A701 - ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	CEILING FINISH	FLOOR FINISH	BASE FINISH	W WALL FINISH	N WALL FINISH	E WALL FINISH	S WALL FINISH	NOTES
A100	VEST.	MTL	SC	-	-	-	MTL	-	
A101	LOBBY	MTL, ACT	CPT3	-	PT-1	PT-1	MTL	PT-1	RESILIENT BASE @ GYP. BD. WALLS
A104	INTAKE EXCHANGE	ACT	CPT3	RB	PT-1	PT-1	PT-1	PT-1	
A105	HALL	ACT	CPT3	RB	PT-1	PT-1	PT-1	PT-1	
A106	HALL	ACT	CPT3	RB	PT-1	PT-1	PT-1	PT-1	
A110	HALL	ACT	CPT3	RB	PT-1	PT-1	PT-1	PT-1	
A111	ADMIN. ASST.	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-3	
A112	CASEWORK SUPR.	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-3	
A113	CASEWORK SUPR.	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-3	
A114	DATA/ TRAIN COORD.	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-3	
A115	ASST. DIR.	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-3	
A116	CONFERENCE	ACT	CPT1	RB	PT-1	PT-3	PT-1	PT-1	
A117	STAFF TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A118	STAFF TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A119	COPY/ WORK ROOM	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
A120	SEC. FILES	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
A121	VISITATION	ACT	CPT2	RB	PT-1	PT-1	PT-1	PT-3	
A122	VISITATION	ACT	CPT2	RB	PT-1	PT-1	PT-1	PT-3	
A123	PRIVATE VISIT	PT-2	CPT2	RB	PT-1	PT-1	PT-1	PT-1	
A124	JAN.	PT-2	SC	RB	PT-1	PT-1	PT-1	PT-1	
A125	TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A130	INTAKE WAITING	ACT	CPT3	RB	PT-1	PT-1	PT-3	PT-1	
A131	TLT SH.	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A132	LAUNDRY/STOR.	PT-2	SC	RB	PT-1	PT-1	PT-1	PT-1	
A133	INTERV.	PT-2	CPT3	RB	PT-1	PT-1	PT-1	PT-1	
A134	INTERV.	PT-2	CPT3	RB	PT-1	PT-1	PT-1	PT-1	
A140	CASE MGR. WORK	ACT	CPT1	RB	PT-1	PT-3	PT-1	PT-1	
A141	WASTE COLLECTION	OTS	SC	RB	PT-1	PT-1	PT-1	PT-1	
A142	ELEC./I.T.	OTS	SC	RB	PT-1	PT-1	PT-1	PT-1	
A143	CONFERENCE	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-3	
A144	LG. GROUP COUNSELING	ACT	CPT2	RB	PT-1	PT-3	PT-1	PT-1	
A145	SM. GROUP COUNSELING	ACT	CPT2	RB	PT-1	PT-3	PT-1	PT-1	
A146	JUV. TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A147	JUV. TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A148	THERAPIST OFFICE	ACT	CPT2	RB	PT-1	PT-1	PT-3	PT-1	
A150	MECH.	OTS	SC	RB	PT-1	PT-1	PT-1	PT-1	
A151	WAITING	ACT	CPT1	RB	PT-1	PT-3	PT-1	PT-1	
A152	EXAM	ACT	SV1	RB	PT-1	PT-3	PT-1	PT-1	
A153	MED. OFFICE	ACT	CPT1	RB	PT-1	PT-3	PT-1	PT-1	
A154	MSO	PT-2	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
A155	LIN.	PT-2	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
A156	LAUNDRY	ACT	CPT4	RB	PT-1	PT-1	PT-1	PT-1	
A160	DINING	ACT	SV1	RB	PT-1	PT-3	PT-1	PT-1	
A161	INDOOR REC.	OTS	SC*	-	CMU	CMU	CMU	CMU	PT-1 ALL WALLS IN ENTRANCE FLOOR FINISH: VSF @ ALTERNATE #
A162	JUV. TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A163	INDOOR STOR.	PT-2	SC	RB	PT-1	PT-1	PT-1	PT-1	
A164	INDOOR STOR.	PT-2	SC	RB	PT-1	PT-1	PT-1	PT-1	
A165	STAFF TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A170	STORAGE	PT-2	SC	RB	PT-1	PT-1	PT-1	PT-1	
A171	CLASSROOM	ACT	CPT2	RB	PT-1	PT-3	PT-1	PT-1	
A172	CLASSROOM	ACT	CPT2	RB	PT-1	PT-3	PT-1	PT-1	
A173	CLASSROOM	ACT	CPT2	RB	PT-1	PT-3	PT-1	PT-1	
A174	JUV. TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
A175	WORK	PT-2	CPT2	RB	PT-1	PT-1	PT-1	PT-1	
A176	JUV. TLT	PT-2	SV2	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B100	LIVING ROOM	OTS, ACT, ACU	CPT1, CPT4	RB	PT-1	PT-3	PT-1	PT-1	
B100.1	WORKSTATION	OTS	CPT4	RB	PT-1	PT-3	PT-1	PT-1	
B101	CALM	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B102	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B103	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B104	CLOSET	PT-2	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B105	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B106	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B107	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B108	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B109	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B110	LIVING ROOM	OTS, ACT, ACU	CPT1, CPT4	RB	PT-3	PT-1	PT-1	PT-1	
B110.1	WORKSTATION	OTS	CPT4	RB	PT-3	PT-1	PT-1	PT-1	
B111	CALM	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B112	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B113	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B114	CLOSET	PT-2	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B115	BEDROOM	PT-2	LVT	RB	PT-3	PT-1	PT-1	PT-1	
B116	BEDROOM	PT-2	LVT	RB	PT-3	PT-1	PT-1	PT-1	
B117	BEDROOM	PT-2	LVT	RB	PT-3	PT-1	PT-1	PT-1	
B118	BEDROOM	PT-2	LVT	RB	PT-3	PT-1	PT-1	PT-1	
B119	BEDROOM	PT-2	LVT	RB	PT-3	PT-1	PT-1	PT-1	
B120	LIVING ROOM	OTS, ACT, ACU	CPT1, CPT4	RB	PT-1	PT-1	PT-3	PT-1	
B120.1	WORKSTATION	OTS	CPT4	RB	PT-1	PT-1	PT-3	PT-1	
B121	CALM	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B122	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B123	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B124	CLOSET	PT-2	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B125	BEDROOM	PT-2	LVT	RB	PT-1	PT-1	PT-3	PT-1	
B126	BEDROOM	PT-2	LVT	RB	PT-1	PT-1	PT-3	PT-1	
B127	BEDROOM	PT-2	LVT	RB	PT-1	PT-1	PT-3	PT-1	
B128	BEDROOM	PT-2	LVT	RB	PT-1	PT-1	PT-3	PT-1	
B130	LIVING ROOM	OTS, ACT, ACU	CPT1, CPT4	RB	PT-1	PT-3	PT-1	PT-1	
B130.1	WORKSTATION	OTS	CPT4	RB	PT-1	PT-3	PT-1	PT-1	
B131	CALM	ACT	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B132	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B133	TLT SH.	PT-2	SV1	RB	PTE-1	PTE-1	PTE-1	PTE-1	
B134	CLOSET	PT-2	CPT1	RB	PT-1	PT-1	PT-1	PT-1	
B135	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B136	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B137	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	
B138	BEDROOM	PT-2	LVT	RB	PT-1	PT-3	PT-1	PT-1	

GENERAL NOTES

A. DO NOT PAINT DECORATIVE GROUND FACE BLOCK TYPICAL.
B. REF. REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION.
C. REF. FLOOR FINISH PLANS FOR ADDITIONAL INFORMATION

FINISH LEGEND

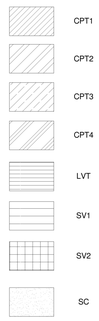
APC1 - 2x2 ACCOUSTICAL PANEL CEILING
CPT1 - CARPET
CPT2 - CARPET
CPT3 - RESILIENT CARPET TILE
CPT4 - RESILIENT CARPET TILE
LVT - VINYL FLOOR TILE
PT1 - WALL PAINT
PT2 - CEILING PAINT
PT3 - ACCENT PAINT
PTE1 - EPOXY PAINT
RB - RESILIENT BASE
SC - SEALED CONCRETE
SV1 - SHEET VINYL
SV2 - SHEET VINYL
VSF - VINYL SPORTS FLOORING
(--) - FINISH NOT REQUIRED

NOTE: TYPICAL FOR ALL LIVING UNITS

FLOOR FINISH PATTERN
1/4" = 1'-0"

1

FLOOR FINISH LEGEND



DATE
REVISIONS
BY
NO.

COMMONWEALTH OF VIRGINIA
MICHAEL TREANOR
Lic. No. 012984
ARCHITECT

Virginia A&E

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 1004.3-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

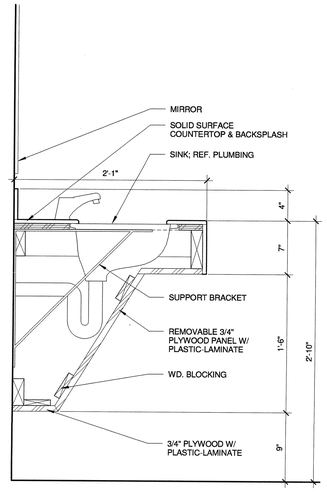
FINISH PLAN

DATE: 02 FEB 15

PROJECT NO: 1004.3

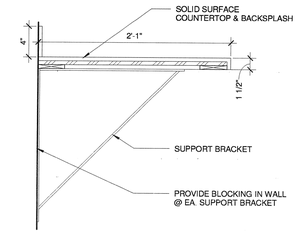
Full Scale Verification
0" 1"

Drawing No.:
A710



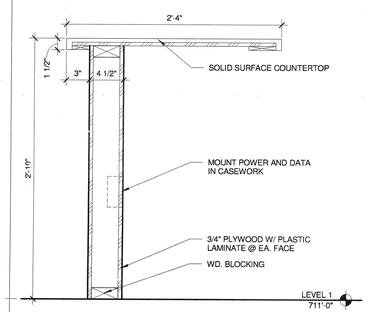
CASEWORK - VANITY 10

1 1/2" = 1'-0"



TYP. COUNTER SECTION 8

1 1/2" = 1'-0"



STAFF WORKSTATION 14

1 1/2" = 1'-0"

STAFF WORKSTATION ELEV. 15

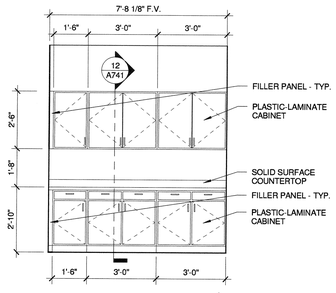
3/8" = 1'-0"

A152 EXAM 7

3/8" = 1'-0"

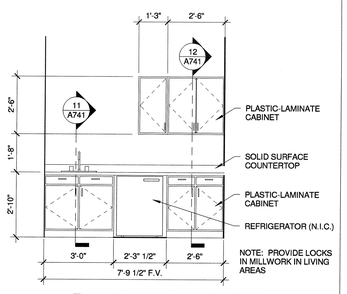
A160 DINING 6

3/8" = 1'-0"



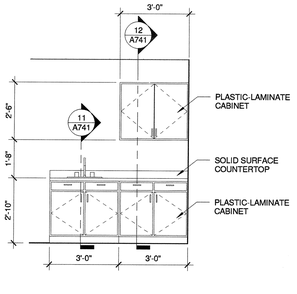
A119 COPY/WORK ROOM 5

3/8" = 1'-0"



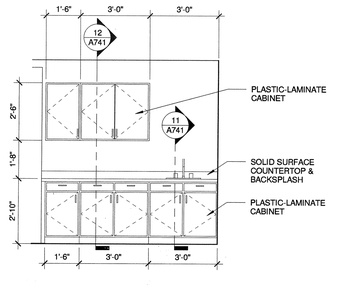
B100 LIVING ROOM 4

3/8" = 1'-0"



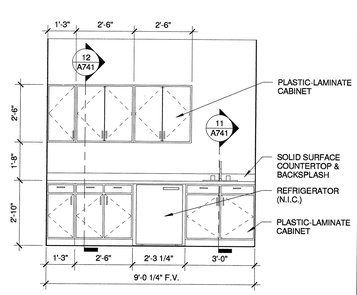
A132 LAUNDRY/STOR. 3

3/8" = 1'-0"



A121 VISITATION 2

3/8" = 1'-0"



A110 HALL 1

3/8" = 1'-0"

DATE | REVISIONS | BY | NO.

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2-3-16

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

MILLWORK

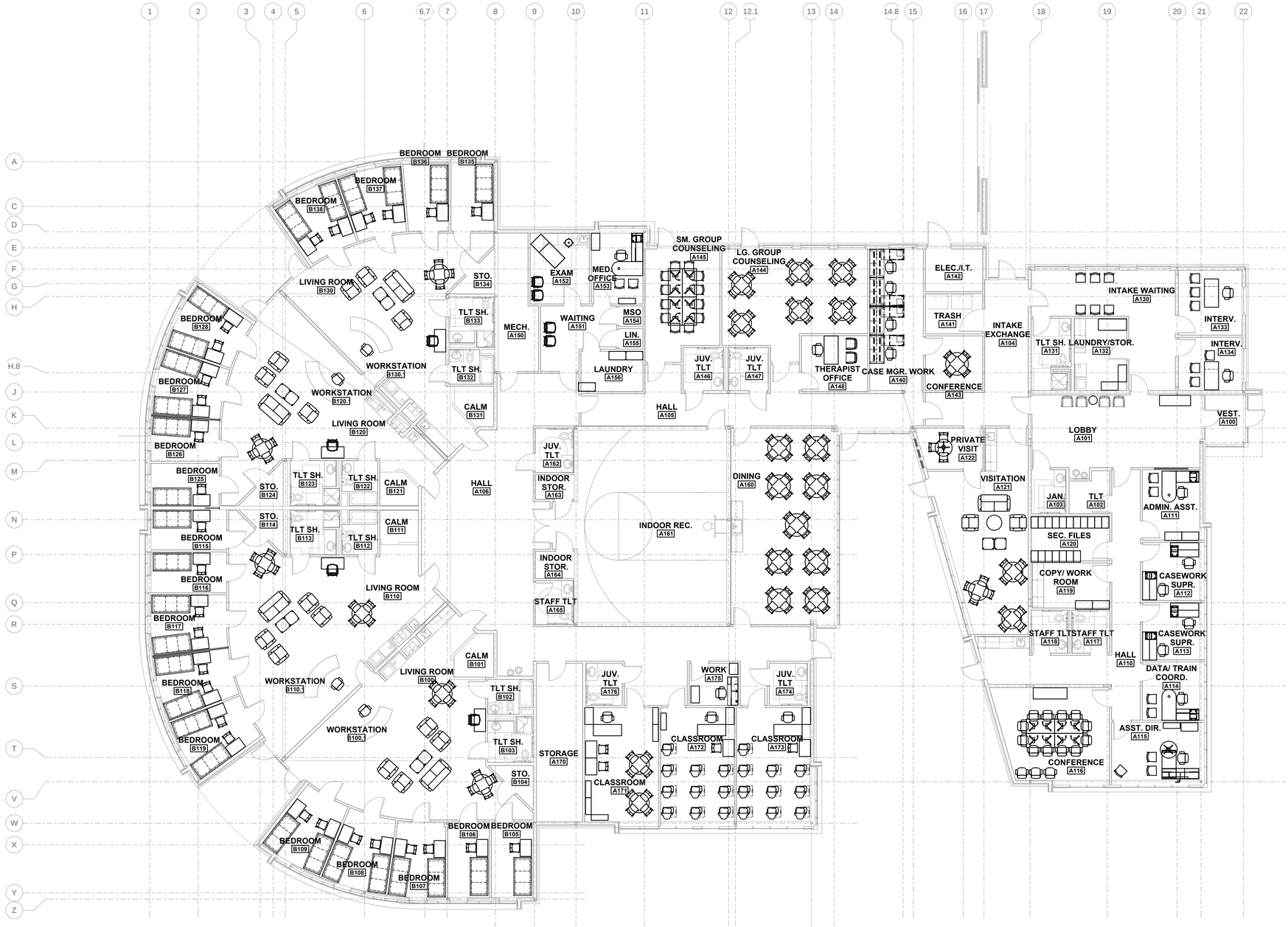
DATE: 02 FEB 15
PROJECT NO: 11088

Full Scale Verification
0" 1"

Drawing No.:
A741

GENERAL NOTES:

1. FURNITURE SHOWN IS FOR INFORMATION ONLY. FURNITURE PROVIDED BY OTHERS.



NORTH

FURNITURE LAYOUT PLAN

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

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

Virginia A&E

VIRGINIA A&E, PLLC
1115 VISTA PARK DRIVE
FOREST, VIRGINIA 24551
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Inspired Design by Anne, LLC
FOCUS ON INTERIOR DESIGN

180 POPLAR TERRACE DRIVE
LYNCHBURG, VIRGINIA 24502
anne@inspireddesign.us
434.509.3177

LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

FURNITURE LAYOUT PLAN

DATE: 03 FEB 15

PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:

ID101

GENERAL NOTES:

GENERAL:

1. GOVERNING BUILDING CODE:
   2009 VIRGINIA UNIFORM STATEWIDE BUILDING CODE
   (2009 INTERNATIONAL BUILDING CODE)

UNIFORM FLOOR LIVE LOADS:	
ALL FLOORS, EXCEPT AS NOTED	100 PSF
MECHANICAL ROOMS	150 PSF
LIGHT STORAGE AREAS	125 PSF

2. ROOF LIVE LOAD (NON-REDUCIBLE) 20 PSF

3. CONCENTRATED LIVE LOADS:
   ALL FLOORS, EXCEPT AS NOTED 2000 LBS

4. WIND LOAD CRITERIA:

BASIC WIND SPEED	90 MPH
WIND IMPORTANCE FACTOR (IW)	1.0
WIND EXPOSURE CONDITION	C
INTERNAL PRESSURE COEFFICIENT (GCPI)	0.18
COMPONENTS AND CLADDING WIND PRESSURE	17 PSF
SURFACE ROUGHNESS CATEGORY	C
BUILDING CATEGORY	11

5. SNOW LOAD CRITERIA:

GROUND SNOW LOAD (PG)	20 PSF
FLAT ROOF SNOW LOAD (PF)	14 PSF
SNOW EXPOSURE FACTOR (CE)	1.0
SNOW IMPORTANCE FACTOR (IS)	1.0
SNOW THERMAL FACTOR (CT)	1.0
ROOF SLOPE FACTOR	1.0
SLOPED SNOW ROOF LOAD	14.0 PSF

6. SEISMIC LOAD CRITERIA:

SEISMIC IMPORTANCE FACTOR (IE)	1.0
OCCUPANCY CATEGORY	II
MAPPED SPECTRAL RESPONSE COEFFICIENT, (SS)	0.225
MAPPED SPECTRAL RESPONSE COEFFICIENT, (S1)	0.070
SITE CLASS (PER GEOTECHNICAL REPORT)	D
SHORT PERIOD SITE COEFFICIENT (FA)	1.60
LONG PERIOD SITE COEFFICIENT (FV)	2.40
SPECTRAL RESPONSE FOR SHORT ACCELERATION (SMS)	0.360
SPECTRAL RESPONSE AT 1 SECOND (SM1)	0.168
SPECTRAL RESPONSE COEFFICIENT, (SDS)	0.240
SPECTRAL RESPONSE COEFFICIENT, (SD1)	0.112
SEISMIC DESIGN CATEGORY	B
SEISMIC FORCE RESISTING SYSTEM	ORDINARY REINFORCED MASONRY WALLS AND STEEL MOMENT FLANGES
DESIGN BASE SHEAR	143 KIPS
SEISMIC RESPONSE COEFFICIENT, (CS)	0.12
EFFECTIVE SEISMIC WEIGHT (W)	1,188 KIPS
RESPONSE MODIFICATION FACTOR (R)	2
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE
SEISMIC DESIGN CATEGORY:	
SHORT PERIOD	B
1 SECOND PERIOD	B

7. SUBMIT SHOP DRAWINGS AND MATERIAL CERTIFICATIONS FOR REVIEW FOR THE FOLLOWING ITEMS. DO NOT FABRICATE MATERIALS UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND ALL EXCEPTIONS HAVE BEEN RESOLVED.
   A. CONCRETE MIX DESIGNS, TESTS, AND CERTIFICATES PER ACI 301
   B. CONCRETE REINFORCING STEEL SHOP DRAWINGS
   C. REBAR AND WWF PRODUCT DATA
   D. ISOLATION JOINT MATERIAL
   E. JOINT FILLER
   F. VAPOR BARRIER PRODUCT DATA
   G. MASONRY UNIT TESTS, CERTIFICATES, AND PRODUCT DATA
   H. MASONRY REINFORCING STEEL SHOP DRAWINGS
   I. MASONRY MORTAR AND GROUT MIX DESIGNS, TESTS, AND CERTIFICATES
   J. STRUCTURAL STEEL MANUFACTURER'S CERTIFICATE OF COMPLIANCE
   K. STRUCTURAL STEEL FASTENERS MANUFACTURER'S CERTIFICATE OF COMPLIANCE
   L. STRUCTURAL STEEL SHOP DRAWINGS
   M. STEEL JOIST AND JOIST GIRDERS SHOP DRAWINGS
   N. METAL DECK SHOP DRAWINGS
   O. MISCELLANEOUS STEEL SHOP DRAWINGS
   P. STEEL PAINT PRODUCT DATA
   Q. COLD FORMED FRAMING PRODUCT DATA
   R. METAL FRAMING ANCHORS
   S. TERMITE SOIL TREATMENT

8. CONTRACT DRAWINGS SHALL NOT BE MARKED AND SUBMITTED AS SHOP DRAWINGS.

9. THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND PROTECT FROM DAMAGE DURING EXCAVATION AND BACKFILLING OPERATIONS.

10. ALL STRUCTURAL MATERIALS, COMPONENTS, AND SYSTEMS SHALL BE TESTED AND INSPECTED IN ACCORDANCE WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE BY AN INDEPENDENT TESTING AND INSPECTION FIRM PROVIDED BY THE OWNER. TEST FIRM SHALL PROVIDE WRITTEN REPORTS FOR REVIEW BY THE ENGINEER AND OWNER INCLUDING:
    A. SUBGRADE COMPACTION
    B. REINFORCEMENT PLACEMENT
    C. CONCRETE COMPRESSIVE STRENGTH
    D. CONCRETE SLUMP
    E. CONCRETE AIR CONTENT
    F. CONCRETE TEMPERATURE
    G. CONCRETE PLACEMENT
    H. CONDITION, SIZE, LOCATION, SPACING OF MASONRY REINFORCING STEEL
    I. FIELD SAMPLES AND TESTING OF MASONRY MORTAR & GROUT
    J. INSTALLATION OF HIGH-STRENGTH STEEL BOLTS
    K. WELDING
    L. STEEL FRAMING AND CONNECTIONS

11. STRUCTURAL FRAMING SHALL BE TEMPORARILY BRACED UNTIL ERECTION IS COMPLETE AND PERMANENT CONNECTIONS, BRACING MEMBERS AND/OR SHEAR WALLS ARE INSTALLED.

12. SPECIAL INSPECTION REQUIREMENTS:
    A. SPECIAL INSPECTIONS SHALL FOLLOW THE REQUIREMENTS OUTLINED IN CHAPTER 17 OF THE 2009 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC).
       1) SPECIAL INSPECTIONS FOR STEEL CONSTRUCTION SHALL FOLLOW THE INFORMATION OUTLINED IN SECTION 1704.3 IN THE IBC AND INFORMATION AS OUTLINED IN TABLE 1704.3 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION.
       2) SPECIAL INSPECTIONS FOR CONCRETE SHALL FOLLOW THE INFORMATION AS OUTLINED IN SECTION 1704.4 IN THE IBC.
       3) SPECIAL INSPECTIONS FOR MASONRY SHALL FOLLOW THE INFORMATION FROM 1704.5 IN THE IBC AND INFORMATION OUTLINED IN TABLE 1704.5 SPECIAL INSPECTION OF MASONRY CONSTRUCTION, TABLE 1704.5.1 LEVEL 1 SPECIAL INSPECTION OR TABLE 1704.5.3 LEVEL 2 SPECIAL INSPECTION BASED ON TABLE 1704.5.
       4) SPECIAL INSPECTIONS FOR SOILS SHALL FOLLOW THE INFORMATION IN 1704.7 AND OUTLINED IN TABLE 1704.7 REQUIRED VERIFICATION AND INSPECTION OF SOILS.
       5) SPECIAL INSPECTIONS FOR HELICAL PILE FOUNDATIONS SHALL FOLLOW THE REQUIREMENTS OUTLINED IN SECTION 1704.10.
       6) SPECIAL INSPECTIONS FOR SPRAYED FIRE-RESISTANT MATERIALS SHALL FOLLOW THE REQUIREMENTS OUTLINED IN SECTION 1704.12.
       7) SPECIAL INSPECTIONS FOR EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS) SHALL FOLLOW THE INFORMATION IN 1704.13.

    B. A STATEMENT OF SPECIAL INSPECTIONS SHALL BE PREPARED IN ACCORDANCE TO SECTION 1705-STATEMENT OF SPECIAL INSPECTIONS OF THE IBC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE REQUIREMENTS OUTLINED IN SECTION 1706 - CONTRACTOR RESPONSIBILITY IN THE IBC.

    C. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE SHALL FOLLOW THE GUIDELINES SET FORTH IN SECTION 1707 - SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

    D. STRUCTURAL TESTING SHALL FOLLOW THE GUIDELINES SET FORTH IN SECTION 1708 - STRUCTURAL TESTING FOR SEISMIC RESISTANCE.

FOUNDATIONS:

1. DESIGN SOIL BEARING CAPACITY: 2,500 PSF PER THE REPORT OF SUBSURFACE INVESTIGATION, NO. 20120440, PREPARED BY HURT & PROFFITT, DATED 2/28/14. THE REPORT IS INCLUDED IN THE SPECIFICATIONS. NOTE: A HELICAL PILE SYSTEM IS RECOMMENDED.

2. WHERE FOOTING OR SLAB ON GRADE IS TO BE PLACED ON FILL, ALL TOPSOIL, ROOTS, TRASH, AND OTHER EXTRANEOUS MATERIALS SHALL BE REMOVED AND REPLACED WITH SELECT FILL COMPACTED TO A MINIMUM OF 95% OF ITS MAXIMUM DENSITY AT ITS OPTIMUM MOISTURE CONTENT AS MEASURED BY THE STANDARD PROCTOR METHOD (ASTM D698). THE TOP 12" SHALL BE COMPACTED TO A MINIMUM DENSITY OF 98%. EACH LAYER OF FILL SHALL BE NO GREATER THAN 6" THICK AND SHALL BE COMPACTED AS SPECIFIED PRIOR TO PLACEMENT OF THE FOLLOWING LAYER.

3. OWNER SHALL ENGAGE A TESTING AND INSPECTION FIRM WITH A QUALIFIED GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA TO INSPECT AND APPROVE THE SUBGRADE INCLUDING FILL AND BACKFILL MATERIALS AND OPERATIONS. ALL FOUNDATION BEARING STRATA SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY CONCRETE PLACEMENT. IF UNSUITABLE SOILS ARE ENCOUNTERED, THE GEOTECHNICAL ENGINEER AND THE PROJECT ENGINEER SHALL DETERMINE THE MEANS OF CORRECTIVE ACTION INCLUDING, BUT NOT LIMITED TO, ITEMS NOTED BELOW.

4. FOOTING BEARING ELEVATIONS MAY BE LOWERED WHERE REQUIRED TO OBTAIN THE DESIGN SOIL BEARING CAPACITY SPECIFIED ABOVE.

5. FOOTINGS MAY BE UNDERCUT AND BACKFILLED WITH COMPACTED STONE OR INCREASED IN THICKNESS AS REQUIRED TO OBTAIN THE DESIGN CAPACITY NOTED ABOVE.

6. FOOTING EXCAVATIONS SHALL NOT BE LEFT OPEN OVER NIGHT WHEN RAIN IS FORECAST. OPEN EXCAVATIONS LEFT EXPOSED TO RAIN, SNOW, OR ICE SHALL HAVE A LAYER OF 3" LEAN CONCRETE PLACED AHEAD OF WEATHER CONDITIONS FOR PROTECTION.

7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WELL-BRACED SHORING AT EXCAVATIONS NEAR EXISTING BUILDINGS AND CONSTRUCTION TO PREVENT SETTLEMENT OR CAVE-INS.

8. WALLS ACTING AS RETAINING WALLS SHALL NOT BE BACKFILLED WITHOUT BRACING UNTIL ALL FOUNDATION DRAINS, SUPPORTING SOILS, AND SLABS ARE IN PLACE.

9. SELECT AND PLACE POROUS BACKFILL AT RETAINING WALLS CAREFULLY WHERE INDICATED ON THE DRAWINGS.

10. PLACE CONCRETE FOR WALL FOOTINGS MONOLITHICALLY WITH COLUMN FOOTINGS. CONSTRUCTION JOINTS IN WALL FOOTINGS SHALL BE MADE ONLY MIDWAY BETWEEN COLUMN FOOTINGS.

11. ALL FOOTINGS, GRADE BEAMS, AND PILE CAPS SHALL BE FORMED WITH WOOD OR METAL FORMING MATERIALS TO THE DIMENSIONS SHOWN ON THE DRAWINGS, UNLESS OTHERWISE NOTED.

12. BEFORE PLACING CONCRETE FOOTINGS, VERIFY ELECTRICAL GROUNDING CONNECTIONS TO REBAR ARE IN PLACE AND TESTED. SEE ELECTRICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

13. ALL SLABS ON GRADE SHALL BE PLACED OVER 3" COMPACTED GRANULAR FILL OVER VAPOR BARRIER OVER 4" BASE OF WELL-COMPACTED STONE. THE STONE SHALL BE PLACED ON ORIGINAL SOIL OR ON COMPACTED EARTH FILL AS DESCRIBED ABOVE.

14. VAPOR BARRIER SHALL BE POLYETHYLENE SHEET IN ACCORDANCE WITH ASTM D4397, NOT LESS THAN 10 MILS THICK.

15. PLACE CONCRETE FOR SLAB ON GRADE IN CONTINUOUS STRIPS AND PROVIDE CRACK CONTROL JOINTS AT LOCATIONS INDICATED ON PLAN OR A MAXIMUM SPACING OF 15 FEET ON CENTER, UNLESS OTHERWISE NOTED.

16. EXCAVATE PILE CAPS TO DEPTHS SHOWN ON PLANS AND DETAILS PRIOR TO COMMENCING INSTALLATION OF PILE.

17. HELICAL PILES SHALL BE DRILLED TO A DEPTH OF 7'-0" MINIMUM, BELOW EXISTING GRADE WHERE EXISTING GRADE IS 700' AMSL OR LOWER. WHERE EXISTING GRADE IS ABOVE 700' AMSL HELICAL PILES SHALL BE DRILLED TO 690' AMSL OR LOWER. REFER TO DRAWING C130 FOR EXISTING GRADE ELEVATIONS. ALL HELICAL PILES SHALL BE TO MINIMUM CAPACITIES AS SHOWN ON DRAWING S101 PLAN AND STATED ON HELICAL PILE LEGEND.

CONCRETE:

1. CONCRETE MIXTURES SHALL COMPLY WITH ACI 301. PREPARE NORMAL-WEIGHT CONCRETE (145 PCF) DESIGN MIXES UNLESS OTHERWISE NOTED, PROPORTIONED ACCORDING TO ACI 301, AS FOLLOWS:

   INTERIOR FLOOR SLAB:
   A. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS.
   B. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO: 0.45
   C. SLUMP LIMIT: 5 INCHES +/- 1 INCH FOR CONCRETE
   D. AIR CONTENT: MAINTAIN 3% (+/- 1%)

   FOOTINGS AND OTHER CONCRETE:
   A. MINIMUM COMPRESSIVE STRENGTH: 3000 PSI AT 28 DAYS.
   B. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO: 0.45
   C. SLUMP LIMIT: 5 INCHES +/- 1 INCH FOR CONCRETE
   D. AIR CONTENT: MAINTAIN 3% (+/- 1%)

   EXTERIOR CONCRETE (SIDEWALKS, EQUIPMENT PADS, ETC.):
   A. MINIMUM COMPRESSIVE STRENGTH: 3500 PSI AT 28 DAYS.
   B. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO: 0.45
   C. SLUMP LIMIT: 5 INCHES +/- 1 INCH FOR CONCRETE
   D. AIR CONTENT: MAINTAIN 5% (+/- 1%)

2. READY MIXED CONCRETE PRODUCER SHALL CONFORM TO QUALIFICATIONS BY ASTM C94.

3. MEASURE, BATCH, MIX, AND DELIVER CONCRETE ACCORDING TO ASTM C94 AND ASTM C1116. WHEN AIR TEMPERATURE IS ABOVE 90 DEG F, REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.

4. ALL DETAILING, FABRICATION AND PROCEDURES OF CONCRETE PLACEMENT SHALL CONFORM WITH THE LATEST EDITIONS OF ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 315 - "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT", AND ACI 318 - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND SPECIFICATION SECTION 033000 - CAST-IN-PLACE CONCRETE.

5. REINFORCING BARS SHALL BE ROLLED FROM NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 DEFORMED, UNLESS OTHERWISE NOTED.

6. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND A82 HAVE END LAPS OF ONE FULL MESH PLUS 2" BETWEEN CROSS WIRES AND EDGE LAPS OBTAINED BY OVERLAPPING LONGITUDINAL SELVAGE WIRES 2" AND WIRING ALL LAPS SECURELY TOGETHER. WELDED WIRE FABRIC SHALL EXTEND INTO SUPPORT BEAMS AND WALLS FOR ANCHORAGE UNLESS AN EXPANSION JOINT IS INDICATED.

7. ALL SHOP AND FIELD WELDING OF REINFORCING STEEL TO STRUCTURAL SHAPES SHALL BE PERFORMED BY WELDERS WHO HAVE BEEN QUALIFIED BY TEST AS PRESCRIBED IN THE AWS D1.1 AND SHALL BE PERFORMED IN ACCORDANCE WITH AWS D1.4.

8. GROUT UNDER ALL COLUMN BASE PLATES AND BEAM BEARING PLATES WITH NON-SHRINK, NON-METALLIC GROUT WHICH CONFORMS TO ASTM C1107.

9. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCEMENT, UNLESS OTHERWISE NOTED:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER: #5 THROUGH #18 BARS 2"

10. ISOLATION JOINT MATERIAL SHALL BE 1/2" THICK ASPHALT-SATURATED CELLULOSIC FIBER IN ACCORDANCE WITH ASTM D1752, UNLESS OTHERWISE NOTED.

11. PROVIDE CORNER BARS AT ALL WALL AND FOOTING STEPS AND CORNERS UNLESS OTHERWISE NOTED. CORNER BARS SHALL BE A MINIMUM OF 2'-6"x2'-6" LONG AND SHALL HAVE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCING.

12. LAP ALL REINFORCING SPLICES AT LEAST 48 BAR DIAMETERS UNLESS OTHERWISE NOTED. SPLICE LOCATIONS SHALL BE STAGGERED FOR PARALLEL BARS.

13. ALL REINFORCING SHALL BE SECURELY WIRED TOGETHER IN FORMS AS CALLED FOR IN "PLACING REINFORCING BARS" BY CRSI.

14. NO TORCH CUTTING, HEAT BENDING, OR WELDING OF REINFORCING SHALL BE DONE UNLESS OTHERWISE NOTED.

15. CHAMFER EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.

16. SHORING OR FORMS SHALL NOT BE REMOVED UNTIL THE CONCRETE IT SUPPORTS IS CAPABLE OF SUPPORTING ITSELF AND ALL SUPERIMPOSED LOADS.

17. DO NOT SLEEVE WALLS WITHOUT PRIOR APPROVAL OF THE ENGINEER, UNLESS SHOWN ON STRUCTURAL DRAWINGS.

18. CEMENTITIOUS MATERIAL: USE CEMENTITIOUS MATERIALS, OF THE SAME TYPE, BRAND, AND SOURCE, THROUGHOUT PROJECT. PORTLAND CEMENT SHALL BE ASTM C150, TYPE 1/11, GRAY. SUPPLEMENT WITH FLY ASH IN ACCORDANCE WITH ASTM C618, CLASS F OR C AND GROUND GRANULATED BLAST-FURNACE SLAG IN ACCORDANCE WITH ASTM C989, GRADE 100 OR 120. SILICA FUME SHALL BE ASTM C1240, AMORPHOUS SILICA.

19. NORMAL-WEIGHT AGGREGATES: ASTM C33, CLASS 3S COARSE AGGREGATE OR BETTER, GRADED. PROVIDE AGGREGATES FROM A SINGLE SOURCE WITH DOCUMENTED SERVICE RECORD DATA OF AT LEAST 10 YEARS' SATISFACTORY SERVICE IN SIMILAR APPLICATIONS AND SERVICE CONDITIONS USING SIMILAR AGGREGATES AND CEMENTITIOUS MATERIALS. MAXIMUM COARSE-AGGREGATE SIZE SHALL BE 1 INCH NOMINAL. FINE AGGREGATES SHALL BE FREE OF MATERIALS WITH DELETERIOUS REACTIVITY TO ALKALI IN CEMENT.

20. WATER SHALL BE ASTM C94 AND POTABLE.

21. AIR-ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260.

22. CHEMICAL ADMIXTURES SHALL CONFORM TO ASTM C494 AND BE WATER REDUCING. CONTRACTOR SHALL NOT USE CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE.

23. JOINT FILLER SHALL BE TWO COMPONENT, POLYUREA ELASTOMER, FLEXIBLE, 100 PERCENT SOLIDS FOR EXTERIOR APPLICATION. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF JOINT FILLER/SEALANT WITH FLOORING, SEALING, AND CURING MANUFACTURING.

24. CLEAR, SOLVENT-BORNE, MEMBRANE-FORMING CURING AND SEALING COMPOUND SHALL CONFORM TO ASTM C1315, TYPE 1, CLASS A. TWO PART APPLICATION PER MANUFACTURER'S REQUIREMENTS AND SHALL BE APPLIED TO AREAS WITH SEALED CONCRETE FLOOR FINISHES ON THE ARCHITECTURAL FINISH SCHEDULE.

25. CONSTRUCT FORMWORK ACCORDING TO ACI 301 AND MAINTAIN TOLERANCES AND SURFACE IRREGULARITIES WITHIN ACI 347 R LIMITS OF CLASS C, 1/2 INCH FOR OTHER CONCRETE SURFACES.

26. COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.

27. BEFORE PLACING CONCRETE, VERIFY THAT INSTALLATION OF FORMWORK, REINFORCEMENT, AND EMBEDDED ITEMS IS COMPLETE AND THAT ALL REQUIRED INSPECTIONS HAVE BEEN PERFORMED.

28. PLACE CONCRETE IN A CONTINUOUS OPERATION AND CONSOLIDATE USING MECHANICAL VIBRATING EQUIPMENT.

29. PROTECT CONCRETE FROM PHYSICAL DAMAGE, PREMATURE DRYING, AND REDUCED STRENGTH DUE TO HOT OR COLD WEATHER DURING MIXING, PLACING, AND CURING.

30. FORMED SURFACES SHALL BE FINISHED BY THE FOLLOWING METHODS:
    A. ROUGH FORMED FINISHES SHALL BE APPLIED TO CONCRETE SURFACES NOT EXPOSED TO PUBLIC VIEWS. AS-CAST CONCRETE TEXTURE IMPARTED BY FORM-FACING MATERIAL WITH TIE HOLES AND DEFECTS REPAIRED AND PATCHED. REMOVE FINS AND OTHER PROJECTIONS THAT EXCEED SPECIFIED LIMITS ON FORMED-SURFACE IRREGULARITIES.
    B. SMOOTH-FORMED FINISHES SHALL BE APPLIED TO CONCRETE SURFACES EXPOSED TO PUBLIC VIEW. AS-CAST CONCRETE TEXTURE IMPARTED BY FORM-FACING MATERIAL, ARRANGED IN AN ORDERLY AND SYMMETRICAL MANNER WITH A MINIMUM OF SEAMS. REPAIR AND PATCH TIE HOLES AND DEFECTS. REMOVE FINS AND OTHER PROJECTIONS THAT EXCEED SPECIFIED LIMITS ON FORMED-SURFACE IRREGULARITIES. A SMOOTH-RUBBED FINISH SHALL BE APPLIED TO CONCRETE FOUNDATION WALLS NO LATER THAN ONE DAY AFTER FORM REMOVAL. MOISTEN CONCRETE, AND RUB WITH CARBORUNDUM BRICK OR ANOTHER ABRASIVE UNTIL PRODUCING A UNIFORM COLOR AND TEXTURE. DO NOT APPLY CEMENT GROUT OTHER THAN THAT CREATED BY THE RUBBING PROCESS.

31. UNFORMED SURFACES SUCH AS TOPS OF WALLS, HORIZONTAL OFFSETS, AND SIMILAR UNFORMED SURFACES ADJACENT TO FORMED SURFACES, STRIKE OFF SMOOTH AND FINISH WITH A TEXTURE MATCHING ADJACENT FORMED SURFACES. CONTINUE FINAL SURFACE TREATMENT OF FORMED SURFACES UNIFORMLY ACROSS ADJACENT UNFORMED SURFACES UNLESS OTHERWISE NOTED.

32. SLAB FINISHES SHALL COMPLY WITH ACI 302.1R RECOMMENDATIONS FOR SCREEDING, RESTRAIGHTENING, AND FINISHING OPERATIONS FOR CONCRETE SURFACES. APPLY FINISHES TO FLOORS AND SLABS NOTED BELOW:
    A. SCRATCH FINISH SHALL BE APPLIED TO SURFACES THAT WILL RECEIVE CONCRETE FLOOR TOPPING OR MORTAR SETTING BEDS FOR BONDED CEMENTITIOUS FLOOR FINISHES. WHILE STILL PLASTIC, TEXTURE CONCRETE SURFACE THAT HAS BEEN SCREEDED AND BULL-FLOATED OR DARBIED. USE STIFF BRUSHES, BROOMS, OR RAKES TO PRODUCE PROFILE AMPLITUDE OF 1/4 INCH IN ONE DIRECTION.
    B. FLOAT FINISH SHALL BE APPLIED TO SURFACES TO RECEIVE TROWEL FINISH. CONSOLIDATE SURFACE WITH POWER-DRIVE FLOATS OR BY HAND FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER DRIVEN FLOATS. RESTRAIGHTEN, CUT DOWN HIGH SPOTS, AND FILL IN LOW SPOTS. REPEAT FLOAT PASSES AND RESTRAIGHTENING UNTIL SURFACE IS LEFT WITH A UNIFORM, SMOOTH, GRANULAR TEXTURE.
    C. TROWEL FINISH SHALL BE APPLIED TO SURFACES THAT ARE EXPOSED TO VIEW OR TO BE COVERED WITH RESILIENT FLOORING, CARPET, CERAMIC OR QUARRY TILE SET OVER A CLEAVAGE MEMBRANE, PAINT, OR ANOTHER THIN-FILM-FINISH COATING SYSTEM. AFTER APPLYING FLOAT FINISH, APPLY FIRST TROWELING AND CONSOLIDATE CONCRETE BY HAND OR POWER-DRIVEN TROWEL. CONTINUE TROWELING PASSES AND RESTRAIGHTEN UNTIL SURFACE IS FREE OF TROWEL MARKS AND UNIFORM IN TEXTURE AND APPEARANCE. GRIND SMOOTH ANY SURFACE DEFECTS THAT WOULD TELEGRAPH THROUGH APPLIED COATINGS OR FLOOR COVERINGS. FINISH SURFACES ACCORDING TO ASTM E 1155 FOR A RANDOMLY TRAFFICKED FLOOR SURFACE.
    D. TROWEL AND BROOM FINISH SHALL BE APPLIED TO SURFACES THAT WILL HAVE CERAMIC OR QUARRY TILE INSTALLED. A FIRST TROWEL FINISH TO SURFACES INDICATED OR WHERE CERAMIC OR QUARRY TILE IS TO BE INSTALLED BY EITHER THICKSET OR THIN-SET METHOD. WHILE CONCRETE IS STILL PLASTIC, SLIGHTLY SCARIFY SURFACE WITH A FINE BROOM.
    E. BROOM FINISH SHALL BE APPLIED TO EXTERIOR CONCRETE PLATFORMS, STEPS, RAMPS, AND AS INDICATED. IMMEDIATELY AFTER FLOAT FINISHING, SLIGHTLY ROUGHEN TRAFFICKED SURFACE BY BROOMING WITH FIBER-BRISTLE BROOM PERPENDICULAR TO MAIN TRAFFIC ROUTE. COORDINATE REQUIRED FINAL FINISH WITH OWNER/ENGINEER BEFORE APPLICATION.

33. SAW CUT CONTROL JOINTS (CJ) AS SHOWN ON PLAN AFTER INITIAL GEL AND WITHIN 24 HOURS OF POUR. GEL MUST BE SUITABLE TO PREVENT SURFACE FRACTURING DURING SAW CUT.

34. BEGIN CURING CONCRETE SLABS AFTER FINISHING.

35. PROTECT CONCRETE FROM DAMAGE. REPAIR SURFACE DEFECTS IN FORMED CONCRETE AND SLABS.

36. DO NOT ADD WATER TO CONCRETE DURING DELIVERY, AT PROJECT SITE, OR DURING PLACEMENT UNLESS APPROVED BY ENGINEER.

37. BEFORE TEST SAMPLING AND PLACING CONCRETE, WATER MAY BE ADDED AT PROJECT SITE, SUBJECT TO LIMITATIONS OF ACI 301 AND ENGINEER APPROVAL. DO NOT ADD WATER TO CONCRETE AFTER ADDING HIGH-RANGE WATER-REDUCING ADMIXTURES TO MIXTURE.

38. DEPOSIT CONCRETE CONTINUOUSLY IN ONE LAYER OR IN HORIZONTAL LAYERS OF SUCH THICKNESS THAT NO NEW CONCRETE WILL BE PLACED ON CONCRETE THAT HAS HARDENED ENOUGH TO CAUSE SEAMS OR PLANES OF WEAKNESS. IF A SECTION CANNOT BE PLACED CONTINUOUSLY, PROVIDE CONSTRUCTION JOINTS AS INDICATED. DEPOSIT CONCRETE TO AVOID SEGREGATION. DEPOSIT CONCRETE IN HORIZONTAL LAYERS OF DEPTH TO NOT EXCEED FORMWORK DESIGN PRESSURES AND IN A MANNER TO AVOID INCLINED COLD JOINTS. CONSOLIDATE PLACED CONCRETE WITH MECHANICAL VIBRATING EQUIPMENT ACCORDING TO ACI 301. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE INSIDE FORMS. INSERT AND WITHDRAW VIBRATORS VERTICALLY AT UNIFORMLY SPACED LOCATIONS TO RAPIDLY PENETRATE PLACED LAYER AND TO EXTEND AT LEAST 6 INCHES INTO PRECEEDING LAYER. DO NOT INSERT VIBRATORS INTO LOWER LAYERS OF CONCRETE THAT HAVE BEGUN TO LOSE PLASTICITY. AT EACH INSERTION, LIMIT DURATION OF VIBRATION TO TIME NECESSARY TO CONSOLIDATE CONCRETE AND COMPLETE EMBEDMENT OF REINFORCEMENT AND OTHER EMBEDDED ITEMS WITHOUT CAUSING MIXTURE CONSTITUENTS TO SEGREGATE.

39. DEPOSIT AND CONSOLIDATE CONCRETE FOR SLABS IN A CONTINUOUS OPERATION, WITHIN LIMITS OF CONSTRUCTION JOINTS, UNTIL PLACEMENT OF A PANEL OR SECTION IS COMPLETE. CONSOLIDATE CONCRETE DURING PLACEMENT OPERATIONS SO CONCRETE IS THOROUGHLY WORKED AROUND REINFORCEMENT AND OTHER EMBEDDED ITEMS AND INTO CORNERS. MAINTAIN REINFORCEMENT IN POSITION ON CHAIRS DURING CONCRETE PLACEMENT. SCREED SLAB SURFACES WITH A STRAIGHTEDGE AND STRIKE OFF TO CORRECT ELEVATIONS. SLOPE SURFACES UNIFORMLY TO DRAIN WHERE REQUIRED. BEGIN INITIAL FLOATING USING BULL FLOATS OR DARBIES TO FORM A UNIFORM AND OPEN-TEXTURED SURFACE. DO NOT FURTHER DISTURB SLAB SURFACES BEFORE STARTING FINISHING OPERATIONS.

40. COLD-WEATHER PLACEMENT: COMPLY WITH ACI 306.1 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES. WHEN AVERAGE HIGH AND LOW TEMPERATURE IS EXPECTED TO FALL BELOW 40 DEG F FOR THREE SUCCESSIVE DAYS, MAINTAIN DELIVERED CONCRETE MIXTURE TEMPERATURE WITHIN THE TEMPERATURE RANGE REQUIRED BY ACI 301. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE OR SNOW. DO NOT PLACE CONCRETE ON FROZEN SUBGRADE OR ON SUBGRADE CONTAINING FROZEN MATERIALS. DO NOT USE CALCIUM CHLORIDE, SALT, OR OTHER MATERIALS CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS UNLESS OTHERWISE SPECIFIED AND APPROVED IN MIXTURE DESIGNS.

41. HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 301. MAINTAIN CONCRETE TEMPERATURE BELOW 90 DEG F AT TIME OF PLACEMENT. CHILLED MIXING WATER OR CHOPPED ICE MAY BE USED TO CONTROL TEMPERATURE, PROVIDED WATER EQUIVALENT OF ICE IS CALCULATED TO TOTAL AMOUNT OF MIXING WATER. USING LIQUID NITROGEN TO COOL CONCRETE IS CONTRACTOR'S OPTION. FOG-SPRAY FORMS, STEEL-REINFORCEMENT, AND SUBGRADE JUST BEFORE PLACING CONCRETE. KEEP SUBGRADE UNIFORMLY MOIST WITHOUT STANDING WATER, SOFT SPOTS, OR DRY AREAS.

42. CURE CONCRETE ACCORDING TO ACI 308.1 MOISTURE CURING: KEEP SURFACES CONTINUOUSLY MOIST FOR NOT LESS THAN SEVEN DAYS WITH WATER, CONTINUOUS WATER-FOG SPRAY, ABSORPTIVE COVER, WATER SATURATED, AND KEPT CONTINUOUSLY WET. COVER CONCRETE SURFACES AND EDGES WITH 12 INCH LAP OVER ADJACENT ABSORPTIVE COVERS.

43. OWNER SHALL ENGAGE A TESTING AND INSPECTION FIRM TO PERFORM FIELD TESTS ON CONCRETE AND REBAR AND TO SUBMIT TEST REPORTS FOR VALIDATION WITH DESIGN PARAMETERS NOTED ABOVE.

44. INSPECTIONS SHALL INCLUDE STEEL REINFORCEMENT PLACEMENT, VERIFICATION OF USE OF REQUIRED DESIGN MIXTURE, CONCRETE PLACEMENT, INCLUDING CONVEYING AND DEPOSITING, AND CURING PROCEDURES AND MAINTENANCE OF CURING TEMPERATURE.

45. CONCRETE TESTS: TESTING OF COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C172. TESTING FREQUENCY: OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE EXCEEDING 5 CUBIC YARDS, BUT LESS THAN 25 CUBIC YARDS, PLUS ONE SET FOR EACH ADDITIONAL 50 CUBIC YARDS OR FRACTION THEREOF.

46. SLUMP: ASTM C143; ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.

47. AIR CONTENT: ASTM C231, PRESSURE METHOD, FOR NORMAL-WEIGHT CONCRETE; ONE TEST FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE.

48. CONCRETE TEMPERATURE: ASTM C1064; ONE TEST HOURLY WHEN AIR TEMPERATURE IS 40 DEG F AND BELOW AND WHEN 80 DEG F AND ABOVE. AND ONE TEST FOR EACH COMPOSITE SAMPLE.

49. COMPRESSION TEST SPECIMENS: ASTM C39; CAST AND LABORATORY CURE THREE SETS OF TWO STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE. TEST ONE SET OF TWO LABORATORY-CURED SPECIMENS AT 7 DAYS AND ONE SET OF TWO SPECIMENS FOR 28 DAYS. HOLD ONE SET IN RESERVE. A COMPRESSIVE-STRENGTH TEST SHALL BE THE AVERAGE COMPRESSIVE STRENGTH FROM A SET OF TWO SPECIMENS OBTAINED FROM SAME COMPOSITE SAMPLE AND TESTED AT AGE INDICATED WHEN STRENGTH OF LABORATORY-CURED CYLINDERS. CONTRACTOR SHALL EVALUATE OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING IN-PLACE CONCRETE.

50. STRENGTH OF EACH CONCRETE MIXTURE WILL BE SATISFACTORY IF EVERY AVERAGE OF ANY THREE CONSECUTIVE COMPRESSIVE-STRENGTH TESTS EQUALS OR EXCEED SPECIFIED COMPRESSIVE STRENGTH AND NO COMPRESSIVE STRENGTH TEST VALUE FALLS BELOW SPECIFIED COMPRESSIVE STRENGTH BY MORE THAN 500 PSI.

51. TEST RESULTS SHALL BE REPORTED IN WRITING TO OWNER, A/E, AND CONTRACTOR WITHIN 48 HOURS OF TESTING. REPORTS OF COMPRESSIVE-STRENGTH TESTS SHALL CONTAIN PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING AND INSPECTION FIRM, LOCATION OF CONCRETE BATCH IN WORK, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIXTURE PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7- AND 28-DAY TESTS.

52. NONDESTRUCTIVE TESTING: IMPACT HAMMER, SONOSCOPE, OR OTHER NONDESTRUCTIVE DEVICE MAY BE PERMITTED, BUT WILL NOT BE USED AS SOLE BASIS FOR APPROVAL OR REJECTION OF CONCRETE.

53. ADDITIONAL TESTS: TESTING AND INSPECTION FIRM SHALL MAKE ADDITIONAL TESTS OF CONCRETE WHEN TEST RESULTS INDICATE THAT SLUMP, AIR ENTRAINMENT, COMPRESSIVE STRENGTHS, OR OTHER REQUIREMENTS HAVE NOT BEEN MET. TESTING AND INSPECTION FIRM MAY CONDUCT TESTS TO DETERMINE ADEQUACY OF CONCRETE BY CORED CYLINDERS COMPLYING WITH ASTM C42 OR BY OTHER METHODS.

54. ADDITIONAL TESTING AND INSPECTING, AT CONTRACTOR'S EXPENSE, WILL BE PERFORMED TO DETERMINE COMPLIANCE OF REPLACED OR ADDITIONAL WORK WITH SPECIFIED REQUIREMENTS.

55. CORRECT DEFICIENCIES IN THE WORK THAT TEST REPORTS AND INSPECTIONS INDICATE DO NOT COMPLY WITH THE CONTRACT DOCUMENTS.

STRUCTURAL STEEL:

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

STRUCTURAL W-SHAPES	ASTM A992, GRADE 50
CHANNELS AND ANGLES	ASTM A36
PLATES AND BAR	ASTM A36
TUBE SECTIONS	ASTM A500, GRADE B
ANCHOR BOLTS	ASTM A307 OR A36
HIGH STRENGTH BOLTS	ASTM A325

2. DESIGN, FABRICATION, ERECTION, AND WORKMANSHIP SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN," AISC ASD, NINTH EDITION,

3. CONNECTION BOLTS SHALL BE 3/4" DIAMETER A325N, UNLESS NOTED. CONNECTIONS SHALL BE FRAMED TYPE PR (PARTIALLY RESTRAINED) CONSTRUCTION, UNLESS DETAILED OTHERWISE. BEAM TO COLUMN CONNECTIONS AT ALL SHEAR FRAMES SHALL BE FULLY TENSIONED. CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE DESIGNED AND DETAILED BY THE STEEL FABRICATOR FOR THE LOADS SHOWN ON THE DRAWINGS OR AS GIVEN IN STANDARD AISC LOAD TABLES FOR SPAN, SECTION AND STRENGTH SPECIFIED.

4. BOLTED CONNECTIONS AT SINGLE SHEAR PLATE CONNECTIONS SHALL BE SHEAR-BEARING TYPE WITH THREADS INCLUDED IN THE SHEAR PLANES UNLESS OTHERWISE NOTED.

5. ALL SHOP AND FIELD WELDING SHALL BE EXECUTED BY WELDERS AND WELDING OPERATORS WHO HAVE BEEN PREVIOUSLY QUALIFIED BY TEST AS PRESCRIBED IN THE "CODE FOR WELDING IN BUILDING CONSTRUCTION", AWS D1.1, OF THE AMERICAN WELDING SOCIETY TO PERFORM THE TYPES OF WELDS REQUIRED ON THIS PROJECT.

6. ALL WELDING ELECTRODES SHALL BE E70XX SERIES.

7. MINIMUM FILLET WELD SIZE SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

THICKNESS OF THICKER PART JOINED	WELD SIZE
3/16" TO 1/2"	3/16"
OVER 1/2" TO 3/4"	1/4"
OVER 3/4" TO 1 1/2"	5/16"
OVER 1 1/2" TO 2 1/4"	3/8"
OVER 2 1/4" TO 6"	1/2"

8. RETURN ALL WELDS AT CORNERS TWICE THE NOMINAL SIZE OF THE WELD MINIMUM, UNLESS OTHERWISE NOTED.

9. SHORE OR BRACE EXISTING MEMBERS WHEN REQUIRED TO REDUCE WARPING TO A MINIMUM WHEN WELDING TO EXISTING MEMBERS CARRYING LOAD.

10. ALL COPES, BLOCKS, CUT-OUTS, AND OTHER CUTTING OF STRUCTURAL MEMBERS SHALL HAVE ALL RE-ENTRANT CORNERS SHAPED, NOTCHED FREE TO A RADIUS OF AT LEAST 1/2".

11. SEE ARCHITECTURAL AND OTHER ENGINEERING DRAWINGS FOR MISCELLANEOUS STEEL NOT SHOWN ON THE STRUCTURAL DRAWINGS.

12. ALL EXPOSED STEEL SHALL BE PAINTED. (SHOP PRIMED, WITH FINISH COATS APPLIED IN THE FIELD.)

13. SHOP PAINTING: ALL SURFACES SHALL BE PRIME PAINTED IN THE SHOP WITH AN APPROVED PRIMER COMPATIBLE WITH THE TOP COAT. PRIMER COAT SHALL HAVE A MINIMUM OF 2 MILS DRY FILM THICKNESS. SPOT PAINT ALL FIELD WELDS AND SERIOUS ABRASIONS TO THE SHOP COAT WITH PAINT COMPATIBLE WITH THE SHOP COAT. DO NOT PAINT STEEL SURFACES THAT ARE TO BE EMBEDDED IN CONCRETE OR MORTAR OR WHICH ARE TO RECEIVE SPRAYED-ON FIREPROOFING.

14. TO PRIME STEEL SUBSTRATES, REMOVE RUST, LOOSE MILL SCALE, AND SHOP PRIMER IF ANY. CLEAN USING METHODS RECOMMENDED IN WRITING BY PAINT MANUFACTURER BUT NOT LESS THAN: SSPC-SP 3 "POWER TOOL CLEANING".

15. TO PRIME SHOP-PRIMED STEEL SUBSTRATES: CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS OF SHOP PAINT, AND PAINT EXPOSED AREAS WITH THE SAME MATERIAL AS USED FOR SHOP PRIMING TO COMPLY WITH SSPC-PA 1 FOR TOUCHING UP SHOP-PRIMED SURFACES.

16. METAL ROOF DECK SHALL BE 22 GAGE SHOP PRIMED STEEL WITH MINIMUM YIELD STRENGTH OF 33 KSI DESIGNED IN ACCORDANCE WITH THE SDI SPECIFICATIONS FOR STEEL ROOF DECK, UNLESS OTHERWISE NOTED. DECK PROFILE SHALL BE INTERMEDIATE WITH RIB WITH 1 1/2" NOMINAL CORRUGATION DEPTH. REQUIRED MINIMUM SECTION PROPERTIES:
    I =0.120 IN^4/FT, SP = 0.111 IN^3/FT, SN + 0.120 IN^3/FT

17. ACOUSTICAL ROOF DECK SHALL BE PROVIDED IN AREAS OF EXPOSED STRUCTURE. ACOUSTICAL ROOF DECK SHALL BE 22 GAGE SHOP PRIMED STEEL WITH A MINIMUM YIELD STRENGTH OF 35 KSI DESIGNED IN ACCORDANCE WITH THE SDI SPECIFICATIONS FOR STEEL ROOF DECK. DECK PROFILE SHALL BE WIDE RIB WITH 1 1/2" NOMINAL CORRUGATED DEPTH WITH ACOUSTICAL PERFORATIONS AND SOUND ABSORBING INSULATION.

18. SHOP PRIMED METAL DECK SHALL CONFORM WITH ASTM A1008.

19. METAL DECK SHALL BE WELDED TO SUPPORTING MEMBERS IN ACCORDANCE WITH THE SPECIFICATIONS OR AS NOTED BELOW. ALL FIELD WELDS SHALL BE CLEANED AND TOUCH-UP PAINTED. PROVIDE 16 GAGE WELDING WASHERS FOR METAL DECKS LESS THAN 0.0295" THICK (22 GAGE).

20. WELD METAL ROOF DECK IN A 36/4 WELD PATTERN, AS SPECIFIED BY STEEL DECK INSTITUTE THROUGHOUT, UNLESS OTHERWISE NOTED, THAT IS:
    A. FOUR (4) 5/8" DIAMETER PUDDLE WELDS AT EACH SUPPORT MEMBER (THIRD, FIFTH AND BOTH END FLUTES).
    B. PUDDLE WELD AT 1/3 POINTS OR 20" ON CENTER (WHICHEVER IS LESS) AT ALL MARGINAL MEMBERS.
    C. FOR TYPE F (INTERMEDIATE RIB) DECK, USE 3/8" x 1 1/4" ARC SEAM WELDS INSTEAD OF PUDDLE WELDS.

21. MECHANICALLY FASTEN SIDE LAPS OF ADJACENT DECK UNITS BETWEEN SUPPORTS WITH (3) #10 SELF-TAPPING SCREWS PER SPAN.

STEEL JOISTS:

1. DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS SHALL CONFORM TO THE LATEST EDITION OF THE STEEL JOIST INSTITUTE SPECIFICATION.

2. JOISTS SHALL BEAR 4" MINIMUM ON MASONRY AND 2 1/2" MINIMUM ON STEEL UNLESS OTHERWISE NOTED.

3. WELD EACH JOIST TO BEAM OR BEARING PLATE WITH A 1/8" FILLET WELD EACH SIDE OF JOIST, WELD LENGTH SHALL BE A MINIMUM OF 2" PER SIDE UNLESS OTHERWISE NOTED.

4. BRIDGING SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS OR AS SPECIFIED BY THE STEEL JOIST INSTITUTE, WHICHEVER REQUIREMENT IS MORE STRINGENT. CONTINUE ALL BRIDGING TO ROLLED STEEL SHAPES OR MASONRY WALLS THAT ARE PARALLEL TO THE JOISTS AND ANCHOR IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.

5. ALL BRIDGING SHALL BE SECURED TO TOP AND BOTTOM OF ALL JOISTS AND BEAMS AND SHALL BE IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS.

6. BRIDGING SHALL BE IN PLACE AND ANCHORED PRIOR TO PLACING DECKING ON JOISTS.

7. DO NOT CONNECT BOTTOM CHORD OF JOIST GIRDERS OR JOISTS WITH EXTENDED AND WELDED BOTTOM CHORDS UNTIL ROOF DEAD LOADS ARE IN PLACE.

8. WHERE CONCENTRATED LOADS SUCH AS UNIT HEATERS OR SPRINKLER PIPES ARE HUNG FROM BETWEEN THE JOISTS, PROVIDE AN ANGLE HANGER TO EXTEND BETWEEN JOISTS AS REQUIRED TO CARRY THE LOAD. IF THE LOAD IS LOCATED DIRECTLY BENEATH A JOIST, EXTEND THE ANGLE HANGER CONTINUOUSLY TO EACH ADJACENT JOIST AND SECURE TO EACH ADJACENT JOIST.

9. ALL JOISTS SHALL BE PRIME PAINTED IN THE SHOP WITH AN APPROVED PRIMER COMPATIBLE WITH THE TOP COAT. PRIMER COAT SHALL HAVE A MINIMUM OF 2 MILS DRY FILM THICKNESS. SPOT PAINT ALL FIELD WELDS AND SERIOUS ABRASIONS TO THE SHOP COAT WITH PAINT COMPATIBLE WITH THE SHOP COAT.

CONCRETE MASONRY:

1. ALL DETAILING, FABRICATION, AND PROCEDURES OF CONCRETE MASONRY SHALL CONFORM TO THE LATEST EDITIONS OF ACI 530.1 - "SPECIFICATIONS FOR MASONRY STRUCTURES", ACI 530 - "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", AND SPECIFICATION SECTION 042000 - UNIT MASONRY.

2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N-1 UNLESS OTHERWISE NOTED. COMPRESSIVE STRENGTH ON NET CROSS SECTIONAL AREA OF INDIVIDUAL MASONRY UNIT SHALL BE 1900 PSI. NET AREA COMPRESSIVE STRENGTH OF MASONRY (F'M) SHALL BE 1500 PSI.

3. MASONRY SHALL BE LAID IN ASTM C270, TYPE "S" MORTAR, UNLESS NOTED AND SHALL HAVE FULL MORTAR COVERAGE OF THE FACE SHELLS IN BOTH HORIZONTAL AND VERTICAL JOISTS.

4. GROUT FOR REINFORCED MASONRY SHALL CONFORM TO ASTM C476 AND HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS AND A SLUMP OF 8" TO 11". MAXIMUM HEIGHT TO WHICH MASONRY SHALL BE LAID BEFORE FILLING IS 3 FEET FOR PEA GRAVEL CONCRETE AND 6 FEET FOR FINE GROUT.

5. REINFORCING GRADE AND DETAILS SHALL BE THE SAME AS FOR CONCRETE. TIE IN POSITION AND PLACE CONCRETE AROUND REINFORCING DURING CONSTRUCTION OF MASONRY. DO NOT PUSH REINFORCING DOWN INTO PREVIOUSLY PLACED GROUT FILL. SET BOLT SIMILARLY.

6. PROVIDE CLEANOUT OPENINGS AT THE BOTTOM OF EACH GROUT LIFT. CLEANOUT OPENINGS SHALL BE PROVIDED AT EACH CELL TO BE FILLED WITH GROUT. GROUT POURS SHALL BE TERMINATED 1 1/2" BELOW THE TOP OF CMU COURSE TO FORM A KEY AT THIS JOINT.

7. HORIZONTAL BARS MAY BE SPLICED WITH A MINIMUM LAP OF 48 TIMES THE BAR DIAMETER, UNLESS OTHERWISE NOTED.

8. PROVIDE LADDER TYPE HORIZONTAL REINFORCING AT 16" ON VERTICAL CENTER AND IN JOINTS IMMEDIATELY ABOVE AND BELOW ALL OPENINGS. EXTEND REINFORCEMENT A MINIMUM OF 2'-0" BEYOND THE JAMB ON EACH SIDE OF AN OPENING. HORIZONTAL JOINT REINFORCING SHALL BE LAPPED A MINIMUM OF 8". JOINT REINFORCING SHALL STOP AT CONTROL JOINTS. HORIZONTAL REINFORCING SHALL BE GALVANIZED LADDER TYPE JOINT REINFORCEMENT WITH (2) 9 GAGE (W1.7) RODS AND 9 GAGE CROSS RODS, HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A153 - CLASS B-2.

9. DO NOT SPLICE VERTICAL BARS EXCEPT AS DETAILED.

10. VERTICAL SPLICED REINFORCING BARS SHALL OCCUPY THE SAME CELL. VERTICAL REINFORCEMENT IN WALLS SHALL BE SUPPORTED AND SECURED AGAINST DISPLACEMENT AT 4 FOOT MAXIMUM INTERVALS. MINIMUM LAP SPLICE SHALL BE 24" FOR #3 AND #4 BARS AND 36" FOR #5 AND #6 BARS. SPLICED BARS SHALL BE TIED TOGETHER.

11. IN ADDITION TO VERTICAL REINFORCING DETAILED ON THE DRAWINGS, PROVIDE VERTICAL REINFORCING TO MATCH SIZE DETAILED AT THE FOLLOWING LOCATIONS; EXCEPT AS OTHERWISE NOTED.
    A. CELLS EACH SIDE OF OPENINGS (SUCH AS DOORS, WINDOWS, ETC.)
    B. CELLS EACH SIDE OF CONTROL JOINTS.
    C. CELL AT END OF A WALL.
    D. AT INTERSECTIONS (CELL WITHIN 8" OF INTERSECTION).
    E. THREE BARS EACH CORNER (CORNER CELL AND ADJACENT CELLS IN EACH DIRECTION).

12. THE MASONRY CONTRACTOR SHALL PROVIDE AND PLACE SUCH SPECIAL UNITS AS MAY BE REQUIRED TO FORM ALL CORNERS, RETURNS, AND OFFSETS WHILE MAINTAINING THE PROPER BOND.

13. WHERE INTERIOR CONCRETE MASONRY PARTITIONS INTERSECT WITH OTHER INTERIOR PARTITIONS OR EXTERIOR WALLS, A MASONRY BOND, OR THE EQUIVALENT IN APPROVED METAL TIES, SHALL BE PROVIDED UNLESS NOTED OTHERWISE ON THE DRAWINGS.

14. FACE SHELL BEDDING SHALL BE USED WITH COMPLETE COVERAGE OF FACE SHELLS. FURROWING OF THE MORTAR SHALL NOT BE PERMITTED.

15. MORTAR JOINTS SHALL BE 3/8" THICK WITH FULL MORTAR COVERAGE ON VERTICAL AND HORIZONTAL FACE SHELLS.

16. PROVIDE BOND BEAMS AT MASONRY ELEVATIONS AS SHOWN ON THE DRAWINGS. BOND BEAMS SHALL HAVE TWO #5 BARS, CONTINUOUS, UNLESS OTHERWISE NOTED. BOND BEAMS SHALL BE CONTINUOUS AROUND THE PERIMETER OF THE BUILDING AND ALONG INTERIOR PARTITIONS, UNLESS OTHERWISE NOTED. BOND BEAM REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINTS.

COLD-FORMED STEEL FRAMING:

1. METAL STUDS SHALL BE GRADE 50, GALVANIZED.

2. ALL GALVANIZED STUDS, JAMBS, AND HEADERS SHALL BE FORMED FROM STEEL THAT CONFORMS WITH ASTM A653 AND SHALL BE GRADE 50.

3. ALL GALVANIZED TRACK, BRIDGING, STRAPS, END CLOSURES AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CONFORMS TO THE REQUIREMENTS OF ASTM A653, GRADE 33.

4. SHEET STEEL GALVANIZED COATING SHALL CONFORM TO ASTM A924, G90.

5. ALL FRAMING MEMBERS SHALL BE OF THE TYPE, SIZE AND GAGE AS SHOWN ON DRAWINGS. TRACK SHALL BE 18 GAGE UNLESS OTHERWISE NOTED. ANY SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.

6. WELDING SHALL CONFORM TO AWS D1.1, AWS D1.3 AND AISI MANUAL SECTION 4.2. WELD SHALL BE BY FUSION WELDING UTILIZING ELECTRODES WITH ASTM CLASSIFICATIONS E60. ALL WELDERS SHALL BE QUALIFIED BY TESTING IN ACCORDANCE WITH "CODE FOR WELDING IN BUILDING CONSTRUCTION", AWS D.1 OF THE AMERICAN WELDING SOCIETY.

7. BOLTING AND SELF DRILLING/SELF TAPPING SCREWS MAY BE EMPLOYED. THE CONTRACTOR SHALL SUBMIT MECHANICAL FASTENER DATA FOR REVIEW AND APPROVAL.

8. WIRE TYING SHALL NOT BE PERMITTED.

9. STUD MEMBERS MAY BE PUNCHED. JOIST, HEADER, AND LINTEL MEMBERS SHALL NOT BE PUNCHED.

10. PRIOR TO PREFABRICATION OF FRAMING, THE CONTRACTOR SHALL SUBMIT FABRICATION AND ERECTION DRAWINGS TO THE ARCHITECT FOR REVIEW.

11. FRAMING COMPONENTS MAY BE PRE-ASSEMBLED INTO PANELS PRIOR TO ERECTING. PREFABRICATED PANELS SHALL BE SQUARE WITH COMPONENTS AND ATTACHED IN A MANNER AS TO PREVENT RACKING.

12. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED.

13. AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THAT ENDS OF THE STUDS ARE POSITIONED AGAINST THE INSIDE TRACK WEB FOR FULL BEARING, PRIOR TO STUD AND TRACK ATTACHMENT, UNLESS OTHERWISE SHOWN.

14. STUDS SHALL BE ATTACHED TO TRACK ON TWO SIDES.

15. AT BUILT-UP STUD LOCATIONS, STUDS SHALL BE WELDED TOGETHER AT QUARTER POINTS OR 36" MAXIMUM ON CENTER.

16. BEARING WALLS SHALL HAVE TWO ROWS OF HORIZONTAL BRIDGING THREADED THROUGH THE PUNCH STUDS AT 1/3 POINTS.

17. METAL STUD ERECTOR SHALL BE RESPONSIBLE FOR LOCATING AND ATTACHING CONNECTION PLATES TO HOT ROLLED STEEL SECTIONS.

18. METAL STUD ERECTOR SHALL INSTALL SOLID METAL BRIDGING AND STRAP BRIDGING FOR FLOOR JOISTS AS INDICTED ON PLANS.

19. HEADERS WITH INTERIOR STIFFENERS SHALL HAVE INDIVIDUAL STIFFENERS INSPECTED PRIOR TO ASSEMBLING THE TWO JOIST MEMBERS.

20. AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT-WELDED OR SPLICED TOGETHER.

21. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGE OR WEBS OF BOTH UPPER AND LOWER TRACKS.

22. WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROWS SHALL BE SPACED AT 1/3 POINTS, OR CLOSER, AND BRIDGING SHALL BE 16 GAUGE, 1 1/2" WIDE WITH 9/16" FLANGES.

23. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED.

24. WINDOW SILLS SHALL BE THE SAME SIZE AND GAGE AS THE OTHER MEMBERS DESIGNATED IN THE WALL PANEL UNLESS OTHERWISE NOTED.

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
PHIL V. MAYS
Lic. No. 014412
02/03/15
PROFESSIONAL ENGINEER

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

GENERAL NOTES

DATE: 03 FEB 15
PROJECT NO: 11088

Full Scale Verification
0" 1"

Drawing No.:
S001

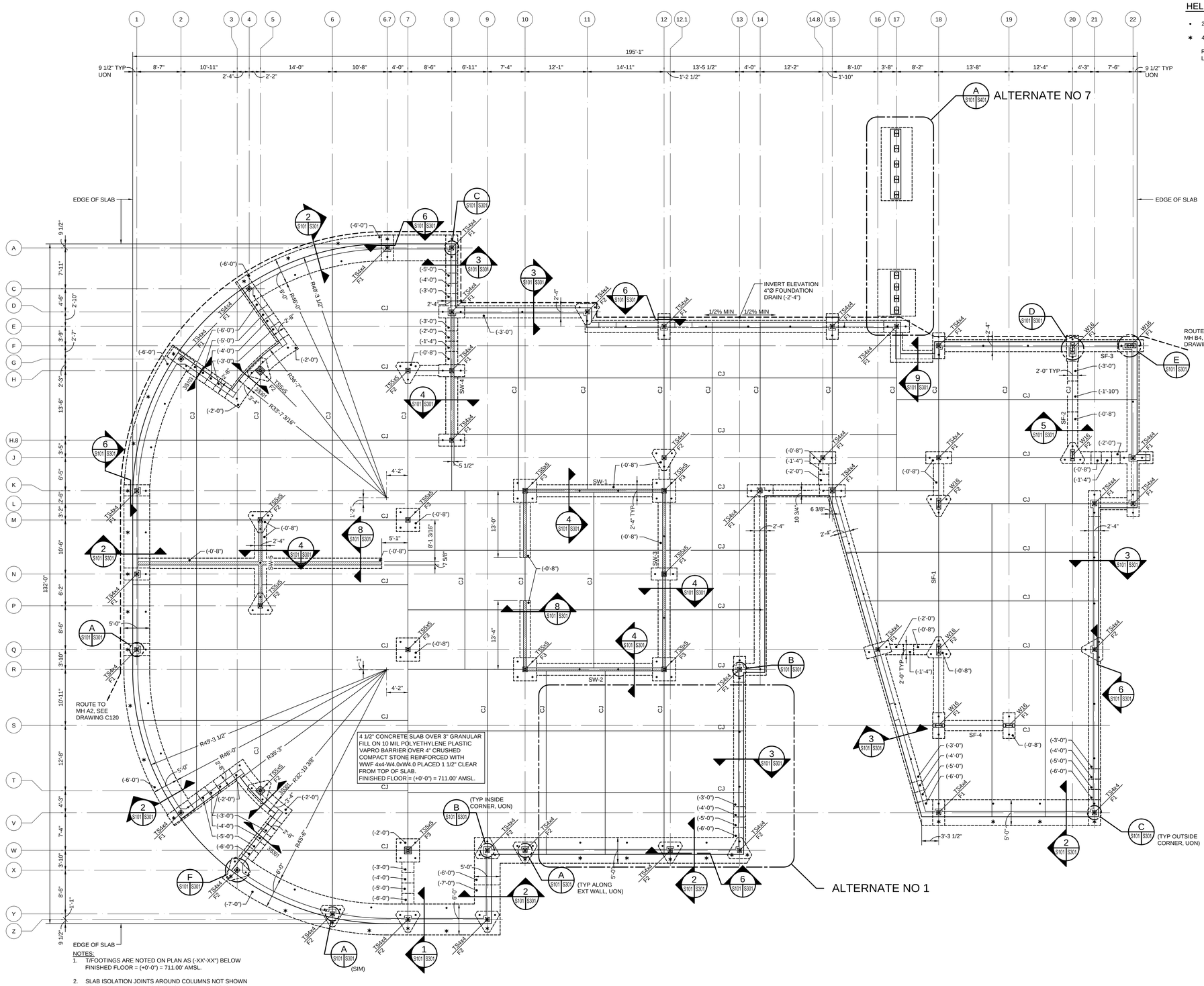
GENERAL NOTES:

1. SHEAR WALLS ARE NOTED AS 'SW' ON PLAN.
2. SHEAR FRAMES ARE NOTED AS 'SF' ON PLAN.
3. SEE ARCHITECTURAL DRAWINGS FOR UNDER SLAB PERIMETER INSULATION.

HELICAL PILE LEGEND:

- • 20K MINIMUM ULTIMATE CAPACITY HELICAL PILE
- ✱ 40K MINIMUM ULTIMATE CAPACITY HELICAL PILE

REFER TO FOUNDATION NOTE 17 ON DRAWING S001 FOR HELICAL PILE MINIMUM LENGTH.



NOTES:
1. T/FOOTINGS ARE NOTED ON PLAN AS (-XX'-XX") BELOW FINISHED FLOOR = (+0'-0") = 711.00' AMSL.
2. SLAB ISOLATION JOINTS AROUND COLUMNS NOT SHOWN FOR CLARITY. REFER TO SECTION 7, DRAWING S301 FOR TYPICAL ISOLATION DETAIL.

NORTH

FOUNDATION AND SLAB PLAN
SCALE: 1/8"=1'-0"

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

FOUNDATION AND SLAB PLAN

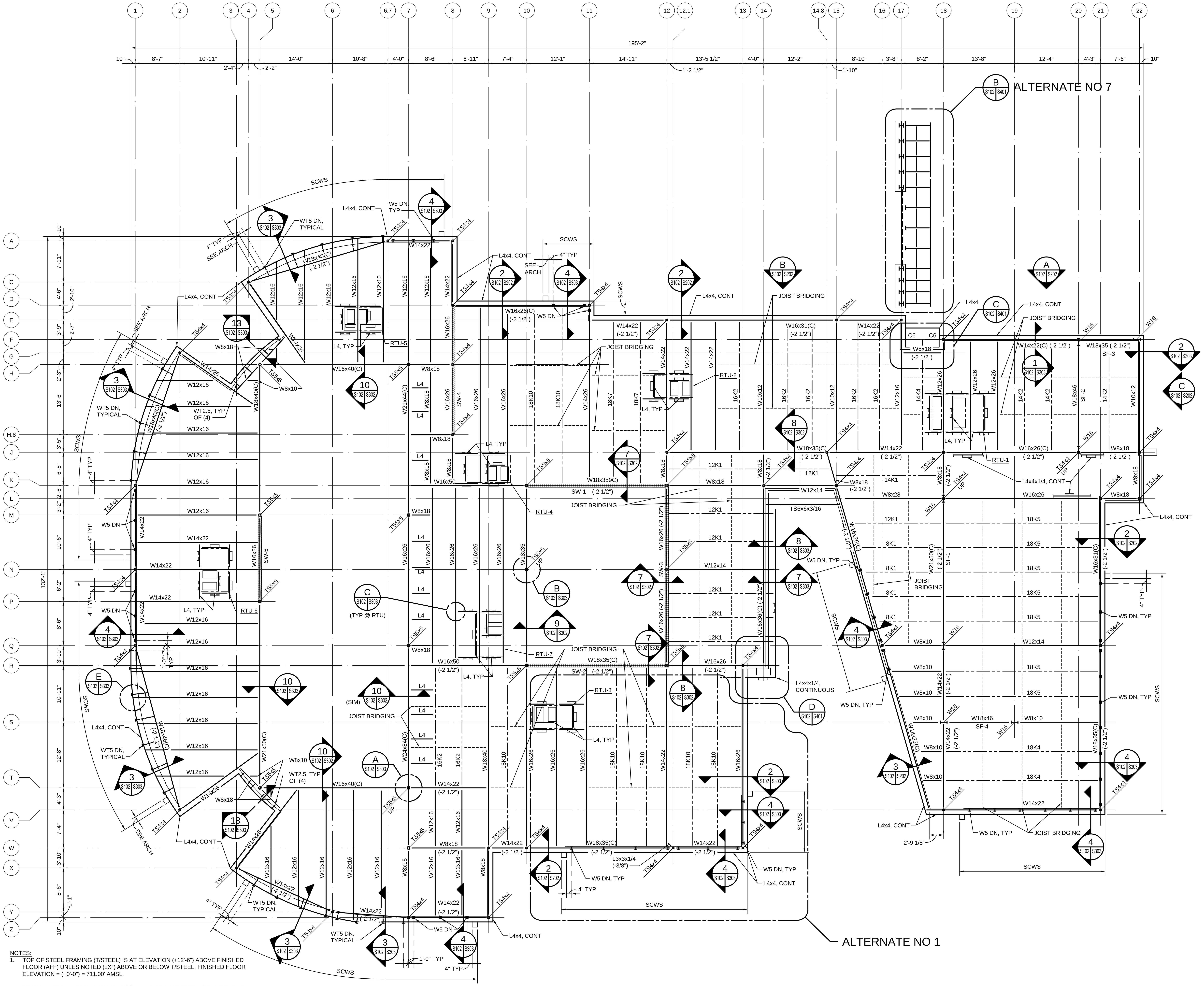
DATE: 02-FEB-15
PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
S101

GENERAL NOTES:

1. SHEAR WALLS ARE NOTED AS 'SW' ON PLAN.
2. SHEAR FRAMES ARE NOTED AS 'SF' ON PLAN.
3. SUSPENDED CURTAIN WALL SUPPORT NOTED AS 'SCWS' ON PLAN.



NOTES:

1. TOP OF STEEL FRAMING (T/STEEL) IS AT ELEVATION (+12'-6") ABOVE FINISHED FLOOR (AFF) UNLES NOTED (±X") ABOVE OR BELOW T/STEEL. FINISHED FLOOR ELEVATION = (+0'-0") = 711.00' AMSL.
2. BEAMS NOTED ON PLAN AS WXXxXX(C) SHALL BE CAMBERED L/550 OF THE SPAN LENGTH.

NORTH

LOW ROOF FRAMING PLAN

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

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

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CITY PROJECT NO: B0158
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1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

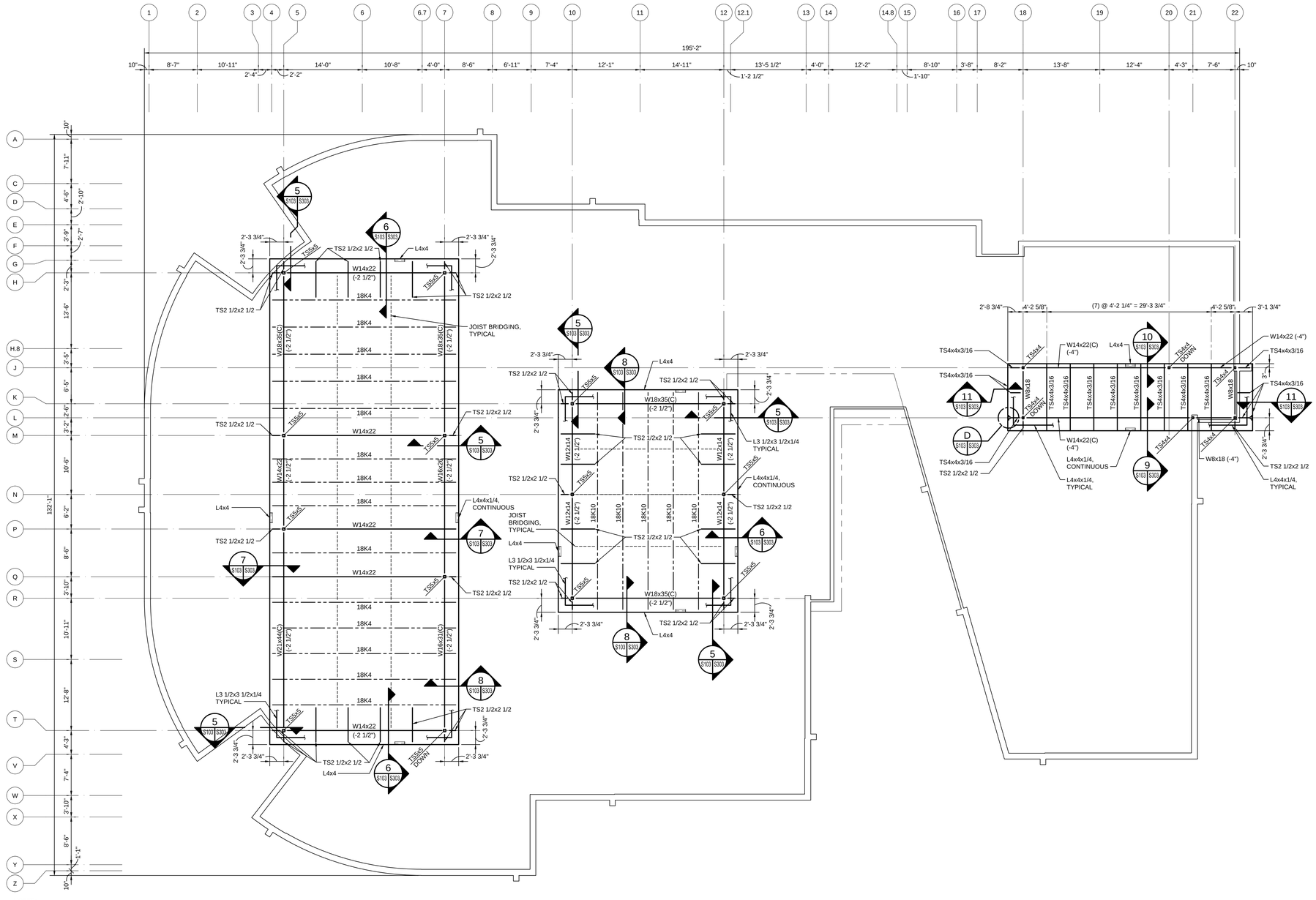
LOW ROOF FRAMING PLAN

DATE: 03 FEB 15

PROJECT NO: 11088

Full Scale Verification
0" 1"

Drawing No.:
S102



NOTES:

1. TOP OF STEEL FRAMING (T/STEEL) IS AT ELEVATION (+18'-6") ABOVE FINISHED FLOOR (AFF) UNLES NOTED (±X") ABOVE OR BELOW T/STEEL. FINISHED FLOOR ELEVATION = (+0'-0") = 711.00' AMSL.
2. BEAMS NOTED ON PLAN AS WXXXXX(C) SHALL BE CAMBERED L/550 OF THE SPAN LENGTH.

NORTH

HIGH ROOF FRAMING PLAN

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

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

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CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

HIGH ROOF FRAMING PLAN

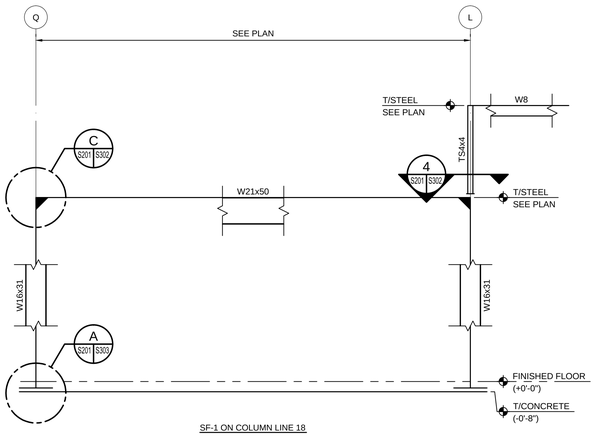
DATE: 02-FEB-15

PROJECT NO: 10043

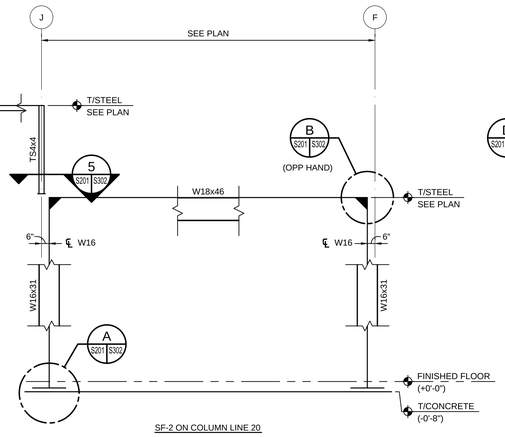
Full Scale Verification
0" 1"

Drawing No.:

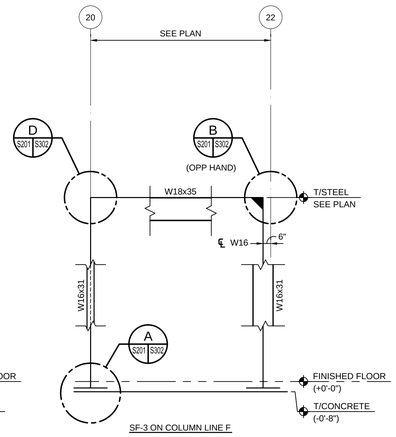
S103



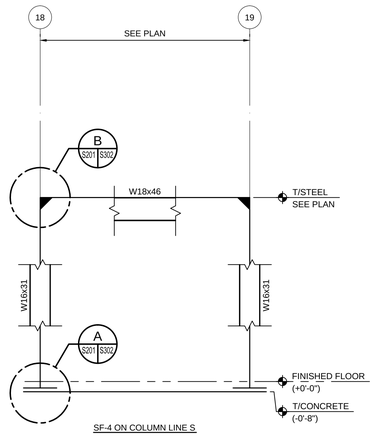
SF-1 ON COLUMN LINE 18



SF-2 ON COLUMN LINE 20



SF-3 ON COLUMN LINE F

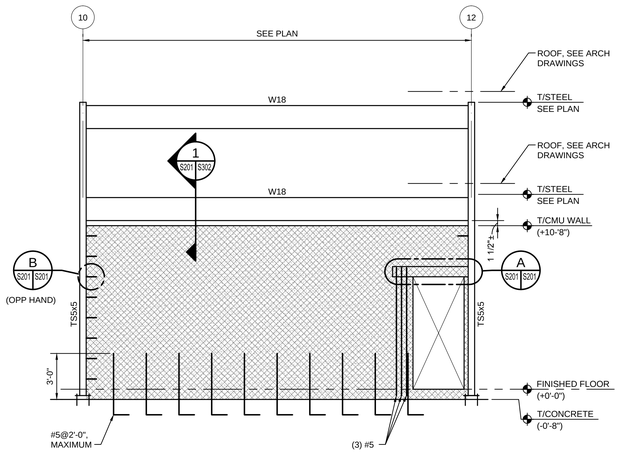


SF-4 ON COLUMN LINE S

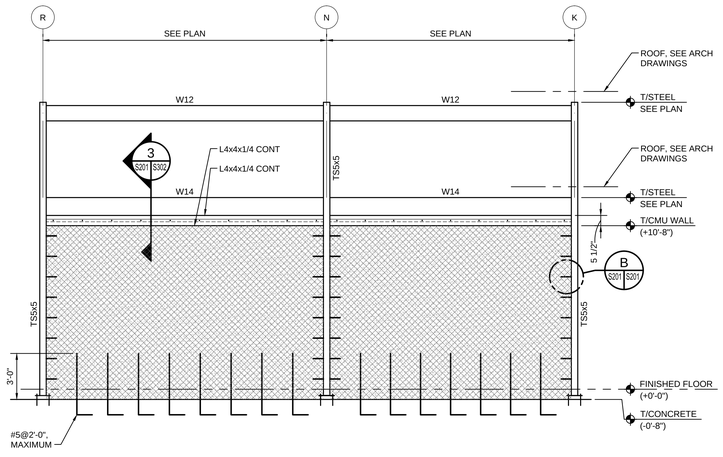
SHEAR FRAME ELEVATIONS

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

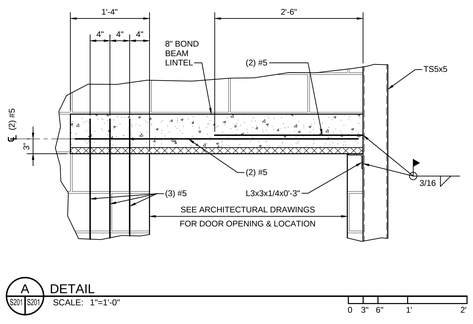
0 1' 5' 10'



SW-1 ON COLUMN LINE K



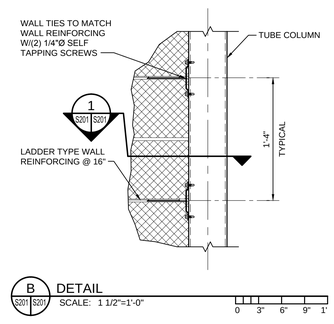
SW-3 ON COLUMN LINE 12



A S201 S201 DETAIL

SCALE: 1"=1'-0"

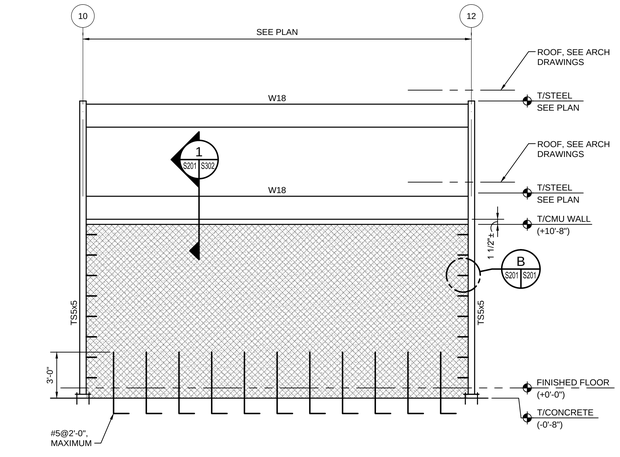
0 3" 6" 1' 2'



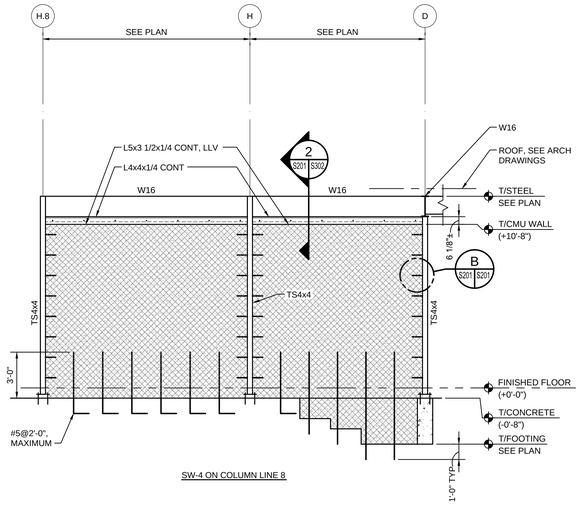
B S201 S201 DETAIL

SCALE: 1 1/2"=1'-0"

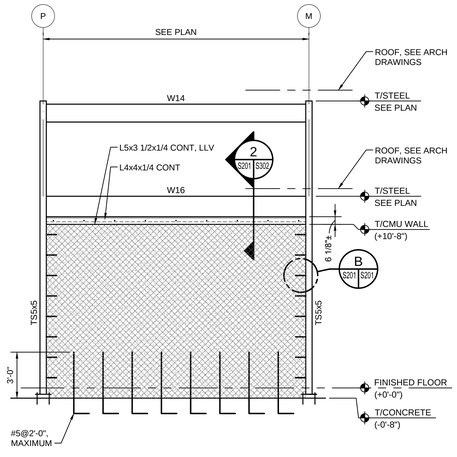
0 3" 6" 9" 1'



SW-2 ON COLUMN LINE R



SW-4 ON COLUMN LINE 8

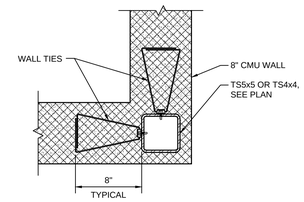


SW-5 ON COLUMN LINE 5

SHEAR WALL ELEVATIONS

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

0 1' 5' 10'



NOTES:

1. LADDER TYPE WALL REINFORCEMENT @ 16' OC VERTICAL, TYPICAL. GROUT FILL ALL CMU VOIDS AT SHEAR WALLS (SW).

1 S201 S201 SECTION

SCALE: 1 1/2"=1'-0"

0 3" 6" 9" 1'

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
PHIL V. MAYS
Lic. No. 014412
02/03/15
PROFESSIONAL ENGINEER

Virginia A&E

VIRGINIA A&E, PLLC
1115 VISTA PARK DRIVE
FOREST, VIRGINIA 24551
PHONE: (434) 316-6001

LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

SHEAR FRAME AND SHEAR WALL
ELEVATIONS, SECTIONS, AND DETAIL

DATE: 02-FEB-15

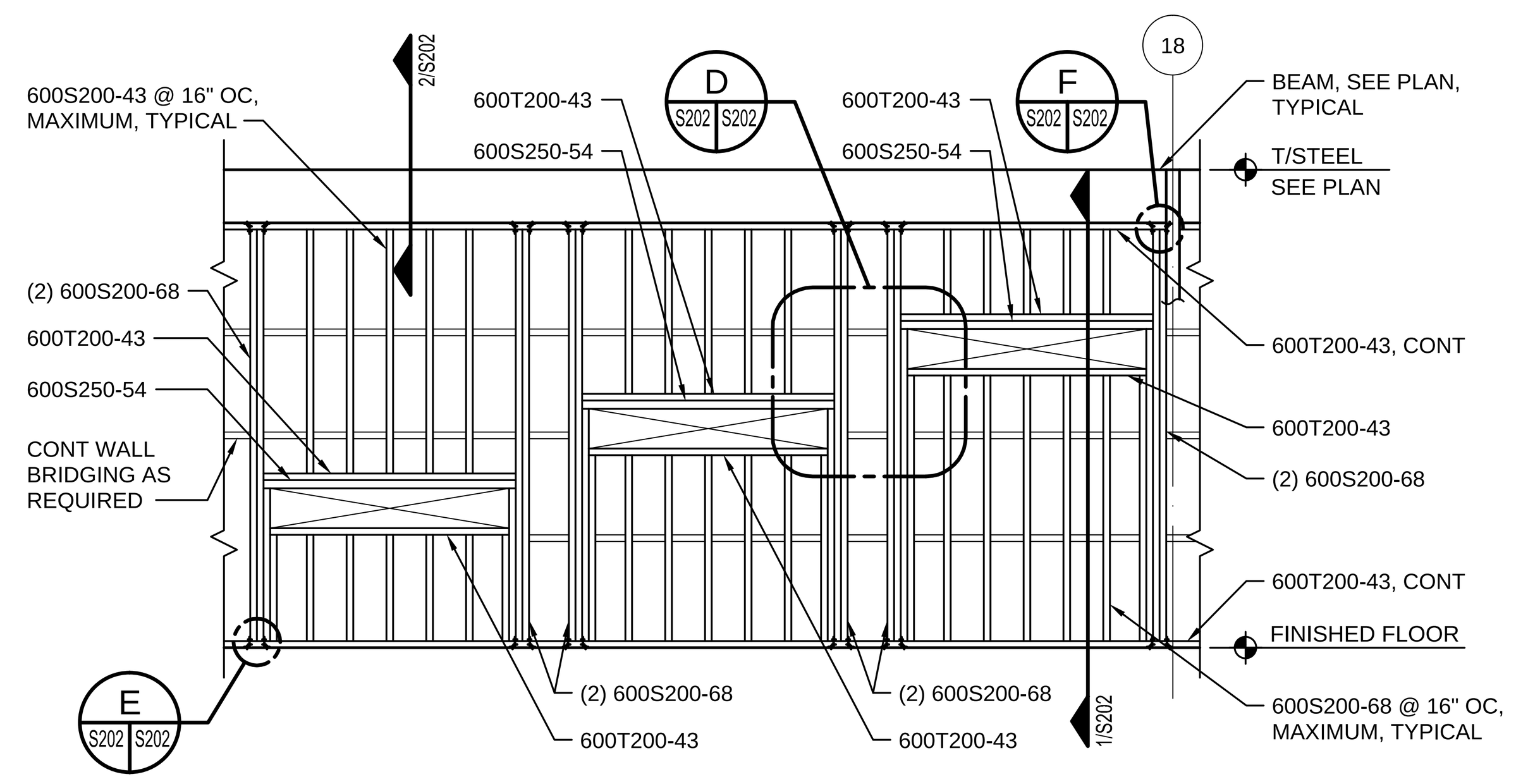
PROJECT NO: 10043

Full Scale Verification

0" 1"

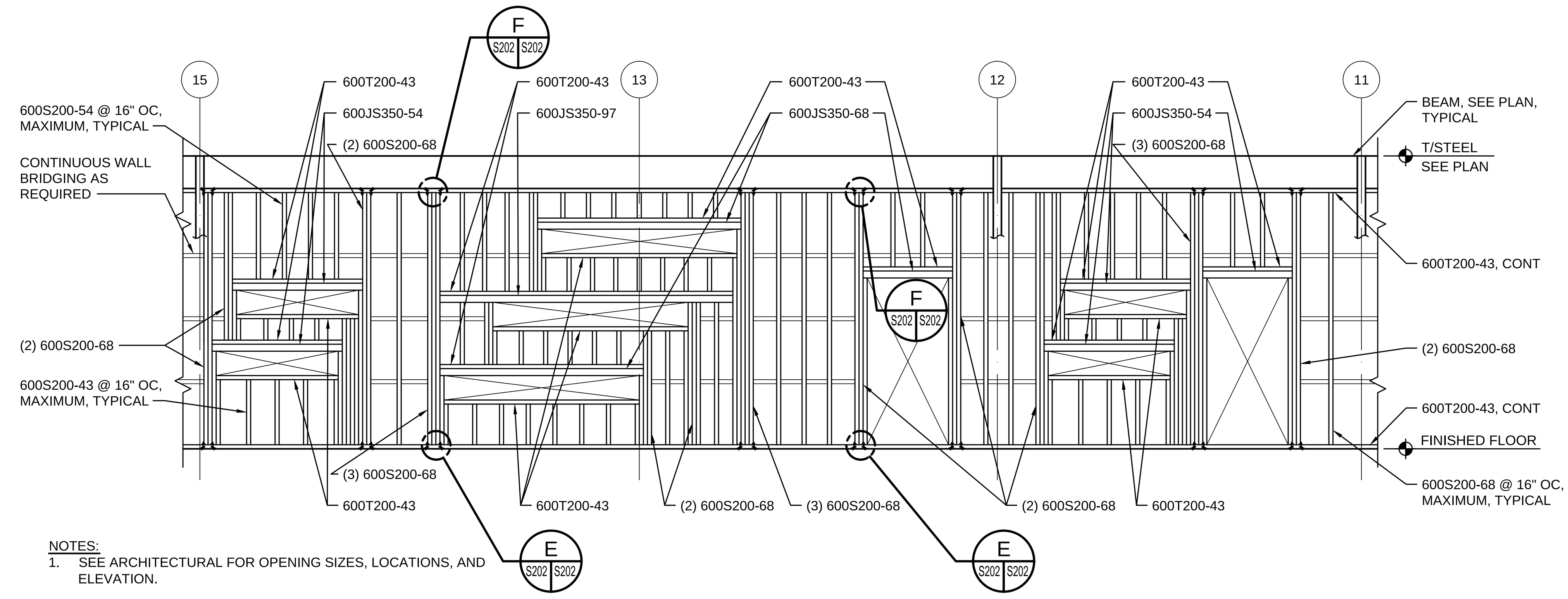
Drawing No.:

S201



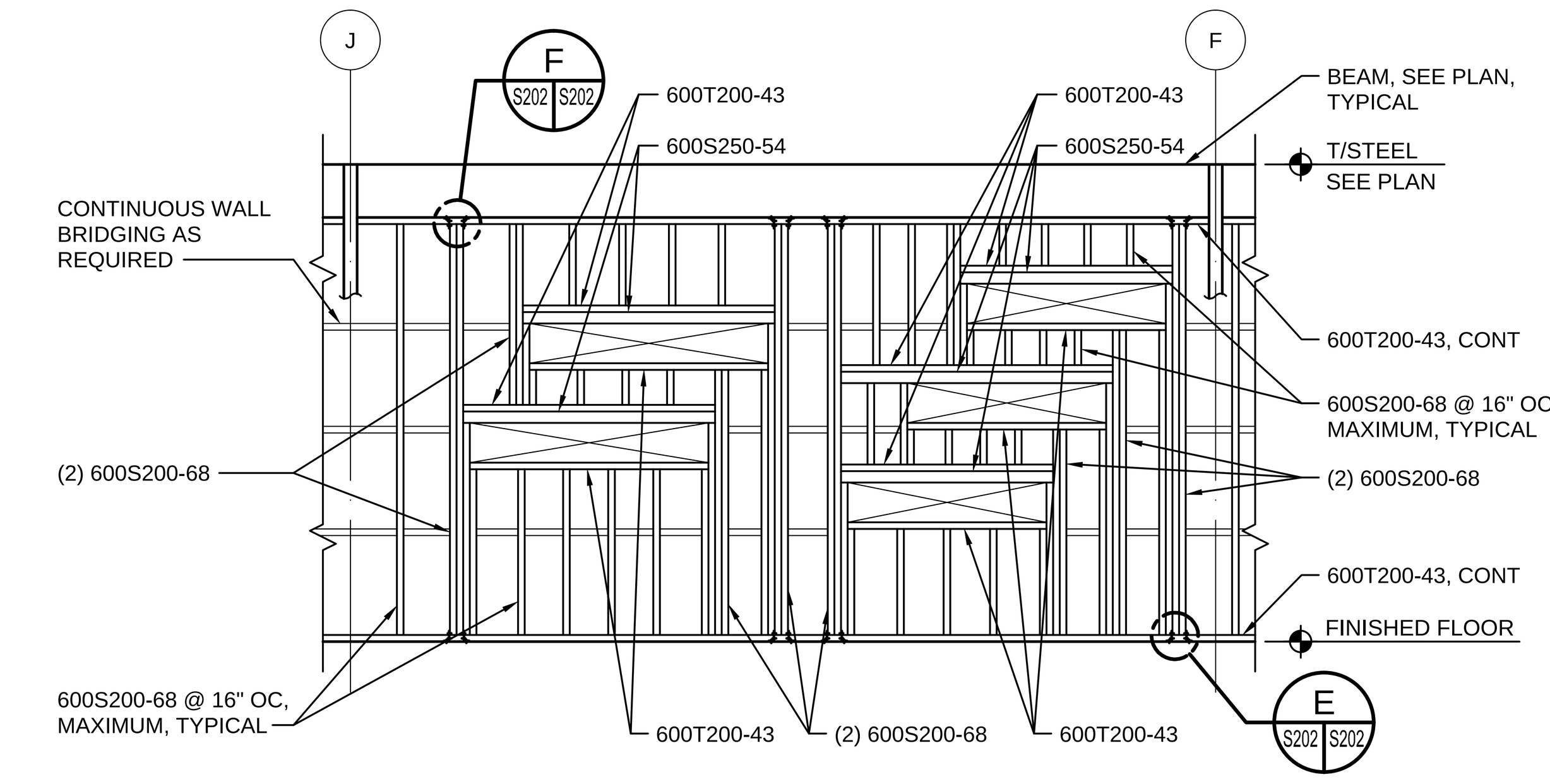
NOTES:
1. SEE ARCHITECTURAL FOR OPENING SIZES, LOCATIONS, AND ELEVATION.

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



NOTES:
1. SEE ARCHITECTURAL FOR OPENING SIZES, LOCATIONS, AND ELEVATION.

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

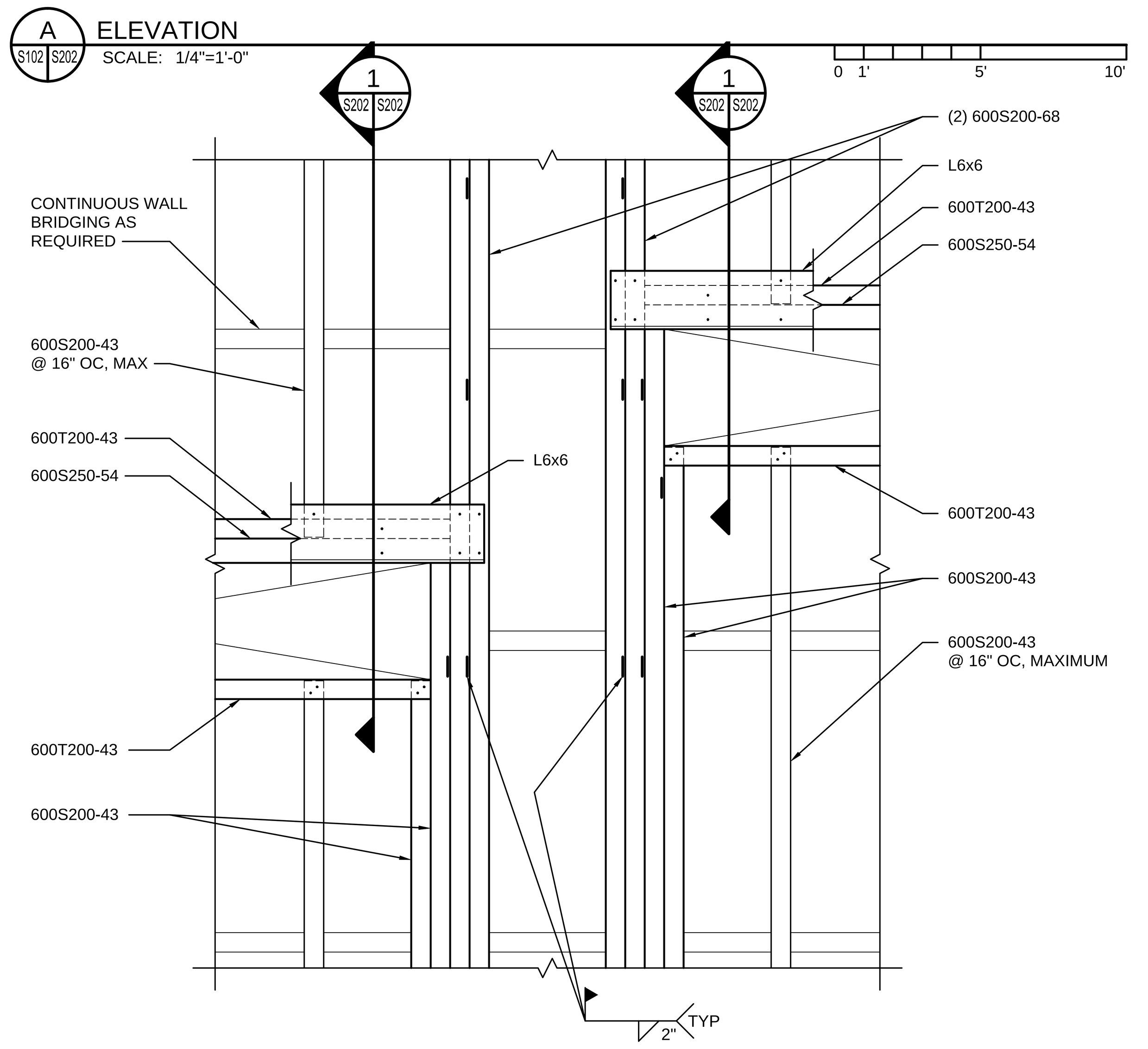


NOTES:
1. SEE ARCHITECTURAL FOR OPENING SIZES, LOCATIONS, AND ELEVATION.

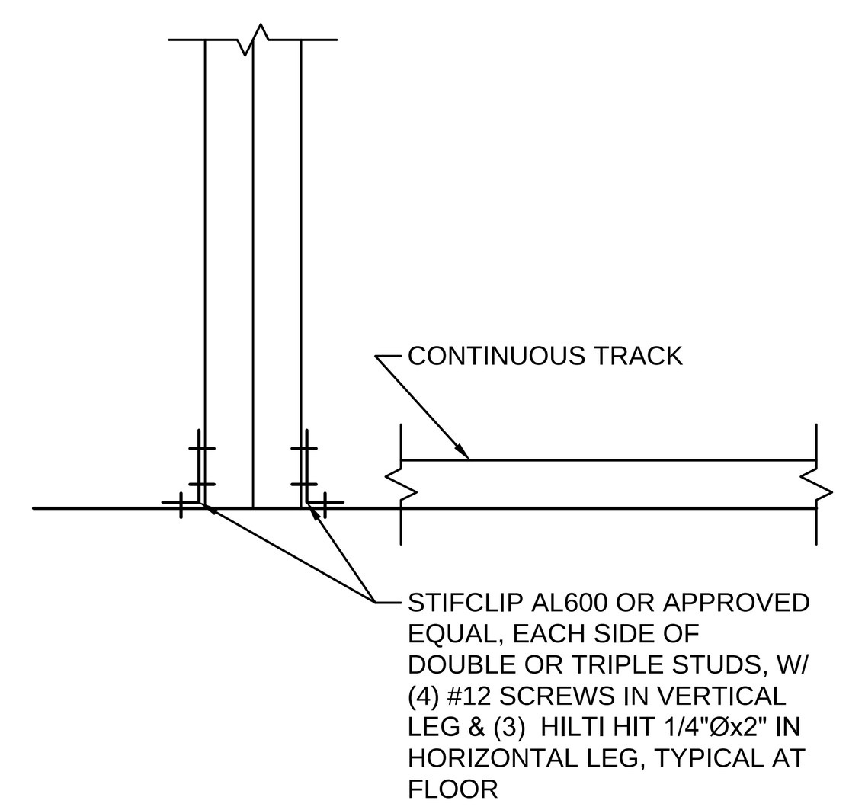
C ELEVATION
SCALE: 1/4"=1'-0"

GENERAL NOTES:

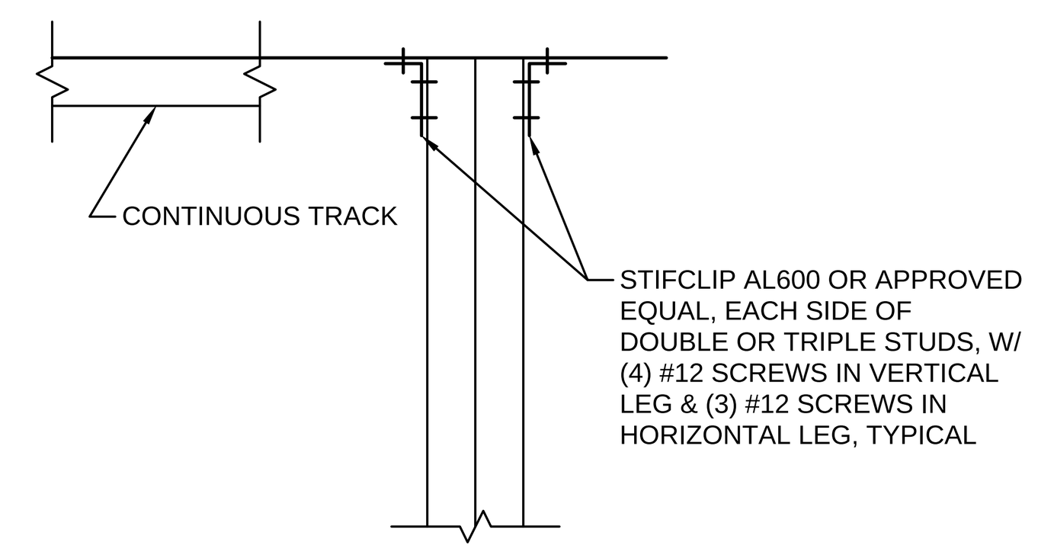
1. PROVIDE SIMILAR HEADERS AND JAMB STUDS AT EXTERIOR DOOR AND WINDOW OPENINGS IN EXTERIOR WALLS NOT DEPICTED ON THIS DRAWING
2. FOR EXTERIOR DOORS AND WINDOWS NOT SHOWM ON THIS DRAWING USE 600JS350-43 HEADERS AND 600JS200-43 DOUBLED JAMB STUDS.



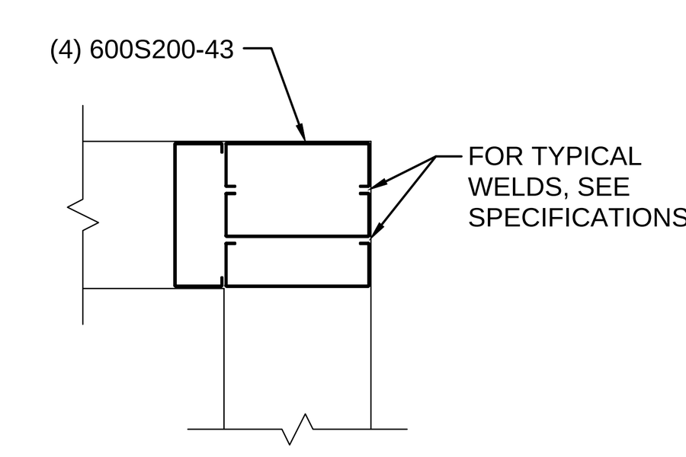
D DETAIL
SCALE: 1"=1'-0"



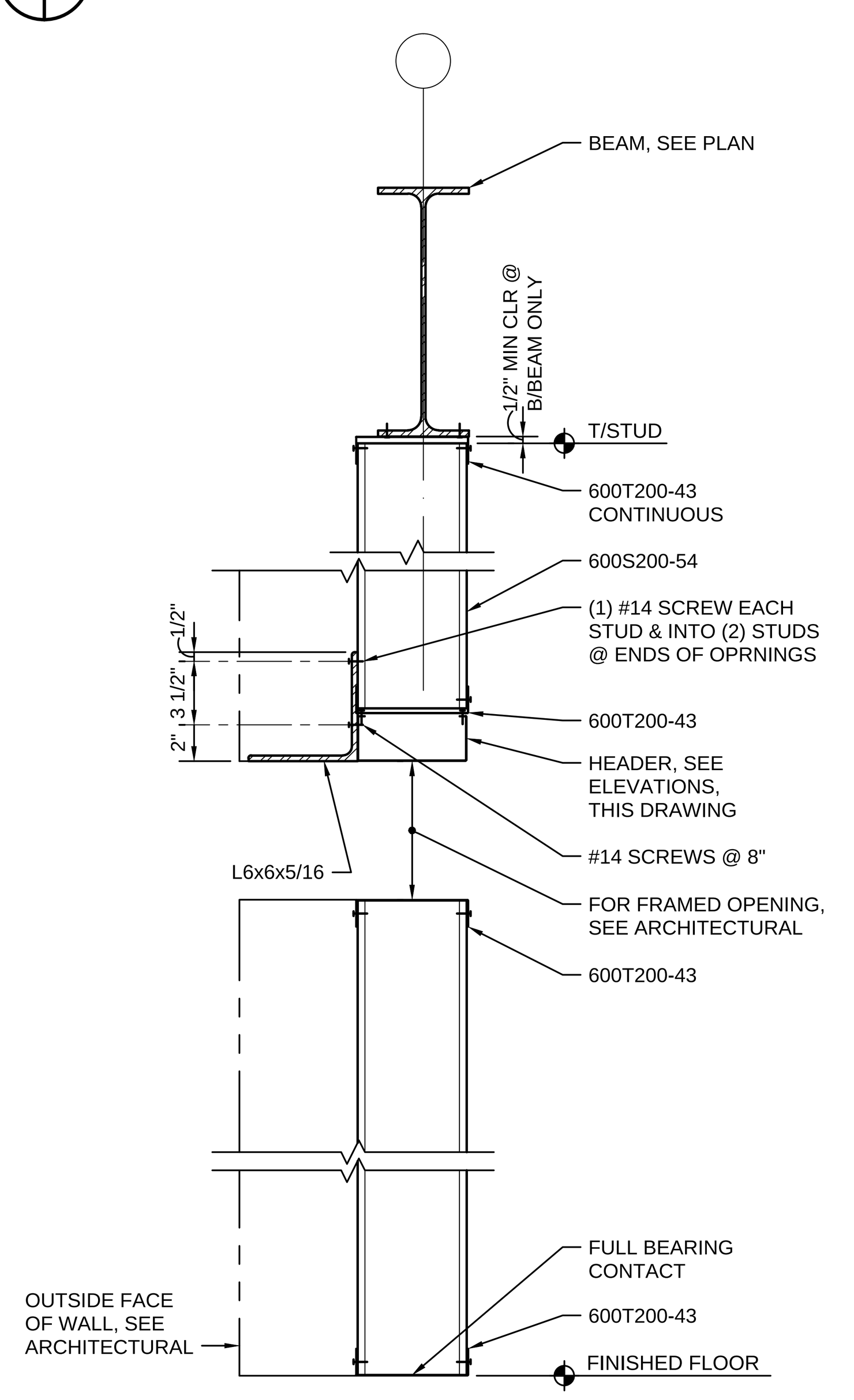
E DETAIL
SCALE: 1 1/2"=1'-0"



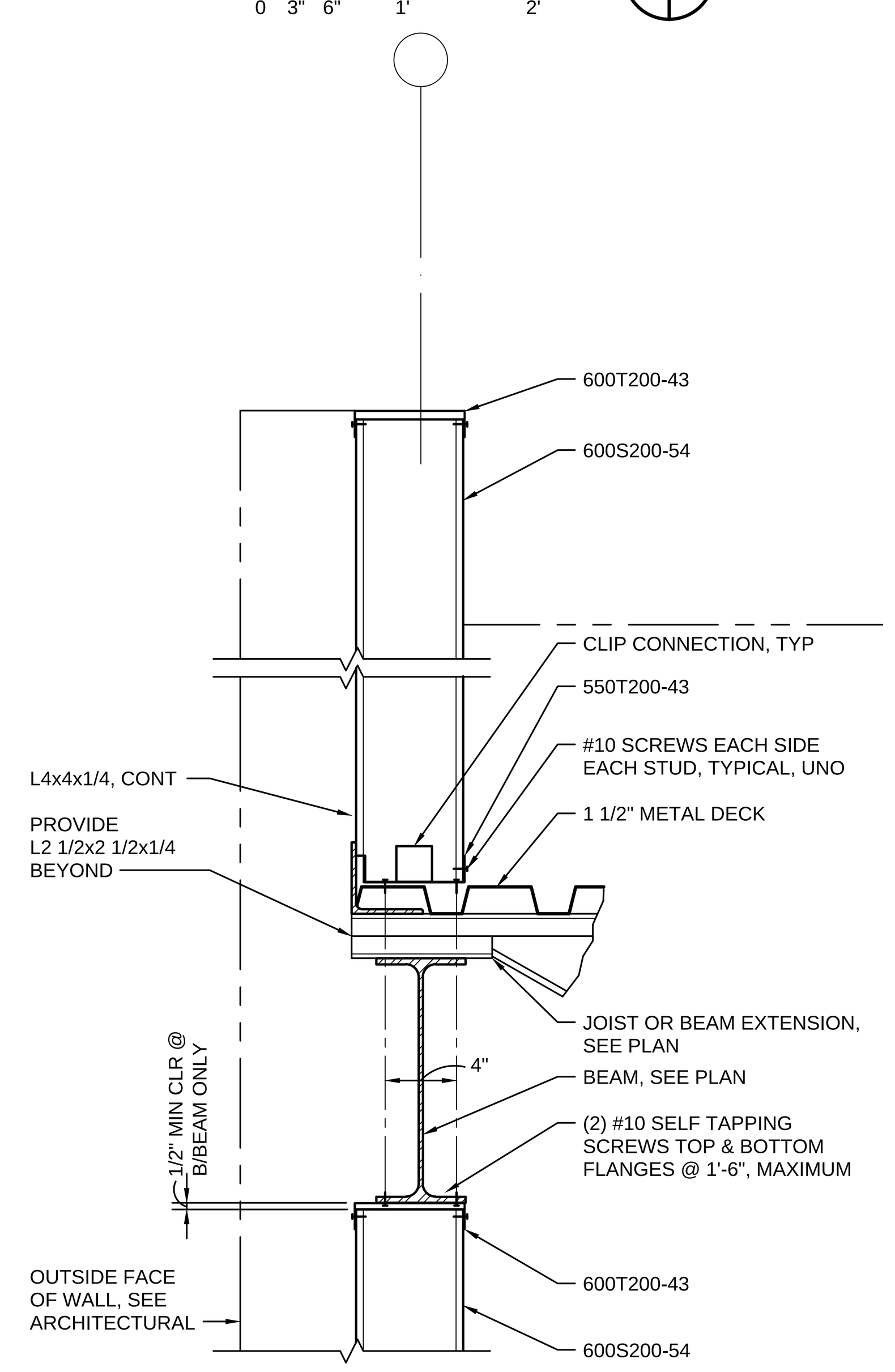
F DETAIL
SCALE: 1 1/2"=1'-0"



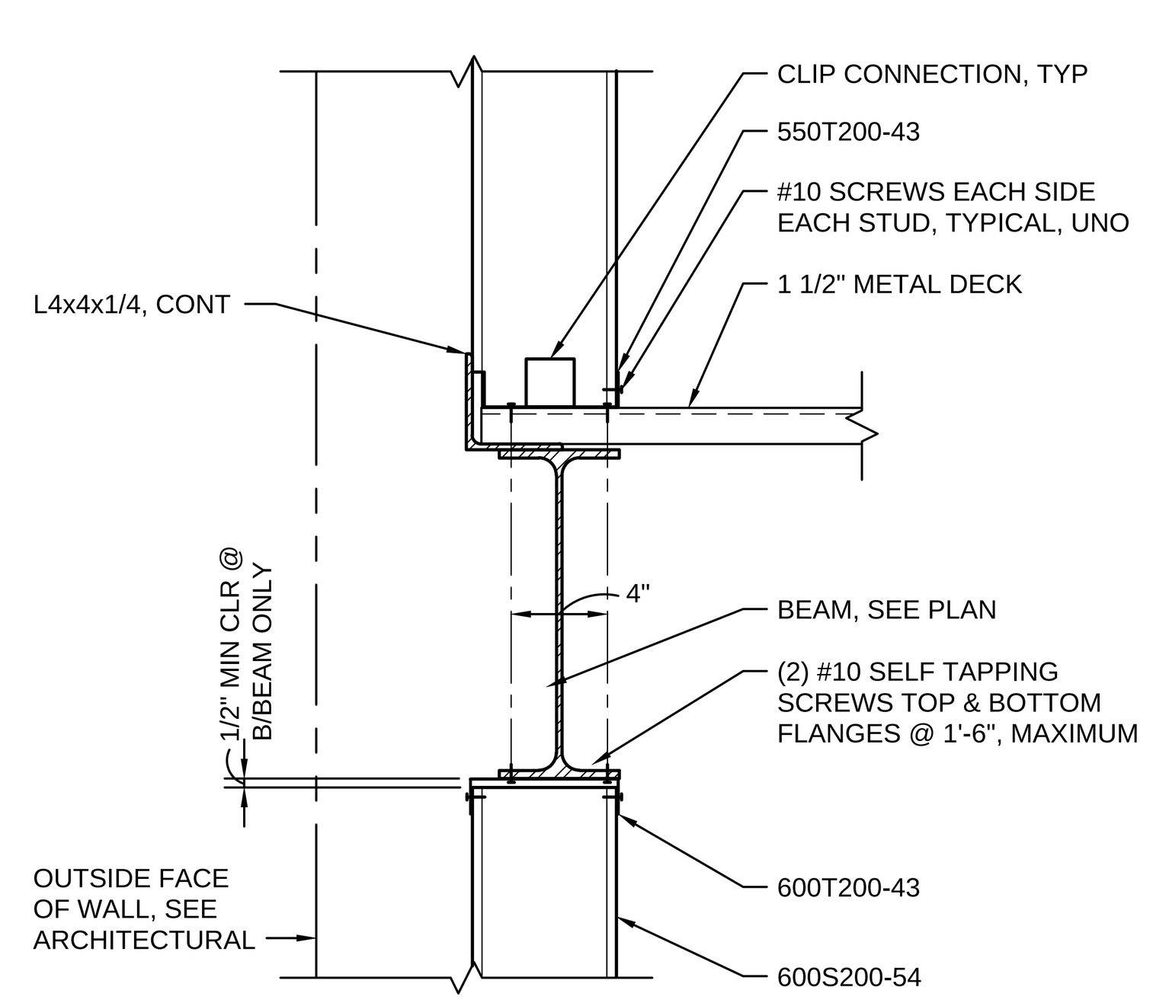
TYPICAL OUTSIDE WALL CORNER STUD DETAIL
SCALE: 1 1/2"=1'-0"



1 SECTION
SCALE: 1 1/2"=1'-0"

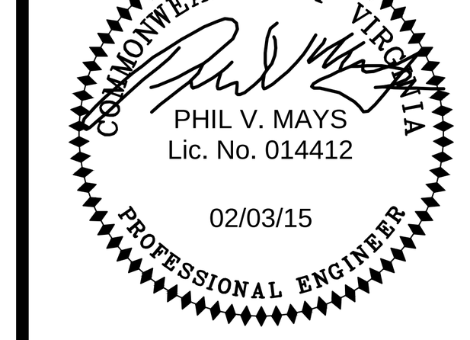


2 SECTION
SCALE: 1 1/2"=1'-0"



3 SECTION
SCALE: 1 1/2"=1'-0"

NO.	BY	REVISIONS	DATE



VIRGINIA A&E, PLLC
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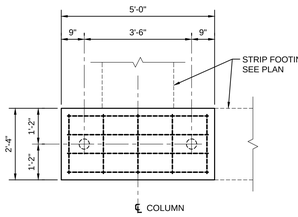
LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

COLD FORMED FRAMING ELEVATIONS, SECTIONS, AND DETAILS

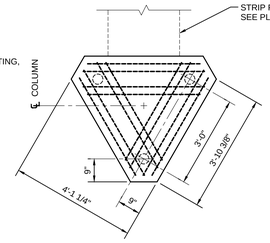
DATE: 03 FEB 15
PROJECT NO: 11088

Full Scale Verification
0" 1"

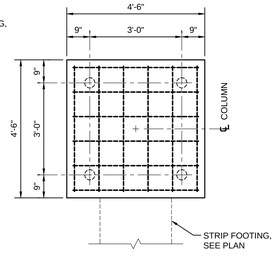
Drawing No.:
S202



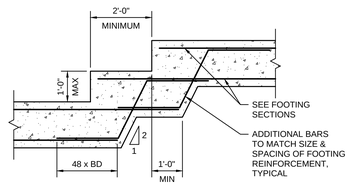
PLAN VIEW



PLAN VIEW

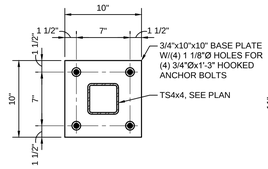


PLAN VIEW

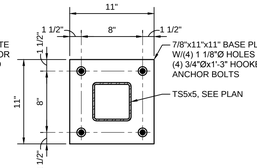


TYPICAL STEP FOOTING DETAIL

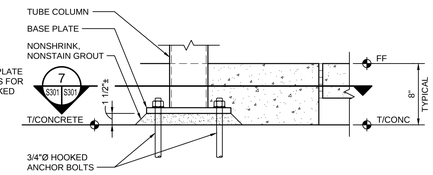
SCALE: 1/2"=1'-0"



TYPE 'A'

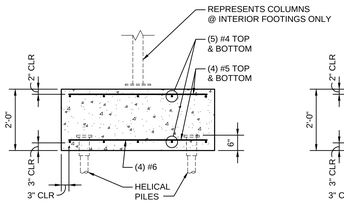


TYPE 'B'



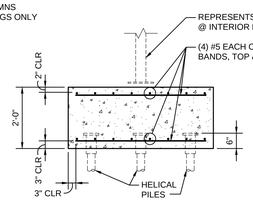
TUBE COLUMN BASE PLATE DETAILS

SCALE: 1 1/2"=1'-0"



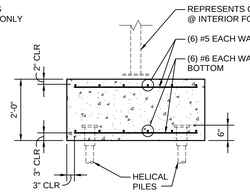
SECTION VIEW

F1



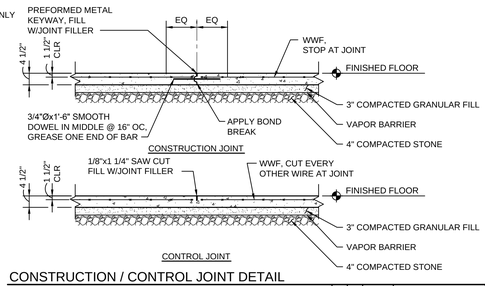
SECTION VIEW

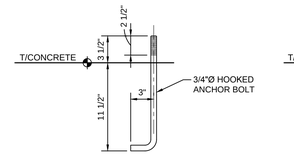
F2



SECTION VIEW

F3





TUBE COLUMN ANCHOR BOLT

SHEAR FRAME ANCHOR BOLT

COLUMN FOOTING DETAILS

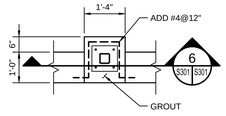
SCALE: 1/2"=1'-0"

CONSTRUCTION / CONTROL JOINT DETAIL

SCALE: 1/2"=1'-0"

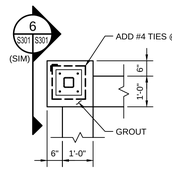
ANCHOR BOLT DETAILS

SCALE: 1 1/2"=1'-0"



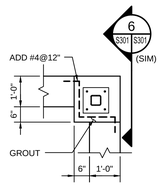
A DETAIL

SCALE: 1/2"=1'-0"



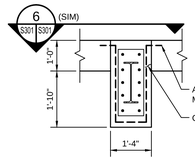
B DETAIL

SCALE: 1/2"=1'-0"



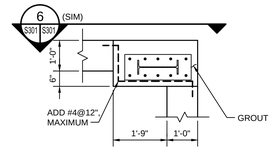
C DETAIL

SCALE: 1/2"=1'-0"



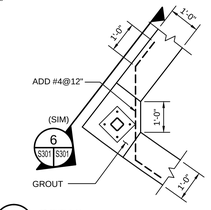
D DETAIL

SCALE: 1/2"=1'-0"



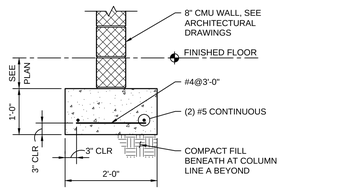
E DETAIL

SCALE: 1/2"=1'-0"



F DETAIL

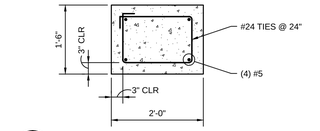
SCALE: 1/2"=1'-0"



8 SECTION

S101 S301

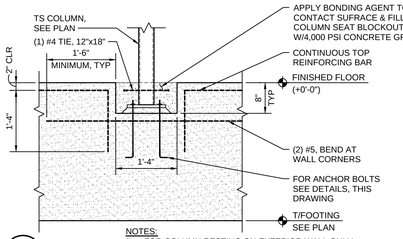
SCALE: 3/4"=1'-0"



5 SECTION

S101 S301

SCALE: 3/4"=1'-0"

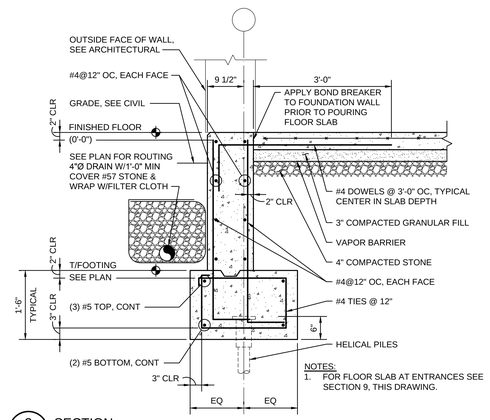


NOTES:
1. FOR COLUMN RESTING ON EXTERIOR WALL ONLY.

6 SECTION

S101 S301

SCALE: 3/4"=1'-0"

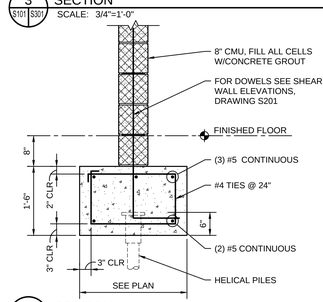


NOTES:
1. FOR FLOOR SLAB AT ENTRANCES SEE SECTION 9, THIS DRAWING.

3 SECTION

S101 S301

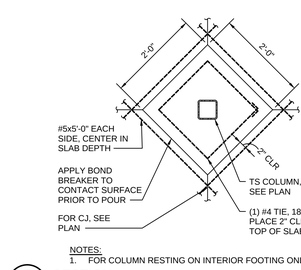
SCALE: 3/4"=1'-0"



4 SECTION

S101 S301

SCALE: 3/4"=1'-0"

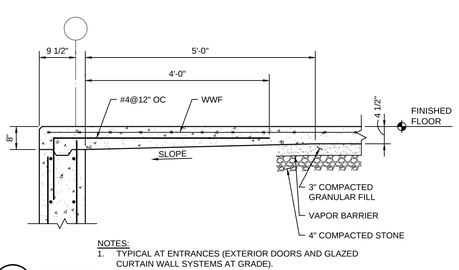


NOTES:
1. FOR COLUMN RESTING ON INTERIOR FOOTING ONLY.

7 SECTION

S301 S301

SCALE: 3/4"=1'-0"

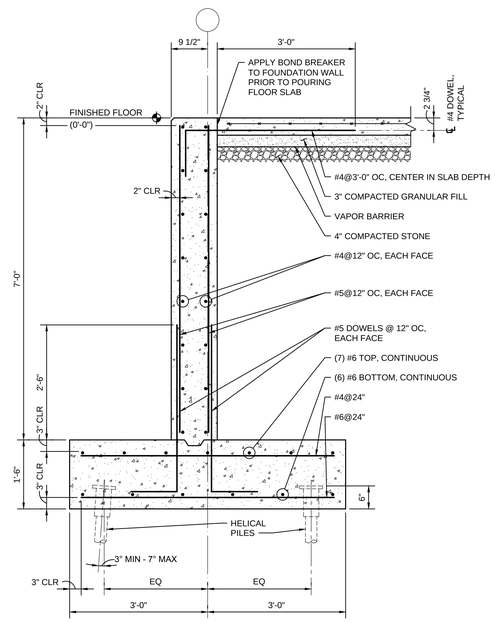


NOTES:
1. TYPICAL AT ENTRANCES (EXTERIOR DOORS AND GLAZED CURTAIN WALL SYSTEMS AT GRADE).

9 SECTION

S101 S301

SCALE: 3/4"=1'-0"

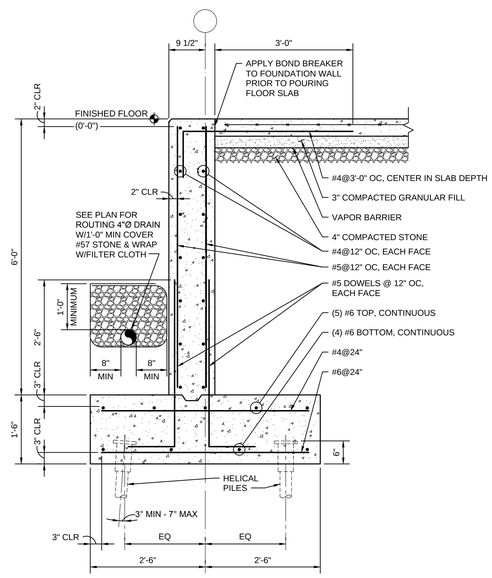


NOTES:
1. ALL 40K (*) PILES @ 90° FROM CONTINUOUS FOOTING DIRECTION, TYPICAL.
2. FOR FLOOR SLAB AT ENTRANCES SEE SECTION 9, THIS DRAWING.

1 SECTION

S101 S301

SCALE: 3/4"=1'-0"



NOTES:
1. ALL 40K (*) PILES @ 90° FROM CONTINUOUS FOOTING DIRECTION, TYPICAL.
2. FOR FLOOR SLAB AT ENTRANCES SEE SECTION 9, THIS DRAWING.

2 SECTION

S101 S301

SCALE: 3/4"=1'-0"

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
PHIL V. MAYS
Lic. No. 014412
02/03/15
PROFESSIONAL ENGINEER

Virginia A&E

VIRGINIA A&E, PLLC
1115 VISTA PARK DRIVE
FOREST, VIRGINIA 24551
PHONE: (434) 316-6001

LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

FOUNDATION
SECTIONS AND DETAILS

DATE: 02-FEB-15

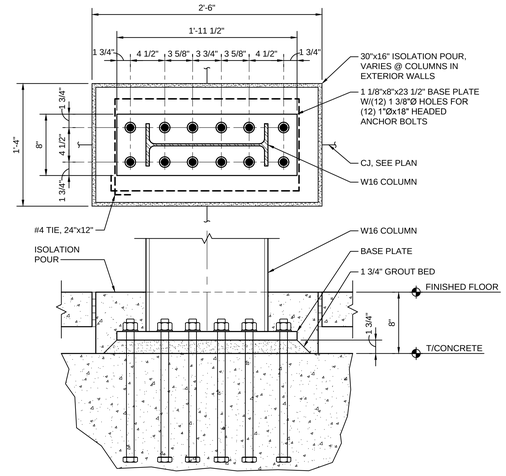
PROJECT NO: 10043

Full Scale Verification

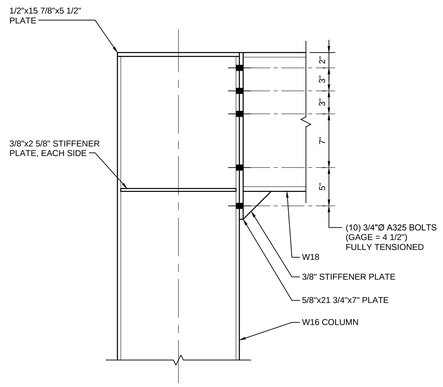
0" 1"

Drawing No.:

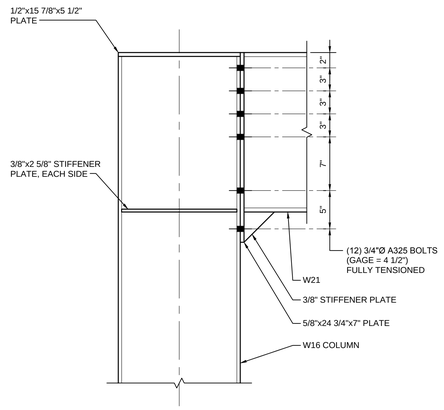
S301



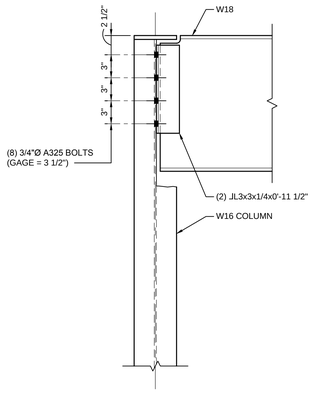
A DETAIL
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



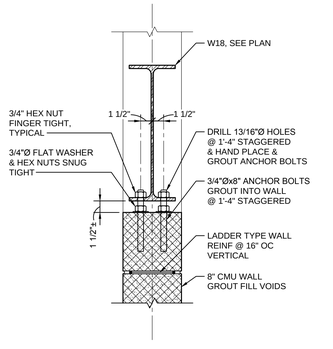
B DETAIL
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



C DETAIL
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



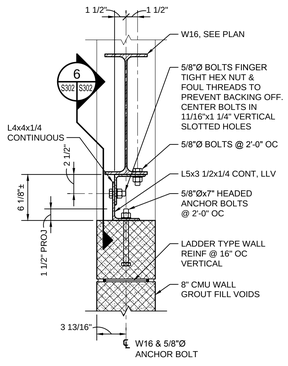
D DETAIL
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



SW-1 & SW-2

NOTES:
1. BUILD CMU CONTINUOUS AROUND BEAMS.

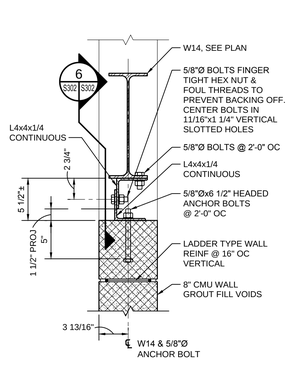
1 SECTION
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



SW-4 & SW-5

NOTES:
1. BUILD CMU CONTINUOUS AROUND BEAMS.

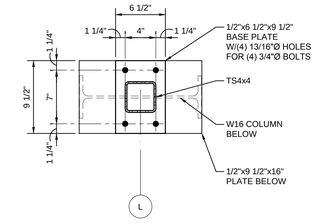
2 SECTION
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



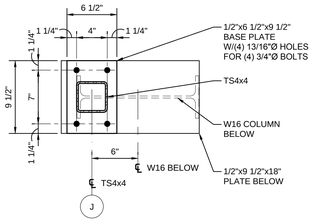
SW-3

NOTES:
1. BUILD CMU CONTINUOUS AROUND BEAMS.

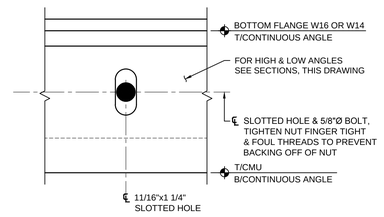
3 SECTION
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



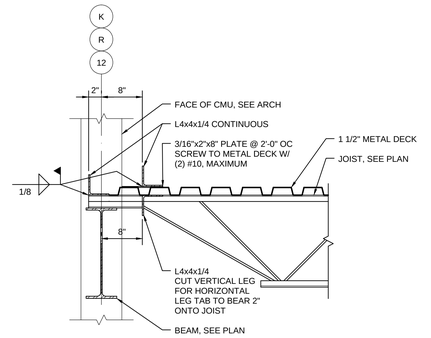
4 SECTION
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



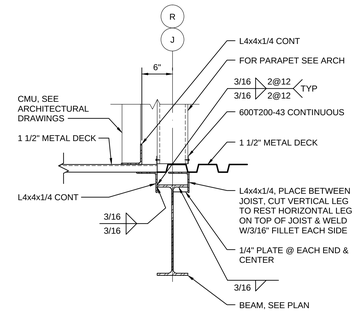
5 SECTION
S201 S302 SCALE: 1 1/2"=1'-0"
0 3" 6" 9" 1'



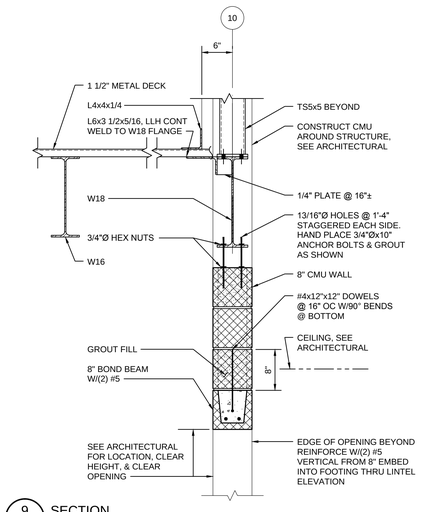
6 SECTION
S302 S302 SCALE: 6"=1'-0"
0 1" 2" 3" 6"



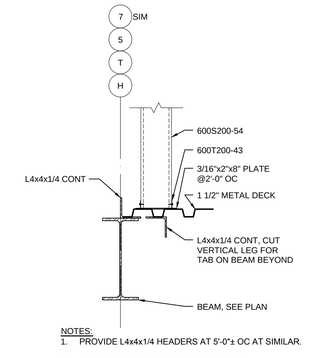
7 SECTION
S102 S302 SCALE: 1"=1'-0"
0 3" 6" 1' 2'



8 SECTION
S102 S401 S302 SCALE: 1"=1'-0"
0 3" 6" 1' 2'



9 SECTION
S102 S302 SCALE: 1"=1'-0"
0 3" 6" 1' 2'



NOTES:
1. PROVIDE L4x4x1/4 HEADERS AT 5'-0"± OC AT SIMILAR.
2. 3/16" PLATE NOT REQUIRED AT SIMILAR.

10 SECTION
S102 S302 SCALE: 1"=1'-0"
0 3" 6" 1' 2'

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
PHIL V. MAYS
Lic. No. 014412
02/03/15
PROFESSIONAL ENGINEER

Virginia A&E

VIRGINIA A&E, PLLC
1115 VISTA PARK DRIVE
FOREST, VIRGINIA 24551
PHONE: (434) 316-6001

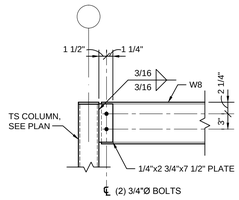
LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

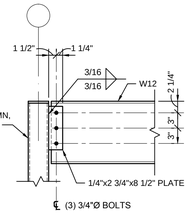
SHEAR FRAME AND SHEAR WALL SECTIONS AND DETAILS

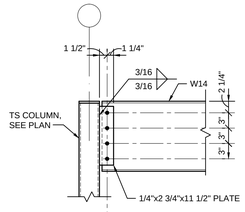
DATE: 02-FEB-15
PROJECT NO: 10043

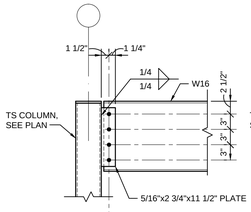
Full Scale Verification
0" 1"

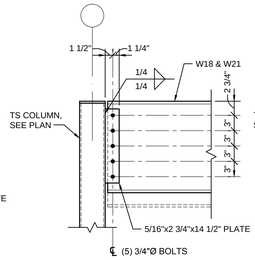
Drawing No.:
S302

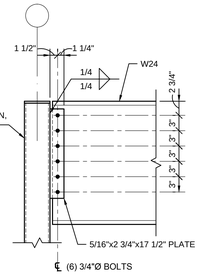


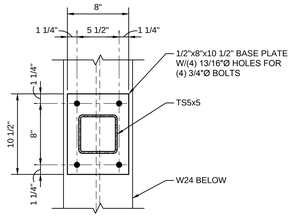


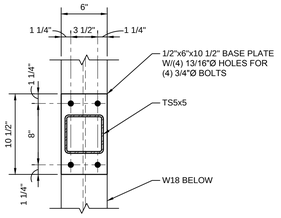






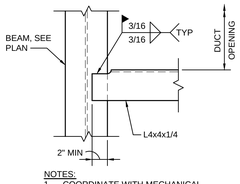




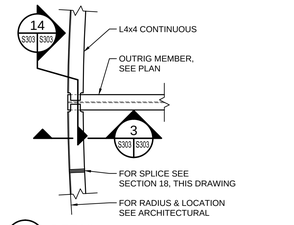


TYPICAL BEAM TO TUBE COLUMN CONNECTION DETAILS

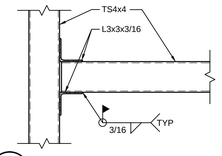
SCALE: 1"=1'-0"



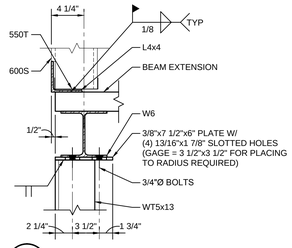
C DETAIL S102 S303 SCALE: 1 1/2"=1'-0"



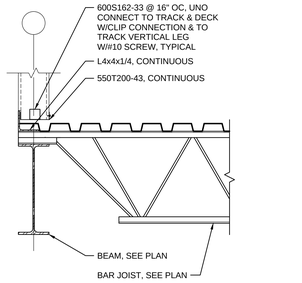
E DETAIL S102 S303 SCALE: 3/4"=1'-0"



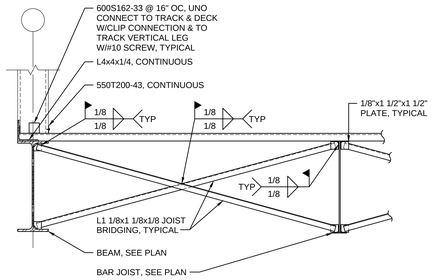
D DETAIL S103 S303 SCALE: 1 1/2"=1'-0"



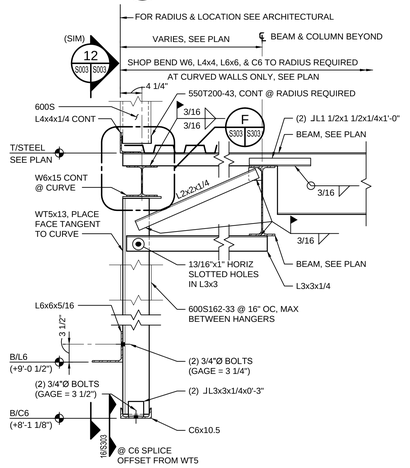
F DETAIL S303 S303 SCALE: 1 1/2"=1'-0"



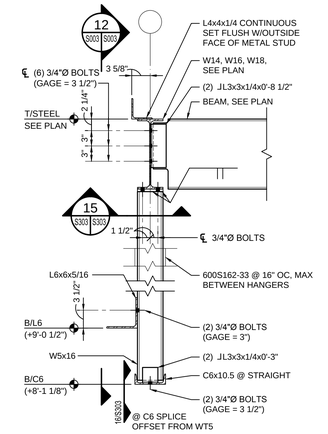
1 SECTION S102 S303 SCALE: 1"=1'-0"



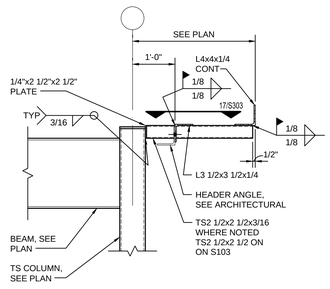
2 SECTION S102 S303 SCALE: 1"=1'-0"



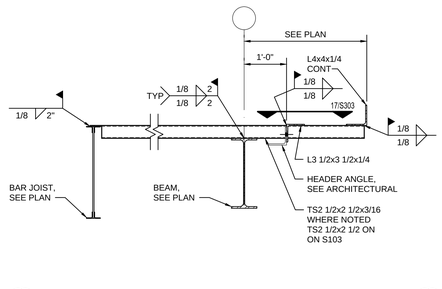
3 SECTION S102 S303 SCALE: 1"=1'-0"



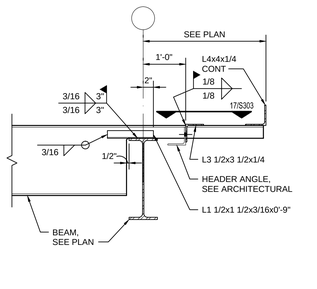
4 SECTION S102 S303 SCALE: 1"=1'-0"



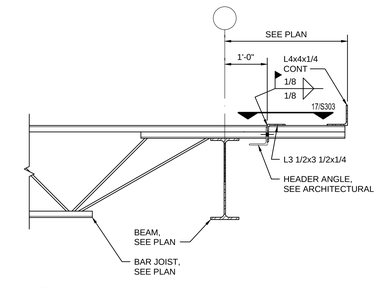
5 SECTION S103 S303 SCALE: 1"=1'-0"



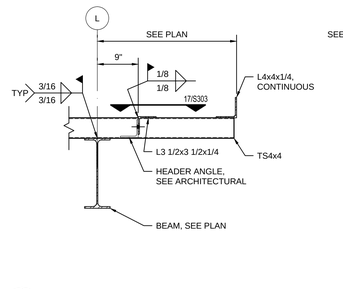
6 SECTION S103 S303 SCALE: 1"=1'-0"



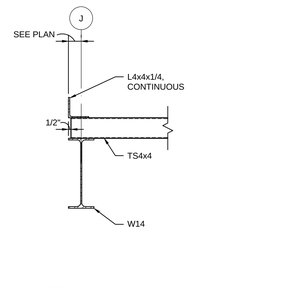
7 SECTION S102 S103 S303 SCALE: 1"=1'-0"



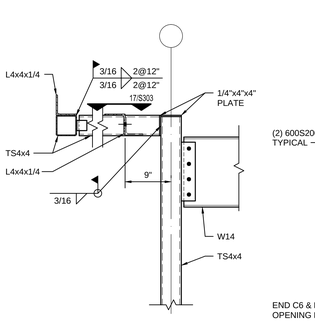
8 SECTION S102 S103 S303 SCALE: 1"=1'-0"



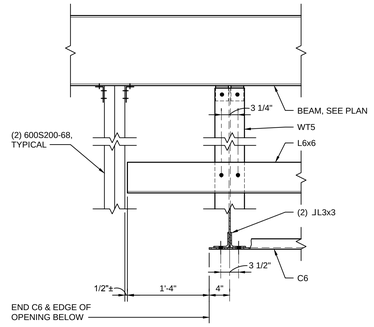
9 SECTION S103 S303 SCALE: 1"=1'-0"



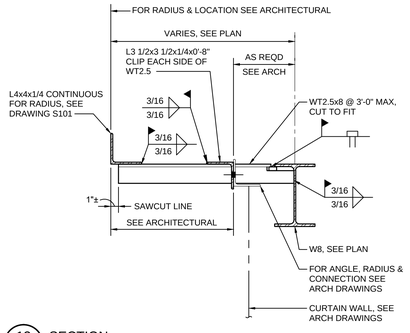
10 SECTION S103 S303 SCALE: 1"=1'-0"



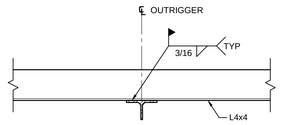
11 SECTION S103 S303 SCALE: 1"=1'-0"



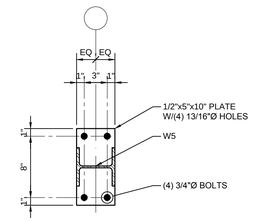
12 SECTION S303 S303 SCALE: 1"=1'-0"



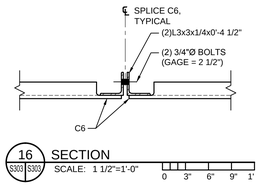
13 SECTION S102 S303 SCALE: 1 1/2"=1'-0"



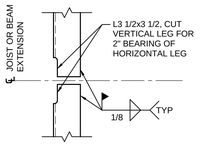
14 SECTION S303 S303 SCALE: 1 1/2"=1'-0"



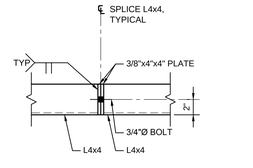
15 SECTION S303 S303 SCALE: 1 1/2"=1'-0"



16 SECTION S303 S303 SCALE: 1 1/2"=1'-0"



17 SECTION S303 S303 SCALE: 1 1/2"=1'-0"



18 SECTION S303 S303 SCALE: 1 1/2"=1'-0"

PHIL V. MAYS
Lic. No. 014412
02/03/15

VIRGINIA A&E, PLLC
1115 VISTA PARK DRIVE
FOREST, VIRGINIA 24551
PHONE: (434) 316-6001

LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

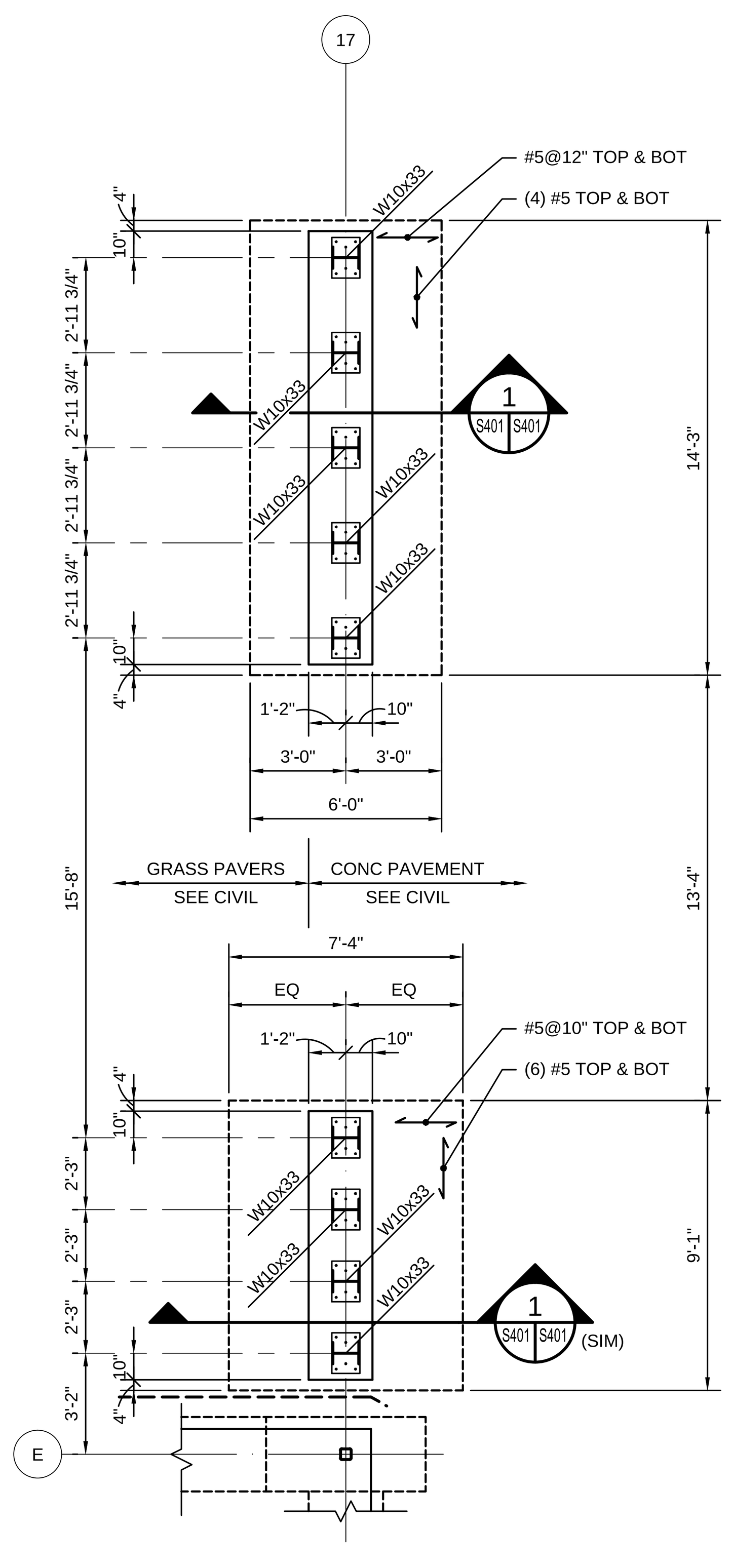
FRAMING
SECTIONS AND DETAILS

DATE: 02-FEB-15
PROJECT NO: 10043

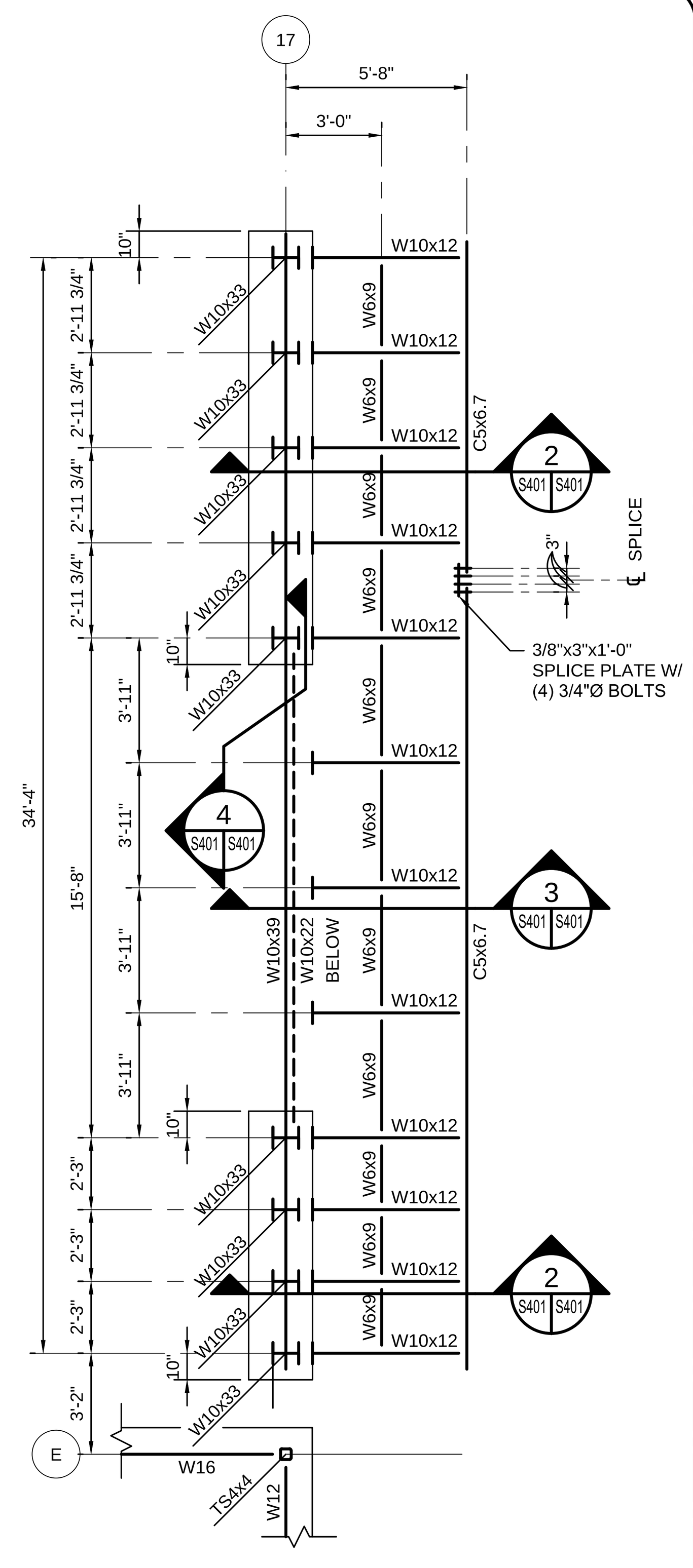
Full Scale Verification
0" 1"

Drawing No.:
S303

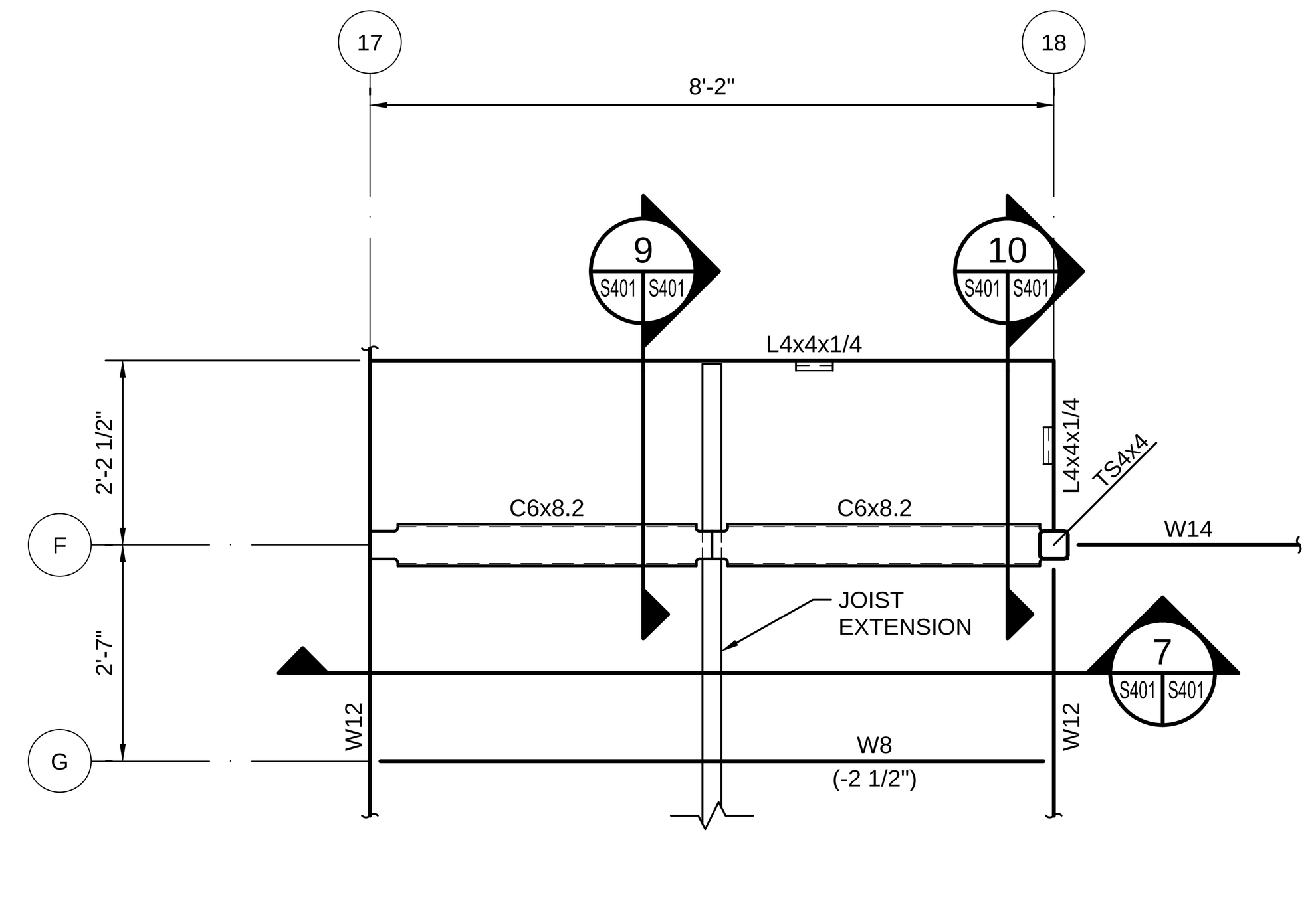
NO.	BY	REVISIONS	DATE



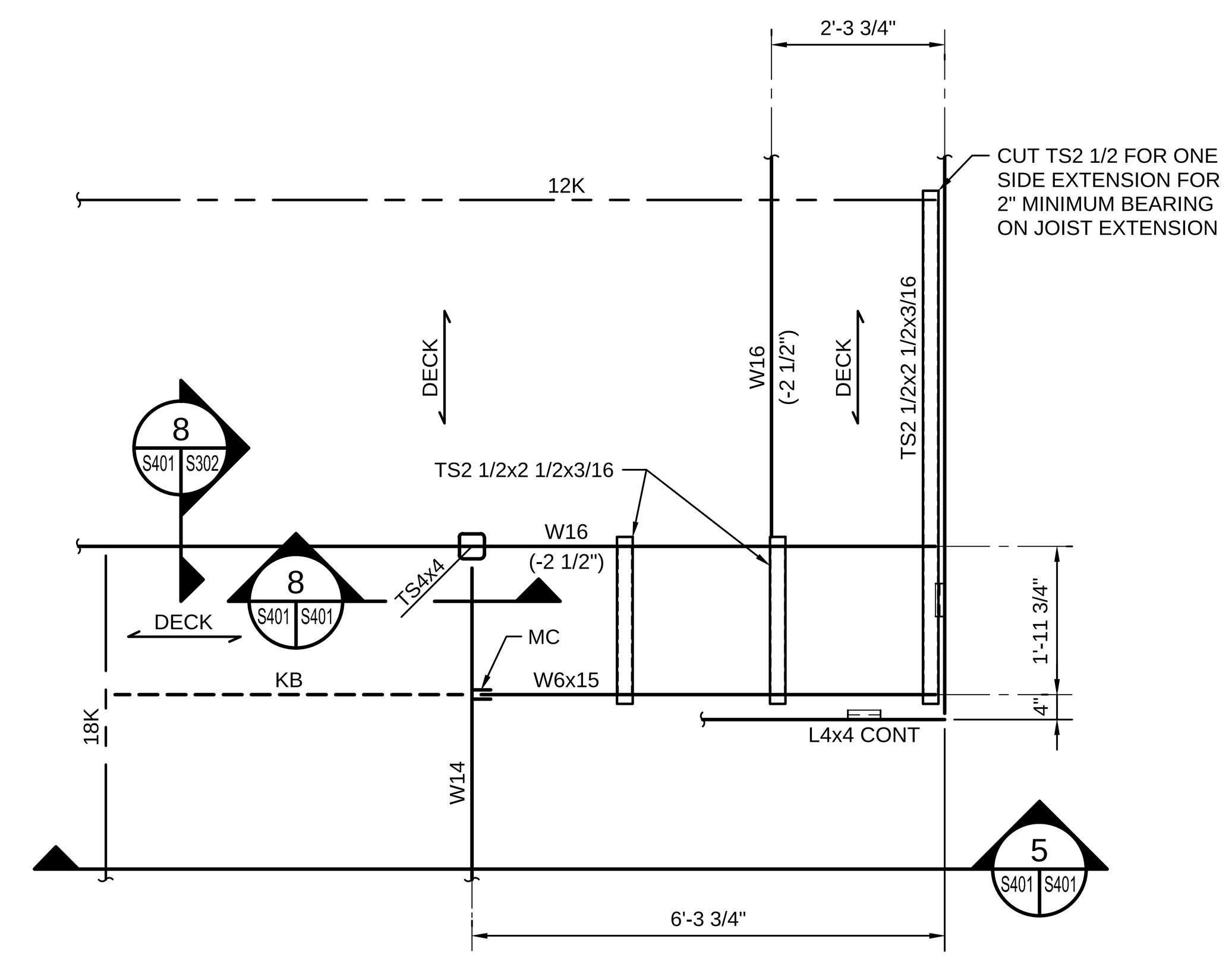
A ENLARGED FOUNDATION PLAN
S101 S401 SCALE: 1/4"=1'-0"



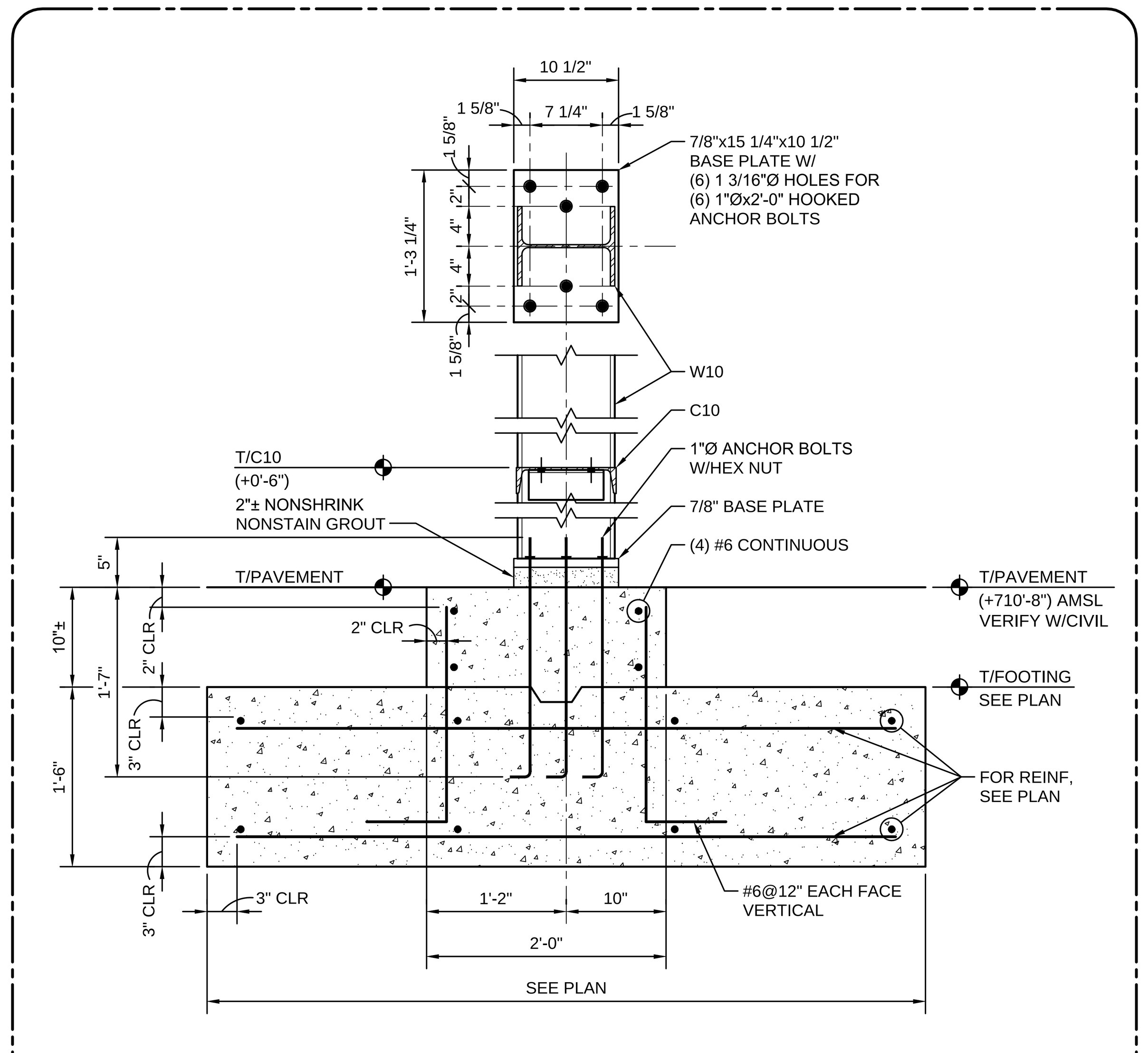
B ENLARGED FRAMING PLAN
S102 S401 SCALE: 1/4"=1'-0"



C ENLARGED FRAMING PLAN
S102 S401 SCALE: 1/2"=1'-0"

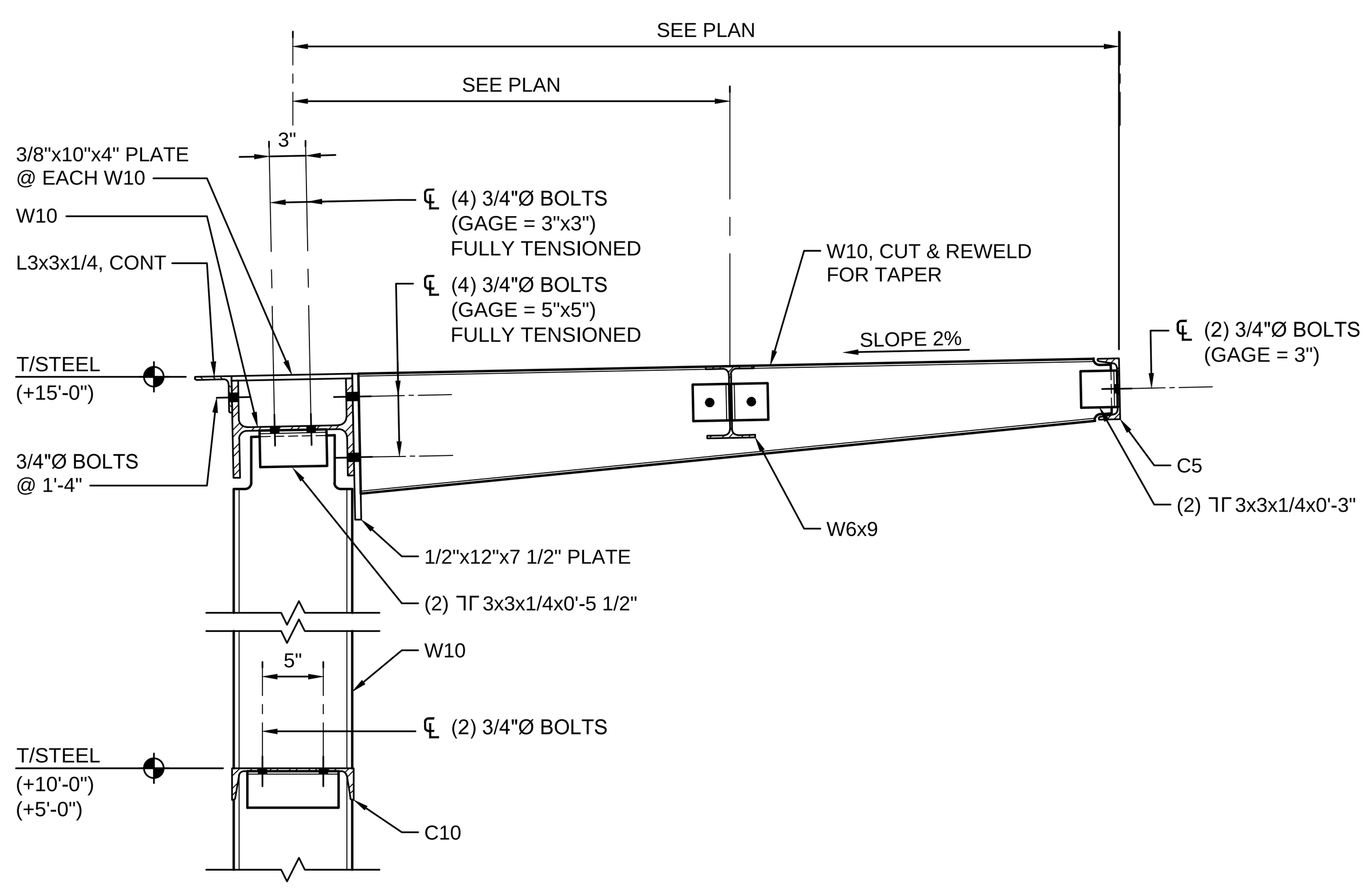


D ENLARGED FRAMING PLAN
S102 S401 SCALE: 1/2"=1'-0"

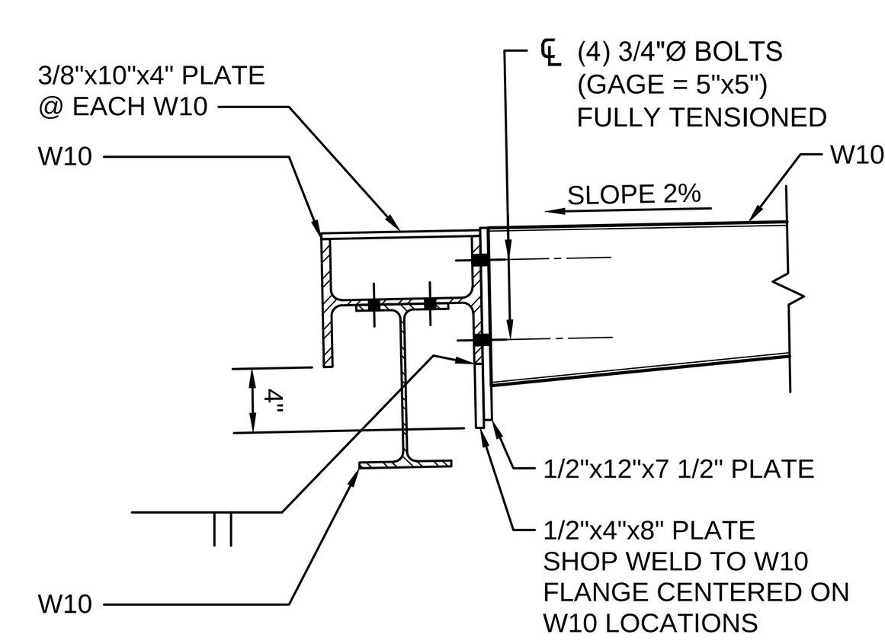


1 SECTION
S401 S401 SCALE: 1"=1'-0"

ALTERNATE NO 7



2 SECTION
S401 S401 SCALE: 1"=1'-0"



3 SECTION
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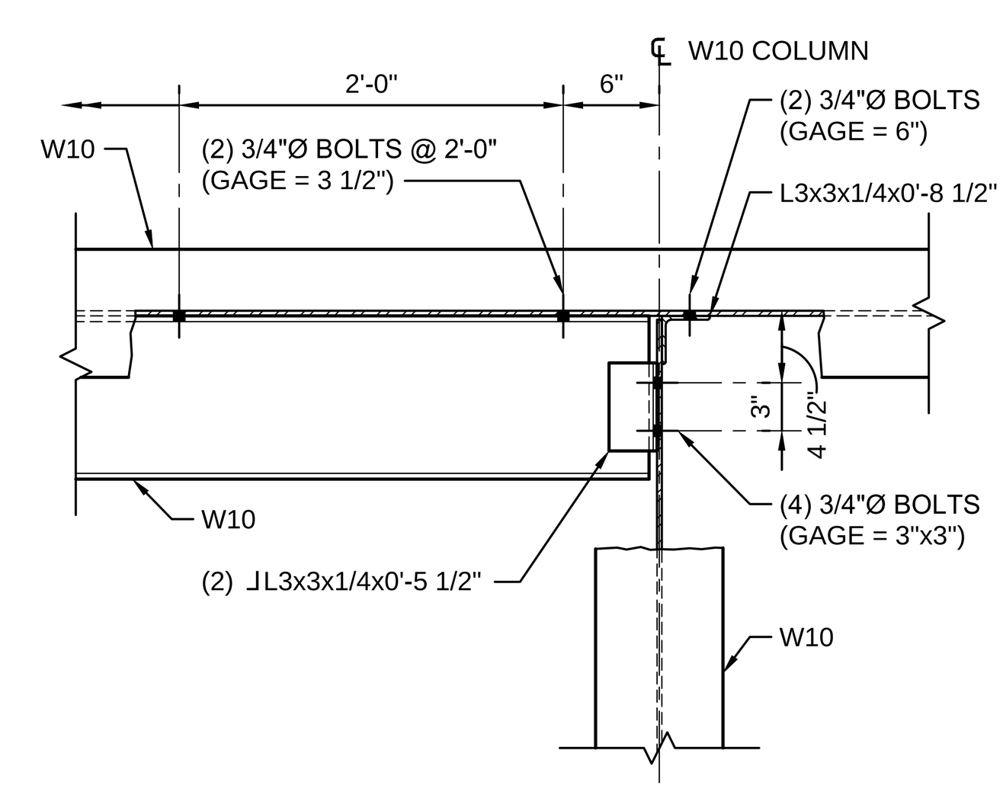

4 SECTION
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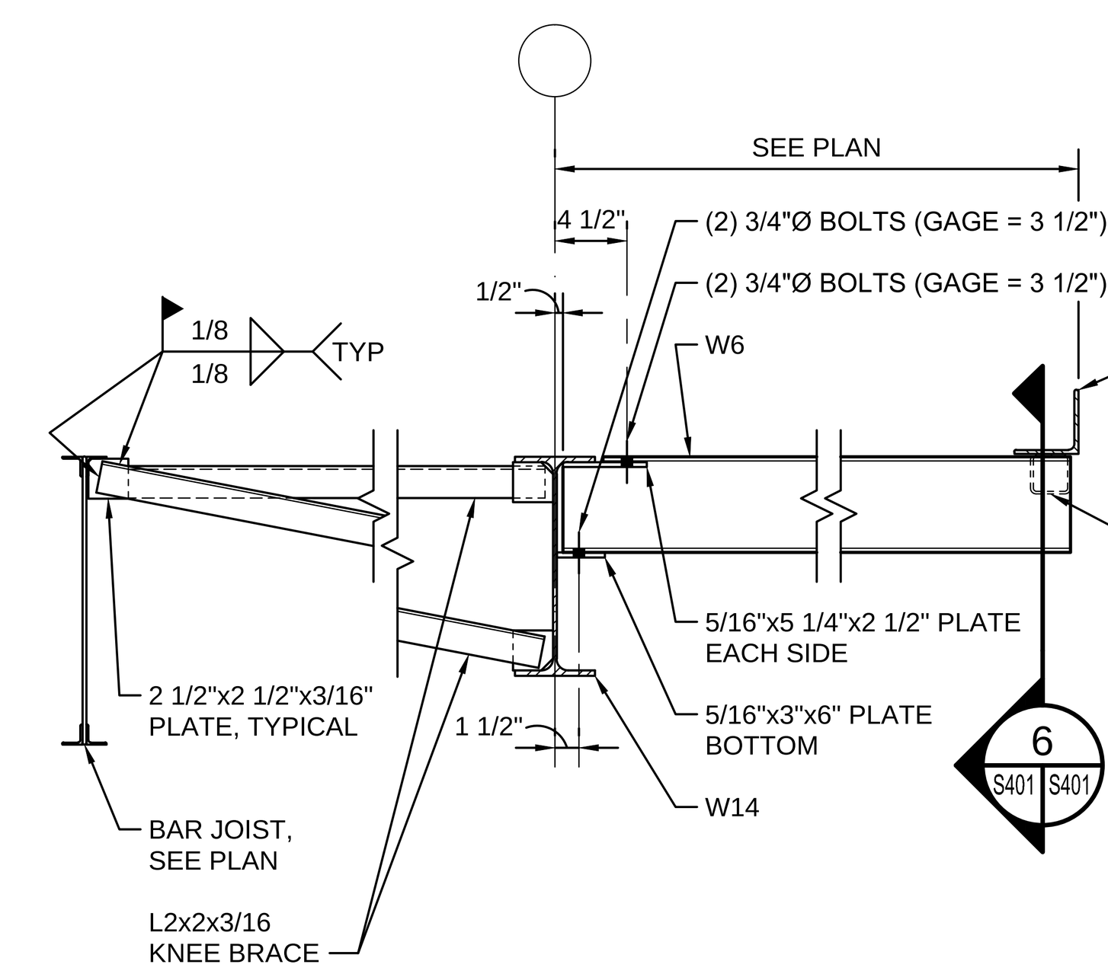
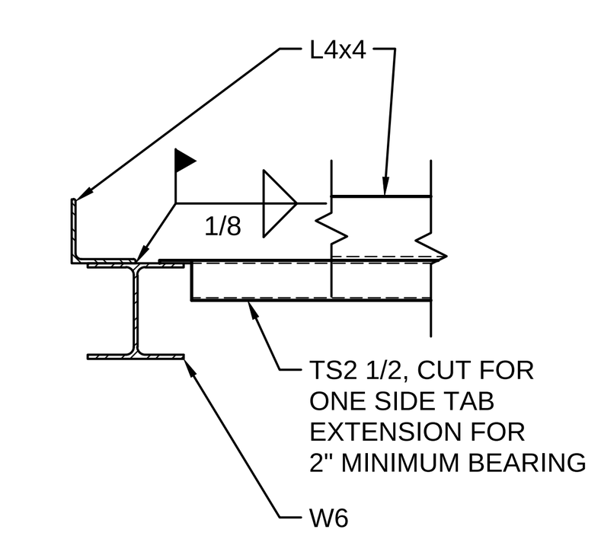
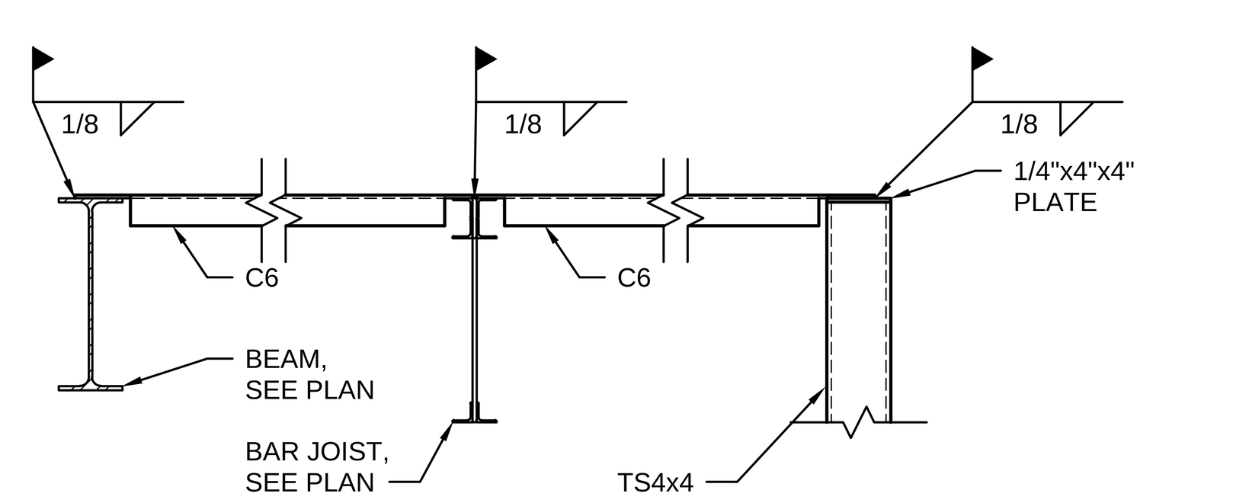


5 SECTION
S401 S401 SCALE: 1"=1'-0"

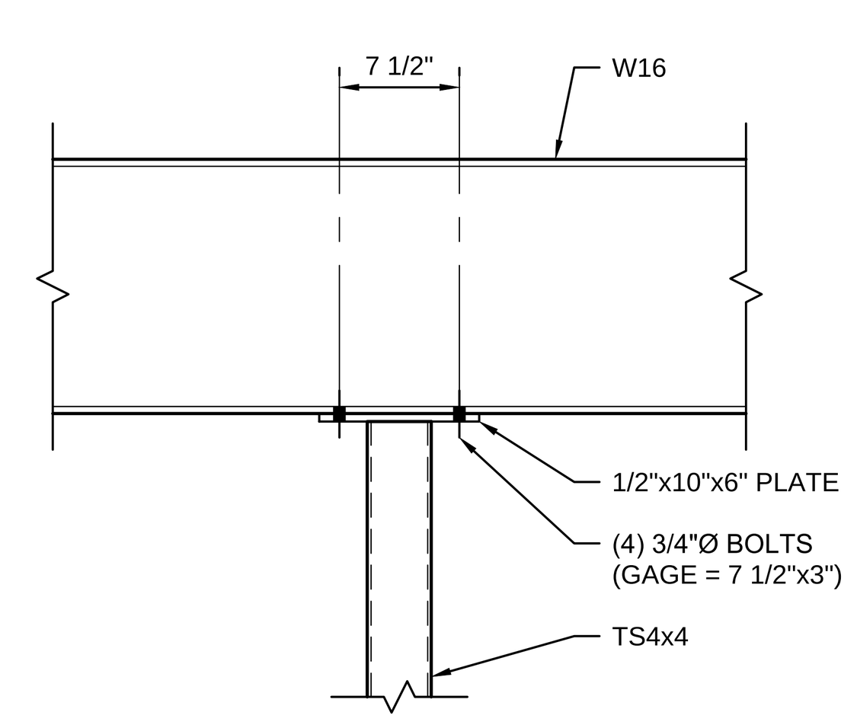


6 SECTION
S401 S401 SCALE: 1"=1'-0"

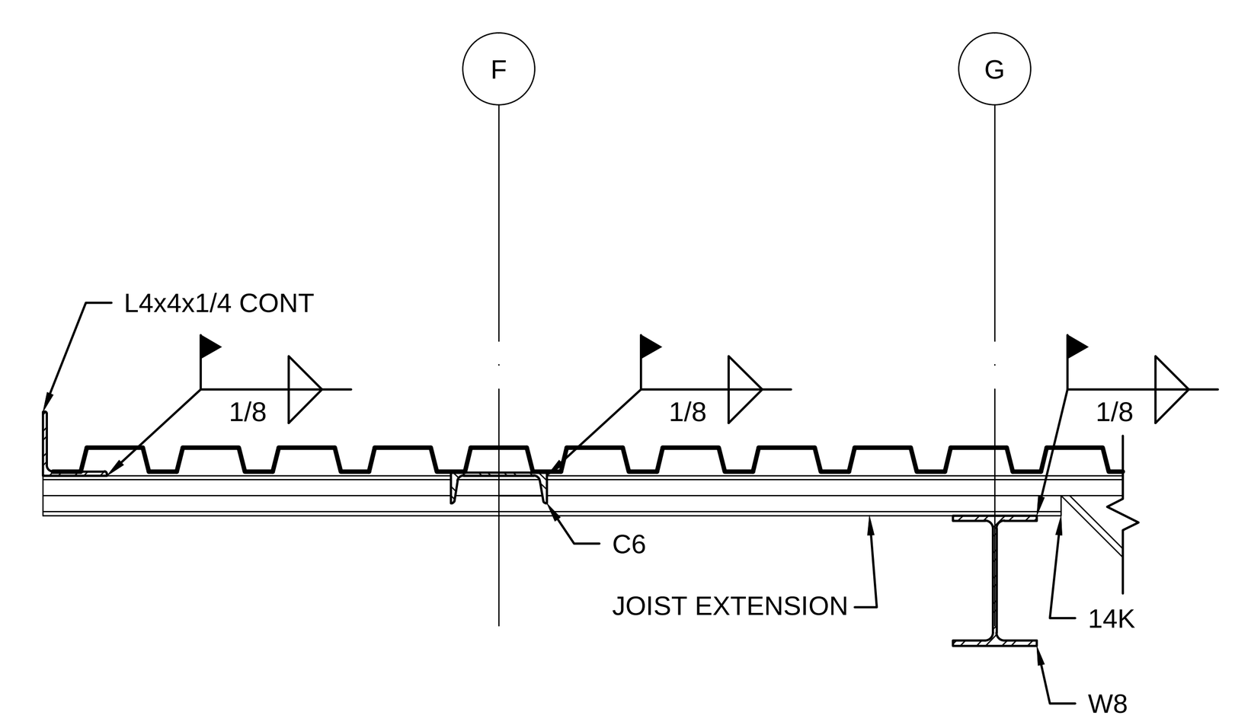
ALTERNATE NO 7



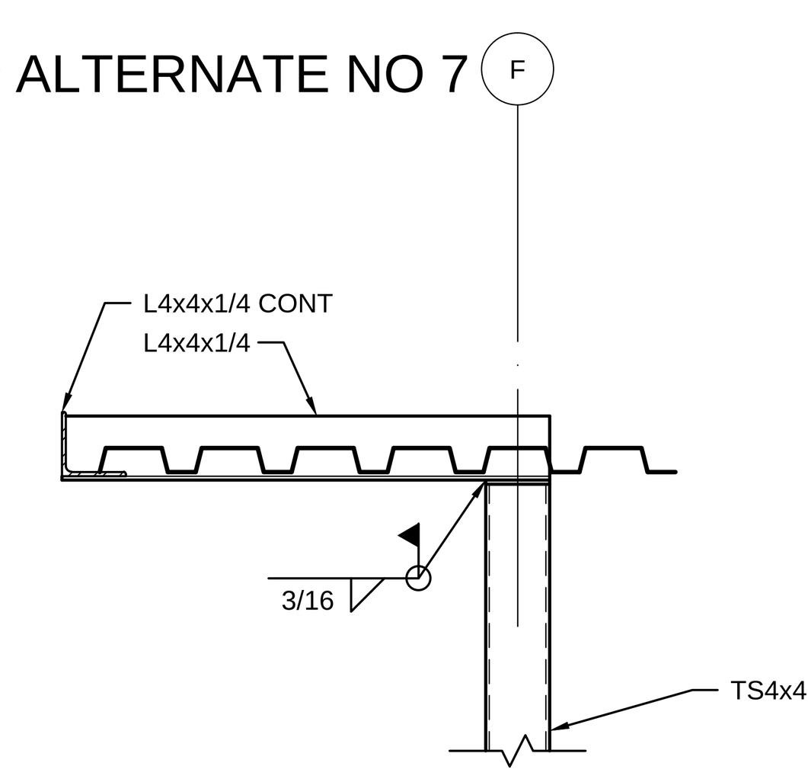
7 SECTION
S401 S401 SCALE: 1"=1'-0"



8 SECTION
S401 S401 SCALE: 1"=1'-0"



9 SECTION
S401 S401 SCALE: 1"=1'-0"



10 SECTION
S401 S401 SCALE: 1"=1'-0"

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
PHIL V. MAYS
Lic. No. 014412
02/03/15
PROFESSIONAL ENGINEER

Virginia A&E
VIRGINIA A&E, PLLC
1115 VISTA PARK DRIVE
FOREST, VIRGINIA 24551
PHONE: (434) 316-6001

LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

ENLARGED PLANS
AND SECTIONS

DATE: 03 FEB 15
PROJECT NO: 11088

Full Scale Verification
0" 1"

Drawing No.:
S401

COLUMN SCHEDULE

LOCATION	A-6.7, A-8, D-8, D-11, E-12, E-15 E-17, F-18, K-1, N-1, Q-1, Q-16, Q-21, V-18, V-21, W-9, W-10, W-12.1, W-13, Y-6, Z-7, Z-9	H-8, H.8-8, J-12, J-14.8, K-15	J-18, J-22, L-22	W-7	C-4, G-2, V-2, X-3	H-5, T-5	M-5, P-5, H-7, M-7, Q-7, K-10, R-10, K-12, N-12, R-12	K-14	J-20	T-7	N-10	L-18	R-13	L-21
HIGH ROOF T/STEEL (+18'-6")									4"			4"		4"
LOW ROOF T/STEEL (+12'-6")	1/4" PLATE, UON												1'-6 1/4" 1/2" PLATE	
	TSAx4x5/16	TSAx4x5/16	TSAx4x5/16	TSSx5x5/16	TSAx4x5/16	TSSx5x5/16	TSSx5x5/16	TSAx4x5/16	TSAx4x5/16	TSSx5x5/16	TSSx5x5/16	TSAx4x5/16	TSAx4x5/16	TSAx4x5/16
	W16 COL BELOW	W24 BEAM BELOW	W18 BEAM BELOW	W14 BEAM BELOW										
FIRST FLOOR FF (+0'-0")	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"	6 1/2"					6 1/2"	6 1/2"
BASE PLATE TYPE (SEE S301)	A	A	A	B	A	B	B	A	SEE SECTION 5, DRAWING S302	SEE DETAIL A, DRAWING S303	SEE DETAIL B, DRAWING S303	SEE SECTION 4, DRAWING S302	A	A

NOTES:

1. FOR SHEAR FRAME COLUMNS SEE DRAWINGS S102, S201, AND S302.
2. COLUMNS W-12.1 AND W-13 ARE DELETED BY ALTERNATE NO 1.

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
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02/03/15
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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

SCHEDULES

DATE: 02/03/15

PROJECT NO: 13005

Full Scale Verification
0" 1"

Drawing No.:
S601

LEGEND

SYMBOLS

- SUPPLY/OA DUCT SECTION OR DIFFUSER/GRILLE
- RETURN/EXHAUST DUCT SECTION OR DIFFUSER/GRILLE
- TRANSITION IN DUCT SIZE
- TRANSITION FROM RECTANGULAR TO ROUND
- MANUAL VOLUME DAMPER
- MOTOR OPERATED DAMPER
- 45° BRANCH CONNECTION
- 45° BRANCH TO ROUND TAKEOFF CONNECTION
- FLEXIBLE DUCTWORK
- ACCESS DOOR
- FIRE DAMPER IN WALL
- FIRE DAMPER IN FLOOR, CEILING OR ROOF
- WALL MOUNTED THERMOSTAT OR TEMPERATURE SENSOR
- DUCT SMOKE DETECTOR
- WALL MOUNTED HUMIDISTAT OR HUMIDITY SENSOR
- AIRFLOW
- 90° ELBOW UP
- 90° ELBOW DOWN
- 90° ELBOW WITH TURNING VANES (RECTANGULAR DUCT)
- 90° RADIUS ELBOW (RECTANGULAR DUCT)
- 45° RADIUS ELBOW (RECTANGULAR DUCT)
- CONICAL SPIN-IN WITH DAMPER
- TEE WITH TURNING VANES (RECTANGULAR DUCT)
- RADIUS TEE (RECTANGULAR DUCT)
- Y FITTING (ROUND DUCT)
- 90° CONICAL TAP
- 45° CONICAL TAP
- CONSTRUCTION NOTE (1)
- CONNECT TO EXISTING
- REVISION TRIANGLE (1)
- REVISION CLOUD
- INDICATES NUMBER OF REVISIONS, CORRESPONDS WITH REVISION NOTE (1)
- TAG NO (X-1 / 000)
- DIFFUSER/GRILL TAG
- CFM
- AHU-1 EQUIPMENT TAG
- PIPE TURNING DOWN
- PIPE TURNING UP
- TEE DOWN
- PIPE CAP
- PIPE FLOW ARROW
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- PIPE FLANGE
- UNION
- WYE STRAINER
- FLEXIBLE CONNECTOR
- AIR VENT (AUTO)
- AIR VENT (MANUAL)
- BACKFLOW PREVENTER
- THERMOMETER
- PRESSURE GAUGE
- PUMP
- TEMPERATURE SENSOR
- FLOW SWITCH
- GATE VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- PLUG VALVE
- BALL VALVE
- CALIBRATED BALANCING VALVE
- MOTORIZED 2-WAY VALVE
- MOTORIZED 3-WAY VALVE
- PNEUMATIC 2-WAY VALVE
- PNEUMATIC 3-WAY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- SAFETY RELIEF VALVE

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMPRESSED AIR
CF	CHEMICAL FEED, CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
DIA, Ø	DIAMETER
DB	DRY BULB
DBA	DECIBELS, A WEIGHTED
DEG	DEGREE
DTR	DUAL TEMPERATURE WATER RETURN
DTS	DUAL TEMPERATURE WATER SUPPLY
DX	DIRECT EXPANSION
DWG	DRAWING
(E)	EXISTING
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EL, ELEV	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
°F	DEGREES FAHRENHEIT
FD	FIRE DAMPER
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FT	FOOT, FEET
G	GAS
GA	GAGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HEIGHT
HD	HEAD
HP	HORSEPOWER
HR	HOUR(S)
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HZ	FREQUENCY
ID	INSIDE DIAMETER
IN	INCHES
INWG	INCHES WATER GAUGE
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	POUND(S)
LF	LINEAR FEET
LPG	LIQUIFIED PETROLEUM GAS (PROPANE)
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAXIMUM CIRCUIT BREAKER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NG	NATURAL GAS
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
%	PERCENT
PD	PRESSURE DROP OR DIFFERENTIAL
PH	PHASE
PRV	PRESSURE REDUCING OR REGULATING VALVE
PSIG	POUNDS PER SQUARE INCH GAGE
PSV	PRESSURE SAFETY VALVE
R12, R22	REFRIGERANT (12, 22, ETC.)
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SQUARE FOOT, FEET
SHR	SENSIBLE HEAT RATIO
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
TD	TEMPERATURE DIFFERENTIAL
TEMP	TEMPERATURE
TOD	TOP OF DUCT
TONS	TONS OF REFRIGERATION
TSP	TOTAL STATIC PRESSURE
T'STAT	THERMOSTAT
TYP	TYPICAL
V	VOLTS
VAV	VARIABLE AIR VOLUME
VTR	VENT THRU ROOF
W	WATT, WIDTH
WB	WET BULB

HVAC SPECIFICATIONS

1. REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATION AND DETAILS OF ROOF AND WALL PENETRATIONS. REFER TO REFLECTED CEILING PLAN FOR LOCATION OF AIR DEVICES.
2. THERMOSTATS, HUMIDISTATS, AND SWITCHES SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR.
3. ROUTE DUCTWORK CONCEALED ABOVE CEILING AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED. WHERE REQUIRED TO AVOID OBSTRUCTIONS, DUCTWORK SHALL BE TRANSFORMED, DIVIDED, OR SHIFTED WITH THE ORIGINAL FREE AREA BEING MAINTAINED.
4. PROVIDE AIR TURNING DEVICES IN DUCTWORK AT ANY CHANGE IN DIRECTION GREATER THAN 30 DEGREES. SQUARE THROAT ELBOWS WITHOUT TURNING VANES, MITERED ELBOWS, STRAIGHT RECTANGULAR AND ROUND DUCT TAPS, AND AIR SCOOPS ARE NOT PERMITTED.
5. INSTALLATION OF FIELD MOUNTED CONTROL COMPONENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL CONTROL WIRING SHALL BE IN CONDUIT AND INSTALLED PER NEC.
6. CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 PVC, ASTM D 1785, SAME SIZE AS EQUIPMENT CONNECTION.
7. DRYER EXHAUST DUCT SHALL BE 4"Ø HEAVY GAUGE (MIN 0.016") RIGID GALVANIZED STEEL DUCT WITH SMOOTH INTERIOR FINISH. DUCTS SHALL BE SUPPORTED AT 4-FOOT INTERVALS AND SECURED IN PLACE. THE INSERT END OF THE DUCT SHALL EXTEND INTO THE ADJOINING DUCT FITTING IN THE DIRECTION OF AIRFLOW. DUCTS SHALL NOT BE JOINED WITH SCREWS OR OTHER FASTENERS THAT PROTRUDE INTO THE INTERIOR OF THE DUCT. ELBOWS SHALL BE 10" RADIUS. PROVIDE DRYER ROOF VENT WITH 5" CLEARANCE EQUAL TO DRYERJACK DJK486. PROVIDE MAXIMUM 2 FT UL 2158A LISTED FLEXIBLE DRYER TRANSITION DUCT AT DRYER CONNECTION. ENTIRE LENGTH OF TRANSITION DUCT SHALL BE EXPOSED WITHIN THE SPACE AND SHALL BE CUT TO AVOID EXCESS DUCT AND UNNECESSARY BENDS. MAXIMUM LENGTH OF DRYER DUCT SHALL BE 35 EQUIVALENT FEET, MEASURED FROM THE POINT OF CONNECTION BETWEEN THE TRANSITION DUCT AND HARD DUCT TO THE ROOF OUTLET, USING 1.5 FEET FOR EACH 10" RADIUS 90-DEGREE ELBOW. CONTRACTOR SHALL CALCULATE FINAL INSTALLED EQUIVALENT LENGTH AND PROVIDE PERMANENT SIGN INDICATING CONCEALED EQUIVALENT LENGTH. SIGN SHALL HAVE WHITE LETTERS ON A BLUE BACKGROUND AND SHALL BE MOUNTED 48" ABOVE FLOOR, CENTERED ON THE DRYER LOCATION, USING GLUE AND STAINLESS STEEL SCREWS. WORDING AS FOLLOWS: "RISK OF FIRE - THE NET EQUIVALENT LENGTH OF DRYER DUCT FROM THIS LOCATION IS ___ FEET."

SEQUENCES OF OPERATIONS

GENERAL

CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ACHIEVING THE SEQUENCE OF OPERATIONS AND SHALL PROVIDE ALL HARDWARE, CONDUIT, WIRING, SOFTWARE, AND PROGRAMMING REQUIRED TO DO SO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPATIBILITY AND COMMUNICATION BETWEEN THE BAS AND ALL EQUIPMENT.

CONTRACTOR SHALL SUBMIT CONTROL SYSTEM PRODUCT DATA INCLUDING HARDWARE, SOFTWARE, LOGIC AND WIRING DIAGRAMS, AND SEQUENCES OF OPERATION AS PART OF THE HVAC SUBMITTAL PACKAGE. ANY DISCREPANCIES WITH OR RECOMMENDED CHANGES FROM WHAT IS INDICATED ON THESE DRAWINGS SHALL BE HIGHLIGHTED.

ALL SETPOINTS INDICATED IN THESE SEQUENCES OF OPERATION SHALL BE UNDERSTOOD TO BE USER ADJUSTABLE. CONTRACTOR SHALL COORDINATE WITH A/E AND OWNER AND PERFORM ALL INITIAL PROGRAMMING OF ZONE SENSORS, UNIT CONTROLLERS, CENTRAL CONTROLLERS, AND OTHER COMPONENTS AS REQUIRED. ANY HARDWARE OR SOFTWARE REQUIRED TO VIEW OR ADJUST THE I/O POINTS, BOTH LOCALLY AND REMOTELY, SHALL BE PROVIDED TO THE OWNER AT NO ADDITIONAL COST.

CONTROLS SUBCONTRACTOR SHALL ASSIST THE COMMISSIONING AGENT AS REQUIRED TO PERFORM FUNCTIONAL TESTING AND DEMONSTRATE COMPLIANCE WITH THE SEQUENCE OF OPERATIONS.

CONTRACTOR SHALL PROVIDE TRAINING FOR OWNER ON ALL COMPONENTS OF CONTROL SYSTEM.

REFER TO CONTROLS SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

BUILDING AUTOMATION SYSTEM (BAS)

ALL HVAC EQUIPMENT SHALL BE CONTROLLED AND MONITORED BY THE CITY'S EXISTING DDC BUILDING AUTOMATION SYSTEM. INFORMATION ON THE CITY'S EXISTING FRONT END CONTAINED HEREIN AND WITHIN THE SPECIFICATIONS IS BASED ON INFORMATION PROVIDED BY THE OWNER. THIS INFORMATION HAS NOT BEEN VERIFIED BY THE A/E. THE CONTROLS SUBCONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING ALL EXISTING CONDITIONS AT THE FRONT END AND DETERMINING COMPATIBILITY REQUIREMENTS.

THE BAS SHALL MONITOR AND DISPLAY THE POINTS INDICATED ON DRAWING M601.

OCCUPANCY

THE ADMINISTRATION AND RESIDENTIAL ZONES SHALL BE IN OCCUPIED MODE 24/7. THE THERAPY, CLASSROOM, AND DINING AND RECREATION ZONES SHALL EACH BE ON A SEPARATE SCHEDULE AS PROGRAMMED AT THE BAS. THE RECREATION AND DINING ZONES SHALL BE IN A STANDBY MODE DURING OCCUPIED HOURS WITH THE SETPOINT RELAXED BY TWO DEGREES.

OCCUPIED TEMPERATURE SETPOINTS SHALL BE 75°F FOR COOLING AND 68°F FOR HEATING. UNOCCUPIED TEMPERATURE SETPOINTS SHALL BE 83°F FOR COOLING AND 60°F FOR HEATING. HUMIDITY SETPOINT SHALL BE 50% DURING OCCUPIED AND UNOCCUPIED PERIODS.

INDIVIDUAL ZONE SENSORS IN THE RECREATION, DINING, THERAPY, AND CLASSROOM ZONES SHALL BE EQUIPPED WITH AN OVERRIDE BUTTON TO TRIGGER A 3-HOUR OVERRIDE DURING UNOCCUPIED HOURS.

ROOFTOP UNITS

DURING OCCUPIED PERIODS, THE OUTSIDE AIR DAMPER SHALL BE OPEN TO ITS MINIMUM POSITION AND THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY. DURING UNOCCUPIED PERIODS, THE OUTSIDE AIR DAMPER SHALL BE CLOSED AND THE SUPPLY FAN SHALL OPERATE ONLY UPON A CALL FOR HEATING, COOLING, OR DEHUMIDIFICATION.

FOR UNITS WITH MULTIPLE STAGES OF COOLING, THE MINIMUM OUTSIDE AIR DAMPER POSITION SHALL BE DETERMINED FOR EACH FAN SPEED. THE UNIT SHALL MODULATE THE DAMPER IN STEPS BASED ON FAN SPEED TO MAINTAIN THE RATE OF OUTSIDE AIR BEING INTRODUCED.

UPON A CALL FOR COOLING OR HEATING BY THE SPACE THERMOSTAT, THE COMPRESSOR OR BURNER SHALL CYCLE TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. WHEN THERE IS A CALL FOR COOLING AND THE ENTHALPY OF THE OUTSIDE AIR IS LOWER THAN THAT OF THE RETURN AIR, THE COMPRESSOR SHALL REMAIN OFF AND THE OUTSIDE AIR DAMPER SHALL MODULATE BETWEEN MINIMUM POSITION AND FULL OPEN TO MAINTAIN THE SPACE TEMPERATURE SETPOINT. THE BAROMETRIC DAMPER OR POWER EXHAUST SHALL RELIEVE THE EXCESS FRESH AIR. IF THE OUTSIDE AIR DAMPER IS FULL OPEN AND THE THERMOSTAT IS NOT SATISFIED, THE COMPRESSOR SHALL RESUME OPERATION.

UPON A CALL FOR HEATING, THE COMBUSTION BLOWER SHALL PURGE THE HEAT EXCHANGER FOR AT LEAST 20 SECONDS. UPON PROOF OF AIRFLOW, THE BURNER SHALL IGNITE. AFTER THREE UNSUCCESSFUL IGNITION ATTEMPTS, THE UNIT SHALL BE LOCKED OUT AND REQUIRE A MANUAL RESET. THE SUPPLY FAN SHALL CONTINUE RUNNING FOR A MINIMUM OF ONE MINUTE AFTER THE BURNER SHUTS OFF. THE UNIT AND GAS VALVES SHALL SHUT OFF UPON LOSS OF AIRFLOW OR FLAME FAILURE.

UPON A CALL FOR DEHUMIDIFICATION WHEN THERE IS NO CALL FOR COOLING, THE UNIT SHALL ENTER A DEHUMIDIFICATION MODE. THE COMPRESSOR AND SUPPLY AIR FAN SHALL OPERATE CONTINUOUSLY AND THE SUPPLY AIR SHALL BE REHEATED BY THE HOT GAS REHEAT COIL UNTIL THE HUMIDSTAT IS SATISFIED.

THE UNIT SHALL BE PREVENTED FROM SHORT CYCLING BY AN ANTI-SHORT CYCLE TIMER. THE UNIT SHALL SHUT OFF UPON HIGH OR LOW REFRIGERANT PRESSURE OR DETECTION OF SMOKE IN THE RETURN AIR DUCT.

BUILDING EXHAUST

EXHAUST FAN SHALL OPERATE WHEN THE ASSOCIATED ZONE IS IN OCCUPIED MODE. EXHAUST FAN SHALL BE OFF WHEN ASSOCIATED ZONE IS IN UNOCCUPIED MODE. AN ALARM SHALL NOTIFY AT THE FRONT END UPON FAN FAILURE.

ELECTRICAL AND IT ROOM

DUCTLESS MINI SPLIT SYSTEM HEAT PUMP SHALL CYCLE AS NECESSARY TO MAINTAIN SPACE TEMPERATURE. AN ALARM SHALL NOTIFY AT THE FRONT END UPON HIGH OR LOW SPACE TEMPERATURE.

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

LEGEND AND SPECIFICATIONS

DATE: 01-FEB-15

PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
M001

GENERAL NOTES:

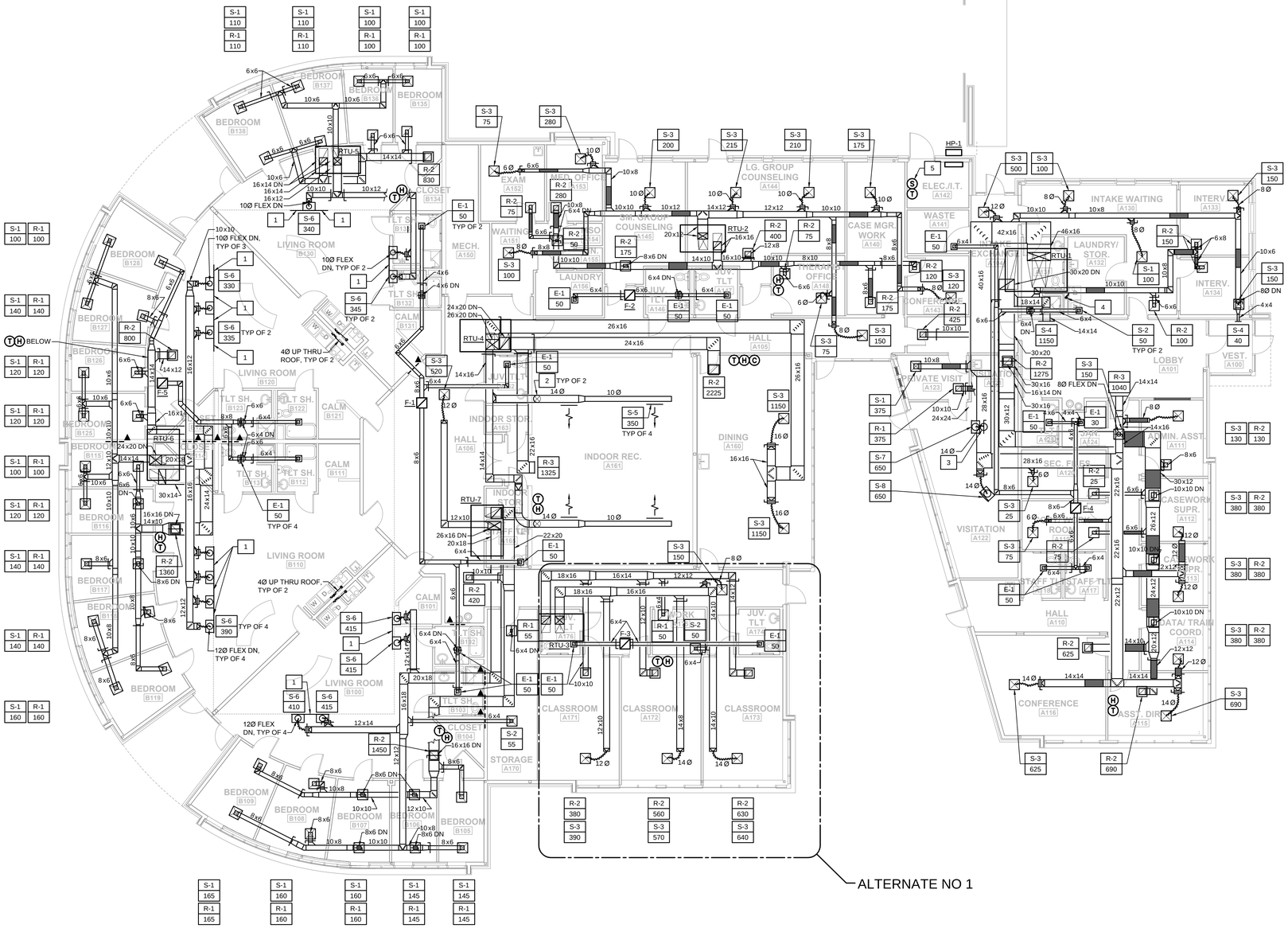
1. REFER TO DRAWING P102 FOR NATURAL GAS PIPING.
2. SPACE SENSORS IN LIVING AREAS SHALL BE RECESSED SECURITY STYLE WITH STAINLESS STEEL COVER PLATE.
3. SPACE SENSORS IN RECREATION, DINING, THERAPY, CLASSROOM, AND ADMINISTRATION AREAS SHALL BE SURFACE-MOUNTED WITH LCD READOUT OF SETPOINT AND CURRENT TEMPERATURE AND WITH OCCUPANCY OVERRIDE BUTTON. PROVIDE WIRE CAGE OVER SENSORS IN RECREATION AREA.
4. PROVIDE LOW LEAKAGE VOLUME BALANCING DAMPERS WHERE REQUIRED TO ACHIEVE AIR FLOW RATES.

XX CONSTRUCTION NOTES

1. PROVIDE TYPE S-6 LINEAR DIFFUSER, BLANKED OFF IN BACK.
2. TURN DUCT TO RUN VERTICALLY ALONG WALL IN ORDER TO RUN AT CEILING LEVEL WITHIN INDOOR REC ROOM.
3. FLEX DUCT WITH VOLUME DAMPER TO BRANCH OFF FROM TOP OF RECTANGULAR DUCT. CONNECT TO SLOT DIFFUSER PLENUM ABOVE.
4. 4"Ø DRYER DUCT TO RUN VERTICALLY WITHIN WALL, UP THROUGH ROOF.
5. PROVIDE TEMPERATURE TRANSMITTER ON WALL ADJACENT TO HEAT PUMP MANUFACTURER'S THERMOSTAT.

LEGEND:

DUCT SILENCER. EQUAL TO PRICE ABSORPTIVE SILENCER, SIZED PER ADJACENT DUCT AND AIR VELOCITY.



NORTH

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

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

MECHANICAL PLAN

DATE: 02-FEB-15
PROJECT NO: 11006

Full Scale Verification
0" 1"

Drawing No.:
M101

PACKAGED GAS HEAT / DX COOLING UNIT SCHEDULE

GENERAL				ELECTRICAL					REFRIGERATION SYSTEM		SUPPLY FAN				COOLING					HEATING						FILTER		EFFICIENCY		SOUND RATING	MAX UNIT WEIGHT	
MARK	LOCATION	TYPE	NOM SIZE TONS	V	PH	HZ	MCA	MCB	TYPE	NO / TYPE COMPRESSORS	SA CFM	OA CFM	ESP INWG	MOTOR HP	AMB DEG F DB	EAT DEG F DB/WB	LAT DEG F DB/WB	NET SENSIBLE MBH	NET TOTAL MBH	EAT DEG F	LAT DEG F	NO. BURNER STAGES	BURNER INPUT MBH	BURNER OUTPUT MBH	GAS SUPPLY INWG	SIZE	NO.	EER / SEER	AFUE	dBA	LB	BASIS OF DESIGN (OR EQUAL)
RTU-1	ROOF	DOWNFLOW	17.5	208	3	60	91	100	R-410A	(2) 1-STAGE	6700	500	0.75	5	95	79 / 66	58.4 / 56.8	152	191	64	92	2	250	203	2.4 - 14.0	20x20x2; 20x25x2	4; 4	12.2 EER	81%	94	3000	TRANE YZD210
RTU-2	ROOF	DOWNFLOW	5	208	3	60	32	45	R-410A	(1) 2-STAGE	1600	250	0.75	1	95	80 / 67	57.3 / 55.9	40	55	60	97	1	80	64	4.5 - 14.0	16x25x2	4	17.5 SEER	80%	87	1000	TRANE YHC067
RTU-3	ROOF	DOWNFLOW	5	208	3	60	32	45	R-410A	(1) 2-STAGE	1800	180	0.75	1	95	79 / 66	58.3 / 55.9	41	56	63	96	1	80	64	4.5 - 14.0	16x25x2	4	17.2 SEER	80%	87	1000	TRANE YHC067
RTU-4	ROOF	DOWNFLOW	10	208	3	60	49	60	R-410A	(2) 1-STAGE	3700	150	0.75	3.75	95	79 / 66	58.7 / 56.5	83	108	66	96	2	150	120	4.5 - 14.0	20x25x2	4	12.5 EER	80%	88	1700	TRANE YHC120
RTU-5	ROOF	DOWNFLOW	4	208	3	60	29	40	R-410A	(1) 2-STAGE	1450	200	0.75	1	95	80 / 67	58.4 / 56.4	34	48	61	92	1	60	48	4.5 - 14.0	16x25x2	4	17.5 SEER	80%	87	1000	TRANE YHC047
RTU-6	ROOF	DOWNFLOW	10	208	3	60	49	60	R-410A	(2) 1-STAGE	3700	400	0.75	3.75	95	79 / 66	58.7 / 56.5	83	108	62	92	2	150	120	4.5 - 14.0	20x25x2	4	12.5 EER	80%	88	1700	TRANE YHC120
RTU-7	ROOF	DOWNFLOW	8.5	208	3	60	42	50	R-410A	(2) 1-STAGE	3000	300	0.75	2	95	79 / 66	57.9 / 56.1	70	92	63	93	2	120	96	4.5 - 14.0	20x25x2	4	12.5 EER	80%	88	1300	TRANE YHC102

1. UNIT SHALL BE UL LISTED, RATED IN ACCORDANCE WITH ARI, FACTORY ASSEMBLED, INTERNALLY WIRED, AND RUN TESTED.
2. PROVIDE VARIABLE COOLING CAPACITY WITH A MINIMUM OF TWO STAGES. MULTIPLE COMPRESSORS, VARIABLE SPEED COMPRESSORS, OR STAGING COMPRESSORS ARE ACCEPTABLE.
3. PROVIDE MICROPROCESSOR BASED CONTROLS WITH 24V TRANSFORMER AND CAPABLE OF INTERFACING WITH BAS.
4. PROVIDE ENHANCED DEHUMIDIFICATION MODE WITH HOT GAS REHEAT.
5. PROVIDE HIGH PRESSURE CUTOUT, LIQUID LINE REFRIGERANT DRYER, REFRIGERANT SERVICE PORTS, CRANKCASE HEATER, FROSTAT, THERMOSTATIC EXPANSION VALVE, PHASE MONITOR, AND LOW AMBIENT COOLING TO 0°F.
6. PROVIDE SLOPED REMOVABLE DRAIN PANS, SINGLE SIDE SERVICE, AND HINGED WEATHERTIGHT ACCESS DOORS.
7. PROVIDE SPACE SENSORS AS INDICATED ON PLANS.
8. PROVIDE INDUCED DRAFT COMBUSTION BLOWER AND DIRECT SPARK IGNITION.
9. PROVIDE COMPARATIVE ENTHALPY ECONOMIZER AND RELIEF FAN OR BAROMETRIC DAMPER.
10. PROVIDE POWERED RECEPTACLE INSIDE UNIT TO POWER AIR CLEANER IN NOTE 11.
11. FOR RTU-2, -3, -4: PROVIDE NEEDLEPOINT BIPOLAR IONIZATION GENERATOR ON INLET SIDE OF COOLING COIL, EQUAL TO GPS-IBAR WITH GPS-7000 POWER SUPPLY.
12. PROVIDE ROOF CURB.
13. INSTALL RETURN AIR SMOKE DETECTOR. HARD WIRE TO SHUT OFF UNIT. DUCT SMOKE DETECTOR CONNECTED TO FAS AND PROVIDED BY FAS CONTRACTOR.
14. PROVIDE 5-YEAR COMPRESSOR AND HEAT EXCHANGER WARRANTY.
15. PROVIDE THROUGH-THE-BASE GAS AND ELECTRIC WITH FACTORY MOUNTED AND WIRED NON-FUSED DISCONNECT SWITCH.

NOTES:

1. RTU-3, F-3, AND ASSOCIATED DUCTWORK, AIR DEVICES, AND CONTROLS ARE DELETED BY ALTERNATE NO. 1.

FAN SCHEDULE

TAG	SERVICE	TYPE	DRIVE	AIRFLOW CFM	SP INWG	RPM	BRAKE HP	SOUND PRESSURE DBA	MOTOR V	MOTOR PH	MOTOR HZ	MOTOR HP	BASIS OF DESIGN (OR EQUAL)
F-1	TOILET EXHAUST	ROOF CENTRIFUGAL	DIRECT	300	0.35	1693	0.04	51	115	1	60	1/6	GREENHECK G-075-VG
F-2	LAUNDRY/TOILET EXHAUST	ROOF CENTRIFUGAL	DIRECT	150	0.25	1715	0.02	47	115	1	60	1/6	GREENHECK G-060-VG
F-3	TOILET EXHAUST	ROOF CENTRIFUGAL	DIRECT	100	0.25	1492	0.01	43	115	1	60	1/6	GREENHECK G-060-VG
F-4	CLOSET/TOILET EXHAUST	ROOF CENTRIFUGAL	DIRECT	330	0.35	1570	0.05	55	115	1	60	1/6	GREENHECK G-080-VG
F-5	TOILET EXHAUST	ROOF CENTRIFUGAL	DIRECT	200	0.35	1650	0.04	50	115	1	60	1/6	GREENHECK G-075-VG

1. PROVIDE VARIABLE SPEED CONTROL WITH MOTOR-MOUNTED POTENTIOMETER DIAL.
2. PROVIDE ROOF CURB.
3. PROVIDE GRAVITY BACKDRAFT DAMPER.
4. PROVIDE FACTORY MOUNTED AND WIRED NEMA 1 DISCONNECT SWITCH.

DUCTLESS MINI SPLIT SYSTEM HEAT PUMP SCHEDULE

	ELECTRICAL					REFRIGERATION SYSTEM								HEATING CAPACITY					
MARK	V	PH	HZ	MCA	MCB	TYPE	NO/TYPE COMPRESSORS	NO REFRIG CIRCUITS	SUCTION SIZE	LIQUID SIZE	FAN CFM	COOLING CAPACITY BTUH	SHR	47 DEG F BTUH	17 DEG F BTUH	SEER	SOUND RATING dBA	WEIGHT LB	BASIS OF DESIGN (OR EQUAL)
HP-1	208	1	60	13	15	R-410A	1 / DC INVERTER TWIN ROTARY	1	1/2"	1/4"	320-425	8,000-18,000	0.68	8,000-20,000	13,000	15.3	40	29	MITSUBISHI PKA-A18HA4
											---						48	91	MITSUBISHI PUZ-A18NHA4

1. PROVIDE REQUIRED LENGTH OF REFRIGERANT PIPING AND REFRIGERANT CHARGE. PROVIDE MINIMUM 5/16" FOAMED POLYETHYLENE INSULATION.
2. PROVIDE WIRED ELECTRONIC 24 HR PROGRAMMABLE AUTO-SWITCHOVER THERMOSTAT CAPABLE OF INTERFACING WITH BAS.
3. PROVIDE MICROPROCESSOR CONTROLS CAPABLE OF CONTROLLING FAN AND COMPRESSOR SPEED BASED ON SPACE LOAD.
4. UNIT SHALL BE UL LISTED AND RATED IN ACCORDANCE WITH ARI.
5. PROVIDE LOW AMBIENT COOLING OPERATION DOWN TO 23 DEG F.
6. PROVIDE WALL MOUNTING BRACKET FOR OUTDOOR UNIT.
7. PROVIDE WASHABLE PRE-FILTER AND ANTI-ALLERGEN FILTER.
8. POWER INDOOR UNIT FROM OUTDOOR UNIT.
9. DISCONNECT SWITCH AT INDOOR AND OUTDOOR UNITS BY ELECTRICAL.

AIR DEVICE SCHEDULE

MARK	SERVICE	TYPE	MATERIAL	FRAME	NECK SIZE	FINISH	ACCESSORIES	BASIS OF DESIGN (OR EQUAL)
S-1	SUPPLY	CEILING DIFFUSER (SQUARE)	ALUMINUM	24"x24" SURFACE MOUNT	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	INSULATE BACK SIDE	4-WAY, ADJUSTABLE LOUVERED AIR PATTERN CONTROLLER, PERFORATED FACE, HIGH CAPACITY. BASED ON PRICE MODEL PDS
S-2	SUPPLY	CEILING DIFFUSER (SQUARE)	ALUMINUM	24"x24" SURFACE MOUNT	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	INSULATE BACK SIDE	4-WAY, ADJUSTABLE, LOUVERED FACE. BASED ON PRICE MODEL AMDA.
S-3	SUPPLY	CEILING DIFFUSER (SQUARE)	ALUMINUM	24"x24" FULL FACE LAY-IN	ROUND, SIZE PER DWG	BAKED-ENAMEL WHITE	INSULATE BACK SIDE	4-WAY, ADJUSTABLE, LOUVERED FACE. BASED ON PRICE MODEL AMDA.
S-4	SUPPLY	GRILLE	ALUMINUM	SURFACE MOUNT	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	N/A	LONG FRONT BLADES, DOUBLE DEFLECTION, 3/4" SPACING, BASED ON PRICE MODEL 620-L.
S-5	SUPPLY	SPIRAL DUCT REGISTER	ALUMINUM	EXPOSED DUCT MOUNT	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	N/A	SHORT FRONT BLADES, DOUBLE DEFLECTION, 3/4" SPACING, BASED ON PRICE MODEL SDG
S-6	SUPPLY	SIDEWALL LINEAR SLOT DIFFUSER	ALUMINUM	SURFACE MOUNT	ROUND, SIZE PER DWG	BAKED-ENAMEL WHITE	FIELD INSULATE EXTERIOR OF PLENUM	DOUBLE 1" SLOT, 2 FT LONG, BASED ON PRICE MODEL JS210. PLENUM BASED ON PRICE MODEL JSPI210 FOR TWO SLOTS, INLET SIZED PER DRAWING.
S-7	SUPPLY	SIDEWALL LINEAR SLOT DIFFUSER	ALUMINUM	SURFACE MOUNT	ROUND, SIZE PER DWG	BAKED-ENAMEL WHITE	FIELD INSULATE EXTERIOR OF PLENUM	DOUBLE 1.5" SLOT, 2 FT LONG, BASED ON PRICE MODEL JS215. PLENUM BASED ON PRICE MODEL JSPI215 FOR TWO SLOTS, INLET SIZED PER DRAWING.
S-8	SUPPLY	CURVED SIDEWALL LINEAR SLOT DIFFUSER	ALUMINUM	SURFACE MOUNT	ROUND, SIZE PER DWG	BAKED-ENAMEL WHITE	FIELD INSULATE EXTERIOR OF PLENUM	DOUBLE 1.5" SLOT, 2 FT LONG, BASED ON PRICE MODEL AS215. PLENUM BASED ON PRICE MODEL ASP215 FOR TWO SLOTS, INLET SIZED PER DRAWING. CURVED SLOT TO MOUNT FLUSH WITH WALL HAVING RADIUS OF 8'-0 1/4".
R-1, E-1	RETURN	GRILLE	ALUMINUM	SURFACE MOUNT	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	N/A	1/2"x1/2"x1/2" EGGCRATE GRID. BASED ON PRICE MODEL 80.
R-2, E-2	RETURN	GRILLE	ALUMINUM	24"x24" LAY-IN	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	N/A	1/2"x1/2"x1/2" EGGCRATE GRID. BASED ON PRICE MODEL 80.
R-3	RETURN	SIDEWALL RETURN	ALUMINUM	SURFACE MOUNT	RECT, SIZE PER DWG	BAKED-ENAMEL WHITE	N/A	LONG BLADES, 3/4" SPACING, 35 DEG DEFLECTION. BASED ON PRICE 630.

POINTS LIST

DEVICE TAG	DEVICE TYPE	BAS POINT TYPE	LOCAL AND/ OR REMOTE ALARM VISIBILITY	DESCRIPTION
CONSTANT VOLUME ROOFTOP AIR HANDLING UNIT (RTU-1,-2,-3,-4,-5,-6,-7)				
ISL	CURRENT SWITCH LOW	DI	R	SUPPLY FAN FAULT
DPSH	DIFFERENTIAL PRESSURE SWITCH HIGH	DI	L & R	AIR FILTER DIRTY
TT	SPACE TEMPERATURE SENSOR	AI		SPACE TEMPERATURE
---	FRONT END SOFTWARE	AO		SPACE TEMPERATURE SETPOINT
---	FRONT END SOFTWARE	DO	R	SPACE TEMPERATURE HIGH/LOW ALARM
GT	SPACE HUMIDITY SENSOR	AI		SPACE HUMIDITY
---	FRONT END SOFTWARE	AO		SPACE HUMIDITY SETPOINT
---	FRONT END SOFTWARE	DO	R	SPACE HUMIDITY HIGH/LOW ALARM
---	FRONT END SOFTWARE	DO		OCCUPIED/UNOCCUPIED STATUS
---	UNIT CONTROLLER	PI	L & R	ROOFTOP UNIT FAULT
EXHAUST FAN (F-1,-2,-3,-4,-5)				
JS	FAN RELAY	DO		FAN START/STOP
ISL	CURRENT SWITCH LOW	DI	L & R	FAN FAULT
IT ROOM				
TT	SPACE TEMPERATURE SENSOR	AI		SPACE TEMPERATURE
---	FRONT END SOFTWARE	PI	R	SPACE TEMPERATURE HIGH/LOW ALARM

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

MECHANICAL SCHEUDLES

DATE: 03 FEB 15

PROJECT NO: 11088

Full Scale Verification
0" 1"

Drawing No.:
M601

LEGEND

SYMBOLS

DOMESTIC COLD WATER	CONCENTRIC REDUCER
DOMESTIC HOT WATER	ECCENTRIC REDUCER
DOMESTIC HOT WATER RETURN	UNION
WASTE OR SOIL	WYE STRAINER
VENT	GATE VALVE
PIPE TURNING DOWN	BALL VALVE
PIPE TURNING UP	BUTTERFLY VALVE
PIPE CAP	CHECK VALVE
PIPE DOWN	BALANCING VALVE
PIPE FLOW ARROW	SAFETY RELIEF VALVE

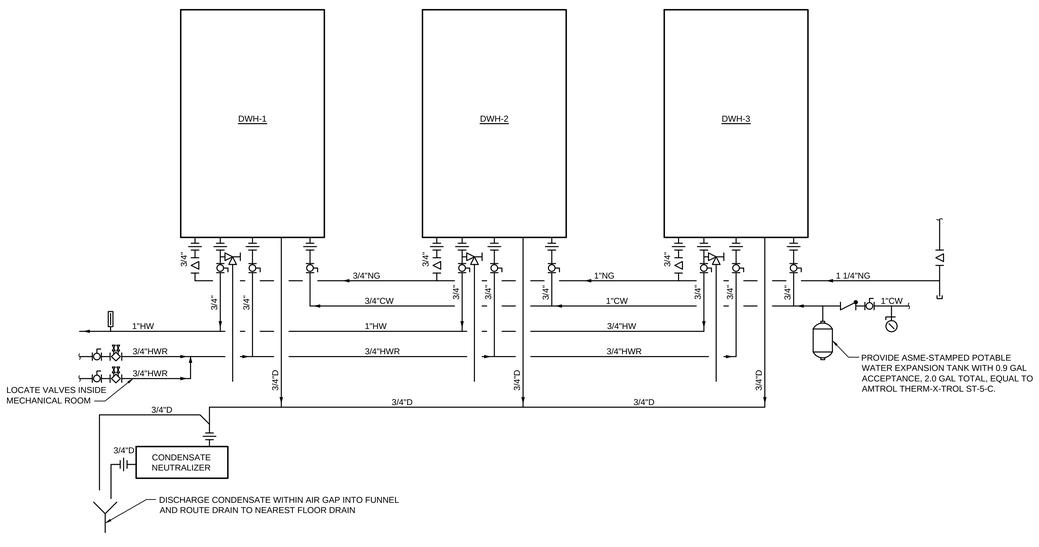
PRESSURE REDUCING VALVE	CONSTRUCTION NOTE
BACKFLOW PREVENTER	CONNECT TO EXISTING
THERMOMETER	REVISION TRIANGLE
PRESSURE GAUGE	REVISION CLOUD
PUMP	INDICATES NUMBER OF REVISIONS, CORRESPONDS WITH REVISION NOTE
XX WATER HAMMER ARRESTOR	
FLOOR DRAIN	
FCO FLOOR CLEANOUT	
WCO WALL CLEANOUT	
HOSE BIBB OR WALL HYDRANT	

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	HB	HOSE BIBB	NIC	NOT IN CONTRACT
C	DOMESTIC COLD WATER	HD	HEAD	NO	NORMALLY OPEN, NUMBER
CA	COMPRESSED AIR	HZ	FREQUENCY	NTS	NOT TO SCALE
DEG	DEGREE	IN	INCHES	PSIG	POUNDS PER SQUARE INCH GAGE
DIA, Ø	DIAMETER	INWG	INCHES WATER GAUGE	PSV	PRESSURE SAFETY VALVE
DN	DOWN	KW	KILOWATT	PH	PHASE
DWG	DRAWING	LPG	LIQUIFIED PETROLEUM GAS	PRV	PRESSURE REDUCING VALVE
(E)	EXISTING		(PROPANE)	S	SOIL
°F	DEGREE FAHRENHEIT	MAX	MAXIMUM	SPEC	SPECIFICATION
FCO	FLOOR CLEANOUT	MCA	MINIMUM CIRCUIT AMPACITY	TYP	TYPICAL
FD	FLOOR DRAIN	MCB	MAXIMUM CIRCUIT BREAKER	V	VENT, VOLTS
FT	FEET	MIN	MINIMUM	VTR	VENT THRU ROOF
GAL	GALLON(S)	MOCP	MAXIMUM OVERCURRENT	W	WASTE
GPH	GALLONS PER HOUR		PROTECTION	WCO	WALL CLEANOUT
GPM	GALLONS PER MINUTE	N/A	NOT APPLICABLE	WH	FROST PROOF WALL HYDRANT
H	DOMESTIC HOT WATER	NC	NORMALLY CLOSED	YCO	YARD CLEANOUT
R	DOMESTIC HOT WATER RETURN	NG	NATURAL GAS		

PLUMBING SPECIFICATIONS

1. MAINTAIN A MINIMUM OF 5'-0" SEPARATION BETWEEN UNDERGROUND DOMESTIC WATER SERVICE AND BUILDING SEWER PIPING. REFER TO SITE PLAN FOR CONTINUATION OF PIPING 5 FEET BEYOND BUILDING.
2. PIPING SHALL BE CLEAN AND FREE OF DIRT AND SCALE AT TIME OF INSTALLATION.
3. KEEP ALL UNDERGROUND PIPING CLEAR OF FOOTINGS & FOUNDATIONS.
4. COLD WATER, HOT WATER, SOIL, WASTE, AND VENT PIPING SHALL BE ROUTED CONCEALED IN WALLS OR ABOVE CEILING.
5. WATER PIPING LOCATED IN EXTERIOR WALLS SHALL BE ROUTED ON ROOM SIDE OF INSULATION.
6. REFER TO STACK AND RISER DIAGRAMS FOR PIPE SIZES NOT SHOWN ON PLUMBING PLANS.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DETAILS OF ROOF AND WALL PENETRATIONS.
8. ROUTE PIPING TO CLEAR STRUCTURES, DUCTWORK, CONDUIT, ETC. ALLOWING SPACE FOR PIPE HANGERS AND ACCESS TO VALVES. ALL PIPING SHALL BE INSTALLED SQUARE AND PLUMB.
9. PROVIDE 12"x12" ACCESS DOORS BELOW ALL VALVES AND CLEAN OUTS LOCATED ABOVE GYPSUM CEILING.
10. SANITARY CLEAN OUTS SHALL BE SET FLUSH WITH EITHER FINISHED FLOOR, FINISHED WALL, OR FINISHED GRADE.
11. PIPING SHALL BE SLEEVED THROUGH WALL AND FLOOR PENETRATIONS WITH SCHEDULE 40 STEEL SLEEVES. ALL PENETRATIONS THROUGH FIRE BARRIERS SHALL BE SEALED WITH A RATED FIRE SYSTEM PROVIDING A MINIMUM 1-HOUR FIRE RATING.
12. USE TRANSITION FITTINGS TO JOIN DISSIMILAR PIPING MATERIALS.
13. COMBUSTION AIR AND FLUE PIPE SHALL BE 2" SCH 40 SOLID CORE PVC, ASTM D 2665 PIPE, JOINED WITH ASTM F 656 PRIMER AND ASTM D 2564 SOLVENT CEMENT PER ASTM 2855, AND SUPPORTED EVERY 3 FEET. PROVIDE CONCENTRIC ROOF VENT KIT AND TERMINATE 24 INCHES ABOVE ROOF.
14. CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 PVC, ASTM D 1785, SAME SIZE AS EQUIPMENT CONNECTION.
15. DRAWINGS DO NOT INDICATE PIPING SUPPORT LOCATIONS AND DETAILS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY PIPE SUPPORTS.
16. ALL DOMESTIC HOT AND COLD WATER PIPING, FITTINGS, AND VALVES SHALL BE NSF-61 LISTED. ALL PLUMBING COMPONENTS CONTACTING DOMESTIC WATER SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT AND BE NSF-372 LISTED AS APPLICABLE. DOMESTIC WATER PIPE SHALL BE DISINFECTED PER ICP-610 AND VIRGINIA DEPARTMENT OF HEALTH REGULATIONS.



DOMESTIC WATER HEATER PIPING CONNECTION DETAIL

SCALE: NONE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

LEGEND AND SPECIFICATIONS

DATE: 02-03-15

PROJECT NO: 13065

Full Scale Verification

0" 1"

Drawing No.:

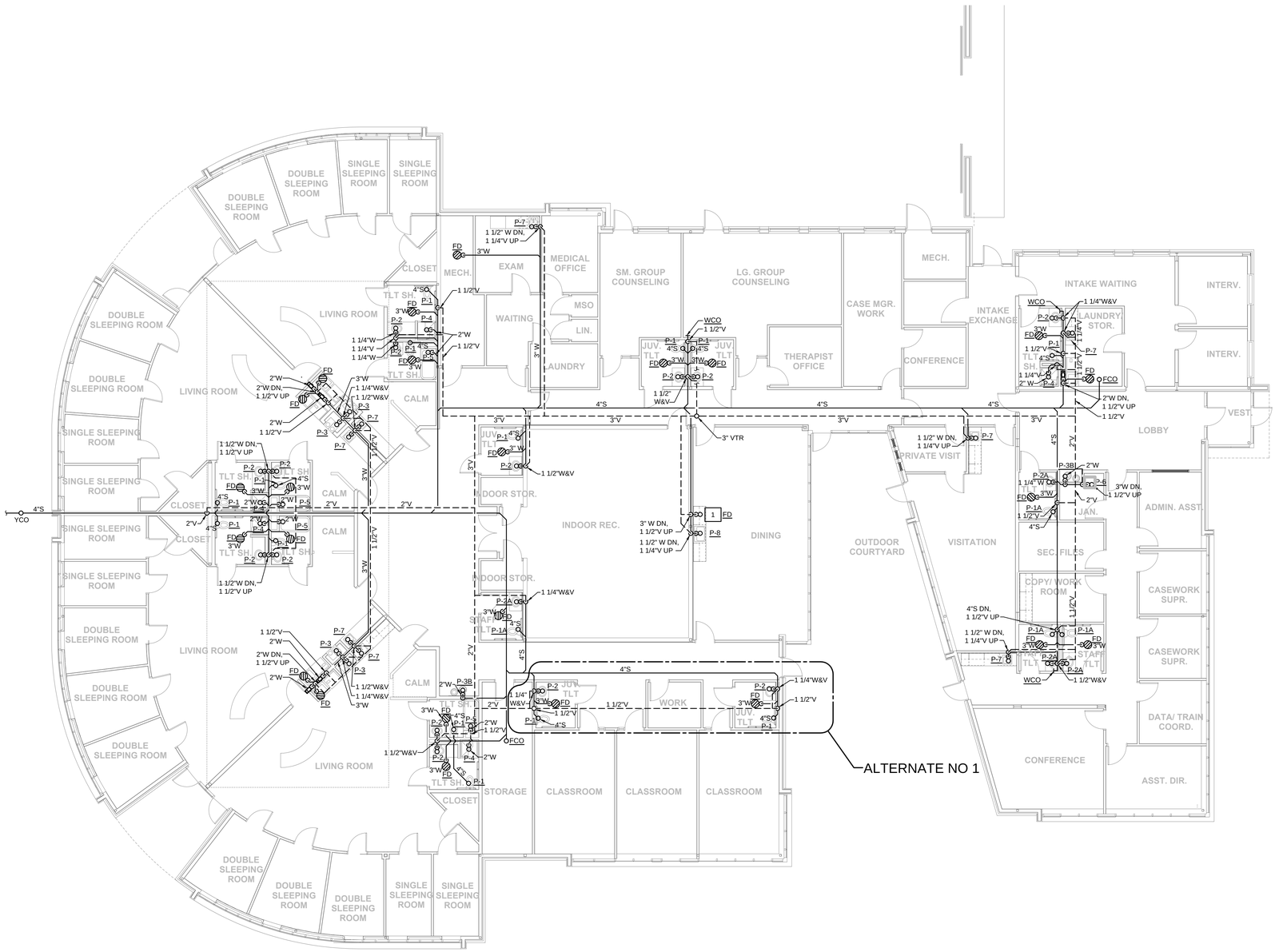
P001

GENERAL NOTES:

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS. PROVIDE 1/2" TRAP PRIMER SUPPLY LINES (NOT SHOWN).

XX CONSTRUCTION NOTES:

1. ICE MAKER DRAIN TUBE TO DISCHARGE INTO UNDER-COUNTER FLOOR DRAIN WITH AIR GAP.



NORTH

SANITARY WASTE AND VENTILATION PIPING PLAN

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

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

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ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

SANITARY PLAN

DATE: 02-FEB-15

PROJECT NO: 10043

Full Scale Verification

0" 1"

Drawing No.:

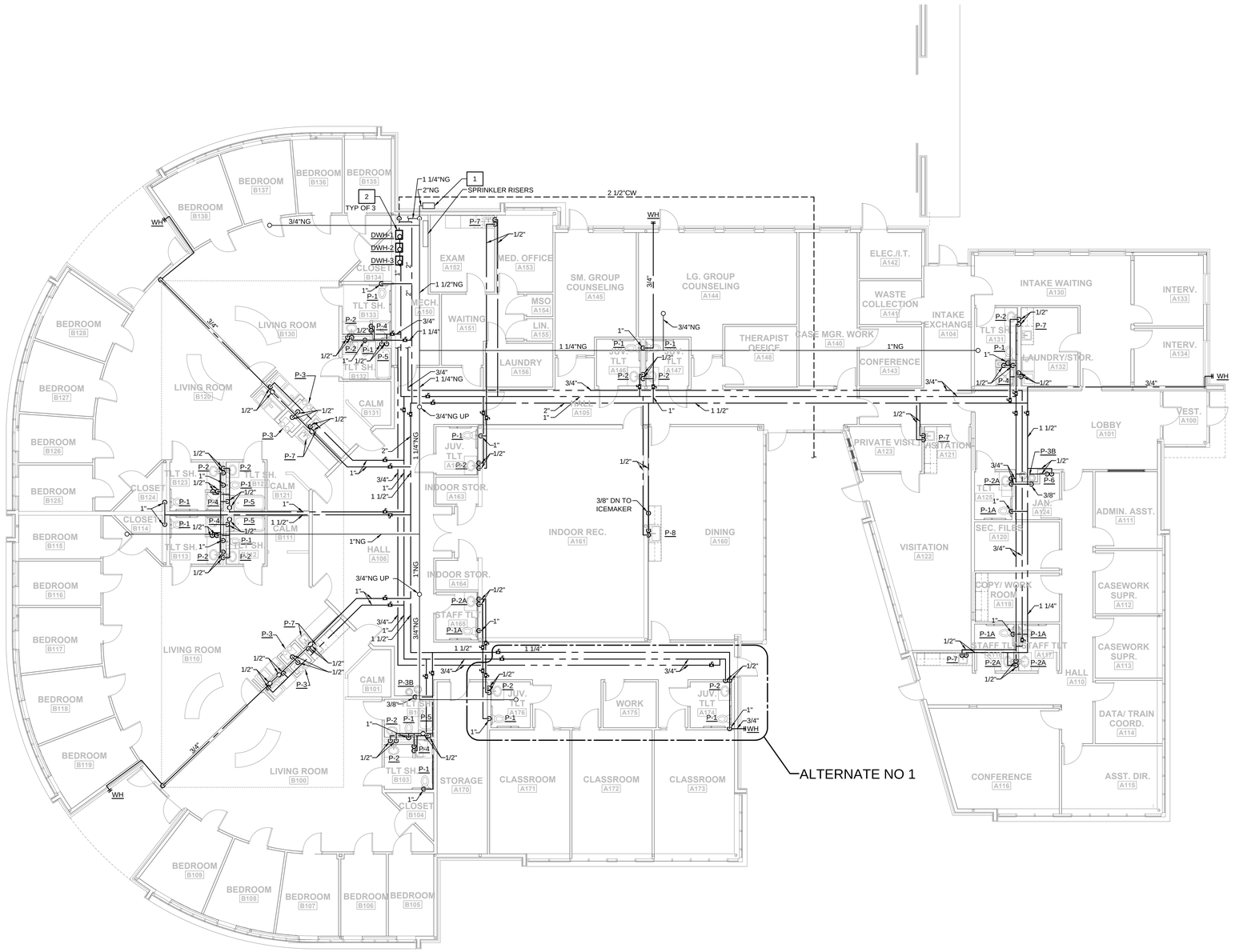
P101

GENERAL NOTES:

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS. PROVIDE 1/2" TRAP PRIMER SUPPLY LINES (NOT SHOWN).
2. PROVIDE WATER HAMMER ARRESTOR AT EACH DRINKING FOUNTAIN AND WATER COOLER.

XX CONSTRUCTION NOTES:

1. GAS COMPANY WILL PROVIDE METER AND REGULATOR AT BUILDING SIZED TO PROVIDE 10.5 INWG UNDER DEMAND CONDITIONS OF 60-1500 CFH.
2. PROVIDE CONCENTRIC ROOF VENT KIT AND TERMINATE 24 INCHES ABOVE ROOF.



NORTH

DOMESTIC WATER AND PLUMBING FIXTURE PLAN

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

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

DOMESTIC WATER PLAN

DATE: 02-FEB-15

PROJECT NO: 10043

Full Scale Verification

0" 1"

Drawing No.:

P102

TANKLESS GAS-FIRED DOMESTIC WATER HEATER SCHEDULE

TAG	FUEL	ELECTRICAL	INPUT MBH	MIN EFF (%)	GAS PRESSURE RANGE, INWG	AIR INTAKE, IN	FLUE OUTLET, IN	WATER CONNECTIONS, IN	GAS INLET, IN	RECOVERY RATE GPM	RECOVERY RATE RISE DEG F	BASIS OF DESIGN (OR EQUAL)
DWH-1,-2,-3	NAT GAS	120V, 1PH, 350W, 4A	19,900-199,900	97	3.5-10.5	2	2	3/4	3/4	5.6	70	NAVIEN NPE-240A

1. PROVIDE INTERNAL BUFFER TANK AND RECIRCULATION PUMP.
2. PROVIDE LOW NOX BURNER WITH SOLID STATE IGNITION.
3. PROVIDE STAINLESS STEEL HEAT EXCHANGER WITH 10 YEAR WARRANTY.
4. PROVIDE WALL MOUNTING HARDWARE.
5. PROVIDE CASCADING CONTROLLER ALLOWING ANY CONNECTED UNIT TO ACT AS MASTER.
6. PROVIDE TEMPERATURE AND PRESSURE RELIEF VALVE.
7. HEATERS SHALL BE FORCED DRAFT DIRECT VENT CAPABLE OF VENTING UP TO 60 EQUIVALENT FEET WITH 2" PVC/CPVC PIPE.
8. PROVIDE IGNITION OPERATION DETECTOR, FLAME SENSOR, AND WATER AND EXHAUST TEMPERATURE HIGH LIMIT SWITCHES.

PLUMBING FIXTURE SCHEDULE

MARK	TYPE	BASIS OF DESIGN	MATERIAL	COLOR	SIZE WxDxH	MOUNT HEIGHT	CONNECTION SIZES WASTE	CW	HW	REMARKS AND ACCESSORIES BASIS OF DESIGN	NOTES
P-1	WATER CLOSET (LIGATURE RESISTANT, ADA)	KOHLER HIGHCLIFF K-4367	VITREOUS CHINA	WHITE	14 1/2"x26"	RIM @ 17-1/2" AFF	4"	1"		1.6 GPF, ELONGATED BOWL, FLOOR-MOUNTED, ZURN CONCEALED Z6152AV PUSH BUTTON FLUSH VALVE, 12" ROUGH-IN.	2,3,15
P-1A	WATER CLOSET (ADA)	KOHLER HIGHCLIFF K-4368	VITREOUS CHINA	WHITE	14 1/2"x26"	RIM @ 17-1/2" AFF	4"	1"		1.6 GPF, ELONGATED BOWL, FLOOR-MOUNTED, ZURN Z6000 FLUSH VALVE, 12" ROUGH-IN.	2,3,15
P-2	UNDERMOUNT LAVATORY (LIGATURE RESISTANT, ADA)	KOHLER CANVAS K-2874	CAST IRON	WHITE	19 7/16"x16 1/16"	RIM @ 34" AFF	1 1/4"	3/8"	3/8"	CAPE-COD SYSTEMS CCSN301 SUICIDE-RESISTANT 4" SPREAD FAUCET. 0.5 GPM@80PSI AERATOR. COORDINATE SOLID-SURFACE FAUCET ENCASEMENT SPECIFICATIONS WITH COUNTERTOP SHAPE. COORDINATE SOLID-SURFACE COLOR WITH OWNER. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE AND ADJUST TO 105 DEG F.	1,8,10,11
P-2A	UNDERMOUNT LAVATORY (ADA)	KOHLER CANVAS K-2874	CAST IRON	WHITE	19 7/16"x16 1/16"	RIM @ 34" AFF	1 1/4"	3/8"	3/8"	KOHLER K-15597 SINGLE HANDLE DECK MOUNTED FAUCET, 0.5 GPM. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE AND ADJUST TO 105 DEG F.	1,4,8,10,11
P-3	RECESSED WATER COOLER	ELKAY EFRCM8	STAINLESS STEEL		54 1/4"x19"x11 3/4"	ORIFICE @ 38 3/8" AFF	1 1/4"	3/8"		PROVIDE PLASTIC P-TRAP	8
P-3B	TWO-LEVEL ELECTRIC WATER COOLER (ADA)	ELKAY LZTL8C	STAINLESS STEEL TOP	GRAY	36 3/4"x19"	ORIFICE @ 38 3/8" & 32 7/8" AFF	1 1/4"	3/8"		PROVIDE PLASTIC P-TRAP	8
P-4	SHOWER UNIT (ADA, LIGATURE RESISTANT)	AQUATIC 1363BF TRANSFER STALL	GELCOAT	WHITE	36"x36"x74 1/8"		2"	1/2"	1/2"	BEHAVIORAL SAFETY PRODUCTS LIGATURE RESISTANT #SV230 SHOWER VALVE, HANDLE, AND ESCUTCHEON PLATE. ACORN ENG CSH15 1.5 GPM LIGATURE RESISTANT SHOWER HEAD. ADJ TEMP LIMIT STOP TO 110 DEG @ 1.5 GPM	5,17,19
P-5	BATHTUB UNIT	AQUATIC 6030SM	GELCOAT	WHITE	60"x30"x76"		2"	1/2"	1/2"	BEHAVIORAL SAFETY PRODUCTS LIGATURE RESISTANT #SV230 SHOWER VALVE, HANDLE, AND ESCUTCHEON PLATE. ACORN ENG CSH15 1.5 GPM LIGATURE RESISTANT SHOWER HEAD. KOHLER K-15136 TUB FAUCET. ADJ TEMP LIMIT STOP TO 110 DEG @ 1.5 GPM	5, 17
P-6	MOP SERVICE SINK	FIAT MODEL MSB 2424	MOLDED STONE		24"x24"x10"	FLOOR MOUNTED	3"	1/2"	1/2"	FIAT #830AA FAUCET, FIAT MODEL 832-AA HOSE & HOSE BRACKET AND MODEL 889-CC MOP BRACKET	5,7
P-7	SINGLE BOWL SINK (ADA)	ELKAY D11719	STAINLESS STEEL	SATIN FINISH	19"x17"x6 1/8"	COUNTER TOP	1 1/2"	3/8"	3/8"	SELF RIMMING 3-HOLE DESIGN W/ UNDERCOATING, ELKAY SINGLE LEVER FAUCET LK1000 LESS SPRAY	6,8,11,12,14
P-8	DOUBLE BOWL KITCHEN SINK (ADA)	ELKAY NE33224	STAINLESS STEEL	SATIN FINISH	33"x22"x6 1/2"	COUNTER TOP	1 1/2"	3/8"	3/8"	SELF RIMMING 3-HOLE DESIGN W/ UNDERCOATING, ELKAY SINGLE LEVER FAUCET LK1000 LESS SPRAY	6,8,11,12,14
FD	FLOOR DRAIN	ZURN Z415B	CAST IRON				3"			CAST IRON BODY WITH 5" ADJUSTABLE STRAINER, P-TRAP, AND TRAP PRIMER CONNECTION.	
FCO	FLOOR CLEANOUT	ZURN ZN-1400	CAST IRON				4"			CAST IRON BODY WITH ROUND TOP AND POLISHED NICKEL BRONZE TOP	
WCO	WALL CLEANOUT	ZURN Z1446	CAST IRON							CAST IRON BODY, GAS AND WATER TIGHT ABS PLUG, SMOOTH STAINLESS STEEL VANDAL PROOF ACCESS COVER	
WH	FROST PROOF WALL HYDRANT	ZURN Z-1321	BRONZE					3/4"		BRONZE CASTING WITH STAINLESS STEEL FACE, INTEGRAL BACK SIPHONAGE/BACKFLOW PREVENTER W/ AUTOMATIC SELF-DRAINING FEATURE	

1. INSULATE TRAP AND WATER RISERS WITH LAV GUARD BY TRUEBRO MODEL #102 OR EQUAL WHEN LAV TRAP AND RISERS ARE EXPOSED.
2. PROVIDE HEAVY DUTY ELONGATED OPEN FRONT SEAT LESS TOP. COLOR TO MATCH FIXTURE.
3. PROVIDE CLOSET BOLTS AND SETTING SEAL.
4. PROVIDE SINGLE LEVER LAV FAUCET, 4" CENTER TO CENTER COVER PLATE, LESS POP-UP, 4-5" SPOUT, 0.5 GPM @ 80 PSI AERATOR, ADA COMPLIANT AND CHROME PLATED.
5. PROVIDE P-TRAP.
6. PROVIDE SINGLE LEVER KITCHEN FAUCET , 8" CENTER TO CENTER COVER PLATE, 9"-10" SWING SPOUT, 2.2 GPM @ 80 PSI AERATOR AND CHROME PLATED. WITH OR WITHOUT SPRAY PER SCHEDULE.
7. PROVIDE FAUCET WITH LEVER HANDLES, VACUUM BREAKER, 3/4" HOSE THREADED OUTLET, PAIL HOOK AND TOP BRACE, AND INTEGRAL STOPS.
8. PROVIDE BRASSCRAFT OR EQUAL 1/2"SWT X 3/8" COMPRESSION CHROME PLATED SOLID BRASS ANGLE STOPS WITH ROUND WHEEL HANDLES AND FLEXIBLE COPPER OR BRAIDED STEEL SUPPLY RISERS.
9. PROVIDE 1 1/4" PROFLO OR EQUAL 17 GA CHROME PLATED GRID STRAINER WITH 6" TAILPIECE.
10. PROVIDE 1 1/4" PROFLO OR EQUAL 17 GA CHROME PLATED OFFSET WHEELCHAIR ELBOW WITH GRID STRAINER AND 6" TAILPIECE.
11. PROVIDE 1 1/4" PROFLO OR EQUAL 17 GA CHROME PLATED BRASS ADJUSTABLE P-TRAP, BRASS NUTS, WASHERS, BRASS TUBE AND SHALLOW STEEL FLANGE.
12. PROVIDE 1 1/4" PROFLO OR EQUAL 17 GA CHROME PLATED BASKET STRAINER WITH 4" TAILPIECE.
13. PROVIDE UNIVERSAL IDENTIFICATION SIGN AND INSPECTION TAG.
14. PROVIDE 1 1/2" PROFLO OR EQUAL 17 GA CHROME PLATED BRASS END OUTLET CONTINUOUS WASTE.
15. PROVIDE FLUSH VALVE WITH CHROME PLATED CAST BRASS ESCUTCHEON, CONTROL STOP, AND VACUUM BREAKER FLUSH CONNECTION.
16. PROVIDE SUPPORT CARRIERS AS MANUFACTURED BY SMITH, JOSAM, WADE, OR ZURN.
17. PROVIDE TAMPER-PROOF SHOWER DRAIN.
18. PROVIDE FOLD-UP SEAT, ODDBALL SP-7WC QUICK-CONNECT 1.5 GPM HAND-HELD SHOWER, AND ACORN ENGINEERING LIGATURE RESISTANT GRAB BARS LOCATED TO COMPLY WITH ADA REQUIREMENTS.

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

PLUMBING SCHEDULES

DATE: 02-FEB-15

PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
P601

LEGEND

SYMBOLS

1 — CONSTRUCTION NOTE

1 — DEMOLITION NOTE

LIMIT OF DEMOLITION

NEW-TO-EXISTING POINT OF CONNECTION

POWER

E — EQUIPMENT CONNECTION

WP — DUPLEX RECEPTACLE, WALL MOUNTED 18" AFF, UON.
WP = WEATHERPROOF WITH GROUND FAULT CIRCUIT PROTECTION
AC = MOUNT 3" ABOVE COUNTER BACKSPLASH
GFI = GROUND FAULT PROTECTION
W = WASHER UNIT RECEPTACLE
D = DRYER UNIT RECEPTACLE
UC = UNDERCOUNTER

QUAD RECEPTACLE, MOUNT 18" AFF, UON.

SIMPLEX RECEPTACLE, MOUNT 18" AFF, UON.

SPECIAL PURPOSE RECEPTACLE, AS NOTED, WALL MOUNT 18" AFF, UON.

RECESSED FLOOR RECEPTACLE

DATA AND DUPLEX RECEPTACLE, AS NOTED, CEILING OR FLOOR MOUNTED.

MANUAL MOTOR STARTER WITH THERMAL OVERLOADS, WALL-MOUNT 48" AFF UON.

480V, 3P, 100A / 70A, NEMA 1 DISCONNECT — VOLTAGE, POLES, AMP RATING / FUSE SIZE, ENCLOSURE TYPE

M — MANUAL MOTOR RATED SWITCH WITHOUT OVERLOADS.

400A / 300A FUSED SWITCH — SWITCH SIZE / FUSE SIZE

400AF / 300AT CIRCUIT BREAKER — AMP FRAME / AMP TRIP

SCHEMATIC SWITCH

N E — TRANSFER SWITCH

LP3
120/208
3P/4W
225A
MCB

PANELBOARD — PANELBOARD NUMBER
VOLTAGE
POLES, WIRES
AMP RATING

LIGHTING

A — 2'x4' FLUORESCENT CEILING-MOUNTED FIXTURE. UPPERCASE LETTER INDICATES FIXTURE TYPE.

B — 1'x4' FLUORESCENT CEILING-MOUNTED FIXTURE.

C — 2'x2' FLUORESCENT CEILING-MOUNTED FIXTURE.

C — 2'x2' FLUORESCENT EMERGENCY FIXTURE. CONNECT EMERGENCY BALLAST AHEAD OF SWITCH.

D — 2' RADIUS LED PENDANT CEILING-MOUNTED FIXTURE.

D — 2'x2' RADIUS LED PENDANT CEILING-MOUNTED EMERGENCY FIXTURE. CONNECT EMERGENCY BALLAST AHEAD OF SWITCH.

E — RECESSED DOWNLIGHT.

F — WALL-MOUNTED FIXTURE.

WALL PACK LIGHT FIXTURE.

S — SWITCH, SINGLE POLE UON, MOUNT 48" AFF UON.
a = LOWER CASE LETTER INDICATES SWITCHING
3 = 3-WAY SWITCH
4 = 4-WAY SWITCH
D = DIMMER

EX1 — CEILING MOUNTED, SINGLE-FACED EXIT SIGN. ARROW INDICATES FACE CONFIGURATION.

EX2 — CEILING MOUNTED, DOUBLE-FACED EXIT SIGN. ARROW INDICATES FACE CONFIGURATION.

EX3 — WALL MOUNTED, SINGLE-FACED EXIT SIGN. ARROW INDICATES FACE CONFIGURATION.

CONDUCTORS AND RACEWAYS

CONDUIT RUN CONCEALED UNDER FLOOR

CONDUIT RUN EXPOSED OR ABOVE CEILING

(3)#12 IN 3/4"C — HOMERUN CIRCUIT TO OTHER CIRCUIT. CONDUCTORS AND RACEWAY SIZE AS NOTED.

HOMERUN TO PANEL AND CIRCUIT NUMBER AS INDICATED. CONDUCTOR AND RACEWAY SIZE AS INDICATED IN PANELBOARD SCHEDULE, UON.
MDP-1

INDICATES MULTIPLE HOMERUN CIRCUITS FROM SINGLE PANEL/CIRCUIT.
MDP-1

JB — JUNCTION BOX

CONDUIT TURNING DOWN

CONDUIT TURNING UP

SPECIAL SYSTEMS

F — FIRE ALARM MANUAL PULL STATION. MOUNT 48" AFF UON.

30 / F — FIRE ALARM COMBINATION HORN/STROBE. WALL-MOUNTED 80" AFF, UON. NUMBER INDICATES CANDELA RATING.

30 / F — FIRE ALARM STROBE. WALL-MOUNTED 80" AFF, UON. NUMBER INDICATES CANDELA RATING.

FACP — FIRE ALARM CONTROL PANEL

FAAP — FIRE ALARM ANNUNCIATOR PANEL

WALL-MOUNTED, SINGLE-GANG, ONE-PORT TELEPHONE OUTLET

WALL-MOUNTED, SINGLE-GANG, DATA OUTLET BOX. MOUNT 18" AFF UON. PROVIDE 1" CONDUIT WITH PULL STRING FROM OUTLET BOX TO ACCESSIBLE AREA ABOVE CEILING.

RECESSED FLOOR MOUNTED, SINGLE-GANG, DATA OUTLET BOX

S — SMOKE DETECTOR

D — SMOKE DETECTOR, DUCT MOUNTED

CO — CARBON MONOXIDE DETECTOR

PUSHBUTTON STATION. MOUNT 48" AFF, UON.

FS — SPRINKLER FLOW SWITCH

TS — TAMPER SWITCH

B — TWO TONE DOOR BELL. WALL-MOUNTED +96" AFF, UON.

CR — CARD READER

CAMERA

OS — OCCUPANCY SENSOR

ABBREVIATIONS

A	AMPERE
AC	ABOVE COUNTER
A/E	ARCHITECT/ENGINEER
AF	AMP FRAME
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATE
BCSD	BARE COPPER SOFT DRAWN
BLDG	BUILDING
C	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
COORD	COORDINATE
CT	CURRENT TRANSFORMER
DWG	DRAWING
(E)	EXISTING
ECB	ENCLOSED CIRCUIT BREAKER
EGC	EQUIPMENT GROUNDING CONDUCTOR
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
FD	FUSED DISCONNECT
FLR	FLOOR
FMC	FLEXIBLE METALLIC CONDUIT
FTL	FEED THROUGH LUGS
FVNR	FULL VOLTAGE NON REVERSING
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTING
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
JB	JUNCTION BOX
KVA	KILOVOLTAMPS
LFMC	LIQUID-TIGHT FLEXIBLE METALL CONDUIT
LTS	LIGHTS
MAX	MAXIMUM
MC	METAL CLAD CABLE
MCA	MIN CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MFGR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOPD	MAX OVERCURRENT PROTECTION DEVICE
N	NEUTRAL
NF	NON FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
OCPD	OVERCURRENT PROTECTION DEVICE
OL'S	OVERLAODS
P	PHASES OR POLES
PB	PUSHBUTTON
PVC	POLYVINYL CHLORIDE
RNC	RIGID NONMETALLIC CONDUIT
RSC	RIGID STEEL CONDUIT
STP	SHIELDED TWISTED PAIR
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
UC	UNDER COUNTER
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRES
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
XFMR	TRANSFORMER

GENERAL NOTES

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND INDICATE THE GENERAL AND APPROXIMATE LOCATION OF EQUIPMENT AND EXISTING CONSTRUCTION. FIELD-VERIFY ALL DIMENSIONS AND LOCATIONS. INDICATED UNDERGROUND OBSTRUCTIONS WERE DEVELOPED FROM EXISTING RECORDS AND ABOVE GROUND INSPECTION. ACCURACY OR COMPLETENESS OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND STRUCTURES CANNOT BE GUARANTEED. VERIFY LOCATION AND DEPTH OF ALL UNDERGROUND FACILITIES BEFORE STARTING WORK.

2. ALL ELECTRICAL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2009 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (EFFECTIVE MARCH 1, 2011), NFPA 70-2008 (NATIONAL ELECTRICAL CODE). AND NFPA 72-2007 (NATIONAL FIRE ALARM CODE).

3. COORDINATE ARRANGEMENT, MOUNTING, AND SUPPORT OF ELECTRICAL EQUIPMENT TO AVOID INTERFERENCES WITH ELECTRICAL AND OTHER TRADES. COORDINATE WORK WITH EXISTING CONDITIONS INCLUDING BEAMS, COLUMNS, SITE FEATURES, AN OTHER CONSTRUCTION WHETHER OR NOT SUCH IS SHOWN ON THE DRAWINGS. SET SLEEVES IN CAST-IN-PLACE CONCRETE AND MASONRY WALLS, AS THEY ARE CONSTRUCTED. COORDINATE LOCATION OF ACCESS PANELS AND DOORS FOR ELECTRICAL EQUIPMENT THAT ARE BEHIND FINISHED SURFACES OR ARE OTHERWISE CONCEALED. COORDINATE AMPACITY VOLTAGE, PHASING, OVERCURRENT PROTECTION, LOCAL DISCONNECT REQUIREMENTS WITH ACTUAL EQUIPMENT PROVIDED.

4. PROVIDE PRODUCT DATA SUBMITTALS FOR THE FOLLOWING EQUIPMENT IF SUPPLIED AS PART OF THIS PROJECT: ENCLOSED SWITCHES, LUMINAIRES, AND DEVICES. MATERIAL INSTALLED PRIOR TO OBTAINING AN APPROVED SUBMITTAL ARE AT CONTRACTOR'S RISK.

5. CUT EXISTING CONSTRUCTION AS NEEDED FOR DEMOLITION AND CONSTRUCTION. USE CUTTING METHODS THAT MINIMIZE DAMAGE TO FINISHED AND ADJACENT SURFACES. PATCH EXISTING AND NEW CONSTRUCTION AND REPAIR ALL DAMAGED SURFACES TO MATCH EXISTING. PATCH UNUSED AND ABANDONED PENETRATIONS.

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 1004 3-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

LEGEND, NOTES, AND GENERAL NOTES

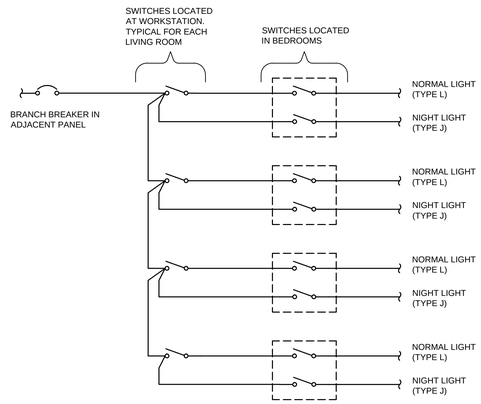
PROJECT NO: 13065

DATE: 02-FEB-15

Full Scale Verification
0" 1"

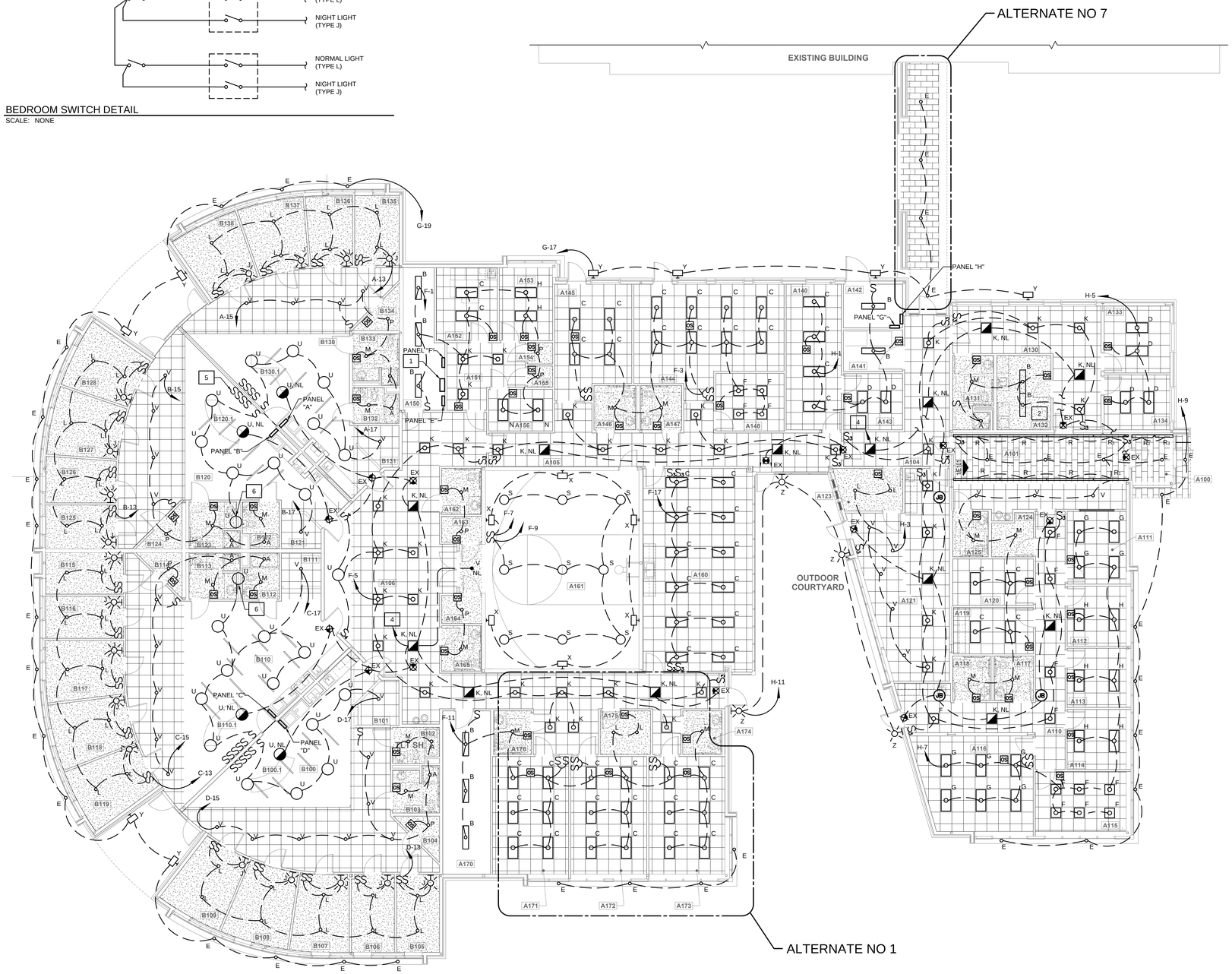
Drawing No.:

E001



BEDROOM SWITCH DETAIL

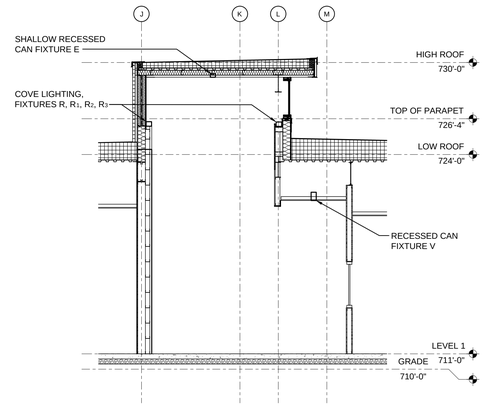
SCALE: NONE



PLAN

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

0 5' 10' 15' 20'



1 E101 E107 SECTION

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

0 1' 5' 10'

CONSTRUCTION NOTES:

XX

1. 120VINPUT, 1500VA OUTPUT (FOR NINETY MINUTES) UNINTERRUPTIBLE POWER SUPPLY WITH FOUR INDIVIDUAL LIGHT CIRCUIT OUTPUTS. PROVIDE MYERS POWER PRODUCTS ILLUMINATOR C-M INVERTER WITH TWO BATTERY MODULES IS BASIS-OF-DESIGN. INVERTER AND BATTERY MODULE MEASURE 10"Dx26"W.
2. NOT USED.
3. NOT USED.
4. 3#12, 3/4" TO EMERGENCY BACKUP PANEL.
5. ONE SWITCH PER ROOM IN EACH QUADRANT. FED FROM ADJACENT PANELBOARD, TYP. SEE SWITCH DETAIL, THIS DWG.
6. 'U' LIGHT FIXTURES ABOVE BATHROOMS B112, B113, B122, AND B123 ARE CEILING MOUNTED ABOVE BATHROOM.

DRAWING NOTES:

1. ROOMS A116, A144, 145, A160, A171, A172, AND A173 WILL HAVE LINE VOLTAGE OCCUPANCY SENSORS AND DUAL LEVEL SWITCHING.

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

FLOOR PLAN - LIGHTING

DATE: 01-08-15

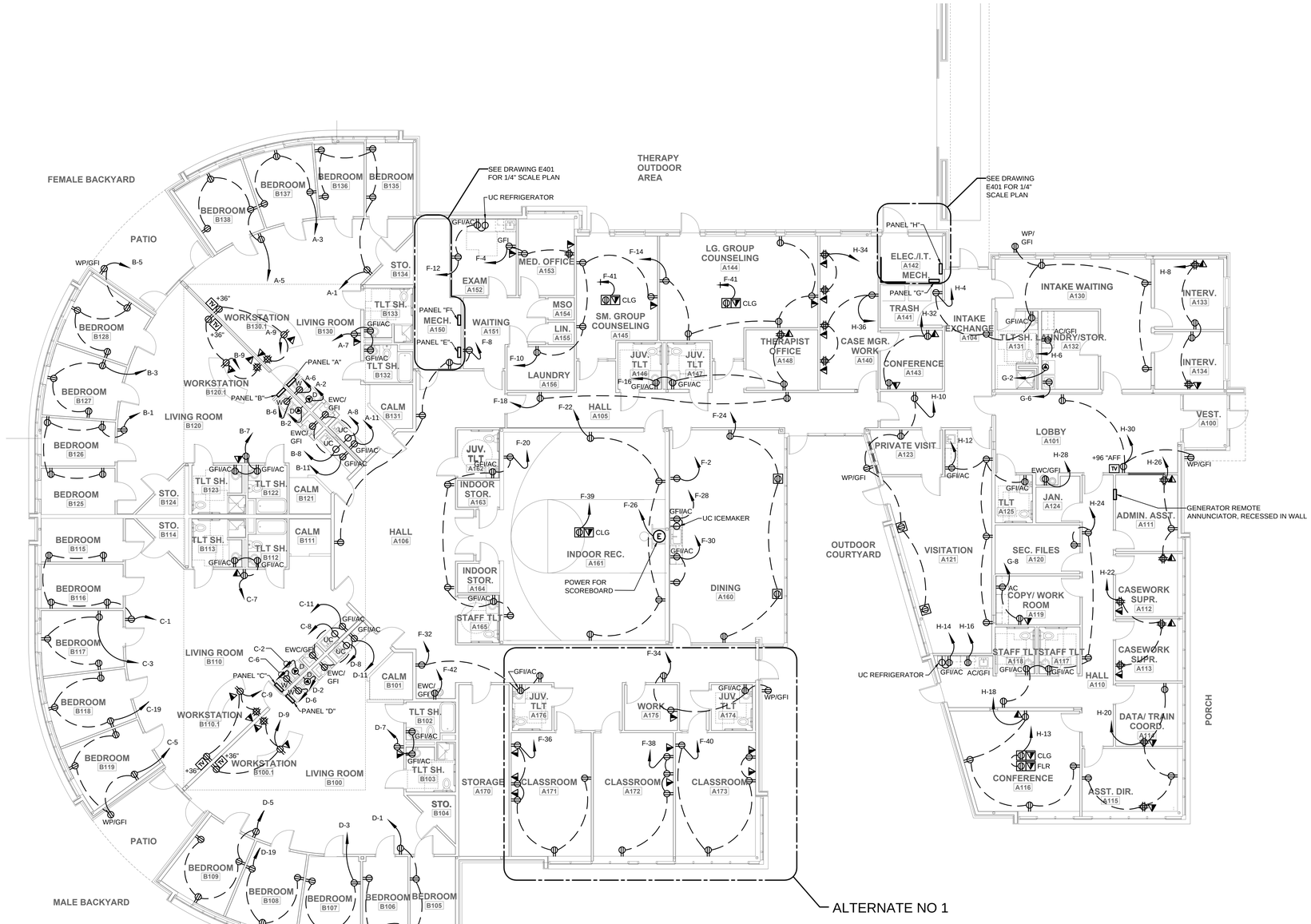
PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
E101

DRAWING NOTES:

1. PROVIDE TAMPER-PROOF RECEPTACLES IN ALL JUVENILE TOILETS AND BEDROOMS.



NORTH

FLOOR PLAN - POWER

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

0 5' 10' 15' 20'

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

FLOOR PLAN - POWER

DATE: 02-03-15

PROJECT NO: 13-005

Full Scale Verification

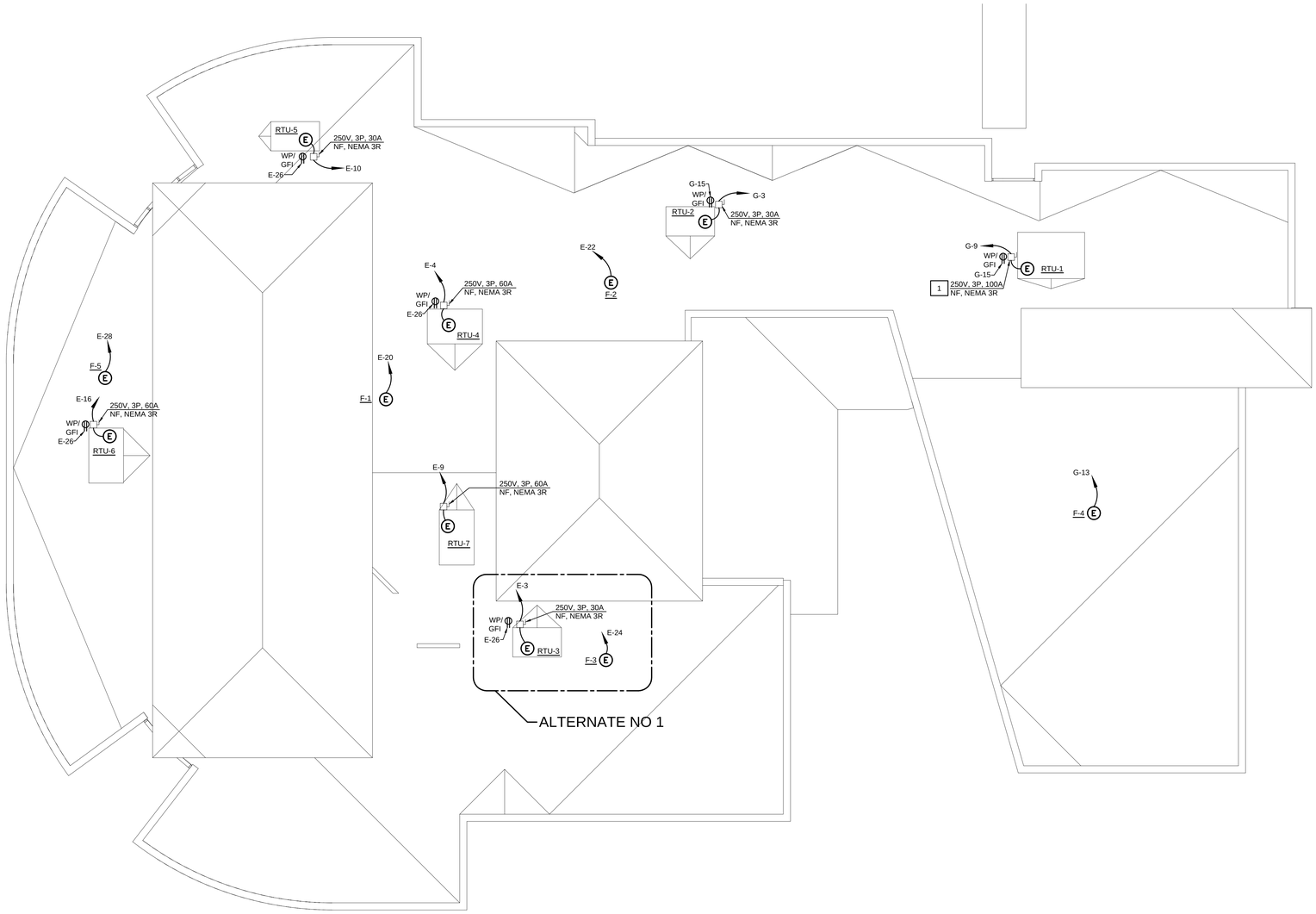
0" 1"

Drawing No.:

E102

XX CONSTRUCTION NOTES:

1. FACTORY WIRED DISCONNECT, TYPICAL ALL ROOFTOP UNITS.
2. FACTORY WIRED DISCONNECT. TYPICAL ALL FANS.



NORTH

ROOF PLAN - POWER
SCALE: 1/8"=1'-0"

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

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CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

ROOF PLAN - POWER

DATE: 03 FEB 15

PROJECT NO: 13006

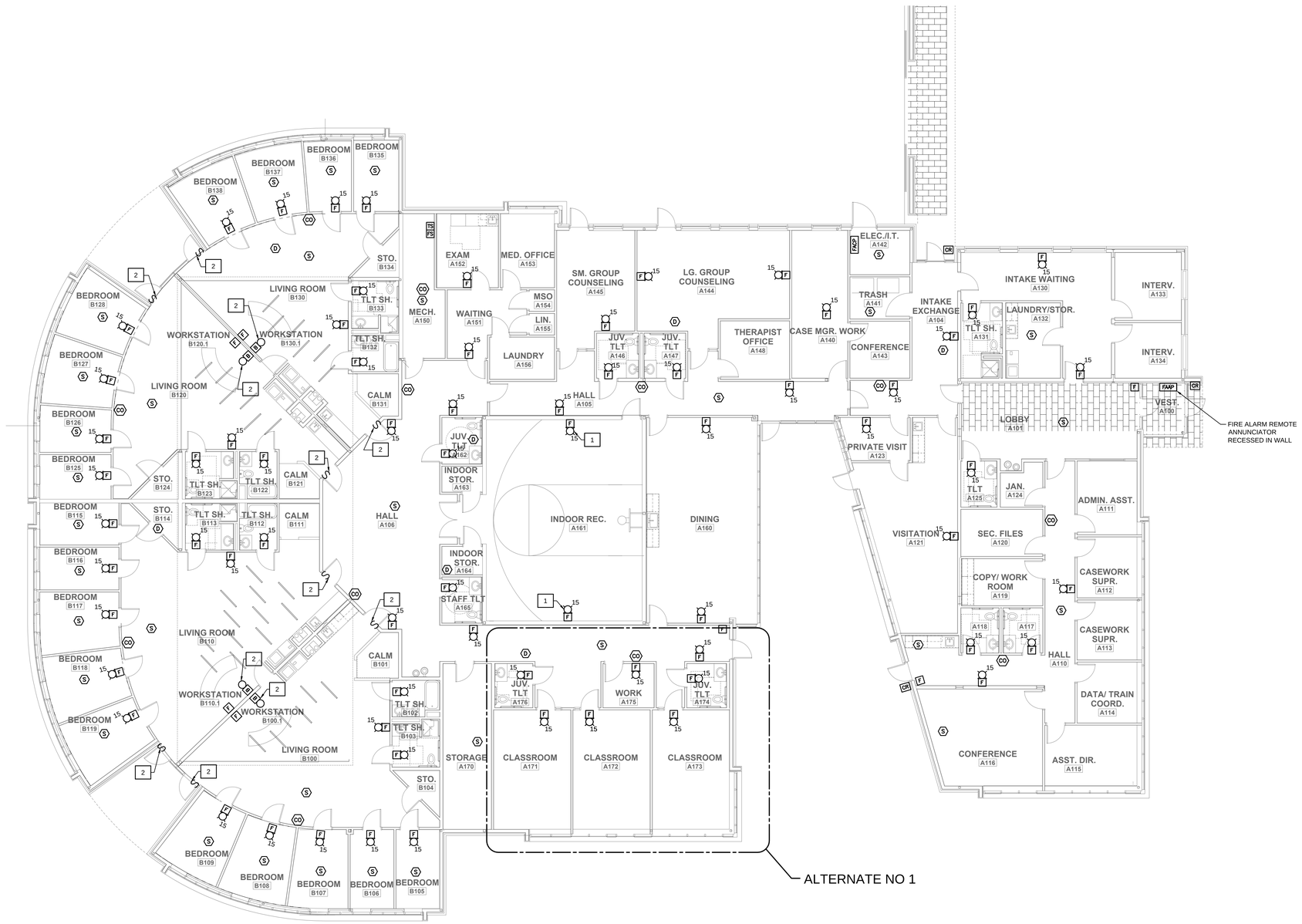
Full Scale Verification
0" 1"

Drawing No.:

E103

XX CONSTRUCTION NOTES:

1. PROVIDE WIRE GUARD.
2. AUTOMATIC SWITCH, 125V, 5A SPST TO ACTUATE TWO TONE DOORBELL. THOMAS AND BETTS DN415 OR APPROVE D EQUAL. LOCATE BELL AT WORKSTATION +96"AFF.



NORTH

FLOOR PLAN - SPECIAL SYSTEMS
SCALE: 1/8"=1'-0"

0 5' 10' 15' 20'

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

FLOOR PLAN - SPECIAL SYSTEMS

DATE: 01-15-15

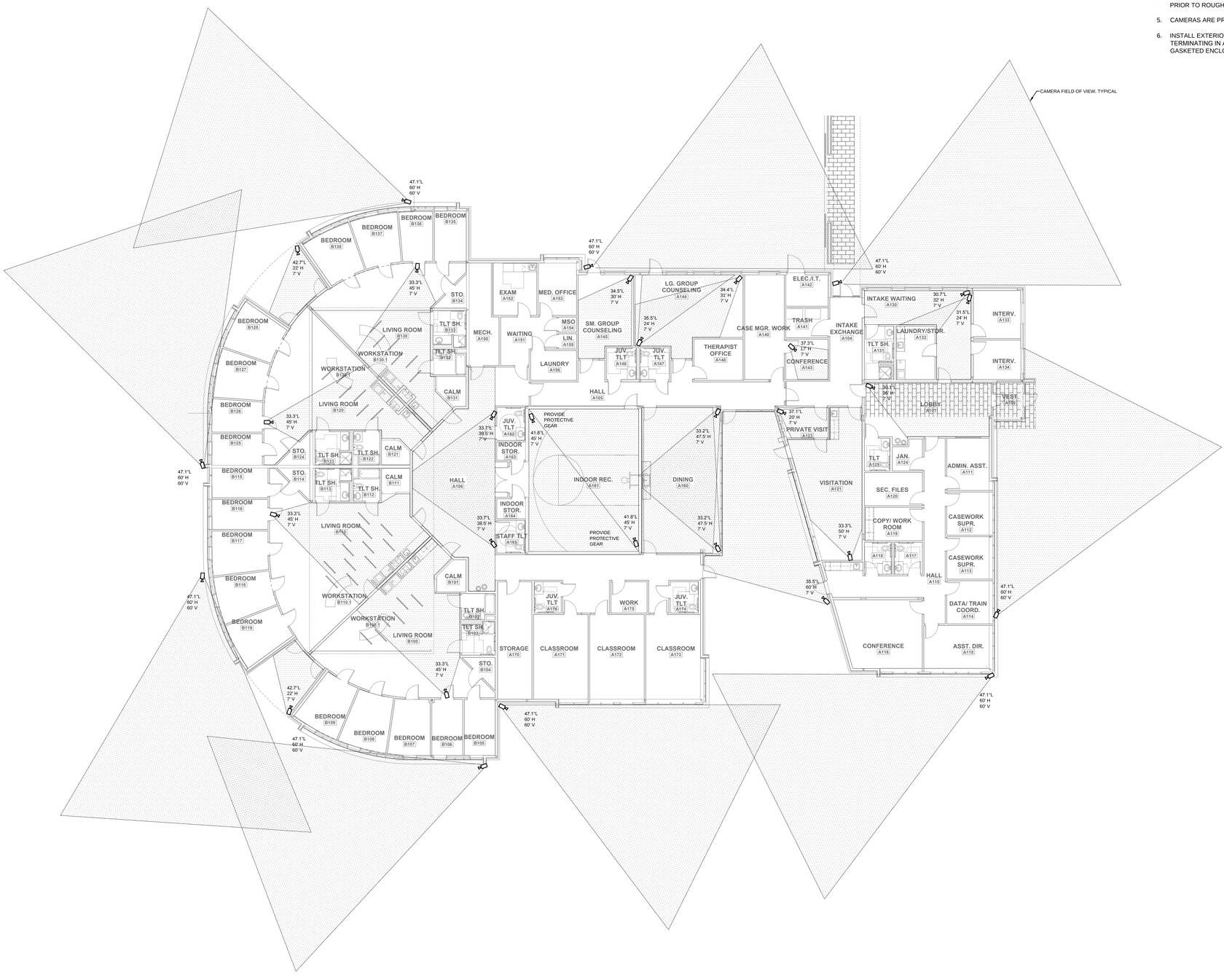
PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
E104

DRAWING NOTES:

1. THE CONTRACTOR SHALL PROVIDE 1" ROUGH-IN CONDUIT SYSTEM TO ABOVE LAY-IN CEILING AREA OR THE NEAREST CORRIDOR CEILING WITH PULL STRING FOR THE SECURITY CAMERAS PER THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS. THE OWNER WILL INSTALL CAMERAS AND WIRING.
2. THE INTERIOR CAMERAS FIELD OF VIEW IS BASED ON SONY #SNCCH260.
3. THE EXTERIOR CAMERAS FIELD OF VIEW IS BASED ON SONY #SNC-EM600.
4. THE CONTRACTOR SHALL VERIFY EACH CAMERA LOCATION WITH THE OWNER PRIOR TO ROUGHING -IN THE CONDUIT.
5. CAMERAS ARE PROVIDED AND INSTALLED BY OWNER.
6. INSTALL EXTERIOR ROUGH-IN CONDUITS TO THE EDGE OF THE ROOF LINE TERMINATING IN A HOFFMAN 6" X 8" 4" DEEP, NEMA 4, NON-CORROSIVE, GASKETED ENCLOSURE. ENCLOSURE SHALL HAVE HINGED COVER.



NORTH

FLOOR PLAN - CAMERAS
SCALE: 3/32"=1'-0"

0 5' 10' 20'

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

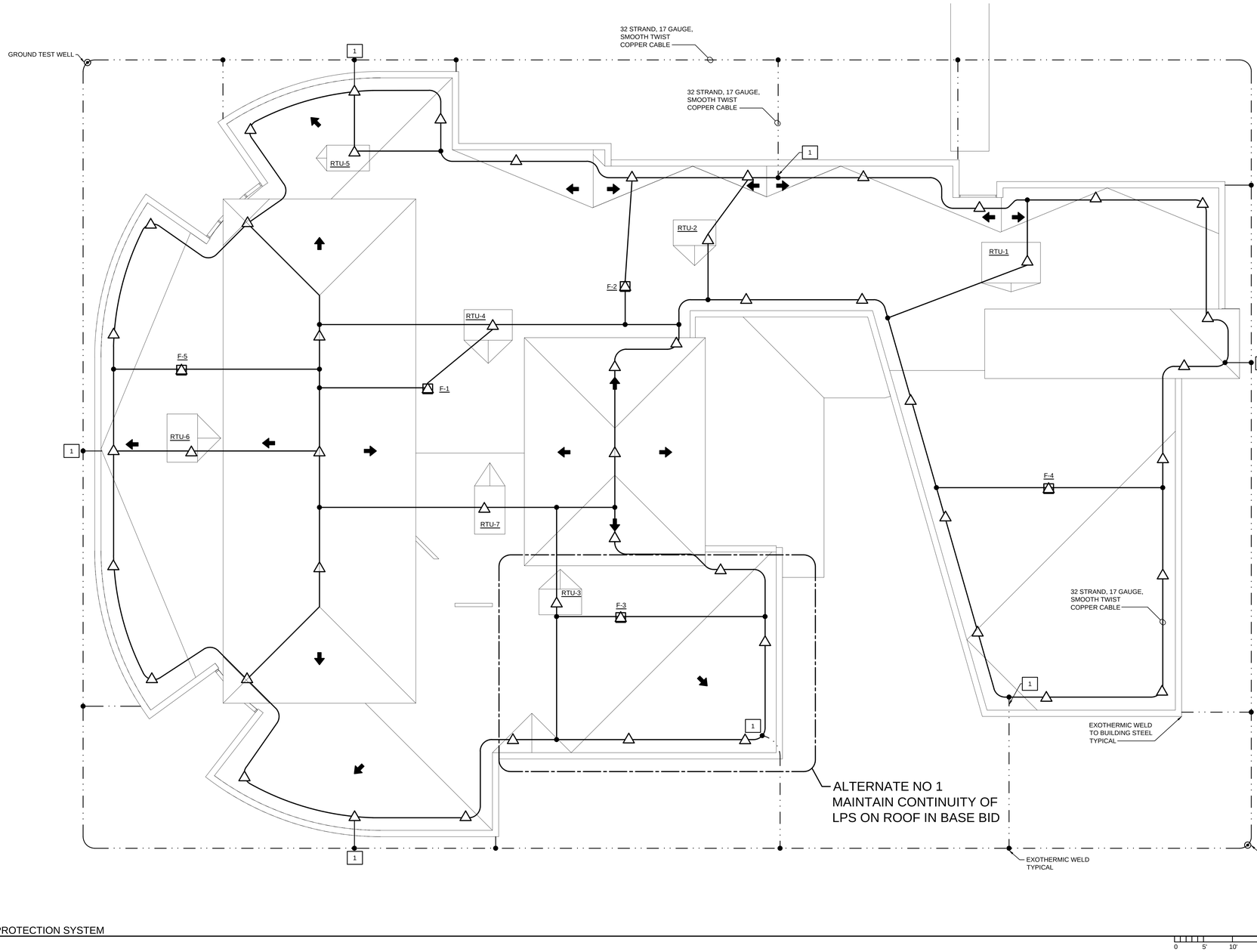
FLOOR PLAN - CAMERAS

DATE: 01-SEP-15

PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
E105



NORTH

LIGHTNING PROTECTION SYSTEM

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

0 5' 10' 15' 20'

XX CONSTRUCTION NOTES:

1. LIGHTING DOWN LEADS SHALL BE INSTALLED IN 1" PVC CONDUIT CONCEALED WITHIN EXTERIOR WALLS AND TURNED OUT 90 DEGRESS TO ACCESS ATTACHMENT TO BURIED COUNTERPOISE RING..

DRAWING NOTES:

1. CONNECT DOWNSPOUTS TO COUNTERPOISE SYSTEM OR ROOF LATERAL CONDUCTORS. SEE DETAIL ON DRAWING E502. TYPICAL.
2. BURIAL DEPTH OF BUILDING PERIMETER GROUND CONDUCTOR SHALL BE A MINIMUM OF 24". UNDERGROUND CONDUCTOR SHALL BE A MINIMUM OF 24" FROM BUILDING FOUNDATION.
3. AIR TERMINAL SHALL BE LOCATED WITHIN 2' OF ROOF EDGES AND OUTSIDE CORNERS OF PROTECTED AREAS. AIR TERMINAL MOUNTING BASES SHALL BE OF CAST CONSTRUCTION AND SECURELY FASTENED TO THE STRUCTURE.
4. NO BEND OF A CONDUCTOR SHALL FORM AN INCLUDED ANGLE OF LESS THAN 90 DEGREES NOR HAVE A RADIUS OF BEND LESS THAN 8". CONDUCTORS SHALL BE SECURED TO THE STRUCTURE AT INTERVALS NOT EXCEEDING 3'-0".
5. SEE DRAWING E502 FOR LIGHNING PROTECTION SYSTEM COMPONENTS.

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

LIGHTNING PROTECTION SYSTEM

DATE: 02-03-15

PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:

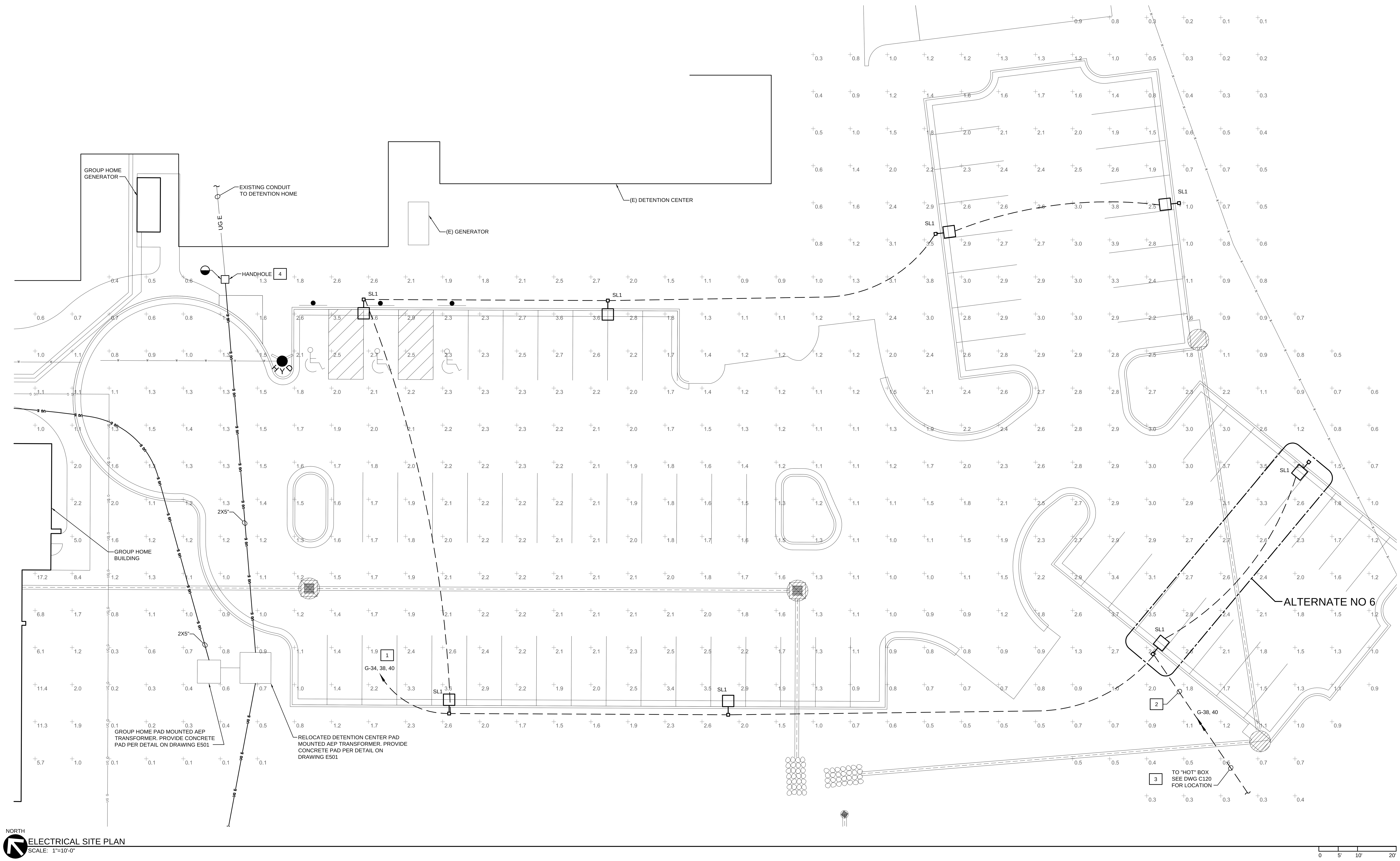
E106

SEQUENCING NOTES:

1. PROVIDE PADS FOR TRANSFORMERS, SECONDARY STUB-OUT FOR GROUP HOME, AND SECONDARY CONDUIT NEAR HANDHOLE TO DETENTION CENTER. COORDINATE WITH UTILITY TO INSTALL PRIMARY AND NEW TRANSFORMERS WHILE RETAINING EXISTING SERVICE TO DETENTION CENTER. COORDINATE OUTAGE WITH DETENTION CENTER TO CHANGE OVER SERVICE. DETENTION CENTER WILL POWER CRITICAL LOADS USING EXISTING GENERATOR DURING OUTAGE. HAVE UTILITY DISCONNECT EXISTING DETENTION CENTER POWER. CUT EXISTING SECONDARY CONDUITS NEAR HANDHOLE LOCATION AND REMOVE CONDUCTORS FROM LOCATION OF CUT INTO DETENTION CENTER CT CABINET. CONNECT EXISTING DETENTION CENTER CONDUIT TO HANDHOLE AND NEW DETENTION CENTER SERVICE CONDUITS TO HANDHOLE. PROVIDE 2 SETS OF 4#500 KCMIL FROM NEW 480V TRANSFORMER TO DETENTION CENTER AND TERMINATE AT BOTH ENDS. VERIFY ROTATION AND CONDUCTOR INSULATION RESISTANCE AND RE-POWER DETENTION CENTER FROM NEW TRANSFORMER.
2. OWNER WILL TOP OFF EXISTING GENERATOR FUEL TANK PRIOR TO OUTAGE. CONTRACTOR SHALL TOP OFF EXISTING GENERATOR FUEL TANK AFTER OUTAGE.
3. OUTAGE IS LIMITED TO 8 HOURS MAXIMUM.

XX CONSTRUCTION NOTES:

1. HOMERUN TO ASTRONOMICAL TIMER LOCATED IN ELECTRICAL EQUIPMENT ROOM. PROVIDE 2#8, 1#10 EGC., 1-1/2" PVC CONDUIT.
2. APPROXIMATE DISTANCE TO "HOT" BOX FOR BACK-FLOW PREVENTION FROM LIGHTING STANDARD IS 97 FEET. PROVIDE 15A/1P GFI RECEPTACLE IN NEMA 3R ENCLOSURE. EXTEND 3#10, 3/4"C. SEE DRAWING C120.
3. PROVIDE 2 GANG "FS" BOX WITH SS COVER, 2-20 AMP, GFI INDUSTRIAL GRADE RECEPTACLES (ONE FOR EACH HEATER) WITHIN HOT BOX.
4. PROVIDE PRECAST 4'x4'x4' CONCRETE HAND HOLE FLUSH WITH GRADE. COVER SHALL BE HIGHWAY RATED H20 WITH 30" ROUND CAST IRON ACCESS COVER. HAND HOLE SHALL BE USED TO INTERCEPT (E)UGE DUCTS TO FEED DETENTION CENTER. PROVIDE NEW DUCTS FROM NEW AEP PAD MOUNTED TRANSFORMER TO HAND HOLE PER THIS DRAWING. DUCTS, TRANSFORMER PAD AND HAND HOLE SHALL BE INSTALLED PER AEP'S REQUIREMENTS. PROVIDE (4) 3/4"x10' GROUND RODS WITH #3/0 BCSD AROUND PERIMETER OF HAND HOLE WITH (2) #3/0 BCSD LEADS EXTENDED INTO HAND HOLE FOR GROUNDING.



ELECTRICAL SITE PLAN
SCALE: 1"=10'-0"

0 5' 10' 20'

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
SCOTT F. BURGER
Lic. No. 034338
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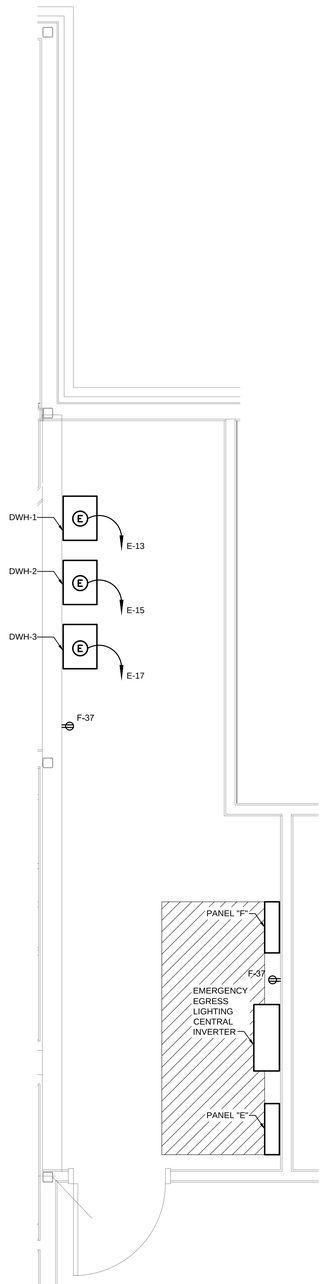
LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

ELECTRICAL SITE PLAN

DATE: 03 FEB 15
PROJECT NO: 11088

Full Scale Verification
0" 1"

Drawing No.:
E107

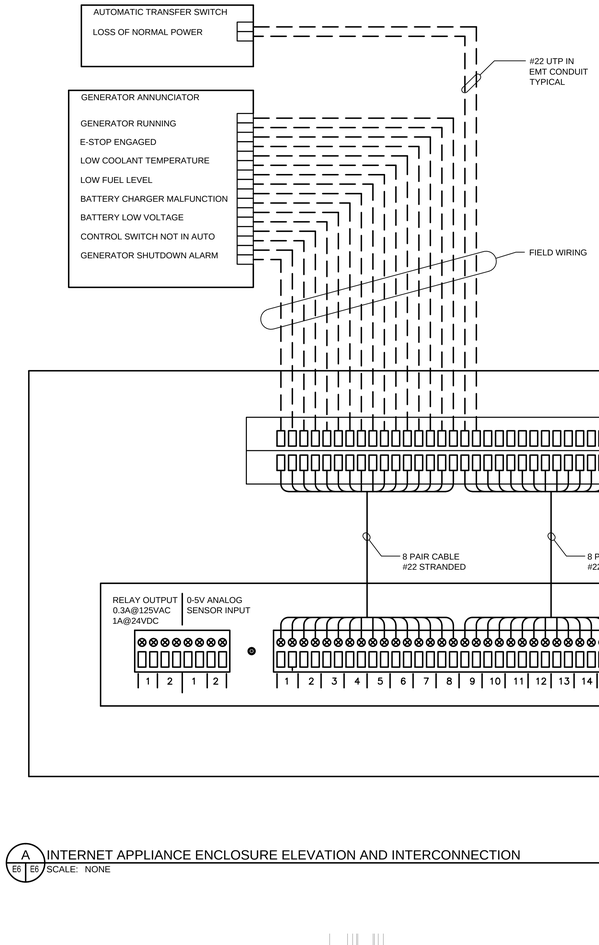


NORTH

ENLARGED PLAN - MECHANICAL ROOM - A150

SCALE: 1/2"=1'-0"

0 6" 1' 2' 5'



NORTH

ENLARGED PLAN - MAIN ELECTRICAL ROOM - A142

SCALE: 1/2"=1'-0"

0 6" 1' 2' 5'

A E8 E6 INTERNET APPLIANCE ENCLOSURE ELEVATION AND INTERCONNECTION

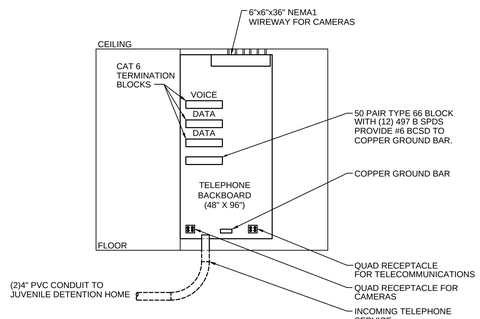
SCALE: NONE

6 E8 E6 GENERATOR INTERCONNECTION

SCALE: NONE

INTERNET APPLIANCE SPECIFICATIONS:

1. PROVIDE SNMP INTERNET APPLIANCE WITHIN 24"x24"x8" ENCLOSURE. PROVIDE ONE PER GENERATOR.
2. INTERNET SNMP APPLIANCE ENCLOSURE TO INCLUDE TERMINAL STRIPS AND INTERNET APPLIANCE.
3. PROVIDE INTERNET APPLIANCE. AVTECH ROOM ALERT RA32E-TH1-RAS.



BACKBOARD ELEVATION

SCALE: NONE

XX CONSTRUCTION NOTES:

1. 36"x36"x12" NEMA 3R CT CABINET, PER AEP REQUIREMENTS.
2. PROVIDE (2) 8'x4'x3/4" PLYWOOD TELEPHONE BACKBOARD.
3. 600 AMP, 3PH, NEMA 1 AUTOMATIC TRANSFER SWITCH.
4. 600 AMP, 3PH, NEMA 1 ENCLOSED CIRCUIT BREAKER.
5. PANEL "MDP"
6. SEE DWG E701 FOR INFO.
7. PROVIDE TWO TELEPHONE OUTLETS AND CONNECT FACP TO OUTLETS. OUTLETS TO BE CONNECTED DIRECTLY TO TELEPHONE SERVICE AND BYPASS ALL SWITCHBOARDS. PROVISION OF TELEPHONE SERVICE IS BY OWNER.

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

ENLARGED PLANS

DATE: 02-FEB-15

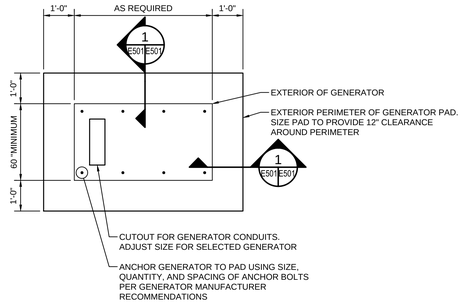
PROJECT NO: 10043

Full Scale Verification

0" 1"

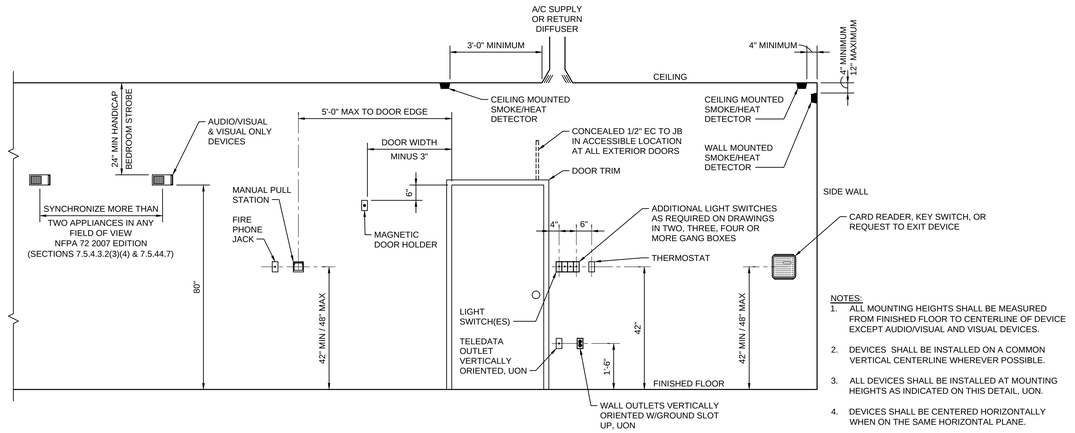
Drawing No.:

E401



CONCRETE AND REINFORCEMENT NOTES:

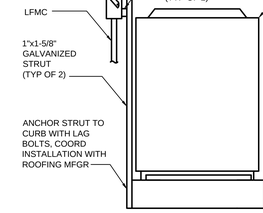
1. GENERATOR PAD SOIL BEARING CAPACITY SHALL BE A MINIMUM 1,500 PSF. CONTRACTOR SHALL ENGAGE INSPECTOR TO VERIFY SOIL BEARING CAPACITY AND REINFORCEMENT PLACEMENT PRIOR TO CONCRETE PLACEMENT. SUBMIT INSPECTION REPORT TO A/E FOR REVIEW.
2. CONCRETE SHALL BE NORMAL WEIGHT 145 PCF WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
3. REINFORCING BARS SHALL BE ROLLED FROM NEW BILLET STEEL CONFORMING WITH ASTM A615/A615M, GRADE 60, UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCEMENT, UNLESS OTHERWISE NOTED:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH — 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER: #5 BAR AND SMALLER — 1 1/2"
5. LAP ALL REINFORCING SPLICES AT LEAST 48 BAR DIAMETERS (24" MINIMUM) UNLESS OTHERWISE NOTED.
6. ALL REINFORCING SHALL BE SECURELY WIRED TOGETHER IN FORMS AS CALLED FOR IN "PLACING REINFORCING BARS" BY CRSI.
7. STONE BASE SHALL BE 4" THICK, #57 STONE.



NOTES:
1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICE EXCEPT AUDIO/VISUAL AND VISUAL DEVICES.
2. DEVICES SHALL BE INSTALLED ON A COMMON VERTICAL CENTERLINE WHEREVER POSSIBLE.
3. ALL DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL, UON.
4. DEVICES SHALL BE CENTERED HORIZONTALLY WHEN ON THE SAME HORIZONTAL PLANE.

A E501 E501 GENERATOR PAD ENLARGED PLAN

SCALE: NONE



1 E501 E501 GENERATOR PAD SECTION

SCALE: NONE

NOTES:
1. PROVIDE 4000 PSI CONCRETE WITH A MINIMUM 3" COVER OVER ALL REBAR. WIRE MESH WITH A MINIMUM CROSS SECTIONAL ARE OF 0.176 SQUARE INCHES PER FOOT OF PAD WIDTH MAY BE USED IN PLACE FOR REBAR.
2. FOR PRIMARY COMPARTMENT CONDUIT PLACEMENT DIMENSIONS SEE SECTION 1, THIS DRAWING.
3. SECONDARY CONDUIT MAY EXTEND IN ANY DIRECTION AS REQUIRED BY THE CONTRACTOR.
4. COORDINATE FINAL PAD REQUIREMENTS AND SIZES WITH UTILITY PROVIDER.
5. FINAL PAD INSTALLATION SHALL BE LEVEL AS MEASURED BY CARPENTER'S LEVEL FOR ALL DIRECTIONS.
6. FINAL GRADE SHALL BE ESTABLISHED BEFORE INSTALLATION OF PAD.
7. IN ORDER TO ACHIEVE CABLE FLEXIBILITY EXTENDING INTO CONCRETE BOX IS TO BE CUT AS SHOWN.
8. PROVIDE PVC CONDUIT WITH 90°, 35 INCH RADIUS BENDS. TO AVOID DISTURBING THE GROUND UNDER THE REAR OF THE PAD AND TO MINIMIZE SETTLING, BRING CONDUITS TO THE FRONT OR SIDES WHENEVER POSSIBLE AND MARK THE CONDUIT END LOCATIONS.
9. IF CONTRACTOR WISHES TO CONNECT BOX TO TRANSFORMER PAD EXTEND REBAR ON REAR OF BOX AS SHOWN. REBAR CAN BE ATTACHED TO TRANSFORMER PAD REBAR.
10. REBAR TO BE SPACED AS SHOWN AND USED ON ALL FOUR SIDES OF BOX.

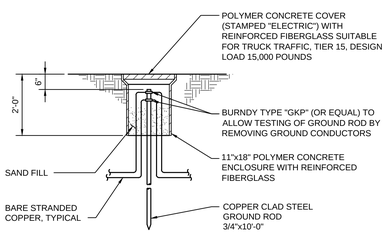
TRANSFORMER PAD DETAIL

SCALE: 1/2"=1'-0"

0 6" 1' 2' 5'

TYPICAL ELEVATIONS - ELECTRICAL, ACCESS CONTROL, AND FIRE ALARM DEVICES

SCALE: NONE

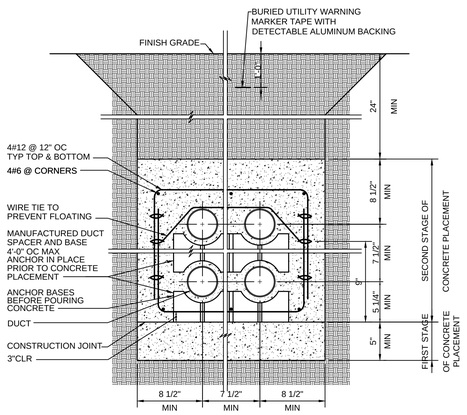


GROUND ROD TEST WELL

SCALE: NONE

DISCONNECT SWITCH MOUNTING DETAIL

SCALE: NONE

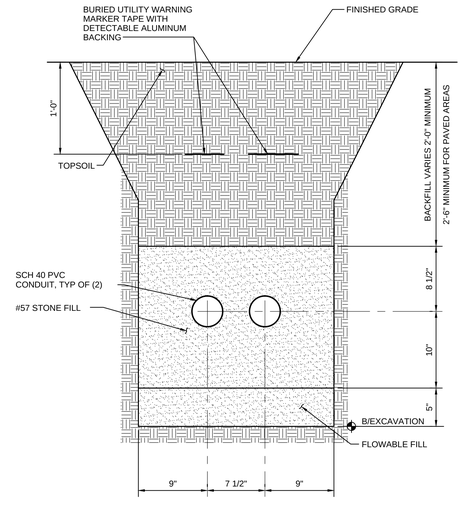


* THE DISTANCE BETWEEN ADJACENT DUCTS SHALL BE 3" IN BOTH ROWS & COLUMNS.

NOTE:
REINFORCED CONCRETE ENCASED, DUCTBANK SHALL BE INSTALLED WHERE DUCTBANKS CROSS BENEATH ROADS, PARKING LOTS AND OTHER PAVED AREAS.

TYPICAL REINFORCED DUCTBANK

SCALE: NONE



TYPICAL 2-WAY DUCTBANK SECTION

SCALE: 1 1/2"=1'-0"

NO.	BY	REVISIONS	DATE

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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

DETAILS

DATE: 02/03/15

PROJECT NO. 10043-BG

Full Scale Verification
0" 1"

Drawing No.:

E501

A

AIR TERMINAL

1/2" X 24" LONG SOLID ALUMINUM

IPC #A331 THOMPSON #A55
ROBBINS #A24 VFC #1212ALAT

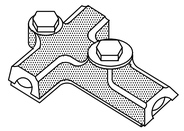
E

SMOOTH TWIST COPPER CABLE

32 STRAND, 17 GAUGE CABLE, 65,500 CIRCULAR MILS.

IPC #32S
ROBBINS #1
THOMPSON #32
VFC #32

F



PRESSURE TYPE TEE CABLE SPLICER

PRESSURE TYPE TEE SPLICER. CLAMPS STRANDED CABLES THROUGH 2/0. FINISHED COMPLETE WITH TWO HEX BOLTS AND WASHERS.

IPC #304 THOMPSON #706
ROBBINS #664 VFC #207

H

COPPER LOOP FASTENER

FITS STANDARD CABLES THROUGH 2/0 COPPER, 1/2" WIDE FOR ONE NAIL OR WOOD SCREWS.

IPC #121A THOMPSON #165
ROBBINS #72 VFC #251

K

PIPE CLAMP

ADJUSTABLE TINNED BRONZE CLAMP FOR BONDING TO PIPES. FITS PIPES 1 1/4" TO 2 1/4" O.D.

IPC #306A
ROBBINS #63B
THOMPSON #240X
VFC #233

M

PERPENDICULAR GROUND ROD AND CABLE CLAMP

COPPER BRONZE FOR CONNECTING ONE OR TWO HORIZONTAL CABLES THROUGH 2/0 TO ANY SIZE GROUND ROD THROUGH 3/4".

IPC #28U THOMPSON #493
ROBBINS #99A VFC #305

TEST WELL GROUND CONNECTION, HIGH COPPER ALLOY UL467 LISTED SUITABLE FOR DIRECT BURIAL

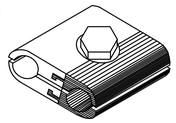
C

GROUND ROD

3/4" X 10' COPPERCLAD

IPC #579 THOMPSON #TL3410
ROBBINS #97-10 VFC #3410

G

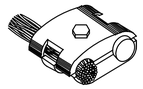


BIMETAL PARALLEL CLAMPS

COPPER TO ALUMINUM BIMETALLIC CLAMP MADE OF CAST ALUMINUM AND BRONZE INHERENTLY MOLDED AS ONE UNIT FOR SPLICING STANDARD ALUMINUM CABLE TO COPPER CABLE THROUGH 2/0 SIZE

IPC #A41P THOMPSON #240X
ROBBINS #63B VFC #233

J

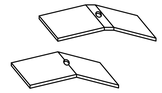


LARGE BRONZE CLAMP

HEAVY DUTY, FOR CLAMPING TWO STANDARD CABLES THROUGH 2/0 AND/OR THROUGH 5/8" RODS.

IPC #297A
ROBBINS #52
THOMPSON #141
VFC #212

L

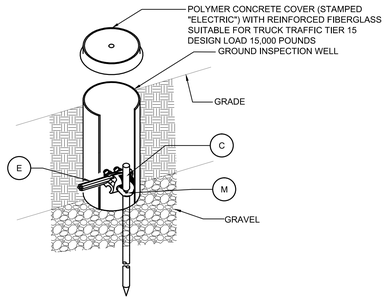


FLASHING SADDLE

FLEXIBLE ALUMINUM 3 1/8" WIDE FLASHING SADDLE. FITS ALL PITCHED ROOFS.

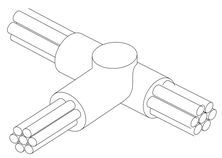
ROBBINS #A121FS
THOMPSON #A682X
IPC #A640

R



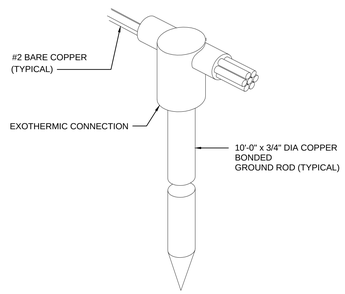
GROUND INSPECTION WELL

N.T.S.



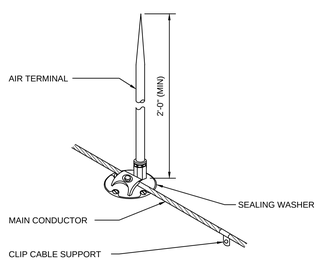
DETAIL - EXOTHERMIC CONNECTION WIRE TO WIRE

SCALE: NONE



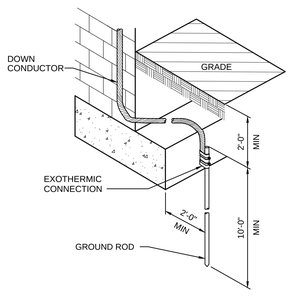
DETAIL - EXOTHERMIC CONNECTION WIRE TO GROUND ROD

SCALE: NONE



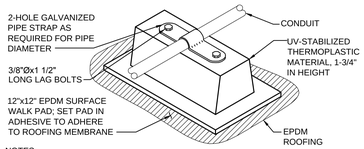
AIR TERMINAL

SCALE: NONE



GROUNDING DETAIL

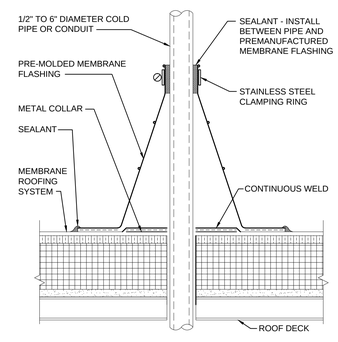
SCALE: NONE



NOTES:
1. SUPPORTS SHALL BE INSTALLED A MAXIMUM OF 8'-0" OC AND AT EACH CHANGE OF DIRECTION OR CONDUIT.
2. ADJUST BLOCK LENGTH AND EPDM PAD SIZE AS REQUIRED TO ACCOMMODATE MULTIPLE CONDUITS.

CONDUIT MOUNTED ON MEMBRANE ROOF DETAIL

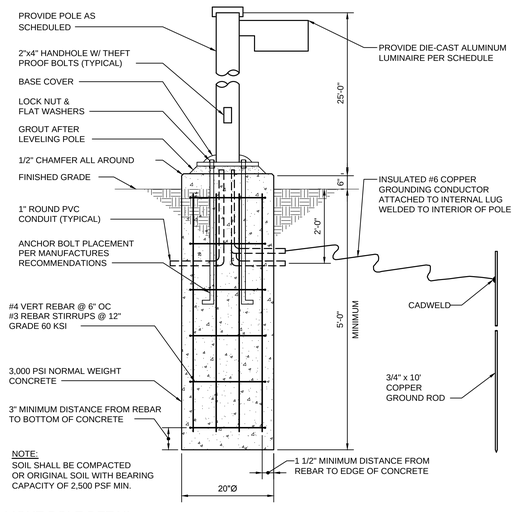
SCALE: NONE



CONDUIT PENETRATION OF MEMBRANE ROOF DETAIL

SCALE: 3"=1'-0"

0 3" 6" 9" 1'



LIGHT POLE DETAIL

SCALE: NONE

TYPE Z LUMINAIRE

SCALE: NONE

TYPE SL1 LUMINAIRE

SCALE: NONE

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
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LYNCHBURG JUVENILE SERVICES GROUP HOME

CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

DETAILS

DATE: 02-FEB-15

PROJECT NO: 11008

Full Scale Verification
0" 1"

Drawing No.:

E502

PANEL "MDP" SCHEDULE RM A142

PANELBOARD CHARACTERISTICS:
VOLTS: 208/120
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
800 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 32,000 RMS SYM AMPS
ENCLOSURE: SURFACE

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
				32.8					#1				
3	PANEL "A"	E	11.8		32.8		3	100	#1	#1	#6	1-1/2"	
						32.8			#1				
				32.8					#1				
9	PANEL "B"	E	11.8		32.8		3	100	#1	#1	#6	1-1/2"	
						32.8			#1				
				35.1					#1				
15	PANEL "C"	E	12.6		35.1		3	100	#1	#1	#6	1-1/2"	
						35.1			#1				
				34.8					#1				
21	PANEL "D"	E	12.5		34.8		3	100	#1	#1	#6	1-1/2"	
						34.8			#1				
27	SPARE						3	60					
33	SPACE						3						
39	SPACE						3						
				166.3					4/0				
4	PANEL "E"	E	59.9		166.3		3	225	4/0	4/0	#4	2-1/2"	
						166.3			4/0				
				79.7					#1				
10	PANEL "F"	E	28.7		79.7		3	100	#1	#1	#6	1-1/2"	
						79.7			#1				
				134.7					4/0				
16	PANEL "G"	E	48.5		134.7		3	225	4/0	4/0	#4	2-1/2"	
						134.7			4/0				
				53.0					#1				
22	PANEL "H"	E	19.1		53.0		3	100	#1	#1	#6	1-1/2"	
						53.0			#1				
28	SPARE						3	40					
34	SPACE						3						
40	SPACE						3						
	TOTALS			569.1	569.1	569.1							

NOTES

569.1	569.1	569.1

PANEL "A" SCHEDULE RM B130

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
100 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 14,000 RMS SYM AMPS
ENCLOSURE: FLUSH-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
1	RECEPTACLES B130, B135, B136	R	1.0	8.3			1	20	#12	#12			
3	RECEPTACLES B137	R	0.6		5.0		1	20	#12	#12	#12	3/4"	1
5	RECEPTACLES B130, B138	R	0.8			6.7	1	20	#12	#12			
7	RECEPTACLES B132, B133, B130	R	0.6	5.0			1	20	#12	#12			
9	TV RECEPTACLE, RECEPTACLES B130.1	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
11	GFI/EWC RECEPTACLES B130	R	0.4			3.3	1	20	#12	#12			
13	LIGHTING B135, B136, B137, B138	L	0.1	1.1			1	20	#12	#12			
15	LIGHTING B130, B132-134	L	0.2		1.7		1	20	#12	#12	#12	3/4"	1
17	LIGHTING B130, B131	L	0.6			5.0	1	20	#12	#12			
19	SPACE						1						
21	SPACE						1						
23	SPACE						1						
2	DRYER	E	5.0	24.0			2	30	#10	#10	#10	3/4"	
					24.0				#10				
6	WASHING MACHINE	E	0.8			7.0	1	20	#12	#12	#12	3/4"	
8	REFRIGERATOR RECEPT	E	0.8	7.0			1	20	#12	#12			
10	SPARE						1	20					
12	SPARE						1	20					
14	SPARE						1	20					
16	SPARE						1	20					
18	SPARE						1	20					
20	SPARE						1	20					
22	SPARE						1	20					
24	SPARE						1	20					
	TOTALS			45.5	37.4	22.0							

NOTES
1. PROVIDE BREAKER TIE HANDLES FOR MULTI-WIRE CIRCUIT HOME RUNS

PANEL "B" SCHEDULE RM B120

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
100 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 14,000 RMS SYM AMPS
ENCLOSURE: FLUSH-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
1	RECEPTACLES B125, B126	R	1.0	8.3			1	20	#12	#12			
3	RECEPTACLES B127	R	0.6		5.0		1	20	#12	#12	#12	3/4"	1
5	RECEPTACLES B128, PATIO	R	0.8			6.7	1	20	#12	#12			
7	RECEPTACLES B120, B122, B123	R	0.6	5.0			1	20	#12	#12			
9	TV RECEPT, QUAD RECEPT B120.1	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
11	GFI/EWC RECEPT B120	R	0.4			3.3	1	20	#12	#12			
13	LIGHTING B125, B126, B127, B128	L	0.1	1.1			1	20	#12	#12			
15	LIGHTING B120, B122-124	L	0.2		1.7		1	20	#12	#12	#12	3/4"	1
17	LIGHTING B120, B121	L	0.6			5.0	1	20	#12	#12			
19	SPACE						1						
21	SPACE						1						
23	SPACE						1						
2	DRYER	E	5.0	24.0			2	30	#10		#10	3/4"	
					24.0				#10				
6	WASHING MACHINE	E	0.8			7.0	1	20	#12	#12	#12	3/4"	
8	REFRIGERATOR RECEPT	E	0.8	7.0			1	20	#12	#12			
10	SPARE						1	20					
12	SPARE						1	20					
14	SPARE						1	20					
16	SPARE						1	20					
18	SPARE						1	20					
20	SPARE						1	20					
22	SPARE						1	20					
24	SPARE						1	20					
	TOTALS			45.5	37.4	22.0							

NOTES
1. PROVIDE BREAKER TIE HANDLES FOR MULTI-WIRE CIRCUIT HOMERUNS

45.5	37.4	22.0

PANEL "C" SCHEDULE RM B110

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
100 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 14,000 RMS SYM AMPS
ENCLOSURE: FLUSH-NEMA 1 DOOR-WITHIN-DOOR
SERVICE ENTRANCE RATED: NO

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
1	RECEPTACLES B110, B115, B116	R	1.0	8.3			1	20	#12	#12			
3	RECEPTACLES B117	R	0.6		5.0		1	20	#12	#12	#12	3/4"	1
5	RECEPTACLES B119, PATIO	R	0.8			6.7	1	20	#12	#12			
7	RECEPTACLES B110, B112, B113	R	0.6	5.0			1	20	#12	#12			
9	TV RECEPT, QUAD RECEPT B110.1	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
11	GFI/EWC RECEPT B110	R	0.4			3.3	1	20	#12	#12			
13	LIGHTING B115, B116, B117, B118, B119	L	0.2	1.6			1	20	#12	#12			
15	LIGHTING B110, B112-114	L	0.3		2.5		1	20	#12	#12	#12	3/4"	1
17	LIGHTING B110, B111	L	0.7			5.8	1	20	#12	#12			
19	RECEPTACLES B118	R	0.6	5.0			1	20	#12	#12	#12	3/4"	1
21	SPACE						1						
23	SPACE						1						
2	DRYER	E	5.0	24.0			2	30	#10		#10	3/4"	
					24.0								
6	WASHING MACHINE	E	0.8			7.0	1	20	#12	#12	#12	3/4"	
8	REFRIGERATOR RECEPT	E	0.8	6.7			1	20	#12	#12			
10	SPARE						1	20					
12	SPARE						1	20					
14	SPARE						1	20					
16	SPARE						1	20					
18	SPARE						1	20					
20	SPARE						1	20					
22	SPARE						1	20					
24	SPARE						1	20					
	TOTALS			50.6	38.2	22.8							

NOTES
1. PROVIDE BREAKER TIE HANDLES FOR MULTI-WIRE CIRCUIT HOMERUNS

50.6	38.2	22.8

PANEL "D" SCHEDULE RM B100

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
100 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 22,000 RMS SYM AMPS
ENCLOSURE: FLUSH-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
1	RECEPTACLES B100, B105, B106	R	1.0	8.3			1	20	#12	#12			
3	RECEPTACLES B107	R	0.6		5.0		1	20	#12	#12	#12	3/4"	1
5	RECEPTACLES B100, B109	R	0.8			6.7	1	20	#12	#12			
7	RECEPTACLES B100, B102, B103	R	0.6	5.0			1	20	#12	#12			
9	TV RECEPT, QUAD RECEPT B100.1	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
11	GFI/EWC RECEPT B100	R	0.4			3.3	1	20	#12	#12			
13	LIGHTING B105, B106, B107, B108, B109	L	0.2	1.6			1	20	#12	#12			
15	LIGHTING B100, B102-104	L	0.3		2.5		1	20	#12	#12	#12	3/4"	1
17	LIGHTING B100, B101	L	0.6			5.0	1	20	#12	#12			
19	RECEPTACLES B108	R	0.6	5.0			1	20	#12	#12	#12	3/4"	1
21	SPACE						1						
23	SPACE						1						
2	DRYER	E	5.0	24.0			2	30	#10		#10	3/4"	
					24.0				#10				
6	WASHING MACHINE	E	0.8			7.0	1	20	#12	#12	#12	3/4"	
8	REFRIGERATOR RECEPT	E	0.8	6.7			1	20	#12	#12			
10	SPARE						1	20					
12	SPARE						1	20					
14	SPARE						1	20					
16	SPARE						1	20					
18	SPARE						1	20					
20	SPARE						1	20					
22	SPARE						1	20					
24	SPARE						1	20					
	TOTALS			50.6	38.2	22.0							

NOTES
1. PROVIDE BREAKER TIE HANDLES FOR MULTI-WIRE CIRCUIT HOMERUNS.

50.6	38.2	22.0

PANEL "E" SCHEDULE RM A150

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
225 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 22,000 RMS SYM AMPS
ENCLOSURE: SURFACE-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
				24.7					#8				
3	RTU-3, 32 MCA, 45 MOCP	M	8.9		24.7		3	45	#8	-	#10	3/4"	
						24.7			#8				
				32.5					#8				
9	RTU-7, 42 MCA, 50 MOCP	M	11.7		32.5		3	50	#8	-	#10	3/4"	
						32.5			#8				
13	DWH-1, GAS FIRED	M	0.4	3.3			1	20	#12	#12			
15	DWH-2, GAS FIRED	M	0.4		3.3		1	20	#12	#12	#12	3/4"	1
17	DWH-3, GAS FIRED	M	0.4			3.3	1	20	#12	#12			
19	SPACE						1						
21	SPACE						1						
23	SPACE						1						
25	SPACE						1						
27	SPACE						1						
29	SPACE						1						
31	SPACE						1						
33	SPACE						1						
35	SPACE						1						
37	SPACE						1						
39	SPACE						1						
41	SPACE						1						
				37.7					#6				
4	RTU-4, 49 MCA, 60 MOCP	M	13.6		37.7		3	60	#6	-	#10	1"	
						37.7			#6				
				22.5					#8				
10	RTU-5, 29 MCA, 40 MOCP	M	8.1		22.5		3	40	#8	-	#10	3/4"	
						22.5			#8				
				37.7					#6				
16	RTU-6, 49 MCA, 60 MOCP	M	13.6		37.7		3	60	#6	-	#10	1"	
						37.7			#6				
20	EXHAUST FAN-1	M	0.5	4.2			1	20	#12	#12	#12	3/4"	
22	EXHAUST FAN-2	M	0.5		4.2		1	20	#12	#12	#12	3/4"	
24	EXHAUST FAN-3	M	0.5			4.2	1	20	#12	#12	#12	3/4"	
26	ROOF RECEPTACLES	R	0.8	6.7			1	20	#12	#12	#12	3/4"	
28	EXHAUST FAN-5	M	0.5		4.2		1	20	#12	#12	#12	3/4"	
30	SPARE						1	20					
32	SPARE						1	20					
34	SPARE						1	20					
36	SPARE						1	20					
38	SPARE						1	20					
40	SPARE						1	20					
42	SPARE						1	20					
	TOTALS			169.3	166.8	162.7							

NOTES
1. PROVIDE BREAKER TIE HANDLES FOR MULTI-WIRE CIRCUIT HOME RUNS

169.3	166.8	162.7

NO.	BY	REVISIONS	DATE

COMMONWEALTH OF VIRGINIA
Scott F. Burger
SCOTT F. BURGER
Lic. No. 034338
02/03/15
PROFESSIONAL ENGINEER

Virginia A&E

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

PANEL SCHEDULES

DATE: 02-FEB-15
PROJECT NO: 10043

Full Scale Verification
0" 1"

Drawing No.:
E601

PANEL "F" SCHEDULE RM A150

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
100 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 22,000 RMS SYM AMPS
ENCLOSURE: SURFACE-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
1	LIGHTING - A150-156	L	0.4	3.4			1	20	#12	#12			
3	LIGHTING - A144-148	L	0.6		5.1		1	20	#12	#12	#12	3/4"	1
5	LIGHTING - A105, A106	L	0.6			5.0	1	20	#12	#12			
7	LIGHTING - A161	L	1.2	10.0			1	20	#12	#12			
9	LIGHTING - A161-165	L	1.2		10.0		1	20	#12	#12	#12	3/4"	1
11	LIGHTING - A170-176	L	1.0			8.3	1	20	#12	#12			
13	LIGHTING	L	0.8	6.7			1	20	#12	#12	#12	3/4"	
15	SPARE						1	20					
17	SPARE						1	20					
19	SPARE						1	20					
21	SPARE						1	20					
23	SPARE						1	20					
25	SPARE						1	20					
27	SPARE						1	20					
29	SPARE						1	20					
31	SPARE						1	20					
33	SPARE						1	20					
35	EMERGENCY EGRESS LIGHTING INVERTER	E	1.5			12.5	1	25	#10	#10	#10	1"	
37	RECEPTACLES - A150 MECH RM	R	0.4	3.3			1	20	#12	#12			
39	AV RECEPTACLE - A161	R	0.4		3.3		1	20	#12	#12	#12	3/4"	1
41	AV RECEPTACLE - A144, A145	R	0.8			6.7	1	20	#12	#12			
2	RECEPTACLE - A160 REFRIGERATOR	R	0.8	6.7			1	20	#12	#12			
4	RECEPTACLE - A152, A153	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
6	SPARE						1	20	#12	#12			
8	RECEPTACLES - A106, A150, A151	R	0.8	6.7			1	20	#12	#12			
10	RECEPTACLES - A145, A156	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
12	RECEPTACLES - A152	R	1.2			10.0	1	20	#12	#12			
14	RECEPTACLES - A144	R	1.0	8.3			1	20	#12	#12			
16	RECEPTACLES - A146, A147, A148	R	1.0		8.3		1	20	#12	#12	#12	3/4"	1
18	RECEPTACLES - A105, A160	R	1.2			10.0	1	20	#12	#12			
20	RECEPTACLES - A106, A161, A162, A165	R	1.2	10.0			1	20	#12	#12			
22	RECEPTACLES - A161	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
24	RECEPTACLES - A160	R	0.8			6.7	1	20	#12	#12			
26	RECEPTACLES - A161 SCOREBOARD	R	1.0	8.3			1	20	#12	#12			
28	RECEPTACLES - A160 ICE MAKER/SINK & GFI	R	1.2		10.0		1	20	#12	#12	#12	3/4"	1
30	RECEPTACLES - A160 GFI AND REFRIGERATOR	R	1.0			8.3	1	20	#12	#12			
32	RECEPTACLES - A106, A176	R	0.6	5.0			1	20	#12	#12			
34	RECEPTACLES - A106, A174, A175, COURTYARD	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
36	RECEPTACLES - A171	R	1.0			8.3	1	20	#12	#12			
38	RECEPTACLES - A172	R	0.8	6.7			1	20	#12	#12			
40	RECEPTACLES - A173	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
42	RECEPTACLES - EW - A160	R	1.0			8.3	1	20	#12	#12			
	TOTALS			75.1	70.1	84.2							

NOTES
1. PROVIDE BREAKER TIE HANDLES TO MULTI-WIRE CIRCUIT HOMERUNS

75.1 70.1 84.2

PANEL "G" SCHEDULE RM A142

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
225 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 18,000 RMS SYM AMPS
ENCLOSURE: SURFACE-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
				24.7					#8				
3	RTU-2, 32 MCA, 45 MOCP	M	8.9		24.7		3	45	#8		#10	3/4"	
						24.7			#8				
				70.2					#2				
9	RTU-1, 91 MCA, 100 MOCP	M	25.3		70.2		3	100	#2		#8	1-1/4"	
						70.2			#2				
13	EXHAUST FAN-4	M	0.5	4.2			1	20	#12	#12	#12	3/4"	
15	ROOFTOP RECEPTACLE	R	0.4		3.3		1	20	#12	#12	#12	3/4"	
17	LIGHTING - EXTERIOR	L	0.2			1.7	1	20	#12	#12	#12	3/4"	
19	LIGHTING - EXTERIOR	L	1.0	8.3			1	20	#12	#12	#12	3/4"	
21	SPACE						1						
23	SPACE						1						
25	SPACE						1						
27	GENERATOR BLOCK HEATER	E	1.5		7.2		2	20	#12		#12	3/4"	
						7.2							
31	GENERATOR BATTERY CHARGER	E					1	20	#12	#12	#12	3/4"	
33	SPACE						1						
35	SPACE						1						
37	SPACE						1						
39	SPACE						1						
41	SPACE						1						
2	DRYER	E	5.0	24.0			2	30	#10	-	#10	3/4"	
					24.0								
6	WASHING MACHINE	E	0.8			7.0	1	20	#12	#12	#12	3/4"	
8	COPIER	E	1.2	10.0			1	20	#12	#12	#12	3/4"	
10	FIRE ALARM CONTROL PANEL	E	0.6		5.0		1	20	#12	#12	#12	3/4"	
12	TELE BACKBOARD RCPTS	R	0.8			6.7	1	20	#12	#12	#12	3/4"	
14	TELE BACKBOARD RCPTS	R	0.8	6.7			1	20	#12	#12	#12	3/4"	
16	SPARE						1	20					
18	SPARE						1	20					
20	SPARE						1	20					
22	SPARE						1	20					
24	SPARE						1	20					
26	SPARE						1	20					
28	SPARE						1	20					
30	SPARE						1	20					
32	SPARE						1	20					
34	SITE LIGHTING	L	1.2		5.8		2	20	#6	-	#10	1-1/4"	
						5.8			#6				
38	HOTBOX @ VALVES	M	1.5	12.5			1	20	#6	#6	#10	1-1/4"	1
40	HOTBOX @ VALVES	M	1.5		12.5		1	20	#6	#6			
42	SPARE						1	20					
	TOTALS			160.6	152.8	123.2							

NOTES
1. PROVIDE BREAKER TIE HANDLES TO MULTI-WIRE CIRCUIT HOMERUNS

160.6 152.8 123.2

PANEL "H" SCHEDULE RM A142

PANELBOARD CHARACTERISTICS:
VOLTS: 120/208
PHASES: 3
WIRES: 4
SOLID NEUTRAL, GROUND BAR

PHASE TO PHASE VOLTS: 208
PHASE TO NEUT. VOLTS: 120
100 AMP MAIN LUGS ONLY
MINIMUM SHORT CIRCUIT RATING: 18,000 RMS SYM AMPS
ENCLOSURE: SURFACE-NEMA 1 DOOR-WITHIN-DOOR

POLE NO.	DESCRIPTION	LOAD TYPE	CONN. KVA	CONN. AMPS A	CONN. AMPS B	CONN. AMPS C	BREAKER P	BREAKER AT	NO. & WIRE SIZE PHASE	NO. & WIRE SIZE NEUT.	NO. & WIRE SIZE GND	COND SIZE	NOTES
1	LIGHTING - A140, A141, A142, A143	L	0.4	2.9			1	20	#12	#12			
3	LIGHTING - A104, A110, A121, A123, A130-132	L	0.6		5.0		1	20	#12	#12	#12	3/4"	1
5	LIGHTING - A100-101, A117-120, A124-125, A133-134	L	0.8			6.7	1	20	#12	#12			
7	LIGHTING - A111-116	L	0.8	6.7			1	20	#12	#12			
9	LIGHTING - EXTERIOR	L	0.2		1.7		1	20	#12	#12	#12	3/4"	1
11	LIGHTING - EXTERIOR COURTYARD	L	0.1			1.2	1	20	#12	#12			
13	AV RECEPTACLES - A116	R	0.4	3.3			1	20	#12	#12	#12	3/4"	
15	SPACE						1						
17	SPACE						1						
19	SPACE						1						
21	SPACE						1						
23	SPACE						1						
25	SPACE						1						
27	SPARE						1	20					
29	SPARE						1	20					
31	SPARE						1	20					
33	SPARE						1	20					
35	SPARE						1	20					
37	SPARE						1	20					
39	SPARE						1	20					
41	SPARE						1	20					
2	SPARE						1	20					
4	RECEPTACLES - A104, A130, A131, A141, EXTERIOR GFI	R	1.4		11.7		1	20	#12	#12	#12	3/4"	1
6	RECEPTACLES - A132	R	0.2			1.7	1	20	#12	#12			
8	RECEPTACLES - A133, A134	R	1.2	10.0			1	20	#12	#12			
10	RECEPTACLES - A104, A123, A121, COURTYARD	R	1.0		8.3		1	20	#12	#12	#12	3/4"	1
12	RECEPTACLES - A121, A125	R	1.0			8.3	1	20	#12	#12			
14	RECEPTACLES - A110 FRIDGE, GFI	R	1.0	8.3			1	20	#12	#12			
16	RECEPTACLES - A110 SINK	R	0.2		1.7		1	20	#12	#12	#12	3/4"	1
18	RECEPTACLES - A116	R	1.0			8.3	1	20	#12	#12			
20	RECEPTACLES - A114, A115	R	1.4	11.7			1	20	#12	#12			
22	RECEPTACLES - A112, A113	R	1.2		10.0		1	20	#12	#12	#12	3/4"	1
24	RECEPTACLES - A110, A117, A118, A120	R	1.2			10.0	1	20	#12	#12			
26	RECEPTACLES - A111, A112	R	1.0	8.3			1	20	#12	#12			
28	RECEPTACLES - EW - A101	R	1.0		8.3		1	20	#12	#12	#12	3/4"	1
30	RECEPTACLES - TV LOBBY A101, EXTERIOR GFI	R	0.4			3.3	1	20	#12	#12			
32	RECEPTACLES - A142, A143	R	0.8	6.7			1	20	#12	#12			
34	RECEPTACLES - A140	R	0.8		6.7		1	20	#12	#12	#12	3/4"	1
36	RECEPTACLES - A140	R	1.0			8.3	1	20	#12	#12			
38	SPARE						1	20					
40	SPARE						1	20					
42	SPARE						1	20					
	TOTALS			57.9	53.3	47.8							

NOTES
1. PROVIDE BREAKER TIE HANDLES TO MULTI-WIRE CIRCUIT HOMERUNS

57.9 53.3 47.8

LIGHTING FIXTURE SCHEDULE

SYM	MANUFACTURER'S CATALOG NO.	VOLTS	VOLT-AMPS	DESCRIPTION	REMARKS
A	WAC LIGHTING HR-LED471-WT	120	3	4 INCH RECESSED LED SHOWER LIGHT WITH SQUARE TRIM	10' AFF
B	LITHONIA ZL2N L48 3000LM MDD MVOLT 40K 80CRI WH WITH HC36	120	42	LENSED LED STRIPLIGHT	EQUIPMENT AND STORAGE ROOMS
C	LITHONIA 2GTL 4 40L LP840 SLD	120	39	RECESSED 2x4 LED TROFFER 4243 LUMEN OUTPUT	STEP LEVEL DIMMING
D	LITHONIA 2GTL F 60L MVOLT LP840 DGA24	120	59	RECESSED 2x4 LED TROFFER (FLANGE) 5559 LUMEN OUTPUT	
E	KIRLIN LRR 04006 120 41K 32	120	20	4" SUPER SHALLOW LENSED DOWNLIGHT RECESSED CANS FOR WET LOCATION	
F	LITHONIA 2VTL2 36L ADP D36 LP840	120	24	RECESSED 2x2 LED TROFFER 2425 LUMEN OUTPUT	
G	LITHONIA 2VTL 40L ADPLP840 SLD	120	36.3	RECESSED 2x4 LED TROFFER 4211 LUMEN OUTPUT	STEP LEVEL DIMMING
H	LITHONIA 2VTL 60L ADPLP840	120	52	RECESSED 2x4 LED TROFFER 6000 LUMEN OUTPUT	
J	KIRLIN LNT-07101-17-26-35	120	1.3	RECESSED LOUVERED TYPE IC LED NIGHTLIGHT	INSTALL 24" AFF
K	LITHONIA 2TL2 33L A12 D38 LP840	120	12	RECESSED 2x2 LED TROFFER 3252 LUMEN OUTPUT	
L	LITHONIA EVO 41/10 6AR FL MD	120	18.4	6" RECESSED LED CAN 1113 LUMEN OUTPUT MEDIUM DISTRIBUTION	
M	LITHONIA EVO 41/14 6AR FL MD	120	24.6	6" RECESSED LED CAN 1539 LUMEN OUTPUT MEDIUM DISTRIBUTION	
N	LITHONIA 2GTL 30L MVOLT LP840	120	26	RECESSED 2x4 LED TROFFER 3000 LUMEN OUTPUT	
P	LITHONIA FMML 7 8 40	120	5	SURFACE MOUNTED LED CLOSET FIXTURE 660 LUMEN OUTPUT	
R	WINONA WACOL 96LONG SCV2 LED15 40K MVOLT QC RA	120	114	96" LED COVE REFLECTOR STRIP LIGHT	
R1	WINONA WACOL 72LONG SCV2 LED15 40K MVOLT QC RA	120	86	72" LED COVE REFLECTOR STRIP LIGHT	
R2	WINONA WACOL 48LONG SCV2 LED15 40K MVOLT QC RA	120	57	48" LED COVE REFLECTOR STRIP LIGHT	
R3	WINONA WACOL 32LONG SCV2 LED15 40K MVOLT QC RA	120	43	32" LED COVE REFLECTOR STRIP LIGHT	
S	LITHONIA JHBL GL WD MVOLT GZ10 40K 80 CRI DWH WGX	120	120	HIGH BAY LED WITH WIREGUARD	INSTALL 15' AFF TO BOTTOM
T	NOT USED				
U	FOCAL POINT SKYDOME LED FSDL 22 4000L 35K LD1 120 SM CX WH	120	72	2' PENDANT	INSTALL 12' AFF
V	GOTHAM EVO 41/22 6AR LS WD 120	120	31.6	6" RECESSED LED CAN	
W	NOT USED				
X	REELLE STREAMLINE 6002 LED 200L 24 4K 120 5.7K WT	120	200	WALL MOUNT INTERIOR	INSTALL 13' AFF TO BOTTOM
Y	LITHONIA MRW LED 2 10A700/50K SR4 MVOLT SF ANODIZED ALUMINUM	120	47	WALL MOUNT EXTERIOR	INSTALL 9' AFF TO CENTER
Z	LITHONIA MRW LED 1 10A700/50K SR4 MVOLT-SF-ANODIZED ALUMINUM	120	24	WALL MOUNT EXTERIOR	INSTALL 9" AFF TO CENTER
SL1	LITHONIA DSX2 LED-80C-530-50K-T4M-MVOLT-SPA-SF-DBLXD-SSA-25-6J-DM19-FBC-TP-DBL	120	142	SINGLE HEAD POLE MOUNTED LIGHTING FIXTURE	
EX	LITHONIA LQM S W 3 G 120/277	120	0.62	LED EXIT	INSTALL 4" ABOVE DOOR FRAME

NOTES:
1. EXIT LIGHTS SHALL BE UNSWITCHED AND SHALL RECEIVE POWER CONTINUOUSLY FROM LIGHTING INVERTER
2. THESE BASIS-OF-DESIGN LIGHT FIXTURES ARE LISTED TO NOTE SIZE, SHAPE, COLOR, AND PERFORMANCE. SUBSTITUTIONS SHALL BE APPROVED BY A/E.

DATE
REVISIONS
BY
NO.

COMMONWEALTH OF VIRGINIA
Scott F. Burger
SCOTT F. BURGER
Lic. No. 034338
02/03/15
PROFESSIONAL ENGINEER

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LYNCHBURG JUVENILE SERVICES GROUP HOME
CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG
1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

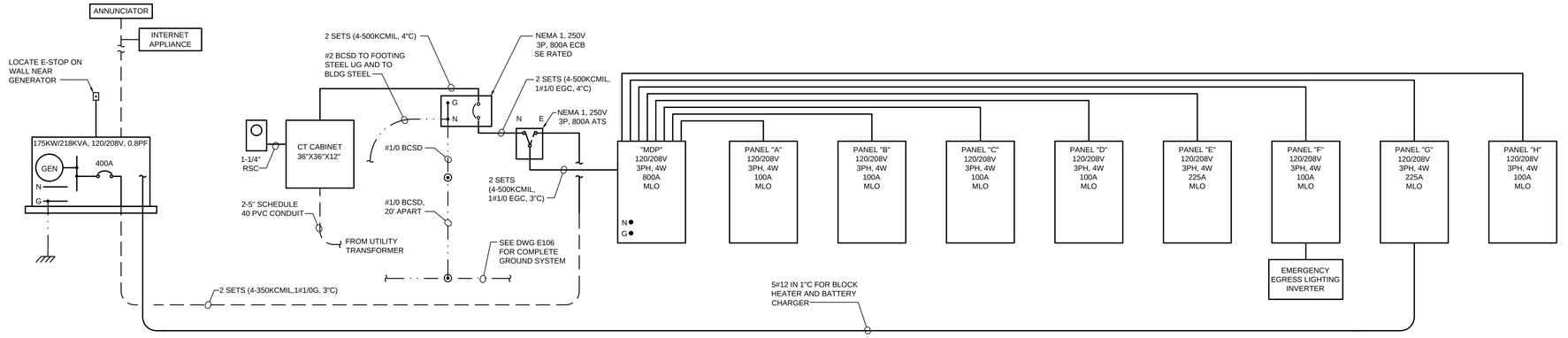
PANEL AND LIGHTING SCHEDULES

DATE: 02-03-15

PROJECT NO: 10043

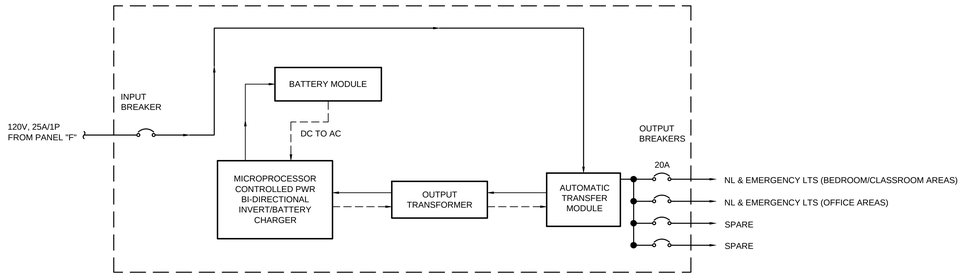
Full Scale Verification
0" 1"

Drawing No.:
E602



SINGLE LINE DIAGRAM

SCALE: NONE



CENTRAL INVERTER DIAGRAM

SCALE: NONE

NO.	BY	REVISIONS	DATE

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CITY PROJECT NO: B0158
ENGINEERING PROJECT NO: 10043-BG

1401 FLORIDA AVENUE
LYNCHBURG, VIRGINIA

SINGLE LINE DIAGRAM

DATE: 01-05-15

PROJECT NO: 10043

Full Scale Verification

0" 1"

Drawing No.:

E701