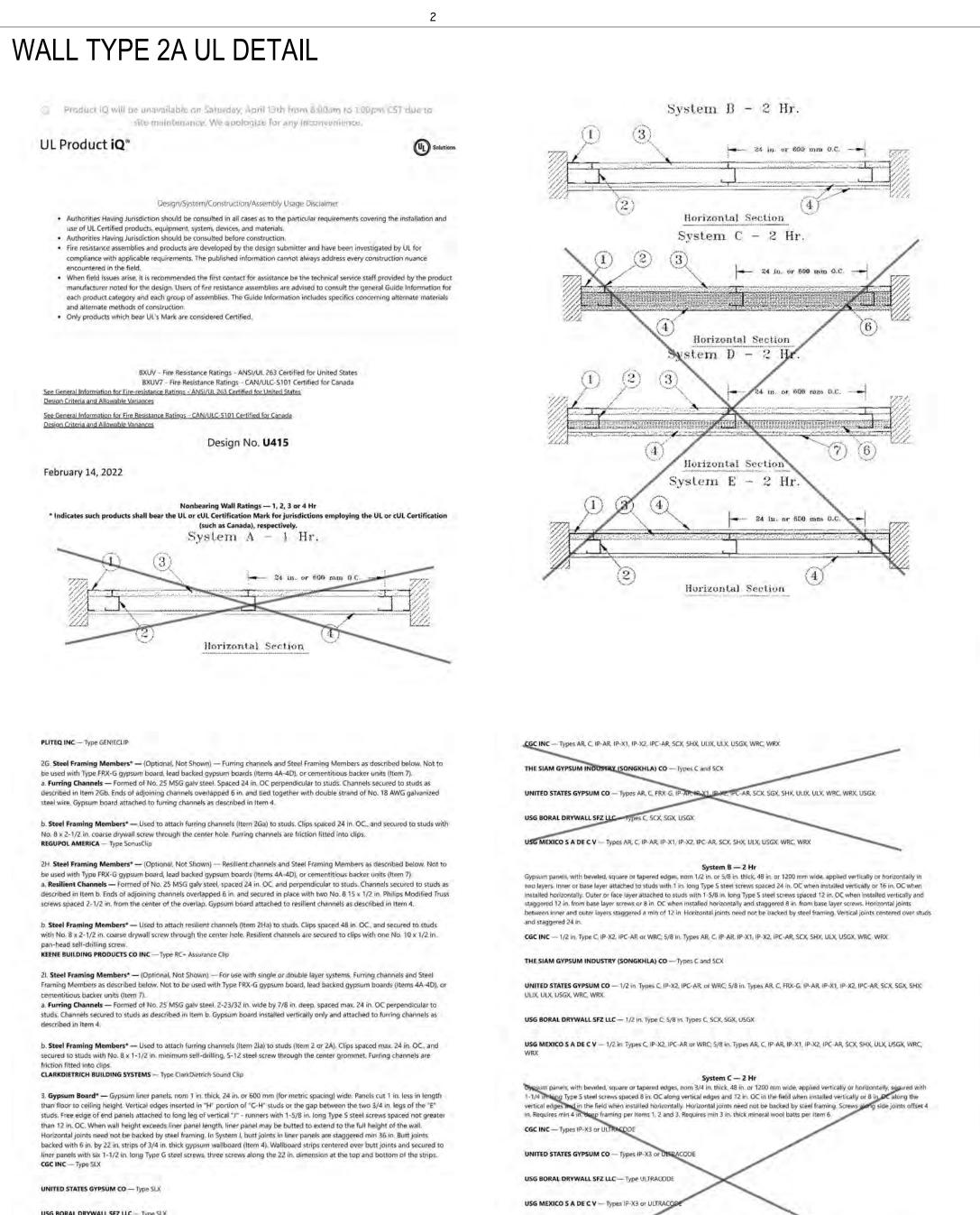
See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States

See General Information for Fire Resistance Ratings - CAN/ULC-5101 Certified for Canada

Design No. **U415**

(such as Canada), respectively.

System A - 1 Hr.



meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsu allboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints. 9A. Lead Batter Strips — (Not Shown, for use with Item 4C) — Lead batter strips, 2 in. wide, max 10 ft long with a max thickness of 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 pap 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 (Item 6) and optional at remaining stud locations. optional at other locations - Max 3/4 in, diam by max 0.125 in, thick lead disce 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 gypoum boards (Item 4A) 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". 10A. Lead Discs — (Not Shown, for use with Item 4C) — 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". 11. Lead Batten Strips — (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of stads and attached to the stud with two min. 1 in. long min. Type 5-8 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 pain 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 4B) and optional at remaining stud locations. 12. Lead Tabs — (Not Shown, For Use With Item 4B) — 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 a screw (that cures the gypsum boards, Item 48) 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. * 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 2022-02-14

square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or hor

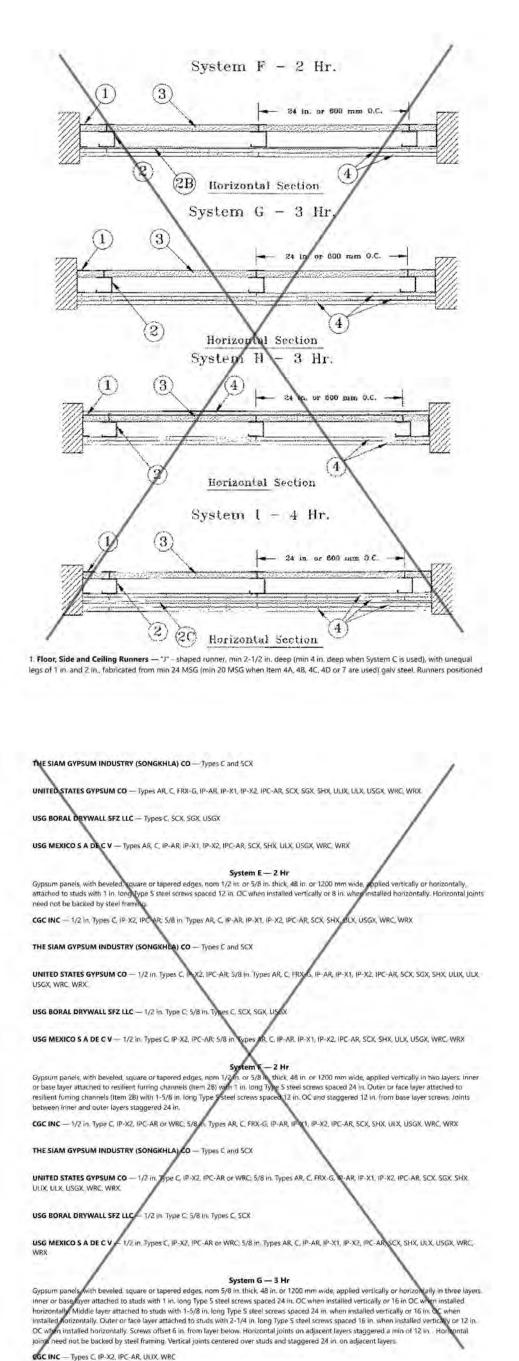
directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horson

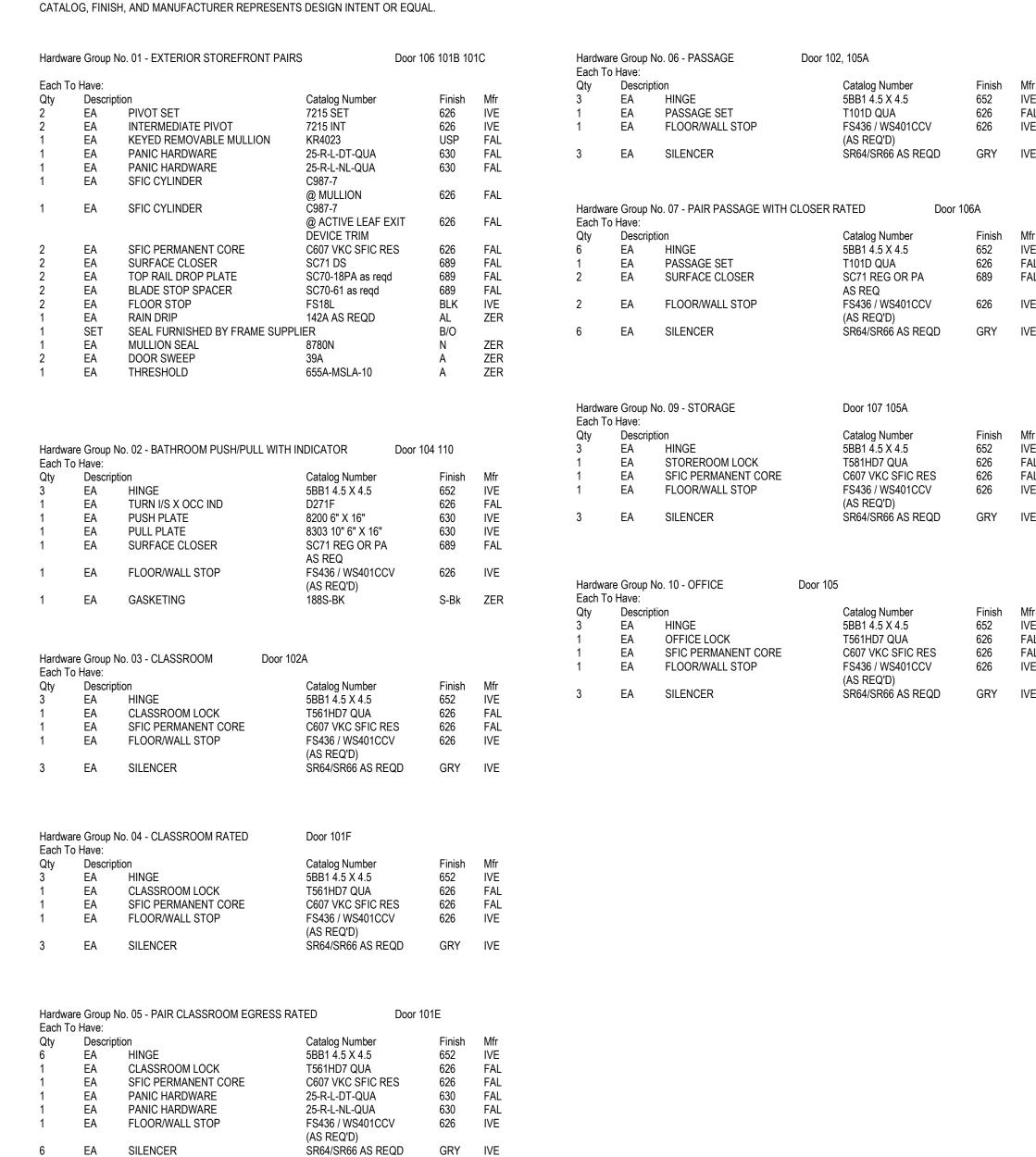
CGC INC - Types AR. C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

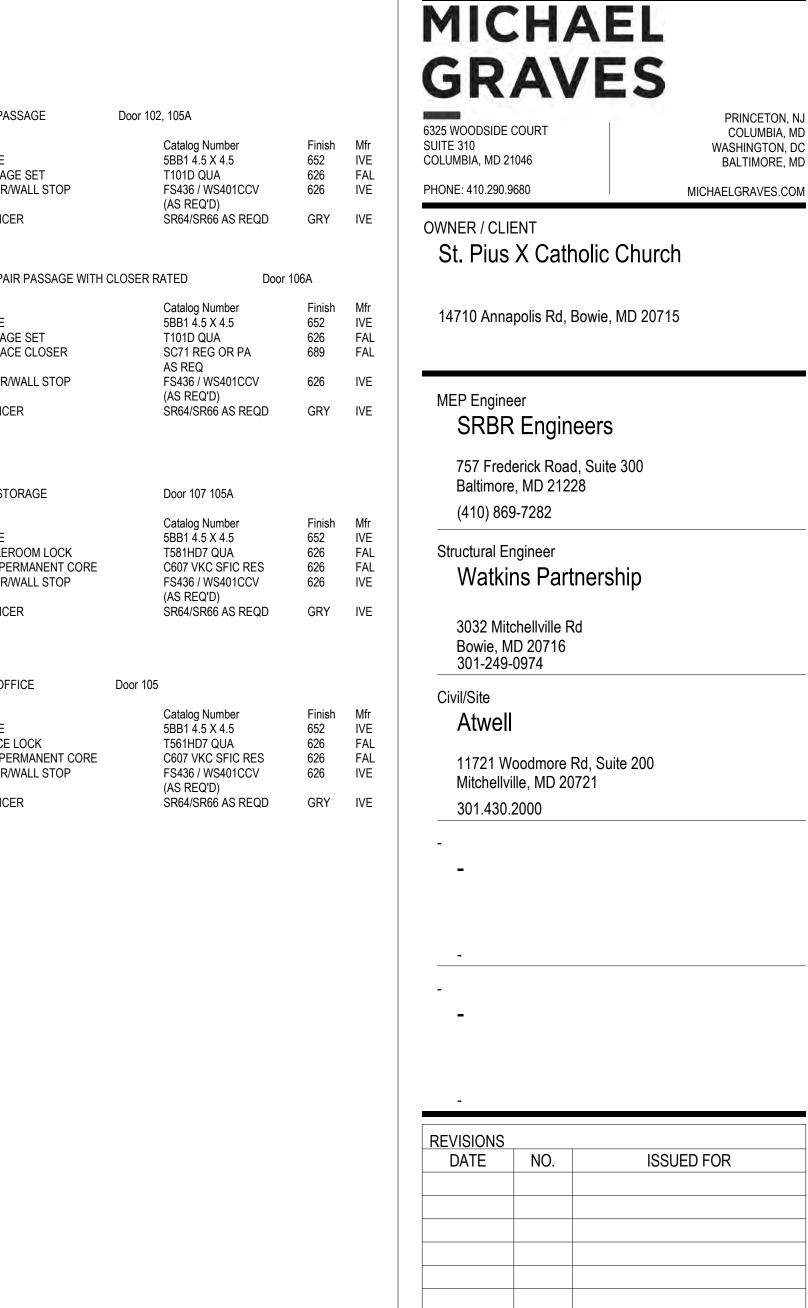
The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product. Ut. Solutions permits the reproduction of the material contained in Product IQ subject to the following conditions: 1. The Guide Information.

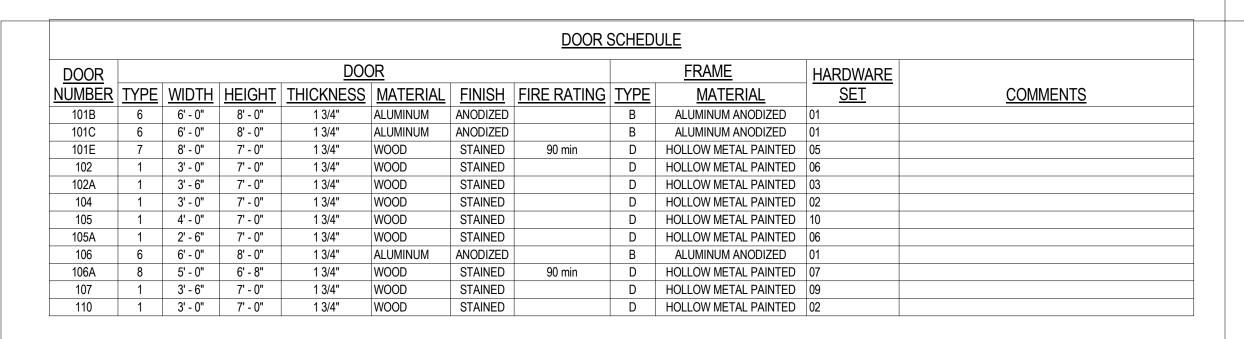
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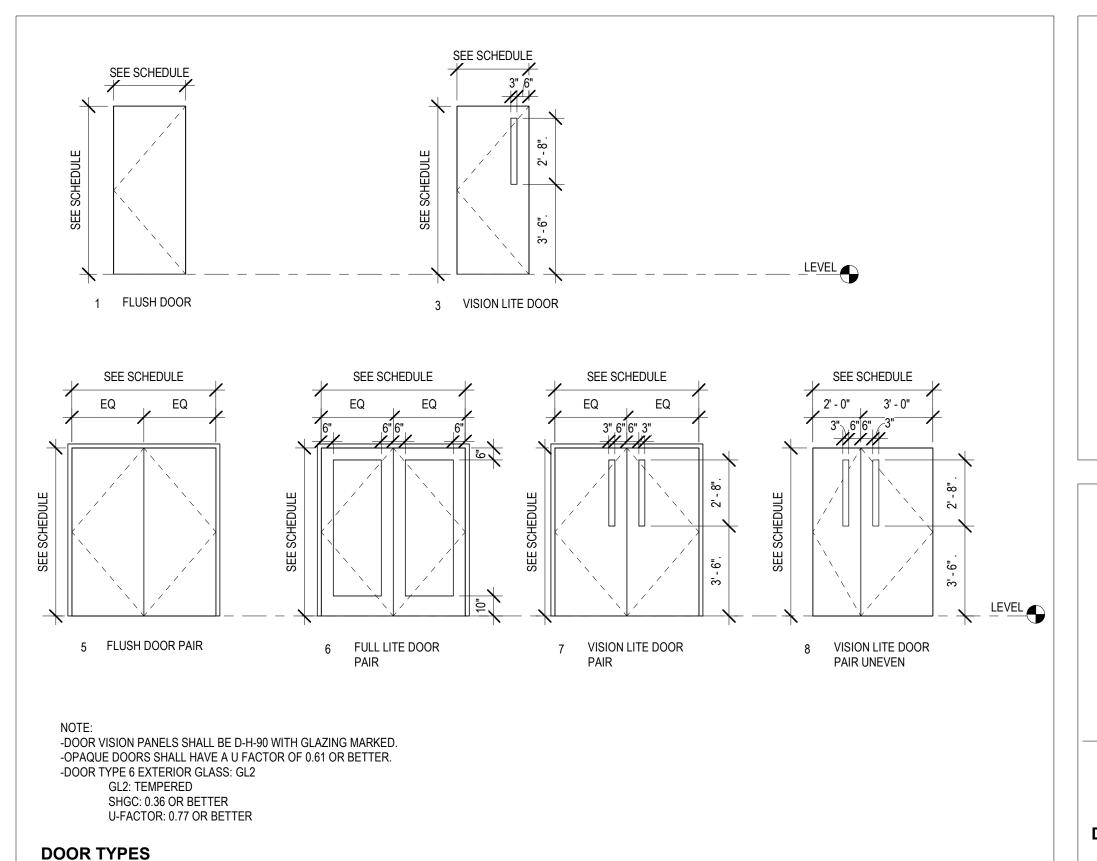


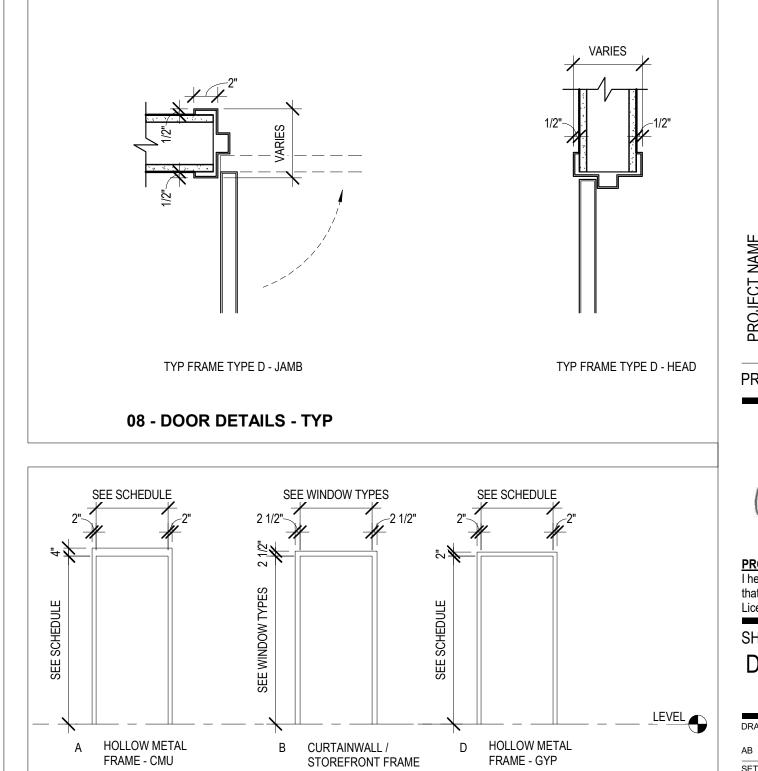


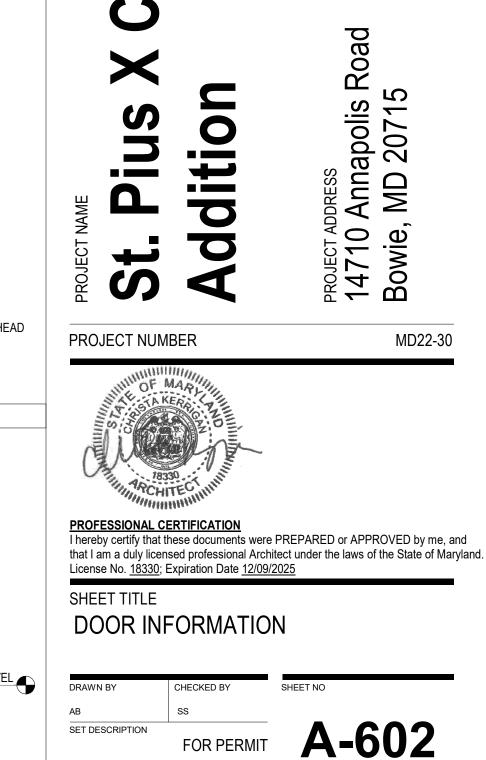
-ALL HANDLES AND OTHER HARDWARE SHALL COMPLY WITH 2010 ADA STANDARDS. -ALL HARDWARE AND DOOR DEVICES SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BEFORE -SUBMITTED HARDWARE SHOULD VISUALLY MATCH NEWER AHRDWARE IN THE ADJACENT LOBBY. -ALL CLOSERS SHALL BE TUNED BY CONTRACTOR TO CLOSE IN NOT LESS THAN 5 SECONDS. -INTERIOR NON-FIRE GLAZING SHALL BE 1/4" TEMPERED. -EXTERIOR DOOR GLAZING SHALL BE GL1.

EA MAG HOLD OPEN TIED TO FIRE ALARM

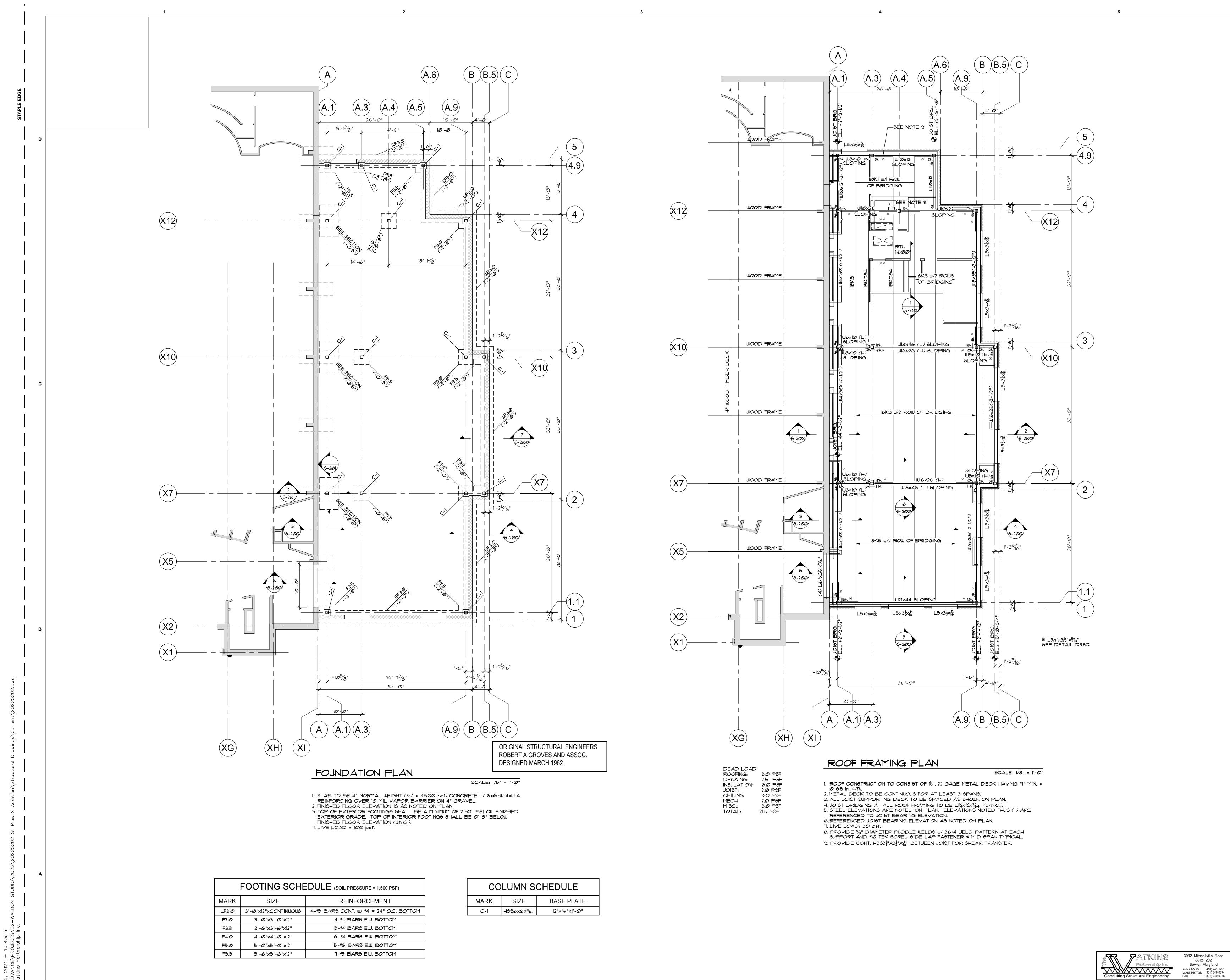
DOOR HARDWARE







DOOR FRAME TYPES



6325 WOODSIDE COURT SUITE 310 COLUMBIA, MD 21046 PRINCETON, NJ COLUMBIA, MD

WASHINGTON, DC

BALTIMORE, MD

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Structural Engineer

301-249-0974

301-430-2000

THE WATKINS PARTNERSHIP, INC.
3018 Mitchellville Road - Suite 101
Bowie, MD 20716

Civil/Site **Atwell**

11721 Woodmore Rd, Suite 200 Mitchellville, MD 20721

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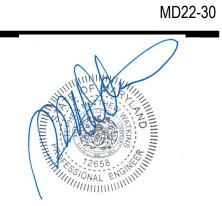
-

	REVISIONS		
	DATE	NO.	ISSUED FOR

St. Pius X Catholic Churaddition

PROJECT ADDRESS
14710 Annapolis
Bowie, MD 2071

PROJECT NUMBER



PROFESSIONAL CERTIFICATION
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a duly licensed professional Engineer under the laws of the state of Maryland.
License No. 12658, Expiration Date 10/11/2025

SHEET TITLE
FOUNDATION & ROOF
FRAMING PLANS

TWP SMW

SCRIPTION

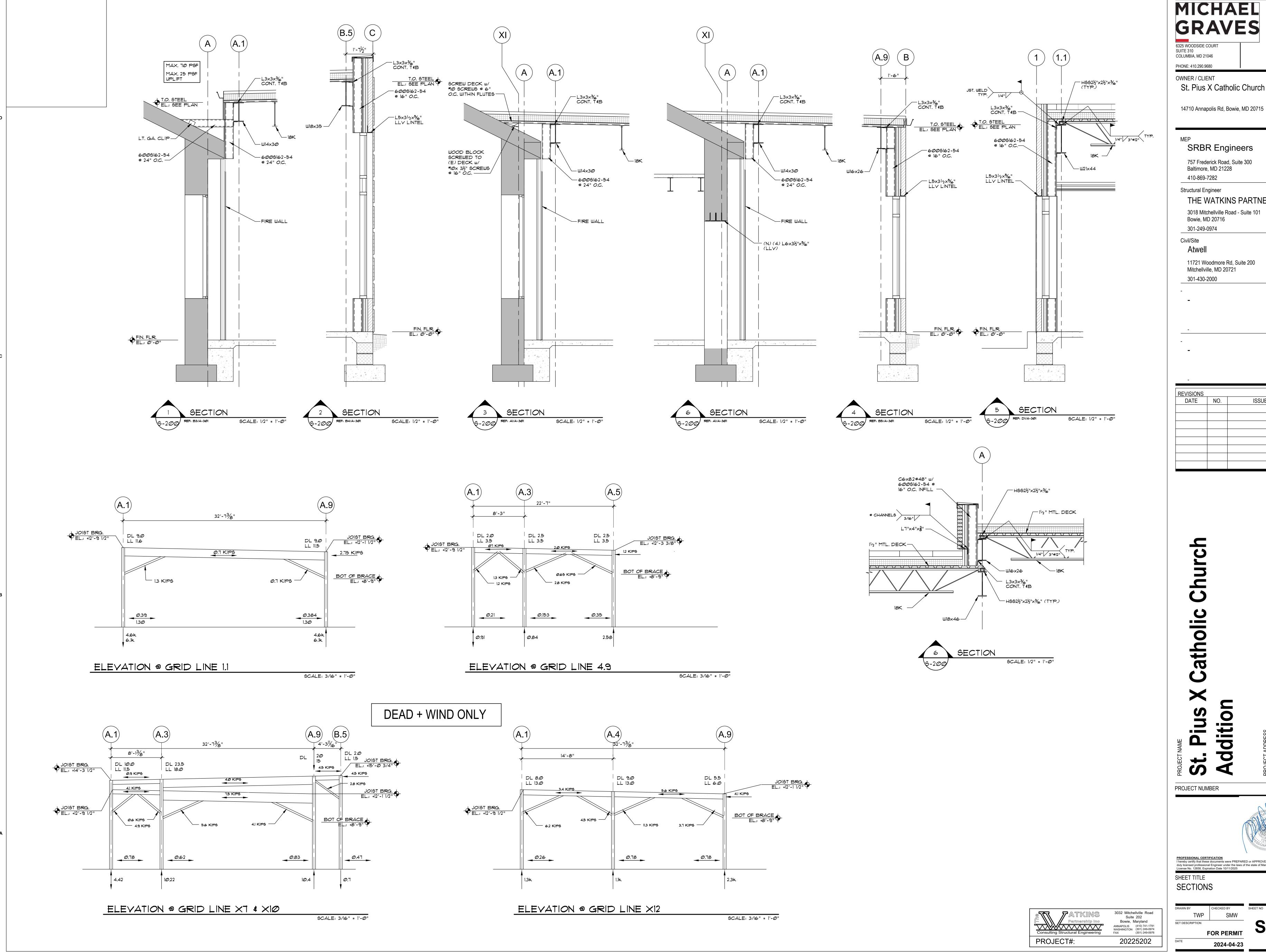
FOR PERMIT

2024-04-23

PROJECT#:

20225202

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PHONE: 410.290.9680 OWNER / CLIENT

St. Pius X Catholic Church

SRBR Engineers

757 Frederick Road, Suite 300 Baltimore, MD 21228 410-869-7282

Structural Engineer THE WATKINS PARTNERSHIP, INC.

3018 Mitchellville Road - Suite 101 Bowie, MD 20716 301-249-0974

Civil/Site Atwell

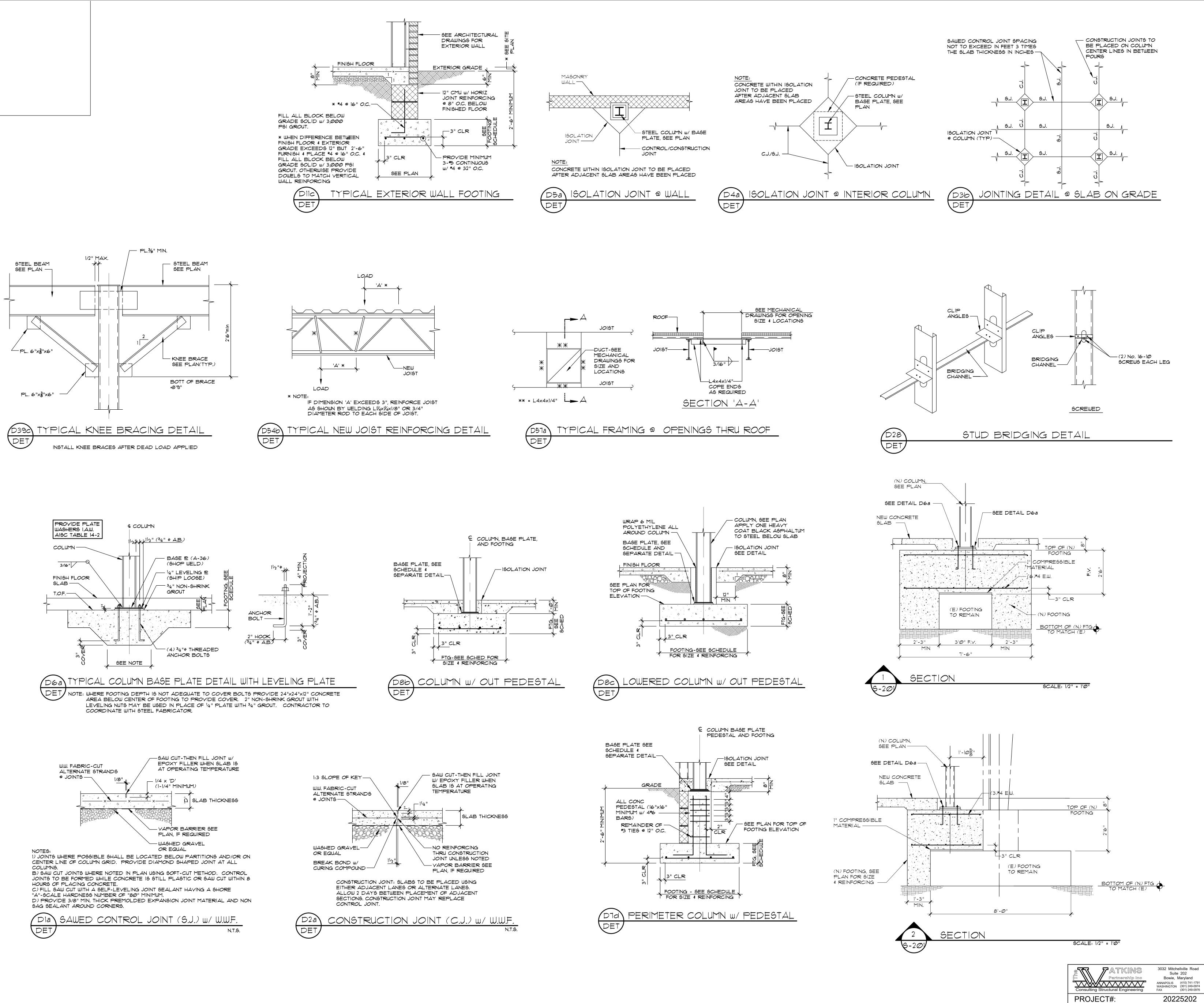
11721 Woodmore Rd, Suite 200 Mitchellville, MD 20721 301-430-2000

ISSUED FOR

Church Catholic PROJECT NUMBER

PROJECT ADDRESS 14710 Annapolis R Bowie, MD 20715

PROFESSIONAL CERTIFICATION
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> PRINCETON, NJ 6325 WOODSIDE COURT SUITE 310 COLUMBIA, MD 21046 PHONE: 410.290.9680

COLUMBIA, MD WASHINGTON, DC BALTIMORE, MD MICHAELGRAVES.COM

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757 Frederick Road, Suite 300 Baltimore, MD 21228 410-869-7282

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THE WATKINS PARTNERSHIP, INC. 3018 Mitchellville Road - Suite 101 Bowie, MD 20716

301-249-0974 Civil/Site

Atwell

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DATE NO. **ISSUED FOR**

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Anna MD 10 Vie,

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MD22-30

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TYPICAL DETAILS

GENERAL NOTES:

GENERAL: ALL NOTES ARE FOR SUPPLEMENTING THE PLANS AND SPECIFICATIONS AND ARE IN NO WAY TO BE CONSIDERED AS EXCLUDING ANY ITEM IN THEM.

COORDINATION: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE STRUCTURAL DRAWINGS AND THEIR DIMENSIONS WITH OTHER DRAWINGS AND IF A CONFLICT EXISTS HE NOTED. SHALL NOT CARRY OUT THE AFFECTED WORK UNTIL THE ARCHITECT HAS RESOLVED THE CONFLICT.

CODE: DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH THE IBC 2018 CODE AND THE PARTICULAR CODES AS REFERENCED IN IBC 2018 BLDG CODE OR IN ACCORDANCE WITH THE ASCE 7-16.

LIVE LOADS: THE STRUCTURE HAS BEEN DESIGNED FOR LIVE LOADS AS FOLLOWS:

FLOOR LOAD: OFFICE: 50 PSF ASSEMBLY: 100 PSF CORRIDOR: 100 PSF

ROOF LOAD: 30 PSF RISK CATEGORY: III

EXPOSURE CATEGORY: B

ULTIMATE DESIGN WIND SPEED (YULT): 120 MPH NOMINAL DESIGN WIND SPEED (YASD): 93 MPH IMPORTANCE FACTOR (IW):1.0 INTERNAL PRESSURE COEFFICIENT: 0.18 MEAN ROOF HT: 16 FT

INTERIOR ZONE: 12.7 PSF END ZONE: 17.4 PSF

POSITIVE ZONES 1 THRU 3:

ROOF PRESSURE -19.1 PSF 2E -27.4 PSF

COMPONENTS & CLADDING: ROOF BASED UPON 10 SQ. FT. AREA: NEGATIVE ZONE 1: -44.7 PSF NEGATIVE ZONE 2 NEGATIVE ZONE 3: -60.9 PSF

WALLS BASED UPON 20 SQ. FT. AREA: NEGATIVE ZONE 4: NEGATIVE ZONE 5: POSITIVE ZONE 4 \$ 5: 18.6 PSF

PARAPETS BASED UPON 10 SQ. FT. AREA: INTERIOR ZONE: -35.3 PSF CORNER ZONE: -40.3 PSF

GROUND SNOW LOAD (PG): 35 PSF EXPOSURE FACTOR (CE):1.0 OAD IMPORTANCE FACTOR (1):1.10 HERMAL FACTOR (CT):1.0 FLAT ROOF SNOW LOAD (PF): 33.0PSF

IMPORTANCE FACTOR (IE):1.25 SITE CLASS:D SPECTRAL RESPONSE ACCEL. SS = 12,93%

SPECTRAL RESPONSE COEFF S DS =12.8% 5D1 = 6.8%

SEISMIC DESIGN CATEGORY:B SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE DESIGN BASED ON EQUIVALENT LATERAL FORCE PROCEDURE RESPONSE MODIFICATION FACTOR (R):3.0 SEISMIC RESPONSE COEFF. (CS): 0.0575 DESIGN BASE SHEAR (CS*W): 5.00 kips

CONSTRUCTION SAFETY: LOADS GREATER THAN THE APPLICABLE DESIGN LOADS SHALL NOT BE PLACED ON THE STRUCTURE. PROVISION SHALL BE MADE FOR ADEQUATE BRACING AND SUPPORT OF ADJACENT CONSTRUCTION, UTILITIES AND EXCAYATIONS. JOB SITE SAFETY AND CONSTRUCTION PROCEDURES

ARE THE RESPONSIBILITY OF THE CONTRACTOR. FOUNDATION: BEFORE PLACEMENT OF FILL, IT IS RECOMMENDED THAT THE SITE BE INSPECTED BY A PROFESSIONAL SOILS ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT FOR PROPER STRIPPING AND PREPARATION FOR RECEIVING THE FILL. EXCAYATION FOR AND BEARING MATERIAL FOR FOUNDATIONS SHOULD BE SUPERVISED AND APPROVED BY A PROFESSIONAL

THE AREAS WITHIN THE BUILDING LIMITS AND THOSE EXTENDING ON ALL THE SIDES SHALL BE PREPARED (BY EXCAVATION OR BY PLACING CONTROLLED FILL) TO A MINIMUM OF SIX (6) FEET OR THE DEPTH OF CONTROLLED FILL, WHICHEVER IS MORE, TO AN ELEVATION (10) INCHES BELOW THE FINISHED FLOOR LEVELS OF

SOILS ENGINEER REGISTERED IN THE JURISDICTION OF THE

SLABS ON GRADE, THE FOOTINGS SHALL BE EXCAVATED AFTER THE BUILDING AREAS HAVE BEEN PROPERLY PREPARED.

MATERIAL SATISFACTORY FOR CONTROLLED FILL AND BACKFILL MATERIAL AROUND AND ABOVE FOOTINGS SHALL INCLUDE CLEAN SOIL OR BANKRUN SAND AND GRAVEL (GW, GC, SC, SM, ML & CL), BUT EXCLUDE HIGHLY PLASTIC CLAYS (MH & CH) OR HIGH SHRINK-SWELL SOILS. THE FILL MATERIALS SHALL BE FREE FROM TOPSOIL ORGANIC CONTAMINATED SOIL AND ROCK FRAGMENTS HAVING A MAJOR DIMENSION GREATER THAN FOUR (4) INCHES, AND

SHALL CONTAIN NO ICE OR SNOW. ALL FOOTINGS SHALL BE CARRIED DOWN A MINIMUM OF ONE FOOT INTO VIRGIN SOIL OR COMPACTED FILL OR AS DIRECTED BY THE SOILS ENGINEER AND, IF EXTERIOR, SHALL BE A MINIMUM OF 2'6" BELOW FINISHED EXTERIOR GRADE, FOOTINGS ARE DESIGNED FOR A SOIL BEARING PRESSURE OF 1,500 PSF. FOOTING ELEVATIONS HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND SHALL NOT BE TAKEN AS A WAIVER OF THESE REQUIREMENTS.

REMOVED FROM THE BOTTOM OF THE FOOTING EXCAVATIONS BEFORE PLACING CONCRETE. FOOTING EXCAYATIONS SHALL NOT BE LEFT OPEN FOR LONG PERIODS. IT IS SUGGESTED THAT THE BOTTOM OF THE FOOTING EXCAVATIONS AND TRENCHES BE PROTECTED BY UNDERCUTTING

WATER, LOOSE SOIL AND SOIL SOFTENED BY WATER SHALL BE

AND PLACING THREE (3) INCHES OF A LEAN-MIX CONCRETE SLAB IMMEDIATELY UPON APPROVAL AND BEFORE REINFORCING STEEL IS PLACED.

DEPTH OF EXCAVATIONS BELOW ANY FOOTINGS SHALL NOT EXCEED 1/2 THE DISTANCE FROM THE NEAREST EDGE OF THAT

WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A WALL BACKFILL BOTH SIDES SIMULTANEOUSLY WITH THE GRADE DIFFERENCE NOT TO EXCEED 2'-0" AT ANY TIME.

PROVISIONS MUST BE TAKEN TO PROTECT ALL CONCRETE WORK FROM FROST DAMAGE WITH SPECIAL ATTENTION PAID TO FOOTINGS AND OTHER CONCRETE ON GRADE PRIOR TO BACKFILLING AND ENCLOSING THE BUILDING.

CARE SHOULD BE TAKEN TO ASSURE THAT DURING PLACING OF CONCRETE FOOTINGS AND SLABS ON GRADE NO ORGANIC MATTER, SALTS, OR CLAYS ARE MIXED WITH THE CONCRETE.

UNLESS OTHERWISE NOTED, FLOOR SLAB ON GRADE TO BE AS SHOWN ON DRAWINGS, FLOOR SLAB TO BE POURED IN STRIPS OR AS NOTED BY THE ARCHITECT, CUT ALTERNATE STRANDS OF WUF AT POUR JOINTS OR USE SCREED KEYS, IN WHICH CASE ALL

COMPACTION: EACH LAYER OF FILL SHALL BE COMPACTED AT OPTIMUM MOISTURE CONTENT (PLUS OR MINUS 2%) TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY.

LOWER DEGREES OF COMPACTION MAY BE PERMITTED BY THE BUILDING OFFICIAL AFTER RECEIPT OF A REPORT FROM THE SOILS ENGINEER CERTIFYING THAT HE HAS INVESTIGATED THE SUBSOIL OF THE SITE, HAS TESTED REPRESENTATIVE FILL MATERIALS AND THAT IN HIS OPINION SUCH LOWER DEGREE OF COMPACTION WILL BE ADEQUATE FOR THE INTENDED USE OF THE FILL.

WITH ASTM D-698 OR ASTM D-1557. ALL FILLS SHALL BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE

THAN 8 INCHES. NO FILL SHALL BE PLACED ON FROZEN GROUND. CONCRETE: TO BE MIXED AND PLACED IN ACCORDANCE WITH THE CURRENT "AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE

REQUIREMENTS FOR REINFORCED CONCRETE". A COPY OF THIS CODE SHALL BE AVAILABLE ON THE PROJECT AT ALL TIMES. ALL REINFORCED CONCRETE, INCLUDING FLOOR TOPPING, TO HAVE A COMPRESSIVE STRENGTH (F'C) OF 3,000 PSI, UNLESS OTHERWISE

SLAB ON GRADE WALLS AND FOOTINGS PEA-GRAVEL GROUT

3,000 PSI (CMU FILL) CONTRACTOR SHALL SUBMIT MIX DESIGNS ACCOMPANIED BY APPROPRIATE GRAPHS AND BACKGROUND DATA FOR APPROVAL MIX DESIGN SHALL INDICATE 7 AND 28 DAYS STRENGTHS. CEMENT CONTENT, AIR CONTENT, WATER-CEMENT RATIO, AMOUNT OF FINE AND COARSE AGGREGATES AND ADMIXTURES, ALL EXTERIOR CONCRETE AND CONCRETE

3,500 PSI

3,000 PSI

EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED. CONCRETE CYLINDER TESTS SHALL BE MADE BY AN INDEPENDENT QUALIFIED TESTING AGENCY, TO BE RETAINED AND PAID FOR BY THE CONTRACTOR, IN ACCORDANCE WITH ASTM SPECIFICATION FOR "COMPRESSION TESTS OF CONCRETE". A SET OF TEST CYLINDERS SHALL BE MADE FOR EACH 50 CUBIC YARDS, OR FRACTION THEREOF, OF CONCRETE PLACED:

NUMBER OF CYLINDERS REQUIRED 7 DAY 28 DAY 56 DAY

THE TESTING AGENCY SHALL BE RESPONSIBLE FOR OBTAINING SAMPLES AND FOR STORAGE.

ALL CONTINUOUS REINFORCING SHALL BE CONTINUOUS OR LAPPED

AT ALL SPLICES, CORNERS AND INTERSECTIONS A MINIMUM OF 30

BAR DIAMETERS (U.N.O.). PROVIDE SPACERS, CHAIRS, TIES AS REQUIRED AND NECESSARY FOR ASSEMBLING, PLACING AND SUPPORTING ALL REINFORCEMENT

CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS GIVEN BE DESIGNED FOR 1000 POUNDS OF AXIAL LOAD AND WELDED IN ACI-318.

ALL CONCRETE WORK, REINFORCING PLACEMENT, FORMWORK AND SHORING SHALL BE INSPECTED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT. CONCRETE QUALITY CONTROL, INSPECTION AND TESTING SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AS WELL AS LOCAL BUILDING CODE REQUIREMENTS.

USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE

USE OF "CEMENT SUBSTITUTES" SUCH AS SLAG OR FLY ASH SHALL NOT BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER. THE USE OF CEMENT SUBSTITUTES WILL ONLY BE PERMITTED DURING SPECIFIC SEASONS, DURING COLD WEATHER, AS DEFINED BY ACI, NO FLY ASH WILL BE PERMITTED FOR USE. THE AMOUNT OF FLY ASH PERMITTED IN THE MIX DESIGN WILL BE LIMITED TO 25% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX. THE AMOUNT OF SLAG PERMITTED IN THE MIX DESIGN WILL BE LIMITED TO 50% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX. WHERE A COMBINATION OF CEMENT SUBSTITUTES IS USED, THE MAXIMUM AMOUNT OF FLY ASH

PERMITTED IN THE MIX DESIGN WILL BE LIMITED TO 15% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE MIX, AND THE REMAINDER OF SLAG WHEN ADDED TO THE FLY ASH SHALL NOT EXCEED 50% BY WEIGHT OF THE TOTAL AMOUNT OF CEMENT IN THE REINFORCING STEEL: SHALL CONFORM TO ASTM SPECIFICATION A615, GRADE 60 FOR BARS, GRADE 40 FOR STIRRUPS AND TIES, AND ASTM SPECIFICATION A185 FOR WELDED WIRE FABRIC (WWF).

CONCRETE PROTECTION AND MINIMUM AREA OF STEEL REQUIRED, TO BE IN ACCORDANCE WITH THE ACI BUILDING CODE AND MANUAL OF STANDARD PRACTICE. MASONRY: LOAD BEARING CONCRETE MASONRY CONSTRUCTION TO BE IN ACCORDANCE WITH THE CURRENT ASCE 5/ACI 530/TMS 402, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", AND THE CURRENT

FABRICATION, INCLUDING ACCESSORIES, ALLOWANCE FOR

ASCE 6/ACI 530.1/TMS/602, SPECIFICATIONS FOR MASONRY STRUCTURES." BEARING WALLS AND PIERS TO CONSIST ENTIRELY OF THE OWNER SHALL EMPLOY AN INDEPENDENT INSPECTION AND TESTING AGENCY TO ASCERTAIN THAT THE MASONRY WALLS ARE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL BUILDING CODE

AND THE AFOREMENTIONED SPECIFICATIONS. ALL MASONRY CONSTRUCTION IS TO BE IN ACCORDANCE WITH ACCEPTABLE INDUSTRY STANDARDS AND METHODS OF

SHOP DRAWINGS FOR ALL REINFORCED MASONRY MUST BE SUBMITTED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. PROVIDE LAYOUT DRAWINGS FOR THE BRACING OF FREE STANDING FOR SMAW, A 200-AMPERE, "HOT BOX" ELECTRIC WELDER OR WALLS, PREPARED AND SEALED BY A REGISTERED

PROVIDE DUR-O-WAL OR EQUAL EVERY BLOCK COURSE BELOW FINISHED FLOOR AND EVERY OTHER COURSE ABOVE FINISHED FLOOR UNLESS OTHERWISE SHOWN ON THE ARCHITECTURAL

PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE

ALL HORIZONTAL WALL REINFORCING IS TO BE TRUSSED AND GALYANIZED. AT CORNERS AND INTERSECTIONS HORIZONTAL WALL REINFORCING TO BE FULLY LAPPED WITH TRUSSED GALVANIZED

HOLLOW LOAD BEARING MASONRY UNITS SHALL CONFORM TO ASTM C90 REGULAR WEIGHT (UNLESS NOTED OTHERWISE). SOLID LOAD BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C145. THE UNIT MASONRY SHALL HAVE A NET UNIT COMPRESSIVE STRENGTH OF 1,500 PSI. THE COMPRESSIVE STRENGTH OF THE UNITS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM C140-70, STANDARD METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS. A 28-DAY PRISM STRENGTH VALUE OF 1,350 PSI

HAS BEEN USED IN THE DESIGN. MORTAR FOR CONCRETE MASONRY SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM SPECIFICATION FOR MORTAR UNIT MASONRY ASTM C210, TYPE M OR S. GROUT SHALL CONFORM TO

CONCRETE GROUT USED TO FILL CORES IN REINFORCED MASONRY UNITS SHALL HAVE A 28-DAY STRENGTH OF 3,000 PSI MIN. SOLID MASONRY IS COMPOSED OF LOAD BEARING UNITS HAVING A NET CROSS-SECTIONAL AREA OF AT LEAST 15% OF THE GROSS AREA (ASTM C145). "100% SOLID" MEANS HOLLOW LOAD BEARING

MASONRY BEARING AT ENDS OF BEAMS, AND A MINIMUM OF 8" DEPTH AND 4" WIDTH CONTINUOUS LENGTH OF 100% SOLID MASONRY AT TIMBER TRUSS, SLAB OR DECK BEARING. DURING CONSTRUCTION, THE MASONRY WALLS SHALL BE PROPERLY BRACED UNTIL ANCHORAGE IS OBTAINED AT THE FLOOR LEVEL AND OR ROOF LEVEL. IT IS RECOMMENDED THAT

BLOCK (ASTM C-90) FILLED WITH GROUT. ALL WALLS BELOW

GRADE ARE TO BE 100% SOLID.

THE UNBRACED HEIGHT NOT EXCEED 6 FEET.

ALL MASONRY IS TO BE LAID IN TYPE M OR S MORTAR WITH FULL HEAD AND BED JOINT. NON-LOAD BEARING MASONRY BLOCK SHALL CONFORM TO ASTM

A PRISM TEST SHALL BE PERFORMED FOR EVERY 5000 SQ. FT. OF MASONRY WALL SURFACE LAID UP. THE PRISM TEST SHALL CONFORM TO THE REQUIREMENTS OF ACI-530.1/ASCE 6/TMS 602, CURRENT EDITION.

STRUCTURAL STEEL: ALL STRUCTURAL STEEL SHALL BE DETAILED. FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (A.I.S.C.) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AND THE AISC CODE OF STANDARD PRACTICE.

IN-PLACE FIELD DENSITY SHALL BE DETERMINED IN ACCORDANCE STRUCTURAL STEEL, TO BE OF DOMESTIC ORIGIN, AND CONFORM

PLATES, ANGLES, & CHANNELS: ASTM A36 HSS SQUARE/RECTANGULAR: ASTM A500, GRADE B, FY=46 KSI HSS ROUND PIPE: ASTM A500, GRADE B, FY=42 KSI ASTM FI554, GRADE 36. ANCHOR BOLTS:

WIDE FLANGE & TEE SECTIONS: ASTM A992

ALL SHOP AND FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS, ASTM A325/A490 (OR WELDED EQUIVALENT) UNLESS OTHERWISE NOTED. SELECT CONNECTIONS TO SUPPORT 50% OF THE TOTAL UNIFORM LOAD CAPACITY IN BENDING FOR EACH GIVEN BEAM AND SPAN OR FOR REACTIONS SHOWN ON PLAN. BOLTING TO BE IN ACCORDANCE WITH RCSC SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS FOR THE EOR'S REVIEW. THE SUPPLIER OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE DESIGN OF ALL STANDARD CONNECTIONS. CONNECTIONS OTHER THAN STANDARD WILL BE DETAILED ON THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL NOTIFY THE STRUCTURAL

ENGINEER OF ANY FABRICATION AND ERECTION ERRORS OR DEVIATIONS TO RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE.

SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ANY SPECIAL COATINGS OR FINISHES REQUIRED ON STRUCTURAL STEEL.

STEEL JOISTS: THE DETAILING, FABRICATION AND ERECTION TO CONFORM TO THE LATEST STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE (S.J.I.). ONLY JOISTS WITH STEEL OF DOMESTIC ORIGIN AND MANUFACTURED IN ACCORDANCE WITH THE STANDARDS OF S.J.I. WILL BE ACCEPTED. BRIDGING SHALL BE WELDED OR BOLTED, ALL SUPPORTED UNITS OR EQUIPMENT SHALL BE DIRECTLY SUPPORTED FROM THE TOP CHORDS OF JOISTS, FOR K SERIES JOISTS, MAXIMUM ALLOWABLE TENSILE STRENGTH -30,000 PSI.

THE FOLLOWING ITEMS MAY BE SUPPORTED BY CONNECTIONS TO THE BOTTOM CHORD PANEL POINTS - SHEET METAL OR FIBERGLASS DUCTS WITH A MAXIMUM CROSS SECTIONAL AREA OF 144 SQUARE INCHES (ONE DUCT PER PANEL), 2" MAXIMUM DIAMETER COPPER TUBING (2 TUBES PER PANEL), 2" MAXIMUM DIAMETER STEEL PIPE (1 PIPE PER PANEL).

SPECIAL JOISTS (SP. JST.) WHERE INDICATED ON PLANS TO HAVE BOTTOM CHORDS EXTENDED AND CONNECTED AT SUPPORTS FOR STABILITY ONLY. THE BOTTOM CHORD SECTION OF SP. JST. SHALL AFTER ALL DEAD LOAD IS IN PLACE.

ALL JOISTS BEARING IN/ON MASONRY OR CONCRETE SHALL HAVE MINIMUM 1/2"X4"X1" BEARING PLATES FOR K SERIES JOISTS ± MINIMUM 1/2"X6"X10" BEARING PLATES FOR LONG SPAN JOISTS ± AND MINIMUM 3/4"X6"X14" BEARING PLATES FOR JOIST GIRDERS. BEARING PLATE LOCATIONS SHALL BE SET BY "FIELD USE" JOIST ERECTION DRAWINGS UNLESS NOTED OTHERWISE ON PLANS.

METAL STUDS AND JOIST: ALL STUDS AND JOIST AND ACCESSORIES SHALL BE AT A MINIMUM OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS. ALL STUD AND JOIST MEMBERS SHALL HAVE A MINIMUM 1-5/8" FLANGE WITH A 1/2" RETURN. RUNNERS SHALL HAVE A MINIMUM I" FLANGE. THE CONTRACTOR'S ENGINEER SHALL PROVIDE SIGNED AND

SEALED SHOP DRAWINGS AND ENGINEERING CALCULATIONS FOR ALL LIGHT GAUGE METAL STUD WORK, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE

LATEST ADOPTED EDITION. ALL STUDS, RUNNERS AND JOISTS SHALL BE FORMED FROM CORROSION-RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A446, WITH A MINIMUM YIELD STRENGTH OF 50 KSI FOR JOISTS AND STUD MEMBERS 16 GAGE AND HEAVIER, 33 KSI FOR JOISTS AND STUD MEMBERS 18 GAGE AND LIGHTER, 33 KSI

WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION

FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS,

ERECTION SHALL BE IN ACCORDANCE WITH AISI AND MANUFACTURER'S RECOMMENDED PRACTICE.

WELDING: ALL WELDING TO BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY (A.W.S.) EXCEPT AS MODIFIED IN A.I.S.C. AND AS INDICATED ABBREVIATIONS LEGENDS ON THE STRUCTURAL DRAWINGS. WELDING ELECTRODES, WELDING PROCESS, MINIMUM PREHEAT AND INTERPASS TEMPERATURES TO BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY. ANY STRUCTURAL STEEL DAMAGED IN WELDING TO BE REPLACED OR ACCEPTABLY REINFORCED.

WELDING, LIGHT GAUGE FRAMING: ARC WELDING IS A SUITABLE ALTERNATE TO CONNECTING FRAMING WITH USG SCREWS, HOWEVER, SCREWS MUST BE USED TO FASTEN PANEL SURFACING TO FRAMING MEMBERS. GENERALLY, GAS METAL ARC WELDING (GMAW) - MIG WELDING IS PREFERRED FOR LIGHTER 20-GA. MEMBERS - AND SHIELDED METAL ARC WELDING (SMAW) - STICK WELDING - IS COMMONLY USED FOR 18-GA. AND HEAVIER STEEL MEMBERS.

FOR GMAW, A WIRE-FEED WELDER IS SUITABLE FOR FAST, UNIFORM WELDING IN SHOP ASSEMBLY, EQUIPMENT SHOULD HAVE CAPACITY OF 60 TO 100 AMPERES AT APPROXIMATELY 25 VOLTS AND REQUIRES 220-YOLT, 3-PHASE ELECTRIC SERVICE. WIRE ELECTRODES, AWS E-705-3, E-705-5 OR E-705-6 WITH CO2, ARGON-OXYGEN OR ARGON-CO2 GAS SHIELDING ARE USED. GASOLINE GENERATOR-WELDER IS SUITABLE. THIS EQUIPMENT IS SIMPLY OPERATED, VERSATILE AND PORTABLE, MAKING IT IDEAL FOR JOB FABRICATION AND ASSEMBLY, FLUX-COVERED, MILD STEEL ELECTRODES AWS E-6012, E-6013 OR-7014 ARE USED.

ALL WELDING SHOULD BE DONE ACCORDING TO CURRENT AMERICAN WELDING SOCIETY PRACTICES, MANUFACTURES SHOULD BE CONSULTED FOR EQUIPMENT RECOMMENDATIONS AND PROPER ELECTRODE SELECTION. AFTER WELDING, ZINC-RICH PAINT SHALL BE APPLIED TO THE WELD AREA TO PROVIDE CORROSION RESISTANCE. ADEQUATE VENTILATION IS NECESSARY TO PROPERLY VENT FUMES.

ROOF DECK: TO BE 1-1/2" DEEP 22 GAUGE STEEL WITH RIBS SPACED AT 6" O.C. WITH THE FOLLOWING MINIMUM PROPERTY: MOMENT OF INERTIA = 0.169 INCHES 4 / FT. THE SHEET STEEL SHALL HAVE RECEIVED PRIME PAINT, SHOP APPLIED OVER CLEANED AND PHOSPHATED STEEL. DECK UNITS SHALL BE OF SUFFICIENT LENGTH TO SPAN OVER THREE OR MORE SUPPORTS. FASTEN TO SUPPORTING STEEL WITH FUSION WELDS.

SHOP DRAWINGS: FOR ALL STEEL STRUCTURAL ITEMS THAT ARE PART OF THIS PROJECT AND MUST BE REVIEWED BY THE STRUCTURAL ENGINEER. PARTIAL SUBMISSIONS OF SHOP DRAWINGS FOR REVIEW MUST BE PRE-APPROVED BY THE STRUCTURAL ENGINEER.

INCOMPLETE OR SHOP DRAWINGS WHICH HAVE NOT BEEN CHECKED BY THE DETAILER, STRUCTURAL STEEL SUPPLIER, AND CONTRACTOR WILL NOT BE REVIEWED BY THE STRUCTURAL ENGINEER.

NUMEROUS DIMENSIONAL ERRORS, LACK OF CONNECTION COORDINATION, AND MISSING MEMBER FABRICATION DETAILING ARE CONSIDERED PROOF THAT THE SHOP DRAWING HAVE NOT BEEN CHECKED OR ARE INCOMPLETE. PROVIDE A MINIMUM OF 24" DEPTH AND 16" LENGTH OF 100% SOLID THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS FOR

BEFORE SUBMISSION TO THE STRUCTURAL ENGINEER.

OF SHOP DRAWINGS PER SUBMISSION.

CONFORMANCE WITH THE STRUCTURAL/ARCHITECTURAL DRAWINGS

ANY DEVIATIONS FROM THE CONTRACT STRUCTURAL/ARCHITECTURAL DRAWINGS SHALL BE INDICATED IN RED ON THE SHOP DRAWINGS BY THE CONTRACTOR. ONLY SHOP DRAWINGS SIGNED AND DATED BY THE CONTRACTOR WILL BE REVIEWED BY THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER WILL PROCESS A MAXIMUM OF 5 SETS

THE STRUCTURAL ENGINEER SHALL HAVE 12 WORKING DAYS TO PERFORM THE SHOP DRAWING REVIEW.

CONTRACT DOCUMENTS MAY NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS WITHOUT A WRITTEN AGREEMENT BETWEEN THE GENERAL CONTRACTOR AND THE ENGINEER OF RECORD.

IF ELECTRONIC FILES ARE REQUESTED, A USE AND ROYALTY FEE WILL BE ASSESSED FOR ELECTRONIC COPIES PER EACH SHEET OF THE CONTRACT DRAWINGS, AND MUST BE PAID IN FULL PRIOR TO THE ENGINEER RELEASING THE SHOP DRAWINGS. THE FOLLOWING SHOP DRAWINGS AND SUBMITTALS SHALL BE

CONCRETE MIX DESIGN GROUT MIX DESIGN CONCRETE MASONRY BLOCK AND REINFORCING CONCRETE REINFORCING STRUCTURAL STEEL STEEL JOIST METAL DECK COLD FORMED METAL FRAMING

PROVIDED FOR REVIEW AND APPROVAL:

WELDING CERTIFICATIONS

AND REPLACED.

STEEL INSPECTION: STRUCTURAL STEEL SHALL BE INSPECTED. BOTH IN SHOP AND IN FIELD, BY A QUALIFIED INSPECTION AGENCY APPROVED BY THE STRUCTURAL ENGINEER, WRITTEN INSPECTION REPORTS SHALL BE FILED WITH THE STRUCTURAL ENGINEER WITHIN 5 WORKING DAYS OF THE ACTUAL INSPECTION, INSPECTORS SHALL BE NOTIFIED OF ALL PHASES OF STRUCTURAL STEEL CONSTRUCTION AND WELDING BY THE GENERAL CONTRACTOR. <u>STRUCTURAL TESTS AND SPECIAL INSPECTIONS:</u> AN INDEPENDENT TESTING AND INSPECTION AGENCY SHALL INSPECT, MONITOR AND/OR TEST THE FOLLOWING IN ACCORDANCE WITH THE MOST STRINGENT REQUIREMENTS OF THE LOCAL JURISDICTION, IBC, TENANT REQUIREMENTS, CONTRACT DOCUMENTS, AND APPROVED SHOP DRAWINGS. THE TESTING AND INSPECTION AGENCY WILL BE PAID BY THE OWNER. REPORTS OF INSPECTIONS SHALL BE SUBMITTED TO THE ARCHITECT, ENGINEER, AND BUILDING OFFICIAL

TESTING AND INSPECTION SHALL BE UNDER THE DIRECTION OF AN ENGINEER LICENSED TO PRACTICE IN THIS LOCAL JURISDICTION. REPORTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN A TIMELY MANNER, UNDER THE LICENSURE SEAL AND SIGNATURE OF THE INSPECTION ENGINEER.

CONSTRUCTION CONSIDERED NON-COMPLIANT SHALL BE REMOVED

SITE PREPARATION, FILL AND/OR BACKFILL PLACEMENT AND COMPACTION, FIELD DENSITY TESTING, VERIFICATION OF SOIL BEARING CAPACITY FOR FOOTINGS AND FOUNDATIONS.

VERIFY AND INSPECT IN ACCORDANCE WITH TABLE 1704.4 OF IBC. INSPECT REINFORCING LOCATION, STRENGTH, BAR SIZE, PLACEMENT, AND CLEARANCES. INSPECT CONCRETE LOCATION, STRENGTH, SLUMP, PLACEMENT, CURING, AND ADDITIVES.

TESTING AND INSPECTION OF ENGINEERED MASONRY IN ACCORDANCE WITH: IBC LEVEL 1 SPECIAL INSPECTION FOR BUILDING CATEGORY: 1, 11 IBC LEVEL 2 SPECIAL INSPECTION FOR BUILDING CATEGORY: IV INSPECT PROPORTIONS OF SITE PREPARED MORTAR AND GROUT

TYPE OF REINFORCEMENT, ANCHORS AND CONNECTORS. INSPECT GROUT SPACE AND CONTINUOUSLY INSPECT GROUT PLACEMENT. PREPARATION AND TESTING OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS AS REQUIRED BY PROJECT SPECIFICATIONS. STRUCTURAL STEEL

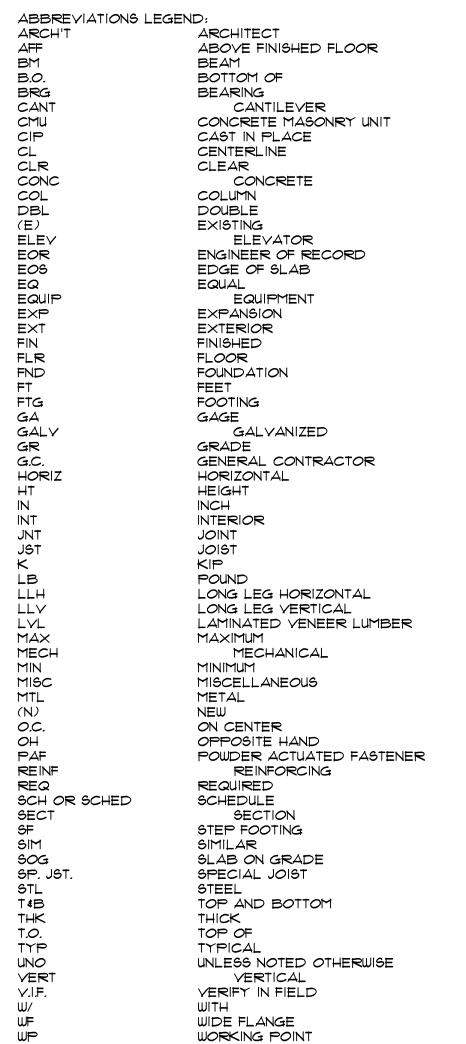
INSPECT MASONRY UNITS AND MORTAR JOINTS, SIZE, GRADE AND

VERIFICATION AND INSPECTION OF STRUCTURAL STEEL IN ACCORDANCE WITH TABLE 1704.3 OF IBC. VERIFY WELDING MATERIALS, WELDING PROCEDURES AND QUALIFICATIONS OF WELDERS IN ACCORDANCE WITH AWS DI.I PRIOR TO START OF FABRICATION. INSPECT MATERIALS FOR STRUCTURAL STEEL, HIGH STRENGTH STEEL BOLTS, NUTS AND WASHERS, AND WELD FILLER MATERIALS. INSPECT INSTALLATION OF HIGH STRENGTH BOLTS IN ACCORDANCE WITH AISC SPECIFICATIONS. INSPECT JOINT FIT-UP PRIOR TO WELDING. INSPECT ALL JOINTS AND CONNECTIONS. INSPECT SHEAR STUDS FOR COMPOSITE CONSTRUCTION.

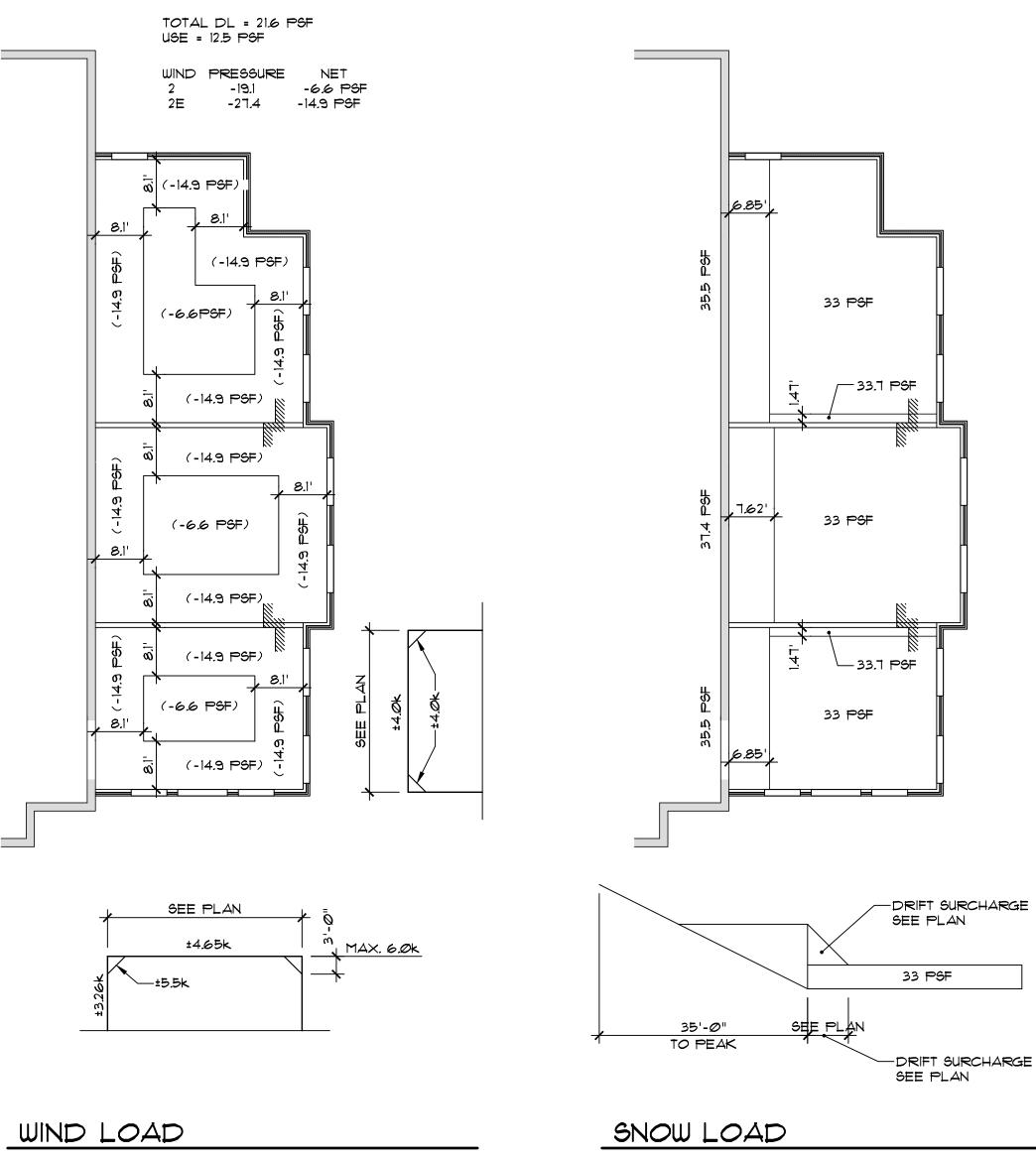
COLD-FORMED METAL FRAMING INSPECT TYPE, SIZE, GAGE AND FINISH OF COLD-FORMED METAL FRAMING IN EXTERIOR CURTAINWALL OR BEARING WALL CONSTRUCTION. INSPECT CONNECTIONS OF MEMBERS TO EACH OTHER AND TO THE SUPPORTING STRUCTURE.

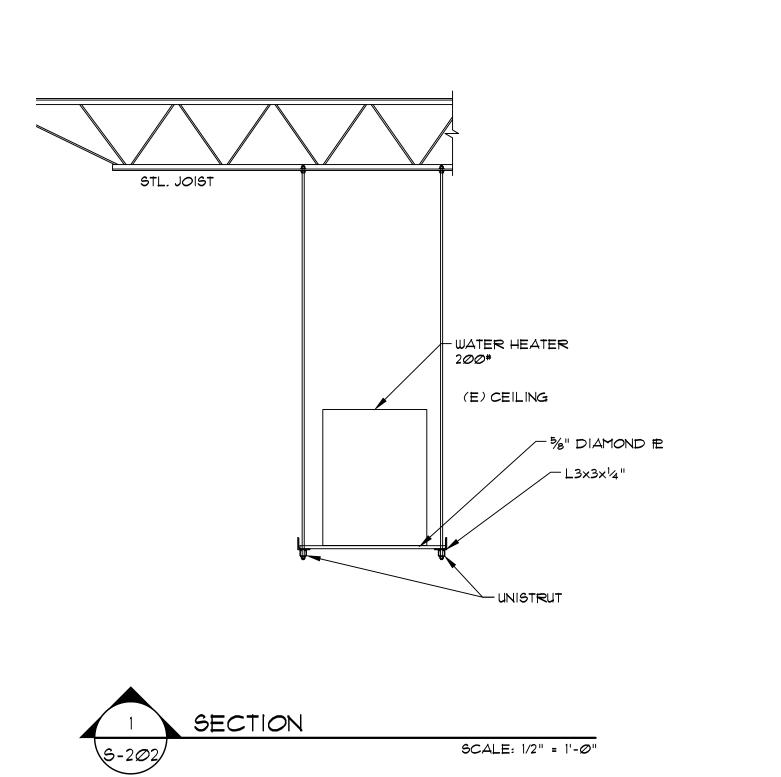
INSPECT TYPE, SIZE, POSITION, AND CONNECTIONS.

INSPECT TYPE, SIZE, GAGE AND FINISH OF METAL DECKING. INSPECT FIELD WELDING OF METAL DECK TO SUPPORTS, SIDE LAP FASTENING, AND CONNECTIONS OF METAL DECK ACCESSORIES.

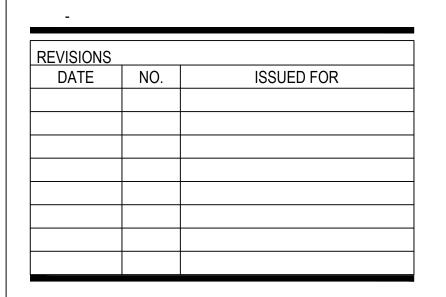


WELDED WIRE FABRIC





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PROJECT NUMBER MD22-30 PROFESSIONAL CERTIFICATION

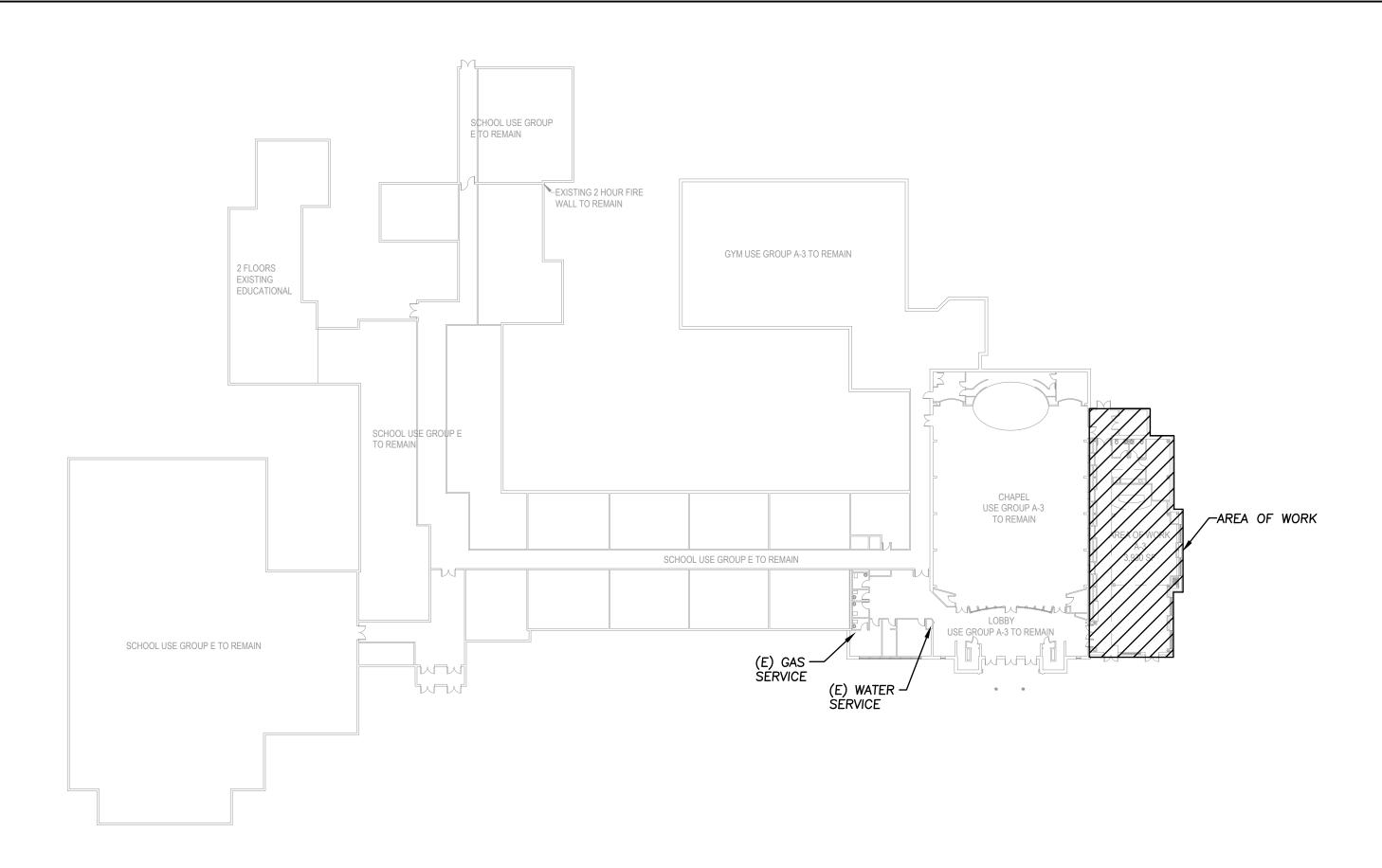
I hereby certify that these documents were PREPARED or APPROVED by me, and that I am a duly licensed professional Engineer under the laws of the state of Maryland. License No. 12658, Expiration Date 10/11/2025

SHEET TITLE **GENERAL NOTES**

2024-04-23

3032 Mitchellville Road Suite 202 Bowie, Maryland ANNAPOLIS (410) 741-1791 WASHINGTON (301) 249-0974 (301) 249-0976 20225202 PROJECT#:

STRANDS AT THE KEY MAY BE CUT.



KEY PLAN/AREA OF WORK

GENERAL REQUIREMENTS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DOCUMENTS TO INCLUDE PLANS AND SPECIFICATIONS FOR THE ARCHITECTURAL AND OTHER WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION. THE CONTRACTOR SHALL ISSUE A FORMAL REQUEST FOR INFORMATION FOR CLARIFICATIONS OF ANY DISCREPANCIES

3. PRE-CONSTRUCTION:

NOTIFY THE A/E TEAM OF ANY DISCREPANCIES PRIOR TO FINAL ROUGH-IN.

1. REFER TO ARCHITECTURAL EQUIPMENT PLANS, FURNITURE PANS, ELEVATIONS, CASEWORK ELEVATIONS AND OTHER

B. EXISTING SANITARY WORK:

- 1. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING SANITARY MAINS, SIZES, AND CLEANOUTS IN THE AREA OF NEW PLUMBING WORK.
- 3. CONTRACTOR SHALL CONFIRM MAIN LINES ARE CLEAR OF DEBRIS AND FREE FLOWING PRIOR TO TIE-IN WORK.
- 4. CONTRACTOR SHALL PROVIDE AN AS-BUILT SKETCH OF THE EXISTING LINES CONFIRMING INVERTS, SIZES, AND

IN THE DOCUMENTS PRIOR TO FINAL BID SUBMISSION.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL REVISED DOCUMENTS TO INCLUDE ARCHITECTURAL PLANS

SPECIAL CONDITIONS

A. EQUIPMENT COORDINATION:

- 2. VERIFY LOCATION OF NEW TIE-IN POINTS TO THE MAIN SANITARY LINE, VERIFICATION WILL INCLUDE DIGGING NECESSARY TEST PITS TO VERIFY LOCATION AND APPROPRIATE DEPTH PRIOR TO COMMENCEMENT OF THE WORK
- DIRECTION OF FALL.

1. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF THIS PROJECT.

AND WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION. THIS INCLUDES REVIEW OF ALL ADDENDUMS, REVISIONS AND SHOP DRAWINGS THAT AFFECT THE WORK OF THIS DIVISION. THE CONTRACTOR SHALL

RELATED PLANS FOR ADDITIONAL MEP PROVISIONS.

- AND TRENCHING NEW LINES.



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MEP Engineer



SRBR No: 23002

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FOR PERMIT 04/23/2024

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SHEET TITLE COVER SHEET PLUMBING

FLOOR PLAN - PLUMBING - DWV

FLOOR PLAN - PLUMBING - WATER & GAS

SCALE: 1/8" = 1'-0"
0 2' 4' 8' 16'

PLAN NOTES

- A ELECTRIC WATER HEATER MOUNTED ON SHELF. SEE PIPING DETAILS FOR MORE INFORMATION
- B 1¼" COLD WATER TO WATER SERVICE. CONNECT TO EXISTING PIPE AND INSTALL SERVICE ISOLATION VALVE AT CONNECTION SEE POO1 FOR SERVICE LOCATION
- C 2" GAS. EXTEND BACK TO GAS SERVICE AND CONNECT TO EXISTING PIPE. CONTRACTOR TO CONFIRM GAS SERVICE IS ADEQUATE SIZE. SEE POO1 FOR SERVICE LOCATION
- D 2" VENT UP, TRANSITION TO 3" BEFORE PENETRATING
- E 4" SANITARY. CONNECT TO SANITARY LINE IN THIS APPROXIMATE LOCATION. CONTRACTOR TO FIELD VERIFY LOCATION AND INVERT
- F 2" GAS UP TO ROOFTOP UNIT. PROVIDE DRIP LEG, UNION AND SHUT-OFF VALVE. PROVIDE A PRV WITH OUTDOOR RATED VENT LIMITER
- G 1/2" CW AND HW DOWN IN WALL TO LAVATORY
- H 11/4" CW DOWN IN WALL TO TOILET FLUSH VALVE
- 1½" CW AND ¾" HW DOWN IN WALL. EXTEND ½" PIPING OVER TO LAVATORY, ¾" PIPING SERVICE SINK FAUCET AND 1½" COLD WATER TO TOILET FLUSH VALVE.
- J 1/2" CW AND HW DOWN IN WALL TO SINK. EXTEND 1/2" CW OVER TO ICE-MAKER BOX
- K 2" WASTE UP FROM BELOW SLAB AND 1½" VENT UP IN WALL TO ABOVE CEILING

 L PIPES UP IN BULKHEAD TO UPPER CEILING. INSTALL DIRT LEG IN GAS PIPE AT BOTTOM OF RISER.
- M PROVIDE SLEEVES AND FIRE CAULK PIPES FOR 2 HOUR RATING SEE UL-1479.

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DATE NO. ISSUED FOR

DATE NO. ISSUED FOR

s X Catholic Church

PROJECT NAME

Addition

Addition



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SRBR No: 23002

SHEET TITLE
FLOOR PLAN - PLUMBING

SRBR SRBR

FOR PERMIT

. All work shall be done in accordance with applicable building, mechanical, plumbing, electrical and energy codes and standards. These include, but are not limited to the 2021 International Building Code (IBC), International Mechanical Code (IMC), International Plumbing Code (IPC), National Fire Protection Association (NFPA), American Society of Refrigeration and Air Conditioning Engineers (ASHRAE). If any existing code violations are found, the contractor shall notify the project manager immediately.

4. The contractor shall maintain a competent superintendent on site at all times who will oversee all work and ensure the construction is done in a safe, clean and professional manner. He shall ensure the work is done in accordance with the project specifications, all layout is correct and accurate and the quality of the workmanship meets or exceed industry standards. He shall also verify all manufacturer instructions are being followed for installation and setup.

5. The contractor shall submit equipment shop drawings for all major equipment and materials including, but not limited to plumbing fixtures and plumbing specialties (valves, pipe, fittings, insulation). Shop drawings shall indicate materials, dimensions, weights, performance data and warranty information.

6. The contractor shall maintain a set of as-built documents on site at all times. The drawings shall maintain red-line markup of all deviations from the deign documents and include pertinent information such as critical dimensions and elevations.

7. All new equipment and materials shall be reviewed by the contractor before ordering to ensure the equipment will fit in the given space, is suitable for the location, arrangement of duct, piping ,etc, and can be serviced once installed. All required service access space shall be maintained and room shall be provided to remove filters. Verify equipment electrical characteristics meet the existing available power. Provide access doors in all locations where valves, dampers, equipment, etc that require service are located behind hard ceilings or walls. Access doors shall be appropriately sized for the required access. Access doors shall be fire rated to match the wall or ceiling assembly

8. Domestic water piping shall be type L copper with soldered joints and fittings. As an alternate, Press-Fit, fittings and joints may be used. All valves shall be bronze. Shut-off valves shall be full port ball valves. Provide manual air vents at all high points and a vacuum breaker at the cold water inlet to all domestic hot water heaters. Each individual fixture shall have an isolation valve. Exposed piping under plumbing fixtures shall be chrome plated. All valves, fittings joints faucets, etc with wetted parts, shall be NSF-61 compliant for low lead materials. Piping shall be supported as required by the manufacturer but no less than every 4 ft. Hangers shall be supported from the building structure and never hung of other pipes, ducts or equipment. Install escutcheons on all pipes penetrating walls and floors that are exposed. Install shock absorbers on all hot and cold water supply lines with quick closing valves such as clothes washers and flush valves. Shock absorbers inside walls or above gypsum ceiling shall be made accessible via access doors.

9. Gas piping shall be schedule 40 black steel pipe. Piping 2" and smaller shall have threaded joints and fittings. Piping 2½" and larger shall have welded fittings and joints. Piping exposed to the outside shall be painted with a rust/corrosion proof paint - caution yellow. Provide a drip leg at all change in elevation and at each appliance. Also install a shut-off valve and union at each appliance.

10. All new water piping shall be hydrostatically tested at 100 psig pressure for a minimum of four (4) hours. All new gas piping shall be tested at 20 psig for four (4) hours. The contractor shall document the test with date, time, pressure and include a diagram showing the section of

11. All domestic water piping shall be insulated with preformed fiberglass pipe insulation with all service jacket. Apply PVC covers over all fittings and valve. Insulation thickness shall be in accordance with the 2021 IECC: 1 thick insulation for all pipe sizes.

12. Drain, waste and vent piping above ground shall be schedule 40 PVC pipe solid wall. Foam core piping is not allowed. The contractor may use cast iron nu-hub pipe with extra heavy duty bands at his option. All piping shall be installed according to the International Plumbing Code. DWV pipe shall be tested for leaks by filling the system from the main house vent. The test shall be tested up to 20 feet water pressure. Piping shall be installed in accordance with the international Plumbing Code (IPC). AC condensate drain pipe shall either be Type L copper. Provide a trap at the connection to all AC drain pans. Trap shall have an integral cleanout. All AC condensate piping shall be insulated with 1" thick preformed fiberglass pipes insulation with ASJ.

FIRE PROTECTION

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Contractor shall extend the existing sprinkler system to suite the new floor plan. The system shall be designed and installed in accordance with all applicable codes including, but not limited to, NFPA-13. The sprinkler designer shall be a licensed and experienced contractor and shall bear all of the required certifications for design and installation. The contractor shall hydraulically calculate the pressure drop in the piping system and shall provide a complete set of shop drawings to be submitted to the State Fire Marshal's office for review and approval.

Sprinkler heads shall be quick response type and shall be semi-recessed pendants. The sprinkler heads shall be installed in the center of ceiling tiles and shall be installed in a symmetric fashion. Provide seven (7) extra sprinkler heads of each kind and a wrench to fit each type. These extra heads shall be stored in the new metal box furnished by this contractor.

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PLUMBING FIXTURE SCHEDULE

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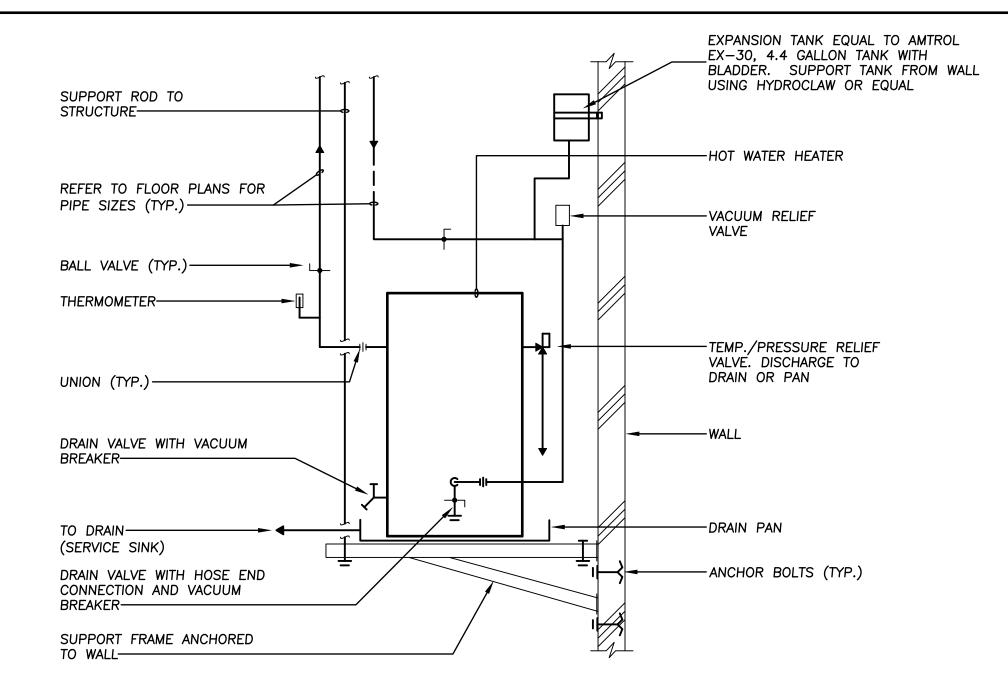
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ELECTRIC WATER HEATER SCHEDULE										
MARK	LOCATION	STORAGE CAPACITY (GALLONS)	RECOVERY (GPH)	TEMPERATURE RISE * (°F)	WATTS	VOLTAGE V–P–H	MANUFACTURER & MODEL No.	REMARKS		
EWH 1	ABOVE CEILING	19	11	90°F.	1 @ 2,500	120-1-60	A.O. SMITH EJCT-20	SEE PIPING DIAGRAM ON SHEET THIS SHEET. WATER HEATER SHALL MEET OR EXCEED ASHRAE 90.1b EFFICIENCY REQUIREMENTS.		

* - BASED ON 50°F. ENTERING WATER TEMP. SET-POINT OF WATER HEATER TO BE 120°F.



ELECTRIC HOT WATER HEATER PIPING SCHEMATIC (WALL MOUNTED)

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Provide angles access characters access (Alexa PASSE).

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REVISIONS DATE NO. ISSUED FOR

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PROJECT NUMBER

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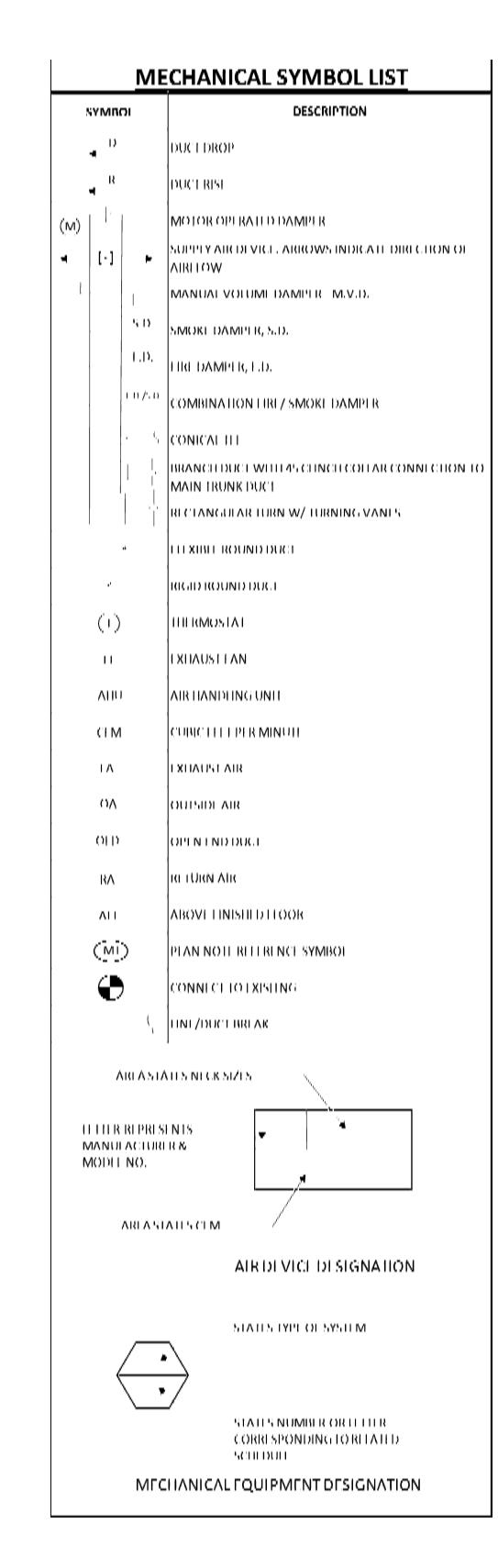


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SHEET TITLE PLUMBING DETAILS & SCHEDULES



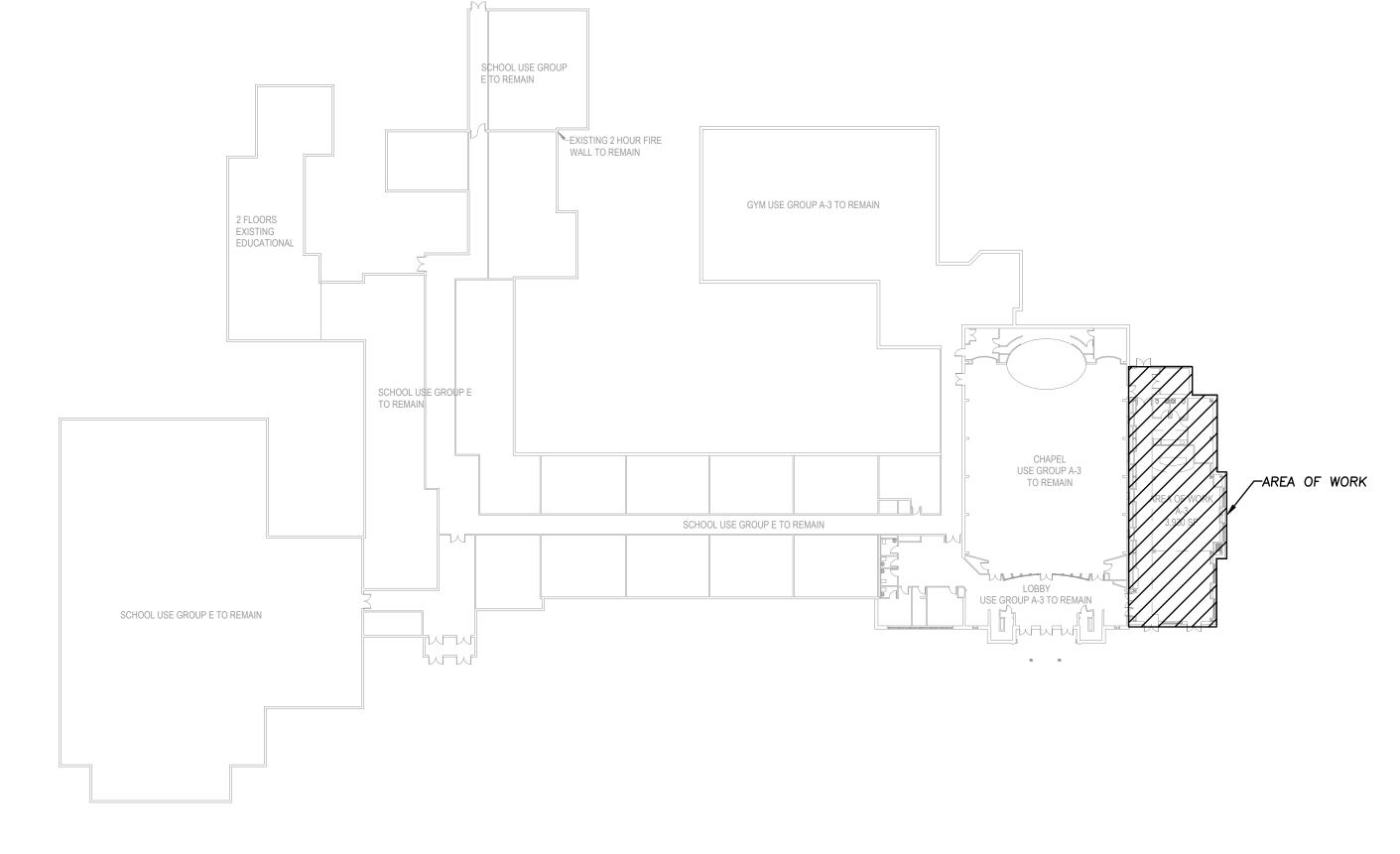
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Balance RTU to maximum 1200 cfm (24% OA)



KEY PLAN/AREA OF WORK

_		
No.	Sheet No.	Sheet Title
1	M001	COVER SHEET - MECHANICAL
2	M101	FLOOR PLAN - MECHANICAL
3	M201	MECHANICAL SCHEDULES AND SPECIFICATIONS
4		
5		
6		
7		
8		-
9		
10		*

GENERAL REQUIREMENTS

1. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF THIS PROJECT.

2. BID PHASE:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DOCUMENTS TO INCLUDE PLANS AND SPECIFICATIONS FOR THE ARCHITECTURAL AND OTHER WORK IUNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION, THE CONTRACTOR SHALL ISSUE A FORMAL REQUEST. FOR INFORMATION FOR CLAR FICATIONS OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO FINAL BID SUBMISSION.

3. PRE-CONSTRUCTION:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL REVISED DOCUMENTS TO INCLUDE ARCHITECTURAL PLANS AND WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION. THIS INCLUDES REVIEW OF ALL ADDENDUMS, REVISIONS AND SHOP DRAWINGS THAT ASPECT THE WORK OF THIS DIVISION. THE CONTRACTOR SHALL NOT BY THE AVEITEAM OF ANY DISCREPANCIES PRIOR TO FINAL ROUGH-IN.

Table 1: Summary Calculation Used to Determine Outdoor Air Ventilation Rates - Mechanically Ventilated Reference - 2018 IMC St. Pius Zone Identification International Mechanical Code Compliance People Outdoor Area Outdoor Air Rate (cfm/ person) Person (Properson) People Outdoor Area Outdoor (Cfm/ person) People Outdoor (Cfm/ Boom Name System Occupancy Category | (cfm/sf) | |#/1000sf; | Vbz Effectiveness (CFM) (CFM) (CFM) 117 5.00 0.06 10.00 2 17 0.8 21 100 0.21 0.24 24 Main Entry Lobby 204 0.00 0.12 0.00 0 24 0.8 31 110 0.28 0.24 26 0.8 22 100 0.22 0.24 24 Storage Room 244 0.00 0.06 0.00 0 15 0.8 18 100 0.18 0.24 965 7.50 0.18 70.00 63 646 0.8 808 2,350 0.34 0.24 98 660 7.50 0.06 65.00 50 415 0.8 518 1,550 0.33 0.24 173 Gathering Room B Lecture Classroom 161 0.00 0.30 0.00 0 48 0.8 60 240 0.25 0.24 173 Y 176 7.50 0.06 40.00 8 71 0.8 88 350 0.25 0.24 444 Y Kitchenette Kitchen Mall Common Area Circulation 264 0.00 0.06 0.00 0 16 0.8 20 100 0.20 0.24 790 1587 5,000 185.00 Max Zp = 0.34Ev = 0.8Table 403.3.1.1.2.3.2 (IMC) Ps = 125 Maximum Occupancy D = 0.68Ps/(Sum Pz)

PROJECT DESCRIPTION

FURNISH AND INSTALL A NEW HEATING, VENTILATION AND AIR CONDITIONING CONTROL SYSTEM FOR THE NEW ADDITION OF THE FACILITY.

THE NEW HVAC SYSTEM SHALL INCLUDE A NEW PACKAGED GAS FIRED ROOFTOP UNIT WITH SUPPLY AND RETURN DUCTWORK, OUTSIDE AIR INTAKE AND CONTROLS. THE UNIT SHALL BE DESIGNED TO CONDITION THE SPACE ADEQUATELY UNDER PEAK CONDITIONS AS ESTABLISHED BY ASHRAE STANDARDS.

THE ROOFTOP UNIT SHALL BE EQUIPPED WITH ECONOMIZER CONTROLS, TEMPERATURE CONTROLS, GAS HEAT AND SINGLE ZONE VARIABLE AIR VOLUME CONTROL

PROVIDE MECHANICAL EXHAUST FROM THE TOILET ROOMS AND JANITOR CLOSET

ALL WORK SHALL BE IN COMPLIANCE WITH THE INTERNATIONAL MECHANICAL AND PLUMBING CODES, THE FUEL GAS CODE AND BUILDING CODE AS WELL AS LOCAL CODES AND STANDARDS.



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SHEET TITLE

2024-04-23

OWNER / CLIENT St. Pius X Catholic Church 14710 Annapolis Rd, Bowie, MD 20715

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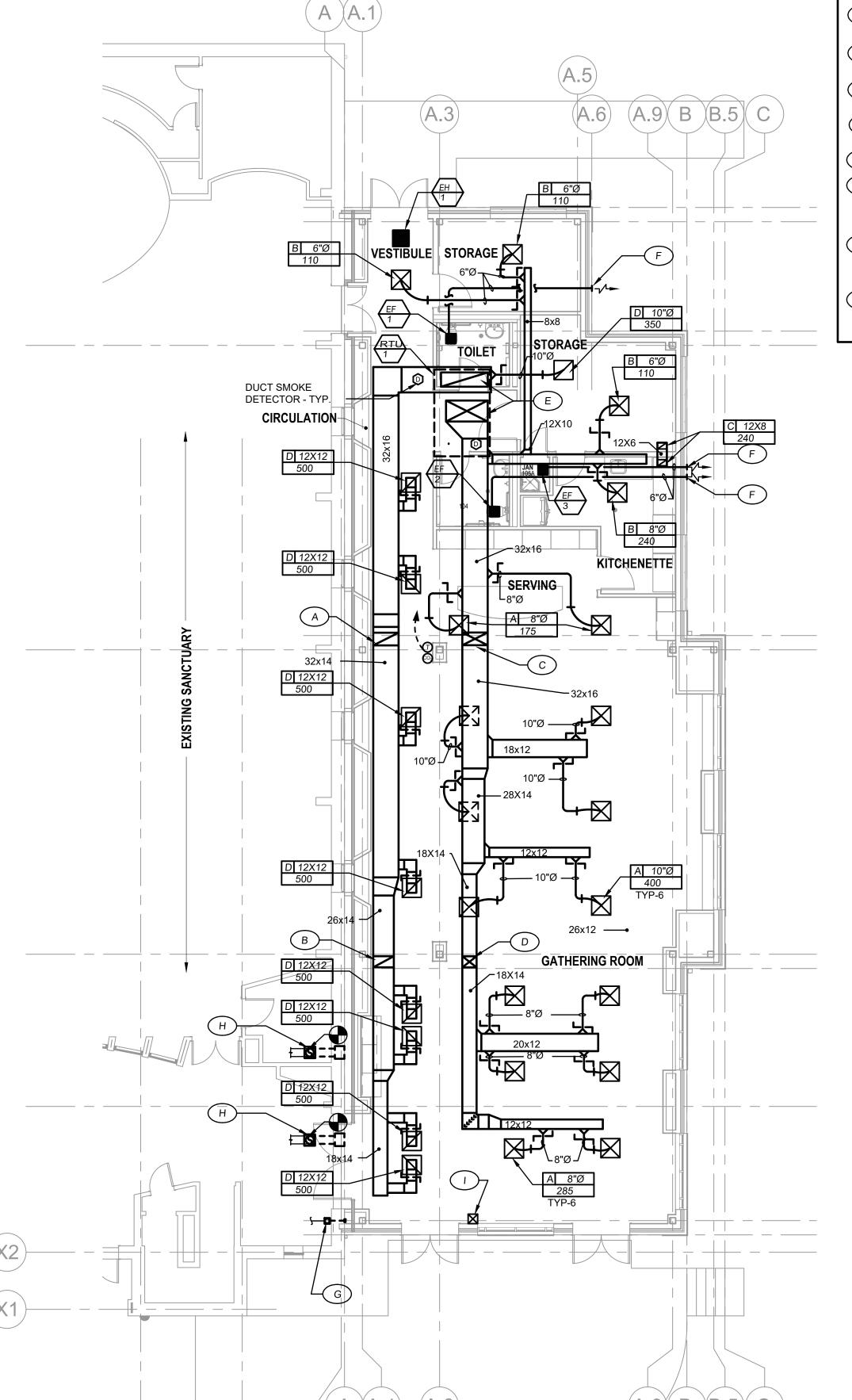
PROJECT NUMBER

COVER SHEET MECHANICAL

14710 ABOWIE,

MD22-30

ROOF PLAN - MECHANICAL



FLOOR PLAN - MECHANICAL

PLAN NOTES

- A 32"X14" RETURN DUCT UP IN BULKHEAD TO HIGHER CEILING ELEVATION
- B 26"X14" RETURN AIR DUCT DOWN IN BULKHEAD TO LOWER CEILING AREA
- C 32"X16" SUPPLY DUCT UP IN BULKHEAD TO HIGHER CEILING ELEVATION
- D 18"X14" SUPPLY DUCT DOWN IN BULKHEAD TO LOWER CEILING ELEVATION SUPPLY AND RETURN DUCT UP TO ROOFTOP UNIT FULL SIZE OF UNIT CONNECTION.
- 6"Ø EXHAUST WALL CAP WITH INSECT SCREEN.

DAMPER AND FLASHING PLATE

- G CUT EXISTING EXHAUST DUCT AND REMOVE WALL CAP. EXTEND EXHAUST DUCT UP THROUGH ROOF AND TERMINATE WITH ROOF VENTILATOR EQUAL BROAN 634M WITH BUILT-IN BACKDRAFT
- REMOVE EXISTING WALL LOUVER AND CUT EXISTING INTAKE DUCT BACK AS SHOWN. EXTEND INTAKE DUCT UP THROUGH ROOF AND TERMINATE WITH ROOF CAP EQUAL TO GREENHECK MODEL GRSI-10 WITH BIRD SCREEN AND FLASHING PLATE.
-) EMERGENCY SHUTDOWN SWITCH FOR RTU-1. REFER TO DRAWING E101 FOR MORE INFORMATION. COORDINATE EXACT LOCATION OF SWITCH WITH FIRE MARSHAL.

GENERAL NOTES

- RELOCATE TWO (2) EXISTING OUTSIDE AIR INTAKES ON SIDE OF EXISTING BUILDING
- 2. DEMOLISH EXISTING EXHAUST WALL CAP ON EXISTING BUILDING

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FOR PERMIT 04/23/2024



Phone: 410/869-7282 Web: www.SRBRengineers.com SRBR No: 23002

FLOOR PLAN - MECHANICAL

MECHANICAL SPECIFICATIONS

- 1. Furnish and install a complete and operational system in accordance with drawings and these specifications. Provide all materials whether specified or not for a complete and operational system that complies with all required codes and standards. All materials and equipment shall be installed in accordance with the manufacturer's instructions and all applicable codes and standards. Equipment shall be installed complete including power, controls, supports, etc. Equipment and associated controls shall be functionally tested in all operating modes. All equipment and materials shall be new unless otherwise indicated.
- 2. The contractor shall be responsible for visiting the site prior to bid and becoming familiar with all existing conditions that may affect his work. The contractor shall include in his bid any required labor and materials necessary to modify, remove or relocate existing work to allow for the new work to be installed. If the contactor believes the new work cannot be installed as shown in the drawings, he shall inform the project construction manager immediately. There shall be no additional compensation for failure to include coordination with existing conditions in the scope and cost.
- 3. All work shall be done in accordance with applicable building, mechanical, plumbing, electrical and energy codes and standards. These include, but are not limited to the 2021 International Building Code (IBC), International Mechanical Code (IMC), International Plumbing Code (IPC), International Fuel Gas Code (IFGC), National Fire Protection Association (NFPA), specifically section 90A, American Society of Refrigeration and Air Conditioning Engineers (ASHRAE), Sheet Metal and Air Conditioning Contractors National Association (SMACNA), National Electrical Code. If any existing code violations are found, the contractor shall notify the project manager immediately.
- 4. The contractor shall maintain a competent superintendent on site at all times who will oversee all work and ensure the construction is done in a safe, clean and professional manner. He shall ensure the work is done in accordance with the project specifications, all layout is correct and accurate and the quality of the workmanship meets or exceed industry standards. He shall also verify all manufacturer instructions are being followed for installation and setup.
- 5. The contractor shall submit equipment shop drawings for all major equipment and materials including, but not limited to, rooftop unit, split systems, fans, ductwork, air devices, etc. Shop drawings shall indicate materials, dimensions, weights, performance data and warranty information.
- 6. The contractor shall maintain a set of as-built documents on site at all times. The drawings shall maintain red-line markup of all deviations from the deign documents and include pertinent information such as critical dimensions and elevations.
- 7. All new equipment and materials shall be reviewed by the contractor before ordering to ensure the equipment will fit in the given space, is suitable for the location, arrangement of duct, piping, etc, and can be serviced once installed. All required service access space shall be maintained and room shall be provided to remove filters. Verify equipment electrical characteristics meet the existing available power.
- 8. Roof mounted equipment shall be set on 14" roof curbs that are flashed into the existing roofing system.
- 9. New equipment shall be identified using industry standard methods indicating type of unit and sequential number such as RTU-1, 2, 3 or EF-1, 2, 3. Replacement equipment shall retain the original identification numbering. Install permanently engraved plastic or vinyl ID plates. Identify associated unit disconnect if not mounted directly on the unit.
- 10. All equipment shall be started and tested by the installing contractor. The equipment shall be tested in all modes of operation. All operating set points shall be programmed in coordination with the building operating staff. Verify all peripheral components including, but not limited to, control dampers, sensors, interlocks, etc operate as intended and specified. The contractor shall provide a one year parts and labor warranty starting from the date the project is accepted and considered substantially complete by the architect. At the time the equipment is turned over to the owner, all units shall have clean filters.
- 11. Ductwork shall be constructed of galvanized sheet metal fabricated and installed in accordance with the latest SMACNA standards. Ductwork shall be constructed to 2" we working pressure and shall have a minimum thickness of 26 gage. Duct transitions and turns shall utilize fittings. Install flexible duct connectors at each connection to equipment with moving parts (ie fan coil units and exhaust fans, etc). All supply and return ductwork shall be insulated with 1.5" thick foil faced fiberglass duct-wrap with integral vapor barrier, minimum insulating value R-6 and constructed with a seal class A. Flexible branch ducts shall be permitted provided they are UL sited for such duty, are pre-insulated and carry a helical spring to retain its shape. Flexible branch ducts shall not exceed 8 ft in length and shall not turn more than 270 degrees.
- 12. All new air systems shall be balanced by a third-party firm certified by AABC or NEBB. Test and Balance all supply air outlets, return air inlets, exhaust air inlets and outside air intake on the affected rooftop units and split system. All airflows shall be set to within 10% of that prescribed on the drawings. Submit to the engineer of record a Test and Balance report at the completion of the project indicating information about each unit and fan, provide a static pressure profile of the rooftop units, provide duct traverse measurements of main supply ducts and tabulate the air balance for each air device.

CONTROLS:

The rooftop unit shall be controlled by a programmable thermostat capable of occupied/unoccpied modes and economizer operation.

In occupied mode the outside air damper shall be open to its minimum position, and the fan shall run continuously. The DX cooling and gas heating shall energize and stage as needed to maintain the cooling and heating space temperature set point respectively. In cooling mode, if the pace temperature is above the cooling set point the fan shall ramp up in sped while the refrigeration system shall maintain a set leaving air temperature off the cooling coil (55 deg F adjustable). As the space temperature falls toward set point the fan shall slow down while maintaining he leaving air temperature. Once the space temperature is satisfied or the below the cooling set point the fan shall be at minimum speed and the refrigeration system shall shut down. If the relative humidity is above set point 55% the refrigeration system shall continue to run at minimum capacity.

If there is a call for cooling and the ambient air enthalpy is in the proper range, the unit shall go into economizer mode in which the refrigeration system is locked out and the outside air damper shall open 100%.

The heating mode shall be similar to the cooling mode. If the space temperature drops below the heating space temperature set point, the fan shall ramp up and the furnace shall modulate to maintain s set leaving air temperature. As the space temperature rises the fan shall slow down while the leaving air temperature is maintained. Once the space temperature set point is satisfied the furnace shall shut down and the fan shall remain at minimum speed. The economizer damper shall always be at minimum position when operating in the heating mode.

The unit shall also be equipped with demand control ventilation logic. A CO2 sensor shall be installed in the gathering room. The outside air damper shall be set with a minimum position to introduce 200 cfm in order to pressurize the building and provide a minimal amount of ventilation air. If CO2 level rise above set point (650 ppm) the outside air damper shall open to the second ventilation set point to allow the minimal flow indicated in the equipment schedule. If the CO2 levels do not drop to the required set point the outside air damper shall continue to open. Refer to the RTU manufacturer's instruction for pre-programmed logic for more detail.

In unoccupied mode the unit shall be off, and the outside air damper shall remain closed. The DX cooling and gas heating shall energize, along with the supply fan when there is a call of cooling or heating based on the unoccupied temperature set points.

The toilet room fans shall be controlled by a walls switch.

	EXHAUST FAN SCHEDULE											
Tag	Tag Manufacturer and Model Number Weight CFM ESP RPM Drive type Power Voltage Control Remarks											
EF-1	Greenheck SP-A90L	12	75	0.2	870	Direct	16W	120-1-60	Switch	Provide white ceiling grill, backdraft damper		
EF-2	Greenheck SP-A90L	12	75	0.2	870	Direct	16W	120-1-60	Switch	Provide white ceiling grill, backdraft damper		
EF-3	Greenheck SP-A90L	12	75	0.2	870	Direct	16W	120-1-60	Switch	Provide white ceiling grill, backdraft damper		

AIR DEVICE SCHEDULE								
MARK SYSTEM TYPE	SYSTEM	MANUFACTURER & MODEL NO.	Remarks					
	TYPE	WIANGFACTURER & WIODEL NO.	Remarks					
A	SUPPLY	Titus OMAII stool diffuses with aleque fees and round neek 24%24% module	White T Dayberdestune					
^ [DIFFUSER	Titus OMNI steel diffuser with plaque face and round neck , 24"x24" module	White, T-Bar border type					
В	SUPPLY	Titus TMS, 12"x12" module, with face border, 3 cone, steel construction round	White, T-Bar border type					
	REGISTER	neck	Wilite, 1-bar border type					
С	RETURN	TITUS 350RL, Steel Construction, 3/4" blade spacing, 35 deg deflection	Gypsum ceiling frame					
	REGISTER	11103 330KL, Steel Collstruction, 3/4 blade spacing, 35 deg deflection	Cypsum cening name					
	EXHAUST	TITLIS DAD 24"-24" module square neck perferented force						
D	GRILLE	TITUS PAR, 24"x24" module, square neck perforated face						

	ELECTRIC HEATER SCHEDULE									
Mark	Heater Type	Amps	Watts	BTU/HR	V-P-H	Manufacturer and Model No.	Remarks			
EH-1	CEILING	12.5	1,500	5,120	120-1-60	Q-Mark EFF-1500	Ceiling heater with integrap thermostat, steel grille and mounting hardware for grid ceiling			



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REVISIONS
DATE NO. ISSUED FOR

.. Pius X Catholic Church

ROJECT ADDRESS 14710 Annapolis Road 3owie, MD 20715

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"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. 22792, Expiration Date: 08-04-2024."

FOR PERMIT 04/23/2024



757 Frederick Road Suite 300 - Catonsville, Maryland 21228 Phone: 410/869-7282 Web: www.SRBRengineers.com MECHANICAL SCHEDULE AND SPECIFICATIONS

SRBR CHECKED BY
SRBR
DESCRIPTION
FOR PERMIT

SHEET TITLE

CANDELLA RATING PER NFPA 72, U.N.O. FIRE ALARM SYSTEM COMBINATION (HORN/ STROBE) AUDIBLE/ VISUAL DEVICE. WALL MOUNTED 80" AFF; CANDELLA RATING PER NFPA 72, U.N.O.

FIRE ALARM SYSTEM VISUAL (STROBE) DEVICE. FLUSH CEILING MOUNTED U.N.O.; CANDELLA RATING PER NFPA 72, U.N.O. FIRE ALARM SYSTEM COMBINATION (HORN/ STROBE) AUDIBLE/ VISUAL DEVICE. FLUSH CEILING MOUNTED U.N.O.; CANDELLA RATING PER NFPA 72, U.N.O.

FIRE ALARM AUDIBLE ALARM (HORN). WALL MOUNTED 90" AFF FIRE ALARM SYSTEM SMOKE DETECTOR

FIRE ALARM SYSTEM SMOKE DETECTOR - DUCT TYPE FIRE ALARM SYSTEM SPRINKLER FLOW SWITCH - FURNISH AND INSTALL UNDER DIVISION 15, CONNECT UNDER DIVISION 16

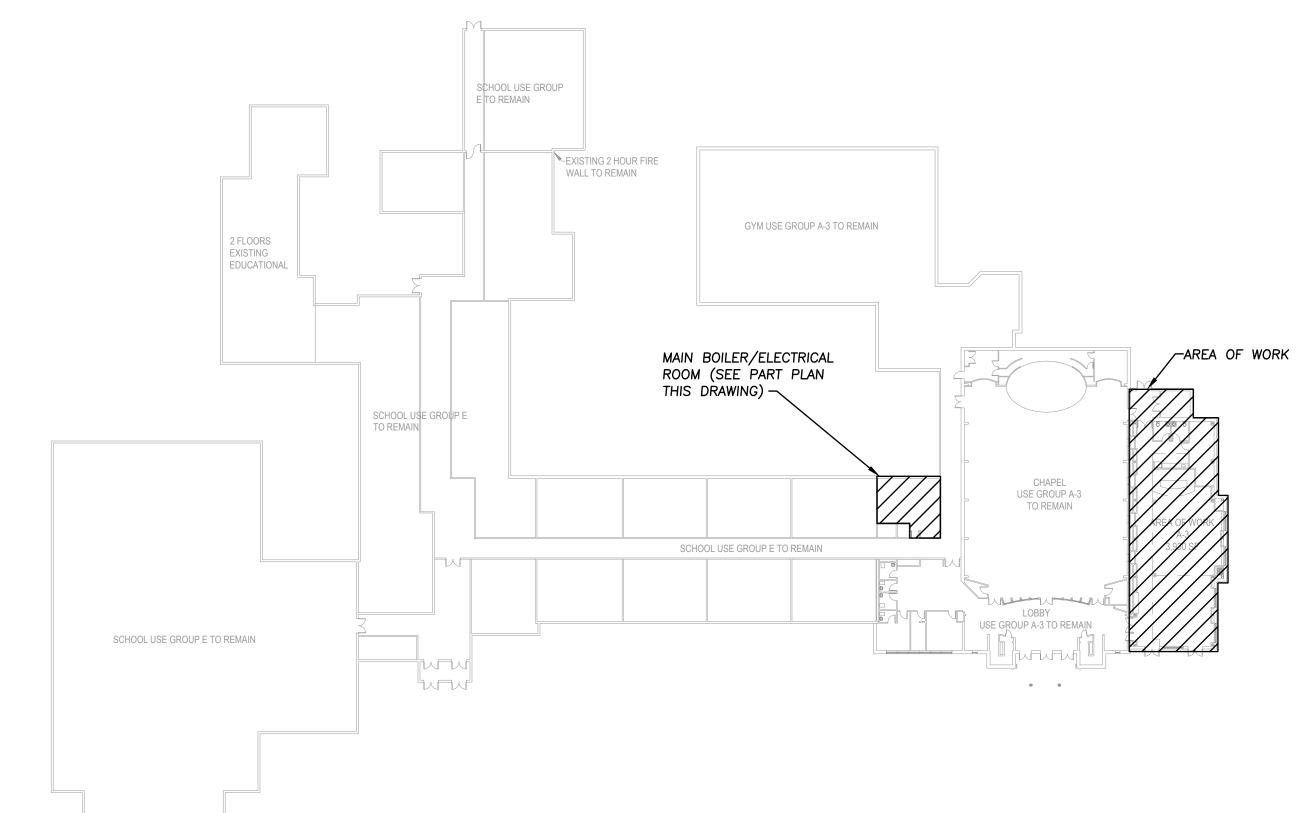
FIRE ALARM SYSTEM SPRINKLER TAMPER SWITCH - FURNISH AND INSTALL UNDER DIVISION 15, CONNECT UNDER DIVISION 16 FIRE ALARM SYSTEM PANEL - 'FACP' DESIGNATES FIRE ALARM CONTROL PANEL, SURFACE MOUNTED; 'FAAP' DESIGNATES FIRE ALARM ANNUNCIATOR PANEL, RECESSED

1. DUCT SMOKE DETECTOR FURNISHED UNDER DIVISION 16, INSTALLED UNDER DIVISION 15 AND WIRED UNDER DIVISION 16. ALL ROOF TOP UNITS OF 2000 CFM AND LARGER SHALL HAVE DUCT SMOKE DETECTORS IN THE SUPPLY AND RETURNS OF EACH ROOF TOP UNIT, AS REQUIRED BY AUTHORITY

2. NUMBER ADJACENT TO VISUAL SIGNALING DEVICE INDICATES CANDELA RATING OF DEVICE.

3. DIVISION 15 SHALL FURNISH AND INSTALL ALL FIRE SMOKE DAMPERS AND FIRE DAMPERS. SMOKE DAMPERS SHALL BE PROVIDED WITH DUCT SMOKES BY DIVISION 15. ALL REQUIRED POWER AND CONTROL WIRING, TRANSFORMERS, ACTUATORS, RELAYS, MODULES AND OTHER COMPONENTS TO BE FURNISHED AND INSTALLED BY DIVISION 15. DIVISION 16 SHALL MONITOR THE SMOKE DAMPERS VIA THE FIRE ALARM SYSTEM. DIVISION 16 TO PROVIDE COMPONENTS AND WIRING AS REQUIRED TO MONITOR FIRE SMOKE DAMPERS.

4. DIVISION 16 TO PROVIDE ALL WIRING, RELAYS, MODULES, TRANSFORMERS REQUIRED TO CONNECT ALL SMOKE DAMPERS TO THE FIRE ALARM SYSTEM. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS TO CONFIRM QUANTITY AND LOCATIONS OF SMOKE AND FIRE DAMPERS.



KEY PLAN/AREA OF WORK

GENERAL REQUIREMENTS

- 1. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF THIS PROJECT.
- 2. <u>BID_PHASE:</u>
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DOCUMENTS TO INCLUDE PLANS AND SPECIFICATIONS FOR THE ARCHITECTURAL AND OTHER WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION. THE CONTRACTOR SHALL ISSUE A FORMAL REQUEST FOR INFORMATION FOR CLARIFICATIONS OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO FINAL BID SUBMISSION.
- 3. PRE-CONSTRUCTION: IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL REVISED DOCUMENTS TO INCLUDE ARCHITECTURAL PLANS AND WORK UNDER OTHER DIVISIONS THAT CAN AFFECT THE WORK OF THIS DIVISION. THIS INCLUDES REVIEW OF ALL ADDENDUMS, REVISIONS AND SHOP DRAWINGS THAT AFFECT THE WORK OF THIS DIVISION. THE CONTRACTOR SHALL NOTIFY THE A/E TEAM OF ANY DISCREPANCIES PRIOR TO FINAL

SPECIAL CONDITIONS

. DEMOLITION COORDINATION:

- 1. REFER TO ARCHITECTURAL DEMOLITION PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
- 2. REFER TO ARCHITECTURAL PLANS AND/OR SUPPLEMENTAL DOCUMENTS FOR CONSTRUCTION PHASE SEQUENCE REQUIREMENTS FOR OCCUPIED SPACES AFFECTED
- 3. NOTIFY THE OWNER OF ANY WORK THAT MAY DISRUPT OTHER AREAS OUTSIDE OF THE WORK AREA.

. WORK IN EXISTING CEILINGS:

- . REFER TO ARCHITECTURAL CEILING PLAN AND RELATED DETAILS FOR CEILING CONDITIONS, ADDITIONAL REQUIREMENTS, AND SYSTEM INSTALLATION COORDINATION. REFER TO ARCHITECTURAL PLANS FOR AREAS TO BE DEMOLISHED AND PROVIDED WITH NEW CEILING FINISHES. ALL OTHER AREAS ARE EXISTING CEILINGS TO REMAIN.
- COORDINATE SCOPE OF WORK IN EXISTING CEILINGS WITH GENERAL CONTRACTOR AT TIME OF BIDS AND PRIOR TO START OF WORK.
- . **EQUIPMENT COORDINATION**: 1. REFER TO ARCHITECTURAL EQUIPMENT PLANS, FURNITURE PLANS, ELEVATIONS, CASEWORK ELEVATIONS AND OTHER RELATED PLANS FOR ADDITIONAL MEP

	ELECTRICAL DRAWING LIST						
No.	Sheet No.	Sheet Title					
1	E-001	COVER SHEET - ELECTRICAL					
2	E-101	FLOOR PLAN - POWER & LIGHTING					
3	E-201	POWER RISER DIAGRAM & SCHEDULES					
4	E-301	ELECTRICAL SPECIFICATIONS					
5							

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the state of Maryland, License No. 22792, Expiration Date: 08-04-2024." FOR PERMIT 04/23/2024



SHEET TITLE

SET DESCRIPTION

SRBR

SWITCH - KEY OPERATED, PILOT LIGHT, MOTOR RATED. PROVIDE NEUTRAL \$k,\$p,\$m CONDUCTOR AT ALL SWITCHES. WALL MOUNTED OCCUPANCY SENSOR LIGHT SWITCH.

<u>DESCRIPTION</u>

DUPLEX RECEPTACLE - STANDARD, 125 VOLT. 18" A.F.F.

DUPLEX RECEPTACLE - STANDARD, 125 VOLT. 44" A.F.F.

QUAD OUTLET; TWO 125 VOLT DUPLEX RECEPTACLES;

MOUNTED AT 18" A.F.F. UNLESS NOTED OTHERWISE.

AS INDICATED ON THE DRAWINGS. FLUSH IN FLOOR.

TELEVISION OUTLET - MATV/CATV SYSTEM. 18" A.F.F.

DUPLEX RECEPTACLE, 125 VOLT. FLUSH IN CEILING.

COMBINATION VOICE/DATA OUTLET. 18" A.F.F.

FLOOR BOX DATA OUTLET. FLUSH IN FLOOR

NOTED OTHERWISE. MOUNT ABOVE COUNTER.

NEUTRAL CONDUCTOR AT ALL SWITCHES.

 $\$ \$_2 \$_3 \$_4 \a SWITCH — SINGLE POLE, DOUBLE POLE, THREE WAY, FOUR WAY,

OTHERWISE AT 18" A.F.F.

VOICE OUTLET. 18" A.F.F.

DATA OUTLET. 18" A.F.F.

AT ALL SWITCHES.

DUPLEX RECEPTACLE - GFI PROTECTED, 125 VOLT. 44" A.F.F. AT COUNTER,

(VERIFY ELECTRICAL REQUIREMENTS AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN)

SIMPLEX RECEPTACLE - SPECIAL PURPOSE, VERIFY CONFIGURATION. 18" A.F.F. FLOOR BOX (WITH DUPLEX RECEPTACLE SHOWN). DEVICE TYPE SHALL BE

EWC ELECTRIC WATER COOLER - PROVIDE DEDICATED CIRCUIT WITH GFCI PROTECTION.

DUPLEX RECEPTACLE - WP AND GFI PROTECTED, 125 VOLT. 18" A.F.F.

QUAD RECEPTACLE - WP AND GFI PROTECTED, 125 VOLT. 18" A.F.F.

FLOOR BOX COMBINATION VOICE/DATA OUTLET. FLUSH IN FLOOR

JUNCTION OR PULL BOX - SIZE PER N.E.C. UNLESS NOTED OTHERWISE.

MULTI-OUTLET RACEWAY - SIMPLEX OUTLETS 12" ON CENTER UNLESS

SUPERSCRIPT DENOTES OUTLETS CONTROLLED. 44" A.F.F. PROVIDE

SWITCH - DIMMER, MOUNT AT 44" A.F.F. PROVIDE NEUTRAL CONDUCTOR

<u>SYMBOL</u> SWITCH - RHEOSTAT FOR FAN CONTROL. PROVIDE NEUTRAL CONDUCTOR AT ALL SWITCHES. CONTACTOR: SEE PLANS FOR SPECIFICATIONS MANUAL THERMAL MOTOR STARTER. SIZE OVERLOAD AS REQUIRED. TC

EXISTING MAIN FUSED SAFETY SWITCH—— EXISTING 400 AMP FUSED SAFETY SWITCH -

EXISTING PANEL 'MDP'-EXISTING FIRE ALARM CONTROL PANEL ----EXISTING PANEL 'B'-EXISTING PANEL 'OL'-

PART PLAN MAIN BOILER/ELECTRIC ROOM

0 2' 4' 8' 16'

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

FOR REQUIREMENTS.

MOTOR CONNECTION. SEE SCHEDULE FOR HP RATING UNLESS

CONTROL EQUIPMENT PHOTOCELL - CIRCUIT CONTROLLED AS INDICATED ON PLANS.

WIRING CONCEALED ABOVE CEILING OR IN WALL (2 CONDUCTORS + EQUIPMENT GROUND MINIMUM UNLESS NOTED OTHERWISE). WIRING BELOW GRADE OR BELOW FINISHED SLAB (3/4" C. - 2#10 + 1#10 EQUIPMENT GROUND MINIMUM UNLESS NOTED OTHERWISE). WIRING: NEUTRAL (OVERSIZED TICK), 2 PHASE CONDUCTORS HOMERUN TO PANEL (SOURCE PANEL & CIRCUIT NUMBERS, AS INDICATED)

ELECTRICAL SYMBOL LIST

FLEXIBLE WIRING: CONDUCTORS TO MATCH SUPPLY CIRCUIT ELECTRICAL PANEL: 120/208 VOLT — SURFACE, RECESSED MOUNTED PLAN NOTE - REFER TO NOTES ON DRAWING.

> SYMBOL INDICATES 24 HOUR LIGHT (NIGHT LIGHT) LIGHTING CONTROL NOTE - SEE LIGHTING CONTROL SCHEDULE

EQUIPMENT CONNECTION NOTE - SEE SCHEDULE.

(X/R) EXISTING EQUIPMENT TO BE RELOCATED <u>ABBREVIATIONS</u> NOTE: ALL EQUIPMENT SHOWN IS NEW U.N.O. <u>DESIGNATION</u> <u>DESCRIPTION</u> A.F.F. ABOVE FINISHED FLOOR (TO CENTERLINE UNO) NFSS C/B CIRCUIT BREAKER

POWER DISTRIBUTION SYMBOLS

2/100 INDICATES 2-POLE/1-PHASE, 100A

60F INDICATES 60A FUSE RATING

INDICATES 3-POLE/3-PHASE, 225A

TRIP (FRAME RATING FOR SWITCH)

TRIP (FRAME RATING FOR SWITCH)

MOTOR CONNECTION - 3 PHASE

MOTOR CONNECTION - 1 PHASE

SYMBOL DESCRIPTION

FUSED SWITCH

FEEDER LEGEND

<u>DESIGNATION</u> <u>DESCRIPTION</u>

1#XXX N──NEUTRAL SIZE

X"C ← CONDUIT SIZE

MLO MAIN LUGS ONLY

______ WIRE SIZE IN AWG.

■ 1#XX G — EQUIPMENT GROUND

CIRCUIT BREAKER

NON-FUSED SAFETY SWITCH NIGHTLIGHT (24 HOUR OPERATION) UNO UNLESS NOTED OTHERWISE CFSS COMBINATION FUSED STARTER SWITCH WEATHERPROOF (NEMA 3R UNO) ECB ENCLOSED CIRCUIT BREAKER

X SETS QTY. OF PARALLEL SETS (1 SET IF BLANK) = PHANTOM DEVICES TO BE REMOVED

<u>DESCRIPTION</u>

GROUNDING ELECTRODE

STEP DOWN TRANSFORMER

<u>DESCRIPTION</u>

EXISTING EQUIPMENT TO REMAIN

EXISTING EQUIPMENT RELOCATED EXISTING EQUIPMENT TO BE REMOVED

EXISTING CONDITIONS

(N) NEW EQUIPMENT

EWC ELECTRIC WATER COOLER (VERIFY MTD.) EQUIPMENT GROUND GROUND FAULT INTERRUPTER C/B

GFCI GROUND FAULT CIRCUIT INTERRUPTER FUSED SAFETY SWITCH MCB MAIN CIRCUIT BREAKER

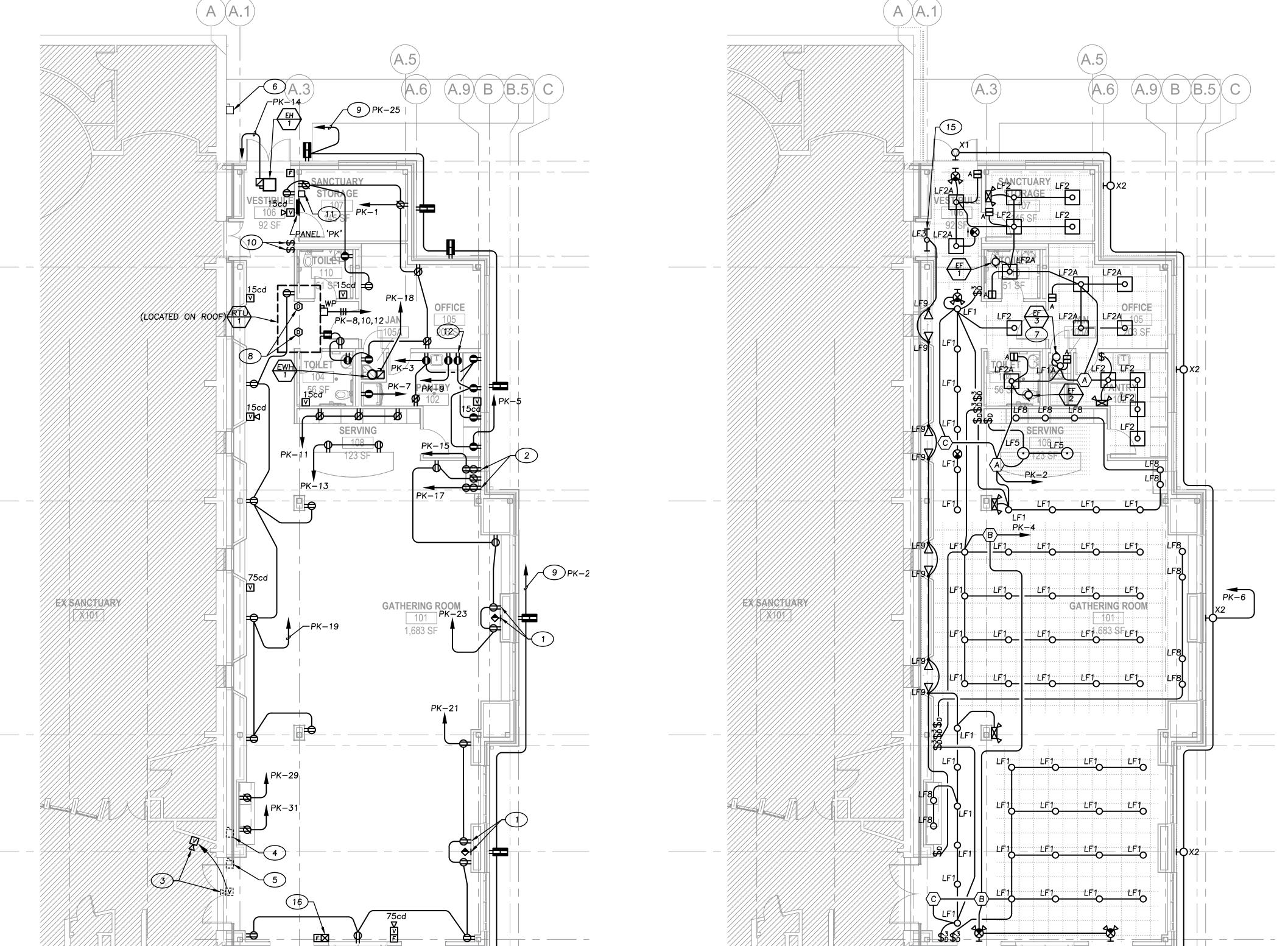
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SRBR No: 23002

E-001 2024-04-23

COVER SHEET ELECTRICAL

SRBR



FLOOR PLAN - LIGHTING

PLAN NOTES

- 1) MOUNT OUTLET 84" AFF FOR WALL MOUNTED TELEVISION. 2) MOUNT RECEPTACLE IN A/V CABINET BELOW COUNTERTOP. (3) RELOCATE AND RECONNECT EXISTING FIRE ALARM SYSTEM
- HORN/STROBE. REMOVE EXISTING FUSED SAFETY SWITCH SERVING RELOCATED CONDENSING UNIT. PROVIDE NEW FSS AT RELOCATED UNIT; EXTEND EXISTING CIRCUIT AND RECONNECT AS REQUIRED.
- 5) REMOVE AND RELOCATE EXISTING FUSED SAFETY SWITCH SERVING RELOCATED HEATPUMP OUTDOOR UNIT. EXTEND EXISTING CIRCUIT AND RECONNECT AS REQUIRED. FIELD COORDINATE NEW UNIT LOCATION.

FIELD COORDINATE NEW UNIT LOCATION.

- (6) EXISTING FUSED SAFETY SWITCH FOR CONDENSING UNIT. 7) EXHAUST FAN #EF-3. CONTROL BY DIVISION 15.
- (8) DUCT SMOKE DETECTOR PROVIDE (1) IN THE SUPPLY AND (1) IN THE RETURN. COORDINATE EXACT REQUIREMENTS WITH ÀÚTHORITY HAVING JURISDICTION. (9) CONNECT CIRCUIT VIA TOGGLE SWITCH IN VESTIBULE 106.

(10) TOGGLE SWITCHES TO CONTROL EXTERIOR RECEPTACLES (TWO

- 11) 7 DAY TIMECLOCK TO CONTROL TYPE 'X2' EXTERIOR LIGHTS, IN CONJUNCTION WITH NEW PHOTOCELL MOUNTED ON ROOF ABOVE. PROGRAM TIMECLOCK AS DIRECTED BY OWNER. TYPE 'X2' LIGHTS SHALL BE PHOTOCELL ON/TIMECLOCK OFF.
- (12) MOUNT THIS RECEPTACLE BELOW COUNTER.
- (13) CONNECT CIRCUIT VIA TIMECLOCK (PHOTOCELL ON/TIMECLOCK 14 CONNECT TO EXTERIOR LIGHTING CIRCUIT PK-6 AHEAD OF TIMECLOCK CONTROLS (TYPE 'X1' FIXTURES TO HAVE INTEGRAL PHOTOCELL CONTROL).
- (15) MOUNT FIXTURE ABOVE CEILING, TO ILLUMINATE STAINED GLASS TRANSOM WINDOW.
- (16) HAND-OFF-AUTOMATIC SWITCH TO PROVIDE MANUAL CONTROL OF NEW ROOFTOP UNIT RTU-1. CONFIRM EXACT SWITCH LOCATION WITH FIRE MARSHAL.

GENERAL NOTES:

- ALL RECEPTACLES WITHIN PANTRY SHALL BE GFCI PROTECTED IN ACCORDANCE WITH NEC 210.8. THE GROUND FAULT INTERRUPTER DEVICE SHALL BE READILY ACCESSIBLE.
- 2. ELECTRICAL DEVICES IN EXISTING WALLS TO REMAIN WHICH ARE NOT INDICATED ON THE PLANS SHALL REMAIN UNLESS NOTED
- 3. CONNECT EXIT SIGNS AND EMERGENCY LIGHTS TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING. 4. EXHAUST FANS IN TOILET ROOMS SHALL BE CONNECTED TO CIRCUIT SERVING TOILET ROOM LIGHTS FOR POWER AND

CONTROL VIA WALL SWITCH.

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FLOOR PLAN - POWER & LIGHTING

2024-04-23

SHEET TITLE

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Regional School Addition
mp\MD22-30.00 St Pius X Church and R
02:30 AM C:\Temp\MD22

	FIX	TURE DESCRI	IPTION	<u> </u>			LAMPS		l		TYPICAL
MARK	ILLUM	TYPE	DIFFUSER	REMARKS	VOLT	MOUNTING	QTY	LUMENS	INPUT WATTS	MANUFACTURER	LOCATION
LF1	L.E.D.	DOWN LIGHT	CLEAR SPECULAR	6" APERTURE, DIMMING	120	RECESSED	1	3,000	32	LIGHTOLIER #6R-P6R-DL-30-835-CL-Z10-U	GATHERING/ CORRIDORS
LF1A	L.E.D.	DOWN LIGHT	CLEAR SPECULAR	6" APERTURE	120	RECESSED	1	1,500	l 15	LIGHTOLIER #6R-P6R-DL-15-835-CL-Z10-U	JANITOR'S CLOSET
LF2	L.E.D.	2' X 2'	FLAT LENS	THIN PROFILE	120	GRID	1	2,000	l 16	DAY-BRITE #2FPZ-20L-835-S-DS-UNV-DIM	STORAGE
LF2A	L.E.D.	2' X 2'	FLAT LENS	THIN PROFILE	120	GRID	1	3,800	34	DAY-BRITE #2FPZ-38L-835-S-DS-UNV-DIM	PANTRY
LF3	L.E.D.	2' STRIP	LENS		120	SURFACE	1	2,400	l 21	DAY-BRITE #SDS-2'-1224L-8CST-UNV	STAINED GLAS: WINDOW
LF5	L.E.D.	PENDANT		REMOTE DRIVER, DIMMABLE TRIAC	120	SUSPENDED	1	1,096	9	ESTILUZ #T-3302S-LED9W-26BLK	SERVING
LF8	L.E.D.	DOWN LIGHT	CLEAR SPECULAR	3" APERTURE	120	RECESSED	1	500	7	LIGHTOLIER #3R-P3R-DL-05-935-CL-Z10-U	GATHERING
LF9	L.E.D.	TRACK HEAD		MONOPOINT, WHITE FINISH	120	MONOPOINT	1	2,000	23	LIGHTOLIER #LWW-20-935-WH	STAINED GLASS WINDOWS
X1	L.E.D.	WALL LIGHT	LENS	DARK GRAY FINISH, TYPE 4 DISTR. INTEGRAL EMERG BATTERY & PHOTOCELL	120	SURFACE	1	2,862	22	GARDCO #121- 16L-400-NW-G4-4-EBPC-UNV-PCB-DGY	EGRESS DOORS
X2	L.E.D.	WALL LIGHT	LENS	DARK GRAY FINISH, TYPE 2 DISTR.	120	SURFACE	1	2,862	22	GARDCO #121-16L-400-NW-G4-2-UNV-DGY	EXTERIOR WALLS

<u>LIGHTING NOTES:</u>

- ALL LAMPS AND L.E.D. FIXTURES SHALL BE 80 COLOR RENDERING INDEX MINIMUM AND 3500 KELVIN TEMPERATURE RATING OR AS SELECTED BY THE ARCHITECT. CONTRACTOR SHALL SUBMIT LAMP TYPE INFORMATION WITH THE LIGHTING SHOP DRAWING SUBMITTAL.
- . ALL FIXTURES SHALL BE CAPABLE OF BEING DIMMED. COORDINATE METHOD OF DIMMING WITH CONTROLS PROVIDED.

GENERAL FIXTURE NOTES:

- ... FIXTURE MARK IN TYPICAL FOR ALL FIXTURES OF THE SAME SYMBOL TYPE WITHIN THE SAME ROOM OR AREAU.N.O.
- FIXTURE CATALOG # ESTABLISHES THE MANUFACTURER'S SERIES # COMPLETE CATALOG # SHALL BE DETERMINED BY THE SCHEDULE DESCRIPTION, PLAN NOTES AND
- THE CONTRACTOR SHALL WORK WITH THE LIGHTING AND CONTROLS MANUFACTURER TO TEST THE FINAL LIGHTING SYSTEM TO INSURE PROPER CALIBRATION AND

INTEGRAL HIGH IMPACT WHITE THERMO PLASTIC

BATTERY, WHITE HOUSING.

HOUSING, SINGLE FACE UNIVERSAL MOUNT

TWIN HEAD, NO REMOTE, LEAD CALCIUM

				<u>EI</u>	MERGENCY LIGHTING FIX	TUR	E SCHEDI	ULE			
MARK	DESTG.	F	IXTURE DESCRIP	TION	REMARKS	VOLT	MOUNTING		LAMPS	MANUFACTURER	TYPICAL
MAKK	(NOTE 4)	ILLUM	TYPE	SOURCE	REMIANKS	YOU	MOUNTING	QTY	TYPE	MANOPACIORER	LOCATION
4	rv1	rn.	CV T	INTEGRAL	HIGH IMPACT WHITE THERMO PLASTIC		UNDITERNI		FURNISHED	"EMERG -LITE" (PREMIER)	EVITE
•	EX1	_ED	ÐΣŤ	BATTERY.	HOUSING, SINGLE FACE		UNIVERSAL	-	W/ UNIT	#W-PREM SERIES	EXITS
A.4	EX2	.ED	EV T	INTEGRAL	HIGH IMPACT WHITE THERMO PLASTIC		HMDIEGERI		FURNISHED	"EMERG -LITE" (PREMIER)	EVITE
77	[2,2	בט	EXT	BATTERY	HOUSING, DOUBLE FACE		UNIVERSAL	-	W/ UNIT	#W-PREM SERIES	EXITS

UNIVERSAL

EMERGENCY LIGHTING NOTES:

EXIT SIGNS SHALL HAVE DIRECTION ALARROWS AS INDICATED ON THE PLANS.

EMERGENCY

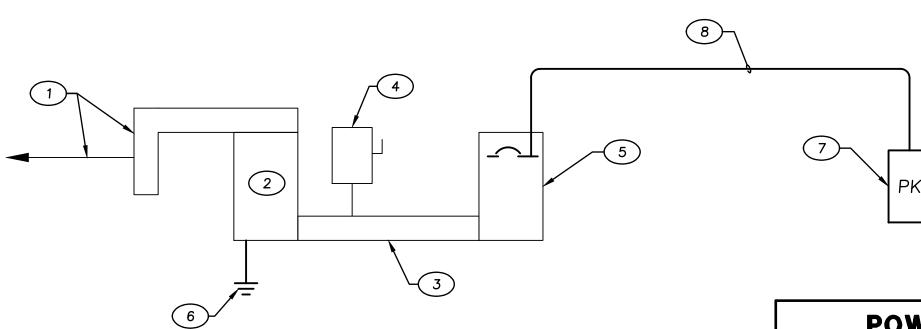
HALOGEN

- 2. VERIFY COLOR AND CONFIGURATION OF EXITISIGN LETTERS WITH LOCAL CODES, EXISTISIGN SHALL NOT EXCEED 5 WATTS PER FACE. EXIT SIGNS AND EMERGENCY BATTERY PACKS ARE INDICATED BY SYMBOLION THE PLANS IN LIEU OF LETTER DESIGNATION.
- EXIT SIGNS AND EMERGENCY BATTERY PACKS SHALL BE CONNECTED AHEAD OF LOCAL SWITCH CONTROL.

INTEGRAL

BATTERY

- 5. EXIT LIGHTS SHALL BE MOUNTED: (1) ON WALL 6' ABOVE DOOR WHERE POSSIBLE. (2) CEIUNG MOUNTED (NO HIGHER THAN 9-C' A.F.FOR). (3) ON WALL TO THE SIDE OF THE DOOR AS HIGH AS
- POSSIBLE, WHERE CEILING IS TOO LOW, EXIT SHALL BE NO MORE THAN 2' HORIZONTALLY FROM THE OPENING. (4) WHEN DEALING WITHIN GHICELLING, THE BOTTOM OF THE NEW EGRESS. MARKINGS SHALL BE LOCATED AT THE VERTICAL DISTANCE OF NOT MORE THAN 801 ABOVE THE TOPIEDGE OF THE EGRESS OPENING INTENDED FOR DESIGNATION BY THE MARKING.
- 5. TYPE 'E31' & 'EBR' EMERGENCY LIGHTING SHALL BE WALL MOUNTED AT 7-0' A F.F. or 12" BELOW CEILING WHICHEVER IS GREATER. (UNLESS NOTED OTHERWISE, BUT NOTH (GHER THAN 9'-0' A.F.F.).



POWER RISER DIAGRAM NO SCALE

- 1. THIS DIAGRAM SHOWS A PORTION OF THE EXISTING DISTRIBUTION SYSTEM ONLY, AND DOES NOT INDICATE ALL EXISTING PANELS, FEEDERS, NOR DISTRIBUTION EQUIPMENT.
- 2. EQUIPMENT AND FEEDERS INDICATED ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER RISER NOTES

(1) EXISTING SECONDARY SERVICE AND SERVICE WIREWAY.

FURNISHED | "EMERG -LITE" (PREMIER) =

(6V. 10W HEADS)

FURNISHED #MPR10M- SER ES

W/ UNIT (CV. 1994, 54.26)

W/ UNIT #W-PR SERIES [12V, 24W HEADS]

"EMERG -LITE" (Premier Compact)

- (2) EXISTING 3 POLE, 1200 AMP MAIN SWITCH. (3) EXISTING DISTRIBUTION WIRE TROUGH.
- (4) EXISTING 3 POLE, 400 AMP FUSED SAFETY SWITCH.
- (5) EXISTING MAIN DISTRIBUTION PANEL 'MDP' (120/208 VOLT, 3
- PHASE, 4 WIRE, 1200 AMP MLO). PROVIDE NEW 3 POLE, 200 AMP CIRCUIT BREAKER TO SERVE NEW PANEL 'PK'.
- (6) EXISTING GROUND.
- 7) NEW PANEL 'PK' SEE SCHEDULE ON THIS DRAWING.

/										
)	NEW FEEDER:	4	#3/0	AWG	+	#6	GROUND	IN	2"	CONDUIT

						EXISTING PA	NEL			•
	VOLTAGE:	120	/ 208							A.I.C.: 42 k
	PHASE, WIRE:	3	, 4			1200	AMP I	MAIN L	UGS	MOUNTED: SURFACE
		BR	EAKER		QTY	FEEDER SIZ	E PER S	ET	CONNECTED	
СКТ	SERVING	POLE	FRAME	TRIP	SETS	WIRE	GND	CDT	LOAD (kVA)	COMMENTS
1	PANEL 'D'	3	100	100					14.4	EXISTING C/B & CIRCUIT
2	PANEL 'L'	3	100	100					15.1	EXISTING C/B & CIRCUIT
3	PANEL 'H'	3	250	200					29.5	EXISTING C/B & CIRCUIT
4	PANEL 'E1'	3	250	200					19.8	EXISTING C/B & CIRCUIT
5	BUSSED SPACE	3							`	
6	PANEL 'PK'	3	250	200	1	4 # 3/0	1#6	2"	41.4	NEW C/B & CIRCUIT
7	PANEL 'H3'	3	250	225					39.6	EXISTING C/B & CIRCUIT
8	PANEL 'B'	3	250	225					43.2	EXISTING C/B & CIRCUIT
9	PANEL 'K'	3	250	225					32.1	EXISTING C/B & CIRCUIT
10	PANEL 'A'	3	250	225					37.8	EXISTING C/B & CIRCUIT
1 1	SPARE	3	250	225	-	-	-	-	`	EXISTING C/B
12	PANEL 'M'	3	250	225					44.3	EXISTING C/B & CIRCUIT

LIGHTING CONTROL SCHEDULE OCCUPANCY APPLICATION COMMENTS CONTROL SENSOR SYSTEM TO BE WATTSTOPPER MANUAL NOTES 1 THRU 4 A TYPICAL ROOM/ SPACE ON/ OFF (PIR/ US) OR APPROVED EQUIVALENT (NOTE 1) MANUAL DT W/ SYSTEM TO BE WATTSTOPPER TYPICAL ROOM/ SPACE WITH DAYLIT ZONE OR APPROVED EQUIVALENT (NOTE 1) ON/ OFF PHOTO-SENSOR AUTO SYSTEM TO BE WATTSTOPPER PIR C CORRIDOR NOTES 1, 5, 6 & 7 ON/OFF BI-IRECTIONAL OR APPROVED EQUIVALENT (NOTE 1)

- LIGHTING WIRING SHOWN ON CONTRACT DRAWINGS ARE DIAGRAMMATIC FOR ESTABLISHING THE CONTROL ZONE TYPE ONLY. ALL CONTROL SYSTEMS SHALL BE COMPLETE TO INCLUDE ALL REQUIRED DEVICES, RELAYS AND CONTROL WIRING FOR A FULLY FUNCTIONING SYSTEM. ALL DEVICES AND COMPONENTS SHALL BE LOCATED IN ACCESIBLE VENTILATED SPACES. PROVIDE FACTORY DRAWINGS OF THE SPECIFIC PROJECT LIGHTING PLANS TO INCLUDE ALL PROPOSED DEVICES, DETECTORS AND CONTROL WIRING FOR EACH SPACE. SUBMIT FACTORY LIGHTING CONTROL DRAWINGS FOR REVIEW & INCLUDE DATA SHEETS FOR EACH DEVICE TYPE TO INCLUDE DETECTION PATTERNS. OCCUPANCY CONTROL SYSTEMS SHALL BE
- WATTSTOPPER OR APPROVED EQUIVALENT. ALL INTERIOR COMMERCIAL SPACES SHALL BE PROVIDED WITH LOCAL OCCUPANCY SENSOR CONTROLS IN ACCORDANCE WITH THE LATEST IECC AND LOCAL JURISDICTIONAL REQUIREMENTS. SYSTEM SHALL CONSIST OF TYPE AND QUANTITY OF SENSORS AS REQUIRED BY THE MANUFACTURER FOR THE RANGE OF COVERAGE REQUIRED FOR THE SPECIFIC SPACE CONFIGURATION AND TO PREVENT FALSE TRIPPING. SYSTEM SHALL BE MANUAL ON WITH AUTOMATIC OFF WITHIN 30 MINUTES OF THE LAST MOTION DETECTION. ROOMS WITH MULTIPLE SWITCH CONTROL ZONES SHALL HAVE COMMON OCCUPANCY SENSOR CONTROLS. (ALL SWITCHES PROVIDED MUST BE BACKLIT FOR VISIBILITY IN DARKENED ROOMS).
- ALL INTERIOR SPACES SHALL HAVE LOCAL MANUALON/ MANUAL OFF CONTROLS. SWITCHES IN OCCUPANCY SENSOR CONTROLLED SPACES SHALL BE LOW VOLTAGE TYPE AND COMPATABLE WITH THE OCCUPANCY SENSOR CONTROL SYSTEM. WHEN THE MANUAL SWITCH IS IN THE OFF POSITION THE OCCUPANCY SENSOR SHALL BE BYPASSED TO MAINTIAN LIGHTS OFF UNTIL MANUALLY TURNED ON. WHEN THE MANUAL SWITCH IS IN THE ON POSITION THE OCCUPANCY SENSOR SHALL ACTIVATE FOR MOTION DETECTION TO TURN LIGHTS ON IMMEDIATELY. THE LIGHTS SHALL TURN OFF AUTOMATICALLY WITHIN 30 MINUTES OF LAST MOTION DETECTION AND REMAIN OFF UNTIL MANUALLY TURNED ON TO REPEAT THE SEQUENCE (SEE NOTE 6 & 7 FOR EXCEPTIONS TO MANUAL CONTROLS). SPACES LESS THAN 300 SQUARE FEET MAY UTILIZE INTEGRAL WALL SWITCHES FOR MANUAL ON/OFF, OCCUPANCY SENSOR AND DAYLIGHT CONTROLS.
- INTERIOR SPACES INDICTED WITH DIMMING SWITCHES SHALL BE PROVIDED WITH LOW VOLTAGE DIMMING SWITCHES COMPATIBLE WITH THE OCCUPANCY SENSOR SYSTEM. PROVIDE ALL NECESSARY CONTROL WIRING FROM CONTROLLER TO EACH FIXTURE FOR 0-10 VOLT FULL RANGE DIMMING. CONFERENCE, MEETING ROOMS, CLASSROOMS AND SPACES WHERE INDICATED SHALL INCLUDE FULL RANGE MANUAL DIMMING
- INTERIOR SPACES IN DAYLIGHT ZONES WITHIN 15 FOOT OF EXTERIOR GLAZING OR SKYLIGHT SHALL BE PROVIDED WITH PHOTOSENSOR CONTROLS WITH ADJUSTABLE SENSITIVITY. THE SYSTEM SHALL BE HOLD-OFF TYPE UNLESS REQUIRED OTHERWISE BY THE LOCAL JURISDICTION. SPACES LESS THAN 300SF IN DAYLIT ZONES MAY BE INTEGRAL TO THE WALL SWITCH TO INCLUDE OCCUPANCY SENSOR AND DIMMING (WHERE INDICATED). NIGHTLIGHTS AND EMERGENCY BATTERY LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL CONTROLS AND AUTOMATIC CONTROLS FOR 24/7 OPERATION EXCEPT AS OTHERWISE INDICATED ON THE PLANS.
- CORRIDORS AND GANG RESTROOMS DO NOT REQUIRE LOCAL ON/OFF CONTROLS AND WILL BE AUTOMATIC ON/OFF.

ABBREVIATIONS: DS - DIMMER SWITCH FOR MANUAL ON/OFF CONTROL AND FULL RANGE 0-10 VOLT

GENERAL REQUIREMENTS AND SEQUENCE OF OPERATION NOTES:

- DIMMING (SEE SYMBOL LIST FOR TYPE) DT - DUAL TECHNOLOGY (PIR/US)
- PIR PASSIVE INFRARED MOTION DETECTION US - ULTRASOUND MOTION DETECTION
- TC -TIME CLOCK WP - WEATHERPROOFWS
- WS WALL SWITCH FOR MANUAL LOCAL ON/OFF CONTROL (SEE SYMBOL LIST FOR TYE) UNO - UNLESS NOTED OTHERWISE

SYMBOL LEGEND

CONTROL SYSTEM TYPE (SEE SCHEDULE) SUBSCRIPT # INDICATES

> CIRCUITS TO BE CONNECTED TO ALL FIXTURES IN ZONE LETTER INDICATES MANUAL SWITCH CONTROL ZONE

						PA	NE	EL	Pł	(
	VOLTAGE 120 / PHASE WIRE 3 PH ,				•	225	AMP	MAIN	LUGS	• S			A.I.C.: 10k MOUNTED: SURFAC	Æ
		C/	В	WIF	₹E				WIF	₹E	C/E	3		T
CKT	SERVING	P	TRIP	QTY	AWG	KVA	PН	KVA	QTY	AWG	P	TRIP	SERVING	СКТ
1	REC STORAGE	1	20	2	12	1.6	Α	0.8	2	12	1	20	LTG PANTRY	2
3	REC PANTRY	1	20	2	12	0.6	8	1.6	2	12	1	20	LTG GATHERING	4
5	REC PANTRY	1	20	2	12	0.6	С	0.2	2	12	1	20	LTG EXTERIOR	6
7	REC REFRIGERATOR	1	20	2	12	0.8	Α	6.6	3	3	3	90	RTU-1	8
9	REC ICE MAKER	1	20	2	12	1.5	8	6.6	1					10
11	REC SERVING	1	20	2	12	0.6	С	6.6	1					12
13	REC SERVING	1	20	2	12	0.6	Α	1.5	2	12	1	20	HEATER EH-1	14
15	REC A/V	1	20	2	12	0.4	В				1	20	SPARE	16
17	REC A/V	1	20	2	12	0.4	С	2.5	2	10	1	30	WATER HEATER EWH-1	18
19	REC GATHERING ROOM	1	20	2	12	1.1	Α				1	20	SPARE	20
21	REC GATHERING ROOM	1	20	2	12	1.3	8				1	20	SPARE	22
23	REC GATHERING ROOM	1	20	2	12	1.1	С				1	20	SPARE	24
25	REC EXTERIOR	1	20	2	12	1.4	Α						BUSSED SPACE	26
27	REC EXTERIOR	1	20	2	12	1.8	8						BUSSED SPACE	28
29	REC GATHERING ROOM	1	20	2	12	0.2	С						BUSSED SPACE	30
31	REC GATHERING ROOM	1	20	2	12	0.2	Α						BUSSED SPACE	32
33	SPARE	1	20				8						BUSSED SPACE	34
35	SPARE	1	20				С						BUSSED SPACE	36
37	BUSSED SPACE						Α						BUSSED SPACE	38
39	BUSSED SPACE						8						BUSSED SPACE	40
41	BUSSED SPACE						С						BUSSED SPACE	42

MICHAEL GRAVES

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COLUMBIA, MD WASHINGTON, DC BALTIMORE, MD MICHAELGRAVES.COM

OWNER / CLIENT St. Pius X Catholic Church

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MEP Engineer SRBR Engineers

PHONE: 410.290.9680

757 Frederick Road, Suite 300 Baltimore, MD 21228 (410) 869-7282

Structural Engineer Watkins Partnership

3032 Mitchellville Rd Bowie, MD 20716 301-249-0974

Civil/Site Atwell

11721 Woodmore Rd, Suite 200 Mitchellville, MD 20721 301.430.2000

REVISIONS DATE NO. ISSUED FOR

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"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of

the state of Maryland, License No. 22792, Expiration Date: 08-04-2024." FOR PERMIT 04/23/2024



Phone: 410/869-7282 Web: www.SRBRengineers.com SRBR No: 23002 SHEET TITLE POWER RISER DIAGRAM & SCHEDULES

PROJECT NUMBER

SECTION 16A - ELECTRICAL WORK

- 1. <u>GENERAL</u> A. The GENERAL and SPECIAL CONDITIONS listed under
- Division 1 shall govern this work where applicable. B. The Contractor shall provide labor, materials, equipment, and services necessary for the construction of the complete functioning electrical
- C. Labor and materials, although not specifically mentioned, but necessary for the completion of work and the successful operation of the electrical
- systems, shall be supplied as if specifically indicated. D. Materials and equipment installed as part of the permanent installation shall be new unless otherwise indicated or specified, and shall be approved by the Underwriter's Laboratories, Inc. for installation in each particular case where standards have been
- E. Wiring at finished areas shall be concealed in walls or above ceilings wherever possible. Exposed locations shall be pre-approved by the Architect prior to rough—in. Exposed wiring at finished areas shall be installed in conduit or surface metal raceway per architect's approval. Exposed surfaces shall be primed and finish painted as directed.

2. <u>SCOPE</u>

- A. The Contractor shall provide all labor and materials required to install a complete system of electrical work as indicated on the drawings and/or herein specified. Work includes but is not limited to the
- 1. Power and lighting feeders, panelboards, safety 2. Lighting system complete with lamps.
- 3 Final connections of mechanical equipment, electrical motors. 4. Extension of the existing Fire Alarm System.
- 3. <u>REGULATIONS AND CODE REQUIREMENTS:</u>
- A. Work shall conform to the requirements of the latest editions of the following codes, regulations and specifications.
- 1. National Electrical Code (NFPA 70) 2. National Fire Protection Association (NFPA) 3. Underwriters Laboratories, Inc. 4. International Building Code 5. Local and state requirements

4. <u>CERTIFICATES:</u>

- A. The Contractor shall, at his expense, have an inspection made by the Electrical Inspection department of the complete electrical installation and shall deliver certificate approval of the completed
- 5. <u>PERMITS:</u>
- A. The contractor shall obtain and pay for all permits required for his work.

6. <u>SHOP DRAWINGS:</u>

A. The contractor shall submit shop drawings and manufacturer's catalog cuts showing all details of equipment to be furnished.

7. **GUARANTEE**:

A. In addition to the augrantee obligations specified in other divisions, the Contractor shall guarantee the complete electrical system installation free from all mechanical and electrical defects for the period of one year from date of final acceptance by the

8. <u>DRAWINGS AND SPECIFICATIONS:</u>

- A. The drawings are intended to show the general arrangement of outlets. Door swings shall be checked for arrangement of switches, installed on the latch side. Contractor shall check structural plans, mechanical plans and specifications so that he may coordinate his work with these trades.
- B. Outlets shall be located uniformly with respect to beams, partitions, ducts, openings, etc., and the general locations shall be checked with the Architect before installing. Should there be any interference between the electrical outlets and other trades, the contractor shall notify the Architect so that the proper location may be decided upon. No outlets shall be installed in back of ducts, grilles, or inaccessible places.

9. <u>GROUNDING:</u>

A. Grounding of conduit, panelboards, boxes, cabinets and equipment shall conform to the requirements of the latest edition of the National Electric Code.

10. <u>DISTRIBUTION EQUIPMENT:</u>

- A. Panelboards shall be equivalent to Square D as a. Receptacle panels (208/120v): NQOD series Panels shall be fully rated for the indicated short circuit rating indicated. All affected panels shall be labeled & provided with a type written circuit
- B. Fuses protecting motors shall be dual element time delay type as recommended by the supplier.

11. <u>EQUIPMENT CONNECTIONS AND MOTOR STARTERS:</u>

A. Power wiring shall be installed and connected under this section, unless already provided on the equipment.

12. CONDUCTORS: A. Secondary conductors shall be copper. 98%

- conductivity covered with 600 volt standard type THW or THHN Insulation. B. Conductors shall have the following information surface printed throughout the entire length of the
- conductors. . Cable manufacturer Trade name of wire Size of wire

4. Type of insulation

- 5. Voltage classification C. Wire shall be in strict accordance with the latest
- edition of the National Electrical Code. D. Wire number 8 and larger shall be stranded.
- E. A color coding system to match the existing shall be used throughout the building network of feeders

13. WIRING METHODS:

and circuits.

- A. Feeders rated 100A or greater shall be conductors ran in conduit.
- B. Branch circuit wiring shall be type MC cable
- C. Branch circuit wiring in exposed areas shall be installed in EMT conduit
- D. Circuits for computer outlets & dimming shall be connected with dedicated neutral conductors. 14. OUTLET BOXES:
- A. Outlet boxes in concealed locations shall be galvanized stamped steel of sizes required by the
- B. Boxes in exposed locations shall be cast with gasketed cover. C. Provide covers for boxes.

15. PULL-BOXES AND JUNCTION BOXES:

A. Pull-boxes shall be provided as shown or wherever required to facilitate pulling of wires and cables, or as junction points. Such boxes shall be installed in accessible locations.

16. WIRING DEVICES:

- A. Receptacles & switch plates shall have ivory finish U.N.O. & furnished as follows: 1. Duplex receptacles: Leviton #5362 (NEMA 5-20R)
- 2. GFI receptacles: Leviton #6898 (NEMA 5-20R) 3. Toggle Switches: Leviton #1221 Series 4. Wall Plates: 0.032" thick stainless steel (nonmagnetic type 302), or thermoplastic. 5. Togale Switches: Leviton #54501-W Series

6. 3-way Toggle Switch: Leviton #54503-W Series

Dimmina Switches: Lutron Nova NT or equivalent

Provide wattage required for fixtures controlled. B. 20 AMP rated receptacles shall be used for dedicated 20 AMP circuit connections per NFPA 70

requirements. 17. <u>LIGHTING FIXTURES:</u>

- A. The Contractor shall provide labor and materials, equipment and services necessary for and incidental to the installation of lighting fixtures.
- B. Provide a fixture for each outlet shown on the drawings. Fixtures shall be complete with lamps, lenses, glassware, mounting brackets, etc., for a complete assembly. Fixtures shall be UL listed.

18. STARTERS:

A. Starters shall be Square 'D' class 8538 combination starter and fused disconnect switch. Coordinate overloads and controls with motor supplier. Manual motor starters shall be Square 'D' class 2510 with pilot lamp.

19. <u>COMMUNICATION SYSTEM:</u>

- A. Contractor to coordinate outlet box and conduit stubs into ceiling space with owners voice and CATV contractor.
- B. Contractor to coordinate and assure all wiring in installed ceiling space to be ran in conduit or be plenum ceiling rated.

SECTION 16B - EXISTING CONDITIONS/ DEMOLITION WORK

. <u>SCOPE:</u>

ELECTRICAL SPECIFICATIONS

- A. The contractor shall make necessary changes to the existing electrical systems to accommodate the new work. This shall include removal or relocation and reconnections of existing equipment disturbed by the new work.
- B. Material and equipment made superfluous by reason of the new work shall become the property of the contractor and shall be removed from the site equipment and devices required for the full unless the equipment is specifically indicated to be retained by the Owner, in which case the contractor shall disconnect and remove the equipment and etc., shall be approved. return to the Owner.

GENERAL

- C. The contractor shall furnish labor material and necessary to complete the demolition work.
- D. The work shall include removal and relocation of existing equipment as shown on the drawings.

2. <u>SITE VISIT:</u>

A. Prior to preparing the bid, the contractor shall visit the site and familiarize himself with the existing conditions. He shall make necessary investigations as to locations of utilities and all other matters which can affect the work. No additional compensation will be made to the contractor as a result of failure to become familiar with the existing conditions under which the work must be performed.

3. OUTAGES:

- A Electrical work which will interfere with the normal use of occupied areas in any manner shall be done at times mutually agreed upon by the Contractor and the Owner.
- B. Unless otherwise specified, outages of services required for the performance of this contract and affecting areas other than the immediate work area shall be schedule at least ten (10) days in advance. Such outages shall be performed on other than normal duty hours.
- C. The Contractor shall include in his price the cost of premium time required for outages and other work which interferes with the normal use of the building. This shall be performed, in most cases, during other than normal work time and at the convenience of

4. CONNECTIONS AND ALTERATIONS TO EXISTING WORK:

- A. The extension of existing services shall be closely coordinated with the owner as they impact adjacent areas which shall remain operational.
- B. While performing connections and alterations to existing mechanical/electrical work, the contractor shall take extreme care to protect existing materials, eauipment, etc. from dirt, debris, and damage. Damage to existing materials, equipment, etc. shall be repaired or replaced by the contractors without expense to the owner.

5. <u>CUTTING AND PATCHING:</u>

the Owner.

- A. Cutting and patching associated with the work in the existing structure shall be performed in a neat and workmanlike manner. Existing surfaces which are damaged by the contractor shall be repaired or replaced with new materials.
- B. Structural members shall not be cut or penetrated. Holes cut through concrete and/or masonry to accommodate new work shall be cut by reciprocating or rotary, non-percussive methods.
- C. Patching of areas, disturbed by installation of new work and/or required demolition, shall match existing adjacent surfaces as to material texture and color.

SECTION 16C - FIRE ALARM SYSTEM

- A. The contractor shall furnish and install labor, materials, equipment and services necessary for an extension of the existing Fire Alarm System as specified herein and shown on plans. All new
- devices shall be completely compatible with the existing F/A system, and shall be wired, connected and left in first class operating condition. Equipment shall match the existing manufacturer, and shall be approved by the Underwriters Laboratory. All functioning of the system, including booster/extender panels, batteries, relays, modules, wiring, cabinets,
 - B. The System shall comply with the latest applicable sections of the following codes, regulations, and quidelines:
 - 1. National Fire Protection Association (NFPA) 2. Underwriters Laboratory, Inc. (UL)
 - 3. Factory Mutual Approval Guide (FM) 4. American Insurance Association Fire Protection
 - 5. International Buildina Code 6. Applicable State & Local Jurisdiction Regulations Amendments, and Codes 7. American with Disabilities Act (ADA)
 - C. The contractor shall submit fire alarm system shop drawings to the local authority having jurisdiction for complete review and approval. It shall be the contractor's responsibility to obtain approved shop drawings prior to starting fire alarm work.

2. <u>DUCT SMOKE DETECTORS:</u>

- A. Duct smoke detectors to be photoelectric type with sampling tube operating on the light-scattering, photo-diode principle. Detectors shall be furnished with insect screen and designed to ignore invisible airborne particles or smoke densities below the factory set alarm point (no radioactive materials shall be used).
- B. The control panel shall be capable of alarm verification of each detector in accordance with NFPA limitations. The detector operating power shall be derived from the control panel.
- C. Furnish a remote test alarm indicator station where a detector is located above a ceiling. The station shall be flush in wall closest to the detector location or as indicated on the drawings.
- D. Detectors shall be furnished and connected under Division 16 and installed in the duct under Division 15 in strict accordance with NFPA 90A & 72E. The fire alarm supplier shall verify detector locations and arrangement with local jurisdiction and state fire protection authorities prior to installation.
- Auxiliary contacts shall be provided for each detector to control the HVAC unit. Connections shall be coordinated with the Automatic Temperature Control (ATC) work.

ALARM DEVICES:

- A. Fire alarm system audible/visual signals shall be flush mounted horns with strobe lights. A common housing shall be utilized.
 - B. Strobes shall be Xenon type in accordance with ADA (NFPA 72) requirements.
 - C. Smoke detectors shall be photoelectric type. D. Flow and tamper switches shall be furnished &

installed under division 15. Connection to the fire

alarm system shall be completed under division 16.

4. <u>HVAC CONTROLS:</u>

- A. Furnish and install H-O-A switches to control all HVAC equipment in accordance with NFPA 90A.
- B. Switches shall be arranged and located adjacent to the lobby annunciator as directed by the local authorities. Switches shall be installed in a lockable cabinet with key to match fire alarm control panels and/or as acceptable by the local authorities.

	MECHANICAL EQUIPMENT SCHEDULE											
MADV	SERVING	VOLT	PH	LOAD	PRO	CONTROL						
MARK	SERVING	VOLT	РП	LOAD	DEVICE	DEVICE FRAME		CONTROL				
GAS-FIRED	GAS-FIRED ROOFTOP UNIT											
RTU-1	ADDITION (NOTE 4)	208	3	64 MCA	FSS	100	90	DIV. 15				
EXHAUST FANS												
EF-1	TOILET ROOMS	120	1	16 WATTS	-	1	-	WALL SWITCH				
EF-2	TOILET ROOMS	120	1	16 WATTS	-	-	-	WALL SWITCH				
EF-3	JANITOR'S CLOSET	120	1	16 WATTS	-	-	-	DIV. 15				
ELECTRIC H	IEATER											
EH-1	CEILING HEATER	120	1	1.5 KW	NFSS	30	-	DIV. 15				
ELECTRIC V	VATER HEATER											
EWH-1	JANITOR'S CLOSET	120	1	2.5 KW	NFSS	30	-	DIV. 15				

- EQUIPMENT INDICATED ABOVE IS FURNISHED & INSTALLED UNDER ANOTHER DIVISION OF THE WORK. DIVISION 16 TO MAKE
- ELECTRICAL PROVISIONS AS INDICATED.
- . FUSE SIZE PER MANUFACTURER'S RECOMMENDATIONS. ALL EXTERIOR SWITCHES AND SAFETY SWITCHES TO BE NEMA 3R TYPE.
- 4. ADDITIONALLY CONNECT RTU-1 TO H-O-A SWITCH AT MAIN ENTRANCE OF ADDITION.

EQUIPMENT MARK

GENERAL NOTES:

EQUIPMENT TYPE RTU 🗻 EQUIPMENT NUMBER

DC - DIRECT CONNECTION DIV. 15 - MECHANICAL SCOPE OF WORK (DIVISION 15) CFSS - COMBINATION FUSED STARTER SAFETY SWITCH

FSS - FUSED SAFETY SWITCH MCA - MINIMUM CIRCUIT AMPS NFSS - NON FUSED SAFETY SWITCH MTS - MOTOR RATED TOGGLE SWITCH

TC - TIME CLOCK TMS - THERMAL MANUAL MOTOR STARTER TSTAT - LINE VOLTAGE THERMOSTAT

WP - WEATHERPROOF WS - WALL SWITCH

SR - SIMPLEX RECEPTACLE

COMcheck Software Version 4.1.5.1 **Interior Lighting Compliance Certificate**

Project Information 2018 IECC Energy Code: Project Title: St. Pius X - Addition

Project Type: Addition Construction Site: Owner/Agent: 14710 Annapolis Road

Catonsville, MD 21228

Area Category

LED 5: LF3: 2' LED strip: LED Linear 20W:

LED 7: LF9: LED monopoint flood: LED PAR 20W:

Allowed Interior Lighting Power

Bowie, MD 20715

1-Church addition (Religious Building)	3930	0.94		3694	
	To	tal Allowed W	/atts =	3694	
Proposed Interior Lighting Power					
A	В	С	D	E	
Fixture ID: Description / Lamp / Wattage Per Lamp / Ballast	Lamps/	# of	Fixture	(C X D)	
	Fixture	Fixtures	D Fixture Watt.		
1-Church addition (Religious Building)					
LED 1: LF1: LED downlight: LED Other Fixture Unit 36W:	1	52	32	1664	
LED 1 copy 1: LF1A: LED downlight: LED Other Fixture Unit 36W:	1	1	15	15	
LED 3: LF2: 2' x 2' LED troffer: LED Panel 19W:	1	9	16	144	
LED 3 copy 1; LF2A; 2' x 2' LED troffer; LED Panel 33W;	1	8	34	272	

Designer/Contractor

Floor Area

(ft2)

SRBR Engineers, Inc.

757 Frederick Road

Allowed

Watts / ft2 (B X C)

1 11 7 77

Total Proposed Watts =

Allowed Watts

nterior Lighting PASSES: Design 36% better than code

LED 1 copy 1: LF8: LED downlight: LED Other Fixture Unit 6.5W:

Interior Lighting Compliance Statement Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist. Donald Gray, Project Engineer December 21, 2023 Name - Title

Project Title: St. Pius X - Addition Data filename: M:\StPiusX_23002\Calcs\Lighting\InteriorLtg-COMcheck.cck Report date: 12/21/23

Page 1 of 6

ISSUED FOR DATE

MICHAEL

GRAVES

St. Pius X Catholic Church

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PROJECT NUMBER

"Professional Certification. I hereby certify that these documents were prepared or

approved by me, and that I am a duly licensed professional engineer under the laws of SHEET TITLE the state of Maryland, License No. 22792, Expiration Date: 08-04-2024."

ELECTRICAL SPECIFICATIONS

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