BCDC YOUTH DETENTION CENTER

AT THE

BALTIMORE CITY DETENTION CENTER

IN THE

DIVISION OF PRETRIAL DETENTION AND SERVICES (DPDS)

DPSCS CONTRACT NO. : KT-000-150-C01



BIDDING DOCUMENTS
FEBRUARY 05, 2015
VOLUME 2 OF 2

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDE RTHE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18565, EXPIRATION DATE 01/19/2016.

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STRUCTURAL

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A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

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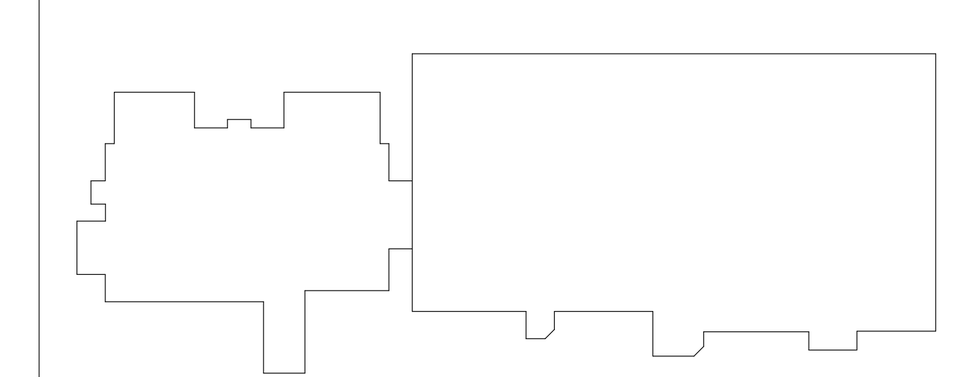
ARCHITECT 13814 JAMES L. BEIGHT STATE OF MARYLAND

THE CONTRACT DOCUMENTS FOR THE INDICATED PUBLIC IMPROVEMENT WERE PREPARED UNDER MY SUPERVISION AND, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THEY COMPLY WITH THE RELEVANT BUILDING CODES OF THE STATE OF MARYLAND. LICENSE NUMBER 13814, EXPIRATION DATE 3/28/2015.

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	2-5-2015

TITLE

INDEX

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

G003

SHEET NO.

KEY NOTES

1. INTUMESCENT FIREPROOFING AT ROOF DECK AND JOISTS OF HOUSING UNIT UPPER ROOFS (CLERESTORY AREA), & OTHER AREAS OF EXPOSED STRUCTURE ACCESSIBLE TO DETAINEES (NEW CONSTRUCTION ONLY).
2. INTUMESCENT FIREPROOFING AT EXPOSED COLUMNS AND ROOF BEAMS OF GYMNASIUM. (ROOF JOISTS AND DECK ARE EXEMPTED FROM THE FIRE-PROTECTION REQUIREMENT AS THEY ARE NOT LESS THAN 20' ABOVE THE FLOOR.
3. SPRAY FIRE-RESISTIVE MATERIAL AT COLUMNS AND BRACING IN CONCEALED AREAS OF GYMNASIUM WALLS.
4. SPRAY FIRE-RESISTIVE MATERIAL AT STRUCTURAL FRAME, ROOF FRAMING AND DECKING EXPOSED AT MECHANICAL ROOMS, ELEVATOR EQUIPMENT, & OTHER NON-DETAINEE AREAS, AND ABOVE CEILINGS OF OTHER SPACES (NEW CONSTRUCTION ONLY).

GENERAL NOTES

1. ALL PENETRATIONS THROUGH BUILDING ELEMENTS REQUIRED TO BE RATED SHALL BE PROVIDED WITH AN APPROVED PROTECTION METHOD IN ACCORDANCE WITH SECTION 07 84 13 DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN WHICH IT IS INSTALLED.
2. ALL JOINTS MADE IN OR BETWEEN BUILDING ELEMENTS REQUIRED TO BE RATED SHALL BE PROTECTED BY AN APPROVED FIRE-RESISTANT JOINT SYSTEM IN ACCORDANCE WITH SECTION 07 84 46 DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN OR BETWEEN WHICH IT IS INSTALLED.
3. AT NEW CONSTRUCTION (NOT APPLICABLE TO SUI BUILDING): ALL STRUCTURAL STEEL FRAME MEMBERS NOT ENCASED IN FIRE-RESISTANCE-RATED CONSTRUCTION, AND ALL ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS LESS THAN 20 FEET ABOVE THE FLOOR, SHALL BE HAVE APPLIED FIREPROOFING PROVIDING 1-HOUR FIRE-RESISTANCE-RATED PROTECTION.

LEGEND

- NON-RATED SMOKE-TIGHT PARTITION
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- 1-HR FIRE-RESISTANCE-RATED FIRE PARTITION
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- FIRE SEPARATION LINE (PER IBC 702)
- EXIST. SEPARATION BETWEEN OSTC-OCCUPIED AREA OF SUI BLDG. & YDC
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- (83) EXIT OCCUPANT LOAD
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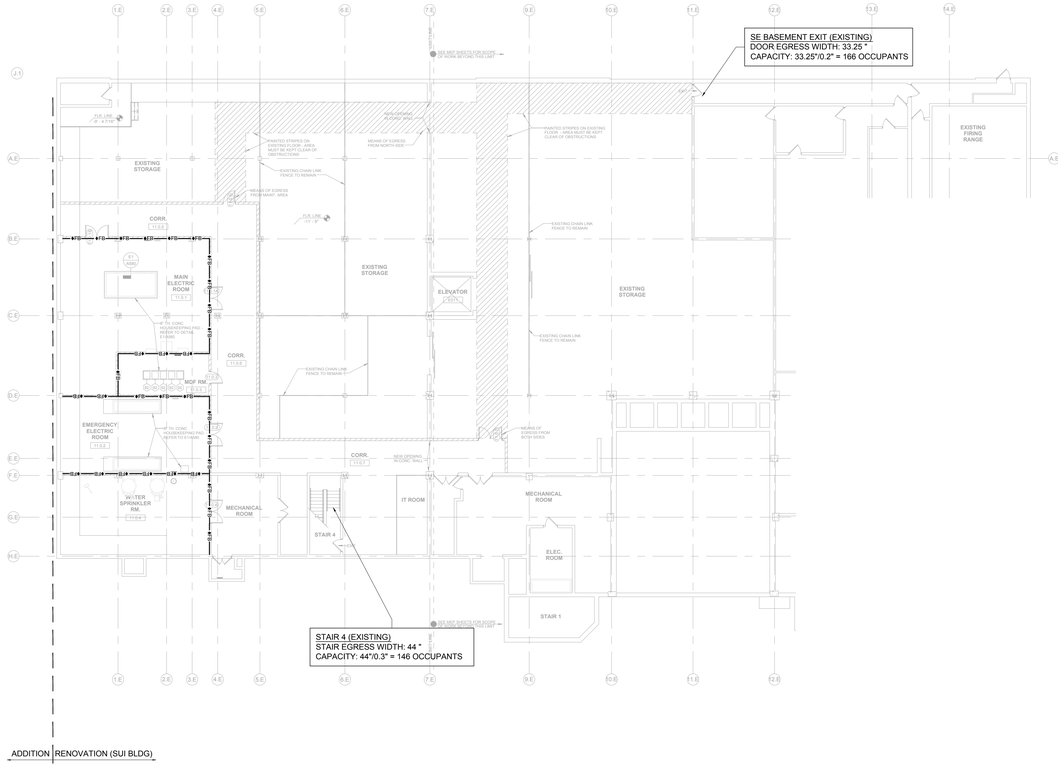

1 G100 BASEMENT CODE SYNOPSIS PLAN
1/16" = 1'-0"

N
NORTH
0' 8" 16' 32'

APPLICABLE CODES

Building Code:	IBC (2012) IEBC (2012)
Fire Code:	NFPA 101 (2012) (Life Safety Code) NFPA 1 (2012) (Fire Code)
Mechanical Code:	IMC (2012)
Plumbing Code:	NSPC (2012)
Electrical Code:	NED (2011)
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Elevator Safety Code:	IBC 2012 in addition to DLLR Requirements
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Energy Conservation Code:	IECC (2012)

ENERGY CODE DATA

BUILDING ENVELOPE REQUIREMENTS PER IECC

Opaque Assemblies	Req'd U-factor	Req'd R-Value	Provided
Roofs			
Insulation entirely above deck		R-25	R-30 min. (metal) R-25 min. (TPO)
Attic (below exterior slabs)		R-38	R-38
Walls			
Mass (new construction)		R-9.5ci	R-12.6 ci (new)
Mass (existing building)	N/A	N/A	U-0.58 (exist)
Metal Framed		R-13+R-7.5ci	R-23+-R-8.4ci
Slab on Grade			
Unheated slab		R-10ci	R-10ci

Fenestration	Req'd U-factor	Req'd SHGC	Provided
Doors			
Entrance door (glazed)	U-0.77		U-0.57
Vertical Fenestration			
Fixed Fenestration			
Detention windows	U-0.38		U-0.22
Aluminum storefront	U-0.38		U-0.39
SHGC:		0.40	0.35
Skylights	U-0.50		U-0.39
SHGC		0.40	0.27

BUILDING CODE DATA

NFPA 101 LIFE SAFETY CODE, 2012 (unless noted otherwise; references to IBC are to IBC 2012)

Occupancy Classification

Chapter 22: New Detention and Correctional Occupancies
Classification: Use Condition IV, Impeded Egress

Group I-3 (IBC 308.5), Condition 4 (IBC 308.5)

Mixed Occupancies (IBC 508.3): Business areas (outside the secure area) considered under the provisions of 508.2.1 for an accessory occupancy, no separation of occupancies required.

General Building Heights and Areas (IBC Chapter 5)

COMAR deletes reference to NFPA 5000 Building Construction and Safety Code and substitutes the building code adopted by the Authority Having Jurisdiction (Maryland Building Performance Standards adopt IBC 2012).

Allowable Buildings Heights and Areas (IBC Table 504)
Existing 2-story SUI building provides equivalent of Type IIB construction; proposed 3-story addition is of Type IIA construction

Occupancy Group	ADDITION IIA Type Construction	EXISTING IIB Type Construction
I-3	2 stories, 65' height 15,000 SF	1 story, 55' height 10,000 SF

Automatic Sprinkler Height Increase (IBC 504.2): Allows increase in max. ht. by 20' and max. number of stories by 1

Building Area Modifications (IBC 506)

Building area in Table 503 may be increased to frontage and automatic sprinkler protection as follows:

$$Aa + [At + [At \times If) + [At \times Is]]$$

Aa = allowable building area (SF) per story
At = tabular building area per story per Table 503
If = area increase factor due to frontage calculated per 506.2
Is = area increase factor due to sprinkler protection calculated per 506.3

506.2 Frontage increase: Allowed for a building has more than 25% of its perimeter on a public way or open space having a width of not less than 20 feet.

$$If = [F/P - 0.25] W/30$$

If = area increase factor due to frontage
F = Building perimeter fronting public way or open space ≥ 20 feet wide
P = Perimeter of entire building
W = Width of public way or open space

506.3 Automatic sprinkler system increase: Allows building area limitation from Table 503 to be increased by an additional 200 percent for buildings with more than one story above grade plane.

Existing SUI building (area renovated for YDC plus area occupied by OSTC program):
Allowable frontage increase:
If = [713/838 - 0.25] 30/30 = 0.60
Allowable Area (Type IIB):
Aa = {10,000 + [10,000 x 0.60] + [10,000 x 2]} = 36,000

Existing area of largest floor (2nd floor) 33,804 SF

Addition:
Allowable frontage increase:
Not calculated because not needed
Allowable Area (Type IIA)
Aa = {15,000 + [15,000 x 2]} = 45,000 SF

Largest floor (2nd floor): 25,460 SF

Incidental Uses (IBC 509)

IBC Table 509 Hazardous Area Protection

Room or Area	Separation and/or Protection
Rooms w/ boilers where largest equip. >15 psi & 10 hp	1 hour or automatic sprinkler
Refrigerant machinery room	1 hour or automatic sprinkler
Laundry rooms over 100 SF	1 hour or automatic sprinkler
Group I-3 cells equipped with padded surfaces	1 hour
Waste and linen collection rooms over 100 SF	1 hour

Protection from Hazards

Table 22.3.2.1 Hazardous Area Protection

Hazardous Area Description	Separation/Protection
Boiler and fuel-fired heater rooms	1 hour
Central or bulk laundries >100 SF	1 hour
Commercial cooking equipment	In accordance with 9.2.3
Commissaries	Smoke resistant
Employee locker rooms	Smoke resistant
Hobby/handicraft shops	Smoke resistant
Maintenance shops	Smoke resistant
Soiled linen rooms	1 hour
Storage rooms >50 SF in area but ≤100 SF in area storing combustible materials	Smoke resistant
Storage rooms >100 SF storing combustible materials	1 hour
Trash collection rooms	1 hour

Type of Construction (IBC Chapter 6)

Fire-Resistance Rating Requirements for Building Elements (in hours) (IBC Table 601)

Building Element	IIA: Rating Req'd	IIB: Rating Req'd	Notes
Structural Frame	1	0	
Bearing Walls			
Exterior	1	0	not < Table 602 req'ts.
Interior	1	0	
Nonbearing Walls			
Exterior	see Table 602	see Table 602	
Interior	0	0	not < req'd by other code sections
Floor construction	1	0	
Roof construction	1	0	rating not required for roof framing and decking ≥ 20' above floor below

Fire-Resistance Rating Requirements (in hours) for Exterior Walls Based on Fire Separation Distance (feet) for Types IIA & IIB Construction , Occupancy Classification I-3 (IBC Table 602):

Fire Separation Distance (X)	Type of Construction	Rating Req'd
X > 5	both	1
5 ≤ X< 10	both	1
10 ≤X< 30	IIA	1
	IIB	0
X ≥ 30	both	0

Fire-Resistance-Rated Construction (IBC Chapter 7)

Definitions (IBC 702)

Fire Separation Distance (as defined in Chapter 2): the distance measured from the building face to one of the following:
1. The closest interior lot line;
2. The centerline of a street, an alley or public way; or
3. An imaginary line between two buildings on the property. (The imaginary line can be located anywhere between the two buildings, but once established the location of the line applies to both buildings and cannot be revised.)

Exterior Walls (IBC 705)

Fire-resistance rating (IBC 705.5): Rate exterior walls in accordance with Tables 601 and 602. Rate for exposure from the inside with fire separation distance > 10 feet. Rate for exposure from both sides with fire separation distance ≤ 10 feet.
Allowable area of openings (IBC 705.8.1): Maximum area of unprotected or protected openings in an exterior wall shall not exceed the values set forth in Table 705.8.
Automatic sprinkler system (IBC 704.8.1): With sprinkler system, maximum area of unprotected openings shall be the same as limitations for protected openings. *No limit on area of openings for fire separation distance > 20 feet*.

Maximum Area of Exterior Wall Openings (IBC Table 705.8):

	Fire Separation Distance					
Degree of Op'g Protection	X<3	3<X≤5	5<X≤10	10<X≤15	15<X≤20	20<X
Protected	Not permitted	15%	25%	45%	75%	No limit
Unprotected	Not permitted	15%	25%	45%	75%	No limit

Smoke Barriers (IBC 709)

Smoke barriers require 1-hour fire-resistance rating (IBC 709.3).
Openings: protect in accordance with Section 716 (IBC 709.5).
Penetrations: Comply with Section 714 (IBC 709.6).
Joints: Comply with Section 715 (IBC 709.7).
Ducts and air transfer openings: comply with Section 717 (IBC 709.8).

Shaft Enclosures

8.6.5 1 hour fire barrier where connecting 3 stories or fewer.
Fire-resistance rating: Not less than 1 hour fire barrier where connecting less than 4 stories, not less than fire-resistance rating of floor assembly penetrated (IBC 713.4).

Opening Protectives

Table 8.3.4.2 Minimum Fire Protection Ratings for Opening Protectives in Fire Resistance-Rated Assemblies (hours)

Component	Walls & Partitions	Fire Door Assemblies	Fire Window Assemblies
Elevator hoistways	2	1-1/2	NP
	1	1	NP
Vertical shafts (incl. stairways, exits, & refuse chutes)	2	1-1/2	NP
	1	1	NP
Fire barriers	2	1-1/2	NP
	1	3/4	3/4
	1/2	1/3	1/3
Horizontal exits	2	1-1/2	NP
Exit access corridors	1	1/3	3/4
Smoke barriers	1	1/3	1/3
Smoke partitions	1/2	1/3	1/3

Opening Fire Protection Assemblies, Ratings and Markings (IBC Table 716.5)

Type of Assembly	Required Assembly Rating (in hrs)	Min. Fire Door & Fire Shutter Assembly Ratings (in hrs)
Fire walls & barriers w/ > 1-hour rating	2	1-1/2
	1-1/2	1-1/2
Fire barriers w/ 1-hour rating		
Shaft, exit enclosure & exit passageways	1	1
Other fire barriers	1	3/4
Fire Partitions		
Corridor walls	1	1/3
Other fire partitions	1	3/4
Exterior Walls	1	3/4
Smoke Barriers	1	1/3

Occupant Loads

First Floor: 365
Second Floor: 354 (including occupants of upper housing tier)
Third Floor: 222

Fire Pumps (IBC 913)

Protection of fire pump rooms (IBC 913.2.1, Exception 1 for automatic sprinkler system): separate from all other areas of the building by 1-hour fire barriers or 1-hour horizontal assemblies, or both.

Means of Egress

Table 7.3.3.1 Capacity of Means of Egress
Stairways: 0.3 inches per person
Level components: 0.2 inches per person

7.4.1.1(2)Single means of egress permitted for a mezzanine or balcony where common path of travel limitations are met.

22.2.3.2 Aisles, corridors and ramps required for egress shall be not less than 48" in width

Arrangement

2.2.5.2 Dead end: 50' maximum in Condition IV.
22.2.5.3 Common path of travel: 100' maximum
22.2.6.2 Travel distance: 150' maximum from any room door required as an exit access and an exit
22.2.6.4 Travel distance: 200' maximum from any point in a room and an exit

Dead ends (IBC 1018.4): where more than one exit or exit access is req'd, no dead ends more than 20' in length.
Exceptions:
1. In I-3 Occupancies, dead end shall not exceed 50'.
3. Unlimited where length of dead is less than 2.5 times the least width of the dead end corridor.

Exit Access (IBC 1014)

Common path of egress travel: 100' maximum in I-3 Occupancy (IBC 1014.3).

Exit Access Travel Distance (IBC 1016)

200' maximum in I-3 Occupancy with sprinkler system (IBC Table 1016.1)

Exit Access Corridors

7.1.3.1 Exit Access Corridors: 1 hour fire rating where serving occupant load exceeding 30.
Corridor Fire-Resistance Rating: 1 hour in I-3 Occupancy with sprinkler system, for all occupant loads (IBC Table 1018.1).

Interior Exit Stairways and Ramps

7.1.3.2.1 Exits: 1 hour fire barrier where connecting 3 stories or less.
Construct as 1-hour fire barriers where connecting less than 4 stories (IBC 1022.2).

Horizontal Exits

22.2.2.5: Horizontal exits shall be permitted.
Horizontal exits permitted to comprise 100% of exits required for Group I-3 occupancies. At least 6 SF of space per occupant shall be provided on each side of the horizontal exit for the total number of people in adjoining compartments (IBC 1025.1, Exception 2).
Separation (IBC 1025.2) shall be provided by a fire wall, fire barrier or horizontal assembly; minimum fire-resistance rating of 2 hours.

Discharge from Exits

22.2.7.1: Exits shall be permitted to discharge into a fenced or walled courtyard, provided that not more than two walls of the courtyard are the building walls form which egress is being made.
22.2.7.2: Enclosed yard used for exit discharge shall accommodate all occupants at distance ≥ 50' from building, with net area of 15 SF per person.

Extinguishment Requirements

22.3.5.5(1) Provide Class I standpipe systems for any building 3 or more stories in height.

Subdivision of Building Spaces

22.3.7.1 Smoke barriers to divide every story used for sleeping by residents or stories having an occupant load of 50 or more into not less than 2 compartments.
22.3.7.3 Maximum residents in smoke compartment: 200
Max. distance to door in smoke barrier: 150' from room door, 200' from any point in room
22.3.7.7 Area per occupant on ea. side of smoke barrier for occupants in adjoining compartments: 6 SF

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

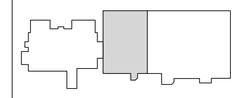
SEAL

ARCHITECTURAL REGISTRATION BOARD 6928-R DANIEL LEROY BAILEY STATE OF MARYLAND

I certify that these documents were prepared or approved by me, and that I am duly licensed architect under the laws of the state of Maryland.

Signature
License Number 6928-R
Expiration Date 01-26-2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY		Author
APPROVED BY	XX	Approver
CHECKED BY	XX	Checker
DATE	XX	02-05-2015

TITLE

BASEMENT CODE SYNOPSIS PLAN

PBA PROJECT NO.	13023
DPSCS CONTRACT NO.	KT-000-150-C01

G100

SHEET NO. XXX

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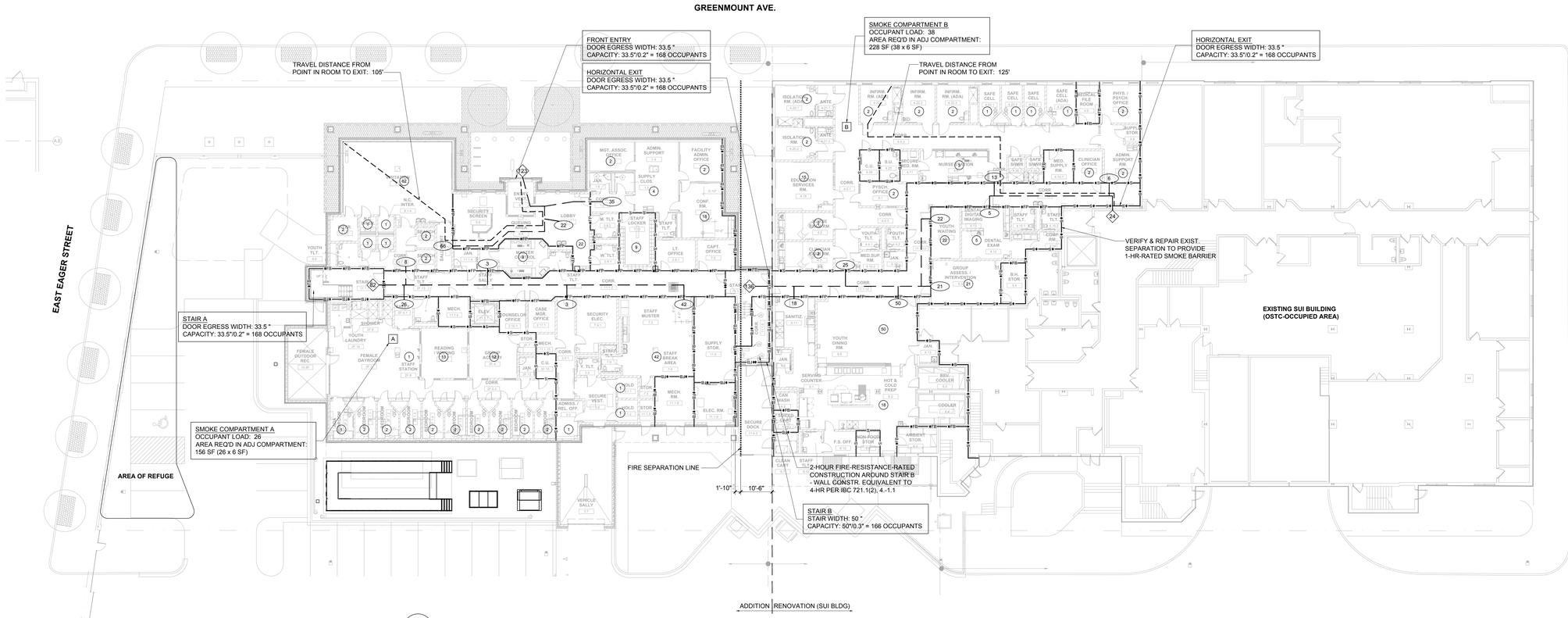

1 G110 FIRST FLOOR CODE SYNOPSIS PLAN
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Allowable Area (Type IIA)
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Exterior	see Table 602	see Table 602	
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Floor construction	1	0	
Roof construction	1	0	rating not required for roof framing and decking ≥ 20' above floor below

Fire-Resistance Rating Requirements (in hours) for Exterior Walls Based on Fire Separation Distance (feet) for Types IIA & IIB Construction , Occupancy Classification I-3 (IBC Table 602):

Fire Separation Distance (X)	Type of Construction	Rating Req'd
X > 5	both	1
5 ≤ X< 10	both	1
10 ≤X< 30	IIA	1
	IIB	0
X ≥ 30	both	0

Fire-Resistance-Rated Construction (IBC Chapter 7)

Definitions (IBC 702)

Fire Separation Distance (as defined in Chapter 2): the distance measured from the building face to one of the following:
1. The closest interior lot line;
2. The centerline of a street, an alley or public way; or
3. An imaginary line between two buildings on the property. (The imaginary line can be located anywhere between the two buildings, but once established the location of the line applies to both buildings and cannot be revised.)

Exterior Walls (IBC 705)

Fire-resistance rating (IBC 705.5): Rate exterior walls in accordance with Tables 601 and 602. Rate for exposure from the inside with fire separation distance > 10 feet. Rate for exposure from both sides with fire separation distance ≤ 10 feet.
Allowable area of openings (IBC 705.8.1): Maximum area of unprotected or protected openings in an exterior wall shall not exceed the values set forth in Table 705.8.
Automatic sprinkler system (IBC 704.8.1): With sprinkler system: maximum area of unprotected openings shall be the same as limitations for protected openings. *No limit on area of openings for fire separation distance > 20 feet*.

Maximum Area of Exterior Wall Openings (IBC Table 705.8):

Degree of Op'g Protection	X<3	3<X≤5	5<X≤10	10<X≤15	15<X≤20	20<X
	Fire Separation Distance					
Protected	Not permitted	15%	25%	45%	75%	No limit
Unprotected	Not permitted	15%	25%	45%	75%	No limit

Smoke Barriers (IBC 709)

Smoke barriers require 1-hour fire-resistance rating (IBC 709.3).
Openings: protect in accordance with Section 716 (IBC 709.5).
Penetrations: Comply with Section 714 (IBC 709.6).
Joints: Comply with Section 715 (IBC 709.7).
Ducts and air transfer openings: comply with Section 717 (IBC 709.8).

Shaft Enclosures

8.6.5 1 hour fire barrier where connecting 3 stories or fewer.
Fire-resistance rating: Not less than 1 hour fire barrier where connecting less than 4 stories, not less than fire-resistance rating of floor assembly penetrated (IBC 713.4).

Opening Protectives

Table 8.3.4.2 Minimum Fire Protection Ratings for Opening Protectives in Fire Resistance-Rated Assemblies (hours)

Component	Walls & Partitions	Fire Door Assemblies	Fire Window Assemblies
Elevator hoistways	2	1-1/2	NP
	1	1	NP
Vertical shafts	2	1-1/2	NP
(incl. stairways, exits, & refuse chutes)	1	1	NP
Fire barriers	2	1-1/2	NP
	1	3/4	3/4
	1/2	1/3	1/3
Horizontal exits	2	1-1/2	NP
Exit access corridors	1	1/3	3/4
Smoke barriers	1	1/3	1/3
Smoke partitions	1/2	1/3	1/3

Opening Fire Protection Assemblies, Ratings and Markings (IBC Table 716.5)

Type of Assembly	Required Assembly Rating (in hrs)	Min. Fire Door & Fire Shutter Assembly Ratings (in hrs)
Fire walls & barriers w/ > 1-hour rating	2	1-1/2
	1-1/2	1-1/2
Fire barriers w/ 1-hour rating		
Shaft, exit enclosure & exit passageways	1	1
Other fire barriers	1	3/4
Fire Partitions		
Corridor walls	1	1/3
Other fire partitions	1	3/4
Exterior Walls	1	3/4
Smoke Barriers	1	1/3

Occupant Loads

First Floor: 365
Second Floor: 354 (including occupants of upper housing tier)
Third Floor: 222

Fire Pumps (IBC 913)

Protection of fire pump rooms (IBC 913.2.1, Exception 1 for automatic sprinkler system): separate from all other areas of the building by 1-hour fire barriers or 1-hour horizontal assemblies, or both.

Means of Egress

Table 7.3.3.1 Capacity of Means of Egress
Stairways: 0.3 inches per person
Level components: 0.2 inches per person

7.4.1.1(2)Single means of egress permitted for a mezzanine or balcony where common path of travel limitations are met.

22.2.3.2 Aisles, corridors and ramps required for egress shall be not less than 48" in width

Arrangement

2.2.5.2 Dead end: 50' maximum in Condition IV.
22.2.5.3 Common path of travel: 100' maximum
22.2.6.2 Travel distance: 150' maximum from any room door required as an exit access and an exit
22.2.6.4 Travel distance: 200' maximum from any point in a room and an exit

Dead ends (IBC 1018.4): where more than one exit or exit access is req'd, no dead ends more than 20' in length.
Exceptions:
1. In I-3 Occupancies, dead end shall not exceed 50'.
3. Unlimited where length of dead is less than 2.5 times the least width of the dead end corridor.

Exit Access (IBC 1014)

Common path of egress travel: 100' maximum in I-3 Occupancy (IBC 1014.3).

Exit Access Travel Distance (IBC 1016)

200' maximum in I-3 Occupancy with sprinkler system (IBC Table 1016.1)

Exit Access Corridors

7.1.3.1 Exit Access Corridors: 1 hour fire rating where serving occupant load exceeding 30.
Corridor Fire-Resistance Rating: 1 hour in I-3 Occupancy with sprinkler system, for all occupant loads (IBC Table 1018.1).

Interior Exit Stairways and Ramps

7.1.3.2.1 Exits: 1 hour fire barrier where connecting 3 stories or less.
Construct as 1-hour fire barriers where connecting less than 4 stories (IBC 1022.2).

Horizontal Exits

22.2.2.5: Horizontal exits shall be permitted.
Horizontal exits permitted to comprise 100% of exits required for Group I-3 occupancies. At least 6 SF of space per occupant shall be provided on each side of the horizontal exit for the total number of people in adjoining compartments (IBC 1025.1, Exception 2).
Separation (IBC 1025.2) shall be provided by a fire wall, fire barrier or horizontal assembly; minimum fire-resistance rating of 2 hours.

Discharge from Exits

22.2.7.1: Exits shall be permitted to discharge into a fenced or walled courtyard, provided that not more than two walls of the courtyard are the building walls form which egress is being made.
22.2.7.2: Enclosed yard used for exit discharge shall accommodate all occupants at distance ≥ 50' from building, with net area of 15 SF per person.

Extinguishment Requirements

22.3.5.5(1) Provide Class I standpipe systems for any building 3 or more stories in height.

Subdivision of Building Spaces

22.3.7.1 Smoke barriers to divide every story used for sleeping by residents or stories having an occupant load of 50 or more into not less than 2 compartments.
22.3.7.3 Maximum residents in smoke compartment: 200
Max. distance to door in smoke barrier: 150' from room door, 200' from any point in room
22.3.7.7 Area per occupant on ea. side of smoke barrier for occupants in adjoining compartments: 6 SF

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

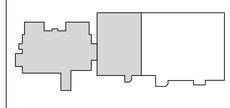
SEAL

ARCHITECTURAL REGISTRATION NO. 6928-R DANIEL LEROY BAILEY STATE OF MARYLAND

I certify that these documents were prepared or approved by me, and that I am duly licensed architect under the laws of the state of Maryland.

Signature
License Number 6928-R
Expiration Date 01-26-2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY		Author
APPROVED BY	XX	Approver
CHECKED BY	XX	Checker
DATE	XX	02-05-2015

TITLE

FIRST FLOOR CODE SYNOPSIS PLAN

PBA PROJECT NO.	13023
DPSCS CONTRACT NO.	KT-000-150-C01

G110

SHEET NO. XXX

KEY NOTES

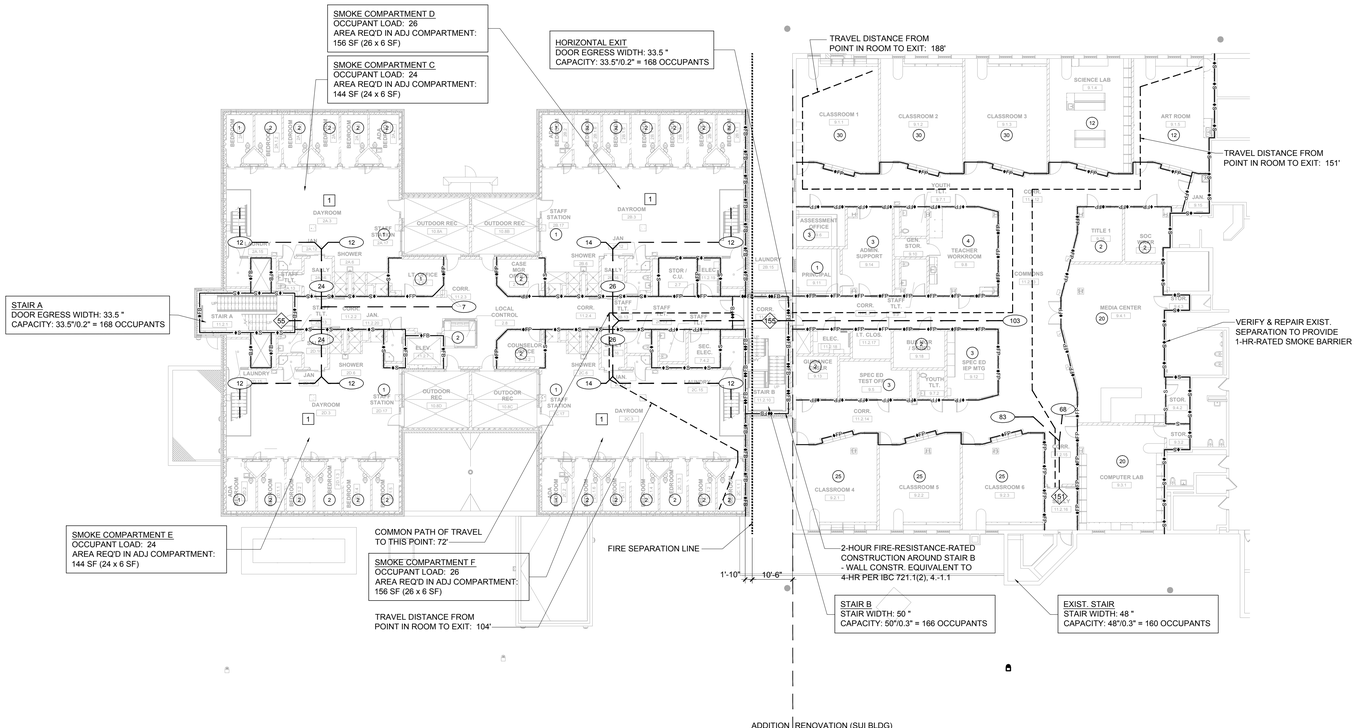
1. INTUMESCENT FIREPROOFING AT ROOF DECK AND JOISTS OF HOUSING UNIT UPPER ROOFS (CLERESTORY AREA), & OTHER AREAS OF EXPOSED STRUCTURE ACCESSIBLE TO DETAINEES (NEW CONSTRUCTION ONLY).
2. INTUMESCENT FIREPROOFING AT EXPOSED COLUMNS AND ROOF BEAMS OF GYMNASIUM. (ROOF JOISTS AND DECK ARE EXEMPTED FROM THE FIRE-PROTECTION REQUIREMENT AS THEY ARE NOT LESS THAN 20' ABOVE THE FLOOR.
3. SPRAY FIRE-RESISTIVE MATERIAL AT COLUMNS AND BRACING IN CONCEALED AREAS OF GYMNASIUM WALLS.
4. SPRAY FIRE-RESISTIVE MATERIAL AT STRUCTURAL FRAME, ROOF FRAMING AND DECKING EXPOSED AT MECHANICAL ROOMS, ELEVATOR EQUIPMENT, & OTHER NON-DETAINEE AREAS, AND ABOVE CEILINGS OF OTHER SPACES (NEW CONSTRUCTION ONLY).

GENERAL NOTES

1. ALL PENETRATIONS THROUGH BUILDING ELEMENTS REQUIRED TO BE RATED SHALL BE PROVIDED WITH AN APPROVED PROTECTION METHOD IN ACCORDANCE WITH SECTION 07 84 13 DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN WHICH IT IS INSTALLED.
2. ALL JOINTS MADE IN OR BETWEEN BUILDING ELEMENTS REQUIRED TO BE RATED SHALL BE PROTECTED BY AN APPROVED FIRE-RESISTANT JOINT SYSTEM IN ACCORDANCE WITH SECTION 07 84 46 DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN OR BETWEEN WHICH IT IS INSTALLED.
3. AT NEW CONSTRUCTION (NOT APPLICABLE TO SUI BUILDING): ALL STRUCTURAL STEEL FRAME MEMBERS NOT ENCASED IN FIRE-RESISTANCE-RATED CONSTRUCTION, AND ALL ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS LESS THAN 20 FEET ABOVE THE FLOOR, SHALL BE HAVE APPLIED FIREPROOFING PROVIDING 1-HOUR FIRE-RESISTANCE-RATED PROTECTION.

LEGEND

- NON-RATED SMOKE-TIGHT PARTITION
- 1-HR FIRE-RESISTANCE-RATED SMOKE BARRIER
- 1-HR FIRE-RESISTANCE-RATED FIRE PARTITION
- 1-HR FIRE-RESISTANCE-RATED FIRE BARRIER
- 2-HR FIRE-RESISTANCE-RATED FIRE BARRIER
- FIRE SEPARATION LINE (PER IBC 702)
- EXIST. SEPARATION BETWEEN OSTC-OCCUPIED AREA OF SUI BLDG. & YDC
- (4) ROOM OCCUPANT LOAD
- (24) CUMULATIVE OCCUPANT LOAD
- PATH OF TRAVEL
- (83) EXIT OCCUPANT LOAD
- TRAVEL DISTANCE



1 G120 SECOND FLOOR CODE SYNOPSIS PLAN
1/16" = 1'-0"

N NORTH
0' 8" 16' 32'

APPLICABLE CODES

Building Code:	IBC (2012) IEBC (2012)
Fire Code:	NFPA 101 (2012) (Life Safety Code) NFPA 1 (2012) (Fire Code)
Mechanical Code:	IMC (2012)
Plumbing Code:	NSPC (2012)
Electrical Code:	NED (2011)
Energy Standard:	ASHRAE 90.1 (2010)
Elevator Safety Code:	IBC 2012 in addition to DLLR Requirements
Accessibility Code:	Maryland Accessibility Code (2012)
Energy Conservation Code:	IECC (2012)

ENERGY CODE DATA

BUILDING ENVELOPE REQUIREMENTS PER IECC

Opaque Assemblies	Req'd U-factor	Req'd R-Value	Provided
Roofs			
Insulation entirely above deck		R-25	R-30 min. (metal) R-25 min. (TPO)
Attic (below exterior slabs)		R-38	R-38
Walls			
Mass (new construction)		R-9.5ci	R-12.6 ci (new)
Mass (existing building)	N/A	N/A	U-0.58 (exist)
Metal Framed		R-13+R-7.5ci	R-23+-R-8.4ci
Slab on Grade			
Unheated slab		R-10ci	R-10ci

Fenestration	Req'd U-factor	Req'd SHGC	Provided
Doors			
Entrance door (glazed)	U-0.77		U-0.57
Vertical Fenestration			
Fixed Fenestration			
Detention windows	U-0.38		U-0.22
Aluminum storefront	U-0.38		U-0.39
SHGC:		0.40	0.35
Skylights	U-0.50		U-0.39
SHGC		0.40	0.27

BUILDING CODE DATA

NFPA 101 LIFE SAFETY CODE, 2012 (unless noted otherwise; references to IBC are to IBC 2012).

Occupancy Classification

Chapter 22: New Detention and Correctional Occupancies
Classification: Use Condition IV, Impeded Egress

Group I-3 (IBC 308.5), Condition 4 (IBC 308.5)

Mixed Occupancies (IBC 508.3): Business areas (outside the secure area) considered under the provisions of 508.2.1 for an accessory occupancy, no separation of occupancies required.

General Building Heights and Areas (IBC Chapter 5)

COMAR deletes reference to NFPA 5000 Building Construction and Safety Code and substitutes the building code adopted by the Authority Having Jurisdiction (Maryland Building Performance Standards adopt IBC 2012).

Allowable Buildings Heights and Areas (IBC Table 504)
Existing 2-story SUI building provides equivalent of Type IIB construction; proposed 3-story addition is of Type IIA construction

Occupancy Group	ADDITION IIA Type Construction	EXISTING IIB Type Construction
I-3	2 stories, 65' height 15,000 SF	1 story, 55' height 10,000 SF

Automatic Sprinkler Height Increase (IBC 504.2): Allows increase in max. ht. by 20' and max. number of stories by 1

Building Area Modifications (IBC 506)

Building area in Table 503 may be increased to frontage and automatic sprinkler protection as follows:

Aa + {At + [At x If] + [At x Is]}

Aa = allowable building area (SF) per story
At = tabular building area per story per Table 503
If = area increase factor due to frontage calculated per 506.2
Is = area increase factor due to sprinkler protection calculated per 506.3

506.2 Frontage increase: Allowed for a building has more than 25% of its perimeter on a public way or open space having a width of not less than 20 feet.

If = [F/P - 0.25] W/30

If = area increase factor due to frontage
F = Building perimeter fronting public way or open space ≥ 20 feet wide
P = Perimeter of entire building
W = Width of public way or open space

506.3 Automatic sprinkler system increase: Allows building area limitation from Table 503 to be increased by an additional 200 percent for buildings with more than one story above grade plane.

Existing SUI building (area renovated for YDC plus area occupied by OSTC program):
Allowable frontage increase:
If = [713/838 - 0.25] 30/30 = 0.60
Allowable Area (Type IIB):
Aa = {10,000 + [10,000 x 0.60] + [10,000 x 2]} = 36,000

Existing area of largest floor (2nd floor) 33,804 SF

Addition:
Allowable frontage increase:
Not calculated because not needed
Allowable Area (Type IIA)
Aa = {15,000 + [15,000 x 2]} = 45,000 SF

Largest floor (2nd floor): 25,460 SF

Incidental Uses (IBC 509)

IBC Table 509 Hazardous Area Protection

Room or Area	Separation and/or Protection
Rooms w/ boilers where largest equip. >15 psi & 10 hp	1 hour or automatic sprinkler
Refrigerant machinery room	1 hour or automatic sprinkler
Laundry rooms over 100 SF	1 hour or automatic sprinkler
Group I-3 cells equipped with padded surfaces	1 hour
Waste and linen collection rooms over 100 SF	1 hour

Protection from Hazards

Table 22.3.2.1 Hazardous Area Protection

Hazardous Area Description	Separation/Protection
Boiler and fuel-fired heater rooms	1 hour
Central or bulk laundries >100 SF	1 hour
Commercial cooking equipment	In accordance with 9.2.3
Commissaries	Smoke resistant
Employee locker rooms	Smoke resistant
Hobby/handicraft shops	Smoke resistant
Maintenance shops	Smoke resistant
Soiled linen rooms	1 hour
Storage rooms >50 SF in area but ≤100 SF in area storing combustible materials	Smoke resistant
Storage rooms >100 SF storing combustible materials	1 hour
Trash collection rooms	1 hour

Type of Construction (IBC Chapter 6)

Fire-Resistance Rating Requirements for Building Elements (in hours) (IBC Table 601)

Building Element	IIA: Rating Req'd	IIB: Rating Req'd	Notes
Structural Frame	1	0	
Bearing Walls			
Exterior	1	0	not < Table 602 req'ts.
Interior	1	0	
Nonbearing Walls			
Exterior	see Table 602	see Table 602	
Interior	0	0	not < req'd by other code sections
Floor construction	1	0	
Roof construction	1	0	rating not required for roof framing and decking ≥ 20' above floor below

Fire-Resistance Rating Requirements (in hours) for Exterior Walls Based on Fire Separation Distance (feet) for Types IIA & IIB Construction , Occupancy Classification I-3 (IBC Table 602):

Fire Separation Distance (X)	Type of Construction	Rating Req'd
X > 5	both	1
5 ≤ X< 10	both	1
10 ≤X< 30	IIA	1
	IIB	0
X ≥ 30	both	0

Fire-Resistance-Rated Construction (IBC Chapter 7)

Definitions (IBC 702)

Fire Separation Distance (as defined in Chapter 2): the distance measured from the building face to one of the following:
1. The closest interior lot line;
2. The centerline of a street, an alley or public way; or
3. An imaginary line between two buildings on the property. (The imaginary line can be located anywhere between the two buildings, but once established the location of the line applies to both buildings and cannot be revised.)

Exterior Walls (IBC 705)

Fire-resistance rating (IBC 705.5): Rate exterior walls in accordance with Tables 601 and 602. Rate for exposure from the inside with fire separation distance > 10 feet. Rate for exposure from both sides with fire separation distance ≤ 10 feet.
Allowable area of openings (IBC 705.8.1): Maximum area of unprotected or protected openings in an exterior wall shall not exceed the values set forth in Table 705.8.
Automatic sprinkler system (IBC 704.8.1): With sprinkler system: maximum area of unprotected openings shall be the same as limitations for protected openings. *No limit on area of openings for fire separation distance > 20 feet*.

Maximum Area of Exterior Wall Openings (IBC Table 705.8):

		Fire Separation Distance					
Degree of Op'g Protection	X<3	3<X≤5	5<X≤10	10<X≤15	15<X≤20	20<X
Protected	Not permitted	15%	25%	45%	75%	No limit
Unprotected	Not permitted	15%	25%	45%	75%	No limit

Smoke Barriers (IBC 709)

Smoke barriers require 1-hour fire-resistance rating (IBC 709.3).
Openings: protect in accordance with Section 716 (IBC 709.5).
Penetrations: Comply with Section 714 (IBC 709.6).
Joints: Comply with Section 715 (IBC 709.7).
Ducts and air transfer openings: comply with Section 717 (IBC 709.8).

Shaft Enclosures

8.6.5 1 hour fire barrier where connecting 3 stories or fewer.
Fire-resistance rating: Not less than 1 hour fire barrier where connecting less than 4 stories, not less than fire-resistance rating of floor assembly penetrated (IBC 713.4).

Opening Protectives

Table 8.3.4.2 Minimum Fire Protection Ratings for Opening Protectives in Fire Resistance-Rated Assemblies (hours)

Component	Walls & Partitions	Fire Door Assemblies	Fire Window Assemblies
Elevator hoistways	2	1-1/2	NP
	1	1	NP
Vertical shafts	2	1-1/2	NP
(incl. stairways, exits, & refuse chutes)	1	1	NP
Fire barriers	2	1-1/2	NP
	1	3/4	3/4
	1/2	1/3	1/3
Horizontal exits	2	1-1/2	NP
Exit access corridors	1	1/3	3/4
Smoke barriers	1	1/3	1/3
Smoke partitions	1/2	1/3	1/3

Opening Fire Protection Assemblies, Ratings and Markings (IBC Table 716.5)

Type of Assembly	Required Assembly Rating (in hrs)	Min. Fire Door & Fire Shutter Assembly Ratings (in hrs)
Fire walls & barriers w/ > 1-hour rating	2	1-1/2
	1-1/2	1-1/2
Fire barriers w/ 1-hour rating		
Shaft, exit enclosure & exit passageways	1	1
Other fire barriers	1	3/4
Fire Partitions		
Corridor walls	1	1/3
Other fire partitions	1	3/4
Exterior Walls	1	3/4
Smoke Barriers	1	1/3

Occupant Loads

First Floor: 365
Second Floor: 354 (including occupants of upper housing tier)
Third Floor: 222

Fire Pumps (IBC 913)

Protection of fire pump rooms (IBC 913.2.1, Exception 1 for automatic sprinkler system): separate from all other areas of the building by 1-hour fire barriers or 1-hour horizontal assemblies, or both.

Means of Egress

Table 7.3.3.1 Capacity of Means of Egress
Stairways: 0.3 inches per person
Level components: 0.2 inches per person

7.4.1.1(2)Single means of egress permitted for a mezzanine or balcony where common path of travel limitations are met.

22.2.3.2 Aisles, corridors and ramps required for egress shall be not less than 48" in width

Arrangement

2.2.5.2 Dead end: 50' maximum in Condition IV.
22.2.5.3 Common path of travel: 100' maximum
22.2.6.2 Travel distance: 150' maximum from any room door required as an exit access and an exit
22.2.6.4 Travel distance: 200' maximum from any point in a room and an exit

Dead ends (IBC 1018.4): where more than one exit or exit access is req'd, no dead ends more than 20' in length.
Exceptions:
1. In I-3 Occupancies, dead end shall not exceed 50'.
3. Unlimited where length of dead is less than 2.5 times the least width of the dead end corridor.

Exit Access (IBC 1014)

Common path of egress travel: 100' maximum in I-3 Occupancy (IBC 1014.3).

Exit Access Travel Distance (IBC 1016)

200' maximum in I-3 Occupancy with sprinkler system (IBC Table 1016.1)

Exit Access Corridors

7.1.3.1 Exit Access Corridors: 1 hour fire rating where serving occupant load exceeding 30.
Corridor Fire-Resistance Rating: 1 hour in I-3 Occupancy with sprinkler system, for all occupant loads (IBC Table 1018.1).

Interior Exit Stairways and Ramps

7.1.3.2.1 Exits: 1 hour fire barrier where connecting 3 stories or less.
Construct as 1-hour fire barriers where connecting less than 4 stories (IBC 1022.2).

Horizontal Exits

22.2.2.5: Horizontal exits shall be permitted.
Horizontal exits permitted to comprise 100% of exits required for Group I-3 occupancies. At least 6 SF of space per occupant shall be provided on each side of the horizontal exit for the total number of people in adjoining compartments (IBC 1025.1, Exception 2).
Separation (IBC 1025.2) shall be provided by a fire wall, fire barrier or horizontal assembly; minimum fire-resistance rating of 2 hours.

Discharge from Exits

22.2.7.1: Exits shall be permitted to discharge into a fenced or walled courtyard, provided that not more than two walls of the courtyard are the building walls form which egress is being made.
22.2.7.2: Enclosed yard used for exit discharge shall accommodate all occupants at distance ≥ 50' from building, with net area of 15 SF per person.

Extinguishment Requirements

22.3.5.5(1) Provide Class I standpipe systems for any building 3 or more stories in height.

Subdivision of Building Spaces

22.3.7.1 Smoke barriers to divide every story used for sleeping by residents or stories having an occupant load of 50 or more into not less than 2 compartments.
22.3.7.3 Maximum residents in smoke compartment: 200
Max. distance to door in smoke barrier: 150' from room door, 200' from any point in room
22.3.7.7 Area per occupant on ea. side of smoke barrier for occupants in adjoining compartments: 6 SF

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

SEAL

I certify that these documents were prepared or approved by me, and that I am duly licensed architect under the laws of the state of Maryland.

Signature
License Number 6928-R
Expiration Date 01-26-2016

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY		Author
APPROVED BY	XX	Approver
CHECKED BY	XX	Checker
DATE	XX	02-05-2015

TITLE

SECOND FLOOR CODE SYNOPSIS PLAN

PBA PROJECT NO.	13023
DPSCS CONTRACT NO.	KT-000-150-C01

G120

SHEET NO. XXX

KEY NOTES

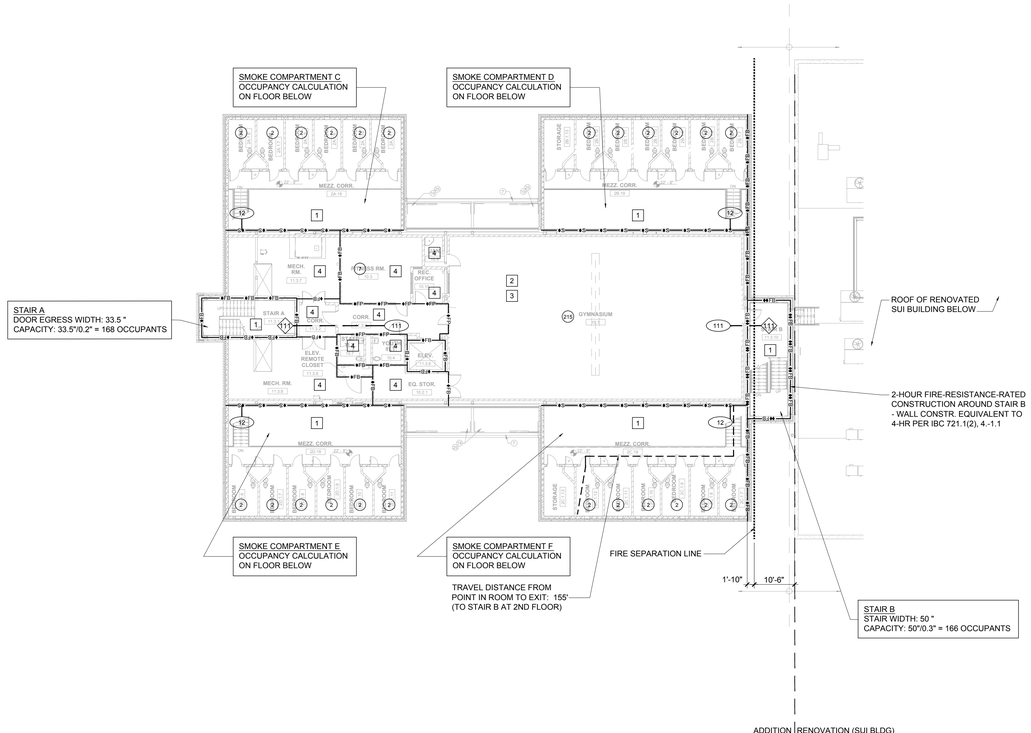
1. INTUMESCENT FIREPROOFING AT ROOF DECK AND JOISTS OF HOUSING UNIT UPPER ROOFS (CLERESTORY AREA), & OTHER AREAS OF EXPOSED STRUCTURE ACCESSIBLE TO DETAINEES (NEW CONSTRUCTION ONLY).
2. INTUMESCENT FIREPROOFING AT EXPOSED COLUMNS AND ROOF BEAMS OF GYMNASIUM. (ROOF JOISTS AND DECK ARE EXEMPTED FROM THE FIRE-PROTECTION REQUIREMENT AS THEY ARE NOT LESS THAN 20' ABOVE THE FLOOR.
3. SPRAY FIRE-RESISTIVE MATERIAL AT COLUMNS AND BRACING IN CONCEALED AREAS OF GYMNASIUM WALLS.
4. SPRAY FIRE-RESISTIVE MATERIAL AT STRUCTURAL FRAME, ROOF FRAMING AND DECKING EXPOSED AT MECHANICAL ROOMS, ELEVATOR EQUIPMENT, & OTHER NON-DETAINEE AREAS, AND ABOVE CEILINGS OF OTHER SPACES (NEW CONSTRUCTION ONLY).

GENERAL NOTES

1. ALL PENETRATIONS THROUGH BUILDING ELEMENTS REQUIRED TO BE RATED SHALL BE PROVIDED WITH AN APPROVED PROTECTION METHOD IN ACCORDANCE WITH SECTION 07 84 13 DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN WHICH IT IS INSTALLED.
2. ALL JOINTS MADE IN OR BETWEEN BUILDING ELEMENTS REQUIRED TO BE RATED SHALL BE PROTECTED BY AN APPROVED FIRE-RESISTANT JOINT SYSTEM IN ACCORDANCE WITH SECTION 07 84 46 DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN OR BETWEEN WHICH IT IS INSTALLED.
3. AT NEW CONSTRUCTION (NOT APPLICABLE TO SUI BUILDING): ALL STRUCTURAL STEEL FRAME MEMBERS NOT ENCASED IN FIRE-RESISTANCE-RATED CONSTRUCTION, AND ALL ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS LESS THAN 20 FEET ABOVE THE FLOOR, SHALL BE HAVE APPLIED FIREPROOFING PROVIDING 1-HOUR FIRE-RESISTANCE-RATED PROTECTION.

LEGEND

- NON-RATED SMOKE-TIGHT PARTITION
- 1-HR FIRE-RESISTANCE-RATED SMOKE BARRIER
- 1-HR FIRE-RESISTANCE-RATED FIRE PARTITION
- 1-HR FIRE-RESISTANCE-RATED FIRE BARRIER
- 2-HR FIRE-RESISTANCE-RATED FIRE BARRIER
- FIRE SEPARATION LINE (PER IBC 702)
- EXIST. SEPARATION BETWEEN OSTC-OCCUPIED AREA OF SUI BLDG. & YDC
- (4) ROOM OCCUPANT LOAD
- (24) CUMULATIVE OCCUPANT LOAD
- PATH OF TRAVEL
- (83) EXIT OCCUPANT LOAD
- TRAVEL DISTANCE



1 G130 THIRD FLOOR CODE SYNOPSIS PLAN

1/16" = 1'-0"

N NORTH

0' 8" 16' 32'

APPLICABLE CODES

Building Code:	IBC (2012) IEBC (2012)
Fire Code:	NFPA 101 (2012) (Life Safety Code) NFPA 1 (2012) (Fire Code)
Mechanical Code:	IMC (2012)
Plumbing Code:	NSPC (2012)
Electrical Code:	NED (2011)
Energy Standard:	ASHRAE 90.1 (2010)
Elevator Safety Code:	IBC 2012 in addition to DLLR Requirements
Accessibility Code:	Maryland Accessibility Code (2012)
Energy Conservation Code:	IECC (2012)

ENERGY CODE DATA

BUILDING ENVELOPE REQUIREMENTS PER IECC

Opaque Assemblies	Req'd U-factor	Req'd R-Value	Provided
Roofs			
Insulation entirely above deck		R-25	R-30 min. (metal) R-25 min. (TPO)
Attic (below exterior slabs)		R-38	R-38
Walls			
Mass (new construction)		R-9.5ci	R-12.6 ci (new)
Mass (existing building)	N/A	N/A	U-0.58 (exist)
Metal Framed		R-13+R-7.5ci	R-23+-R-8.4ci
Slab on Grade			
Unheated slab		R-10ci	R-10ci

Fenestration	Req'd U-factor	Req'd SHGC	Provided
Doors			
Entrance door (glazed)	U-0.77		U-0.57
Vertical Fenestration			
Fixed Fenestration			
Detention windows	U-0.38		U-0.22
Aluminum storefront	U-0.38		U-0.39
SHGC:		0.40	0.35
Skylights	U-0.50		U-0.39
SHGC		0.40	0.27

BUILDING CODE DATA

NFPA 101 LIFE SAFETY CODE, 2012 (unless noted otherwise; references to IBC are to IBC 2012).

Occupancy Classification

Chapter 22: New Detention and Correctional Occupancies
Classification: Use Condition IV, Impeded Egress

Group I-3 (IBC 308.5), Condition 4 (IBC 308.5)

Mixed Occupancies (IBC 508.3): Business areas (outside the secure area) considered under the provisions of 508.2.1 for an accessory occupancy, no separation of occupancies required.

General Building Heights and Areas (IBC Chapter 5)

COMAR deletes reference to NFPA 5000 Building Construction and Safety Code and substitutes the building code adopted by the Authority Having Jurisdiction (Maryland Building Performance Standards adopt IBC 2012).

Allowable Buildings Heights and Areas (IBC Table 504)
Existing 2-story SUI building provides equivalent of Type IIB construction; proposed 3-story addition is of Type IIA construction

Occupancy Group	ADDITION IIA Type Construction	EXISTING IIB Type Construction
I-3	2 stories, 65' height 15,000 SF	1 story, 55' height 10,000 SF

Automatic Sprinkler Height Increase (IBC 504.2): Allows increase in max. ht. by 20' and max. number of stories by 1

Building Area Modifications (IBC 506)

Building area in Table 503 may be increased to frontage and automatic sprinkler protection as follows:

Aa + {At + [At x If] + [At x Is]}

Aa = allowable building area (SF) per story
At = tabular building area per story per Table 503
If = area increase factor due to frontage calculated per 506.2
Is = area increase factor due to sprinkler protection calculated per 506.3

506.2 Frontage increase: Allowed for a building has more than 25% of its perimeter on a public way or open space having a width of not less than 20 feet.

If = [F/P - 0.25] W/30

If = area increase factor due to frontage
F = Building perimeter fronting public way or open space ≥ 20 feet wide
P = Perimeter of entire building
W = Width of public way or open space

506.3 Automatic sprinkler system increase: Allows building area limitation from Table 503 to be increased by an additional 200 percent for buildings with more than one story above grade plane.

Existing SUI building (area renovated for YDC plus area occupied by OSTC program):
Allowable frontage increase:
If = [713/838 - 0.25] 30/30 = 0.60
Allowable Area (Type IIB):
Aa = {10,000 + [10,000 x 0.60] + [10,000 x 2]} = 36,000

Existing area of largest floor (2nd floor) 33,804 SF

Addition:
Allowable frontage increase:
Not calculated because not needed
Allowable Area (Type IIA)
Aa = {15,000 + [15,000 x 2]} = 45,000 SF

Largest floor (2nd floor): 25,460 SF

Incidental Uses (IBC 509)

IBC Table 509 Hazardous Area Protection

Room or Area	Separation and/or Protection
Rooms w/ boilers where largest equip. >15 psi & 10 hp	1 hour or automatic sprinkler
Refrigerant machinery room	1 hour or automatic sprinkler
Laundry rooms over 100 SF	1 hour or automatic sprinkler
Group I-3 cells equipped with padded surfaces	1 hour
Waste and linen collection rooms over 100 SF	1 hour

Protection from Hazards

Table 22.3.2.1 Hazardous Area Protection

Hazardous Area Description	Separation/Protection
Boiler and fuel-fired heater rooms	1 hour
Central or bulk laundries >100 SF	1 hour
Commercial cooking equipment	In accordance with 9.2.3
Commissaries	Smoke resistant
Employee locker rooms	Smoke resistant
Hobby/handicraft shops	Smoke resistant
Maintenance shops	Smoke resistant
Soiled linen rooms	1 hour
Storage rooms >50 SF in area but ≤100 SF in area storing combustible materials	Smoke resistant
Storage rooms >100 SF storing combustible materials	1 hour
Trash collection rooms	1 hour

Type of Construction (IBC Chapter 6)

Fire-Resistance Rating Requirements for Building Elements (in hours) (IBC Table 601)

Building Element	IIA: Rating Req'd	IIB: Rating Req'd	Notes
Structural Frame	1	0	
Bearing Walls			
Exterior	1	0	not < Table 602 req'ts.
Interior	1	0	
Nonbearing Walls			
Exterior	see Table 602	see Table 602	
Interior	0	0	not < req'd by other code sections
Floor construction	1	0	
Roof construction	1	0	rating not required for roof framing and decking ≥ 20' above floor below

Fire-Resistance Rating Requirements (in hours) for Exterior Walls Based on Fire Separation Distance (feet) for Types IIA & IIB Construction , Occupancy Classification I-3 (IBC Table 602):

Fire Separation Distance (X)	Type of Construction	Rating Req'd
X > 5	both	1
5 ≤ X< 10	both	1
10 ≤X< 30	IIA	1
	IIB	0
X ≥ 30	both	0

Fire-Resistance-Rated Construction (IBC Chapter 7)

Definitions (IBC 702)

Fire Separation Distance (as defined in Chapter 2): the distance measured from the building face to one of the following:
1. The closest interior lot line;
2. The centerline of a street, an alley or public way; or
3. An imaginary line between two buildings on the property. (The imaginary line can be located anywhere between the two buildings, but once established the location of the line applies to both buildings and cannot be revised.)

Exterior Walls (IBC 705)

Fire-resistance rating (IBC 705.5): Rate exterior walls in accordance with Tables 601 and 602. Rate for exposure from the inside with fire separation distance > 10 feet. Rate for exposure from both sides with fire separation distance ≤ 10 feet.
Allowable area of openings (IBC 705.8.1): Maximum area of unprotected or protected openings in an exterior wall shall not exceed the values set forth in Table 705.8.
Automatic sprinkler system (IBC 704.8.1): With sprinkler system: maximum area of unprotected openings shall be the same as limitations for protected openings. *No limit on area of openings for fire separation distance > 20 feet*.

Maximum Area of Exterior Wall Openings (IBC Table 705.8):

		Fire Separation Distance					
Degree of Op'g Protection	X<3	3<X≤5	5<X≤10	10<X≤15	15<X≤20	20<X
Protected	Not permitted	15%	25%	45%	75%	No limit
Unprotected	Not permitted	15%	25%	45%	75%	No limit

Smoke Barriers (IBC 709)

Smoke barriers require 1-hour fire-resistance rating (IBC 709.3).
Openings: protect in accordance with Section 716 (IBC 709.5).
Penetrations: Comply with Section 714 (IBC 709.6).
Joints: Comply with Section 715 (IBC 709.7).
Ducts and air transfer openings: comply with Section 717 (IBC 709.8).

Shaft Enclosures

8.6.5 1 hour fire barrier where connecting 3 stories or fewer.
Fire-resistance rating: Not less than 1 hour fire barrier where connecting less than 4 stories, not less than fire-resistance rating of floor assembly penetrated (IBC 713.4).

Opening Protectives

Table 8.3.4.2 Minimum Fire Protection Ratings for Opening Protectives in Fire Resistance-Rated Assemblies (hours)

Component	Walls & Partitions	Fire Door Assemblies	Fire Window Assemblies
Elevator hoistways	2	1-1/2	NP
	1	1	NP
Vertical shafts	2	1-1/2	NP
(incl. stairways, exits, & refuse chutes)	1	1	NP
Fire barriers	2	1-1/2	NP
	1	3/4	3/4
	1/2	1/3	1/3
Horizontal exits	2	1-1/2	NP
Exit access corridors	1	1/3	3/4
Smoke barriers	1	1/3	1/3
Smoke partitions	1/2	1/3	1/3

Opening Fire Protection Assemblies, Ratings and Markings (IBC Table 716.5)

Type of Assembly	Required Assembly Rating (in hrs)	Min. Fire Door & Fire Shutter Assembly Ratings (in hrs)
Fire walls & barriers w/ > 1-hour rating	2	1-1/2
	1-1/2	1-1/2
Fire barriers w/ 1-hour rating		
Shaft, exit enclosure & exit passageways	1	1
Other fire barriers	1	3/4
Fire Partitions		
Corridor walls	1	1/3
Other fire partitions	1	3/4
Exterior Walls	1	3/4
Smoke Barriers	1	1/3

Occupant Loads

First Floor: 365
Second Floor: 354 (including occupants of upper housing tier)
Third Floor: 222

Fire Pumps (IBC 913)

Protection of fire pump rooms (IBC 913.2.1, Exception 1 for automatic sprinkler system): separate from all other areas of the building by 1-hour fire barriers or 1-hour horizontal assemblies, or both.

Means of Egress

Table 7.3.3.1 Capacity of Means of Egress
Stairways: 0.3 inches per person
Level components: 0.2 inches per person

7.4.1.1(2)Single means of egress permitted for a mezzanine or balcony where common path of travel limitations are met.

22.2.3.2 Aisles, corridors and ramps required for egress shall be not less than 48" in width

Arrangement

2.2.5.2 Dead end: 50' maximum in Condition IV.
22.2.5.3 Common path of travel: 100' maximum
22.2.6.2 Travel distance: 150' maximum from any room door required as an exit access and an exit
22.2.6.4 Travel distance: 200' maximum from any point in a room and an exit

Dead ends (IBC 1018.4): where more than one exit or exit access is req'd, no dead ends more than 20' in length.
Exceptions:
1. In I-3 Occupancies, dead end shall not exceed 50'.
3. Unlimited where length of dead is less than 2.5 times the least width of the dead end corridor.

Exit Access (IBC 1014)

Common path of egress travel: 100' maximum in I-3 Occupancy (IBC 1014.3).

Exit Access Travel Distance (IBC 1016)

200' maximum in I-3 Occupancy with sprinkler system (IBC Table 1016.1)

Exit Access Corridors

7.1.3.1 Exit Access Corridors: 1 hour fire rating where serving occupant load exceeding 30.
Corridor Fire-Resistance Rating: 1 hour in I-3 Occupancy with sprinkler system, for all occupant loads (IBC Table 1018.1).

Interior Exit Stairways and Ramps

7.1.3.2.1 Exits: 1 hour fire barrier where connecting 3 stories or less.
Construct as 1-hour fire barriers where connecting less than 4 stories (IBC 1022.2).

Horizontal Exits

22.2.2.5: Horizontal exits shall be permitted.
Horizontal exits permitted to comprise 100% of exits required for Group I-3 occupancies. At least 6 SF of space per occupant shall be provided on each side of the horizontal exit for the total number of people in adjoining compartments (IBC 1025.1, Exception 2).
Separation (IBC 1025.2) shall be provided by a fire wall, fire barrier or horizontal assembly; minimum fire-resistance rating of 2 hours.

Discharge from Exits

22.2.7.1: Exits shall be permitted to discharge into a fenced or walled courtyard, provided that not more than two walls of the courtyard are the building walls form which egress is being made.
22.2.7.2: Enclosed yard used for exit discharge shall accommodate all occupants at distance ≥ 50' from building, with net area of 15 SF per person.

Extinguishment Requirements

22.3.5.5(1) Provide Class I standpipe systems for any building 3 or more stories in height.

Subdivision of Building Spaces

22.3.7.1 Smoke barriers to divide every story used for sleeping by residents or stories having an occupant load of 50 or more into not less than 2 compartments.
22.3.7.3 Maximum residents in smoke compartment: 200
Max. distance to door in smoke barrier: 150' from room door, 200' from any point in room
22.3.7.7 Area per occupant on ea. side of smoke barrier for occupants in adjoining compartments: 6 SF

ADDITION | RENOVATION (SUI BLDG)

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

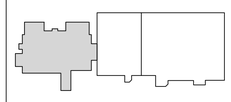
SEAL

ARCHITECTURAL REGISTRATION NUMBER 6928-R DANIEL LEROY BAILEY STATE OF MARYLAND

I certify that these documents were prepared or approved by me, and that I am duly licensed architect under the laws of the state of Maryland.

Signature
License Number 6928-R
Expiration Date 01-26-2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY		Author
APPROVED BY	XX	Approver
CHECKED BY	XX	Checker
DATE	XX	02-05-2015

TITLE

THIRD FLOOR CODE SYNOPSIS PLAN

PBA PROJECT NO.	13023
DPSCS CONTRACT NO.	KT-000-150-C01

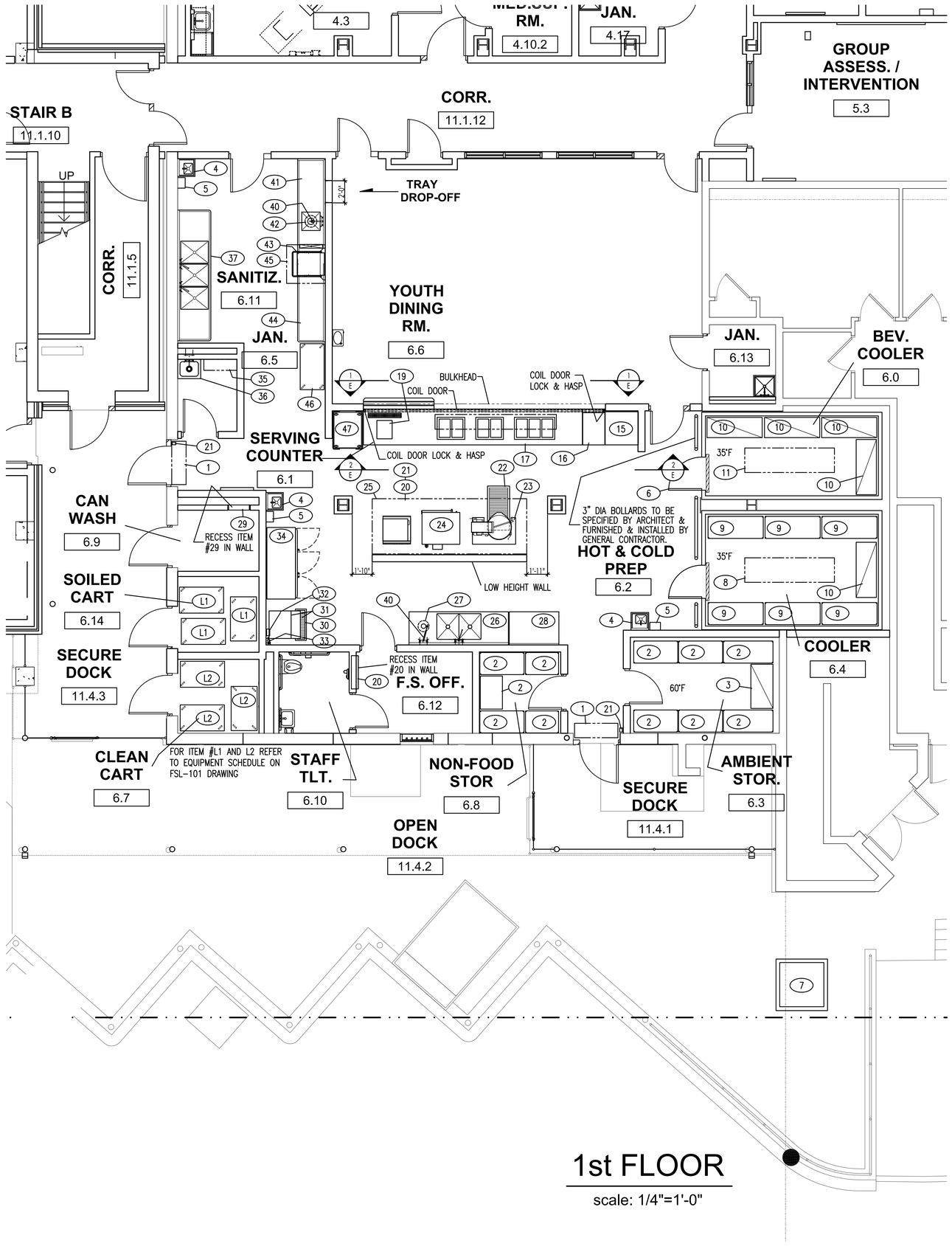
G130

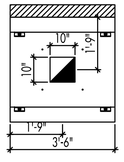
SHEET NO. XXX

FOOD SERVICE EQUIPMENT SCHEDULE

ITEM	QTY	DESCRIPTION	MANUFACTURER
1	2	AIR CURTAIN	MARS AIR
2	LOT	SHELVING FOR AMBIENT & NON FOOD STORAGE	INTER METRO
3	1	AMBIENT DUNNAGE RACK	INTER METRO
4	3	HAND SINK W/ SOAP DISPENSER	IMC TEDDY
5	3	HAND DRIER	WORLD DRYER
6	2	WALK-IN COOLER WITH PLASTIC STRIP CURTAINS	NORLAKE & JAMISON
7	1	REMOTE REFRIGERATION SYSTEM	COOLTEC
8	1	EVAPORATOR COIL	COOLTEC
9	LOT	WALK-IN SHELVING	INTER METRO
10	LOT	DUNNAGE RACKS IN BEVERAGE COOLER	INTER METRO
11	1	EVAPORATOR COIL	COOLTEC
12		OPEN NUMBER	
13		OPEN NUMBER	
14		OPEN NUMBER	
15	1	WORK TABLE	LTI
16	1	TRAY PICK UP STAND	LTI
17	1	SERVING COUNTER	LTI
18		OPEN NUMBER	
19	1	JUICE DISPENSER	CRATHCO *
20	1	WATER WASH EXHAUST HOOD W/ CONTROL PANEL	AVTEC
21	LOT	FIRE SYSTEM	AVTEC/ANSUL
22	1	FLOOR TROUGH FOR KETTLE	LTI
23	1	KETTLE	GROEN
24	1	COMBI-OVEN	BLODGETT
25	1	GRIDDLE	KEATING
26	1	2 COMPARTMENT SINK WITH FAUCET	LTI AND T & S
27	1	2 HP GARBAGE DISPOSER	RED GOAT
28	1	WORK TABLE	LTI
29	1	HOSE STATION	T & S
30	1	FLOOR TROUGH FOR ICE MAKER	LTI
31	1	ICE MAKER WITH BIN	MANITOWOC
32	1	CLEANING SYSTEM	MANITOWOC
33	1	FILTER FOR ICE MAKER	EVERPURE
34	1	3 DOOR REACH-IN FREEZER	VICTORY
35	1	WALL SHELF	LTI
36	1	MOP SINK W/ HEAVY DUTY FAUCET	ADVANCE TABCO AND T & S
37	1	3 COMPARTMENT POT SINK WITH FAUCETS	LTI AND T & S
38		OPEN NUMBER	
39		OPEN NUMBER	
40	2	PRE-RINSE SPRAY	T & S
41	1	SOILED DISH TABLE	LTI
42	1	SINK MOUNTED 3 HP GARBAGE DISPOSER	RED GOAT
43	1	DISHWASHER W/ BUILT-IN BOOSTER HEATER	MEIKO
44	1	CLEAN DISH TABLE	LTI
45	1	CONDENSATE HOOD	AVTEC/CUSTOM
46	1	POT & PAN SHELVING	INTERMETRO *
47	1	TRAY DELIVERY CART WITH CASTERS	INTERMETRO *

* THESE ITEMS WILL BE FURNISHED & INSTALLED BY OWNER AND NOT BY GENERAL CONTRACTOR AND KEC.





ITEM #45

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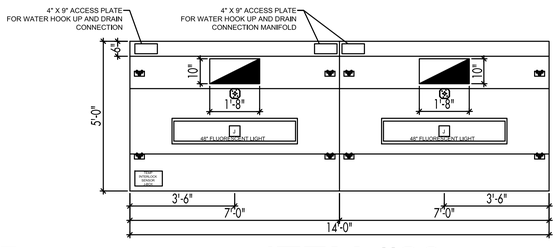

ITEM #20

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1st FLOOR

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURBER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 300
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1140

TERRALOGOS

R&R designer, inc

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

KEY PLAN

SCALE

1/4"=1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

TITLE

Floor Plan of Food Service Area

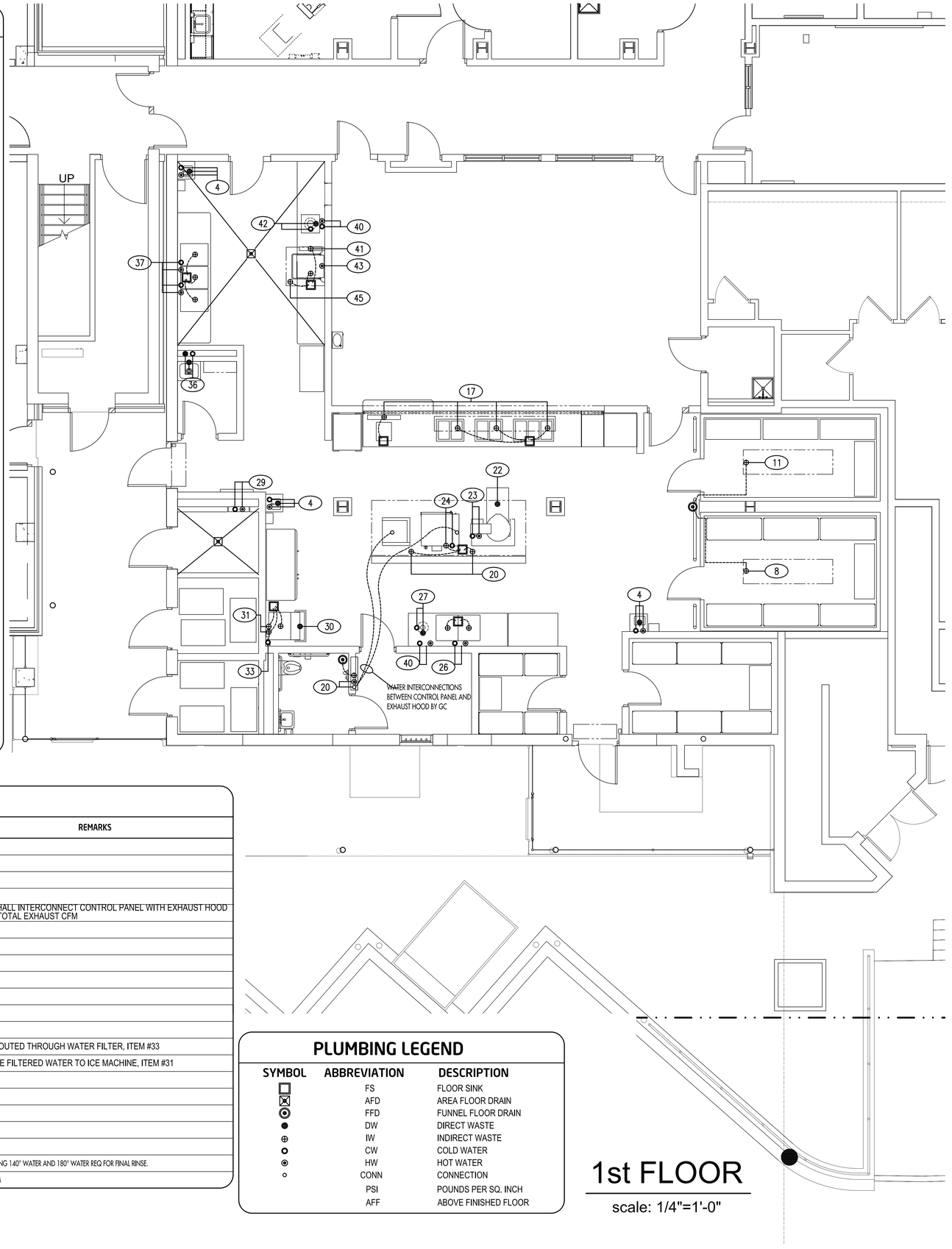
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

FS-100

SHEET NO.

PLUMBING NOTES

1. THIS DRAWING IS FOR INFORMATION PURPOSES ONLY. GENERAL CONTRACTOR (GC) SHALL COORDINATE WITH THE FOOD SERVICE EQUIPMENT SUB-CONTRACTOR AND RELATED MECHANICAL, ELECTRICAL AND PLUMBING SUB-CONTRACTORS TO ESTABLISH FINAL SPOT CONNECTION LOCATIONS AND CONFIGURATIONS AS REQUIRED. THIS DRAWING SHALL NOT BE USED TO LOCATE ANY UTILITY CONNECTIONS IN THE FIELD OR TO LOCATE ANY ROUGH-IN, PENETRATION, OR OTHER REQUIREMENTS.
2. THIS IS NOT A ROUGH-IN DRAWING. DIMENSIONED ROUGH-IN AND SLEEVE DRAWINGS SHALL BE PREPARED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR. ROUGH-IN DRAWINGS SHALL BE PREPARED USING THE BASE LINE DIMENSIONING METHOD. ADDITIONALLY THIS DRAWING IS TO BE USED BY THE HEATING, VENTILATION, PLUMBING AND MECHANICAL ENGINEERS IN PREPARING THEIR DESIGN TO INTEGRATE INTO THE TOTAL BUILDING UTILITY REQUIREMENTS WITH FOOD SERVICE UTILITIES.
3. SERVICES SHOWN RELATE TO FOOD SERVICE EQUIPMENT REQUIREMENTS ONLY AND SHOW ONLY POINT OF CONNECTION. SEE ARCHITECTUAL/ENGINEERING DRAWINGS FOR ADDITIONAL REQUIREMENTS.
4. GENERAL CONTRACTOR (GC) SHALL REFER TO SECTION 11400 SPECIFICATIONS.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES
6. PUBLIC WATER AND SEWAGE SHALL BE FURNISHED.
7. ALL WATER LINES SHALL HAVE SHUT-OFF VALVES.
8. GENERAL CONTRACTOR (GC) AND PLUMBING ENGINEER SHALL PROVIDE HOT WATER FROM THE CENTRAL BUILDING SOURCE TO THE BOOSTER HEATERS , WAREWASHERS, DISHMACHINES AND THREE COMPARTMENT SINKS SUCH THAT THE FINAL RINSE TEMPERATURE MEETS THE HEALTH DEPARTMENT CODE REQUIREMENTS AND THE INSTITUTION CAN OBTAIN THEIR LICENSE FROM THE HEALTH DEPARTMENT.
9. ALL INTERCONNECTING AND FINAL CONNECTIONS SHALL BE DONE BY GENERAL CONTRACTOR (GC) FOR ALL ITEMS LISTED.
10. GENERAL CONTRACTOR SHALL SUPPLY AND INSTALL TRAP-PRIMING SYSTEM FOR ALL FLOOR DRAINS, AS REQUIRED BY CODE.
11. ALL OPEN SITE DRAINS SHALL HAVE A MINIMUM OF 1" AIR GAP.
12. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL ANY NEEDED GREASE TRAPS OR RECEPTORS AS PER LOCAL AND/OR BOCA CODE REQUIREMENTS.
13. INSTALL ALL FLOOR SINK FLUSH WITH FINISHED FLOOR.
14. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL BACK-FLOW PREVENTORS AND VACUUM BREAKERS ON ALL EQUIPMENT AS REQUIRED BY LOCAL CODES.
15. GENERAL CONTRACTOR (GC) SHALL INSTALL SWIRL NOZZLES SOLENOID VALVES AND VACUUM BREAKERS FOR ALL DISPOSERS AND TROUGHS.
16. GENERAL CONTRACTOR (GC) SHALL INTERPLUMB WAREWASHERS/ DISHMACHINES AND BOOSTER HEATERS AS PER MANUFACTURERS RECOMMENDATIONS.
17. G.C. SHALL RUN PRESSURE RELIEF DRAIN FROM BOOSTER TO FLOOR DRAIN.
18. ALL WASTE WATER FROM APPLICABLE FOOD SERVICE EQUIPMENT SHALL BE INDIVIDUALLY PLUMBED TO RESPECTIVE DRAINS.
19. A PRESSURE GAUGE IS REQUIRED IMMEDIATELY UPSTREAM FROM THE FINAL RINSE CONTROL VALVE AND DOWNSTREAM FROM A LINE STRAINER. THE PRESSURE GAUGE MUST READ BETWEEM 15-25 P.S.I. AND SHALL BE INSTALLED IN A 1/4" PETCOCK.
20. IF GREASE INTERCEPTOR IS NOT REQUIRED, RUN ALL 2" WASTE LINES TO CLOSEST RESPECTIVE DRAINS. FOR ALL GREASE INTERCEPTOR LOCATIONS REFER TO MECHANICAL ENGINEERING DRAWINGS. GENERAL CONTRACTOR (GC) SHALL COMPLY WITH ALL COMAR REGULATIONS.
21. PLUMBING/MECHANICAL DIVISION IS RESPONSIBLE FOR:
    A. ALL WATER, WASTE, GAS, STEAM AND HVAC SERVICES TO EQUIPMENT INCLUDING PIPING, FITTINGS, SLEEVES, STOPS, VALVES, TRAPS, CLEANOUTS, INSULATION AND HARDWARE UP TO AND INCLUDING FINAL CONNECTIONS.
    B. WHEREVER POSSIBLE ALL PLUMBING AND STEAM PIPINGS, CONNECTIONS, ETC., SHALL BE CONCEALED AND NOT EXPOSED. IF EXPOSED, PIPINGS AND FITTINGS SHALL BE COVERED IN STAINLESS STEEL.
    C. INTERCONNECTING WASTE SYSTEMS.
    D. INDIRECT WASTE LINES FROM WALK-IN REFRIGERATOR/ FREEZER COILS IN ALUMINUM, PVC, OR COPPER; INCLUDING A 36 WATT-PER-LINEAL FOOT HEAT TAPE AND INSULATION INSIDE FREEZERS. SET LINES SECURELY AND 3/4" CLEAR WALLS.
    E. PROVISION FOR WATER FILTRATION SYSTEM FOR FOOD SERVICE INGREDIENT WATER FILTER FOR ODOR, TASTE, AND PARTICULAR MATTER.
    F. GENERAL CONTRACTOR (GC) SHALL PROVIDE: VACUUM BREAKER. (FOR WASTE SYSTEM)



FOOD SERVICE PLUMBING SCHEDULE

ITEM	QTY	DESCRIPTION	HW	HGT	PSI	CW	HGT	PSI	DW	HGT	IW	DRAIN TYPE	REMARKS
4	3	HAND SINKS	1/2"	36"		1/2"	36"		1 1/2"	27"			
8	1	EVAPORATOR COIL									3/4"	FFD	
11	1	EVAPORATOR COIL									3/4"	FFD	
17	1	SERVING COUNTER									(4) 1"	FS	
20	1	WATER WASH EXHAUST HOOD	(2) 1"	34"							(1) 1" (2) 2"	FFD FS	GC SHALL INTERCONNECT CONTROL PANEL WITH EXHAUST HOOD 4900 TOTAL EXHAUST CFM
22	1	FLOOR TROUGH FOR KETTLE							4"	0"			
23	1	KETTLE	1/2"	34"		1/2"	34"						
24	1	COMBI-OVEN	3/4"	9"	40 - 50	3/4"	9"	40 - 50			2"	FS	
26	1	2 COMPARTMENT SINK WITH FAUCET	1/2"	36"		1/2"	36"				(2) 2"	FS	
27	1	2 HP GARBAGE DISPOSER				1/2"	19"		2"	14"			
29	1	HOSE STATION	3/4"	40"		3/4"	40"						
30	1	FLOOR TROUGH FOR ICE MACHINE							4"	0"			
31	1	ICE MAKER WITH BIN				3/8"	40"				(2) 1/2" (1) 3/4"	FS	CW ROUTED THROUGH WATER FILTER, ITEM #33
33	1	WATER FILTER											ROUTE FILTERED WATER TO ICE MACHINE, ITEM #31
36	1	MOP SINK	1/2"	36"		1/2"	36"		2"	0"			
37	1	3 COMPARTMENT POT SINK WITH FAUCETS	(2)1/2"	40"		(2)1/2"	40"				(3) 2"	FS	
40	2	PRE-RINSE SPRAY	1/2"	34"		1/2"	34"						
41	1	SOILED DISH TABLE									1"	FS	
42	1	SINK 3 HP GARBAGE DISPOSER				1/2"	24"		2"	13"			
43	1	DISHWASHER W/ BUILT-IN BOOSTER HEATER	1/2"	6"							2"	FS	INCOMING 140° WATER AND 180° WATER REQ FOR FINAL RINSE.
45	1	CONDENSATE HOOD									1"	FS	700 CFM

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
□	FS	FLOOR SINK
⊠	AFD	AREA FLOOR DRAIN
◎	FFD	FUNNEL FLOOR DRAIN
●	DW	DIRECT WASTE
⊕	IW	INDIRECT WASTE
○	CW	COLD WATER
◉	HW	HOT WATER
○	CONN	CONNECTION
	PSI	POUNDS PER SQ. INCH
	AFF	ABOVE FINISHED FLOOR

1st FLOOR

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

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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

KEY PLAN

SCALE

1/4"=1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

TITLE

Plumbing Spot Plan of Food Service Area

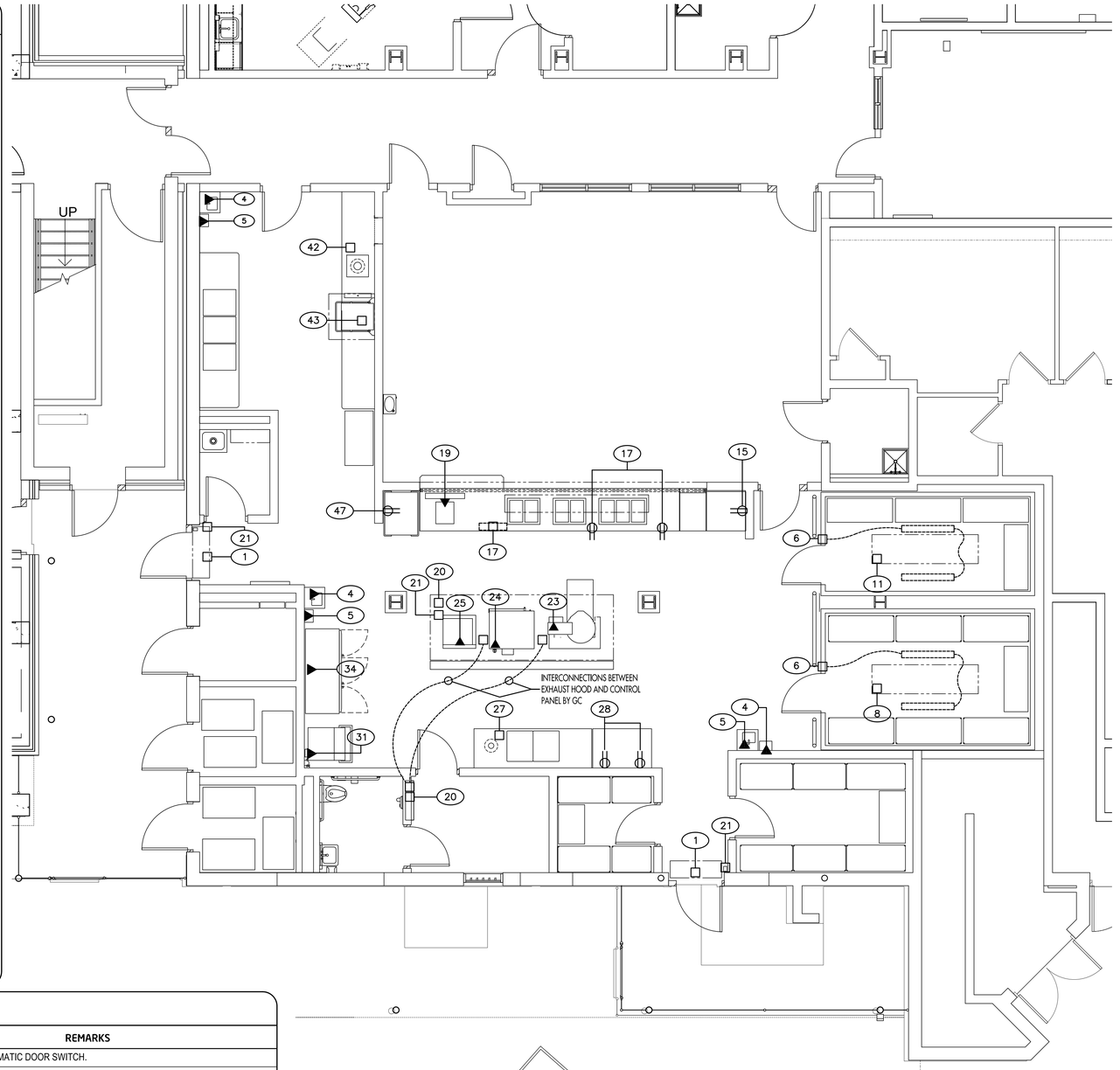
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

FS-201

SHEET NO.

ELECTRICAL NOTES

1. THIS DRAWING IS FOR INFORMATION PURPOSES ONLY. GENERAL CONTRACTOR (GC) SHALL COORDINATE WITH THE FOOD SERVICE EQUIPMENT SUB-CONTRACTOR AND RELATED MECHANICAL, ELECTRICAL AND PLUMBING SUB-CONTRACTORS TO ESTABLISH FINAL SPOT CONNECTION LOCATIONS AND CONFIGURATIONS AS REQUIRED. THIS DRAWING SHALL NOT BE USED TO LOCATE ANY UTILITY CONNECTIONS IN THE FIELD OR TO LOCATE ANY ROUGH-IN, PENETRATION, OR OTHER REQUIREMENTS.
2. THIS IS NOT A ROUGH-IN DRAWING. DIMENSIONED ROUGH-IN AND SLEEVE DRAWINGS SHALL BE PROVIDED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR. THIS IS ONLY FOR REFERENCE AND FOR THE USE OF PROJECT ELECTRICAL ENGINEERS IN PREPARING THEIR DRAWINGS.
3. SERVICES SHOWN RELATE TO FOOD SERVICE EQUIPMENT ONLY AND SHOW ONLY POINT OF CONNECTIONS. FOR CONVENIENCE RECEPTACLES, SWITCHES, CLOCK OUTLETS, TELEPHONES, CABLES, COMPUTER CONDUITS, HVAC, ETC. SEE ARCHITECTURAL/ELECTRICAL DRAWINGS.
4. GENERAL CONTRACTOR (GC) SHALL REFER TO SECTION 11400 SPECIFICATIONS.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL CODES.
6. SEE ENGINEERING CONTRACT DOCUMENTS FOR COMPLETE SPECIFICATIONS ON HVAC SYSTEM, EXHAUST AND MAKE UP AIR SYSTEM EXHAUST AND MAKE UP AIR SYSTEM.
7. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL ALL RECEPTACLE OUTLETS, JUNCTION BOXES, CORDS & PLUGS, QUICK DISCONNECTS, PIN & SLEEVE CONNECTORS, ETC. AS REQUIRED BY THE THE OWNER BUT NOT SHOWN ON DRAWINGS.
8. GENERAL CONTRACTOR (GC) SHALL SUPPLY ALL NECESSARY CONTACTORS, CONTROL WIRING, STARTERS, CORDS AND, PLUGS PIGTAILS, ETC NOT SUPPLIED BY LAUNDRY EQUIPMENT CONTRACTOR OR FACTORIES.
9. GENERAL CONTRACTOR (GC) SHALL INTERWIRE FIRE EXTINGUISHING SYSTEM WITH EXHAUST FAN AND COOKING BATTERY TO CAUSE EXHAUST FAN TO TURN ON AND COOKING BATTERY TO TURN OFF, WHEN FIRE SYSTEM IS ACTIVATED OR AS PER LOCAL, BOCA, & NFPA CODE REQUIREMENTS AND ENGINEERING DRAWINGS.
10. GENERAL CONTRACTOR (GC) SHALL SUPPLY CONTACTORS AND/ OR SHUNT TRIP BREAKERS TO PROVIDE FOR TOTAL FUEL SHUT-OFF TO COOKING BATTERY.
11. GENERAL CONTRACTOR (GC) SHALL INSTALL START-STOP STATION WITH RED LIGHT INDICATOR FOR EXHAUST AND RETURN AIR FANS.
12. GENERAL CONTRACTOR (GC) SHALL CONNECT HOOD LIGHTS IN EXHAUST HOOD.
13. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL START-STOP STATION FOR EXHAUST FAN ON WAREWASHERS AND DISHMACHINES, KILL SWITCHES IN THE OFFICES AND DUCT WORK AND FANS.
14. GENERAL CONTRACTOR (GC) SHALL INSTALL LIGHTS SUPPLIED BY FOOD SERVICE EQUIPMENT CONTRACTOR TO THE WALK-IN COOLER, FREEZERS, AND BEVERAGE COOLER AS NECESSARY.
15. GENERAL CONTRACTOR (GC) SHALL BE RESPONSIBLE FOR ALL WIRING, FITTINGS, AND LABOR, UP TO AND INCLUDING FINAL CONNECTIONS OF JUNCTION BOXES, RECEPTACLES, DISCONNECT SWITCHES AND SUB-PANELS.
16. GENERAL CONTRACTOR (GC) SHALL INTERWIRE VENTILATOR AND FIRE PROTECTION SYSTEM.
17. GENERAL CONTRACTOR (GC) SHALL MAKE PROVISION OF AREA SUB-PANELS IN LIEU OF DISCONNECT SWITCHES WHEREVER POSSIBLE.
18. GENERAL CONTRACTOR (GC) SHALL PROVIDE ALL EXPOSED HARDWARE AND FIXTURES IN STAINLESS STEEL AND BE WATERPROOF.
19. COORDINATION OF PANELBOARDS WITH EQUIPMENT LOCATIONS AND REQUIREMENTS SHALL BE DONE BY GENERAL CONTACTOR (GC).
20. ALL PANELBOARDS SHALL BE PROVIDED WITH 20% SPARE CAPACITY AND IN CASE OF SUBSTITUTION OF EQUIPMENT. ALL PANELBOARDS SHALL ALSO BE PROVIDED WITH 20% SPARE CAPACITY.
21. GENERAL CONTRACTOR (GC) SHALL PROVIDE SHUNT-TRIP BREAKERS FOR COOKING EQUIPMENT AS REQUIRED.
22. EMPTY CONDUITS FOR CONTROL/COMPUTER WIRING, CABLES AND BEVERAGE SYSTEM AS REQUIRED SHALL BE PROVIDED BY GENERAL CONTRACTOR (GC).
23. GENERAL CONTRACTOR (GC) SHALL PROVIDE WIRING, FITTINGS AND LABOR TO DO FINAL CONNECTIONS OF ALL FOOD SERVICE EQUIPMENT.
24. PER MANUFACTURERS SPECIFICATIONS, GENERAL CONTRACTOR (GC) SHALL INTERWIRE WASTE DISPOSAL SYSTEMS AND REMOTE REFRIGERATION SYSTEMS.
25. IF CONTROL WIRING IS NECESSARY FOR ANY EQUIPMENT, THEN ALL CONTROL WIRING CONNECTIONS SHALL BE THE TOTAL RESPONSIBILITY OF GENERAL CONTRACTOR (GC).
26. EMERGENCY BACKUP POWER SHALL BE PROVIDED FOR FOOD SERVICE EQUIPMENT. FOR DETAILS REFER TO ELECTRICAL ENGINEERING DRAWINGS.
27. THE AMPS SHOWN FOR CONVENIENCE OUTLETS IS FOR CIRCUIT.
28. PIN & SLEEVE CONNECTORS WITH TWIST LOCKS SHALL BE SPECIFIED BY ELECTRICAL ENGINEER AND FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR SUB OF GENERAL CONTRACTOR.



FOOD SERVICE ELECTRICAL SCHEDULE

ITEM	QTY	DESCRIPTION	VOLT	PH	KW	AMPS	HP	CONN	HGT	REMARKS
1	2	AIR CURTAIN	115	1		9.0	1	DC	96"	20 AMP AUTOMATIC DOOR SWITCH.
4	3	HAND SINKS	(2) 120	1		20.0		SP	20"	
5	3	HAND DRIER	120	1	1.2	15.0		SP	60"	DEDICATED CIRCUIT REQUIRED.
6	2	WALK-IN COOLER WITH PLASTIC STRIP CURTAINS	120	1		20.0		DC	102"	
7	1	REMOTE REFRIGERATION SYSTEM	208	3		40.0		DC	102"	
8	1	EVAPORATOR COIL	115	1		12.3		DC	96"	
11	1	EVAPORATOR COIL	115	1		8.7		DC	96"	
15	1	WORK TABLE	120	1		20.0		DR	20"	CONVENIENCE OUTLET
17	1	SERVING COUNTER	120 120/208	1 1		20.0 40.0		DR DC	20" 0"	CONVENIENCE OUTLET BREAKER PANEL
19	1	JUICE DISPENSER	120	1	.34	3.0		SP	36"	
20	1	WATER WASH EXHAUST HOOD W/ CONTROL PANEL	120	1		20.0		DC	102"	UNINTERRUPTED POWER GC SHALL INTERCONNECT CONTROL WITH EXHAUST HOOD
21	LOT	FIRE SYSTEM	120	1		20.0		DC	82"	UNINTERRUPTED POWER GC SHALL CONNECT TO PULL STATIONS AT TWO LOCATIONS
23	1	KETTLE	208	3	10.8	30.0		SP	10"	PIN & SLEEVE CONNECTOR W/ TWIST LOCK. REFER TO NOTE #28.
24	1	COMBI-OVEN	208	3	19.0	53.0		SP	28"	PIN & SLEEVE CONNECTOR W/ TWIST LOCK. REFER TO NOTE #28.
25	1	GRIDDLE	208	3	5.4	22.0		SP	28"	PIN & SLEEVE CONNECTOR W/ TWIST LOCK. REFER TO NOTE #28.
27	1	2 HP GARBAGE DISPOSER	208	3		6.0	2	DC	28"	
28	1	WORK TABLE	120	1		20.0		DR	20"	CONVENIENCE OUTLET
31	1	ICE MAKER WITH BIN	115	1		13.2		SP	40"	RUN POWER (0.1 AMP) TO CLEANING SYSTEM, ITEM #32
32	1	CLEANING SYSTEM	115	1		.1				ELECTRICAL POWER (0.1 AMP) DRAWN DIRECTLY FROM ICE MACHINE, ITEM #31
34	1	3 DOOR REACH-IN FREEZER	208-230	1		12.9	3/4	SP	82"	
42	1	SINK MOUNTED 3 HP GARBAGE DISPOSER	208	3		9.5	3.0	DC	20"	
43	1	DISHWASHER W/ BUILT-IN BOOSTER HEATER	208	3	6.0	50.1	1	DC	11"	BUILT IN BOOSTER HEATER IS 208/60/3, 9 KW
47	1	TRAY DELIVERY CART WITH CASTERS	120	1		20.0		DR	20"	NEMA 5-15P

ELECTRICAL LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	V	VOLTAGE
	PH	PHASE
	KW	KILOWATT
	AMP	AMPERE
	HP	HORSEPOWER
	FL	FLUORESCENT LIGHT
	SR	SPECIAL CONVENIENCE OUTLET
	DR	DUPLEX CONVENIENCE OUTLET
	DC	DIRECT CONNECTION
	VPL	VAPOR PROOF LIGHT
	SP	SPECIAL RECEPTACLE (NEMA)
	LED	LED LIGHT

1st FLOOR

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

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BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

KEY PLAN

SCALE

1/4"=1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

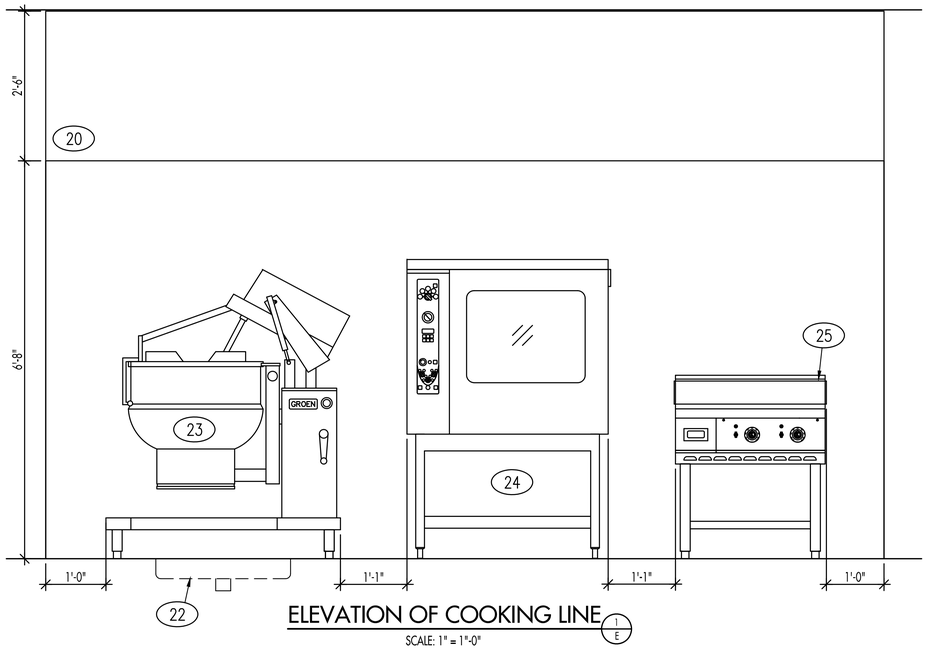
TITLE

Electrical Spot Plan of Food Service Area

PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

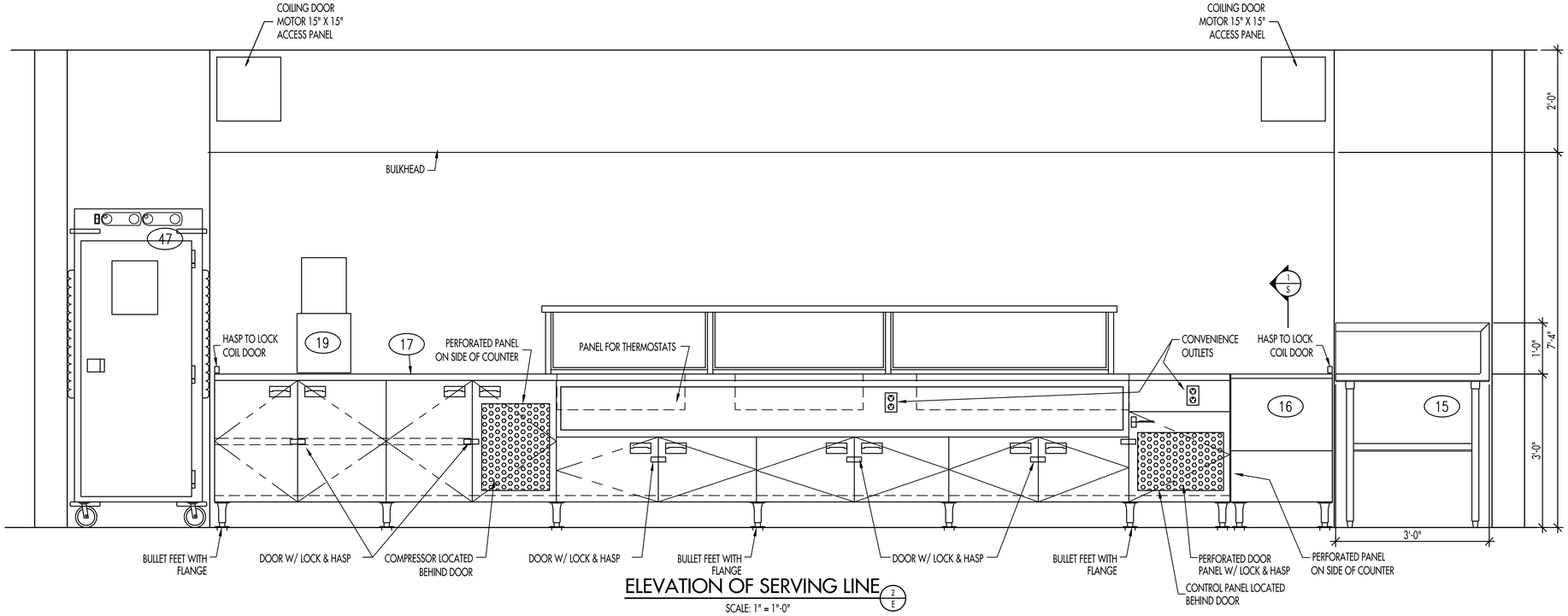
FS-301

SHEET NO.



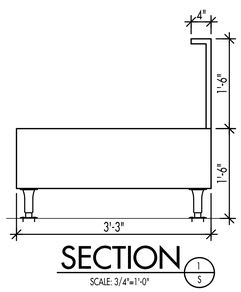
ELEVATION OF COOKING LINE (1/E)

SCALE: 1" = 1'-0"



ELEVATION OF SERVING LINE (2/E)

SCALE: 1" = 1'-0"
FROM KITCHEN SIDE



SECTION (1/S)

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

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DESIGN DEVELOPMENT

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KEY PLAN

SCALE

1"=1'-0"

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DATE	02-05-2015

TITLE

Elevations of Serving and Hot Prep Areas

PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

FS-400

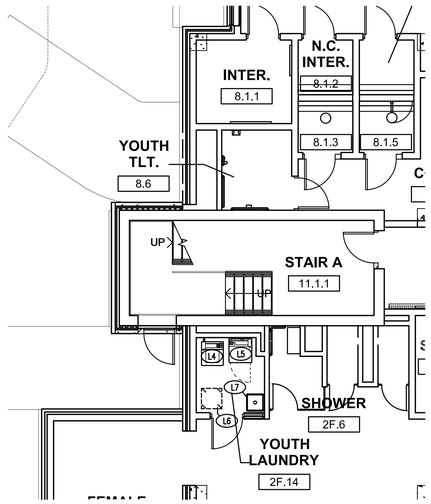
SHEET NO.

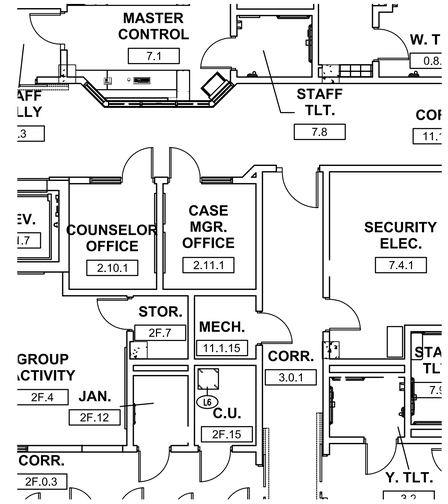
LAUNDRY EQUIPMENT SCHEDULE

ITEM	QTY	DESCRIPTION	MANUFACTURER
L1	3	SOILED LAUNDRY CARTS	INTER METRO *
L2	3	CLEAN LAUNDRY CARTS	INTER METRO *
L3		OPEN NUMBER	
L4	5	WASHERS	UNIMAC
L5	5	DRYERS	UNIMAC
L6	5	LINEN CARTS	INTER METRO *
L7	5	LAUNDRY SINK	AERO

* THESE ITEMS WILL BE FURNISHED & INSTALLED BY OWNER AND NOT BY GENERAL CONTRACTOR.

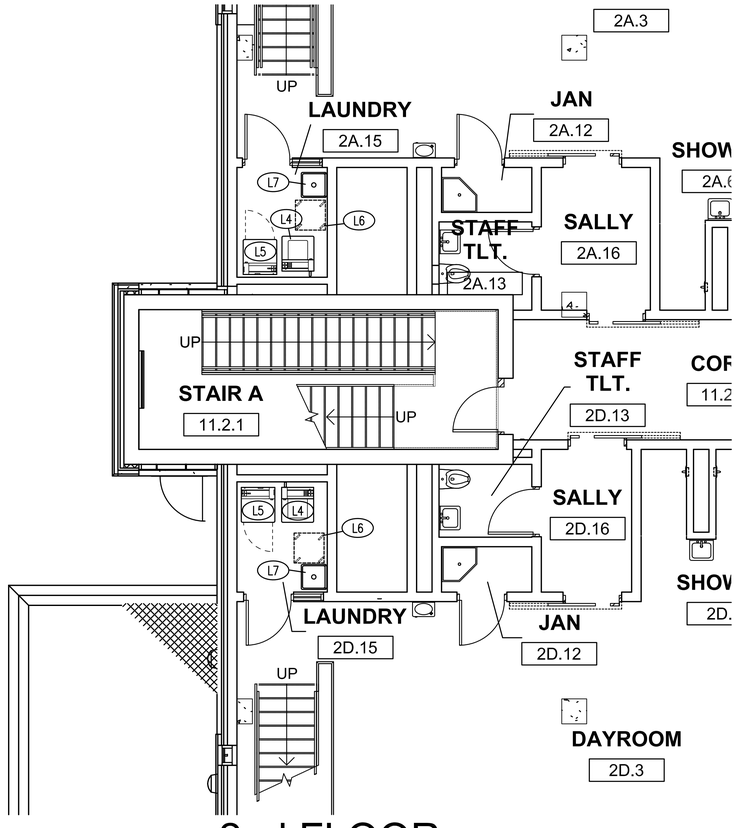
NOTE:
LINEN CARTS, ITEM #L6 WILL BE PARKED IN ROOM #S 2.7 AND 2F.15





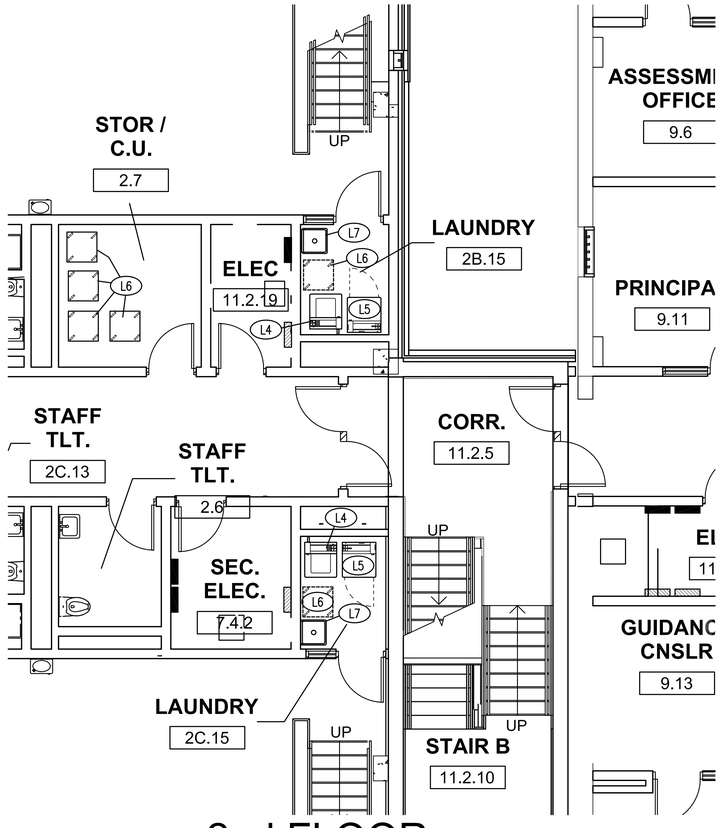
1st FLOOR

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



2nd FLOOR

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



2nd FLOOR

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

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1/4"=1'-0"

No.	Description	Date

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

TITLE
Floor Plan of First & Second Floor Laundry

PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

FSL-100

SHEET NO.

PLUMBING NOTES

1. THIS DRAWING IS FOR INFORMATION PURPOSES ONLY. GENERAL CONTRACTOR (GC) SHALL COORDINATE WITH THE FOOD SERVICE EQUIPMENT SUB-CONTRACTOR AND RELATED MECHANICAL, ELECTRICAL AND PLUMBING SUB-CONTRACTORS TO ESTABLISH FINAL SPOT CONNECTION LOCATIONS AND CONFIGURATIONS AS REQUIRED. THIS DRAWING SHALL NOT BE USED TO LOCATE ANY UTILITY CONNECTIONS IN THE FIELD OR TO LOCATE ANY ROUGH-IN, PENETRATION, OR OTHER REQUIREMENTS.
2. THIS IS NOT A ROUGH-IN DRAWING. DIMENSIONED ROUGH-IN AND SLEEVE DRAWINGS SHALL BE PREPARED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR. ROUGH-IN DRAWINGS SHALL BE PREPARED USING THE BASE LINE DIMENSIONING METHOD. ADDITIONALLY THIS DRAWING IS TO BE USED BY THE HEATING, VENTILATION, PLUMBING AND MECHANICAL ENGINEERS IN PREPARING THEIR DESIGN TO INTEGRATE INTO THE TOTAL BUILDING UTILITY REQUIREMENTS WITH FOOD SERVICE UTILITIES.
3. SERVICES SHOWN RELATE TO LAUNDRY EQUIPMENT REQUIREMENTS ONLY AND SHOW ONLY POINT OF CONNECTION. SEE ARCHITECTUAL/ENGINEERING DRAWINGS FOR ADDITIONAL REQUIREMENTS.
4. GENERAL CONTRACTOR (GC) SHALL REFER TO SECTION 112300 SPECIFICATIONS.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES
6. PUBLIC WATER AND SEWAGE SHALL BE FURNISHED.
7. ALL WATER LINES SHALL HAVE SHUT-OFF VALVES.
8. GENERAL CONTRACTOR (GC) AND PLUMBING ENGINEER SHALL PROVIDE HOT WATER FROM THE CENTRAL BUILDING SOURCE TO THE WASHERS SUCH THAT IT MEETS THE CODE REQUIREMENTS.
9. ALL INTERCONNECTING AND FINAL CONNECTIONS SHALL BE DONE BY GENERAL CONTRACTOR (GC) FOR ALL ITEMS LISTED.
10. GENERAL CONTRACTOR SHALL SUPPLY AND INSTALL TRAP-PRIMING SYSTEM FOR ALL FLOOR DRAINS, AS REQUIRED BY CODE.
11. ALL OPEN SITE DRAINS SHALL HAVE A MINIMUM OF 1" AIR GAP.
12. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL ANY NEEDED GREASE TRAPS OR RECEPTORS AS PER LOCAL AND/OR BOCA CODE REQUIREMENTS.
13. INSTALL ALL FLOOR SINK FLUSH WITH FINISHED FLOOR.
14. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL BACK-FLOW PREVENTORS AND VACUUM BREAKERS ON ALL EQUIPMENT AS REQUIRED BY LOCAL CODES.
15. GENERAL CONTRACTOR (GC) SHALL INTERPLUMB WASHERS AS PER MANUFACTURERS RECOMMENDATIONS.
16. IF GREASE INTERCEPTOR IS NOT REQUIRED, RUN ALL 2" WASTE LINES TO CLOSEST RESPECTIVE DRAINS FOR ALL GREASE GREASE INTERCEPTOR LOCATIONS, GENERAL CONTRACTOR (GC) SHALL COMPLY WITH ALL COMAR REGULATIONS.
17. PLUMBING/MECHANICAL DIVISION IS RESPONSIBLE FOR:
    A. ALL WATER, WASTE, GAS, STEAM AND HVAC SERVICES TO EQUIPMENT INCLUDING PIPING, FITTINGS, SLEEVES, STOPS, VALVES, TRAPS, CLEANOUTS, INSULATION AND HARDWARE UP TO AND INCLUDING FINAL CONNECTIONS.
    B. WHEREVER POSSIBLE ALL PLUMBING AND STEAM PIPINGS, CONNECTIONS, ETC., SHALL BE CONCEALED AND NOT EXPOSED. IF EXPOSED, PIPINGS AND FITTINGS SHALL BE COVERED IN STAINLESS STEEL.
    C. INTERCONNECTING WASTE SYSTEMS.
    D. GENERAL CONTRACTOR (GC) SHALL PROVIDE: VACUUM BREAKER. (FOR WASTE SYSTEM)

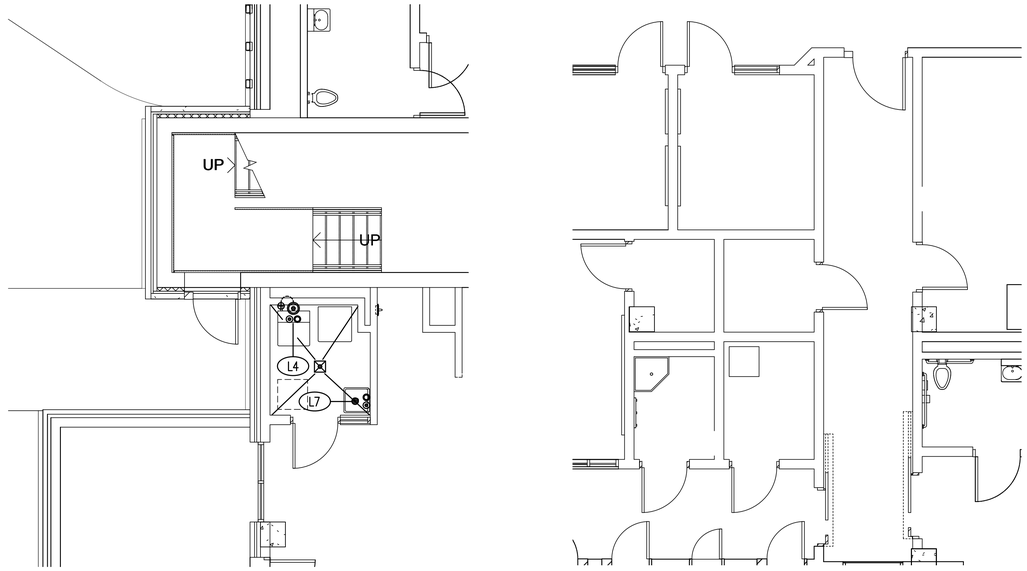
LAUNDRY PLUMBING SCHEDULE

ITEM	QTY	DESCRIPTION	HW	HGT	PSI	CW	HGT	PSI	DW	HGT	IW	DRAIN TYPE
* L4	5	WASHERS	1/2"	24"	20-120	1/2"	24"				3/4"	FFD
L7	5	LAUNDRY SINK	1/2"	35"		1/2"	35"		1 1/2"			

* FOR ITEM #L4, WASHERS - PROVIDE 60° TO 80° F COLD WATER SUPPLY AND 125° F HOT WATER SUPPLY.

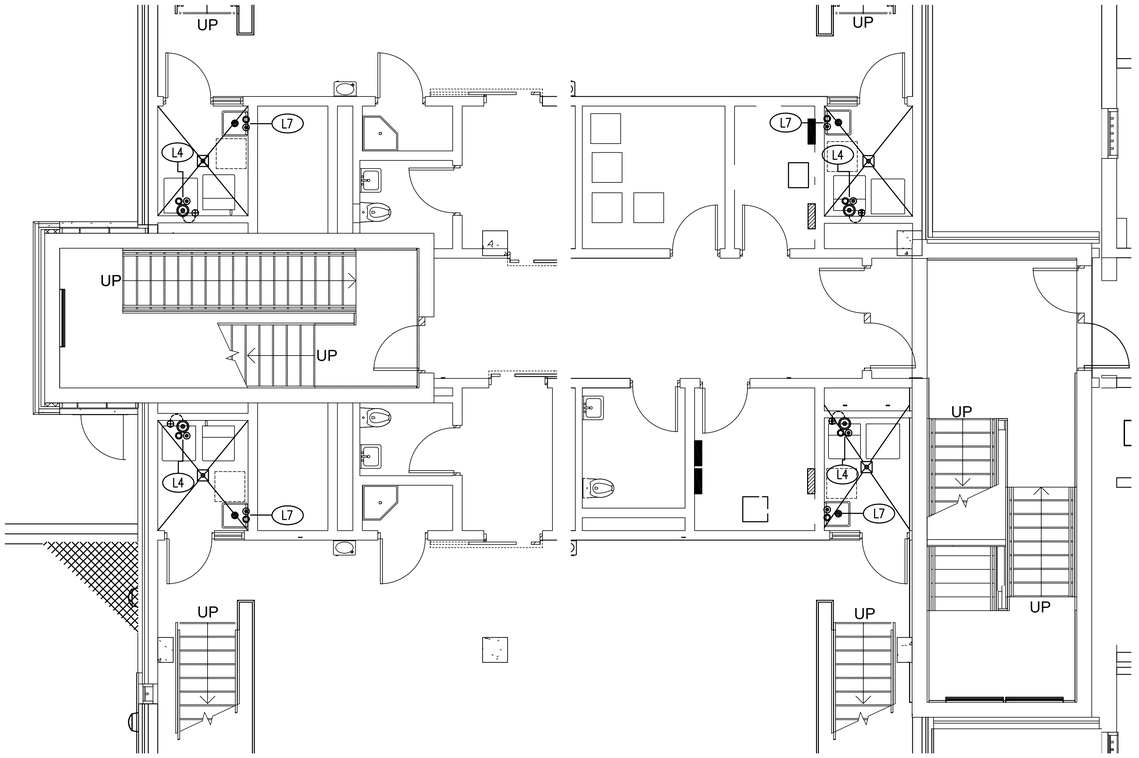
PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	FS	FLOOR SINK
	AFD	AREA FLOOR DRAIN
	FFD	FUNNEL FLOOR DRAIN
	DW	DIRECT WASTE
	IW	INDIRECT WASTE
	CW	COLD WATER
	HW	HOT WATER
	CONN	CONNECTION
	PSI	POUNDS PER SQ. INCH
	AFF	ABOVE FINISHED FLOOR



1st FLOOR

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



2nd FLOOR

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

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No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

TITLE

Plumbing Spot Plan of First & Second Floor Laundry

PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

FSL-201

SHEET NO.

ELECTRICAL NOTES

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6. SEE ENGINEERING CONTRACT DOCUMENTS FOR COMPLETE SPECIFICATIONS ON HVAC SYSTEM, EXHAUST AND MAKE UP AIR SYSTEM EXHAUST AND MAKE UP AIR SYSTEM.
7. GENERAL CONTRACTOR (GC) SHALL SUPPLY AND INSTALL ALL RECEPTACLE OUTLETS, JUNCTION BOXES, CORDS & PLUGS, QUICK DISCONNECTS, PIN & SLEEVE CONNECTORS, ETC. AS REQUIRED BY THE THE OWNER BUT NOT SHOWN ON DRAWINGS.
8. GENERAL CONTRACTOR (GC) SHALL SUPPLY ALL NECESSARY CONTACTORS, CONTROL WIRING, STARTERS, CORDS AND, PLUGS PIGTAILS, ETC NOT SUPPLIED BY LAUNDRY EQUIPMENT CONTRACTOR OR FACTORIES.
9. GENERAL CONTRACTOR (GC) SHALL INSTALL START-STOP STATION WITH RED LIGHT INDICATOR FOR DRYER EXHAUST AND RETURN AIR FANS.
10. GENERAL CONTRACTOR (GC) SHALL BE RESPONSIBLE FOR ALL WIRING, FITTINGS, AND LABOR, UP TO AND INCLUDING FINAL CONNECTIONS OF JUNCTION BOXES, RECEPTACLES, DISCONNECT SWITCHES AND SUB-PANELS.
11. GENERAL CONTRACTOR (GC) SHALL PROVIDE ALL EXPOSED HARDWARE AND FIXTURES IN STAINLESS STEEL AND BE WATERPROOF.
12. COORDINATION OF PANELBOARDS WITH EQUIPMENT LOCATIONS AND REQUIREMENTS SHALL BE DONE BY GENERAL CONTACTOR (GC).
13. ALL PANELBOARDS SHALL BE PROVIDED WITH 20% SPARE CAPACITY AND IN CASE OF SUBSTITUTION OF EQUIPMENT. ALL PANELBOARDS SHALL ALSO BE PROVIDED WITH 20% SPARE CAPACITY.
14. GENERAL CONTRACTOR (GC) SHALL PROVIDE WIRING, FITTINGS AND LABOR TO DO FINAL CONNECTIONS OF ALL LAUNDRY AND LAUNDRY EQUIPMENT.
15. THE AMPS SHOWN FOR CONVENIENCE OUTLETS IS FOR CIRCUIT.

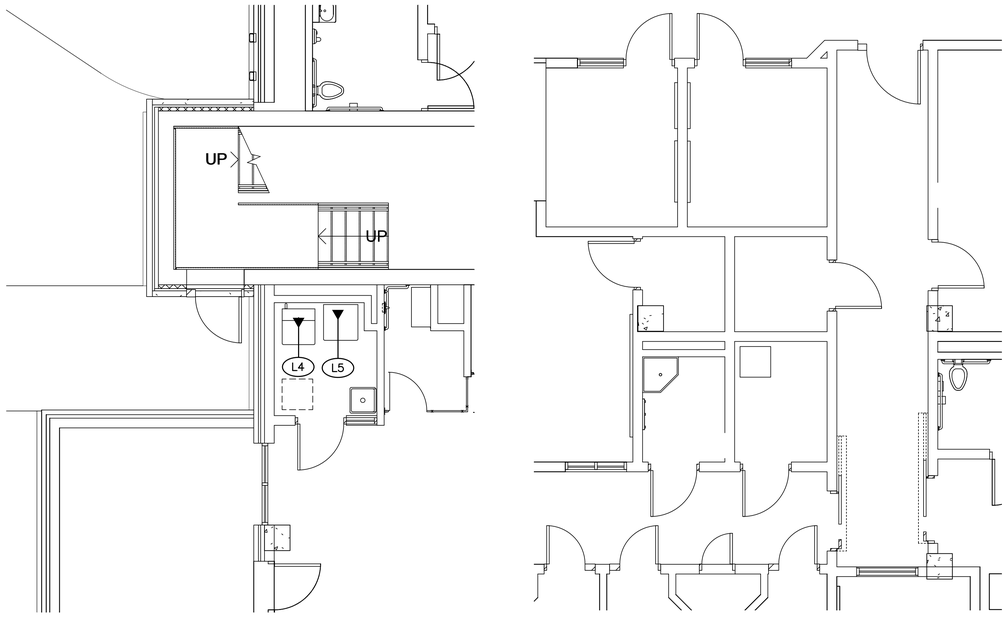
LAUNDRY ELECTRICAL SCHEDULE

ITEM	QTY	DESCRIPTION	VOLT	PH	KW	AMPS	HP	CONN	HGT
L4	5	WASHERS	120	1		15.0	1/2	SP	20"
L5	5	DRYERS	120/208	1	4.75	30.0	1/3	SP	20"

ELECTRICAL LEGEND

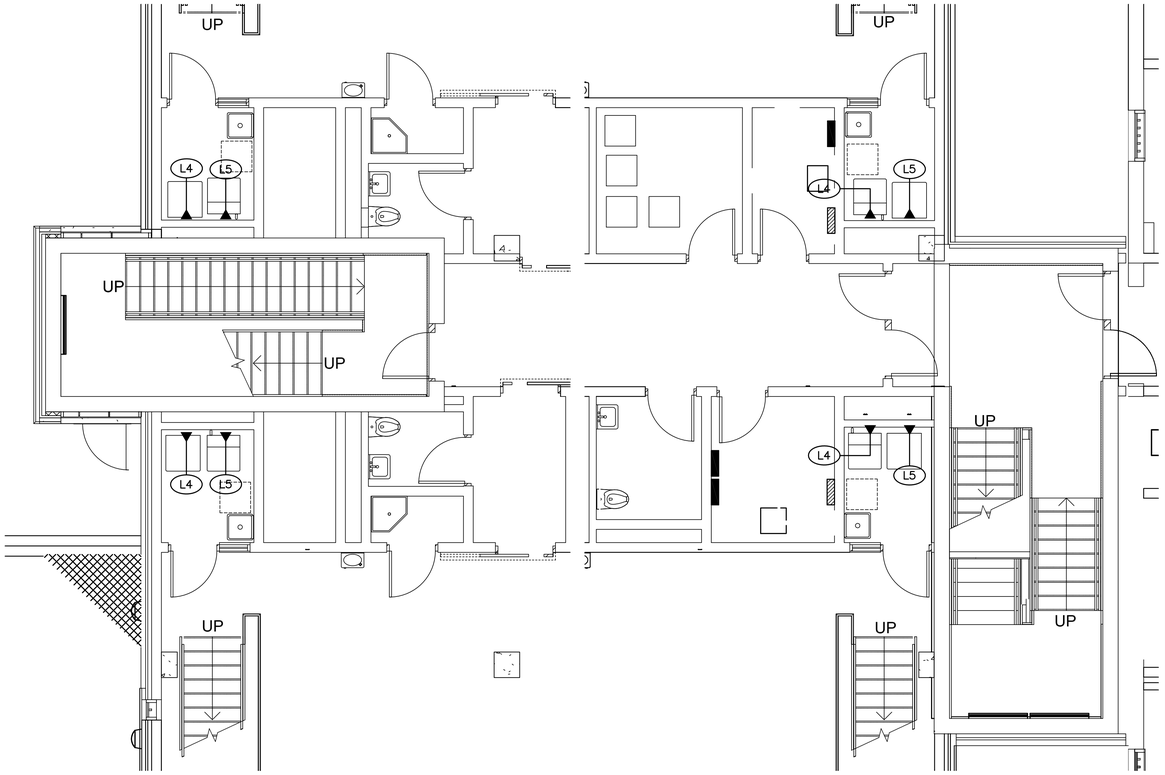
SYMBOL	ABBREVIATION	DESCRIPTION
	V	VOLTAGE
	PH	PHASE
	KW	KILOWATT
	AMP	AMPERE
	HP	HORSEPOWER
	FL	FLUORESCENT LIGHT
	SR	SPECIAL CONVENIENCE OUTLET
	DR	DUPLEX CONVENIENCE OUTLET
	DC	DIRECT CONNECTION
	VPL	VAPOR PROOF LIGHT
	SP	SPECIAL RECEPTACLE (NEMA)
	LED	LED LIGHT

NOTE:
DRYERS REQUIRE 4" EXHAUST DUCT.



1st FLOOR

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



2nd FLOOR

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

KEY PLAN

SCALE

1/4"=1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

TITLE

Electrical Spot Plan of First & Second Floor Laundry

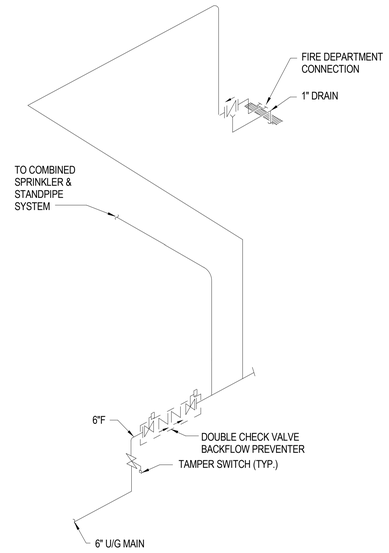
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

FSL-301

SHEET NO.

FIRE PROTECTION NOTES:

1. SPRINKLER SYSTEM SHALL BE INSTALLED TO MEET REQUIREMENTS OF NFPA, BALTIMORE CITY AND STATE OF MARYLAND FIRE MARSHAL.
2. COORDINATE ALL PIPING AND SPRINKLERS WITH CEILING GRID AND SERVICES. ALL SPRINKLER ZONE VALVES SHALL BE KEPT OPEN BY LOCKING MECHANISM WITH TAMPER SWITCH.
3. ALL SPRINKLER ZONE VALVES SHALL HAVE A PERMANENT IDENTIFICATION SIGN INDICATING THE AREA CONTROLLED.
4. ALL PIPES SHALL BE SUPPORTED BY PIPE HANGERS AND SUPPORTS PER NFPA-13. PIPE SIZES AND ROUTING ARE INDICATED FOR INFORMATION ONLY. SPRINKLER PIPING SIZES SHALL BE HYDRAULICALLY CALCUATED AS PER NFPA-13.
5. SPRINKLER SYSTEM SHALL BE PROVIDED WITH DRAINS IN ACCORDANCE WITH NFPA-13. ALL INSPECTION POINTS SHALL BE ACCESSIBLE WITH A PERMANENT IDENTIFICATION LABEL.
6. CONTRACTOR SHALL INSTALL SPRINKLER HEADS TO CLEAR LIGHTING FIXTURES, SPEAKERS, AIR DIFFUSERS AND OTHER CEILING/WALL MOUNTED DEVICES. SPRINKLER HEADS SHALL BE INSTALLED CENTER OF CEILING TILE, WHERE APPLICABLE.
7. SPRINKLER SYSTEM INSTALLER SHALL BE REGISTERED IN THE STATE OF MARYLAND. REFER TO SPECIFICATION SECTION 13915 FOR HAZARD CLASSIFICATION.
8. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A COMPLETE DESIGNED, WET STANDPIPE SYSTEM, DRY SPRINKLER SYSTEM AND CLEAN AGENT FM-200 SYSTEM IN ACCORDANCE WITH NFPA 13, NFPA 14, NFPA 20, NFPA 2001 AND ALL OTHER APPLICABLE CODES AND STANDARDS. ALL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A FIRE PROTECTION ENGINEER REGISTERED IN THE STATE OF MARYLAND. CONTRACTOR SHALL APPLY FOR AND OBTAIN REQUIRED PERMITS, FURNISH AND INSTALL ALL MATERIAL, AND ACQUIRE ALL REQUIRED APPROVALS.



FIRE RISER DIAGRAM

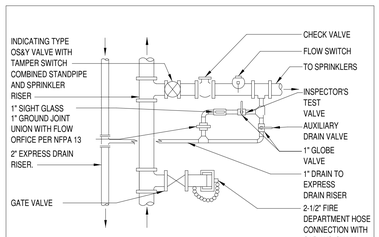
NOT TO SCALE

PLUMBING LEGEND

SYMBOL	DESCRIPTION
F	FIRE PROTECTION PIPE
	PIPE TURNING UP
	PIPE TURNING DOWN
	SHUT-OFF VALVE
	VALVE IN VERTICAL
	NEW TO EXISTING CONNECTION

PLUMBING ABBREVIATIONS

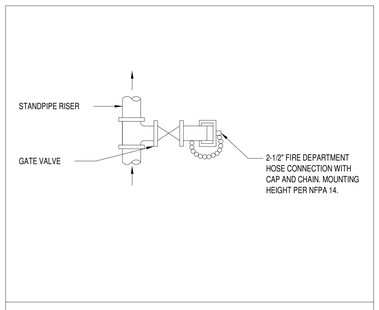
ABBREVIATION	DESCRIPTION
DN	DOWN
DWG.	DRAWING
EX., EXIST.	EXISTING
F	FIRE PROTECTION PIPE
FD	FLOOR DRAIN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION



NOTE:
1) PROVIDE OS&Y VALVE WITH TAMPER SWITCH IN COMBINED STANDPIPE AND SPRINKLER RISER AT CONNECTION TO FIRE MAIN FOR SYSTEMS WITH MULTIPLE RISERS.

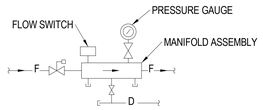
COMBINED STANDPIPE AND SPRINKLER ZONE VALVING DETAIL

SCALE: NONE



STANDPIPE VALVING DETAIL

SCALE: NONE



ZONE VALVE/MANIFOLD ASSEMBLY DETAIL

NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SEAL

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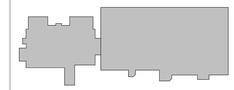
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · STEVEN W. SIDHU · 43481 · PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

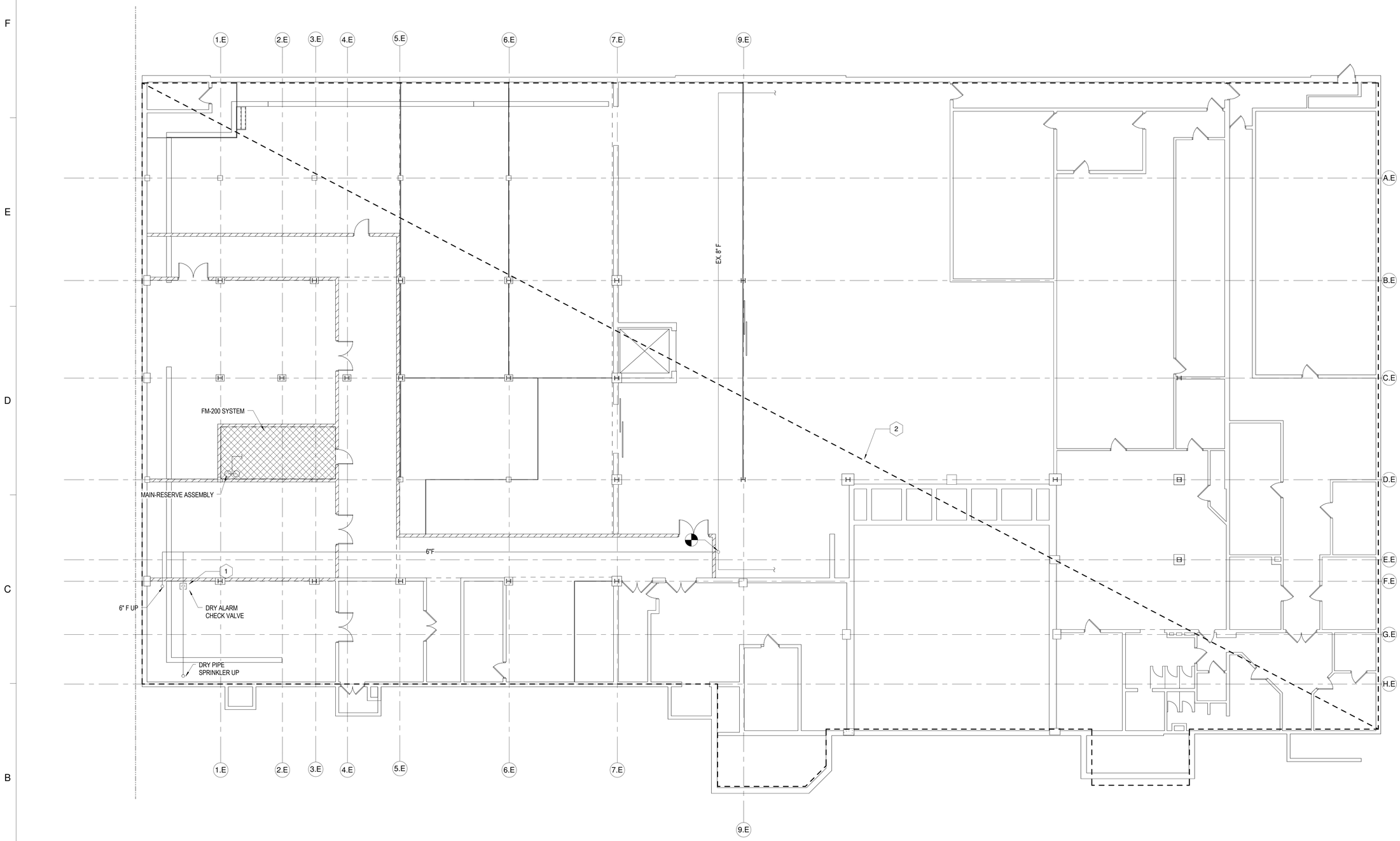
NOTES, SYMBOLS, DETAILS, & ABBREVIATIONS

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

FPO001

SHEET NO.



1 BASEMENT FLOOR PLAN - FIRE PROTECTION

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

0' 4' 8' 16' 32'

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

SHEET NOTES:

1. PROVIDE DRY PIPE SPRINKLER SYSTEM WITH ALARM VALVE, AIR COMPRESSOR, AND ASSOCIATED ACCESSORIES. TO SERVE LOADING DOCK AREA.
2. MODIFY EXISTING SPRINKLER SYSTEM TO SERVE ALL EXISTING AND RENOVATED SPACE TO COMPLY WITH NFPA AND LOCAL FIRE MARSHAL REQUIREMENTS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CLIFTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

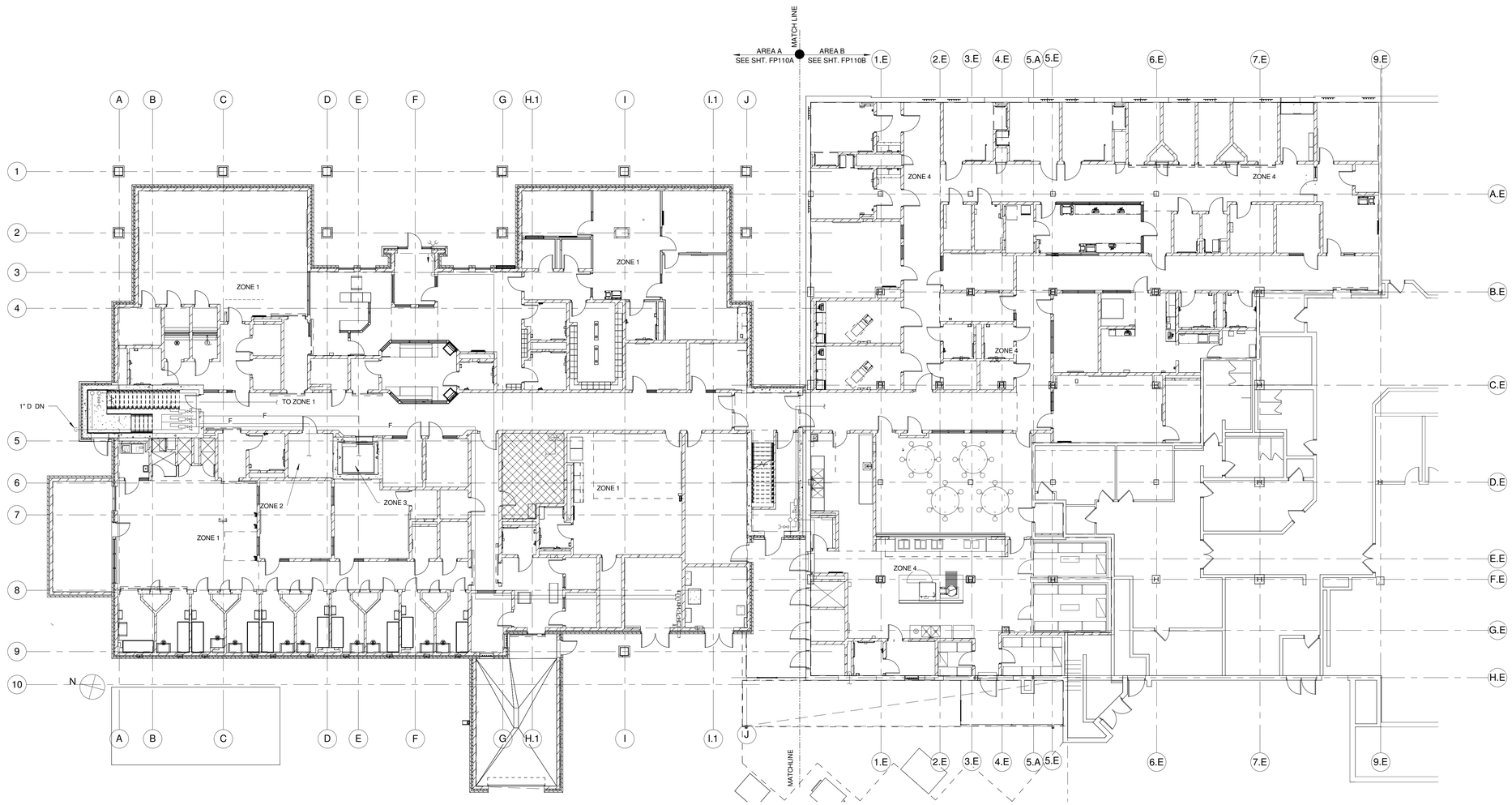
BASEMENT FLOOR PLAN - FIRE PROTECTION

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

FPO100

SHEET NO.



1 FIRST FLOOR PLAN - OVERALL - FIRE PROTECTION

Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · STEVEN K. LEWICKI · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

3/32" = 1'-0"

No.	Description	Date

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DATE	Issue Date

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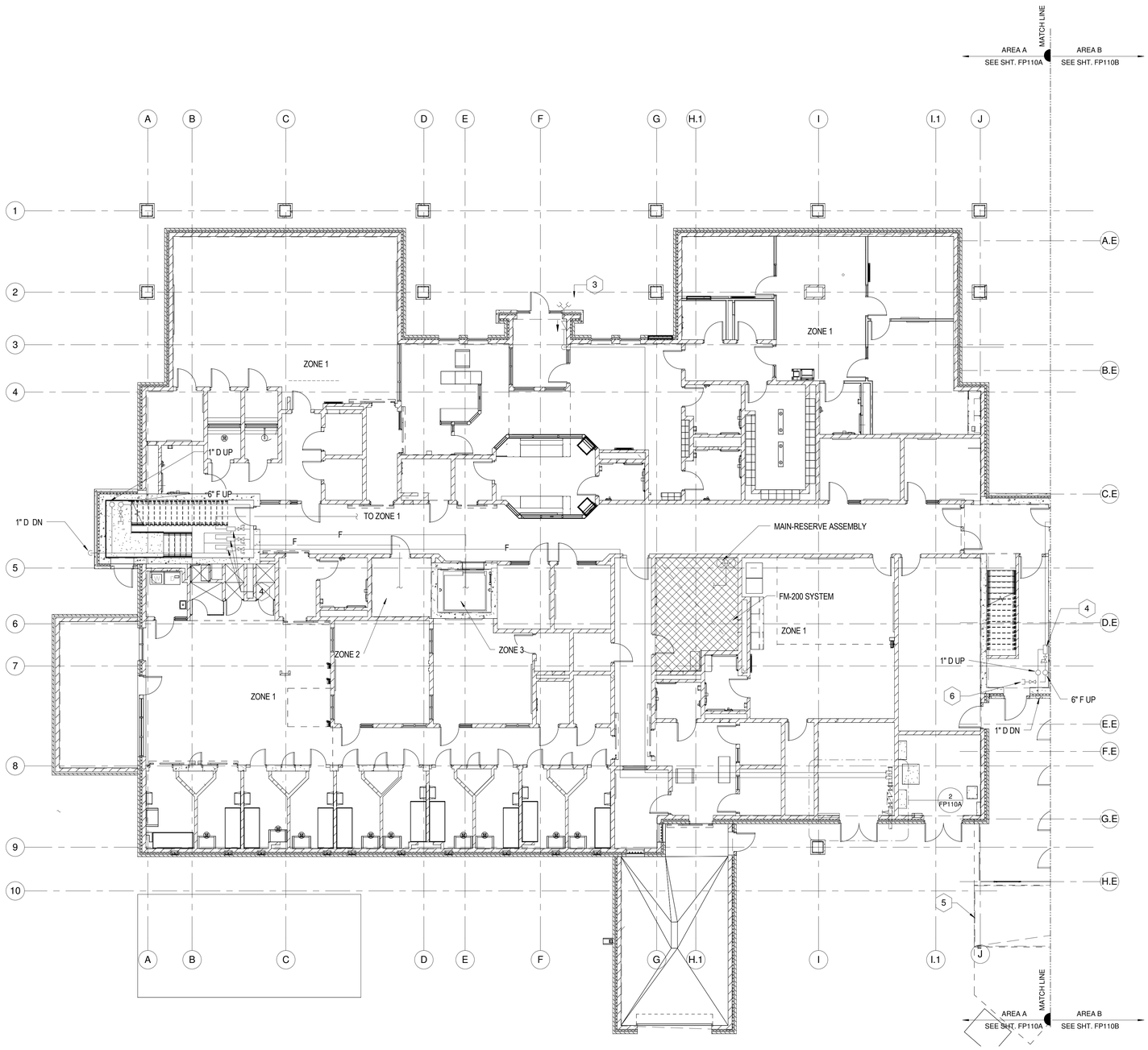
FIRST FLOOR PLAN - OVERALL FIRE PROTECTION

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

FPO110

SHEET NO.

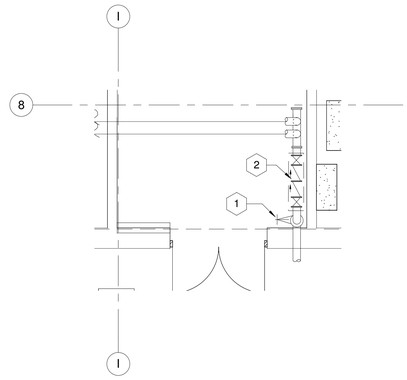


1 FIRST FLOOR PLAN - FIRE PROTECTION - AREA A

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

0' 4' 8' 16' 32'

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



2 FIRST FLOOR PLAN - FIRE PROTECTION - SPRINKLER ROOM

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

0' 2' 4' 8' 16'

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

SHEET NOTES:

1. TAMPER SWITCH PROVIDED BY FIRE ALARM CONTRACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR TO CONNECT TAMPER SWITCH TO FIRE ALARM SYSTEM.
2. PROVIDE NEW DOUBLE CHECK VALVE BACKFLOW PREVENTER.
3. FIRE DEPARTMENT CONNECTION.
4. MANIFOLDED CONTROL ASSEMBLY WITH FLOW SWITCH, PRESSURE GAUGE, INSPECTOR'S TEST CONNECTION, AND DRAIN.
5. PROVIDE DRY PIPE SPRINKLER SYSTEM UNDER LOAD DOCK CANOPY AS INDICATED.
6. HOSE VALE(TYP.).

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · GLEN W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

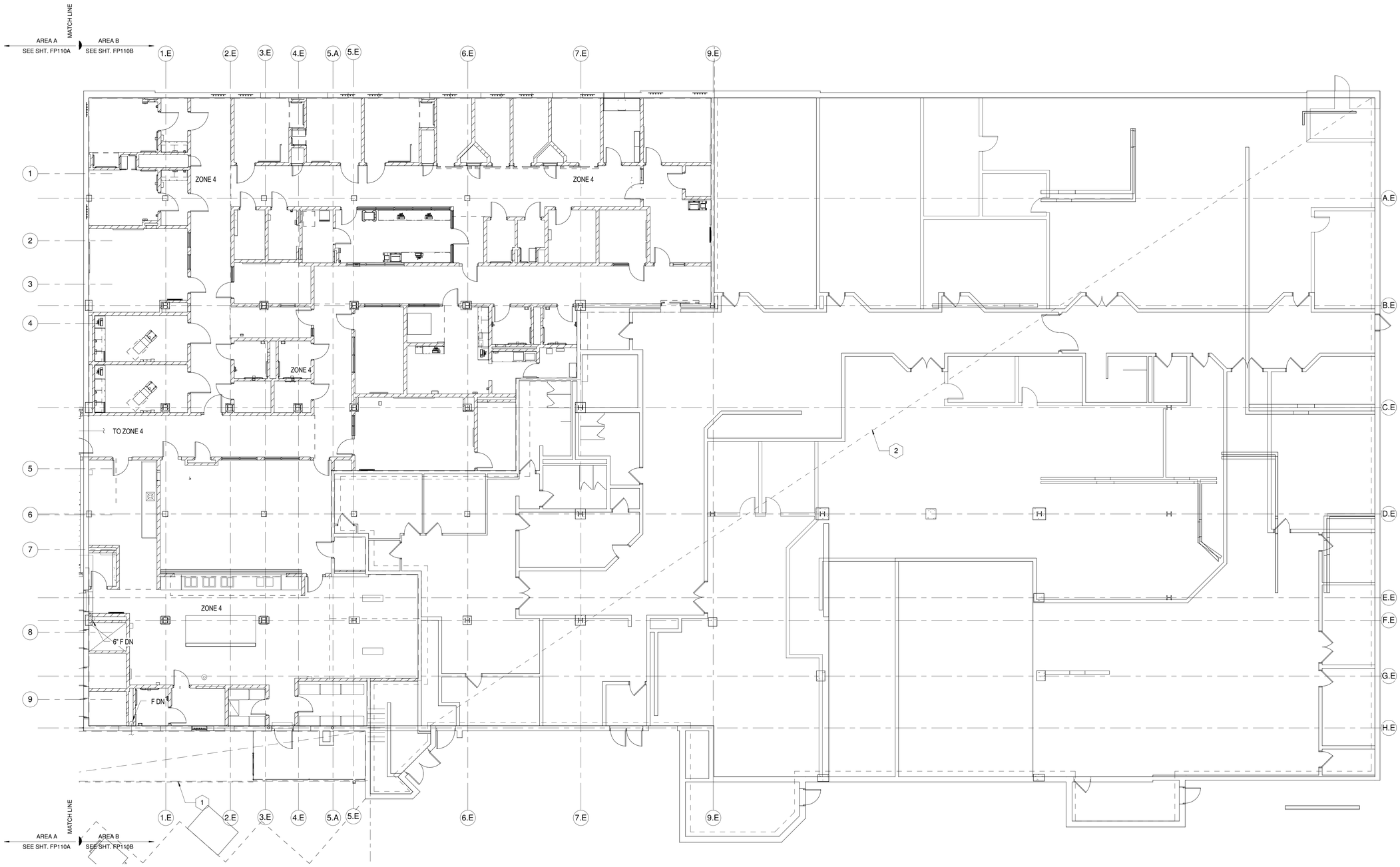
TITLE

FIRST FLOOR PLAN - FIRE PROTECTION - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

FP110A

SHEET NO.



1 FIRST FLOOR PLAN - FIRE PROTECTION - AREA B

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

SHEET NOTES:

1. PROVIDE DRY PIPE SPRINKLER SYSTEM UNDER LOAD DOCK CANOPY AS INDICATED.
2. MODIFY EXISTING SPRINKLER SYSTEM TO SERVE ALL EXISTING AND RENOVATED SPACE TO COMPLY WITH NFPA AND LOCAL FIRE MARSHAL REQUIREMENTS.

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
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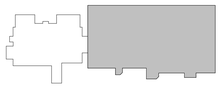
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JEFFREY W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

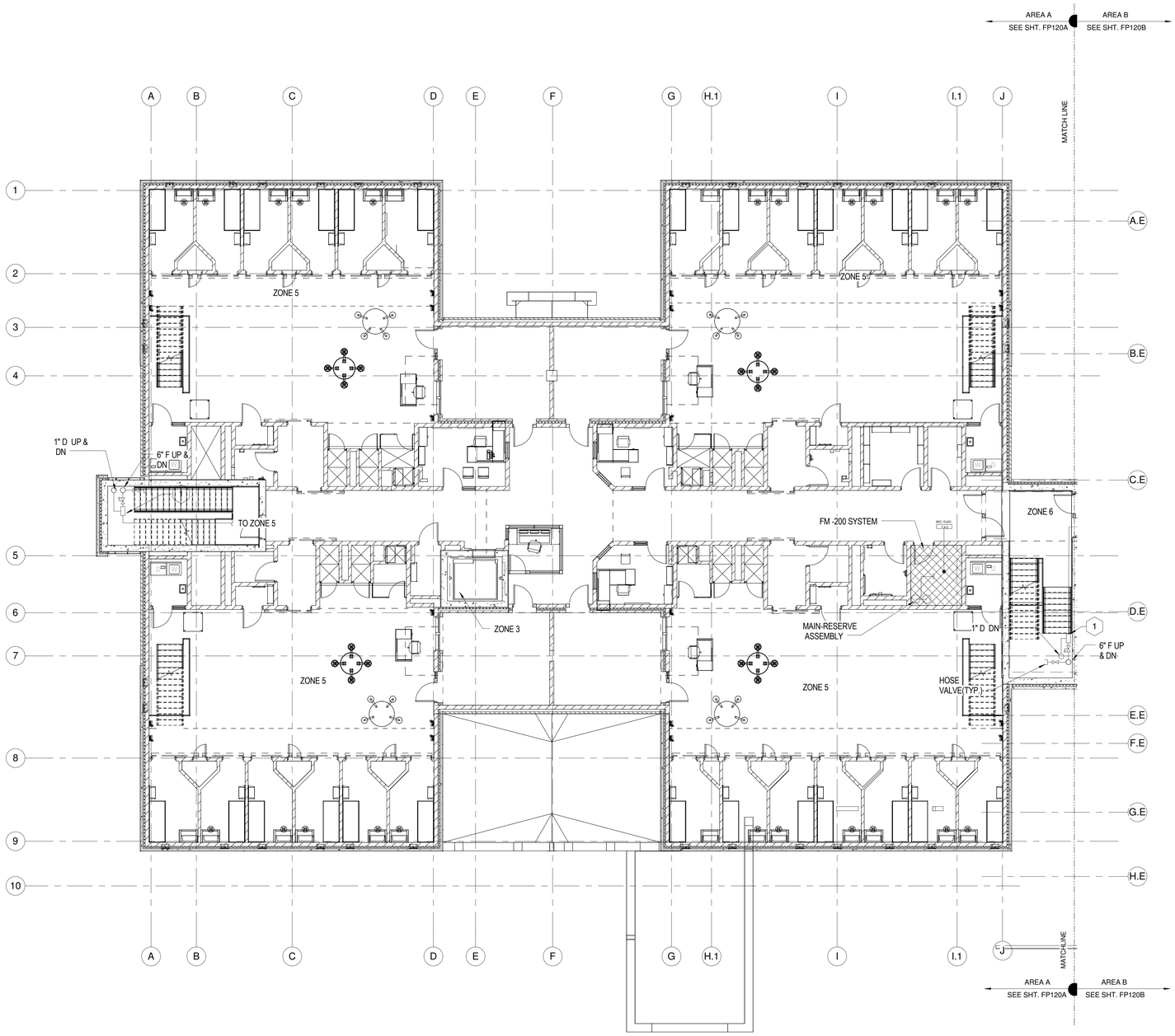
FIRST FLOOR PLAN - FIRE PROTECTION - AREA B

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

FP110B

SHEET NO.



SHEET NOTES:

1. MANIFOLDED CONTROL ASSEMBLY WITH FLOW SWITCH, PRESSURE GAUGE, INSPECTOR'S TEST CONNECTION, AND DRAIN.

1 SECOND FLOOR PLAN - FIRE PROTECTION - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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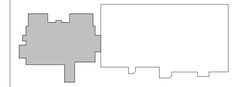
STATE OF MARYLAND — STEVEN W. SIDHU — 43481 — PROFESSIONAL ENGINEER

KEY PLAN



SCALE

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No.	Description	Date

REVISIONS

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

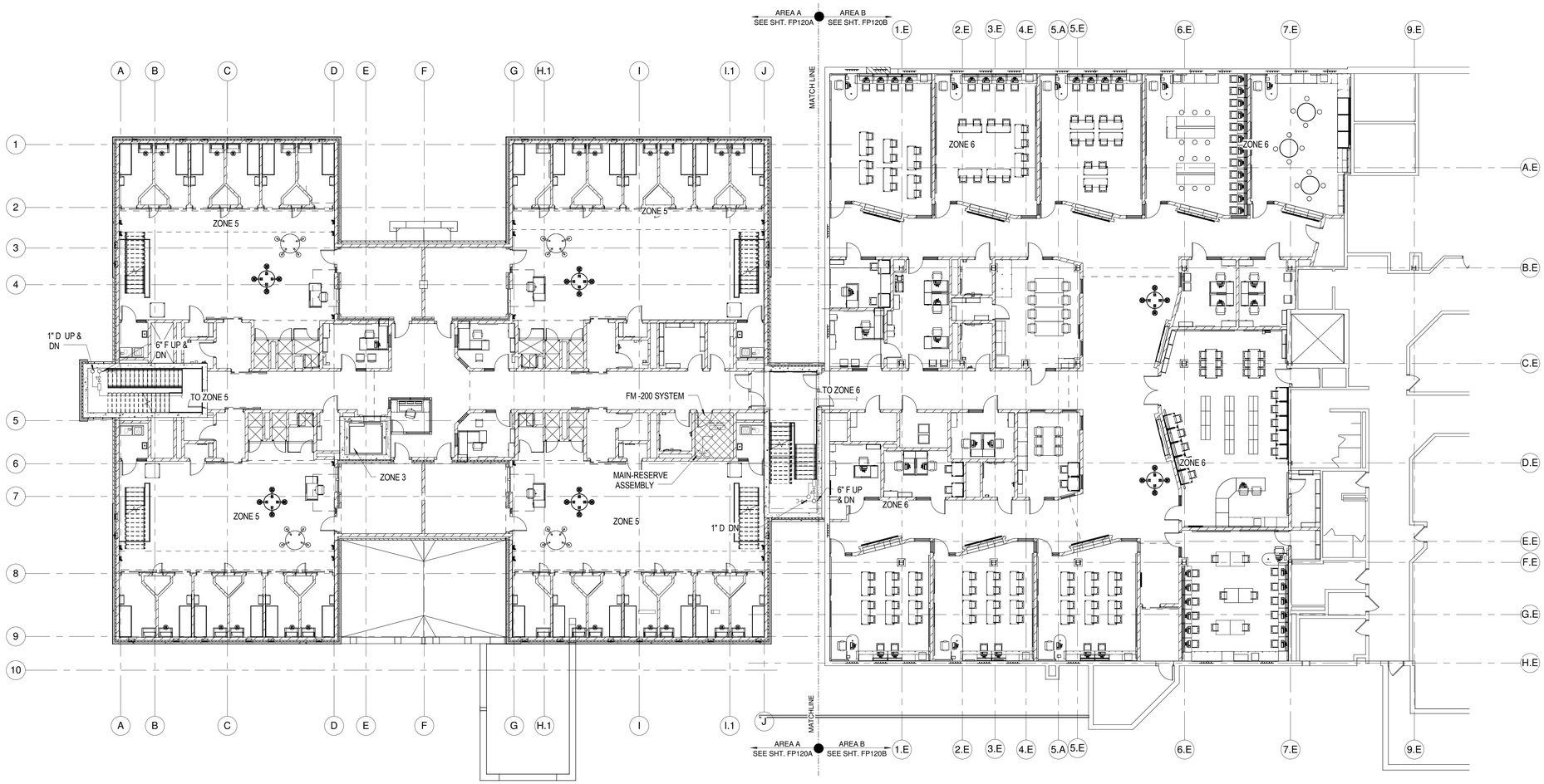
TITLE

SECOND FLOOR - FIRE PROTECTION - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

FP120A

SHEET NO.



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1 SECOND FLOOR PLAN - OVERALL - FIRE PROTECTION
Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE ENGINEER FOR CLARIFICATION PRIOR TO STARTING ANY WORK.
2. EXACT LOCATION OF ALL EQUIPMENT AND ACCESSORIES SHALL BE VERIFIED IN THE FIELD
3. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.

SHEET NOTES:

1 FIRE PROTECTION

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JENNIFER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

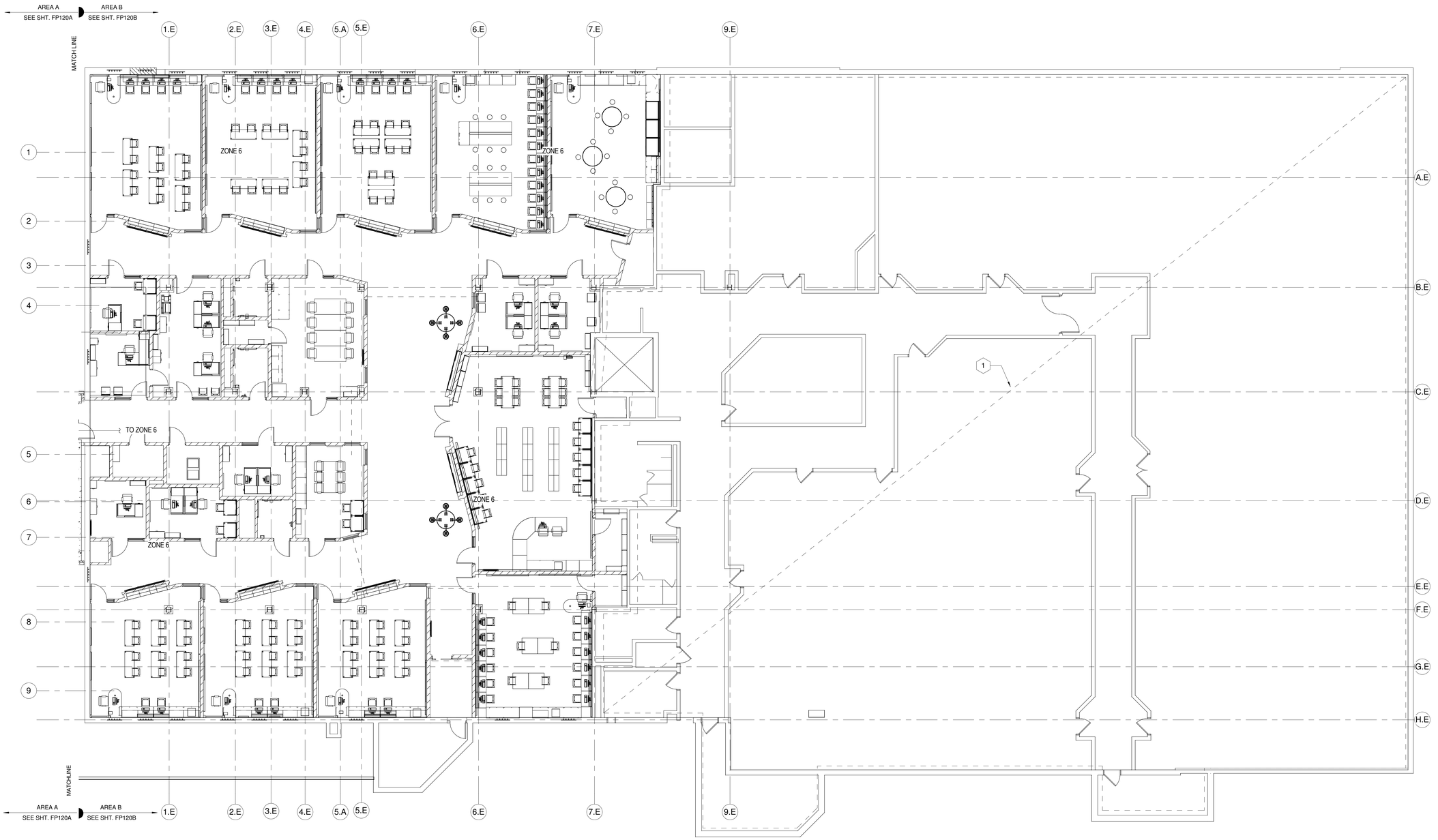
TITLE

SECOND FLOOR PLAN - FIRE PROTECTION

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

FPO120

SHEET NO.



1 SECOND FLOOR PLAN - FIRE PROTECTION - AREA B

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

0' 4' 8' 16' 32'

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

SHEET NOTES:

1. MODIFY EXISTING SPRINKLER SYSTEM TO SERVE ALL EXISTING AND RENOVATED SPACE TO COMPLY WITH NFPA AND LOCAL FIRE MARSHAL REQUIREMENTS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND — 43481 — PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

SECOND FLOOR - FIRE PROTECTION - AREA B

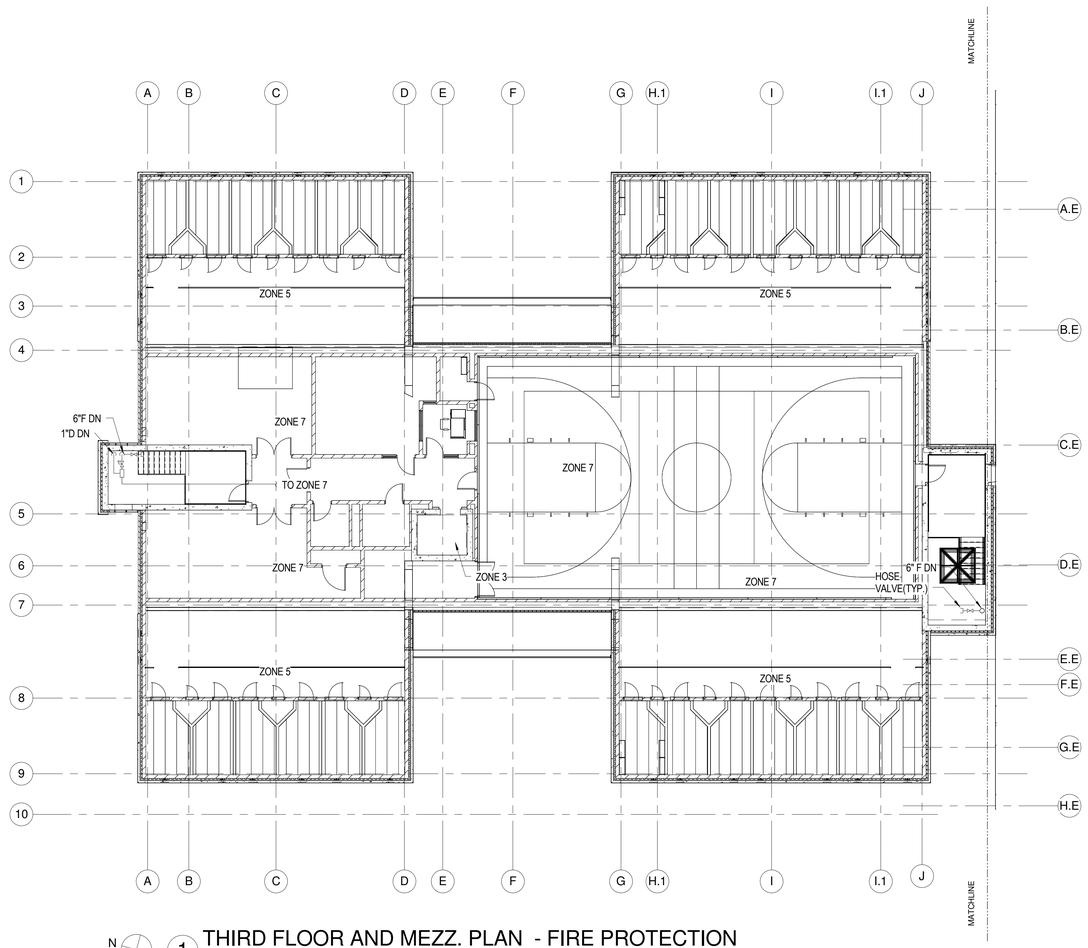
PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

FP120B

SHEET NO.

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE ENGINEER FOR cLARIFICATION PRIOR TO STARTING ANY WORK.
2. EXACT LOCATION OF ALL EQUIPMENT AND ACCESSORIES SHALL BE VERIFIED IN THE FIELD
3. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.



N

1 THIRD FLOOR AND MEZZ. PLAN - FIRE PROTECTION

Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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ECO ARCHITECTURE PC

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · ESTHER W. OHE · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

THIRD FLOOR AND MEZZ. PLAN - FIRE PROTECTION

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

FPO130

SHEET NO.

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE ENGINEER FOR CLARIFICATION PRIOR TO STARTING ANY WORK.
2. THE CONTRACTOR, BEFORE SUBMITTING HIS BID, SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF/HERSELF WITH ALL VISIBLE EXISTING CONDITIONS. AS A RESULT OF VISITING THE SITE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE WORK AS IT RELATES TO SUCH VISIBLE CONDITIONS. THE SUBMISSION OF A BID WILL BE CONSIDERED AN ACKNOWLEDGMENT ON THE PART OF THE BIDDER OF HIS VISIT TO THE SITE.
3. EXACT LOCATION OF ALL EQUIPMENT AND ACCESSORIES SHALL BE VERIFIED IN THE FIELD.
4. THE CONTRACTOR SHALL PERFORM ALL CUTTING, CHIPPING, AND PATCHWORK AS REQUIRED.
5. ALL SURFACES DAMAGED IN THE COURSE OF THE WORK SHALL BE RESTORED TO THE ORIGINAL CONDITION AND IN ACCORDANCE TO DRAWINGS AND SPECIFICATIONS.
6. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.
7. ALL WORK SHALL BE CARRIED OUT AS PER THE LATEST REQUIREMENTS OF IMC, NPC, NFPA, ADA, AND ALL OTHER GOVERNING AGENCIES HAVING JURISDICTION.
8. ALL WORK SHALL BE COORDINATED WITH EXISTING SERVICES AND OTHER TRADES DURING INSTALLATION.
9. CONTROL CONTRACTOR SHALL BE RESPONSIBLE FOR ELECTRIC POWER SUPPLY TO CONTROL DEVICES.
10. ALL INDICATED DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS. CONTRACTOR SHALL INCORPORATE THICKNESS OF DUCT INSULATION OR LINING AS APPLICABLE TO DETERMINE TOTAL OUTSIDE DIMENSIONS.
11. PROVIDE TURNING VANE AT EACH ELBOW OF SUPPLY, RETURN AND EXHAUST AIR DUCT.

BASIS OF DESIGN

PLUMBING REQUIREMENTS

1. THE SANITARY SEWER SYSTEM PIPING SHALL BE STANDARD WEIGHT CAST IRON NO-HUB ABOVE FLOOR AND PVC BELOW GROUND.
2. ROOF DRAIN SYSTEM SHALL BE DESIGNED TO DISCHARGE BY GRAVITY TO THE EXTERIOR STORM DRAIN SYSTEM. ROOF OVERFLOW SHALL BE BY MEANS OF AN INDEPENDENT SAFETY OVERFLOW SYSTEM DISCHARGING IN READILY VISIBLE LOCATIONS.
3. THE DOMESTIC WATER SUPPLY SHALL BE OBTAINED FROM THE LOCAL POTABLE WATER SUPPLY AND SHALL SERVE ALL PLUMBING FIXTURES AND EQUIPMENT.
4. POTABLE WATER HEATERS SHALL BE STORAGE TYPE LOCATED IN THE MECHANICAL ROOM. WATER HEATERS SHALL BE DESIGNED AND LOCATED WITH CONSIDERATION FOR FUTURE REMOVAL AND REPLACEMENT. THEY SHALL BE TWO HIGH EFFICIENCY GAS FIRE HEATERS TO PROVIDE REDUNDANCY.
5. WATER SHALL BE STORED AT 140°F TO SERVE THE FOOD SERVICE DEMAND.
6. A HOT WATER MIXING VALVE SHALL BE EMPLOYED TO TEMPER HOT WATER TO 110°F FOR YOUTH AND GENERAL USE. HOT WATER TEMPERATURES SHALL BE MAINTAINED BY INDEPENDENT 140°F AND 110°F HOT WATER CIRCULATING SYSTEMS.
7. THE TEMPERATURE OF EACH SYSTEM SHALL BE MONITORED BY THE BUILDING AUTOMATION SYSTEM.
8. PLUMBING FIXTURES ACCESSIBLE TO YOUTH SHALL BE VANDAL RESISTANT, STAINLESS STEEL TYPE.
9. MASTER SHUT OFF VALVES LOCATED ON WATER SUPPLY PIPES TO PARTICULAR GROUP OF FIXTURES SHALL HAVE THE CAPABILITY OF CONTROLLING EACH GROUP OF FIXTURES THRU SECURITY SYSTEM.
10. MASTER SHUT OFF VALVES SHALL BE COORDINATED WITH THE REQUIREMENTS OF THE SECURITY SYSTEM. INCLUDING ELECTRICAL WIRING RELAYS AND OTHER ACCESSORIES. TO HAVE SEAMLESS INTEGRATION INTO ONE COMPLETE OPERATING SYSTEM.
11. ALL EQUIPMENT AND PIPING PASSING THRU AREAS SENSITIVE TO WATER LEAKAGE SHALL BE PROVIDED WITH STAINLESS DRAIN PANS CAPABLE OF DRAINING WATER THRU DRAIN PIPES AWAY FROM AREA.
12. FIXTURES FOR STAFF USE SHALL BE STANDARD COMMERCIAL GRADE PLUMBING FIXTURES. HANDICAP ACCESSIBLE FIXTURES SHALL BE PROVIDED WHERE REQUIRED.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
(NAME)	NEW PIPING (DARK LINED)
(NAME)	EXISTING PIPING (LIGHT LINED)
(NAME)	EXISTING PIPE TO BE REMOVED
	POTABLE COLD WATER
	POTABLE HOT WATER
	POTABLE HOT WATER RECIRCULATING
SAN	SANITARY
V	VENT
	PIPE TURNING UP
	PIPE TURNING DOWN
CO CO	CLEAN OUT
	SHUT-OFF VALVE
	VALVE IN VERTICAL
	STRAINER
FD	FLOOR DRAIN
AIR	COMPRESSED AIR
	FLOW CONTROL VALVE
	CHECK VALVE
	INLINE CIRCULATOR PUMP
	NEW TO EXISTING
	EXTENT OF DEMO

PLUMBING ABBREVIATIONS

ABBREVIATION	DESCRIPTION
A	AMPERES
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
AMPS	AMPERES
BTUH	BRITISH THERMAL UNIT PER HOUR
CD	CONDENSATE DRAIN
CFM	CUBIC FEET PER MINUTE
CO	CLEAN OUT
CUH	CABINET UNIT HEATER
CW	DOMESTIC COLD WATER
DB	DRY BULB
DIA, □	DIAMETER
DN	DOWN
DWG.	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
EX., EXIST.	EXISTING
F	FAHRENHEIT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPERES
FPM	FEET PER MINUTE
FT	FOOT OR FEET
G	GAS
GA	GAUGE
GPM	GALLONS PER MINUTE
HB	HOSE BIB
HP	HORSEPOWER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RECIRCULATE
HZ	FREQUENCY HERTZ
IN	INCHES
IMC	INTERNATIONAL MECHANICAL CODE
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTUH
MCA	MAXIMUM CIRCUIT AMPERES
MIN.	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
No	NUMBER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
OA	OUTDOOR AIR
PH, □	PHASE (ELECTRICAL)
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAN	SANITARY
SD	STORM DRAIN
SF	SUPPLY FAN
SP	STATIC PRESSURE
ST	STORM DRAIN
TEMP	TEMPERATURE
TP	TRAP PRIMER
TYP.	TYPICAL
U/G	UNDERGROUND
V	VENT, VOLTS
VD	VOLUME DAMPER
VEL	VELOCITY
W/	WITH
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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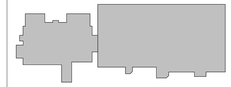
STATE OF MARYLAND — STEVEN W. C. SIDHU — 21915 — PROFESSIONAL ENGINEER

KEY PLAN



SCALE

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REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

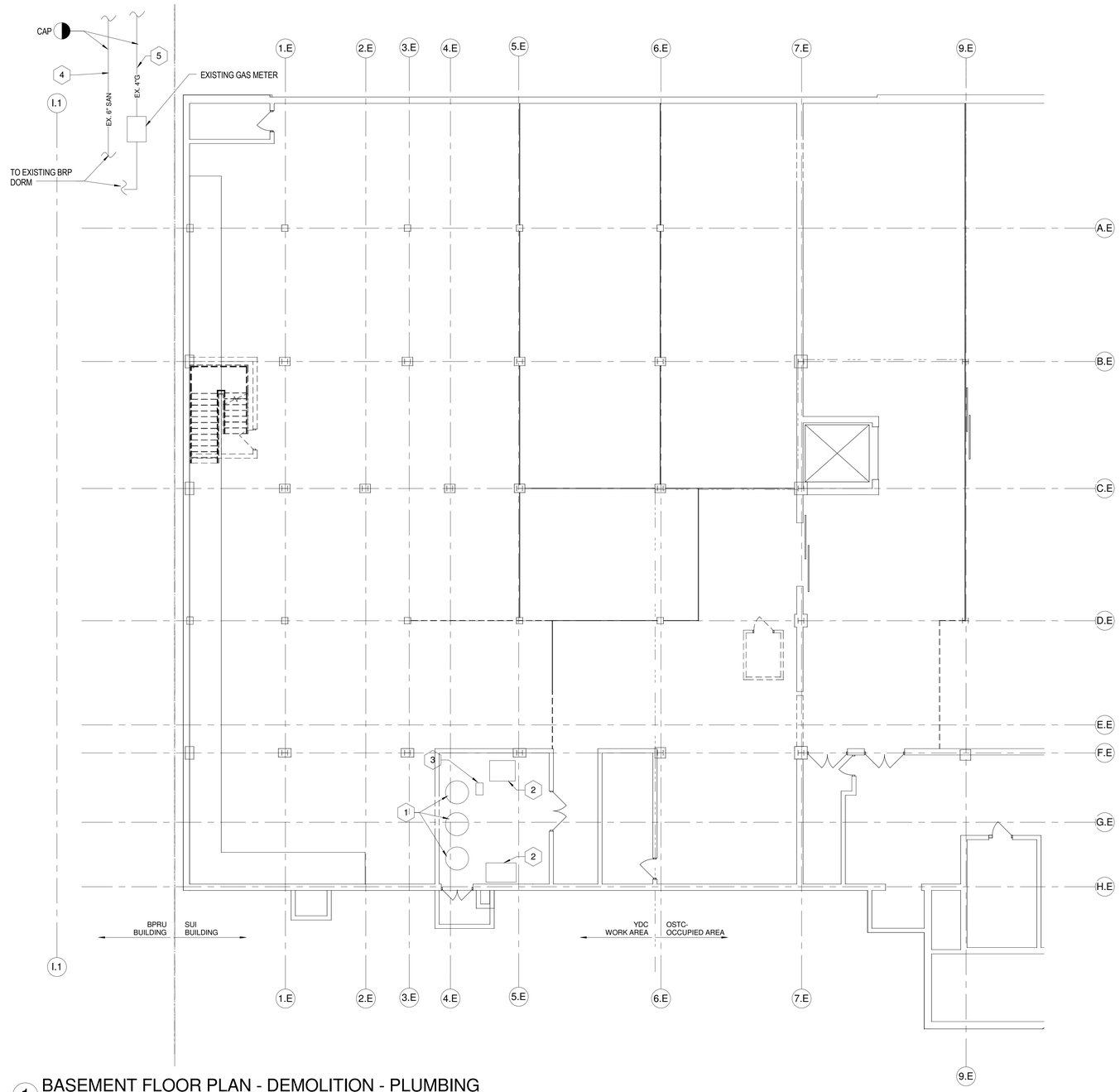
NOTES, SYMBOLS AND ABBREVIATIONS

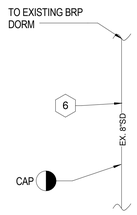
PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

PO001

SHEET NO.





N

1 BASEMENT FLOOR PLAN - DEMOLITION - PLUMBING

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

0' 4' 8' 16' 32'

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

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE ENGINEER FOR CLARIFICATION PRIOR TO STARTING ANY WORK.
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4. DEMOLISH AND REMOVE EXISTING PLUMBING EQUIPMENT, FIXTURES, SUPPORTS, PIPING, AND ASSOCIATED ACCESSORIES TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED.
5. EXISTING STORM DRAIN PIPING AND ROOF DRAINS TO REMAIN.
6. EXISTING PIPING AND SERVICES TO OSTC-OCCUPIED AREA SHALL REMAIN IN OPERATION DURING THE ENTIRE TIME OF CONSTRUCTION

SHEET NOTES:

1. EXISTING DOMESTIC WATER HEATER TO BE REMOVED.
2. EXISTING EQUIPMENT TO REMAIN.
3. EXISTING INLINE CIRCULATING PUMP TO BE REMOVED.
4. REMOVE EXISTING SANITARY LINE TO THE EXTENT SHOWN. TEMPORARILY CAP PIPING UNTIL NEW PIPING IS CONNECTED.
5. REMOVE EXISTING GAS LINE AND METER TO THE EXTENT SHOWN. TEMPORARILY CAP PIPING UNTIL NEW PIPING IS CONNECTED.
6. REMOVE EXISTING STORM DRAIN LINE TO THE EXTENT SHOWN. TEMPORARILY CAP PIPING UNTIL NEW PIPING IS CONNECTED.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
Consulting Engineers
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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · CHESTER W. GALL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

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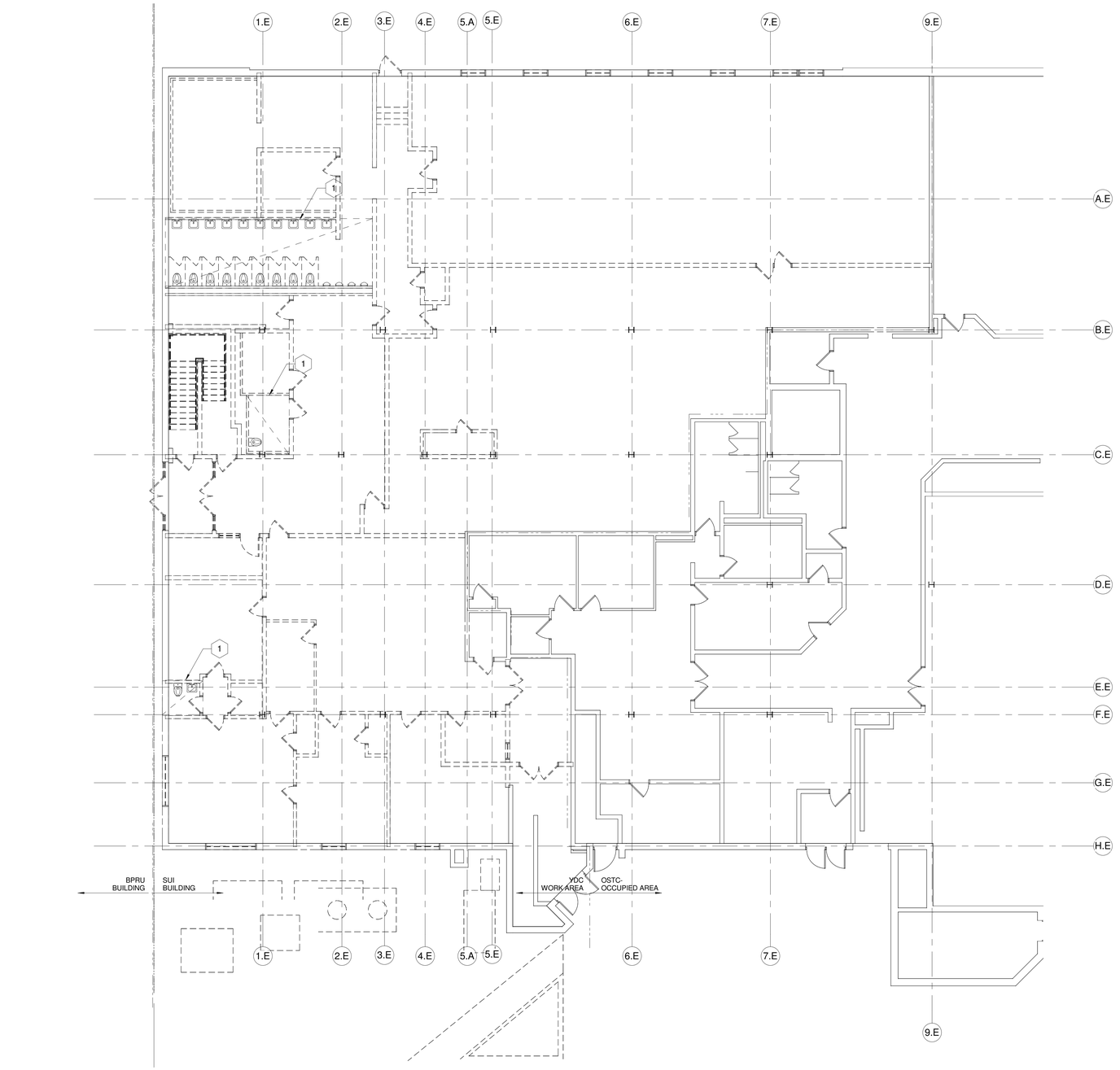
BASEMENT FLOOR PLAN - DEMOLITION - PLUMBING

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

PD100

SHEET NO.



N 1 FIRST FLOOR PLAN - DEMOLITION - PLUMBING
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

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3. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.
4. DEMOLISH AND REMOVE EXISTING PLUMBING EQUIPMENT, FIXTURES, SUPPORTS, PIPING, AND ASSOCIATED ACCESSORIES TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED.
5. EXISTING STORM DRAIN PIPING AND ROOF DRAINS TO REMAIN.
6. EXISTING PIPING AND SERVICES TO OSTC-OCCUPIED AREA SHALL REMAIN IN OPERATION DURING THE ENTIRE TIME OF CONSTRUCTION

SHEET NOTES:

1 REMOVE EXISTING LAVATORIES, WATER CLOSETS, PIPING, SUPPORT FIXTURES, AND ASSOCIATED ACCESSORIES.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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STATE OF MARYLAND · CHESTER W. GALL · 43481 · PROFESSIONAL ENGINEER

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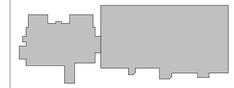

SCALE

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No.	Description	Date

REVISIONS

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APPROVED BY	Approver
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DATE	Issue Date

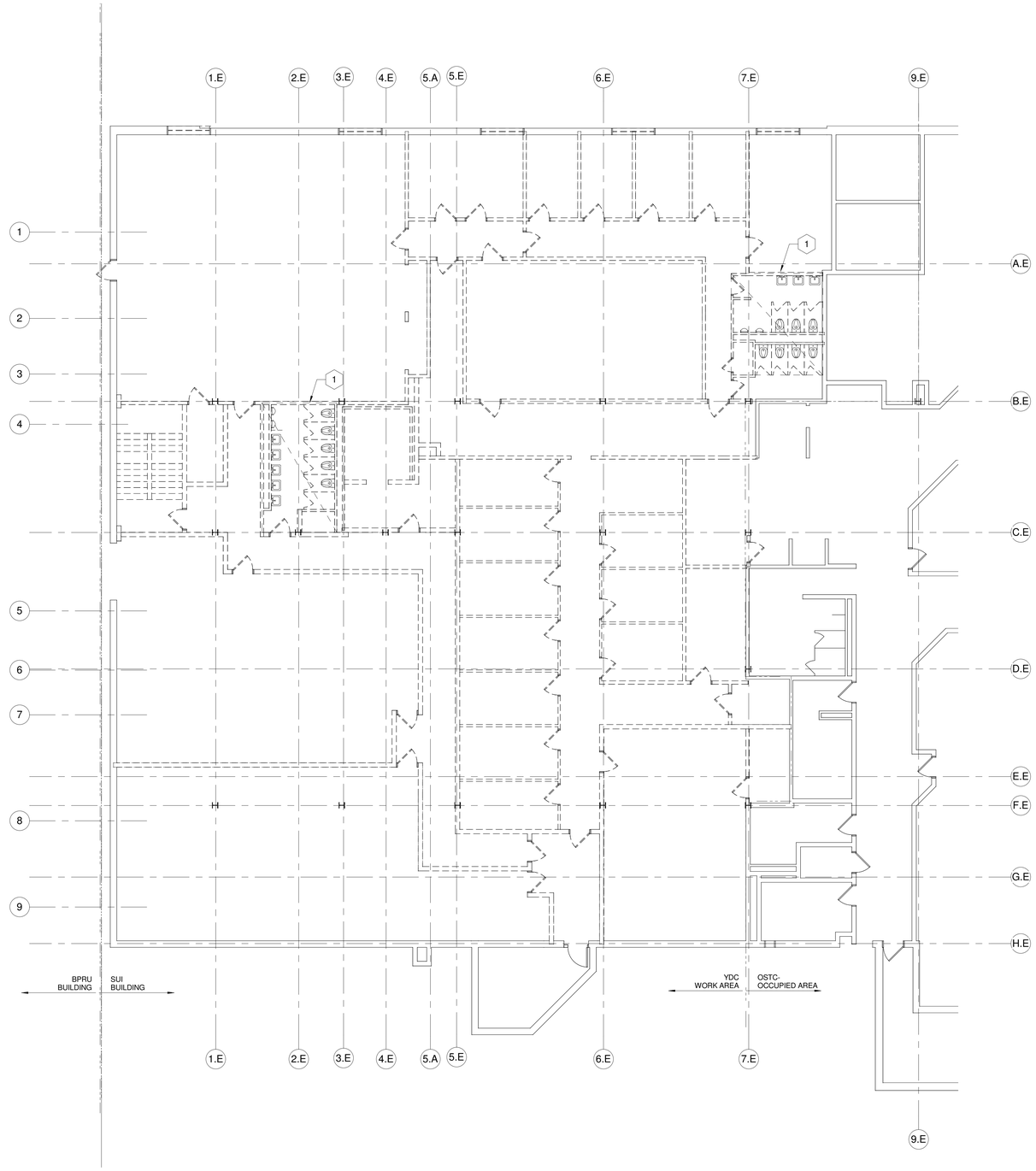
TITLE

FIRST FLOOR PLAN - DEMOLITION - PLUMBING

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

PD110

SHEET NO.



N

1 SECOND FLOOR PLAN - DEMOLITION - PLUMBING

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

0' 4' 8' 16' 32'

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

GENERAL SHEET NOTES:

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3. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.
4. DEMOLISH AND REMOVE EXISTING PLUMBING EQUIPMENT, FIXTURES, SUPPORTS, PIPING, AND ASSOCIATED ACCESSORIES TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED.
5. EXISTING STORM DRAIN PIPING AND ROOF DRAINS TO REMAIN.
6. EXISTING PIPING AND SERVICES TO OSTC-OCCUPIED AREA SHALL REMAIN IN OPERATION DURING THE ENTIRE TIME OF CONSTRUCTION

SHEET NOTES:

1. REMOVE EXISTING LAVATORIES, WATER CLOSETS, PIPING, SUPPORT FIXTURES, AND ASSOCIATED ACCESSORIES.

A JOINT-VENTURE BETWEEN
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STATE OF MARYLAND - DPSCS

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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · CHESTER W. GRAY · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

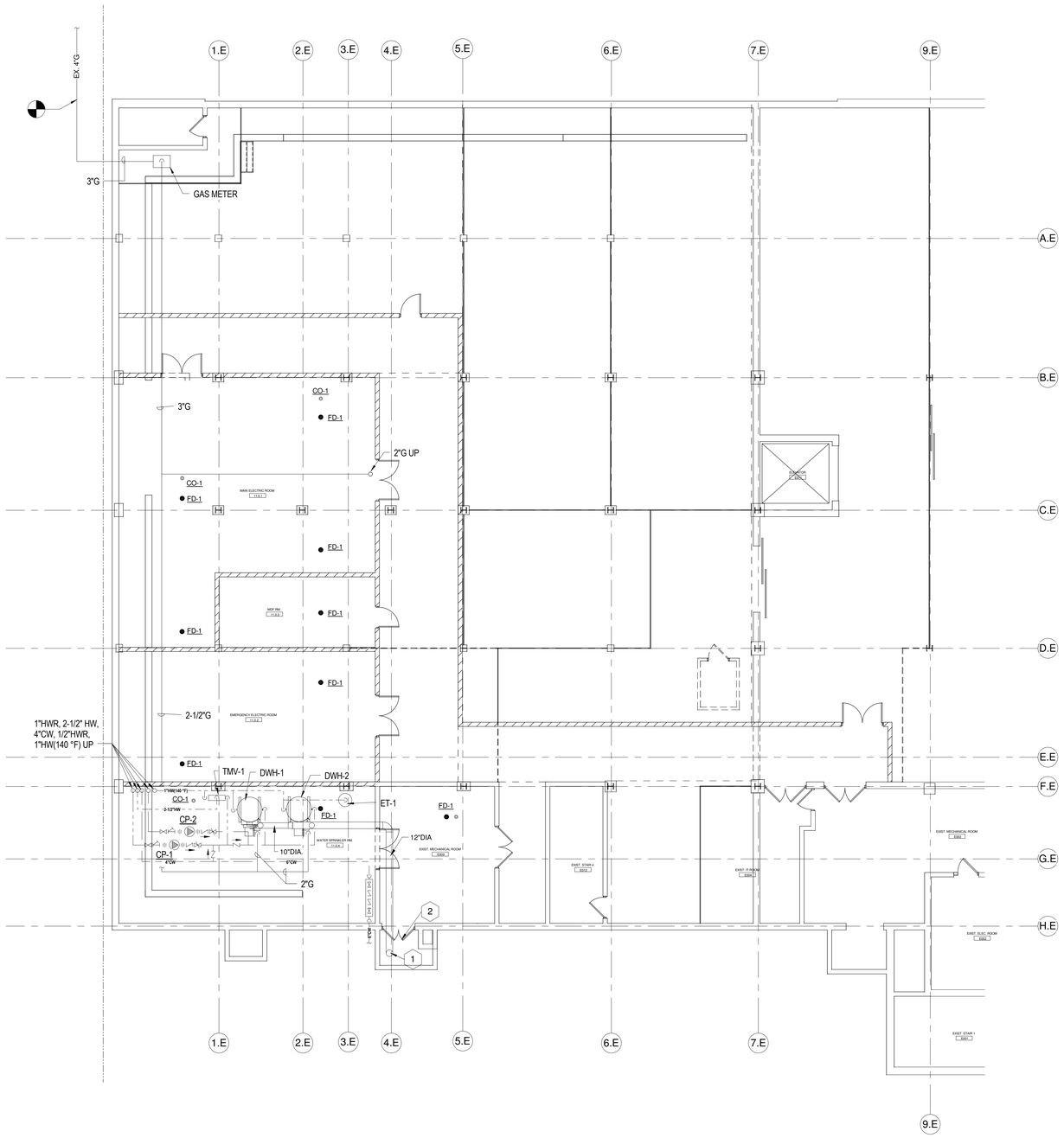
TITLE

SECOND FLOOR PLAN - DEMOLITION - PLUMBING

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

PD120

SHEET NO.



N 1 BASEMENT FLOOR PLAN - PLUMBING
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
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SHEET NOTES:

1. 12" FLUE UP APPROXIMATELY 35 FEET TO TOP OF CHIMNEY. TERMINATE WITH CAP. PROVIDE SUPPORT AT BOTTOM, TOP, AND TWO INTERMEDIATE SUPPORTS. REMOVE AND REINSTALL BRICKS AS NECESSARY TO INSTALL INTERMEDIATE SUPPORTS. EXTEND STACK DOWN TO CHIMNEY ACCESS DOOR AND PROVIDE CLEANOUT AND CONDENSATE DRAIN.
2. REMOVE ANY DEBRIS FROM BOTTOM OF EXISTING CHIMNEY AND VACUUM.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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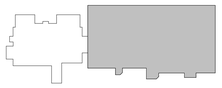
STATE OF MARYLAND
JEFFER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

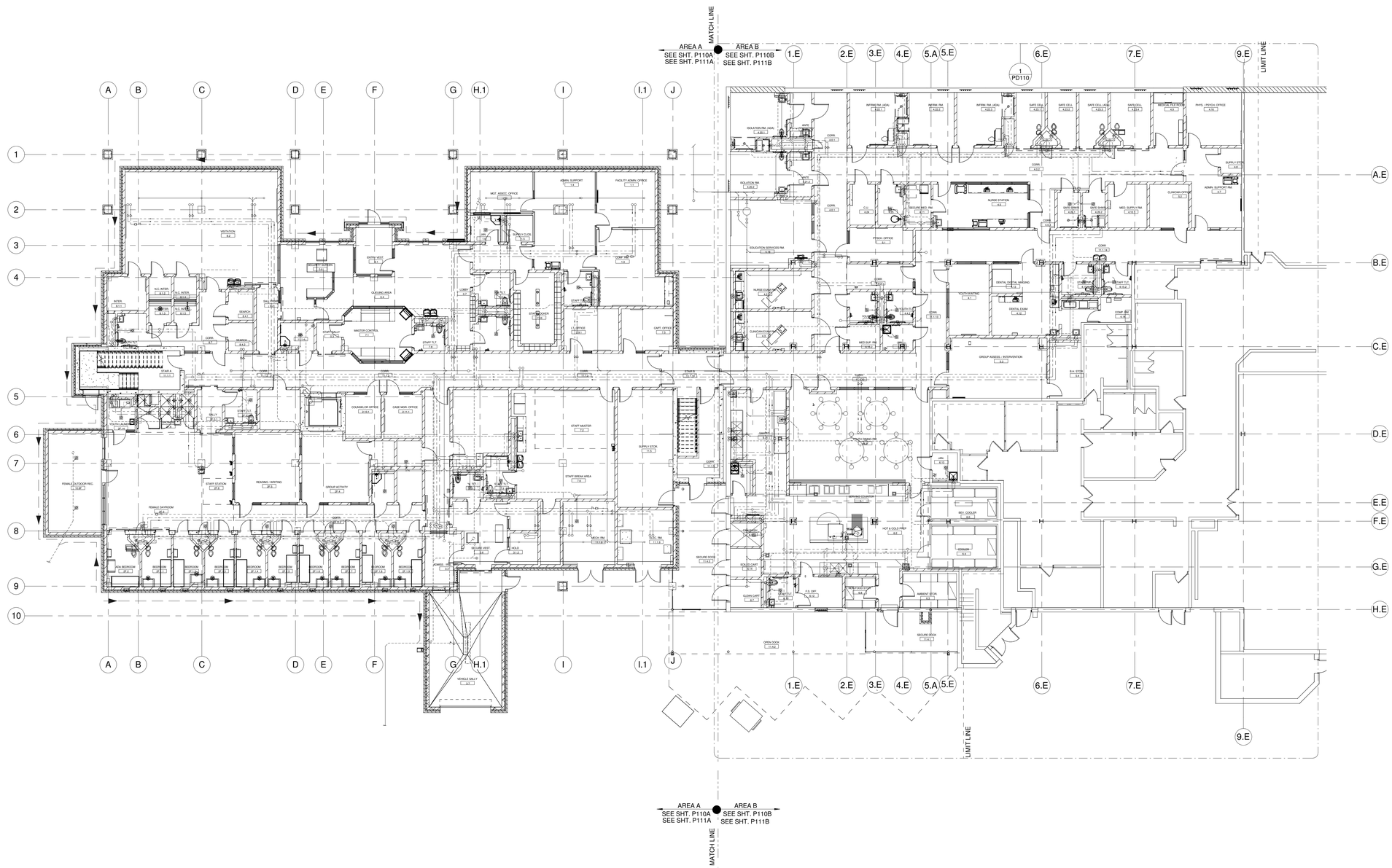
TITLE

BASEMENT FLOOR PLAN-PLUMBING

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

PO100

SHEET NO.



N

1 FIRST FLOOR PLAN- OVERALL - PLUMBING

Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · ESTER W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

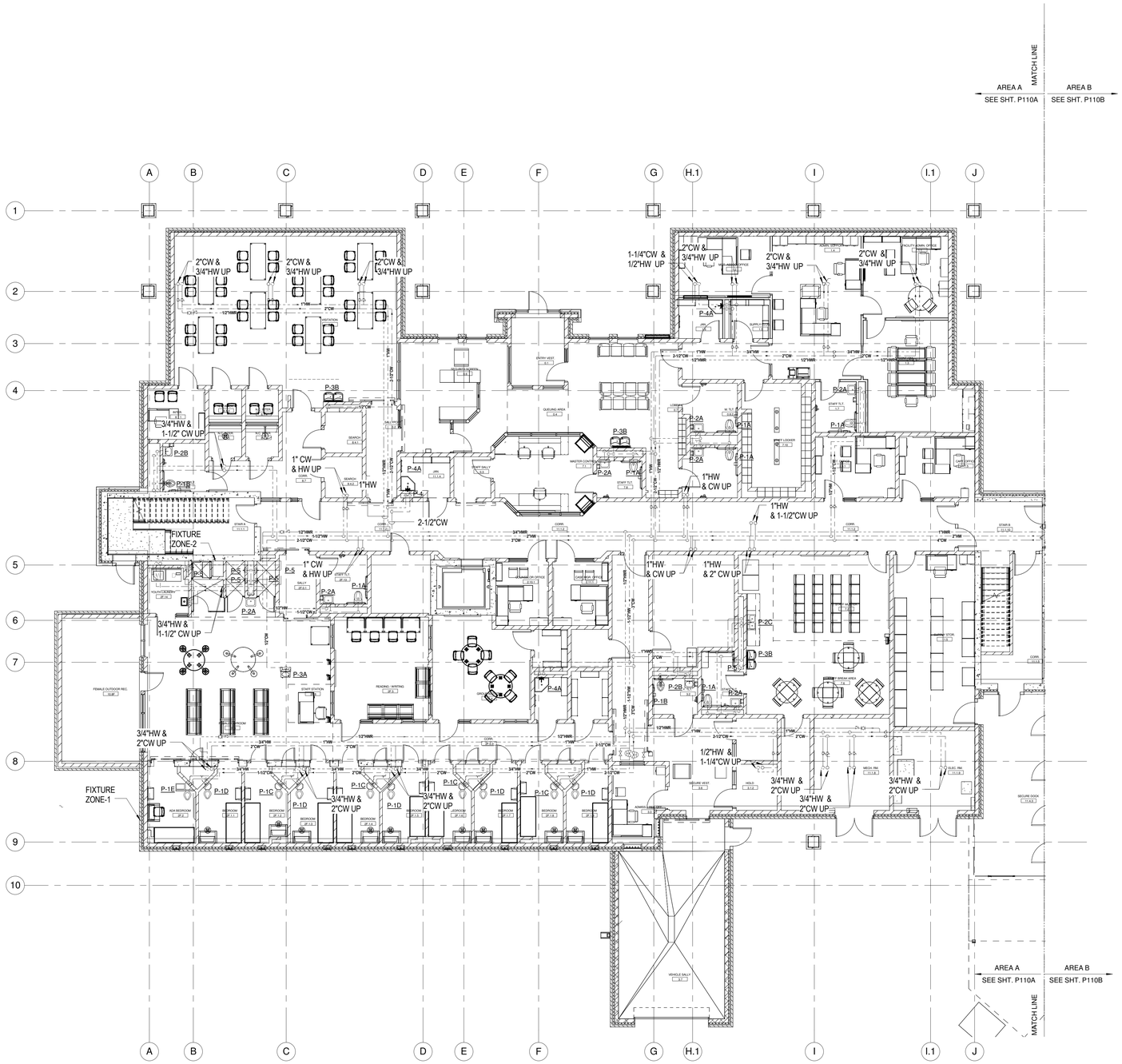
FIRST FLOOR PLAN - PLUMBING

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

PO110

SHEET NO.



GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT DISCREPANCIES, IF ANY, TO THE ENGINEER FOR CLARIFICATION PRIOR TO STARTING ANY WORK.
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4. NO PLUMBING PIPING SHALL BE LOCATED IN THE ELECTRIC, TELEPHONE, OR SECURITY ROOMS.
5. COORDINATE WITH ARCHITECTURAL WORK TO PROVIDE SECURITY GRADE ACCESS PANELS AT CLEANOUTS AND VALVE LOCATIONS.
6. PROVIDE COOPER CONDENSATE PIPE FOR VRF SYSTEM DRAINS TO STORM DRAIN SYSTEM. CONTRACTOR SHALL SUBMIT FINAL LAYOUT IN COORDINATION WITH ARCHITECTURAL, STRUCTURAL, AND SYSTEM ELEMENTS FOR APPROVAL.

N

1 FIRST FLOOR PLAN - DOMESTIC PLUMBING - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE, PC

R&R designer, inc.

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BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · ESTHER W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

FIRST FLOOR PLAN - DOMESTIC PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

P110A

SHEET NO.

GENERAL SHEET NOTES:

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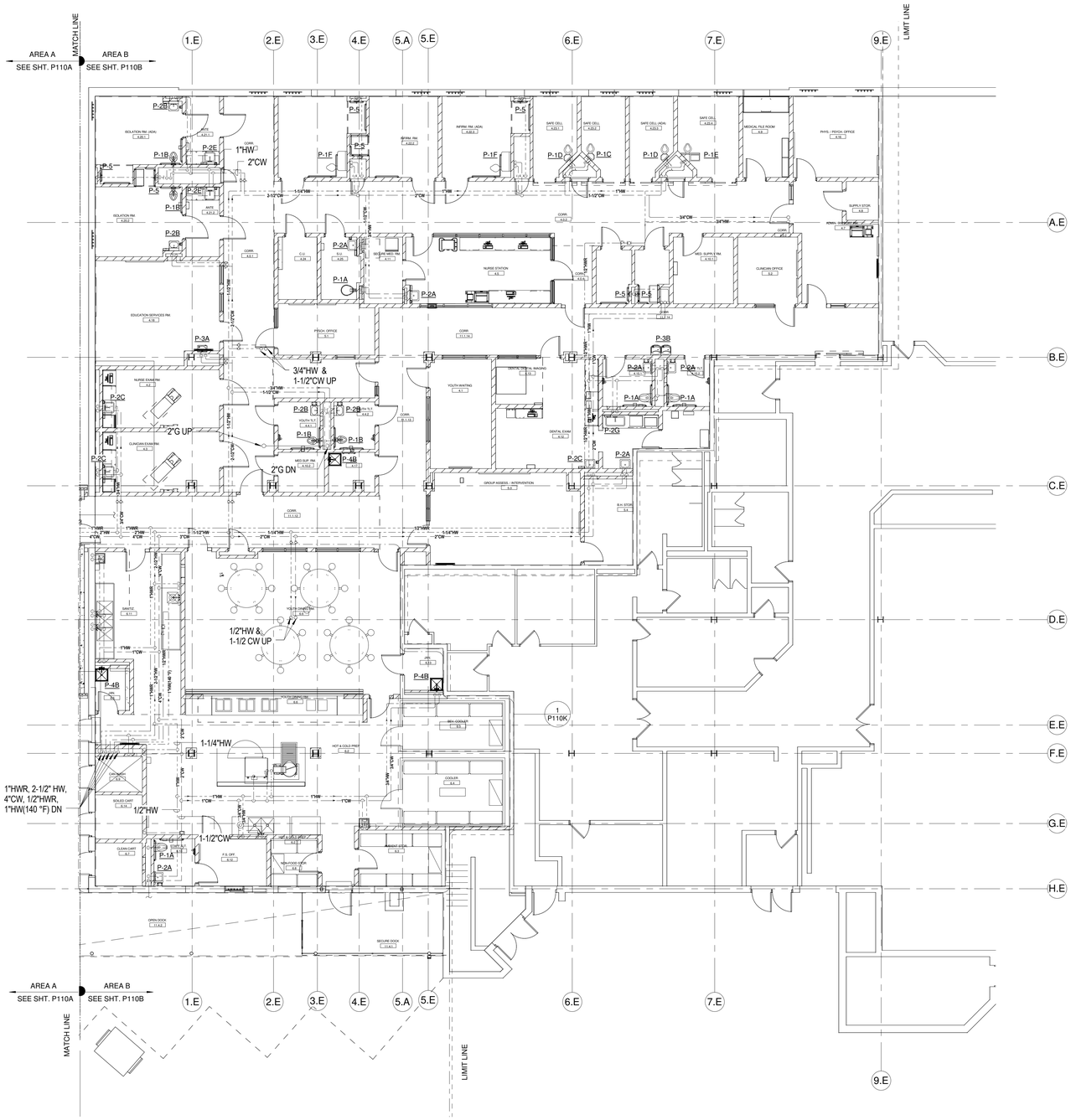

N ① FIRST FLOOR PLAN - DOMESTIC PLUMBING - AREA B
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
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PHONE (410) 329-1115
TERRALOGOS ECO ARCHITECTURE, PC
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015
STATE OF MARYLAND · CHESTER W. CHU · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
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DATE	Issue Date

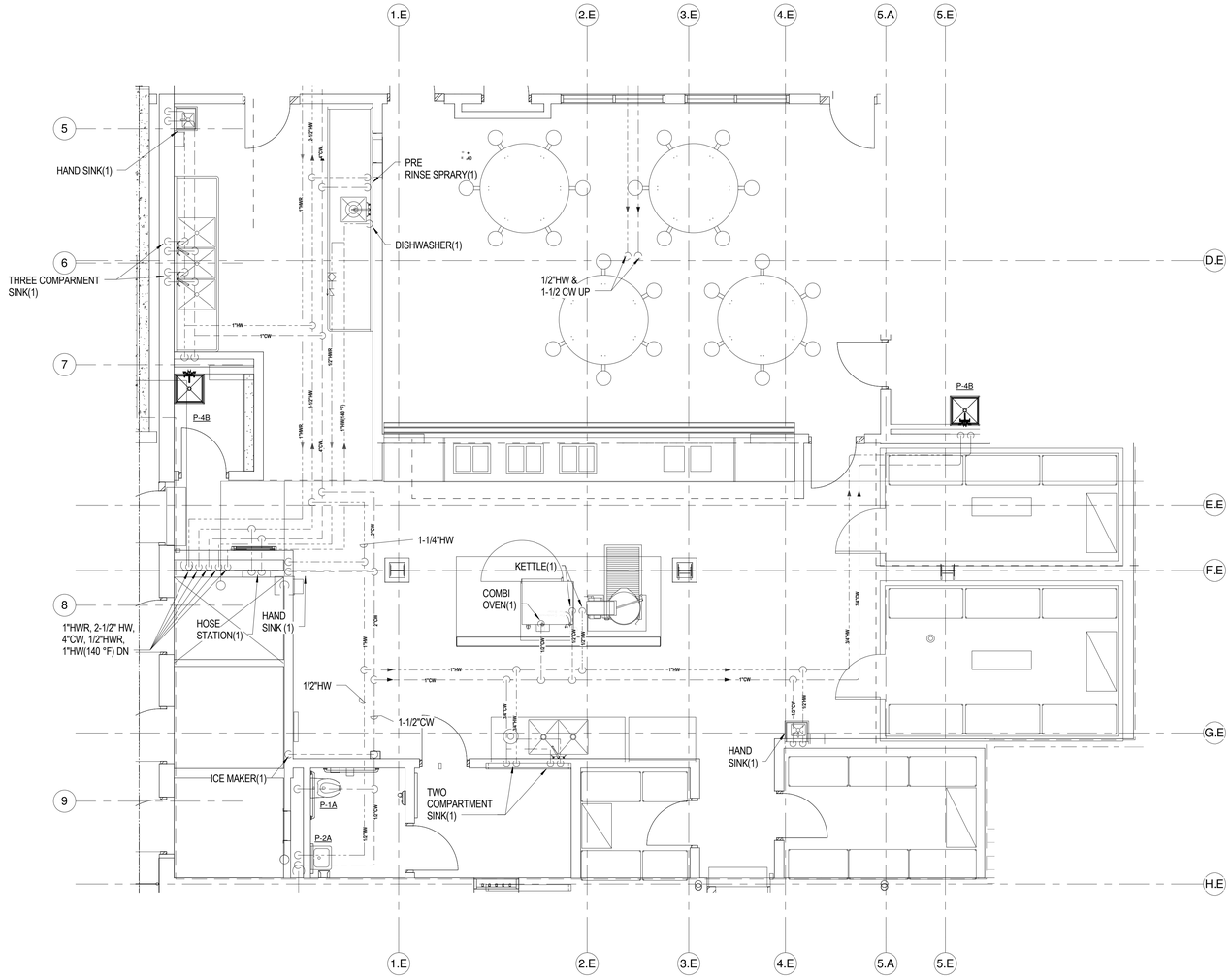
TITLE

FIRST FLOOR PLAN - DOMESTIC PLUMBING - AREA B

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

P110B

SHEET NO.



1 FIRST FLOOR PLAN - DOMESTIC PLUMBING - KITCHEN

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

0' 2' 4' 8' 16'

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

NOTES:

(1) FIXTURE PROVIDED BY KITCHEN CONTRACTOR. PLUMBING CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS WITH KITCHEN EQUIPMENT AND PROVIDE REQUIRED WATER SUPPLY PIPING IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS. SEE KITCHEN EQUIPMENT DRAWING, FOR DETAILS.

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A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:

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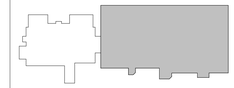
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND — STEVEN K. EBEL — 43481 — PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

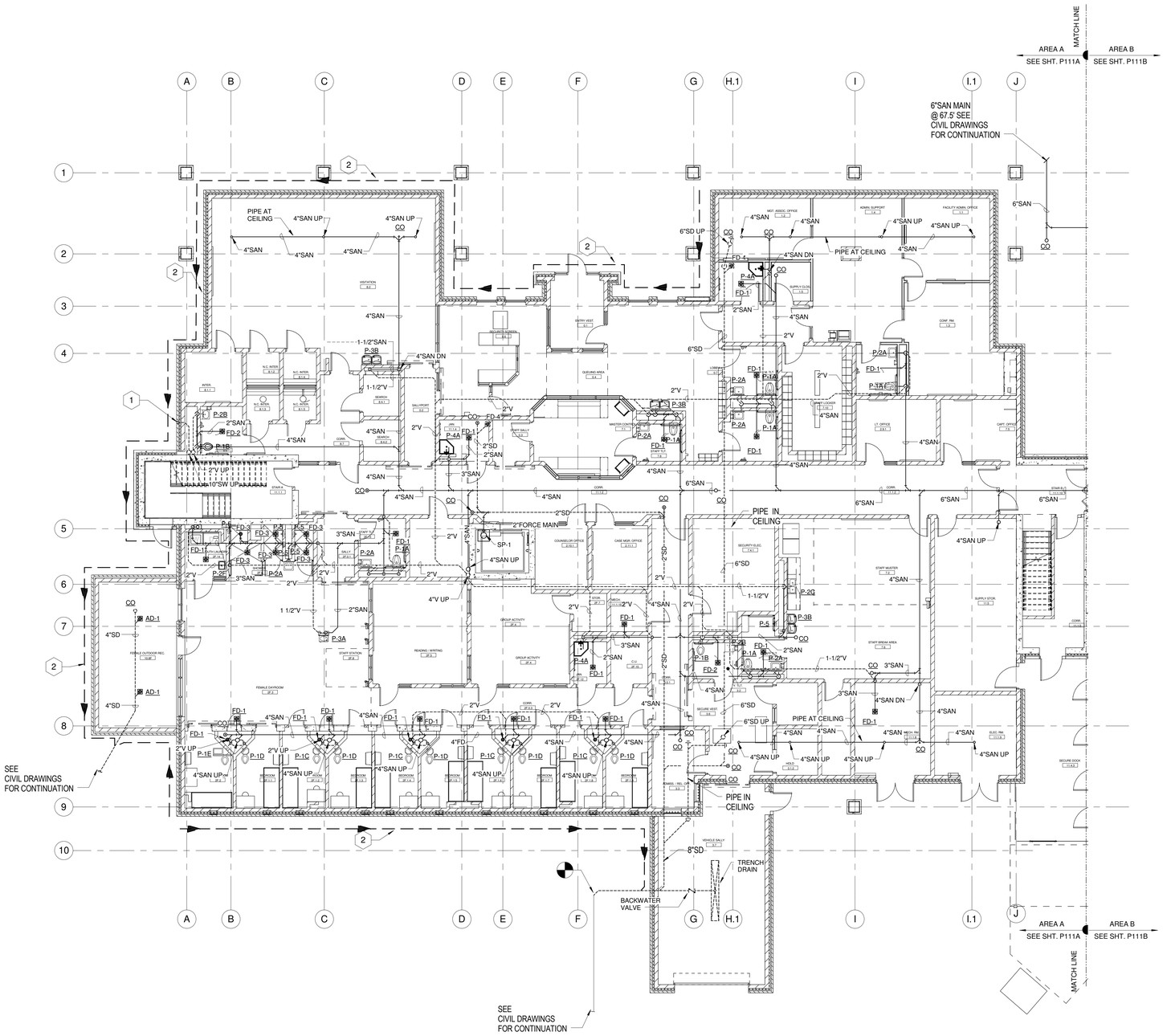
TITLE

FIRST FLOOR PLAN - DOMESTIC PLUMBING - KITCHEN

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

P110K

SHEET NO.



N

1 FIRST FLOOR PLAN - SANITARY PLUMBING - AREA A

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

0' 4' 8' 16' 32'

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

GENERAL SHEET NOTES:

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SHEET NOTES:

1. PROVIDE 10" DONWSPOUT NOZZLE WITH BIRDSCREEN 18" ABOVE FINISHED GRADE.
2. 4" PERFORATED PE DRAIN PIPE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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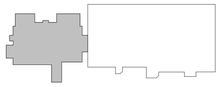
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CLIFTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

FIRST FLOOR PLAN - SANITARY PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

P111A

SHEET NO.



N

1 FIRST FLOOR PLAN - SANITARY PLUMBING - AREA B

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

0' 4' 8' 16' 32'

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

GENERAL SHEET NOTES:

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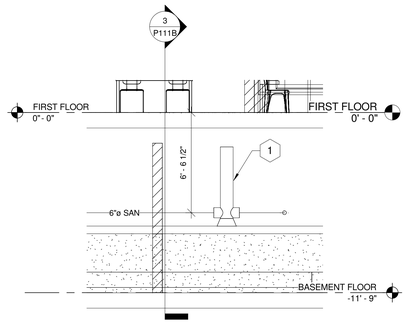
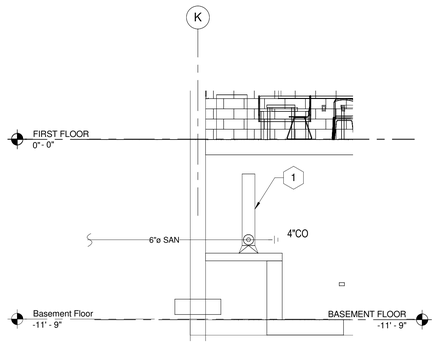
SHEET NOTES:

1. PROVIDE IN-LINE GRINDER WITH ASSOCIATED ACCESSORIES IN VAULT. MUFFIN MONSTER 3004T-1206 OR APPROVED EQUAL.
2. CONNECT FLOOR DRAIN TO NEAREST STORM DRAIN RISER.



2 SECTION VIEW AT GRINDER PUMP 1

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



3 SECTION VIEW AT GRINDER PUMP 2

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
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11350 MCCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · ESTER W. GIBBS · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

FIRST FLOOR PLAN - SANITARY PLUMBING - AREA B

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

P111B

SHEET NO.

GENERAL SHEET NOTES:

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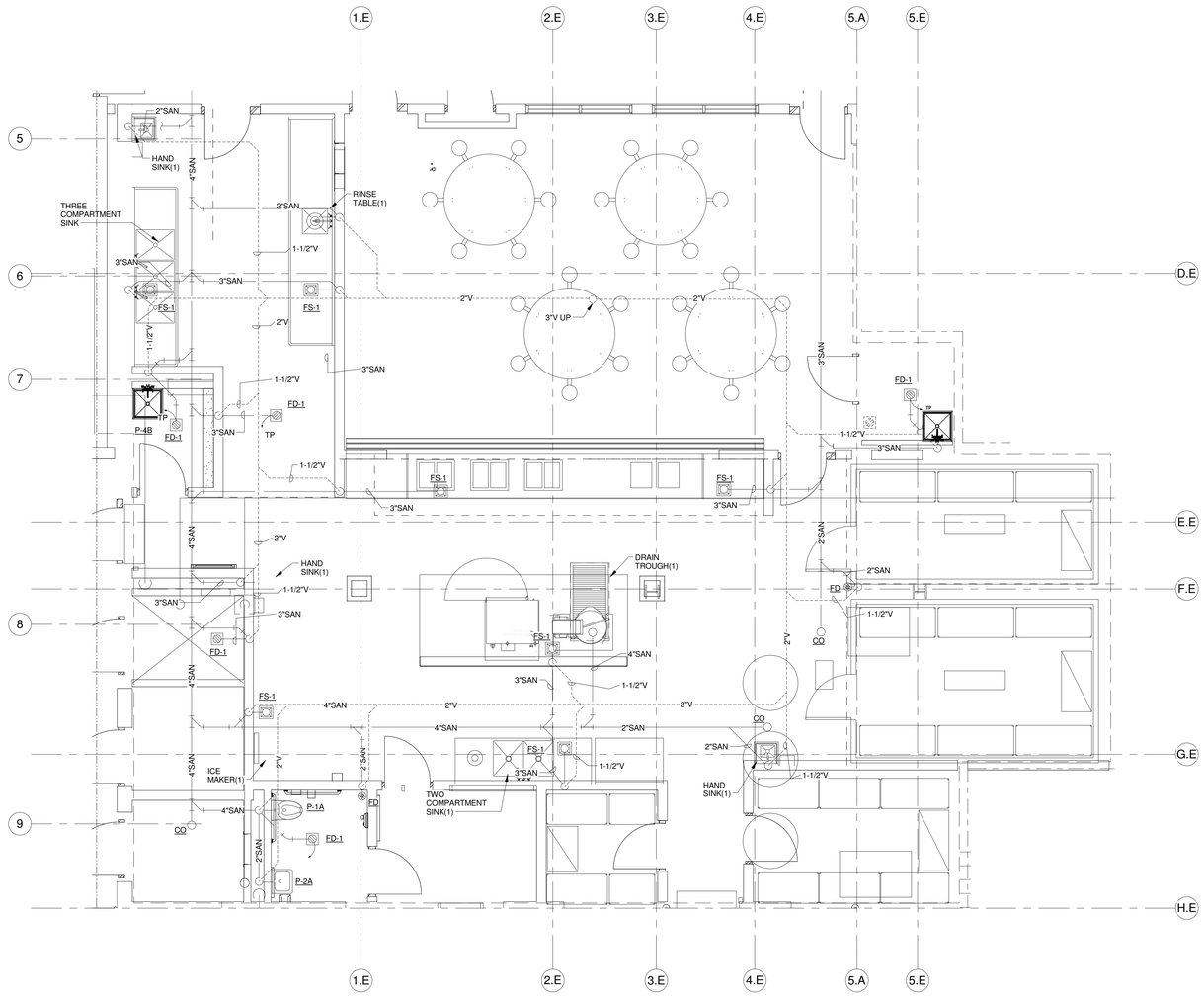

1 FIRST FLOOR PLAN - SANITARY PLUMBING - KITCHEN

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

0' 2' 4' 8' 16'

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

NOTES:

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A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
Consulting Engineers
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TERRALOGOS ECO ARCHITECTURE PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:

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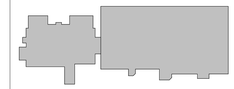
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · CHESTER W. CHU · 43481 · PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

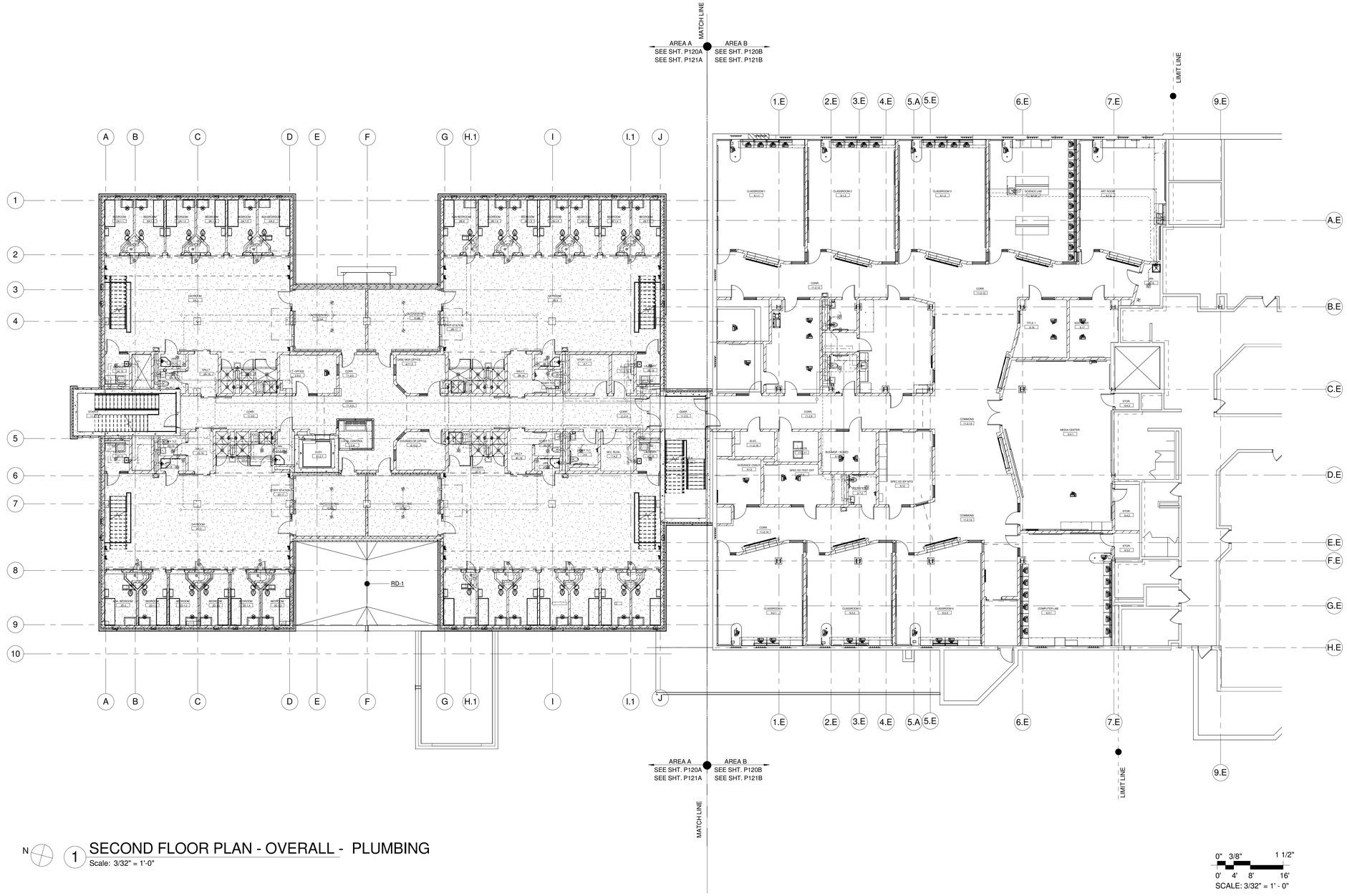
FIRST FLOOR PLAN - SANITARY PLUMBING - KITCHEN

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

P111K

SHEET NO.



N

1 SECOND FLOOR PLAN - OVERALL - PLUMBING

Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE, PC

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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

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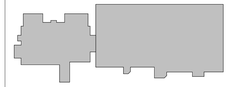
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · STEVEN V. SIDHU · 43481 · PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

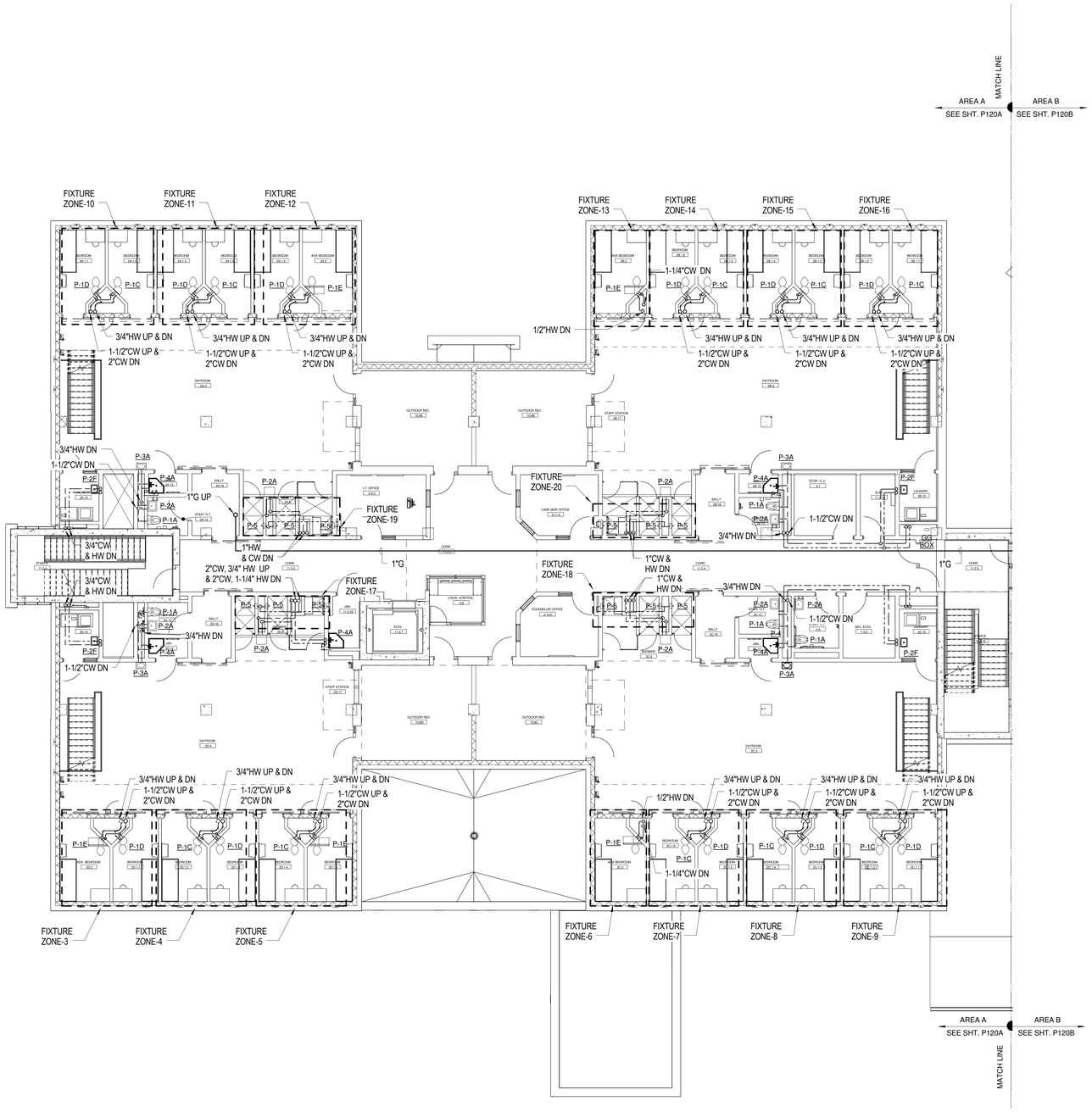
SECOND FLOOR PLAN - PLUMBING

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

PO120

SHEET NO.



N 1 SECOND FLOOR PLAN - DOMESTIC PLUMBING - AREA A
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

GENERAL SHEET NOTES:

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A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

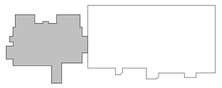
STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JEFFREY W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

SECOND FLOOR PLAN - DOMESTIC PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

P120A

SHEET NO.

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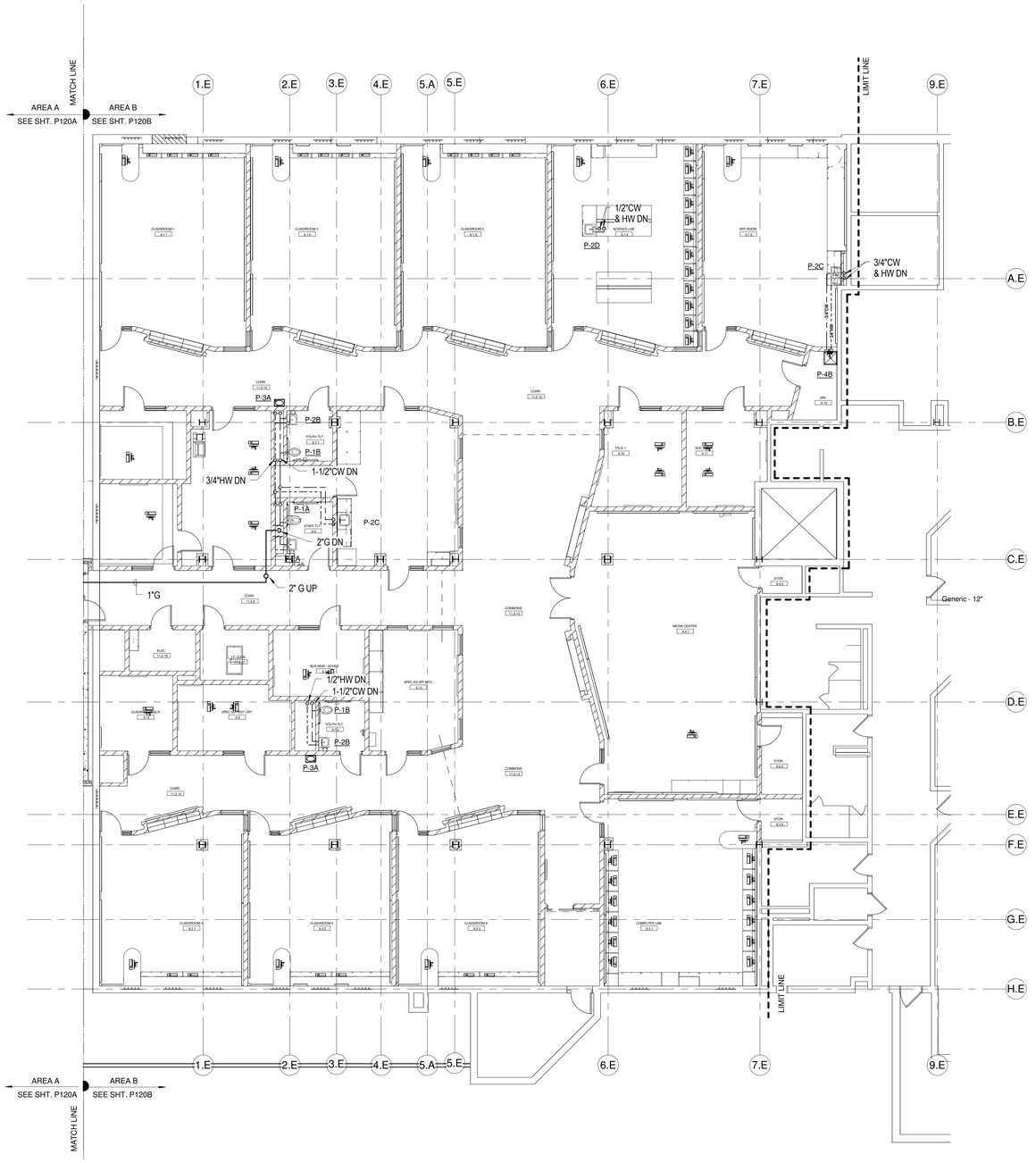

N

1 SECOND FLOOR PLAN - DOMESTIC PLUMBING - AREA B

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE, PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · CARLTON W. CARL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

SECOND FLOOR PLAN - DOMESTIC PLUMBING - AREA B

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

P120B

SHEET NO.

GENERAL SHEET NOTES:

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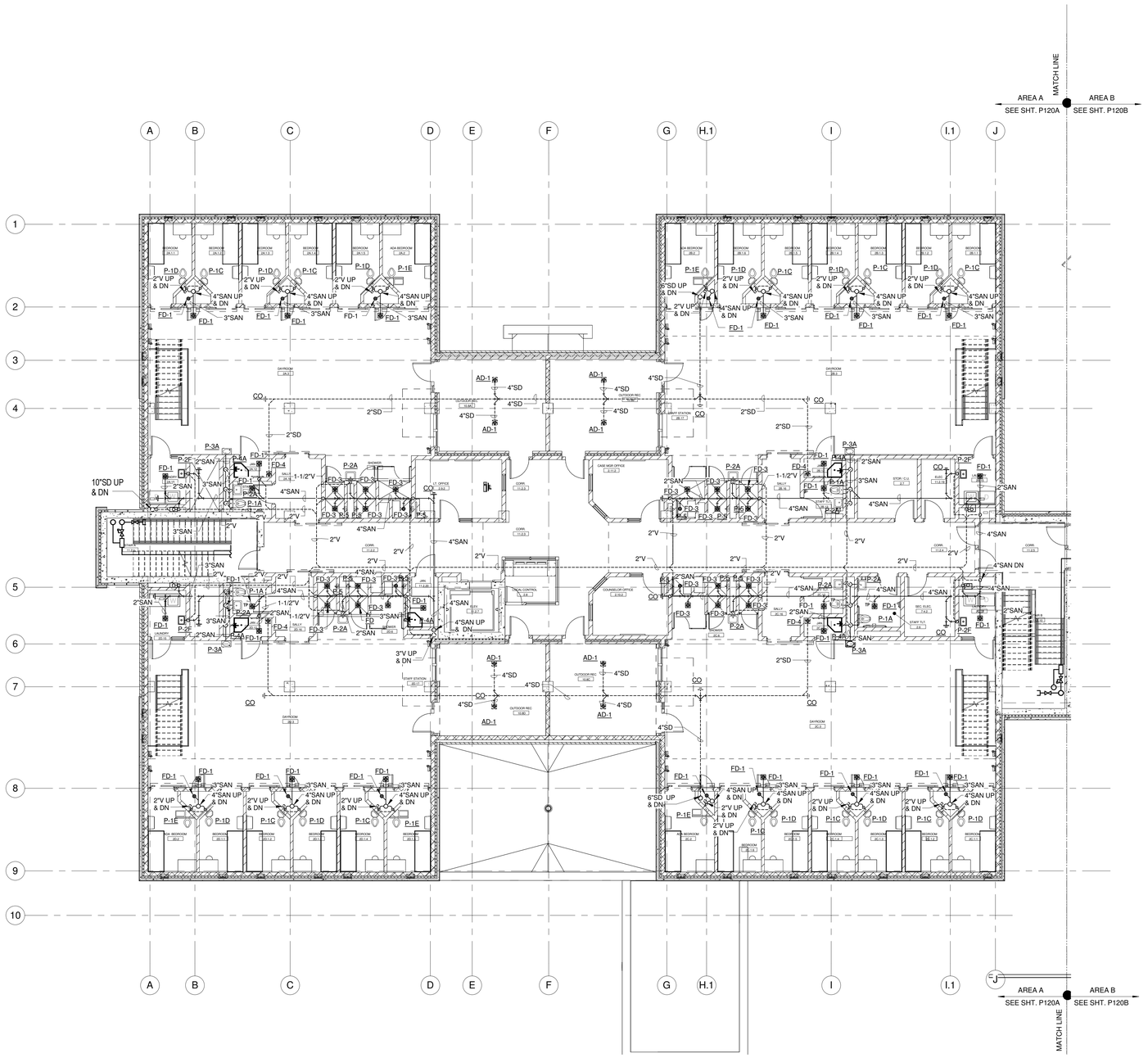

N

1 SECOND FLOOR PLAN - SANITARY PLUMBING - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JEFFER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

SECOND FLOOR PLAN - SANITARY PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

P121A

SHEET NO.



N

1 SECOND FLOOR PLAN - SANITARY PLUMBING - AREA B

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

0' 4' 8' 16' 32'

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

GENERAL SHEET NOTES:

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SHEET NOTES:

1 CONNECT FLOOR DRAIN TO NEAREST STORM DRAIN RISER.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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BALTIMORE MARYLAND

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STATE OF MARYLAND
DEXTER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

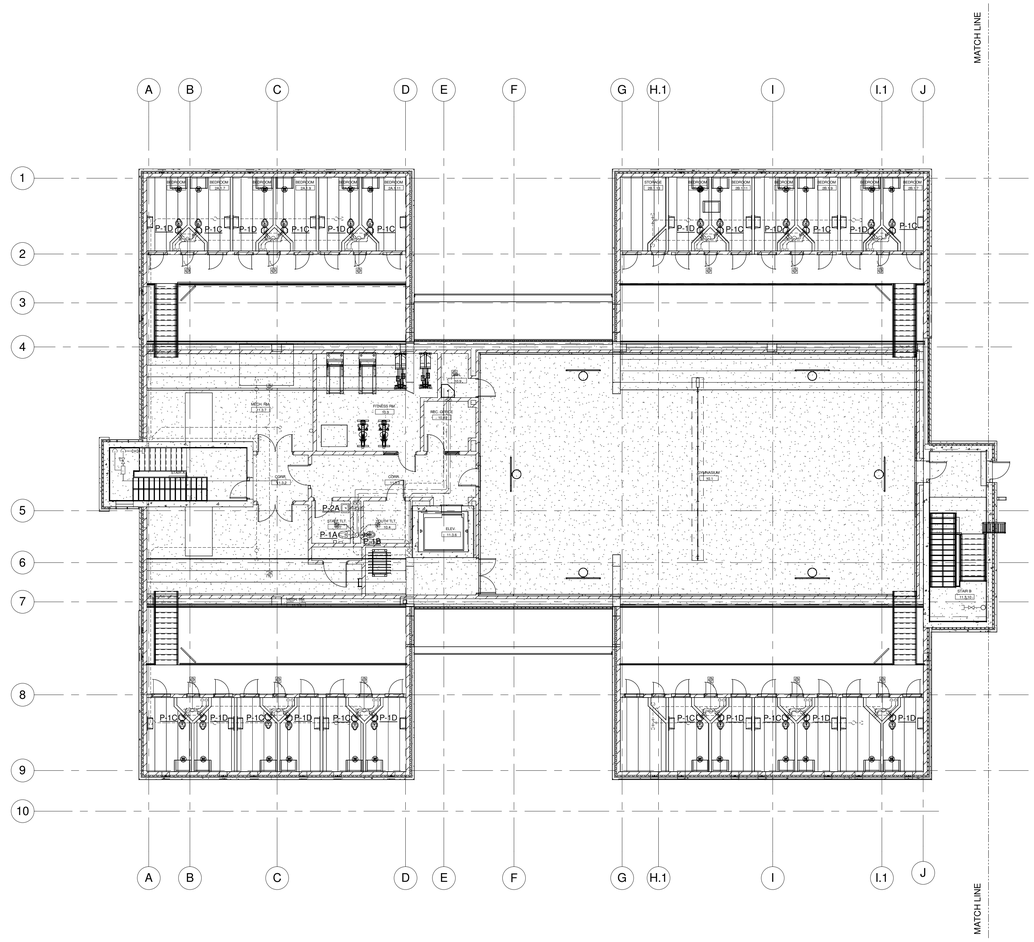
TITLE

SECOND FLOOR PLAN - SANITARY PLUMBING - AREA B

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

P121B

SHEET NO.



N 1 THIRD FLOOR AND MEZZ. PLAN - PLUMBING
Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
DOTTER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

THIRD FLOOR AND MEZZ. PLAN - PLUMBING

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

PO130

SHEET NO.

GENERAL SHEET NOTES:

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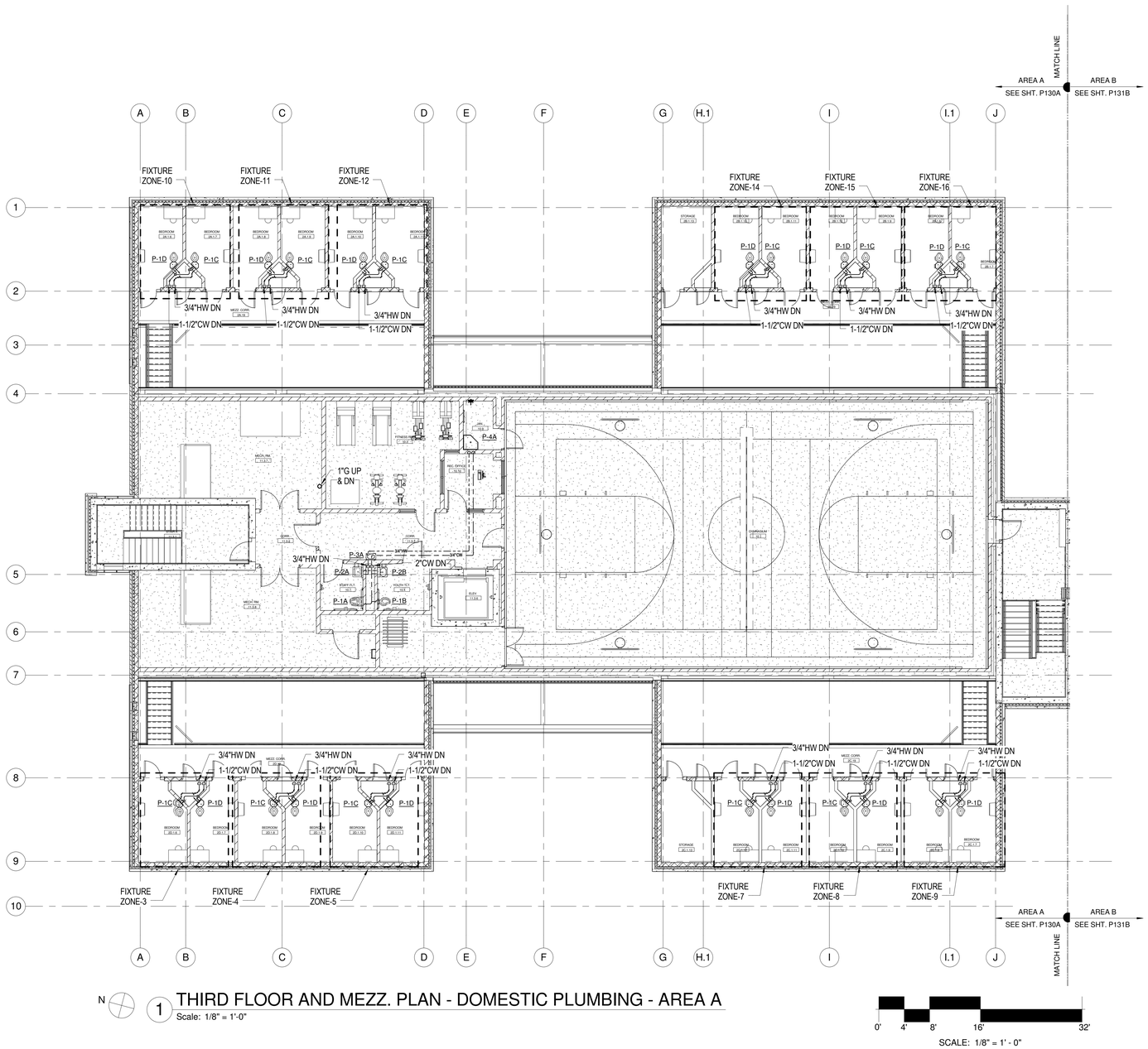

N

1 THIRD FLOOR AND MEZZ. PLAN - DOMESTIC PLUMBING - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
KIRKSTOW PLAZA SE, SUITE 1000
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HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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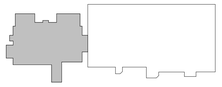
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JEFFREY W. O'HEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

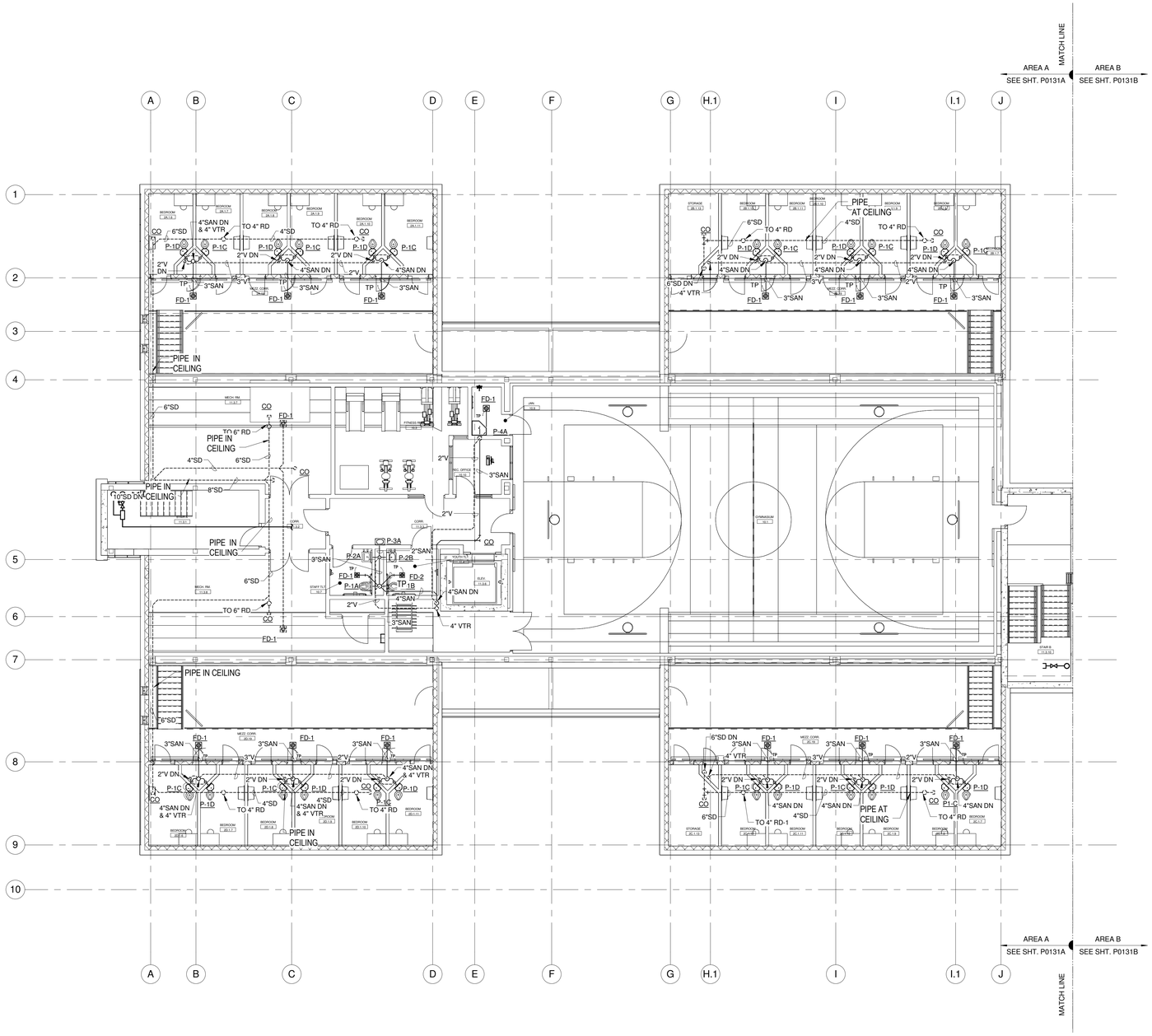
THIRD FLOOR AND MEZZ. PLAN- DOMESTIC PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

P130A

SHEET NO.



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1 THIRD FLOOR AND MEZZ. PLAN - SANITARY PLUMBING - AREA A

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

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A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 MCCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · STEVEN M. LEWICKI · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

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No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

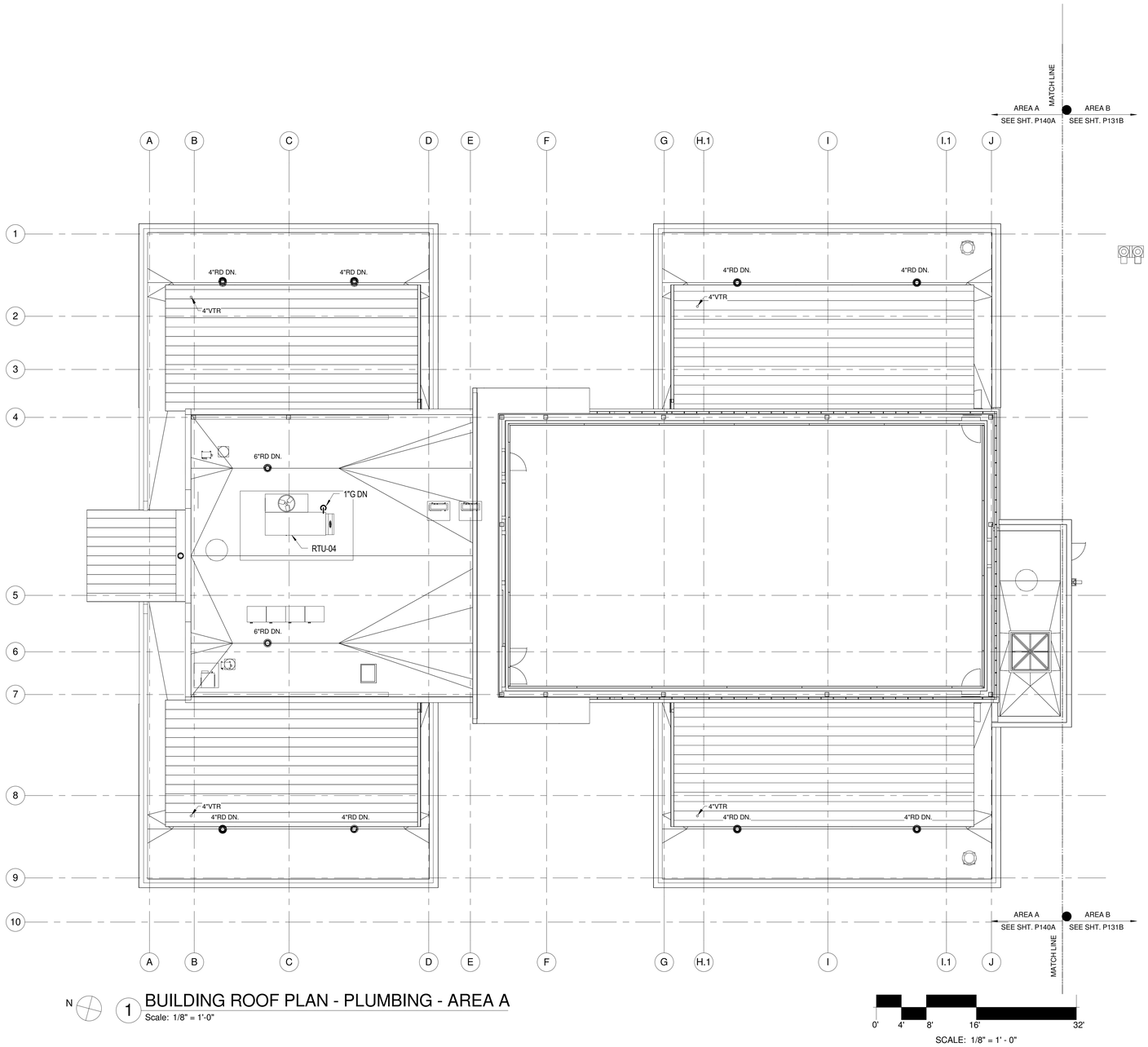
TITLE

THIRD FLOOR AND MEZZ. PLAN - SANITARY PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

P131A

SHEET NO.



1 BUILDING ROOF PLAN - PLUMBING - AREA A
Scale: 1/8" = 1'-0"

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

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PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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STATE OF MARYLAND - DPSCS
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BALTIMORE MARYLAND
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LICENSE NO. 43481
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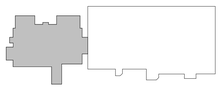
STATE OF MARYLAND
JEFFREY W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE
1/8" = 1'-0"

No.	Description	Date

REVISIONS

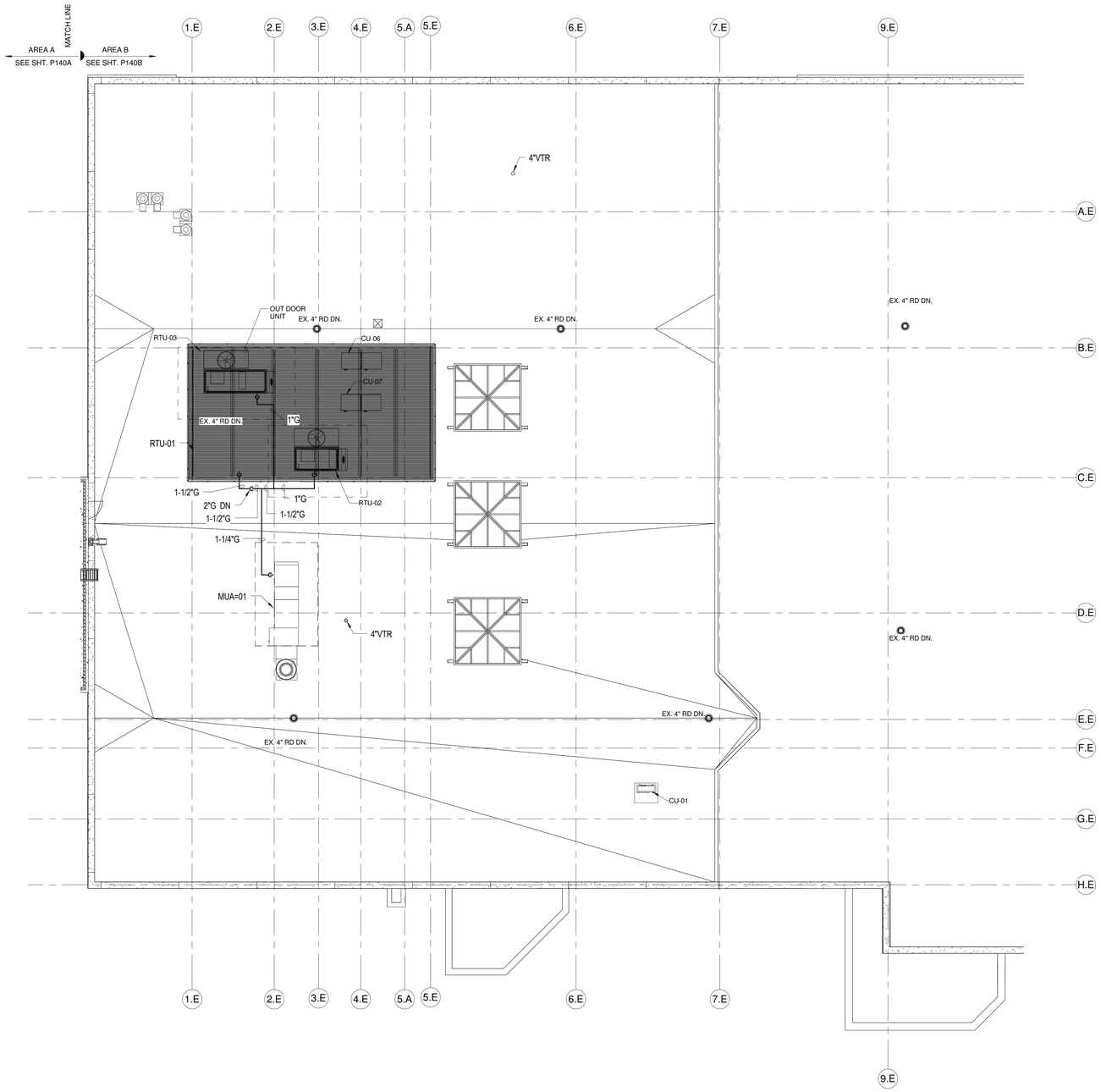
DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE
ROOF PLAN - PLUMBING - AREA A

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

P140A

SHEET NO.



N

1 ROOF PLAN - PLUMBING - AREA B

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A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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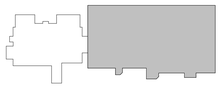
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CLIFTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



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No.	Description	Date

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

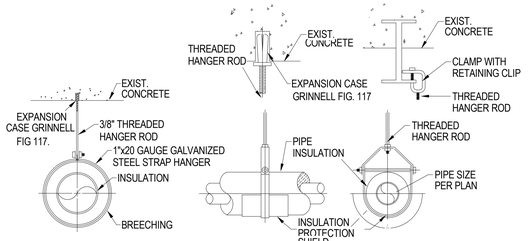
ROOF PLAN - PLUMBING - AREA B

PSA-DEWBERRY PROJECT NO. Project Number

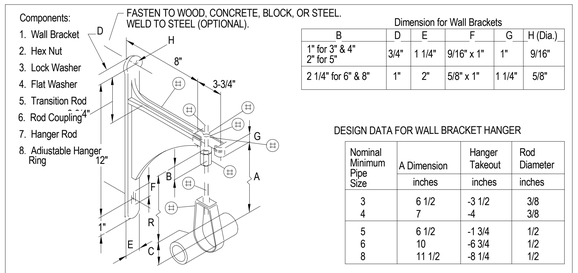
DPSCS CONTRACT NO. KT-000-150-C01

P140B

SHEET NO.



PIPE HANGER DETAIL
NOT TO SCALE



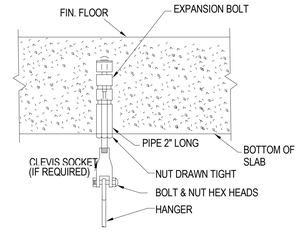
Dimension for Wall Brackets

B	D	E	F	G	H (Dia.)
1" for 3" & 4" 2" for 5"	3/4"	1 1/4"	9/16" x 1"	1"	9/16"
2 1/4" for 6" & 8"	1"	2"	5/8" x 1"	1 1/4"	5/8"

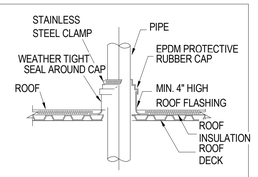
DESIGN DATA FOR WALL BRACKET HANGER

Nominal Minimum Pipe Size	A Dimension	Hanger Takeout	Rod Diameter
	inches	inches	inches
3	6 1/2	-3 1/2	3/8
4	7	-4	3/8
5	6 1/2	-1 3/4	1/2
6	10	-6 3/4	1/2
8	11 1/2	-8 1/4	1/2

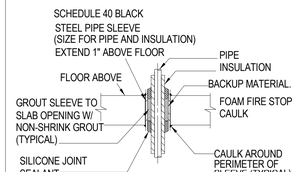
WALL BRACKET PIPE HANGER DETAIL
NOT TO SCALE



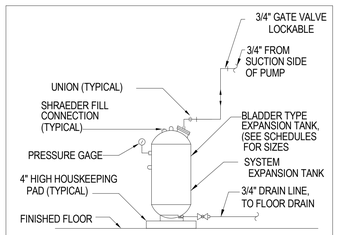
CONCRETE ANCHOR FOR SUPPORT OF PIPES AND EQUIPMENT
NOT TO SCALE



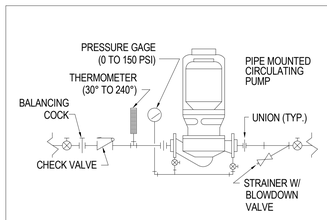
PIPE PENETRATION THRU ROOF DETAIL
NOT TO SCALE



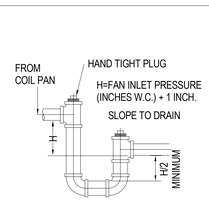
PIPE SLEEVE THROUGH CONCRETE SLAB DETAIL
NOT TO SCALE



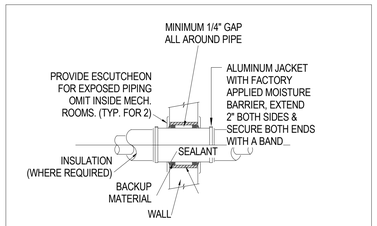
EXPANSION TANK DETAIL
NOT TO SCALE



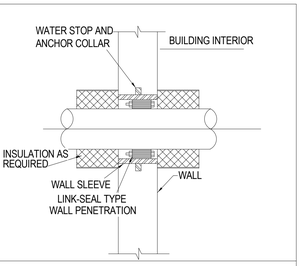
IN-LINE PIPE MOUNTED PUMP DETAIL
NOT TO SCALE



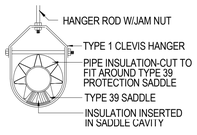
CONDENSATE DRAIN PIPING DETAIL
NOT TO SCALE

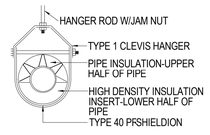


PIPE PENETRATION DETAIL
NOT TO SCALE

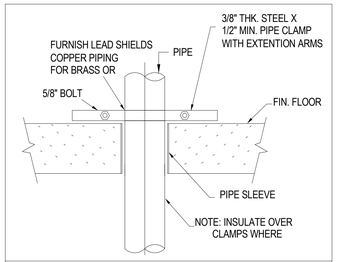


PIPE PENETRATION DETAIL - EXTERIOR WALL
NOT TO SCALE

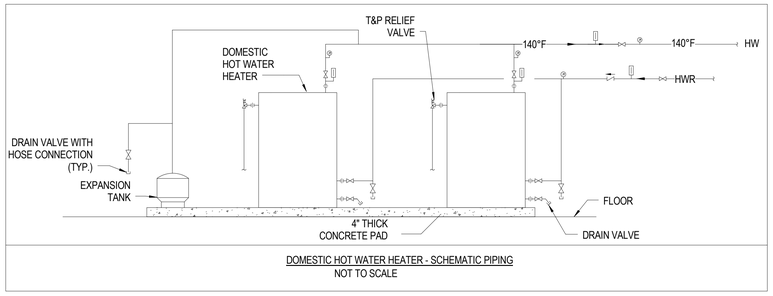




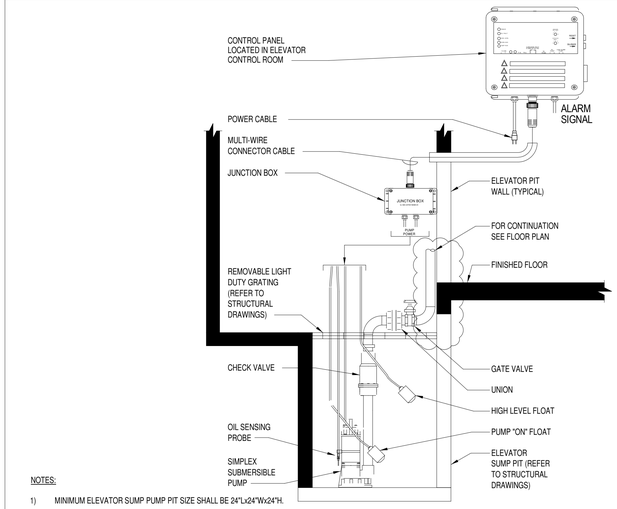
HANGER DETAILS-INSULATED PIPE
NOT TO SCALE



PIPE RISER SUPPORT DETAIL
NOT TO SCALE



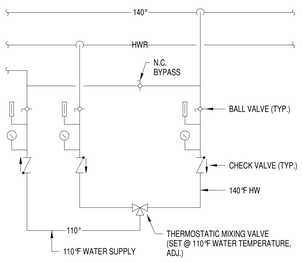
DOMESTIC HOT WATER HEATER - SCHEMATIC PIPING
NOT TO SCALE



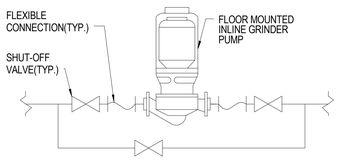
NOTES:

1) MINIMUM ELEVATOR SUMP PUMP PIT SIZE SHALL BE 24"L x24"W x24"H.
2) PROVIDE CONTROL SYSTEM WITH BUILT IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES NOT RUN DUE TO HIGH LIQUID LEVEL.
3) PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACT FOR A REMOTE ALARM LOCATION.
4) CONTROL PANEL SHALL BE PROVIDED WITH INDICATOR LIGHTS FOR POWER, HIGH LIQUID LEVEL, OVERLOAD, AND PUMP STATUS.
5) PROVIDE JUNCTION BOX WITH MULTI-PIN CONNECTOR AND CORD IN LENGTHS AS REQUIRED.

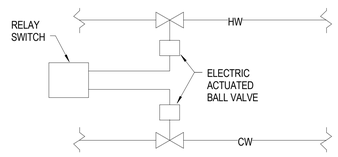
ELEVATOR PIT SUMP PUMP DETAIL
SCALE: NONE



THERMOSTATIC MIXING VALVE
SCALE: NONE



IN-LINE GRINDER DETAIL
NOT TO SCALE



ELECTRIC ACTUATED BALL VALVE DETAIL
NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS
EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
ESSEX CORPORATE CENTER, SUITE 1000, 11350 McCORMICK ROAD, HUNT VALLEY, MARYLAND 21031, PHONE (410) 329-1150
TERRALOGOS ECO ARCHITECTURE, PC
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · GUSTAV W. OMEL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

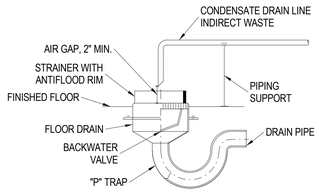
PLUMBING - DETAILS

PSA-DEWBERRY PROJECT NO. Project Number

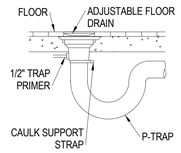
DPSCS CONTRACT NO. KT-000-150-C01

PO150

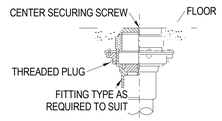
SHEET NO.



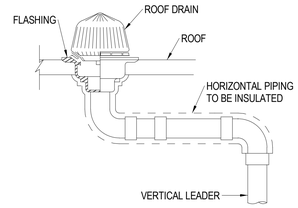
CONDENSATE FLOOR DRAIN DETAIL
NOT TO SCALE



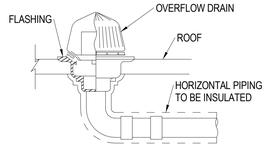
FLOOR DRAIN DETAIL
NOT TO SCALE



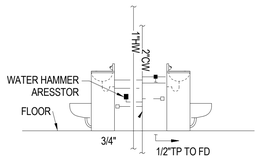
FLOOR CLEANOUT DETAIL
NOT TO SCALE



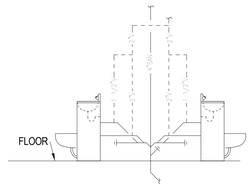
ROOF DRAIN PIPING DETAIL
NOT TO SCALE



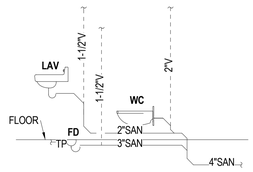
OVERFLOW DRAIN PIPING DETAIL
NOT TO SCALE



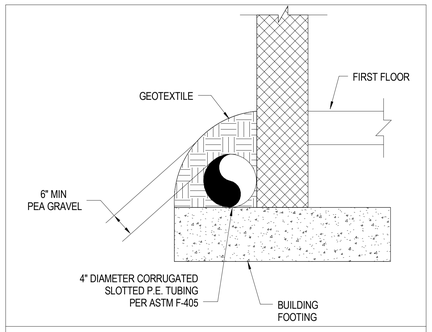
BEDROOM DOMESTIC PIPING DETAIL
NOT TO SCALE



BEDROOM SANITARY PIPING DETAIL
NOT TO SCALE



TOILET ROOM SANITARY PIPING DETAIL
NOT TO SCALE



FOOTING DRAIN PIPING DETAIL
NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
KEELSTON PLAZA SE, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

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LEWICKI ESTIMATING SERVICES, INC

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JUSTIN W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

PLUMBING - DETAILS

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

PO151

SHEET NO.

PLUMBING FIXTURE SCHEDULE

FIXTURE NO.	TYPE	CW	HW	SAN	VENT	NOTES
P-1A	WATER CLOSET	1 1/4"	-	4"	2"	
P-1B	WATER CLOSET	1 1/4"	-	4"	2"	(1)
P-1C	COMBINATION WATER CLOSET/ LAVATORY	1 1/4"	1/2"	4"	2"	(1), (2)
P-1D	COMBINATION WATER CLOSET/ LAVATORY	1 1/4"	1/2"	4"	2"	(1), (3)
P-1E	COMBINATION WATER CLOSET/ LAVATORY	1 1/4"	1/2"	4"	2"	(1)
P-1F	COMBINATION WATER CLOSET/ LAVATORY	1 1/4"	1/2"	4"	2"	(1)
P-2A	LAVATORY	1/2"	1/2"	2"	1 1/2"	(1)
P-2B	LAVATORY	1/2"	1/2"	2"	1 1/2"	(1)
P-2C	LAVATORY	1/2"	1/2"	2"	1 1/2"	
P-2D	ART ROOM SINK	1/2"	1/2"	2"	1 1/2"	
P-2E	HAND SINK	1/2"	1/2"	2"	1 1/2"	
P-2F	HAND SINK	1/2"	1/2"	1 1/2"	1 1/2"	
P-2G	HAND SINK	1/2"	1/2"	1 1/2"	1 1/2"	
P-3A	DRINKING FOUNTAIN	1/2"	-	1 1/2"	1-1/2"	(1)
P-3B	DRINKING WATER COOLER	1/2"	-	1 1/2"	1-1/2"	
P-4A	SERVICE SINK	3/4"	3/4"	2"	1 1/2"	
P-4B	SERVICE SINK	3/4"	3/4"	2"	1 1/2"	(1)
P-5	SHOWER		3/4" TW	.	.	FLOOR DRAIN

(1) SECURITY FIXTURE.
(2) RIGHT HAND CONFIGURATION
(3) LEFT HAND CONFIGURATION

PUMP SCHEDULE

UNIT No.	LOCATION	PUMP STYLE	SERVICE	FLOW GPM	HEAD FT H_2O	MOTOR					MAKE & MODEL
						V	PH	HZ	RPM	POWER	
CP-1	MECHANICAL ROOM BASEMENT	IN-LINE	DOMESTIC HOT WATER(110°)	75	15	115	1	60	-	1/2 HP	ITT BELL & GOSSET PL-55 OR APPROVED EQUAL.
CP-2	MECHANICAL ROOM BASEMENT	IN-LINE	DOMESTIC HOT WATER(140°)	1	7	115	1	60	-	41 W	ITT BELL & GOSSET NRF-9F/LW OR APPROVED EQUAL.
SP-1	ELEVATOR PIT	SUBMERSIBLE	WATER REMOVAL	50	25	115	1	60	3600	0.4 HP	STANCOR MODEL SE-50 OR APPROVED EQUAL.

EXPANSION TANK (ET) SCHEDULE

UNIT NO.	LOCATION	TYPE	SERVICE	SIZE DIA. x HEIGHT	TANK VOLUME GAL. MIN.	TANK ACCEPTANCE VOLUME GAL.	MIN. OPERATING PRESSURE PSIG	MAX. SYSTEM PRESSURE PSIG	PIPE SIZE		MAKE & MODEL
									FILL	SYSTEM	
ET-1	MECHANICAL ROOM	DIAPHRAGM	HOT WATER	24"X37"	35	11	40	65	2-1/2"	2-1/2"	ITT MODEL PTA-80V OR APPROVED EQUAL

HOT WATER HEATER (DWH) SCHEDULE

UNIT No.	LOCATION	INPUT	STORAGE CAPACITY GALLONS	RECOVERY CAPACITY GPH@100° ΔT	ELECTRICAL DATA				MAKE & MODEL
					V	PH	A	HZ	
DWH-1	MECHANICAL ROOM	1,200,000 BTUH	1250	1200	120	1	10	60	PVI, 1500 P 1250A-TP OR APPROVED EQUAL.
DWH-2	MECHANICAL ROOM	1,200,000 BTUH	1250	1200	120	1	10	60	PVI, 1500 P 1250A-TP OR APPROVED EQUAL.

A JOINT-VENTURE BETWEEN
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EBA ENGINEERING
HOPE FURRER Associates, Inc.
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STATE OF MARYLAND · CLINTON W. CAMPBELL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

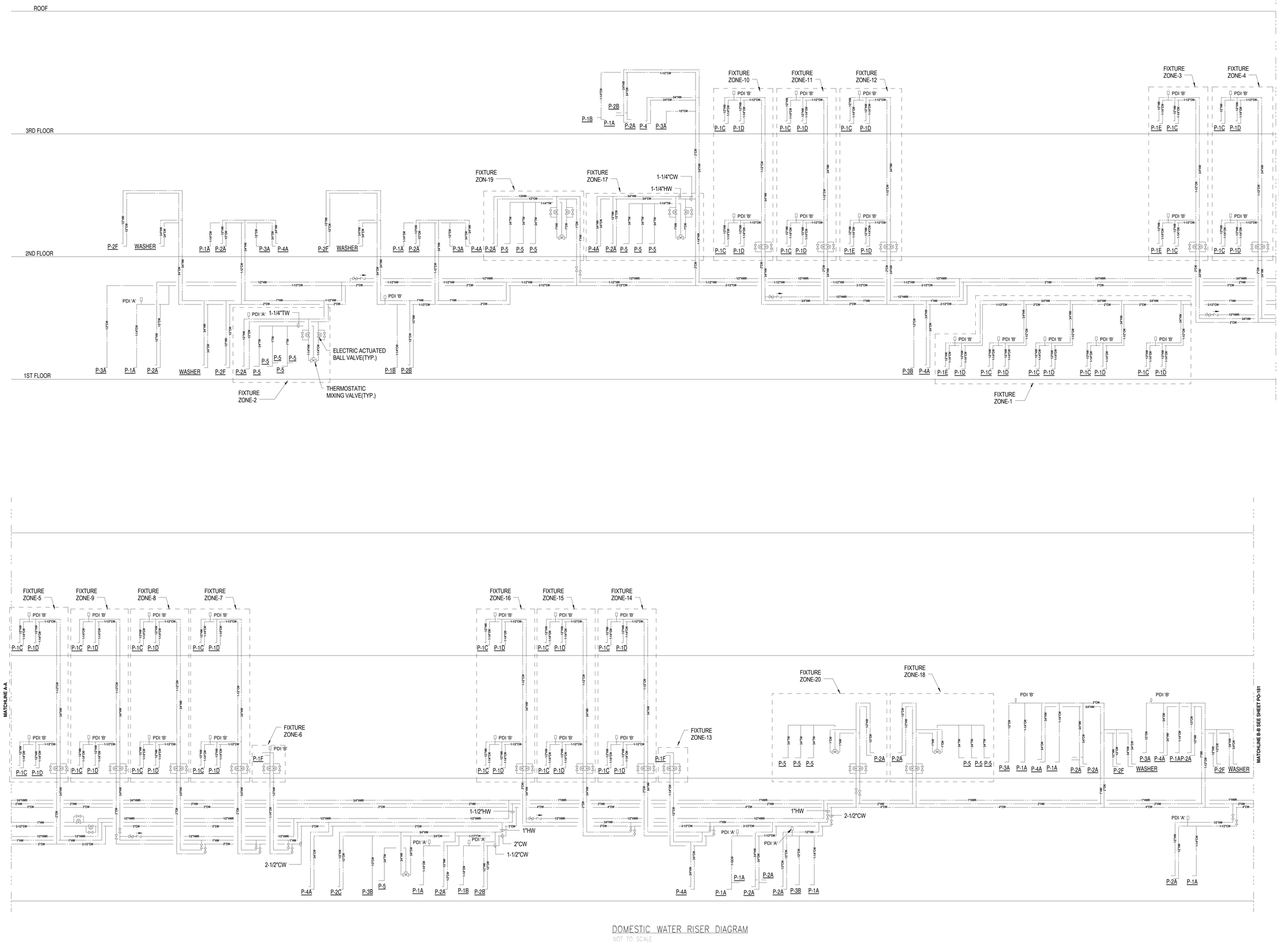
TITLE

PLUMBING SCHEDULES

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

PO160

SHEET NO.



DOMESTIC WATER RISER DIAGRAM

NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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Consulting Engineers
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STATE OF MARYLAND · GREGORY W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

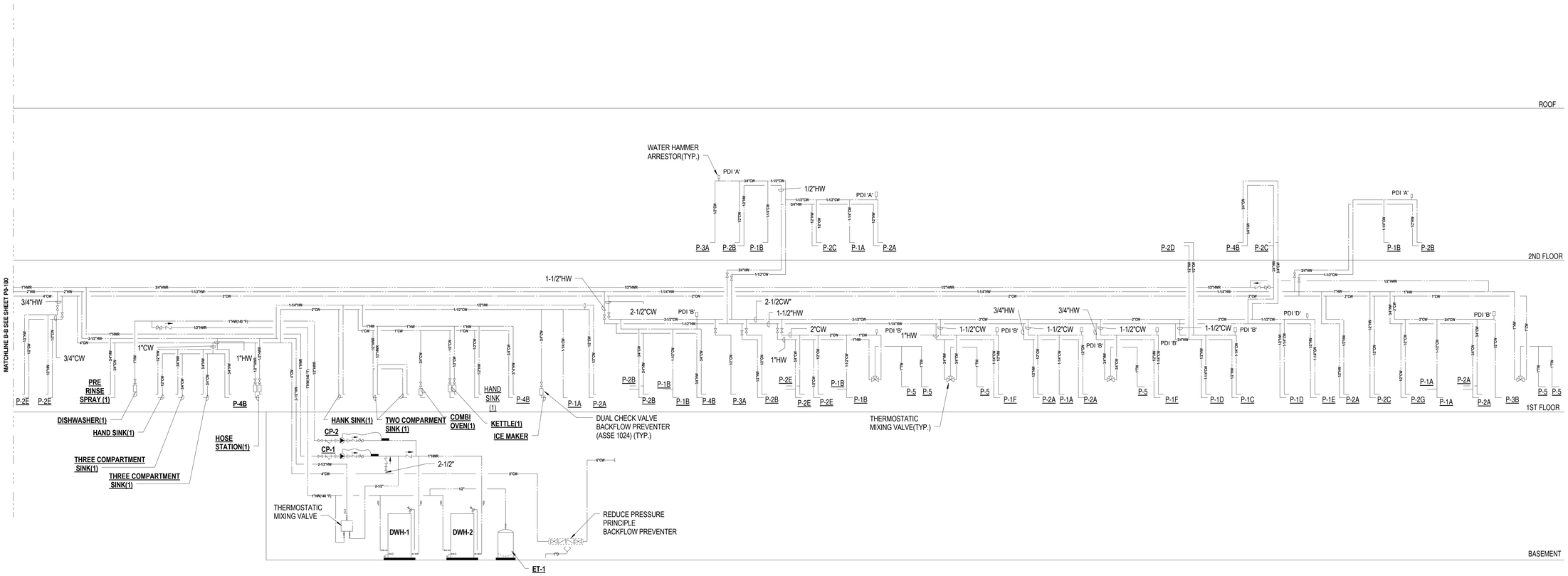
PLUMBING - DOMESTIC WATER RISER DIAGRAM

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

PO180

SHEET NO.



DOMESTIC WATER RISER DIAGRAM

NOT TO SCALE

NOTES:

(1) FIXTURE PROVIDED BY KITCHEN CONTRACTOR. PLUMBING CONTRACTOR SHALL COORDINATE THE FINAL LOCATIONS WITH KITCHEN EQUIPMENT AND PROVIDE REQUIRED WATER SUPPLY PIPING IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S WRITTEN INSTRUCTIONS. SEE KITCHEN EQUIPMENT DRAWING, FOR DETAILS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

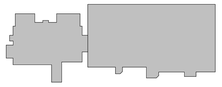
PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CHRISTOPHER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

PLUMBING - DOMESTIC WATER RISER DIAGRAM

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

PO181

SHEET NO.

SANITARY RISER DIAGRAM

NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

STATE OF MARYLAND
STEVEN W. SIDHU
43481
PROFESSIONAL ENGINEER
05/15/2015

KEY PLAN

SCALE

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REVISIONS

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CHECKED BY	Checker
DATE	Issue Date

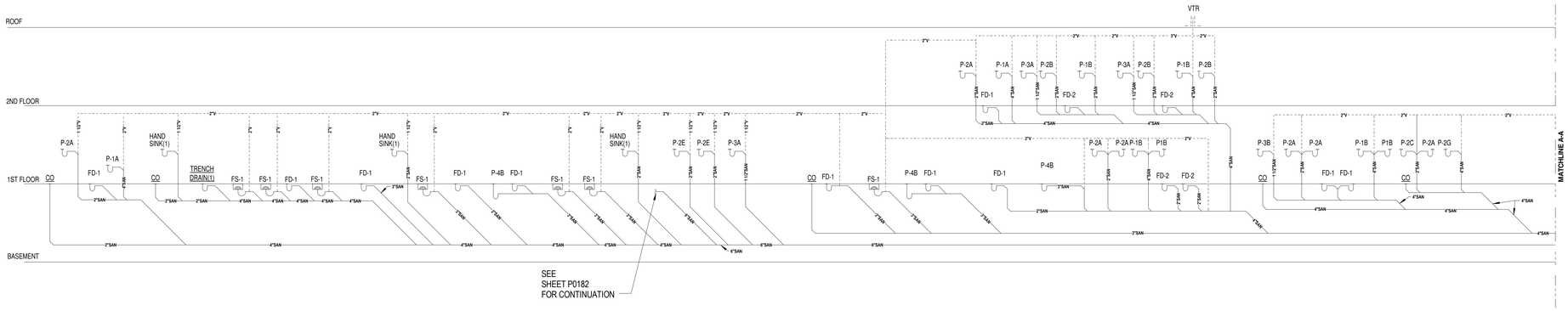
TITLE

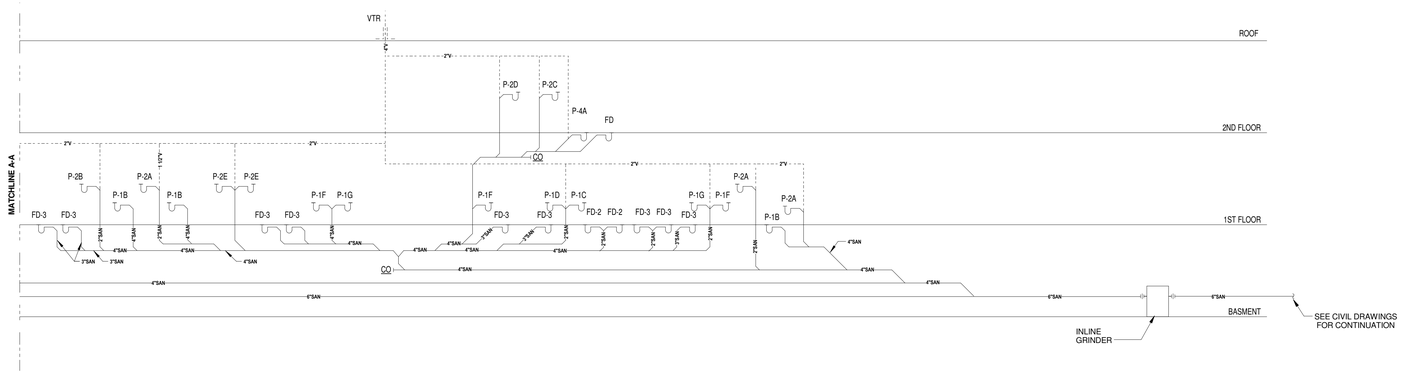
PLUMBING - SANITARY RISER DIAGRAM - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

PO182

SHEET NO.





SANITARY RISER DIAGRAM

NOT TO SCALE

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PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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43481
05/15/2015

KEY PLAN

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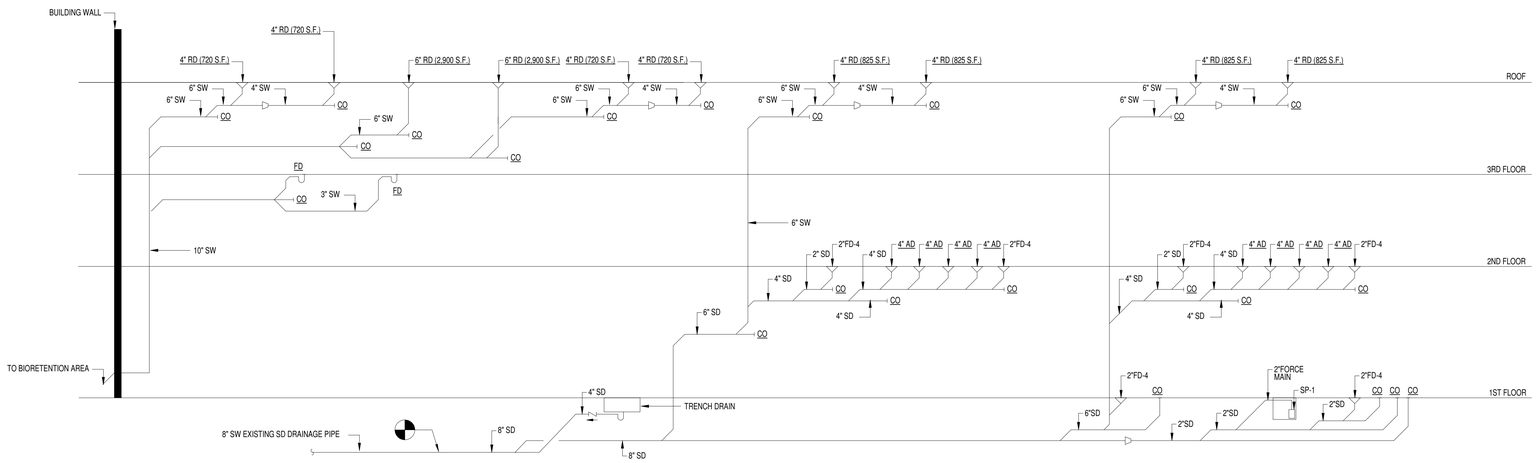
PLUMBING - SANITARY RISER DIAGRAM - AREA B

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

PO183

SHEET NO.



STORM WATER RISER DIAGRAM

SCALE: NONE

GAS RISER

NOT TO SCALE

FIXTURE ZONE SHUT-OFF RISER DIAGRAM

NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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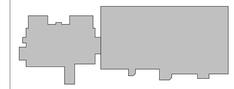
KEY PLAN



SCALE

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DATE	Issue Date

TITLE

PLUMBING - STROM DRAIN AND GAS RISER DIAGRAM

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

PO184

SHEET NO.

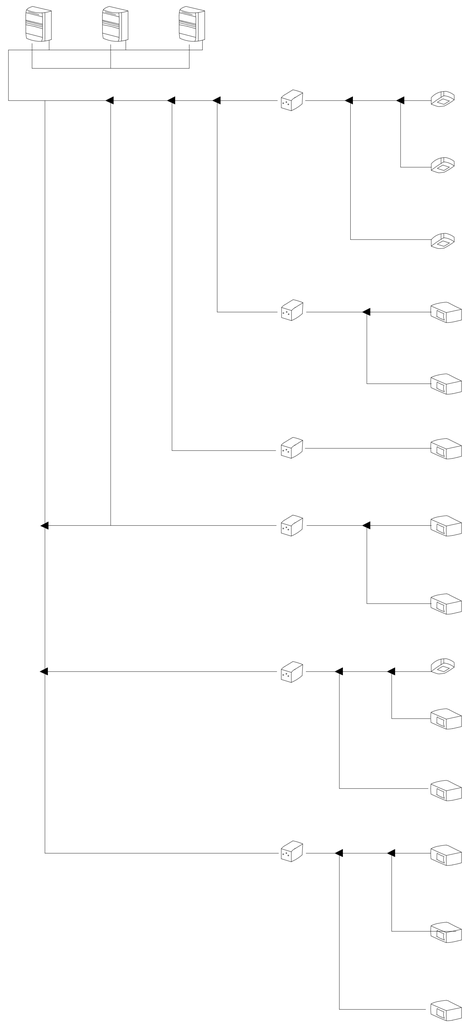
REFRIGERANT PIPING DIAGRAMS

1. Material List

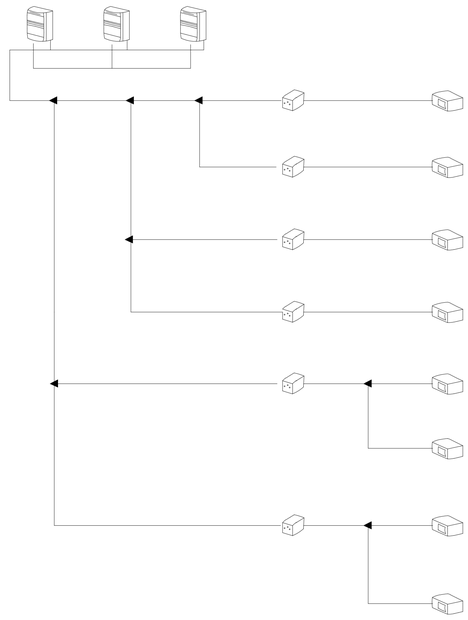
Model	Qty	Description
REMQ120PBTJ	4	Heat recovery VRV P(B) R410A (208-230V)
REMQ96PBTJ	5	Heat recovery VRV P(B) R410A (208-230V)
BSVQ36PVJU	8	Branch selector unit
BSVQ60PVJU	4	Branch selector unit
BSVQ96PVJU	4	Branch selector unit
FXMQ07PAVJU	5	VRV M (PA) - Ceiling Mounted Ducted (Medium Static)
FXMQ18PAVJU	14	VRV M (PA) - Ceiling Mounted Ducted (Medium Static)
FXMQ24PAVJU	4	VRV M (PA) - Ceiling Mounted Ducted (Medium Static)
FXMQ30PAVJU	4	VRV M (PA) - Ceiling Mounted Ducted (Medium Static)
FXMQ36PAVJU	2	VRV M (PA) - Ceiling Mounted Ducted (Medium Static)
FXMQ48PAVJU	3	VRV M (PA) - Ceiling Mounted Ducted (Medium Static)
FXZQ07MVJU9	4	VRV Z - 4-Way Discharge Ceiling Mounted Cassette (2' x 2')
KHRP25A22T	3	REFNET branch piping kit
KHRP25A33T	1	REFNET branch piping kit
KHRP25M72TU	4	REFNET branch piping kit
KHRP25M73TU	5	REFNET branch piping kit
KHRP26A22T	17	REFNET branch piping kit
KHRP26A33T	3	REFNET branch piping kit
BRC1E72	36	Navigation Remote Controller
BYFQ60B8W1U	4	Decoration panel - All FXZQ
BHFP26P136U	3	Condensing Unit Multi Connection Piping kit - VRVIII HR
Piping 1/4"	484.0ft	
Piping 3/8"	783.0ft	
Piping 1/2"	663.0ft	
Piping 5/8"	762.0ft	
Piping 3/4"	540.0ft	
Piping 7/8"	117.0ft	
Piping 1 1/8"	248.0ft	
Piping 1 3/8"	180.0ft	

NOTES: 1. Pipes marked with * in the diagrams must be connected to the device with a reducing joint.

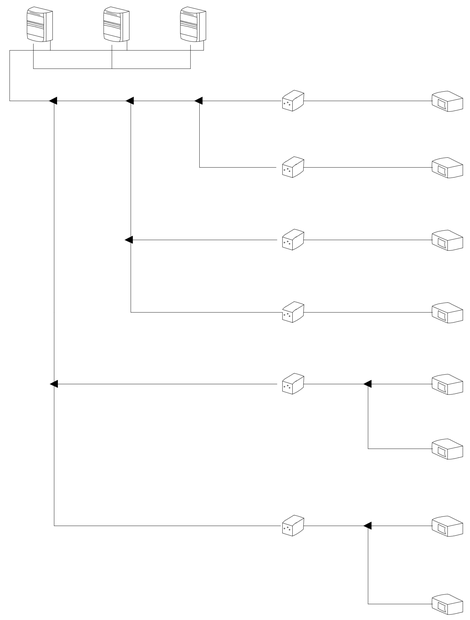
2.1. Piping CU-2nd Floor North



2.2. Piping CU-1st Floor North



2.3. Piping CU-2nd Floor South



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KEY PLAN



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TITLE

PLUMBING - REFRIGERANT RISER DIAGRAM

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

PO185

SHEET NO.

MECHANICAL PROJECT NOTES

1. THESE NOTES APPLY TO ALL MECHANICAL DRAWINGS, AS LISTED IN THE DRAWING INDEX ON THIS SHEET. SEE ALSO GENERAL NOTES ON INDIVIDUAL DRAWINGS.
2. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, LABOR AND SERVICES NECESSARY TO SUCCESSFULLY COMPLETE ALL MECHANICAL WORK INDICATED, ALL WORK SHOWN IS EXISTING UNLESS SPECIFICALLY INDICATED AS DEMOLITION OR NEW WORK. SUCCESSFUL COMPLETION OF ALL WORK MEANS THAT ALL INSTALLED SYSTEMS SHALL BE COMPLETE AND READY FOR OPERATION. SUCCESSFUL COMPLETION ALSO INCLUDES COMPLETION OF ALL TESTING AND BALANCING WORK INDICATED IN THESE DRAWINGS.
3. CONTRACTOR SHALL APPLY FOR AND OBTAIN, AT NO ADDITIONAL COST TO THE OWNER, ALL LICENSES AND PERMITS REQUIRED BY STATE AND LOCAL JURISDICTIONAL AUTHORITIES FOR PERFORMANCE OF MECHANICAL WORK.
4. ALL MECHANICAL WORK (MATERIALS, LABOR, AND EQUIPMENT) SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR COMMENCING WITH THE DATE OF ACCEPTANCE OF ALL WORK BY THE OWNER. ADDITIONAL WARRANTIES AS PER SPECIFICATIONS SHALL ALSO APPLY.
5. ALL MECHANICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND REGULATIONS.
6. ALL PRODUCTS (MATERIALS AND EQUIPMENT) SHALL BE FIRST-QUALITY NEW AND UNUSED PRODUCTS OF REPUTABLE MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF SUCH PRODUCTS. ALL DEMOLITION, INSTALLATION, TESTING AND BALANCING WORK SHALL BE PERFORMED IN A PROFESSIONAL, FIRST CLASS, AND WORKMANLIKE MANNER BY WORKERS SKILLED IN THE TYPE OF WORK BEING PERFORMED.
7. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURERS' PRINTED INSTRUCTIONS AND APPLICABLE NOTES AND SPECIFICATIONS ON THESE DRAWINGS. IF MANUFACTURERS' INSTRUCTIONS ARE IN DIRECT CONFLICT WITH INSTRUCTIONS ON THE DRAWINGS OR IN THE SPECIFICATIONS THE ENGINEER OF RECORD SHALL BE CONTACTED FOR CLARIFICATION.
8. CONTRACTOR SHALL ADHERE AT ALL TIMES TO ALL SAFETY REGULATIONS AND PROCEDURES REQUIRED BY THE LATEST EDITIONS OF THE FEDERAL/STATE OCCUPATIONAL SAFETY AND HEALTH (OSHA) AND TO ALL SAFETY REGULATIONS AND PROCEDURES REQUIRED BY THE OWNER.
9. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND CLEARANCES AND SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO FABRICATION OR INSTALLATION OF ANY WORK. NO ALLOWANCES WILL BE MADE BY OWNER FOR ANY ERROR OR NEGLIGENCE ON THE CONTRACTOR'S PART CONCERNING EXISTING CONDITIONS.
10. DUE TO THE SMALL SCALE OF THE DRAWINGS, NOT ALL OFFSETS, FITTINGS OR ACCESSORIES THAT MAY BE REQUIRED ARE INDICATED. CONTRACTOR SHALL CAREFULLY INVESTIGATE ALL CONDITIONS THAT WILL AFFECT THE WORK TO BE PERFORMED AND SHALL ARRANGE FOR SUCH WORK ACCORDINGLY, FURNISHING ALL MATERIAL AND LABOR REQUIRED FOR COMPLETE AND WORKABLE SYSTEMS AS NOTED ABOVE.
11. THE OWNER OR THEIR REPRESENTATIVE SHALL HAVE THE FINAL DETERMINATION IN CLARIFICATIONS AND INTERPRETATIONS REGARDING THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. ANY DEVIATIONS FROM THE DRAWINGS MUST BE APPROVED IN WRITING BY THE OWNER OR THEIR REPRESENTATIVE.
12. CONTRACTOR SHALL NOT DISCONNECT ANY EXISTING MECHANICAL OR ELECTRICAL SYSTEMS AND SHALL NOT CUT ANY EXISTING STRUCTURAL MEMBERS WITHOUT WRITTEN APPROVAL FROM THE OWNER OR THEIR REPRESENTATIVE.
13. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITY WITH THE OWNER OR THEIR REPRESENTATIVE TO MINIMIZE DISRUPTION TO OSTC NORMAL BUILDING OPERATIONS.
14. CONTRACTOR SHALL KEEP THE WORK SITE AND SURROUNDING AREA FREE FROM ACCUMULATION OF WASTE MATERIALS GENERATED BY WORK PERFORMED UNDER THIS CONTRACT. SUCH DEBRIS SHALL BE REMOVED FROM THE WORK SITE, HAULED FROM THE PREMISES AND DISPOSED OF IN A LEGAL MANNER ON A DAILY BASIS.
15. PROTECT ALL EXISTING WORK WHICH IS TO REMAIN IN PLACE. ANY EXISTING WORK TO REMAIN WHICH IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
16. CONTRACTOR SHALL PERFORM ALL TESTS AND SECURE ALL INSPECTIONS REQUIRED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL FURNISH COPIES OF ALL REQUIRED INSPECTION CERTIFICATES TO OWNER PRIOR TO FINAL PAYMENT.

DESIGN CODES & STANDARDS

ALL CODES REFERENCED ARE TO BE MODIFIED AS REQUIRED BY STATE AND LOCAL AMENDMENTS:

2012 INTERNATIONAL MECHANICAL CODE
2009 NATIONAL STANDARD PLUMBING CODE
2012 INTERNATIONAL ENERGY CONSERVATION CODE
2012 INTERNATIONAL FUEL GAS CODE
2006 NFPA 101 LIFE SAFETY CODE
2002 NFPA 72 FIRE ALARM CODE
2006 INTERNATIONAL EXISTING BUILDING CODE
ANSI/ASHRAE/IESNA STANDARD 90.1-2007
ANSI/ASHRAE 55-2007
ANSI/ASHRAE 62.1-2007
ASHRAE GUIDELINE 0-2007
USGBC LEED®-NC RATING SYSTEM 3.0 2009
UNIFIED FACILITIES CRITERIA (UFC)
ASHRAE 90.1-2004 ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS

DEMOLITION NOTES

1. THESE NOTES APPLY TO ALL MECHANICAL DEMOLITION DRAWINGS.
2. ALL EQUIPMENT AND MATERIALS WHICH ARE INDICATED TO BE REMOVED AND NOT RELOCATED, REUSED OR SALVAGED SHALL BE REMOVED FROM THE WORK SITE, HAULED FROM THE PREMISES AND DISPOSED OF IN A LEGAL MANNER.
3. ALL EQUIPMENT AND MATERIALS WHICH ARE INDICATED TO BE RELOCATED OR REUSED SHALL BE PROTECTED BY THE CONTRACTOR DURING AND AFTER THE REMOVAL. ANY EXISTING WORK TO BE RELOCATED WHICH IS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4. PROTECT ALL EXISTING WORK WHICH IS TO REMAIN IN PLACE. ANY EXISTING WORK TO REMAIN WHICH IS DAMAGED DURING DEMOLITION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
5. PROVIDE ALL REQUIRED CUTTING AND PATCHING. CUT EXISTING WORK WHERE INDICATED FOR REMOVALS AND REPAIR ALL OPENINGS, CRACKS AND DEPRESSIONS IN FLOORS, CEILINGS AND WALLS REMAINING AFTER REMOVALS, MATCHING ADJACENT WORK.
6. DUE TO CONCEALMENT, THE EXTENT OF THE EXISTING DUCTWORK AND PIPING SYSTEMS MAY NOT BE FULLY SHOWN OR MAY DIFFER FROM THAT SHOWN. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EQUIPMENT, DUCTWORK, PIPING, ETC., AS PART OF SYSTEMS INDICATED TO BE REMOVED.
7. PRIOR TO REMOVAL OF EQUIPMENT, PIPING AND DUCTWORK, CONTRACTOR SHALL VERIFY THAT SYSTEMS ARE NO LONGER IN SERVICE TO ANY AREAS OUTSIDE THE WORK AREA OF THIS CONTRACT.
8. ALL EQUIPMENT, DUCTWORK, AND PIPING SYSTEMS INDICATED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. REMOVE ALL VALVES, HANGERS, INSULATION, ETC., ASSOCIATED WITH DEMOLISHED PIPING SYSTEMS. REMOVE ALL HANGERS, INSULATION AND ACCESSORIES ASSOCIATED WITH DEMOLISHED HVAC SYSTEMS.

GENERAL NOTES

1. THE RENOVATED SPACES SHALL BE SERVED BY NEW AND EXISTING HVAC EQUIPMENT AND PLUMBING SERVICES AS INDICATED ON PLANS. ALL REVISIONS TO EXISTING SUPPLY, RETURN AND EXHAUST DUCTWORK ARE SHOWN ON THE CONTRACT DRAWINGS.
2. COORDINATE ALL NEW WORK WITH WALL AND CEILING CONSTRUCTION.
3. ALL DUCT DIMENSIONS INDICATED ARE INSIDE (AIR-PATH) DIMENSIONS.
4. ALL PIPING DIAMETERS INDICATED ARE NOMINAL DIAMETERS.
5. INSTALL DUCTWORK SUCH THAT ALL DAMPERS ARE EASILY ACCESSIBLE.
6. USE ONLY PLENUM-RATED MATERIALS ABOVE THE CEILING.
7. EXISTING DUCTWORK AND PIPING SIZES SHOWN ARE APPROXIMATE. FIELD VERIFY ALL SIZES PRIOR TO FABRICATION OF NEW WORK.
8. UPON COMPLETION OF NEW WORK, CONTRACTOR SHALL VERIFY PROPER OPERATION OF EXISTING HVAC EQUIPMENT AND PLUMBING AND PIPING SERVICES.
9. CONTRACTOR IS REQUIRED TO MEET OR EXCEED THE "GUIDELINES FOR OCCUPIED BUILDING DURING CONSTRUCTION", 1995, CHAPTER 3 OF SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION).
10. HVAC PROTECTION: PROTECT ALL NEW AND EXISTING HVAC EQUIPMENT BEFORE AND AFTER INSTALLATION, INCLUDING DUCTWORK, VAV TERMINALS, ZONE DAMPERS AND DIFFUSERS, FROM DUST AND CONTAMINATION. IF THE HVAC SYSTEM IS USED DURING FIT-OUT CONSTRUCTION, THE PRESCRIPTIVE MEASURES IN SMACNA (CHAPTER 3) SHALL BE FOLLOWED REGARDING SOURCE CONTROL, PATHWAY INTERRUPTION, HOUSEKEEPING AND CLEANUP. CONTRACTOR IS RESPONSIBLE FOR CLEANUP COST FOR EQUIPMENT AND DUCTWORK CONTAMINATED WITH CONSTRUCTION DUST INCLUDING VACUUM CLEANING THE PLENUM SPACE ABOVE THE CEILING. FOLLOWING ARE PROCEDURES TO PROTECT THE DUCTWORK:
    - SEAL ALL DUCT OPENINGS, BOTH SUPPLY AND RETURN, AND WRAP ALL EQUIPMENT WITH PLASTIC.
    - PLACE FILTER MEDIA (NO LESS THAN MERV 8 RATED FILTERS) AT ALL OPENINGS FOR RETURN AIR INCLUDING RETURN GRILLES IN THE CEILING OR NEGATIVE PRESSURE SIDE OF THE SYSTEM. REGULARLY REPLACE THE FILTER MEDIA, NO LESS THAN ONCE PER WEEK, FOR THE DURATION OF CONSTRUCTION.
    - INSTITUTE DAILY CLEANING ACTIVITIES, SUCH AS USING WETTING AGENTS TO MINIMIZE AIRBORNE DUSTS. VACUUM CLEAN WITH HEPA FILTERS FOR FINAL CLEANING.
11. PROVIDE ALL PIPING LEAK TESTING AND INSULATION AS PER SPECIFICATIONS.
12. PROVIDE MECHANICAL IDENTIFICATION FOR EQUIPMENT, PIPING AND DUCTWORK AS PER SPECIFICATIONS.

ABBREVIATIONS

ACU	AIR CONDITIONING UNIT
ACCU	AIR COOLED CONDENSING UNIT
A.	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR-CONDITIONING ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BFP	BACKFLOW PREVENTER
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CA	COMBUSTION AIR
CD	CONDENSATE DRAIN
CF	COMBUSTION FLUE
CFM	CUBIC FEET PER MINUTE
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
C.I.G.	CEILING
CISPI	CAST IRON SOIL PIPE INSTITUTE
CR	CONDENSATE RETURN
CRU	CONDENSATE RETURN UNIT
CU	CONDENSING UNIT; CUBIC
CW	COLD WATER
D.B.	DRY BULB
DESIG.	DESIGNATION
DIA.	DIAMETER
DN	DOWN
DWH	DOMESTIC WATER HEATER
EA	EXHAUST AIR
E.A.T.	ENTERING AIR TEMPERATURE
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
E.	ELEVATION
EWH	ELECTRIC WATER HEATER
EX.	EXISTING TO REMAIN
EXT.	EXTERIOR; EXTERNAL
F	FAN
°F	DEGREES FAHRENHEIT
FHV	FIRE HOSE VALVE
FT	FOOT (FEET)
FW	FILTERED WATER
G	NATURAL GAS
GA.	GAUGE
GAL	GALLON(S)
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HEIGHT
H/V	HORIZONTAL/VERTICAL
HP	HORSEPOWER
HPS	HIGH PRESSURE STEAM
HR	HOUR
HW	HOT WATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
ICC	INTERNATIONAL CODE COUNCIL
IN.	INCH(ES)
INT.	INTERIOR
KW	KILOWATT(S)
LB(S)	POUND(S)
LPR	LOW PRESSURE STEAM CONDENSATE RETURN
LPS	LOW PRESSURE STEAM SUPPLY
MAX	MAXIMUM
MBH	1000 BTUH
MIN	MINIMUM
MOD	MOTOR OPERATED DAMPER
MPS	MEDIUM PRESSURE STEAM
(N)	NEW
N.C.	NOISE CRITERIA
NFPA	NATIONAL FIRE PROTECTION AGENCY
NG	NATURAL GAS
NO.	NUMBER
OA	OUTDOOR AIR
O.C.	ON CENTER
OED	OPEN END DUCT
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
PD	PUMPED DISCHARGE
PPM	PARTS PER MILLION
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RAD	RETURN AIR DUCT
REL.	RELOCATE EXISTING
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
RX.	REMOVE EXISTING
S	SENSOR/STEAM
SA	SUPPLY AIR
SAD	SUPPLY AIR DUCT
SAN	SANITARY
SF	SQUARE FEET
SMACNA	SHEET METAL AND AIR-CONDITIONING CONTRACTORS' ASSOCIATION
S.P.	STATIC PRESSURE
SQ.	SQUARE
SRV	STEAM RELIEF VENT
T	THERMOSTAT
TAB	TESTING AND BALANCING
TAD	TRANSFER AIR DUCT
TMV	THERMOSTATIC MIXING VALVE
TYP.	TYPICAL
V	VENT; VOLT(S)
VAV	VARIABLE AIR VOLUME
VTR	VENT THROUGH ROOF
W	WATT(S); WIDTH
W/	WITH
W.B.	WET BULB
W.C.	WATER COLUMN
WH	WATER HEATER

LEGEND

- CONNECT NEW TO EXISTING
- EXTENT OF DEMOLITION; PATCH EXISTING MAIN TO MATCH EXISTING WHERE OPENING IS NOT REUSED
- DRAWING NOTE
- DUCTWORK DROP
- DUCTWORK RISE
- DUCT TRANSITION
- EXISTING WORK TO REMAIN
- NEW WORK
- WORK TO BE DEMOLISHED
- HIDDEN WORK
- DOMESTIC COLD WATER PIPING
- DOMESTIC HOT WATER PIPING
- DOMESTIC HOT WATER RETURN PIPING
- CONDENSATE DRAIN PIPING
- NATURAL GAS PIPING
- FLOW DIRECTION
- TEE TURNED DOWN
- TEE TURNED UP
- ELBOW TURNED DOWN
- ELBOW TURNED UP
- PIPE CAP
- CONTINUATION SYMBOL
- CONCENTRIC REDUCER
- SHUT-OFF VALVE
- CHECK VALVE
- BALANCING VALVE
- PRESSURE REDUCING VALVE
- GAS COCK
- 3-WAY CONTROL VALVE
- AIRFLOW DIRECTION
- THERMOSTAT
- CARBON MONOXIDE SENSOR
- WATER METER
- ¢ CUBIC FEET PER MINUTE
- ℄ CENTERLINE
- ± PLUS OR MINUS
- ø DIAMETER, PHASE

HVAC REQUIREMENTS

INDOOR AIR QUALITY AND VENTILATION REQUIREMENTS SHALL BE IN ACCORDANCE WITH ASHRAE STANDARD 62.1-2004 WITH THE FOLLOWING MINIMUM VENTILATION RATES MAINTAINED DURING HEATING AND COOLING:

OUTSIDE DESIGN CONDITIONS: FROM THE 2005 ASHRAE HANDBOOK OF FUNDAMENTALS FOR BALTIMORE, MARYLAND ARE AS FOLLOWS:
- HEATING: 12°F DB
- COOLING: 91°F DB & 77°F WB
- DEHUMIDIFICATION: 74°F DEWPOINT, 128 GRAINS OF MOISTURE PER POUND OF DRY AIR.

DB = DRY-BULB TEMPERATURE
WB = WET-BULB TEMPERATURE
7000 GRAINS OF MOISTURE = 1 POUND OF WATER (58,310 GRAINS = 1 GALLON)

INSIDE DESIGN CONDITIONS:
a. GENERAL:
- HEATING: *70°F DB
- SUMMER: **75°F DB & 50% RH

b. ROOMS AND DAYROOMS:
- HEATING: *68°F DB
- COOLING: **78°F DB

* HUMIDIFICATION EQUIPMENT WILL NOT BE PROVIDED AND THEREFORE HUMIDITY WILL NOT BE CONTROLLED DURING THE HEATING SEASON.
** SYSTEMS WILL BE DESIGNED TO MAINTAIN 50% RH AT DESIGN CONDITIONS. CONTROL SYSTEMS WILL BE SET TO MAINTAIN RH BELOW 60%.

RH = RELATIVE HUMIDITY

VENTILATION REQUIREMENTS

1. PREFERRED FAN DESIGN IS SINGLE INLET, SINGLE WIDTH CENTRIFUGAL TYPE WITH BACKWARDLY INCLINED AIRFOILED BLADES. HOWEVER, UTILIZATION OF AIRFOILS, PROPELLERS, AND DUCT AXIAL FANS ARE ENCOURAGED WHERE APPROPRIATE.
2. FAN VOLUME CONTROL (VFD) SHALL BE PROVIDED WHEN THE SYSTEM HAS FEATURES TO CAUSE A VARIANCE IN VOLUME.
3. PROVIDE RIGID STRUCTURAL STEEL BASE FOR BOTH FAN AND MOTOR WITH SLIDE RAILS FOR DRIVE ADJUSTMENT. HINGED MOTOR BASES ARE ACCEPTABLE.
4. FILTERS SHALL HAVE 85% EFFICIENCY (DUST SPOT METHOD USING ATMOSPHERIC DUST) AT 500 FEET PER MINUTE FACE VELOCITY.
5. FOLLOW ASHRAE VENTILATION REQUIREMENTS AND MERV RATINGS ON FILTERS AS REQUIRED BY LEED AND THE INDOOR AIR QUALITY MANAGEMENT PLAN DURING CONSTRUCTION AND BEFORE OCCUPANCY.

SYSTEMS INTEGRATION REQUIREMENTS

MECHANICAL SYSTEMS SHALL FUNCTION SEAMLESSLY TO DELIVER THE PERFORMANCE LEVELS NEEDED TO MAINTAIN SPACE COMFORT WITHIN SPECIFICATIONS SET FORTH BY ASHRAE STANDARD 55-2007. THE HVAC SYSTEM WILL BE CAPABLE OF PROVIDING OUTSIDE AIR VOLUME THAT EXCEED ASHRAE STANDARD 62.1-2007 AND MAINTAIN ADEQUATE LEVELS OF BUILDING PRESSURIZATION.

1. PROVIDE HUMIDITY LEVELS MONITORING IN THE SPACE TO BE MAINTAINED LESS THAN 60% RELATIVE HUMIDITY AND SHOULD NEVER BE ALLOWED TO REACH A LEVEL THAT WOULD ALLOW CONDENSATE TO FORM ON HVAC EQUIPMENT OR OTHER BUILDING ELEMENTS.
2. THE HVAC SYSTEM SHALL BE CAPABLE OF REMOTE ACCESS/ALARM NOTIFICATION VIA LCD SCREENS IN THE MAINTENANCE AND MECHANICAL ROOMS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · GEOFFREY W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

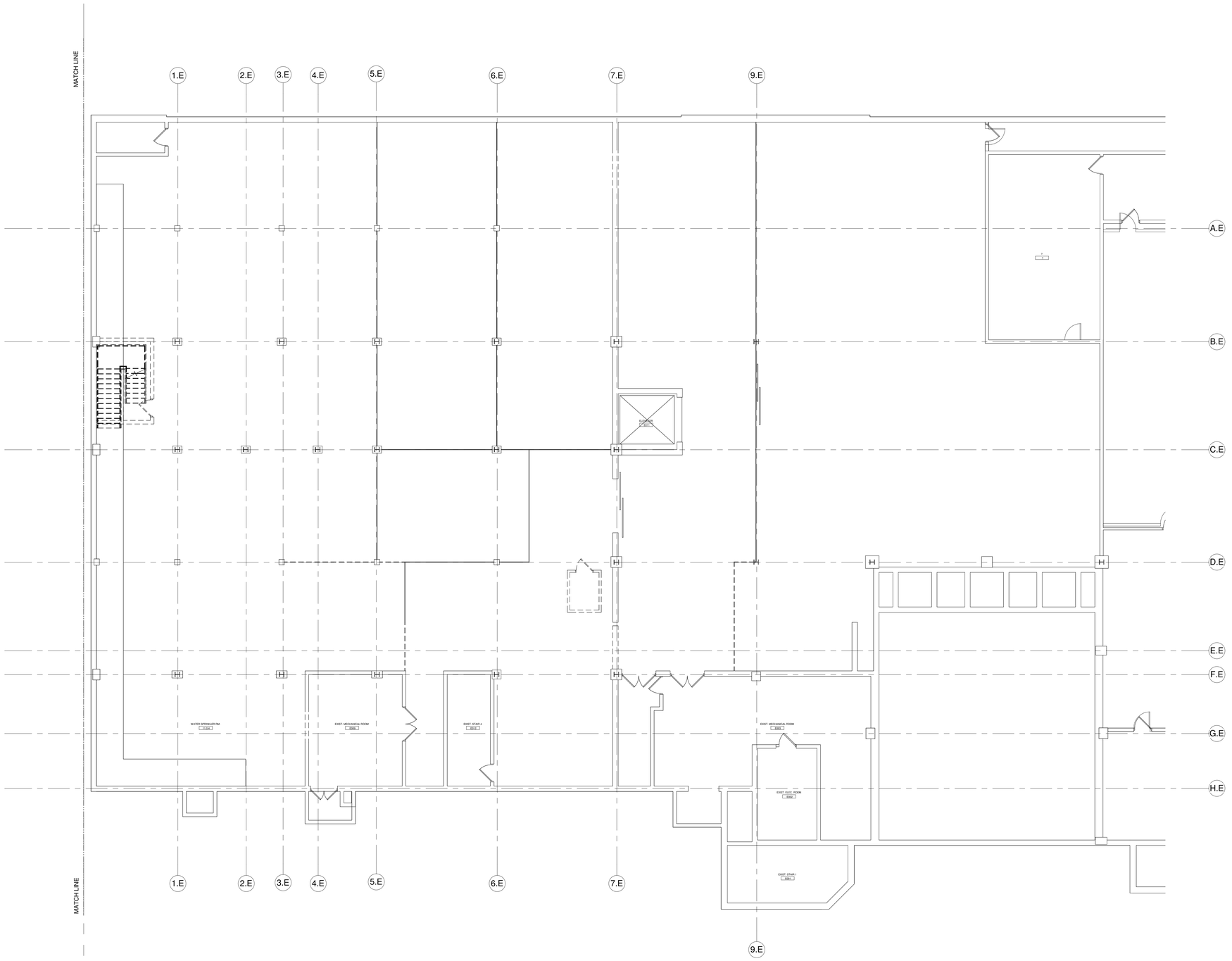
TITLE

NOTES, SYMBOLS AND ABBREVIATIONS

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO001

SHEET NO.



N 1 BASEMENT FLOOR PLAN - DEMOLITION - HVAC
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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STATE OF MARYLAND · STEVEN M. EBEL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

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TITLE

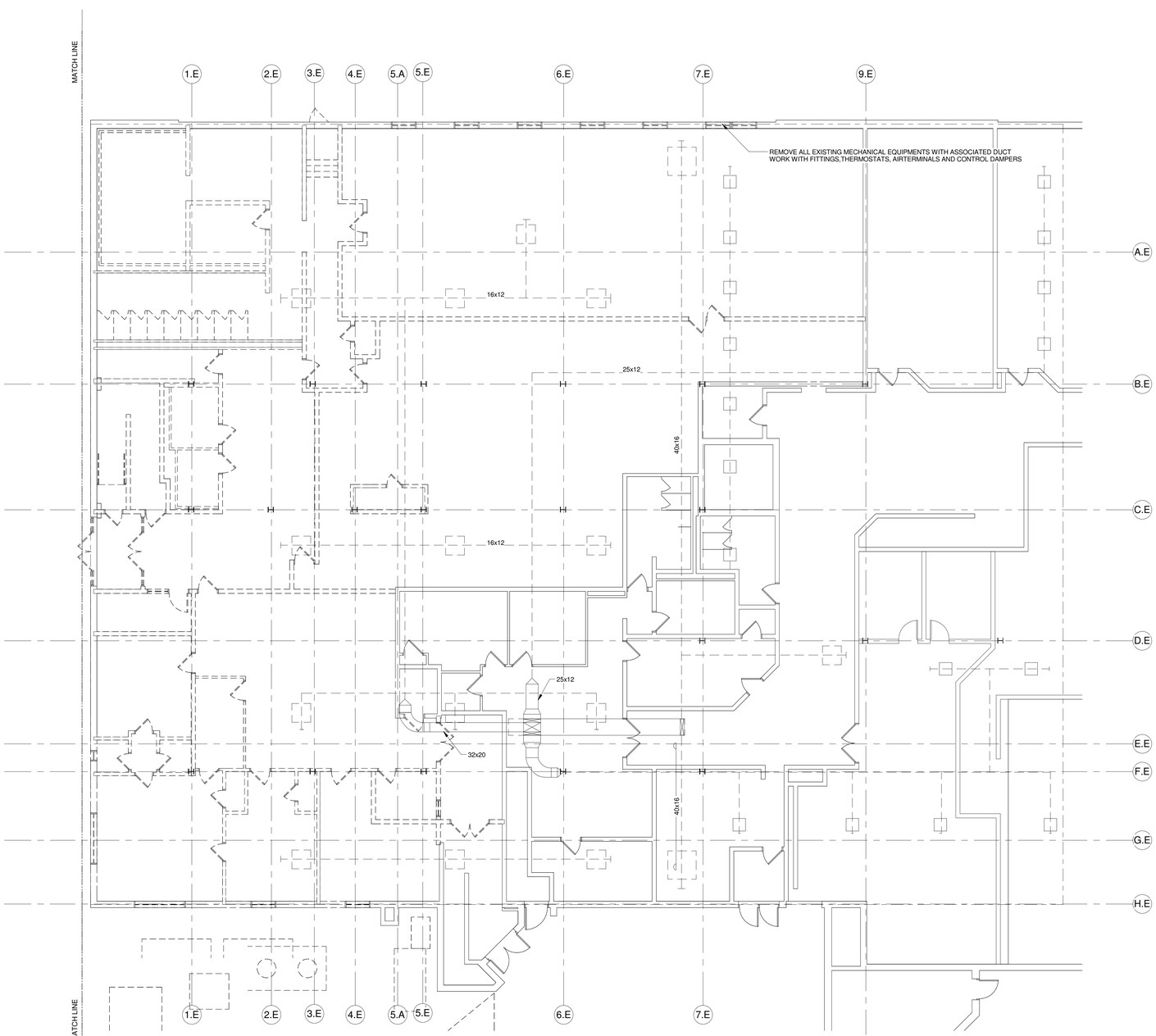
BASEMENT FLOOR PLAN - DEMOLITION - HVAC

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

MD100

SHEET NO.



N

1 FIRST FLOOR PLAN - DEMOLITION - HVAC

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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STATE OF MARYLAND
CLIFTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

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REVISIONS

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

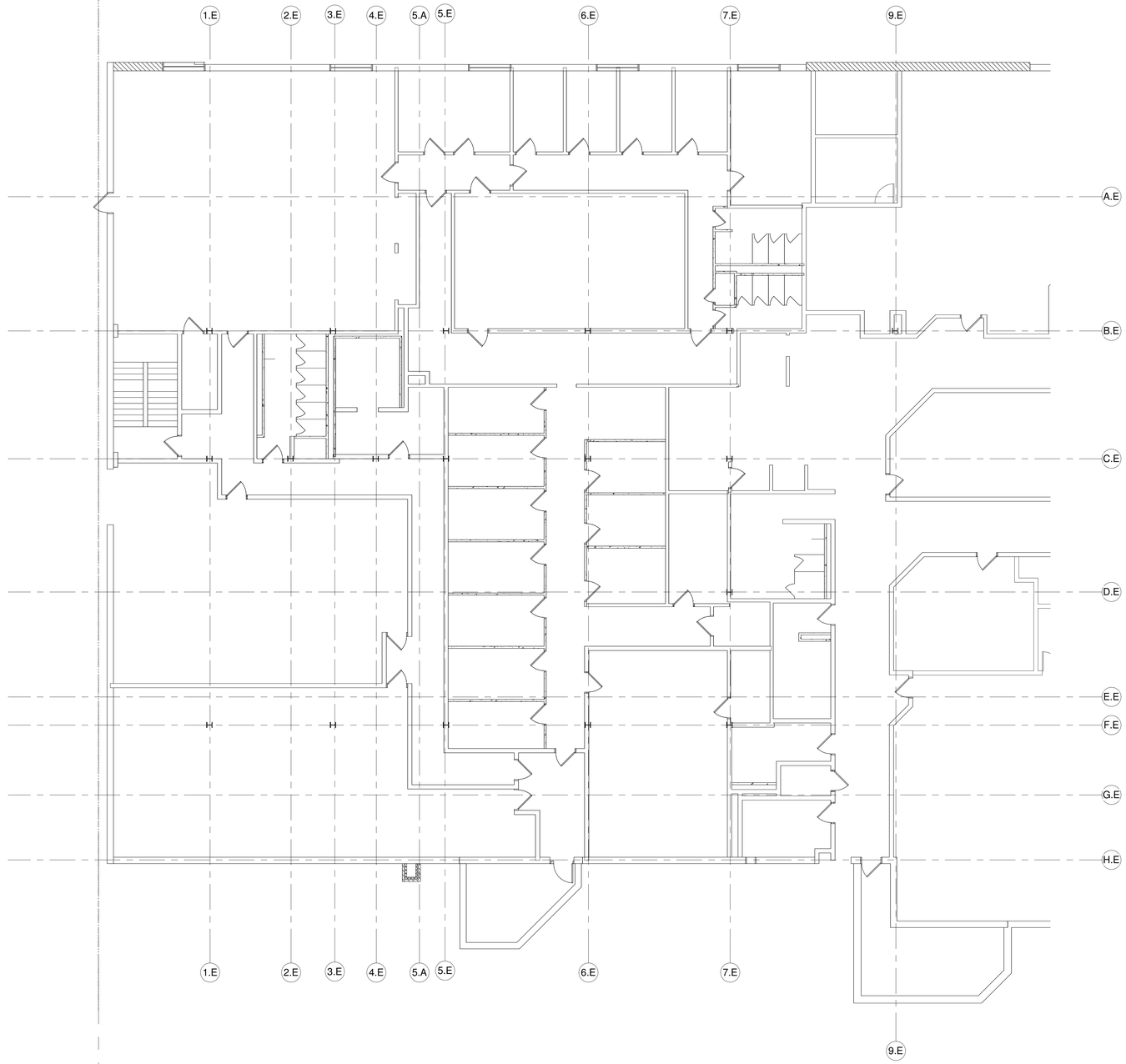
FIRST FLOOR PLAN - DEMOLITION - HVAC

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

MD110

SHEET NO.



N 1 SECOND LEVEL PLAN - DEMOLITION - HVAC
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

A JOINT-VENTURE BETWEEN
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STATE OF MARYLAND · GLENN W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

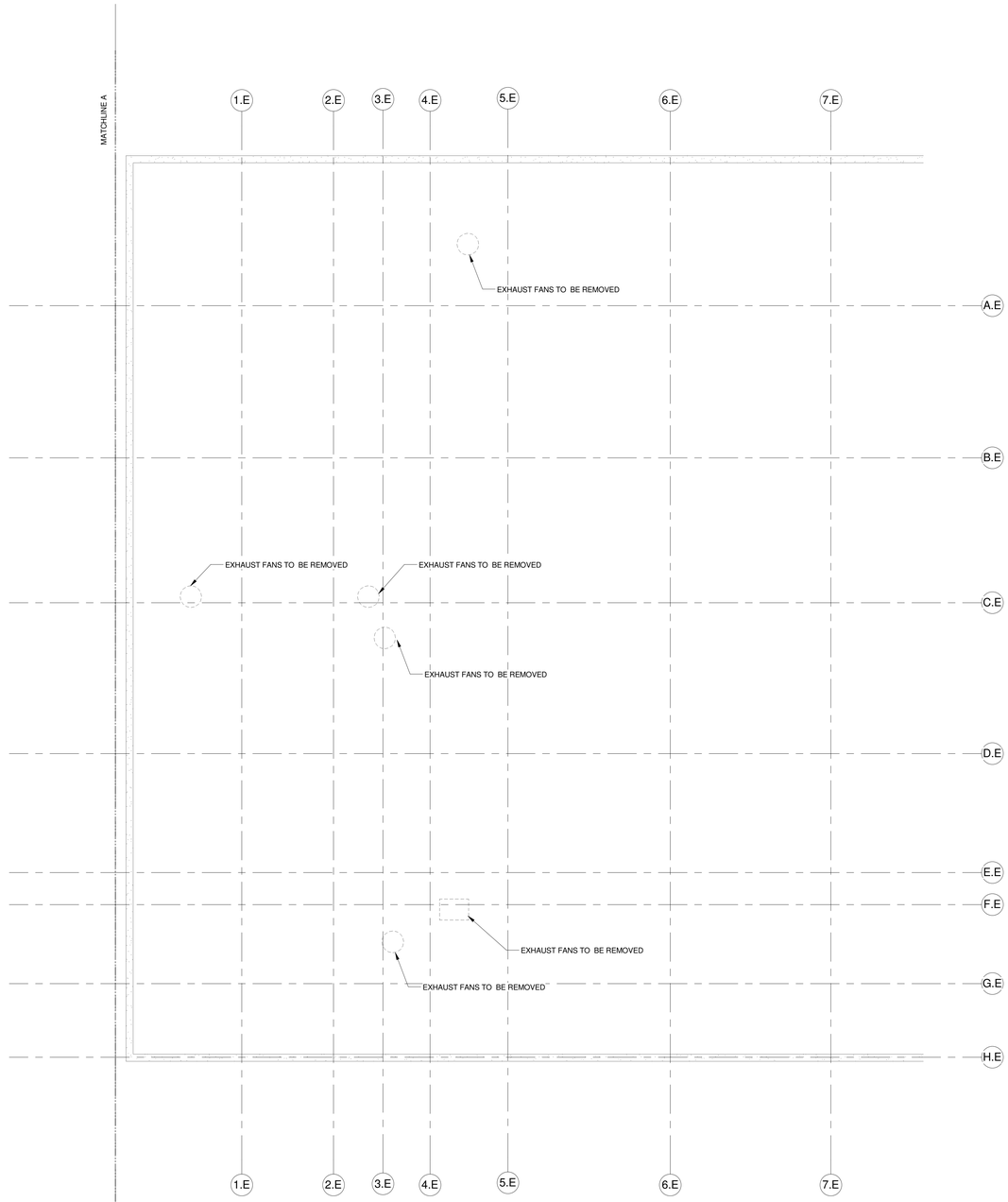
TITLE

SECOND FLOOR PLAN - DEMOLITION - HVAC

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

MD120

SHEET NO.



N

1 ROOF PLAN - DEMOLITION - HVAC
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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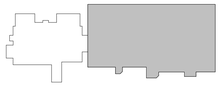
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CLAYTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

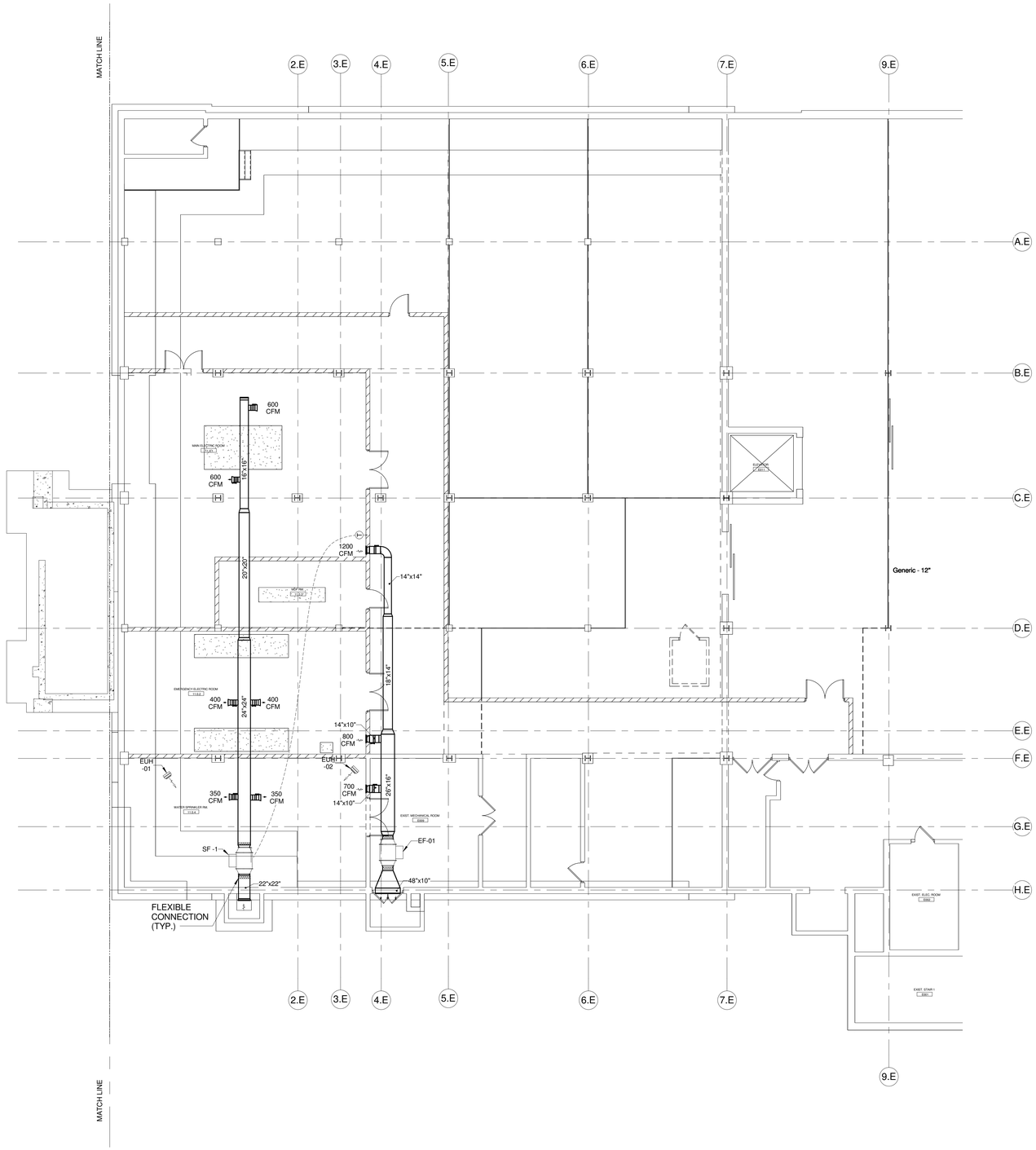
TITLE

ROOF PLAN - DEMOLITION - HVAC

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MD140

SHEET NO.



N 1 BASEMENT FLOOR PLAN - HVAC MECHANICAL

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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STATE OF MARYLAND — STEVEN M. EBEL — 43481 — PROFESSIONAL ENGINEER

KEY PLAN

SCALE

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No.	Description	Date

REVISIONS

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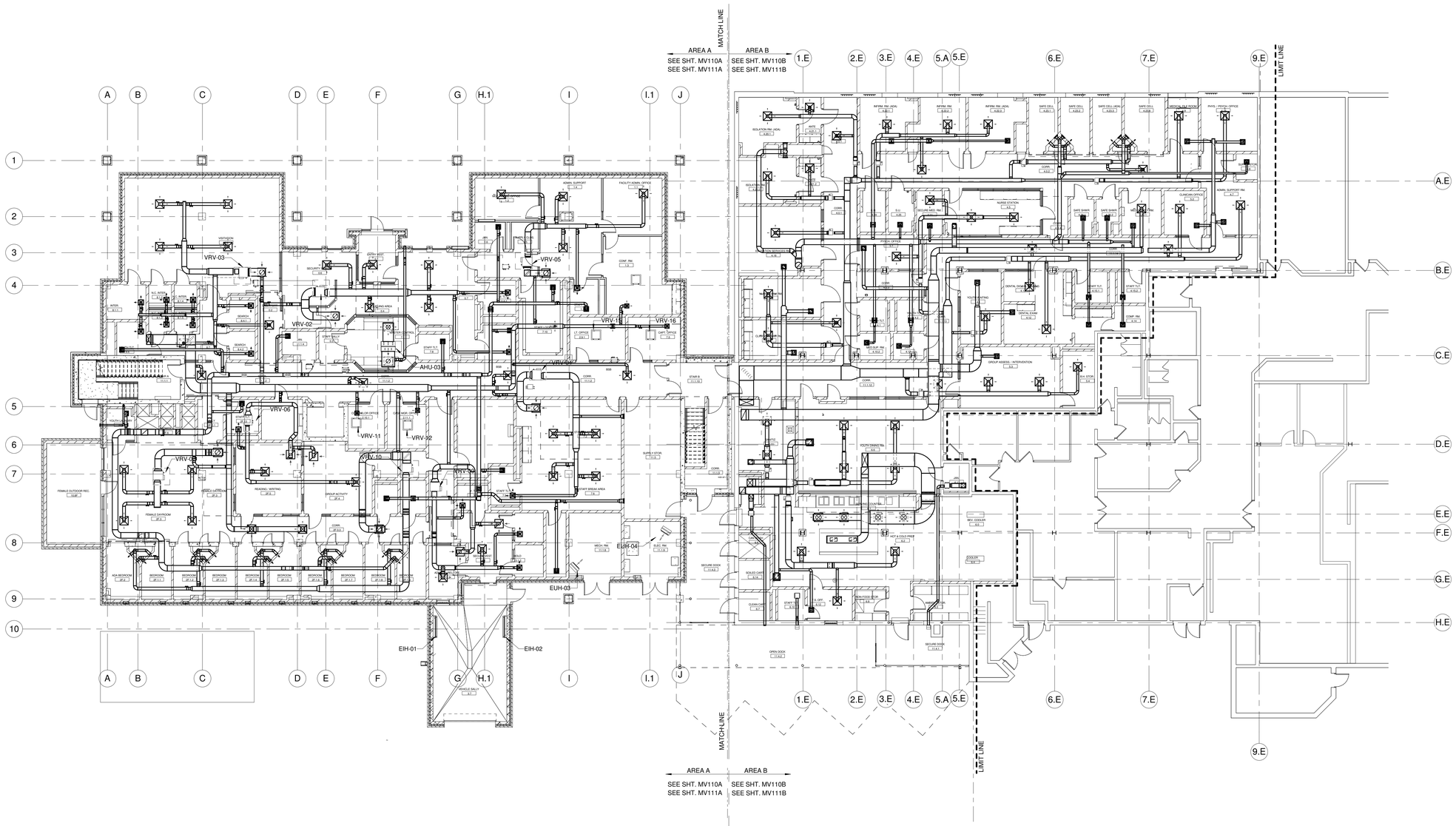
TITLE

BASEMENT FLOOR PLAN - HVAC MECHANICAL

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

MO100

SHEET NO.



N 1 FIRST FLOOR PLAN - MECHANICAL
Scale: 3/32" = 1'-0"

0" 3/8" 1 1/2"
0' 4' 8' 16'
SCALE: 3/32" = 1' - 0"

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT
2. EXACT LOCATION OF ALL EQUIPMENT AND ACCESSORIES SHALL BE VERIFIED IN THE FIELD
3. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.

SHEET NOTES:

1 MECHANICAL

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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STATE OF MARYLAND
JEFFER W. O'HEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

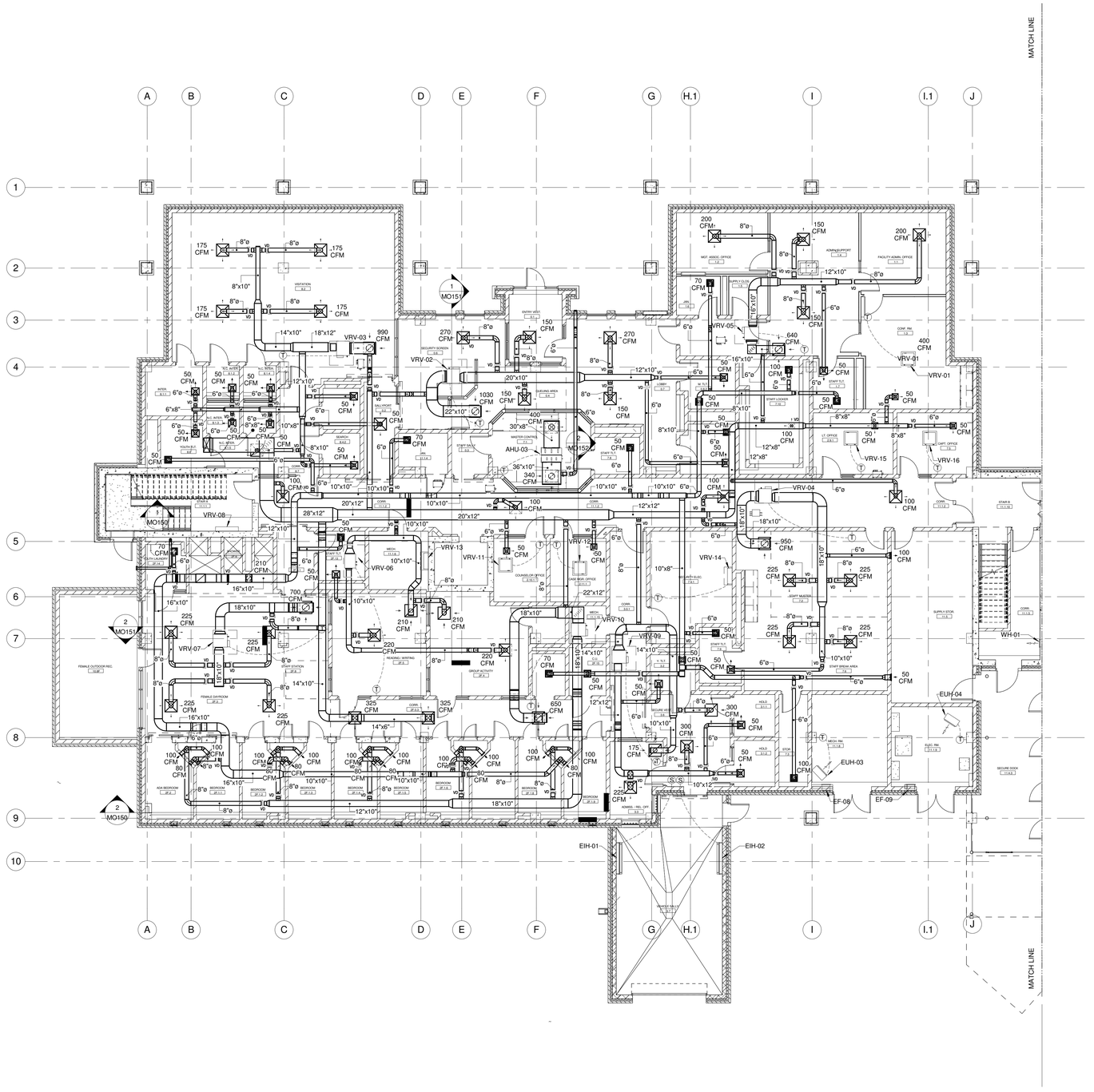
TITLE

FIRST FLOOR PLAN - MECHANICAL

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO110

SHEET NO.



N

1 FIRST FLOOR PLAN - HVAC DUCTWORK - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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STATE OF MARYLAND · STEVEN V. SIDHU · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

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CHECKED BY	Checker
DATE	Issue Date

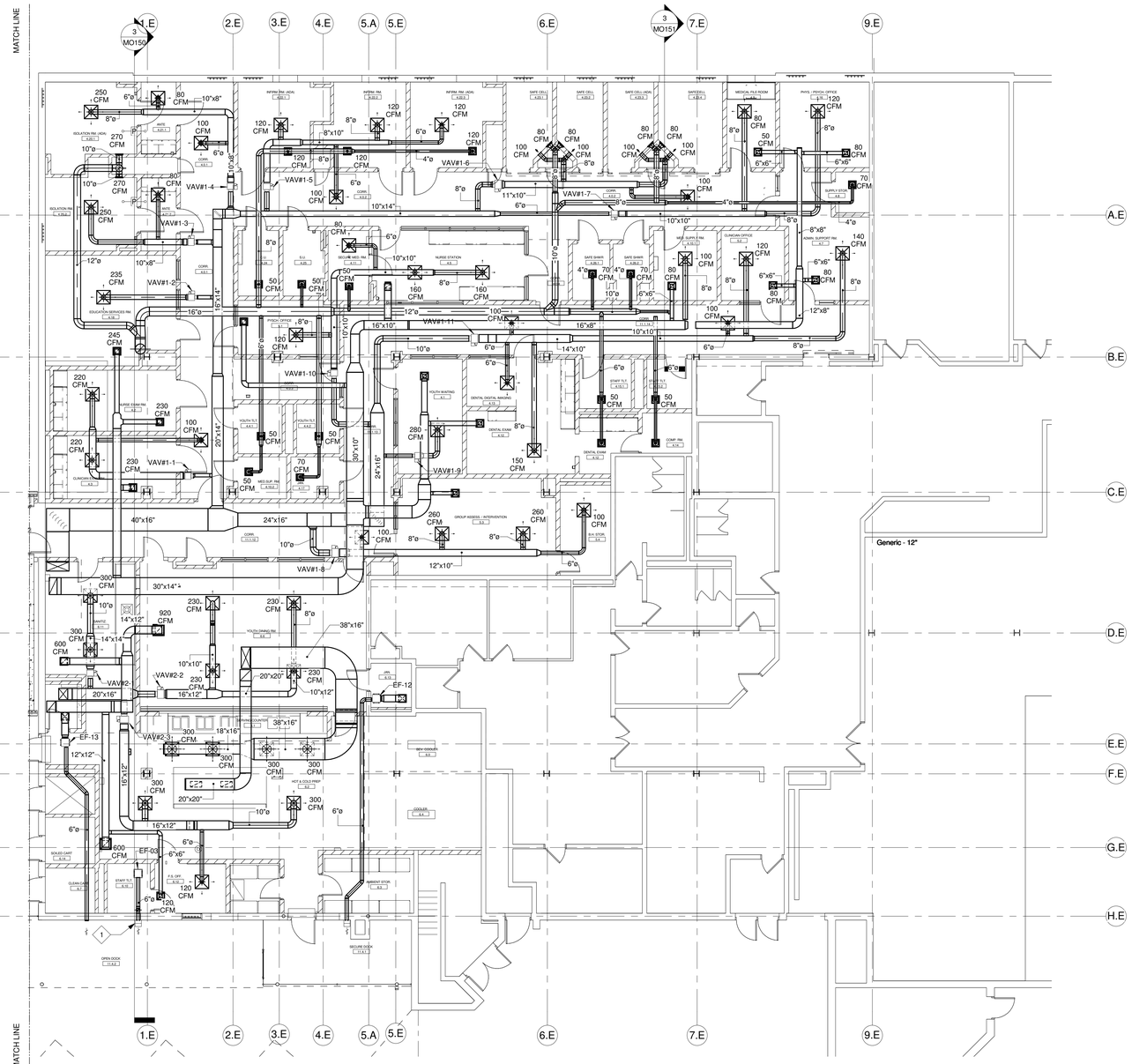
TITLE

FIRST FLOOR PLAN - HVAC DUCTWORK - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

MV110A

SHEET NO.



1 FIRST FLOOR PLAN - HVAC DUCTWORK - AREA B
Scale: 1/8" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
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EXPIRATION DATE: 05/15/2015

KEY PLAN

SCALE
1/8" = 1'-0"

No.	Description	Date

REVISIONS

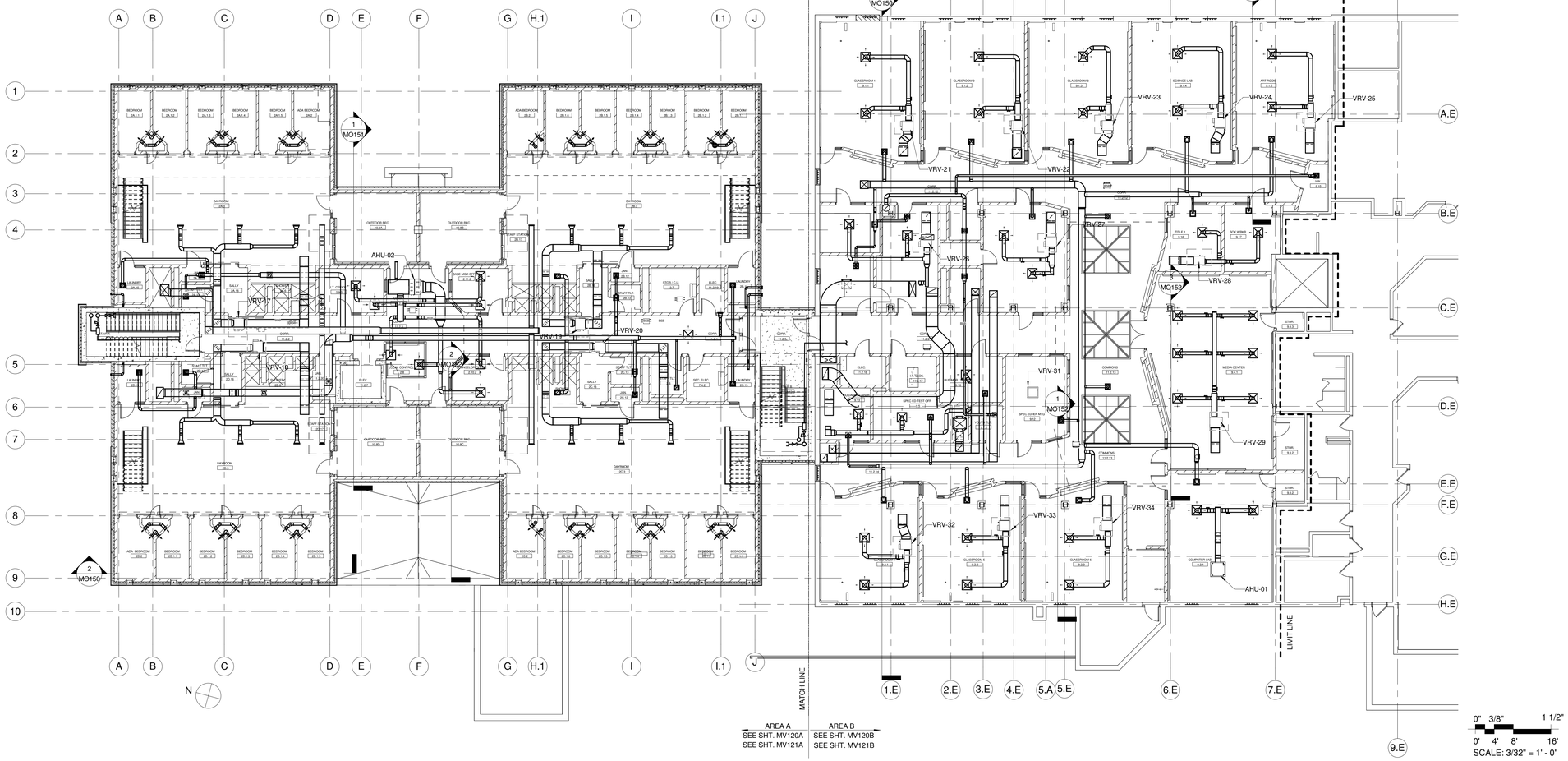
DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE
FIRST FLOOR PLAN - HVAC DUCTWORK - AREA B

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MV110B

SHEET NO.



1 SECOND LEVEL PLAN - MECHANICAL

Scale: 3/32" = 1'-0"

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT
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SHEET NOTES:

1 MECHANICAL

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · GLEN W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

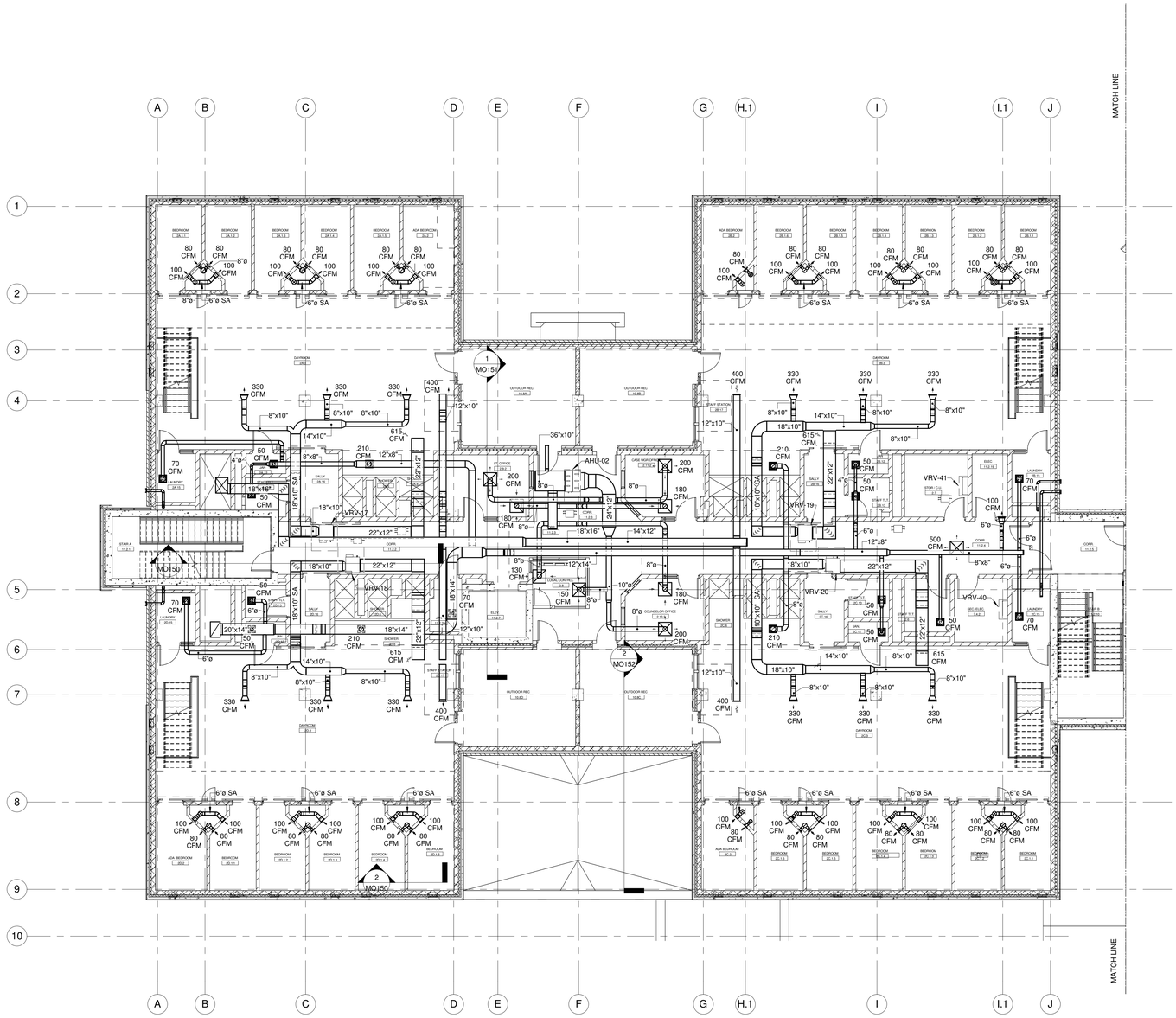
TITLE

SECOND FLOOR PLAN - MECHANICAL

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

MO120

SHEET NO.



N

1 SECOND FLOOR PLAN - HVAC DUCTWORK - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
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EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · HEATHER W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

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APPROVED BY	Approver
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DATE	Issue Date

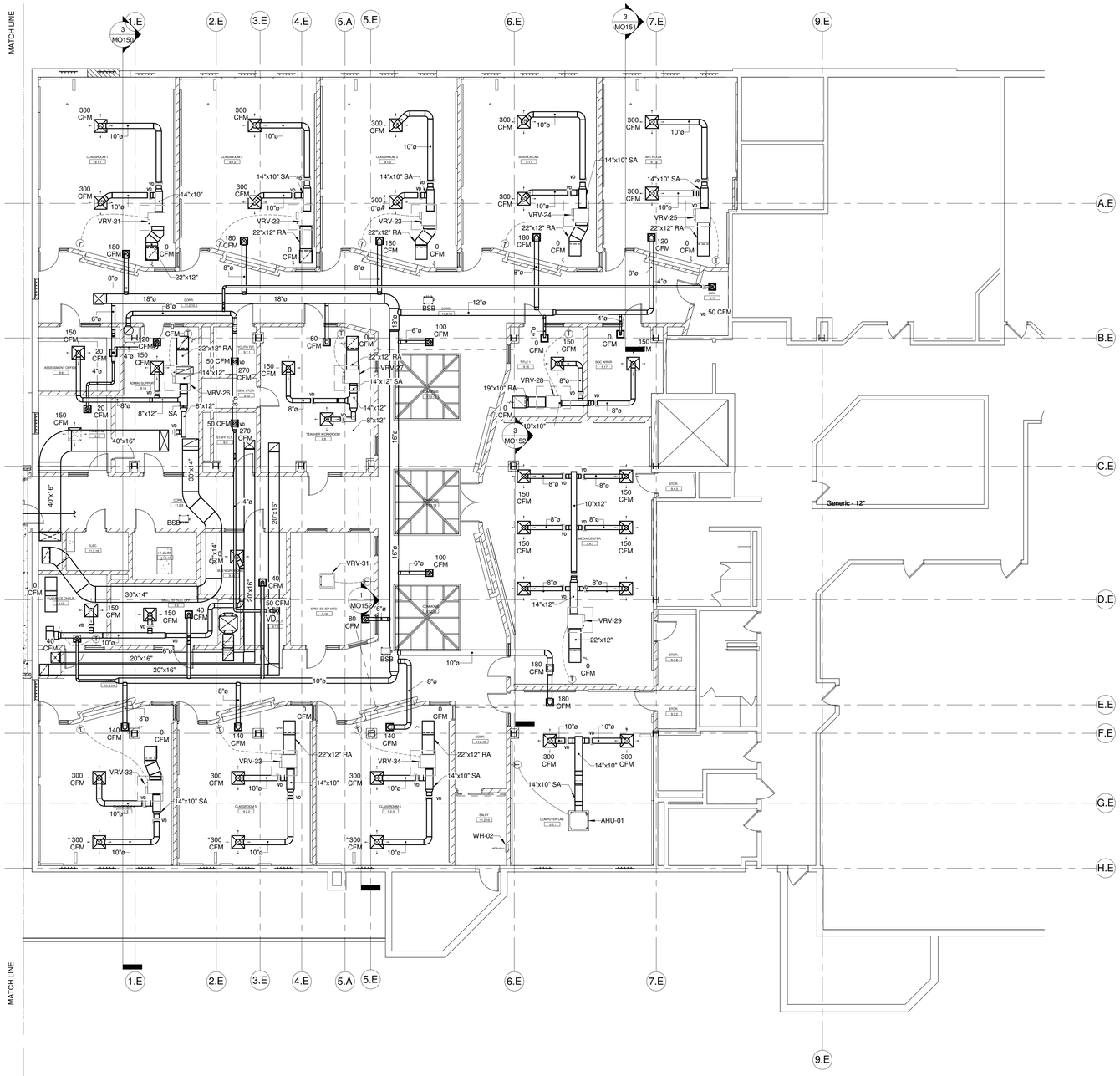
TITLE

SECOND FLOOR PLAN - HVAC DUCTWORK - AREA A

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

MV120A

SHEET NO.



N

1 SECOND FLOOR PLAN - HVAC DUCTWORK - AREA B

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
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EBA ENGINEERING

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DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · STEVEN K. LEWICKI · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

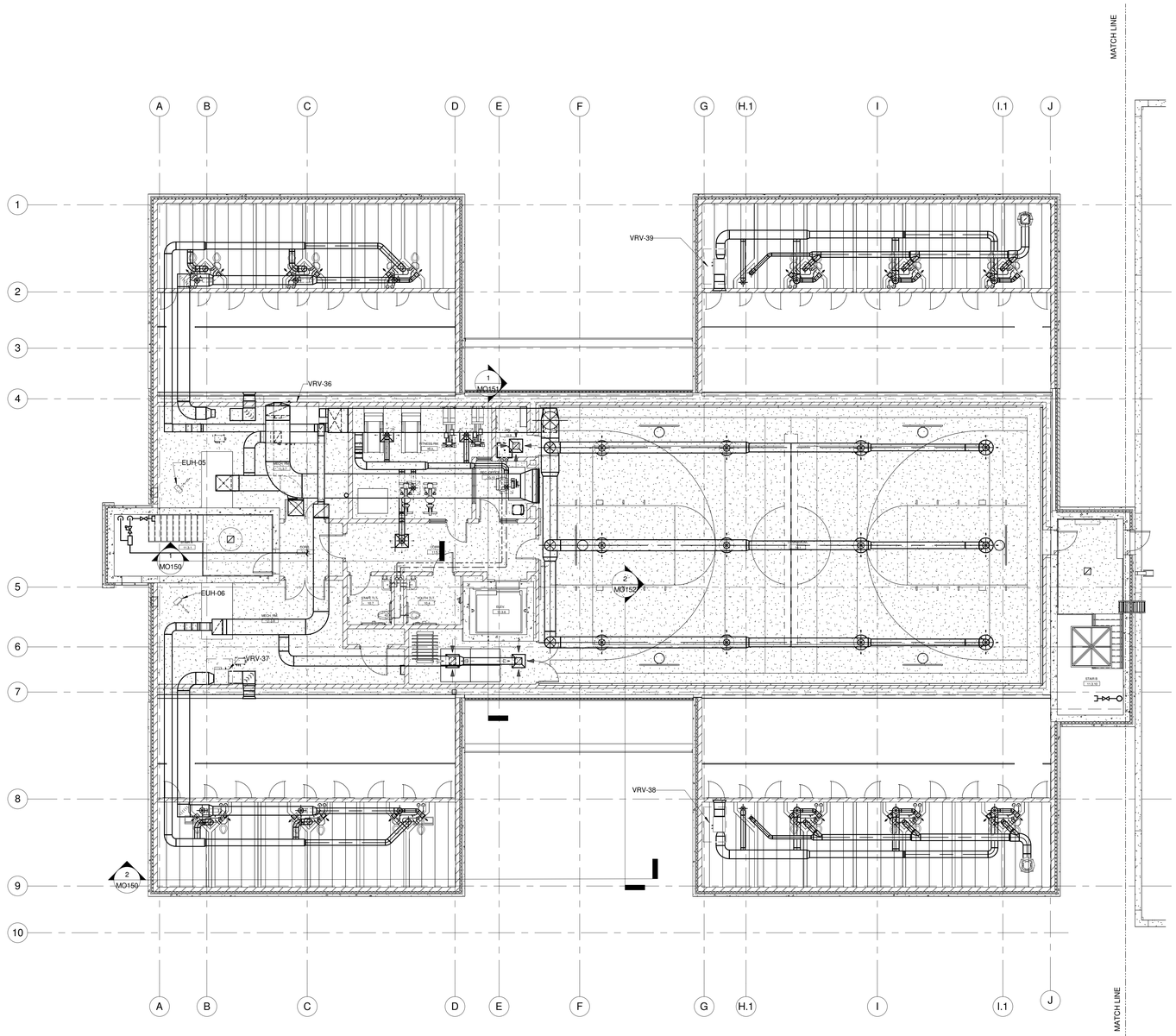
SECOND FLOOR PLAN - HVAC DUCTWORK - AREA B

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

MV120B

SHEET NO.



N

1 THIRD FLOOR AND MEZZ. PLAN - (do not use)

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

0" 3/8" 1 1/2"

0' 4' 8' 16'

SCALE: 3/32" = 1' - 0"

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT
2. EXACT LOCATION OF ALL EQUIPMENT AND ACCESSORIES SHALL BE VERIFIED IN THE FIELD
3. ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS. WORK, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.

SHEET NOTES:

1 MECHANICAL

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 MCCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE, PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND — KEITH W. O'NEIL — 43481 — PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

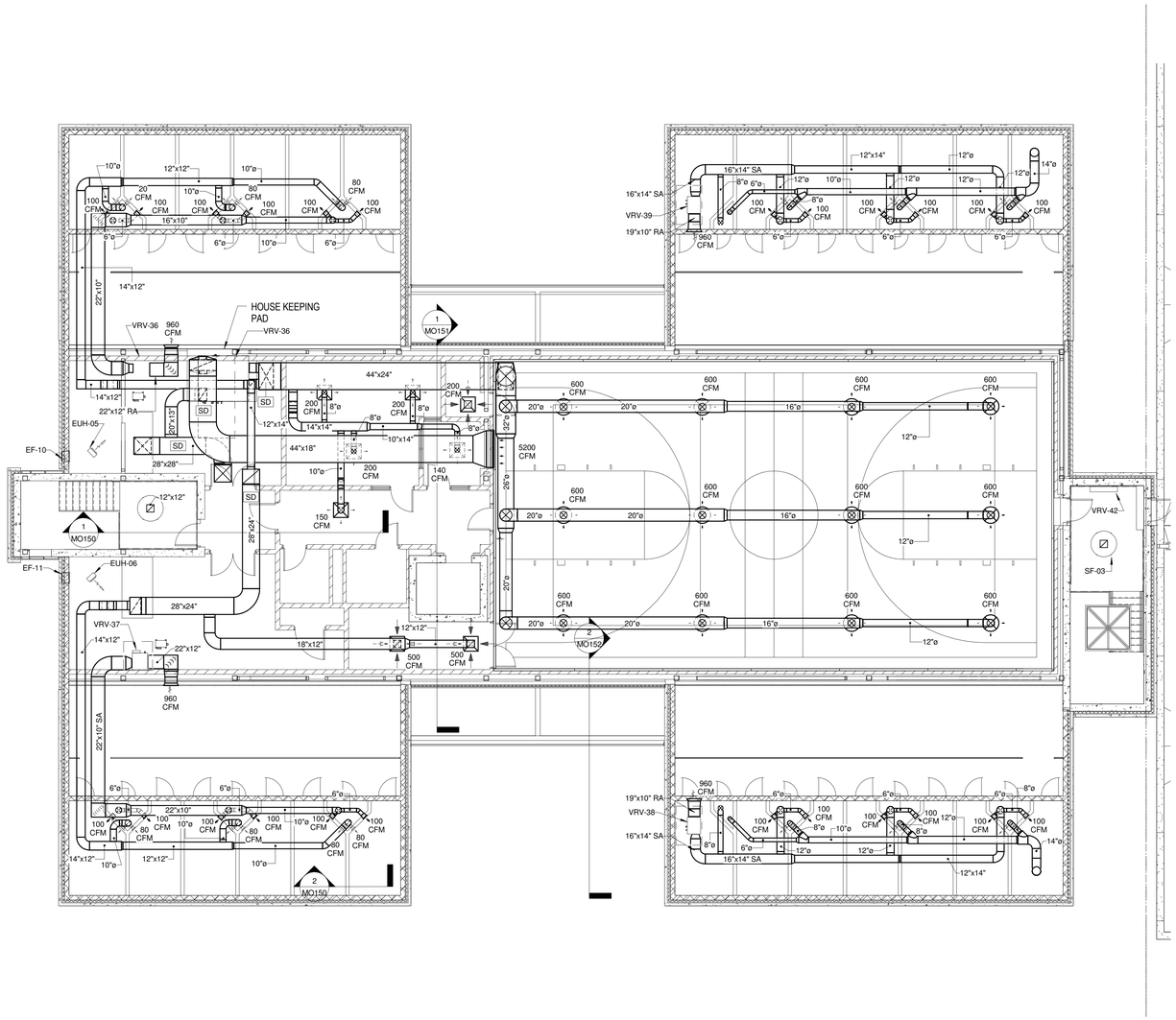
THIRD FLOOR AND MEZZ. PLAN - MECHANICAL

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

MO130

SHEET NO.



N 1 THIRD FLOOR AND MEZZ. PLAN - HVAC DUCTWORK - AREA A

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

0' 4' 8' 16' 32'

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

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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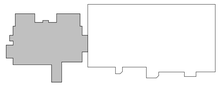
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
DEXTER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

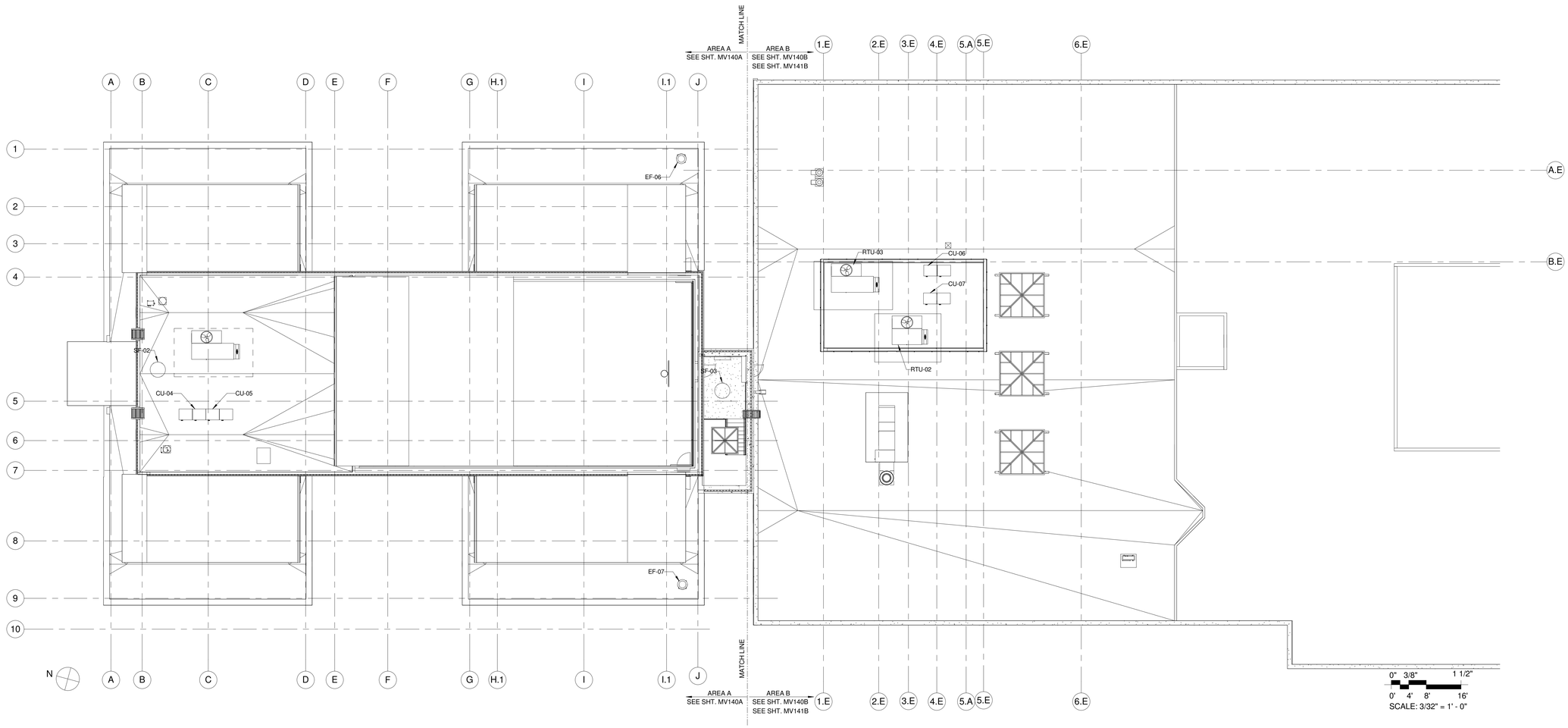
THIRD FLOOR AND MEZZ. PLAN - HVAC DUCTWORK - AREA A

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

MV130A

SHEET NO.



1 ROOF PLAN - MECHANICAL
Scale: 3/32" = 1'-0"

GENERAL SHEET NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND SHALL REPORT
2. DISCREPANCIES
3. EXACT LOCATION OF ALL EQUIPMENT AND ACCESSORIES SHALL BE VERIFIED IN THE FIELD ALL MATERIALS SHALL BE AS PER THE DRAWINGS AND SPECIFICATIONS WORK AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ITS INSTALLATION.

SHEET NOTES:

1 MECHANICAL

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CLIFTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

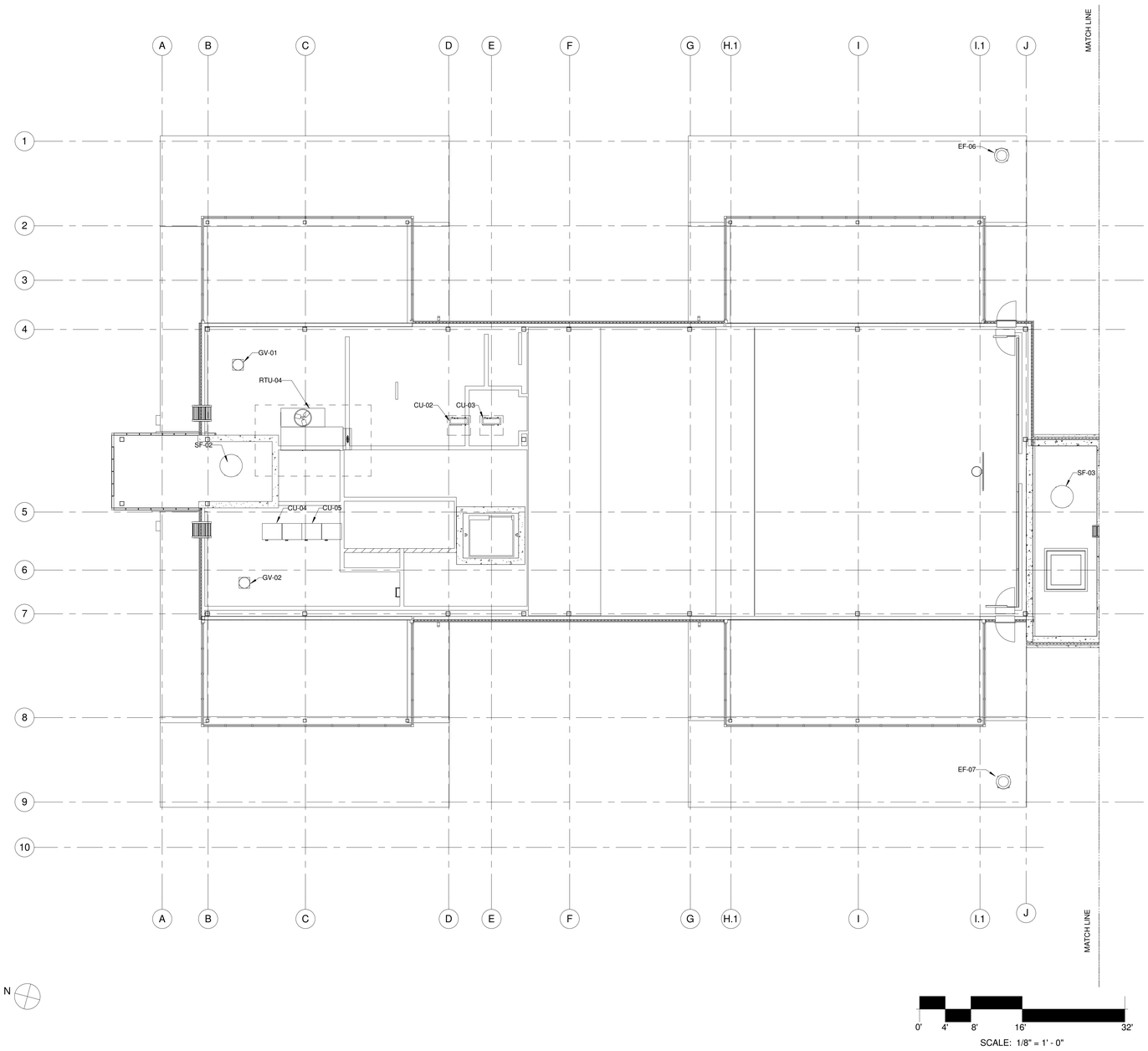
TITLE

ROOF PLAN - MECHANICAL

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO140

SHEET NO.



A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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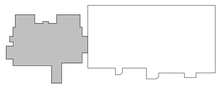
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
SEATON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

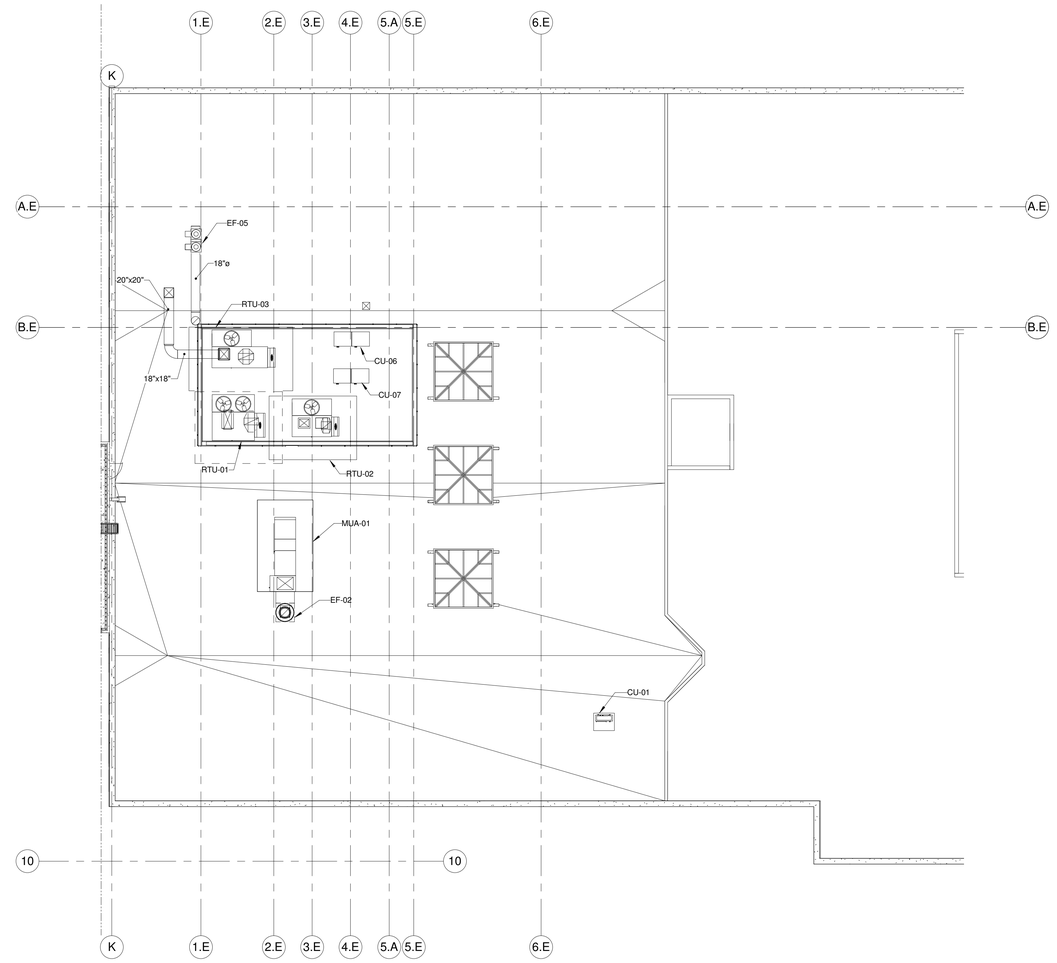
ROOF PLAN - HVAC MECHANICAL - AREA A

PSA-DEWBERRY PROJECT NO. Project Number

DPSCS CONTRACT NO. KT-000-150-C01

MV140A

SHEET NO.



N 1 ROOF PLAN - HVAC MECHANICAL - AREA B
Scale: 3/32" = 1'-0"

0' 4' 8' 16' 32'
SCALE: 1/8" = 1' - 0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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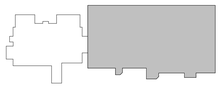
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JEFFREY W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

3/32" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

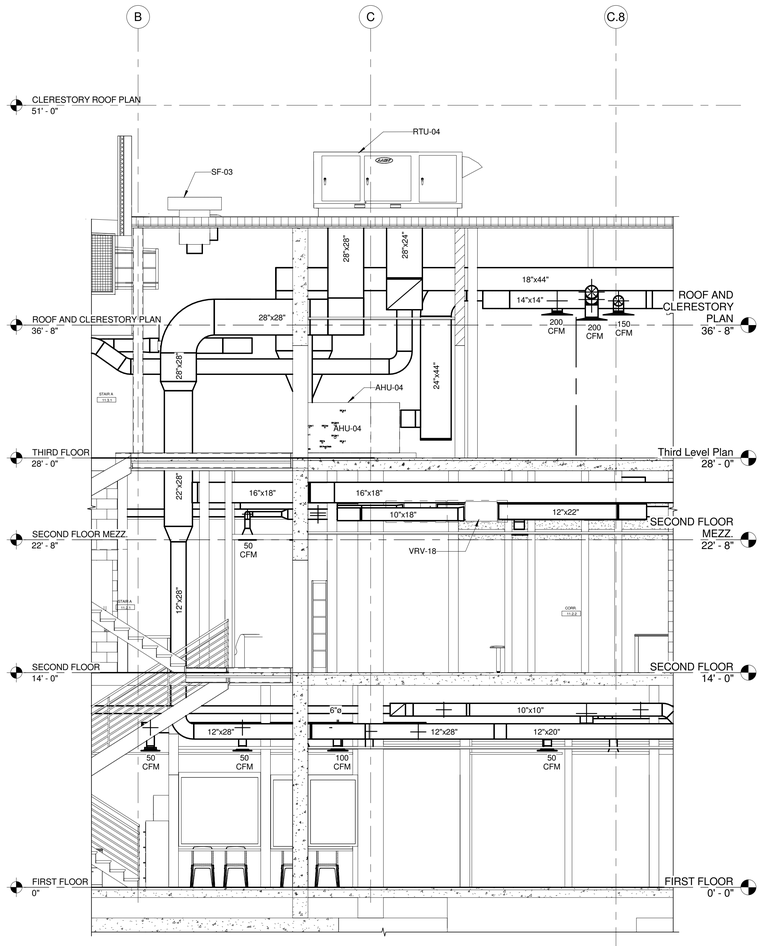
TITLE

ROOF PLAN - HVAC MECHANICAL - AREA B

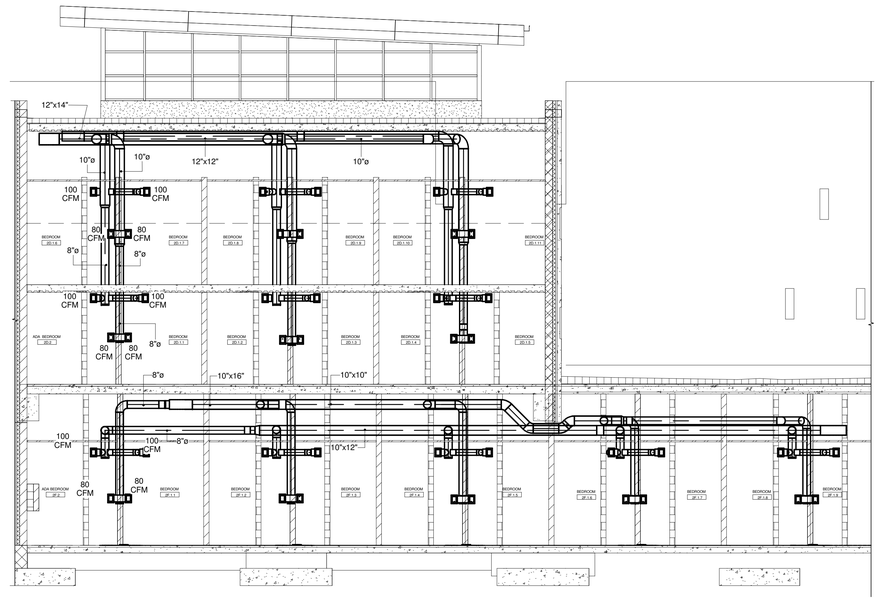
PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MV140B

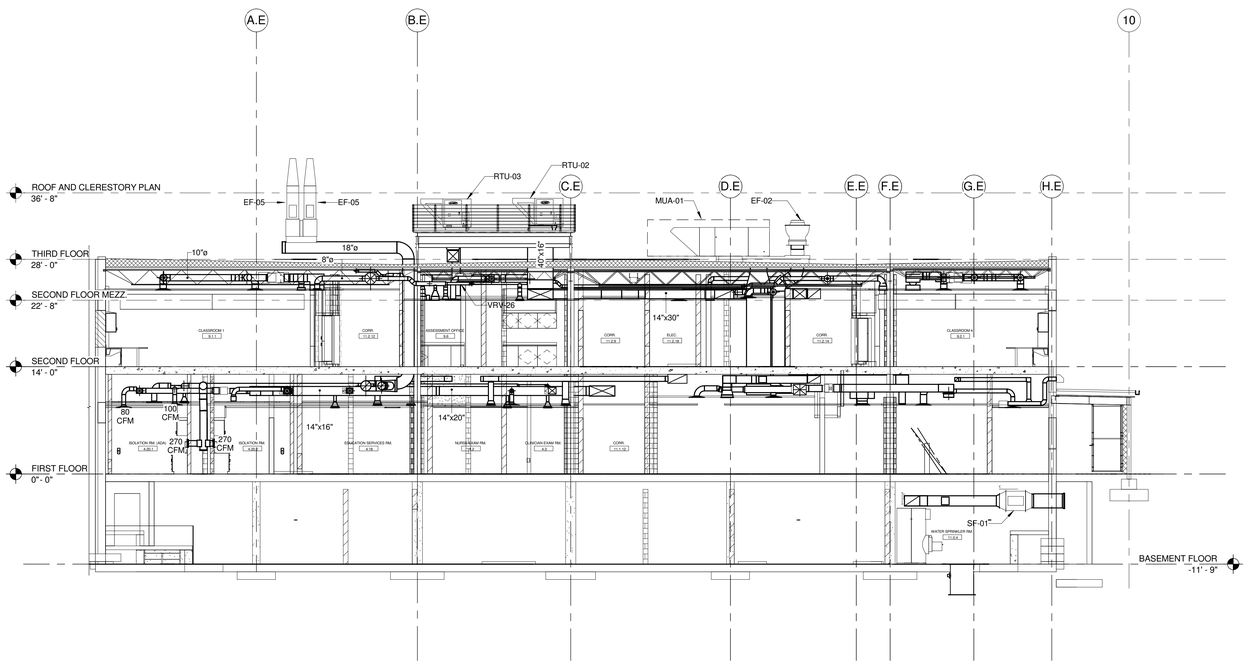
SHEET NO.



1 MECHANICAL SECTION 2
Scale: 1/4" = 1'-0"



2 MECHANICAL SECTION 1
Scale: 3/16" = 1'-0"



3 MECHANICAL SECTION 3
Scale: 1/8" = 1'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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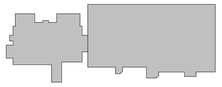
LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
CLIFTON W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

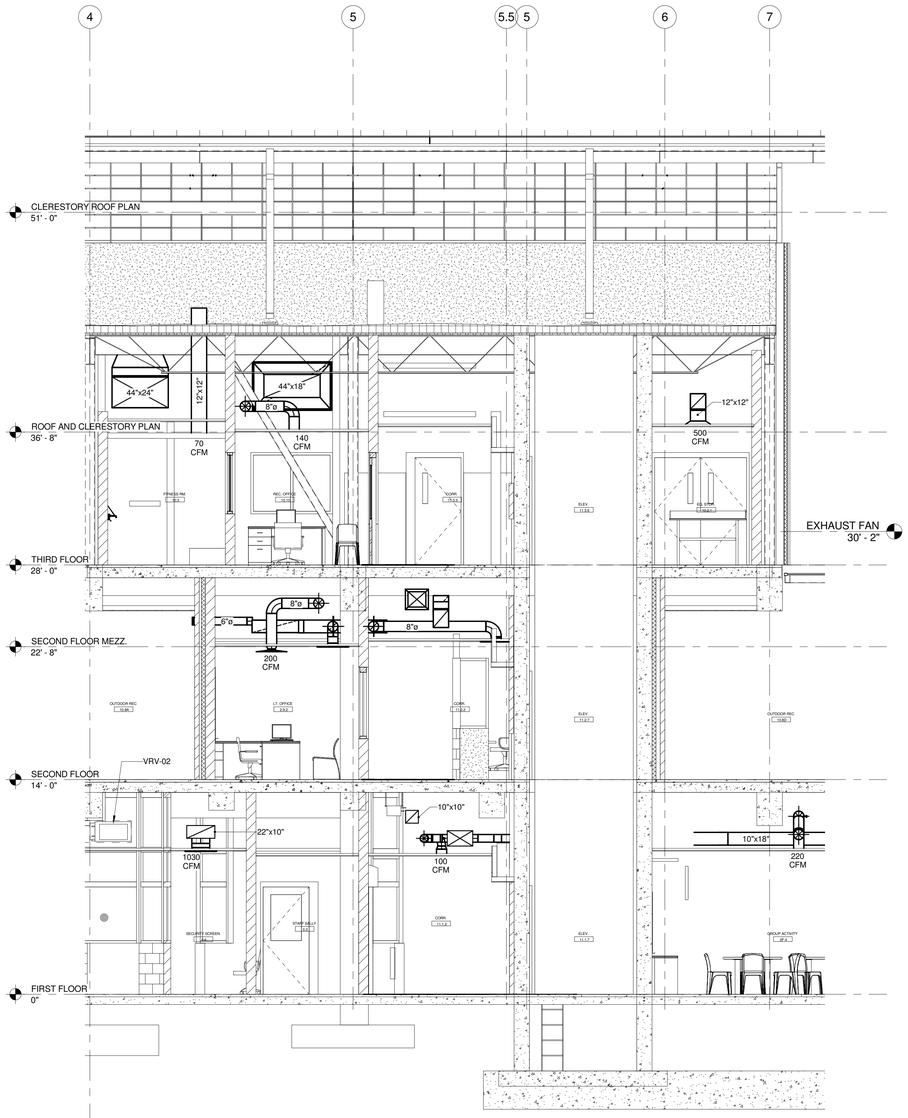
TITLE

MECHANICAL - SECTIONS

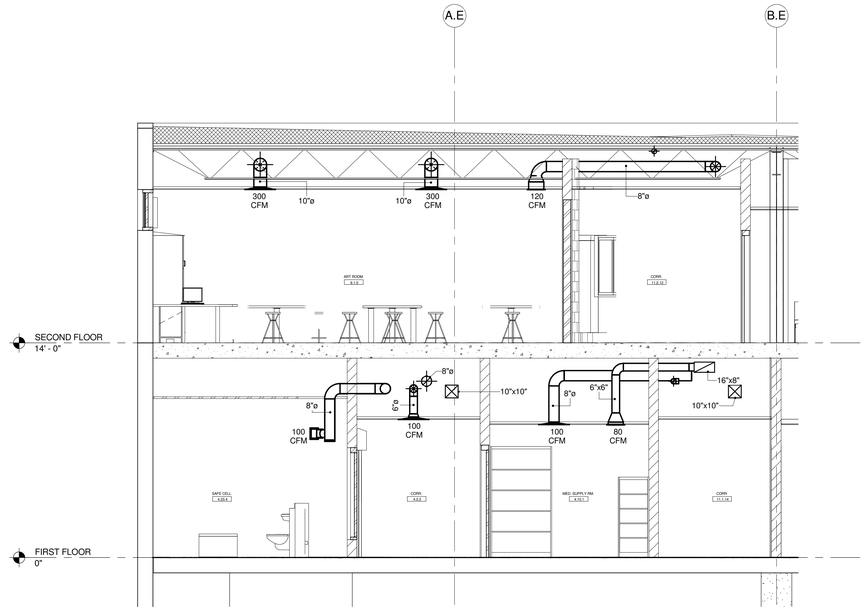
PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO150

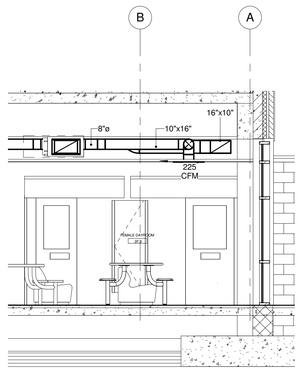
SHEET NO.



1 MECHANICAL SECTION 4
Scale: 1/4" = 1'-0"



3 MECHANICAL SECTION 6
Scale: 1/4" = 1'-0"



2 MECHANICAL SECTION 5
Scale: 1/4" = 1'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · GUSTAV W. OTTO · 43481 · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

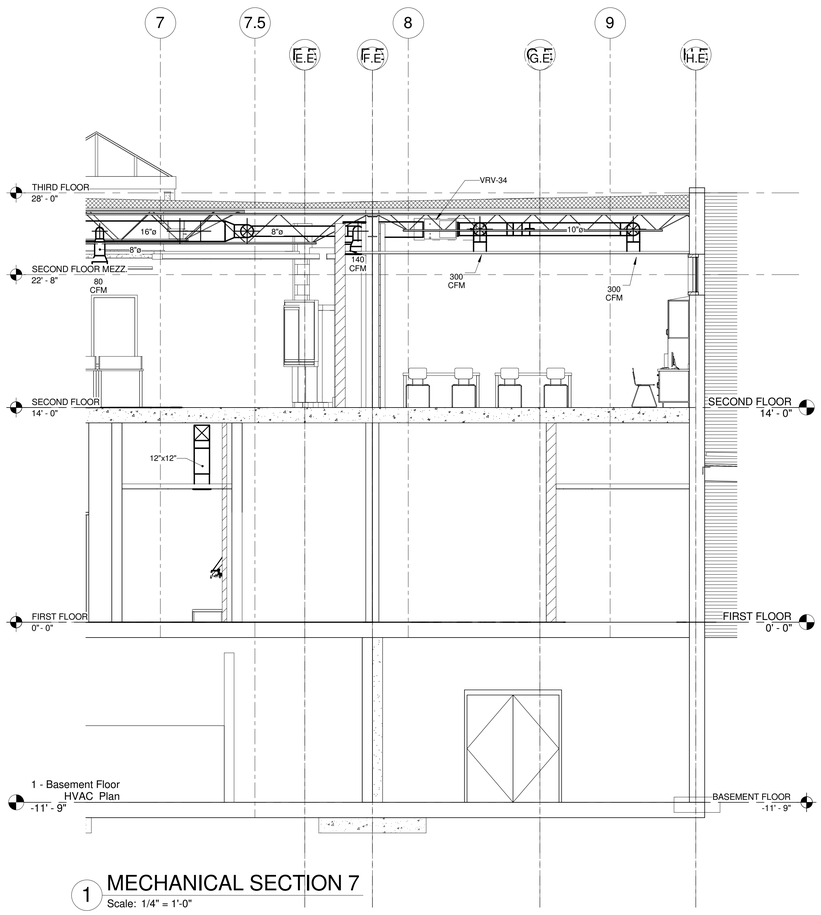
MECHANICAL - SECTIONS

PSA-DEWBERRY PROJECT NO. Project Number

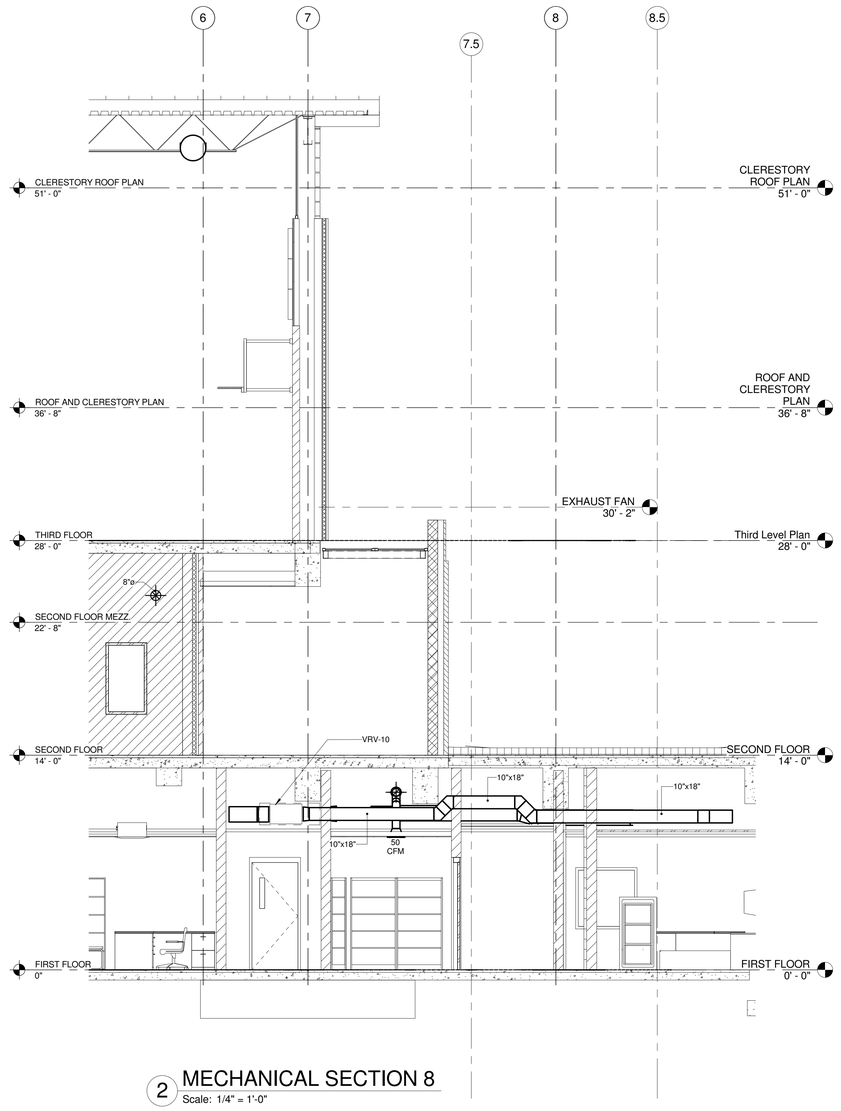
DPSCS CONTRACT NO. KT-000-150-C01

MO151

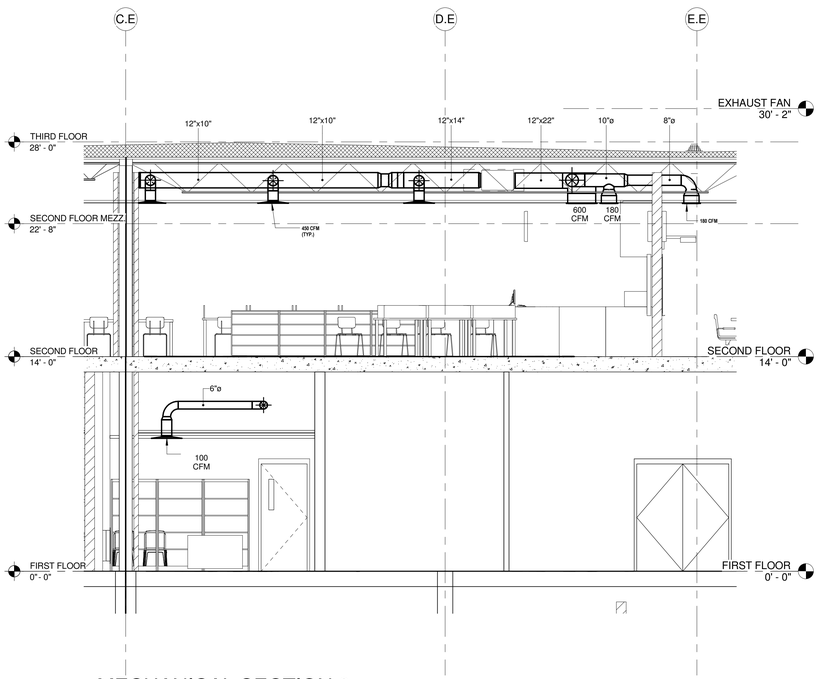
SHEET NO.



1 MECHANICAL SECTION 7
Scale: 1/4" = 1'-0"



2 MECHANICAL SECTION 8
Scale: 1/4" = 1'-0"



3 MECHANICAL SECTION 9
Scale: 1/4" = 1'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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TERRALOGOS

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
JOSEPH W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

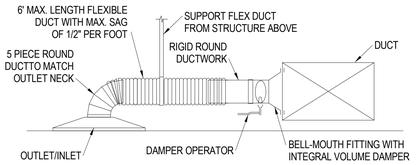
TITLE

MECHANICAL - SECTIONS

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

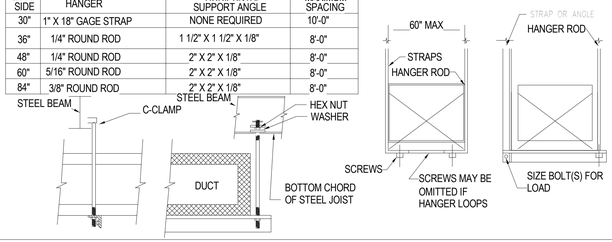
MO152

SHEET NO.

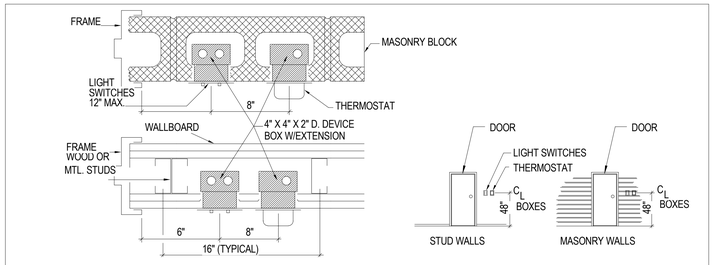


CEILING AIR DEVICE HOOK-UP DETAIL
NOT TO SCALE

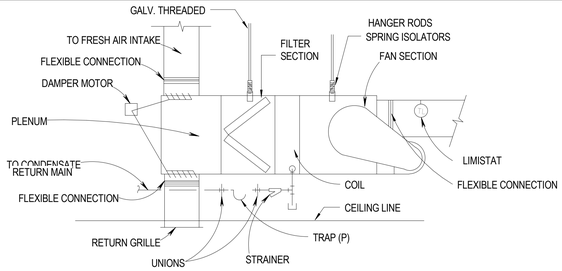
HANGER SIZES FOR RECTANGULAR DUCT			
MAX SIDE	HANGER	HORIZONTAL SUPPORT ANGLE	MAXIMUM SPACING
30"	1" X 18" GAGE STRAP	NONE REQUIRED	10'-0"
36"	1/4" ROUND ROD	1 1/2" X 1 1/2" X 1/8"	8'-0"
48"	1/4" ROUND ROD	2" X 2" X 1/8"	8'-0"
60"	5/16" ROUND ROD	2" X 2" X 1/8"	8'-0"
84"	3/8" ROUND ROD	2" X 2" X 1/8"	8'-0"



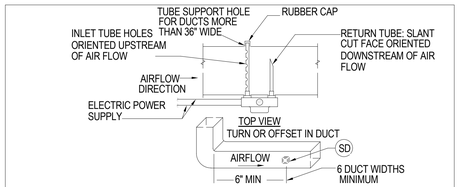
TYPICAL DUCT HANGER ASSEMBLY
NOT TO SCALE



ROOM THERMOSTAT & LIGHT SWITCH MOUNTING DETAIL
NOT TO SCALE



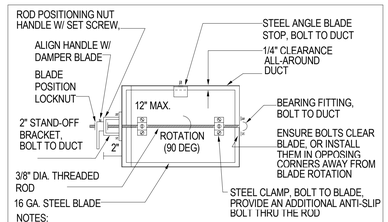
CEILING TYPE AHU UNIT DETAILS
NOT TO SCALE



MINIMUM CLEARANCE FROM AIR OBSTRUCTIONS

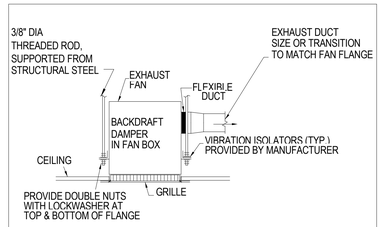
NOTES:
1. INLET TUBE LENGTH SHALL BE EQUAL TO FULL WIDTH OF DUCT.
2. RETURN TUBE SHALL BE AS RECOMMENDED BY THE DETECTOR'S MANUFACTURER.
3. CLEARANCES FROM OBSTRUCTIONS, INLETS AND PROPER LOCATION IN THE SYSTEM SHALL BE IN ACCORDANCE WITH NEMA: "GUIDE FOR PROPER USE OF SMOKE DETECTORS IN DUCT APPLICATIONS"; NFPA 90A, U.L. STD. 268A, AND NFPA 72E

DUCT MOUNTED SMOKE DETECTOR
NOT TO SCALE

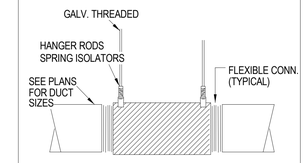


NOTES:
1. DAMPERS FOR ROUND DUCTS SHALL BE SIMILAR TO THE DAMPER SHOWN ABOVE.
2. ENSURE THAT FULL 90° DAMPER BLADE MOVEMENT IS UNOBSTRUCTED.
3. FOR DUCT H MORE THAN 12", PROVIDE FACTORY-FABRICATED OPPOSED BLADE DAMPERS

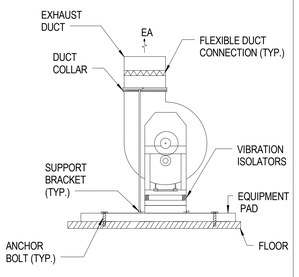
MANUAL DAMPER DETAIL
(ADJUSTABLE SINGLE-BLADE BALANCING TYPE)
NOT TO SCALE



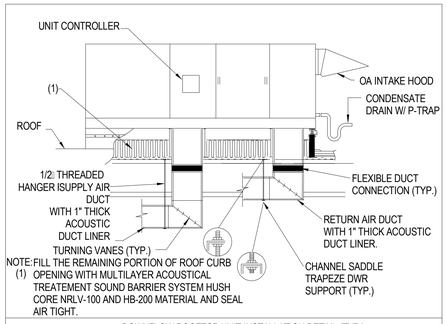
CEILING EXHAUST FAN DETAIL
NOT TO SCALE



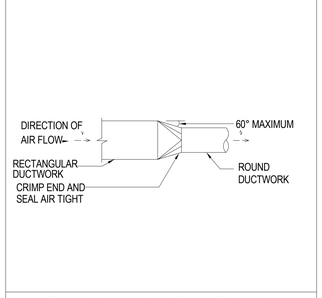
IN-LINE EXHAUST FAN MOUNTING DETAIL
NOT TO SCALE



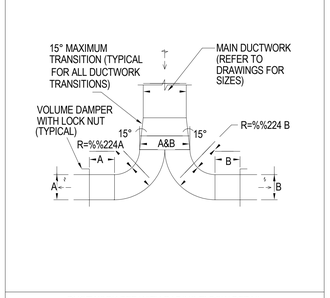
EXHAUST FAN DETAIL
NOT TO SCALE



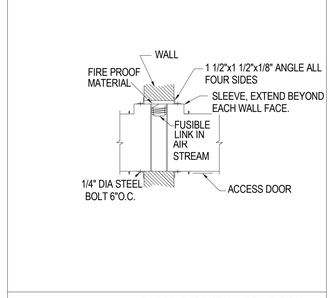
DOWNFLOW ROOFTOP UNIT INSTALLATION DETAIL (TYP.)
NOT TO SCALE



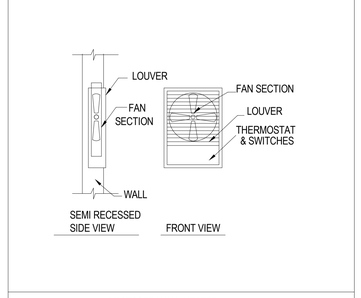
RECTANGULAR TO ROUND DUCTWORK TRANSITION
NOT TO SCALE



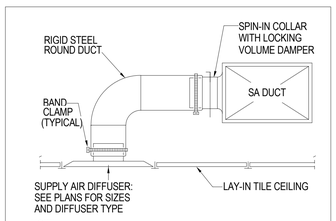
DUCTWORK TEE WITH RADIUS ELBOW DETAIL
NOT TO SCALE



FIRE DAMPER INSTALLATION (TYPICAL)
NOT TO SCALE

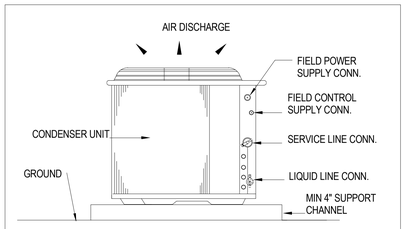


RECESSED WALL HEATER
NOT TO SCALE

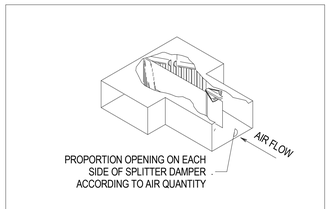


NOTE:
1. FLEXIBLE DUCT SHALL BE SUPPORTED FROM STRUCTURE ABOVE TO PREVENT SAGGING.

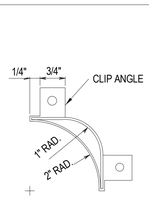
SUPPLY AIR DIFFUSER IN ACOUSTICAL CEILING
NOT TO SCALE



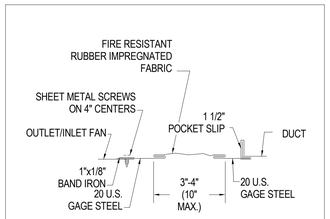
CONDENSER UNIT DETAIL (TYP.)
NOT TO SCALE



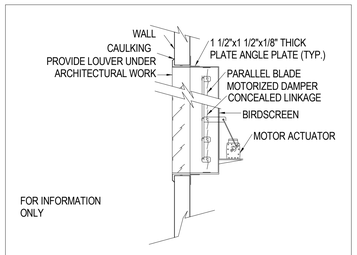
TYPICAL SPLITTER DAMPER DETAIL
NOT TO SCALE



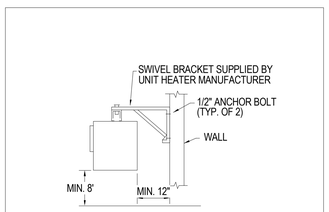
TYPICAL TURNING VANE DETAIL
NOT TO SCALE



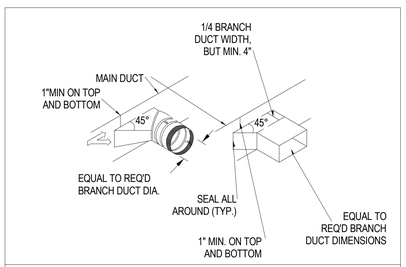
TYPICAL FLEXIBLE CONNECTION DETAIL
NOT TO SCALE



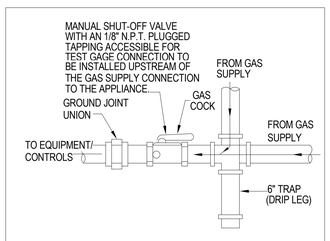
DAMPER DETAIL
NOT TO SCALE



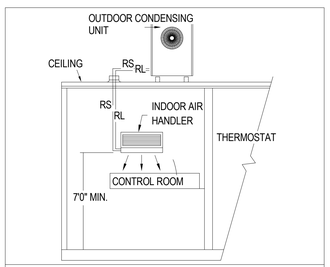
MOUNTING DETAIL-UNIT HEATER
NOT TO SCALE



TYPICAL BRANCH TAKE-OFF FITTING
NOT TO SCALE



GAS CONNECTION TO EQUIPMENT DETAIL
NOT TO SCALE



DUCTLESS SPLIT-SYSTEM AIR HANDLING UNITS DETAIL
NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
KRISTOPH PLAZA III, SUITE 1000 11350 MCCORMICK ROAD HUNT VALLEY, MARYLAND 21031 PHONE (410) 329-1115
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

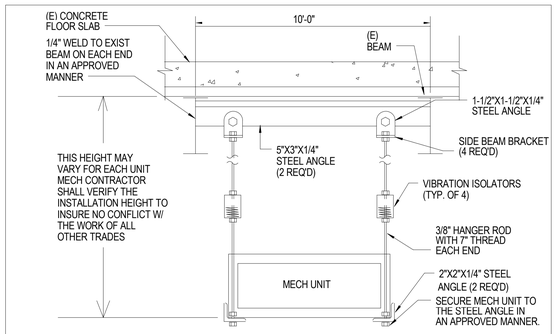
DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE
MECHANICAL - DETAILS

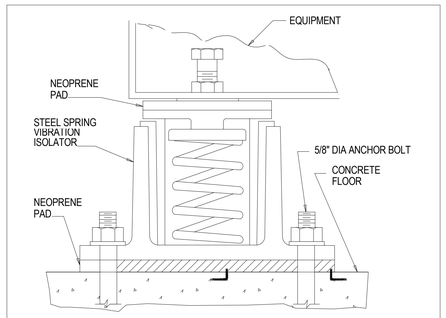
PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO160

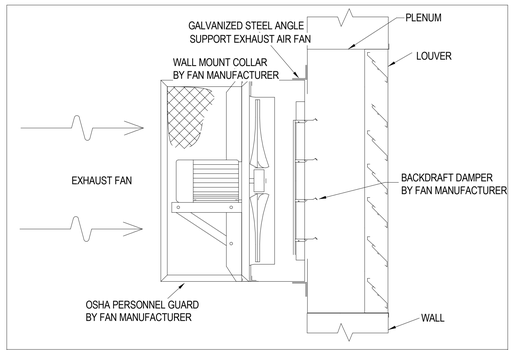
SHEET NO.



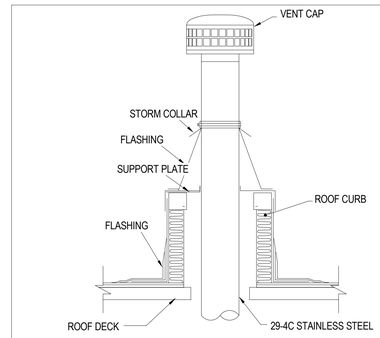
TYPICAL MECH UNIT HANGER DETAIL
NOT TO SCALE



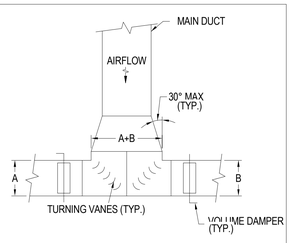
VIBRATION ISOLATOR DETAIL
NOT TO SCALE



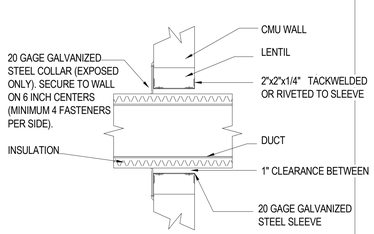
SIDEWALL PROPELLER EXHAUST AIR FAN DETAIL
NOT TO SCALE



FLUE VENT ROOF PENETRATION DETAIL
NOT TO SCALE



DUCT TEE CONNECTION DETAIL
NOT TO SCALE



DUCT PENETRATION THROUGH WALL
NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
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STATE OF MARYLAND - DPSCS

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DESIGN DEVELOPMENT

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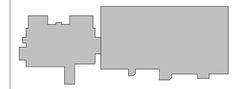
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 43481

EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · GEOFFREY W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY Author
APPROVED BY Approver
CHECKED BY Checker
DATE Issue Date

TITLE

MECHANICAL - DETAILS

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO161

SHEET NO.

AIR DISTRIBUTION DEVICE SCHEDULE

KEYNOTE	MARK	CFM RANGE	FACE (IN)	NECK (IN)	TYPE	MODEL NUMBER	NOTES
7	EG-01	0-80	7x7	6	EXHAUST	PRICE	WALL MOUNTED SECURITY EXHAUST GRILLL
1	SD-0.1	0-300	24x24	8	SUPPLY	PRICE	
2	SD-02	0-120	7x7	6	SUPPLY	PRICE	WALL MOUNTED SECURITY SUPPLY GRILL
1	SD-03	40-300	24x24	10	SUPPLY	PRICE MSSG	
5	SD-05	40-300	24x24	8	RETURN	PRICE MSSG	SECURITY OUT DOOR AIR GRILL
6	SD-06	400-600	20x18	12x10	SUPPLY	PRICE	WALL MOUNTED SECURITY SUPPLY GRILL

EXHAUST/SUPPLY AIR FANS (EF/SF) SCHEDULE

UNIT NO	CFM	E.S.P INCHES W.G.	FAN RPM	TYPE	DRIVE	ELECTRICAL DATA HP	V	PH	HZ	MAKE/MODEL
EF-01	2700	0.4	1725	CENTRIFUGAL	BELT	0.75	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-02	1600	0.5	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-03	1600	0.75	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-04	1200	0.4	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-05	1200	0.5	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-06	1200	0.75	1410	CENTRIFUGAL	DIRECT	0.167	115	1	60	GREENHECK MODEL-CUE-121 OR APPROVED EQUAL
EF-07	1200	0.75	1410	CENTRIFUGAL	DIRECT	0.167	115	1	60	GREENHECK MODEL-CUE-121 OR APPROVED EQUAL
EF-08	1000	0.8	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-09	1000	0.25	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-10	1000	0	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-11	1000	0	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-12	225	0	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
EF-13	225	0	1725	CENTRIFUGAL	BELT	0	208	1	60	GREENHECK (BASIC OF DESIGN)
SF-01	2700	0.4	1725	CENTRIFUGAL	BELT	0.75	208	1	60	GREENHECK (BASIC OF DESIGN)
SF-02	2000	0.2	1725	CENTRIFUGAL	BELT	0.25	208	1	60	GREENHECK (BASIC OF DESIGN)
SF-03	2000	0.2	1725	CENTRIFUGAL	BELT	0.25	208	1	60	GREENHECK (BASIC OF DESIGN)

AIR HANDLING UNIT (AHU) SCHEDULE

UNIT NO	SUPPLY AIR SA CFM	RA CFM	OA CFM	HEATING TOTAL MBH	COOLING DATA TOTAL COOLING CAPACITY (BTU/hr)	EAT DB/WB.	LAT DB/WB.	SUPPLY FAN EXT.SP (IN WG)	FAN RPM	BREAK HORSE POWER	HP	ELECTRICAL DATA V	HZ	PH	AREA SERVED	MAKE/MODEL
AHU-01	600	550	0	21	18000	72/68	56/67	0.2	0	0	0.08	208	60	1	SECOND FLOOR	DAIKIN-FCQ30PAVJU
AHU-02	750	670	80	24	22000	72/68	56/67	0.3	0	0	0.08	208	60	1	SECOND FLOOR	DAIKIN-FXMQ24PVJU
AHU-03	400	360	40	13.5	12000	72/68	56/67	0.1	0	0	0.08	208	60	1	THIRD FLOOR	DAIKIN-FBQ36PVJU
AHU-04	8090	7060	1030	240	240.8	72/68	55/52	1.34	0	2.6	3	480	60	3	GYM, FITNESS RM	DAIKIN-RN015

CONDENSING UNIT (CU) SCHEDULE

UNIT#	UNIT SERVED	ELECTRICAL DATA V	PH	HZ	MIN CIR AMP	MAX OVER CURRENT	COOLING CAPACITY (MBH)	MAKE/MODEL
CU-01	AHU--1	208	1	60	8.75	15	12	DAIKIN RZQ12PVJU OR APPROVED EQUAL
CU-02	AHU-2	208	1	60	17.5	15	24	DAIKIN RZQ24PVJU OR APPROVED EQUAL
CU-03	AHU-3	208	1	60	13.7	15	18	DAIKIN RZQ18PVJU OR APPROVED EQUAL
CU-04	AHU-4	230	3	60	46	50	160	DAIKIN-RXYQ(160-240 MBH) VRV-III-HEATPUMP-COMBO OR APPROVED EQUAL
CU-05	VRV SYS.	480	3	60	29	50	334	DAIKIN-RXYQ(160-240 MBH) VRV-III-HEATPUMP-COMBO OR APPROVED EQUAL
CU-06	VRV SYS.	480	3	60	20	50	160	DAIKIN-RXYQ(160-240 MBH) VRV-III-HEATPUMP-COMBO OR APPROVED EQUAL
CU-07	VRV SYS.	480	3	60	20	50	160	DAIKIN-RXYQ(160-240 MBH) VRV-III-HEATPUMP-COMBO OR APPROVED EQUAL

ELECTRICAL UNIT HEATERS SCHEDULE

UNIT NO	LOCATION	HEATING CAPACITY(KW)	CFM	ELECTRICAL DATA V	PH	HZ	FLA	MAKE/MODEL
EUH -02	BASEMENT AREA A	5	350	480	3	60	6	QMARK MUH541
EUH - 01	BASEMENT AREA A	5	350	480	3	60	6	QMARK MUH541
EUH-03	FIRST FLOOR MECHANICAL RM	3	350	480	3	60	3.6	QMARK MUH341
EUH-04	FIRST FLOOR ELECTRICAL RM	3	350	480	3	60	3.6	QMARK MUH341
EUH-05	THIRD FLOOR MECH. ROOM	5	350	480	3	60	6	QMARK MUH541
EUH-06	THIRD FLOOR MECH ROOM	5	350	480	3	60	6	QMARK MUH541

ROOF TOP UNIT (RTU) SCHEDULE

UNIT #	SUPPLY AIR CFM	TOTAL OA CFM	E.S.P INCHES W.G.	COOLING COIL EAT DB/WB.	LAT DB/WB.	TOTAL MBH	HEATING EAT DB/WB	LAT DB/WB	MBH IN	MBH OUT	ELECTRICAL DATA V	PH	HZ	MCA	MOA	MAKE/MODEL	REMARKS
RTU-01	9555	1350	0	95/75	70/68	0			0	0	460	3	60				
RTU-02	2540	1600	1.5	95/75	57/54	82.1	36	55	42.6	35.5	460	3	60	39	50	AAON-RNA-V-AC-GAS-ECONOMIZER OR APPROVED EQUAL	KITCHEN AREA
RTU-03	2000	2000	1.5	95/75	70/68	77	14	60	156.7	89.2	460	3	60	48	50	AAON-RNB-V-AC-GAS-ECONOMIZER OR APPROVED EQUAL	DOAS SECOND FLOOR CLASS ROOM
RTU-04	8045	8045	2.25	95/75	70/68	309.7	14	60	573.2	445.1	460	3	60	78	100	AAON-RNB-V-AC-GAS-ECONOMIZER OR APPROVED EQUAL	DOAS BUILDING

FAN COIL SCHEDULE (VRV)

UNIT #	LOCATION	MAKE/MODEL	AREA SERVED	CFM	HEATING DATA HEATING CAPACITY (BTU/H)	LAT(F)DB/ WB	COOLING DATA COOLING CAPACITY (BTU/H)	EAT(F) DB/WB.	LAT(F) DB/WB.	COOLING INPUT POWER (kW)	ELECTRICAL DATA V	HZ	PH	MCA	MOA	NOTES
VRV-01	FIRST FLOOR	DAIKIN-FCQ18PAVJU	CONFERENCE ROOM 1.3	400	20000	70/60	18000	72/68	57/54	1.38	208	60	1	1.6	15	
VRV-02	FIRST FLOOR	DAIKIN-FXMQ36PVJU	SECURITY SCREEN 0.6	1600	20000	70/60	18000	72/68	57/54	0.22	208	60	1	1.6	15	
VRV-03	FIRST FLOOR	DAIKIN-FXMQ36PVJU	VISITATION 8.2	1150	18000	70/60	72000	72/68	57/54	0.61	208	60	1	1.6	15	
VRV-04	FIRST FLOOR	DAIKIN-FXMQ36PVJU	COORIDOR 11.1.2	800	18000	70/60	20000	72/68	57/54	0.22	208	60	1	1.6	15	
VRV-05	FIRST FLOOR	DAIKIN-FXMQ24PVJU	STAFF TLT	1200	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.6	15	
VRV-06	FIRST FLOOR	DAIKIN-FXMQ36PVJU	2F.5, 2F.4	800	18000	70/60	20000	72/68	57/54	0.22	208	60	1	1.6	15	
VRV-07	FIRST FLOOR	DAIKIN-FXMQ36PVJU	FEMALE DAYROOM	1050	18000	70/60	20000	72/68	57/54	0.22	208	60	1	1.6	15	
VRV-08	FIRST FLOOR	DAIKIN-FCQ18PAVJU		0	18000	70/60	20000	72/68	57/54	0.23	208	60	1	1.6	15	
VRV-09	FIRST FLOOR	DAIKIN-FXMQ36PVJU	3.2, 3.6, 3.12	3000	27000	70/60	24000	72/68	57/54	0.25	208	60	1	1.8	15	
VRV-10	FIRST FLOOR	DAIKIN-FXMQ36PVJU	CELLS	7500	81000	70/60	72000	72/68	57/54	0.61	208	60	1	1.6	15	
VRV-11	FIRST FLOOR	DAIKIN-FCQ18PAVJU	COUNSELOR OFFICE	400	20000	70/60	18000	72/68	57/54	1.38	208	60	1	1.8	15	
VRV-12	FIRST FLOOR	DAIKIN-FCQ18PAVJU	CASE MGR OFFICE	400	20000	70/60	18000	72/68	57/54	1.38	208	60	1	1.8	15	
VRV-13	FIRST FLOOR	DAIKIN-FCQ18PAVJU		0	2000	70/60	24000	72/68	57/54	0.23	208	60	1	1.6	15	
VRV-14	FIRST FLOOR	DAIKIN-FCQ18PAVJU		0	20000	70/60	24000	72/68	57/54	0.23	208	60	1	1.6	15	
VRV-15	FIRST FLOOR	DAIKIN-FCQ18PAVJU	LT OFFICE	400	20000	70/60	18000	72/68	57/54	1.38	208	60	1	1.6	15	
VRV-16	FIRST FLOOR	DAIKIN-FCQ18PAVJU	CAPT. OFFICE	400	20000	70/60	18000	72/68	57/54	1.38	208	60	1	1.8	15	
VRV-17	SECOND FLOOR	DAIKIN-FXMQ24PVJU	DAYROOM 2A.3	1080	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-18	SECOND FLOOR	DAIKIN-FXMQ24PVJU	DAYROOM 2D.3	1080	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-19	SECOND FLOOR	DAIKIN-FXMQ24PVJU	DAYROOM 2B.3	1080	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-20	SECOND FLOOR	DAIKIN-FXMQ24PVJU	DAYROOM 2C.3	1080	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-21	SECOND FLOOR	DAIKIN-FXMQ24PVJU	CLASSROOM-1	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-22	SECOND FLOOR	DAIKIN-FXMQ24PVJU	CLASSROOM-2	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-23	SECOND FLOOR	DAIKIN-FXMQ24PVJU	CLASSROOM-3	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-24	SECOND FLOOR	DAIKIN-FXMQ24PVJU	SCIENCE LAB	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-25	SECOND FLOOR	DAIKIN-FXMQ24PVJU	ARTROOM	800	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-26	SECOND FLOOR	DAIKIN-FXMQ24PVJU	9.6,9.11,9.14	800	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-27	SECOND FLOOR	DAIKIN-FXMQ24PVJU	TEACHER WORK ROOM	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-28	SECOND FLOOR	DAIKIN-FXMQ36PVJU	TITLE, SOCIAL WORK	800	40000	70/60	36000	72/68	80/67	4.1	208	60	1	2.9	15	
VRV-29	SECOND FLOOR	DAIKIN-FXMQ36PVJU	MEDIA CENTER	1200	40000	70/60	36000	72/68	80/67	4.1	208	60	1	2.9	15	
VRV-31	SECOND FLOOR	DAIKIN-FXMQ24PVJU	9.12	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-32	SECOND FLOOR	DAIKIN-FXMQ24PVJU	CLASSROOM-4	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-33	SECOND FLOOR	DAIKIN-FXMQ24PVJU	CLASSROOM-5	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-34	SECOND FLOOR	DAIKIN-FXMQ24PVJU	CLASSROOM-6	600	27000	70/60	24000	72/68	80/67	0.23	208	60	1	1.8	15	
VRV-37	THIRD FLOOR	DAIKIN-FXMQ24PVJU	CELLS	1200	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.8	15	
VRV-38	THIRD FLOOR	DAIKIN-FXMQ24PVJU	CELLS	1200	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.8	15	
VRV-39	THIRD FLOOR	DAIKIN-FXMQ24PVJU	CELLS	1200	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.8	15	
VRV-40	THIRD FLOOR	DAIKIN-FCQ30PAVJU		0	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.6	15	
VRV-41	THIRD FLOOR	DAIKIN-FCQ30PAVJU		400	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.8	15	
VRV-42	THIRD FLOOR	DAIKIN-FCQ30PAVJU		200	27000	70/60	24000	72/68	57/54	0.23	208	60	1	1.6	15	

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS
EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
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PHONE (410) 329-1115
TERRALOGOS ECO ARCHITECTURE PC
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY: Author
APPROVED BY: Approver
CHECKED BY: Checker
DATE: Issue Date

TITLE

MECHANICAL - SCHEDULES

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO170

SHEET NO.

SINGLE-DUCT AIR TERMINAL UNIT (VAV) SCHEDULE				
		CFM		HEATING CAPACITY (kW)
Mark	UNIT SIZE	MAX	MIN	
VAV#1-1	3	540	160	0
VAV#1-2	2	235	100	0
VAV#1-3	2	330	330	1.5
VAV#1-4	2	430	430	2
VAV#1-5	2	460	140	1
VAV#1-6	2	400	120	1
VAV#1-7	2	200	100	0
VAV#1-8	5	900	270	0
VAV#1-9	2	280	100	0
VAV#1-10	3	520	160	0
VAV#1-11	3	610	180	0
VAV#2-1	2	300	100	0
VAV#2-2	5	900	270	0
VAV#2-3	5	1020	300	0

ELECTRICAL INFRARED HEATER SCHEDULE								
				ELECTRICAL DATA				
UNIT#	AREA SERVED	HEATING CAPACITY(kW)	CFM	V	PH	HZ	HP	MAKE/MODEL
EIH-01	VEHICLE SALLY	6	0	480	3	60	0	INFRATECH COMFORT MODEL# WD 6024SS OR APPROVED EQUAL
EIH-02	VEHICLE SALLY	6	0	480	3	60	0	INFRATECH COMFORT MODEL# WD 6024SS OR APPROVED EQUAL

MAKE UP AIR UNIT (MAU) SCHEDULE															
				ELECTRICAL DATA					HEATING						
UNIT NO	TOTAL SUPPLY AIR CFM	EXT SP (IN. WG)	TOTAL SP (IN. WG)	FLA	HP	V	PH	HZ	OUTDOOR AIR (F)	LEAVING AIR	INPUT (MBH)	OUTPUT (MBH)	UNIT WEIGHT(IBS)	MAKE/MODEL	NOTES
MUA-01	4900	0.4	0.6	4.8	3	460	3	60	13	65	300	280	0	IGX-112-H22 (BASIC OF DESIGN)	

GRAVITY VENTILATOR						
UNIT NO	LOCATION	TYPE	DEPTH(IN)	HEIGHT(IN)	WIDTH(IN)	MAKE/MODEL
GV-01	THIRD FLOOR MECH ROOM	GRAVITY	12	10	10	GREENHECK
GV-02	THIRD FLOOR MECH. ROOM	GRAVITY	12	10	10	GREENHECK

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STATE OF MARYLAND
JEFFER W. O'NEILL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
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MECHANICAL - SCHEDULES

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO171

SHEET NO.

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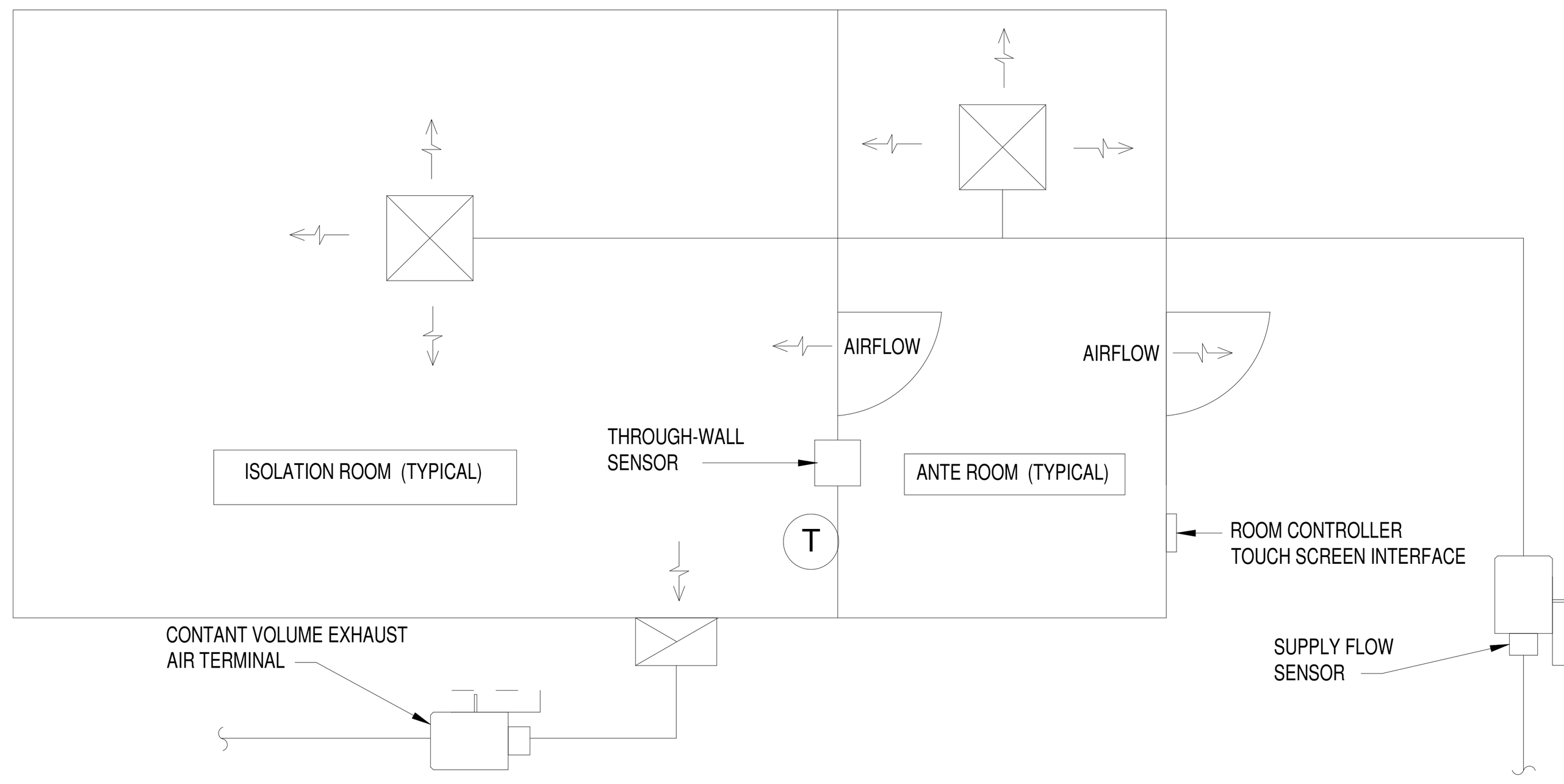


DIRECT PRESSURE CONTROL

GENERAL INFORMATION
DRAWING IS FOR REFERENCE ONLY.

OCCUPIED MODE

THE ROOM CONTROLLER SHALL MAINTAIN THE USER-DEFINED OCCUPIED TEMPERATURE SETPOINTS AND MINIMUM VENTILATION RATES.

UNOCCUPIED MODE

THE ROOM CONTROLLER WILL MAINTAIN THE USER-DEFINED UNOCCUPIED TEMPERATURE SETPOINTS AND MINIMUM VENTILATION RATES.

PRESSURE CONTROL SEQUENCE OF OPERATION

THE ROOM CONTROLLER MEASURES THE ACTUAL PRESSURE DIFFERENTIAL WITH A THROUGH-THE-WALL SENSOR AND SHALL MAINTAIN USER-DEFINED SETPOINT VIA A MECHANICALLY PRESSURE INDEPENDANT VENTURI AIR CONTROL SUPPLY AND EXHAUST VALVE. THE ROOM CONTROLLER WILL ALARM IF THE MEASURED PRESSURE DIFFERENTIAL FALLS OUTSIDE THE USER-DEFINED SETPOINTS. ALARMS WILL ONLY SOUND AFTER A TIMED DELAY TO PREVENT NUISANCE ALARMS.

THE ROOM CONTROLLER ACCEPTS A DOOR SWITCH INPUT TO FREEZE THE SUPPLY AND EXHAUST CONTROL OUTPUTS WHILE THE DOOR IS OPEN. THE ROOM CONTROLLER WILL ALLOW FOR LONGER ALARM DELAYS WHEN THE DOOR IS OPEN.

SUPPLY FLOW CONTROL SEQUENCE OF OPERATION

THE ROOM CONTROLLER SHALL MEASURES THE SUPPLY FLOW AND MODULATE THE VENTURI SUPPLY AND EXHAUST VALVES TO MAINTAIN DESIRED AIR SUPPLY CFMS AND ALARMS IF THE MEASURED FLOW FALLS OUTSIDE USER-DEFINED SETPOINTS. THE ROOM CONTROLLER SHALL MODULATES THE SUPPLY AIRFLOW TO MAINTAIN ROOM PRESSURE DIFFERENTIAL SETPOINT. EXHAUST VENTURI VALVES SHALL BE PROVIDED WITH ELECTRONIC FLOW FEEDBACK FOR FEEDBACK OF AIRFLOW TO THE PIC CONTROLLER . EACH VENTURI VALVE SHALL MAINTAIN PRESSURE INDEPENDENT CONTROL OF ITS FLOW SETPOINT WITHIN A DIFFERENTIAL PRESSURE RANGE OF 0.6" - 3.0" W.C. ACROSS THE VALVE. CONTROLLER SHALL SIMULTANEOUSLY REGULATE SUPPLY AND EXHAUST AIRFLOW OF ISOLATION AND ANTE ROOMS TO THEIR RESPECTIVE OFFSETS. ALARMS WILL ONLY SOUND AFTER A TIMED DELAY TO PREVENT NUISANCE ALARMS.

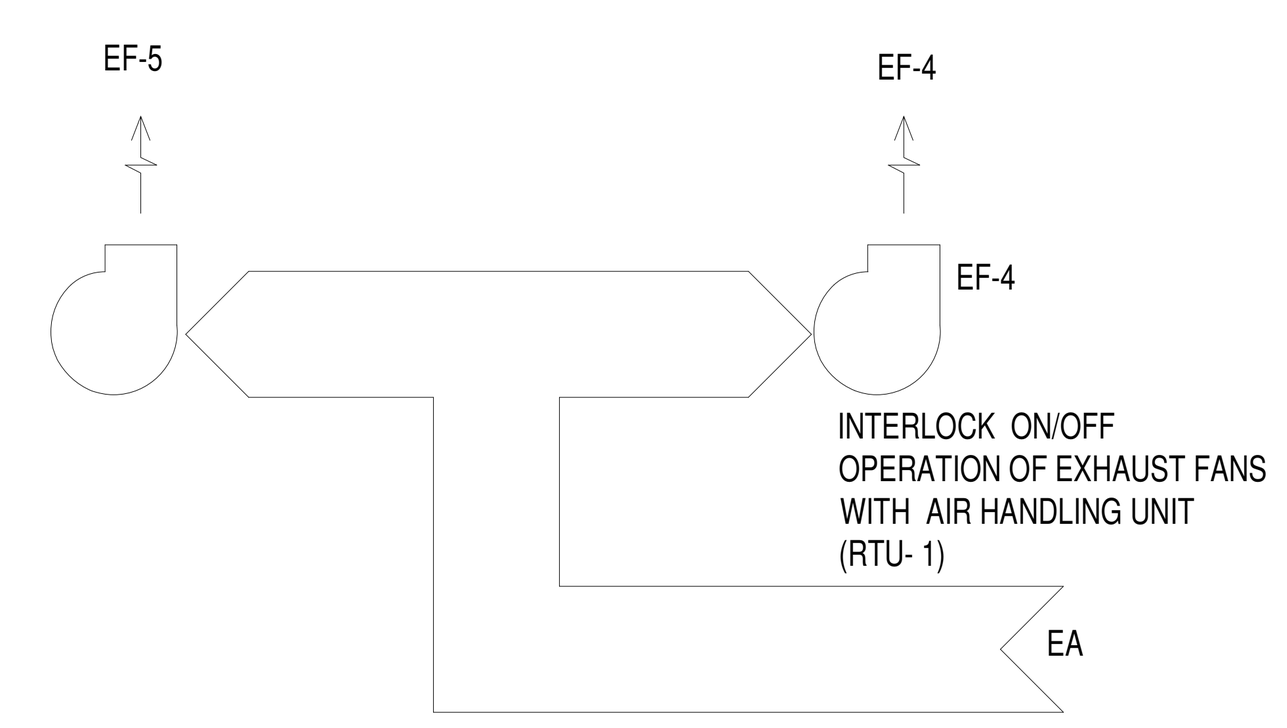
TEMPERATURE CONTROL SEQUENCE OF OPERATION

THE ROOM CONTROLLER SHALL ACCEPTS A MEASUREMENT OF ROOM TEMPERATURE. THE ROOM CONTROLLER WILL ALARM IF TEMPERATURE FALLS OUTSIDE USER-DEFINED SETPOINTS. ALARMS WILL ONLY SOUND AFTER A TIMED DELAY TO PREVENT NUISANCE ALARMS.

THE ROOM CONTROLLER SHALL MODULATE THE HEATING ELEMENT IN THE SUPPLY VENTURI VALVE TO MAINTAIN SPACE TEMPERATURE AT SETPOINT.

AUTOMATIC TEMPERATURE CONTROL LEGEND

SYMBOL	ABBREV	DESCRIPTION
	SD-_	SMOKE DETECTOR
	D-_	CONTROL DAMPER
	T-_	SPACE TEMPERATURE SENSOR
	T-_	EQUIPMENT MOUNTED TEMPERATURE SENSOR
	DP-_	DIFFERENTIAL PRESSURE SWITCH
	HS-	GAS FURNACE COIL
	TS-	DX COIL
	SPS-	STATIC PRESSURE SENSOR
		DIFFERENTIAL PRESSURE SWITCH
		AIR FLOW MONITORING STATION
	N.C.	NORMALLY CLOSED
	N.O.	NORMALLY OPEN



CONTROL DIAGRAM - EXHAUST FANS (EF-4 & EF-5)

SEQUENCE OF OPERATION

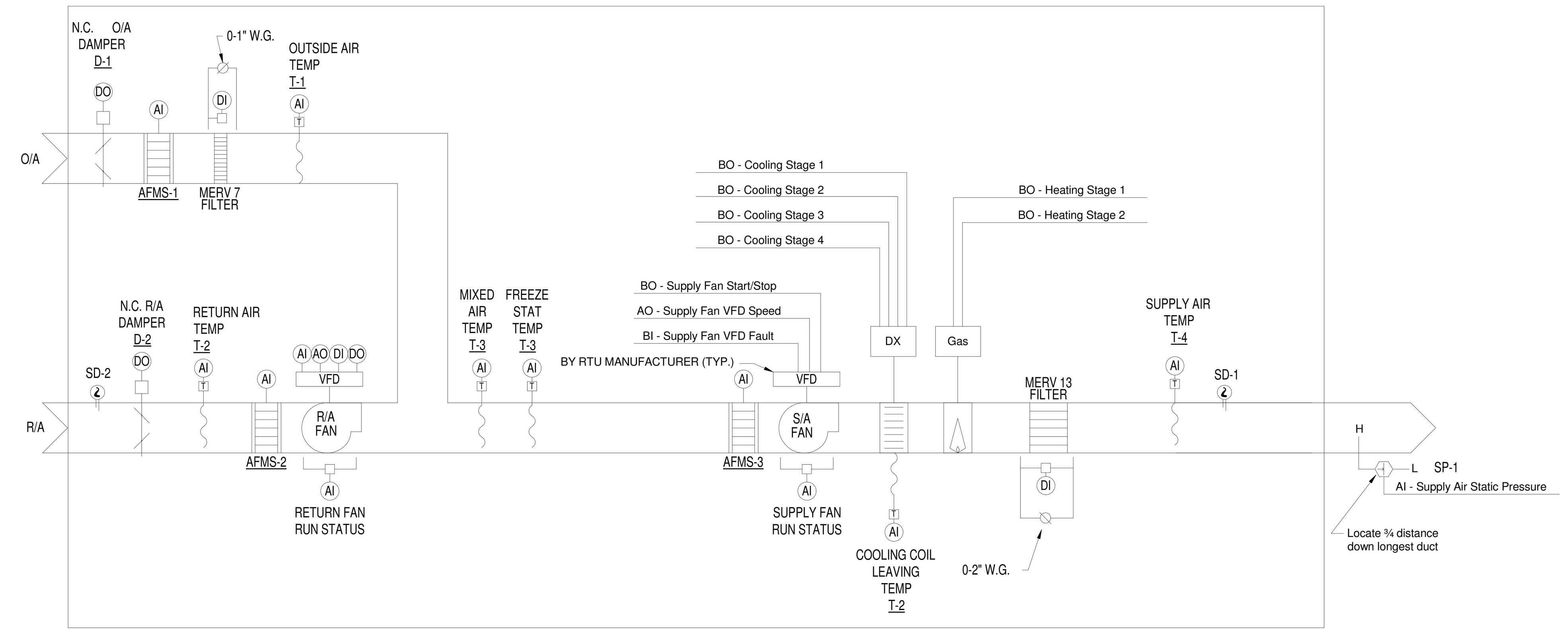
GENERAL

EXHAUST FANS EF-4 AND EF-5 SHALL OPERATE WITH A LEAD LAG-SEQUENCING CONTROLLER. SEQUENCE FANS TO OPERATE FOR 30 DAY (ADJUSTABLE) LEAD RUN TIME TO EQUALIZE FAN OPERATION.

THE CONTROLLER SHALL ENERGIZE THE LEAD FAN ON A "START" COMMAND. IF LEAD FAN FAILS TO PROOF ON WITHIN 1 MINUTE (ADJUSTABLE), LEAD FAN SHALL BE LOCKED OUT AND LAG FAN SHALL BE ENERGIZED.

SYSTEM PRESSURE CONTROL

EXHAUST SYSTEM PRESSURE SHALL BE CONTROLLED BY STATIC PRESSURE SENSOR SPS-1. SETPOINT SHALL BE SET BY BALANCE AGENT TO MAINTAIN SCHEDULED AIR FLOW (ADJUSTABLE). ON A RISE IN SYSTEM PRESSURE ABOVE SETPOINT, BYPASS DAMPER SHALL MODULATE OPEN. ON A FALL IN SYSTEM PRESSURE BELOW SETPOINT, BYPASS DAMPER SHALL MODULATE CLOSED.



CONTROL DIAGRAM - AHU-1

SEQUENCE OF OPERATION (SERVING MEDICAL AREA)

THE AIR HANDLING SYSTEM SHALL CONSISTS OF A SUPPLY AIR, OUTSIDE AIR AND RETURN AIR SECTION WITH OUTSIDE AIR DAMPERS, WITH A PRE-FILTER, A RETURN AIR SECTION WITH A PRE-FILTER AND A RETURN FAN, AND A FINAL FILTER AND SUPPLY FAN.

THE SUPPLY AND RETURN FAN SHALL BE PROVIDED WITH VARIABLE FREQUENCY DRIVES TO MAINTAIN CONSTANT AIRFLOW TO THE SPACE. THE OUTSIDE AIR INLET, RETURN FAN AND SUPPLY FAN INLET ARE PROVIDED WITH AIRFLOW MEASURING DEVICES TO PROVIDE AIRFLOW READINGS TO THE CONTROLLER.

THE AIR HANDLING UNITS ARE SCHEDULED FOR ON/OFF MODES. THE CONTROL SEQUENCE AND SAFETY MODES ARE AS FOLLOWS (ALL SUGGESTED SET POINTS AND SETTINGS ARE ADJUSTABLE.).

GENERAL

THE UNITS IS STARTED/STOPPED AUTOMATICALLY WHENEVER ANY ZONE IS OCCUPIED. WHEN THE UNIT IS OFF, THE OUTSIDE AIR DAMPER (D-1) AND THE RETURN AIR DAMPER (D-2) SHALL BE FULLY CLOSED. VALVES AND DAMPERS OPERATORS SHALL BE DDC CONTROLLED W/ELECTRONIC OPERATORS.

AIR HANDLER SHALL BE IN:
HEATING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 54°F OR LOWER (ADJUSTIBLE)
COOLING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 56°F OR HIGHER (ADJUSTIBLE)

AIR HANDLING UNIT

THE SYSTEM SHOULD RUN CONTINUOUSLY TO PROVIDE SUPPLY AIR TO HEALTH CARE AREA. WHEN THE UNIT IS COMMANDED TO START, OUTSIDE AIR DAMPER (D-1) AND RETURN AIR DAMPER (D-2) SHALL OPEN FULLY, CLOSING THE DAMPER END SWITCH, ALLOWING THE SUPPLY AND RETURN FANS TO OPERATE. THE RETURN FAN SPEED MODULATES TO MAINTAIN RETURN AIRFLOW RATE MEASURED AT AIRFLOW MEASURING STATION (AFMS-2).

THE FANS ARE STARTED WITH THE VARIABLE FREQUENCY CONTROLLERS AT MINIMUM SPEED. THE RETURN FAN IS INTERLOCKED THROUGH SOFTWARE TO RUN WHEN THE SUPPLY FAN RUNS.

ALL THE CONTROL ALGORITHMS ARE ALLOWED TO FUNCTION WHEN THE UNIT STARTS.

ALL VALVES AND DAMPERS SHALL RETURN TO THEIR NORMAL POSITION WHENEVER THE UNIT IS NOT IN OPERATION. THE CONTROLLER SHALL MODULATES THE HEATING FURNACE STAGES TO MAINTAIN 40 F AS MEASURED BY TEMPERATURE SENSOR (T-1) WHENEVER THE UNIT IS NOT IN OPERATION.

TEMPERATURE CONTROL

TEMPERATURE SENSOR (T-5), THROUGH THE CONTROLLER SHALL MODULATES THE DX CYCLE AND GAS HEATING STAGES TO MAINTAIN DESIRED FAN DISCHARGE AIR TEMPERATURE SETPOINT AS FOLLOWS:

COOLING STAGES
1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE COOLING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS GREATER THAN 60°F (ADJ.).
- AND THE ECONOMIZER (IF PRESENT) IS DISABLED OR FULLY OPEN.
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE HEATING (IF PRESENT) IS NOT ACTIVE.

3. ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) GREATER THAN SETPOINT.

GAS HEATING STAGES
1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE HEATING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE COOLING (IF PRESENT) IS NOT ACTIVE.

3. THE HEATING STAGES SHALL RUN FOR FREEZE PROTECTION WHENEVER:
- SUPPLY AIR TEMPERATURE DROPS FROM 40°F TO 35°F (ADJ.).
- AND THE SUPPLY FAN STATUS IS ON.

4. ALARMS SHALL BE PROVIDED AS FOLLOWS:
LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) LESS THAN SETPOINT.

ECONOMIZER:
1. THE CONTROLLER SHALL MEASURE THE MIXED AIR TEMPERATURE AND MODULATE THE ECONOMIZER DAMPERS IN SEQUENCE TO MAINTAIN A SETPOINT 2°F (ADJ.) LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT. THE OUTSIDE AIR DAMPERS SHALL MAINTAIN A MINIMUM ADJUSTABLE POSITION OF 20% (ADJ.) OPEN WHENEVER OCCUPIED.

2. THE ECONOMIZER SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
- AND THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
- AND THE SUPPLY FAN STATUS IS ON.

3. THE ECONOMIZER SHALL CLOSE WHENEVER:
- MIXED AIR TEMPERATURE DROPS FROM 40°F TO 35°F (ADJ.).
- OR THE FREEZESTAT (IF PRESENT) IS ON.
- OR ON LOSS OF SUPPLY FAN STATUS.

4. THE OUTSIDE AND EXHAUST AIR DAMPERS SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN WHEN THE UNIT IS OFF. IF OPTIMAL START UP IS AVAILABLE THE MIXED AIR DAMPER SHALL OPERATE AS DESCRIBED IN THE OCCUPIED MODE EXCEPT THAT THE OUTSIDE AIR DAMPER SHALL MODULATE TO FULLY CLOSED.

MINIMUM OUTSIDE AIR VENTILATION - FIXED PERCENTAGE
1. THE OUTSIDE AIR DAMPERS SHALL MAINTAIN A MINIMUM ADJUSTABLE POSITION DURING BUILDING OCCUPIED HOURS AND BE CLOSED DURING UNOCCUPIED HOURS.

MIXED AIR TEMPERATURE
1. THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE THROUGH MIX AIR SENSOR (T-3) AND USE AS REQUIRED FOR ECONOMIZER CONTROL (IF PRESENT).

2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS GREATER THAN 90°F (ADJ.).
- LOW MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

RETURN AIR TEMPERATURE
1. THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE THROUGH RETURN AIR SENSOR (T-2) AND USE AS REQUIRED FOR SETPOINT CONTROL OR ECONOMIZER CONTROL (IF PRESENT).

2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS GREATER THAN 90°F (ADJ.).
- LOW RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

SUPPLY AIR TEMPERATURE:
1. THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE THROUGH SUPPLY AIR SENSOR (T-5).
2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
- LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

AIR FLOW CONTROL

MINIMUM OUTSIDE AND RETURN AIRFLOW IS MEASURED BY AIRFLOW MEASURING STATION AFMS-1 AND AFMS-2 RESPECTIVELY LOCATED IN THE OUTSIDE AND RETURN AIR INTAKE. AFMS-3 AND CONTROLLER MODULATES THE SUPPLY FAN VARIABLE FREQUENCY DRIVE TO MAINTAIN AIRFLOW SETPOINT.

FILTER ALARM

THE OUTSIDE AIR FILTRATION SYSTEM CONSISTS OF A MERV 7 FILTER. A PRESSURE TRANSMITTERS SHALL BE PROVIDED FOR THE FILTER.

THE CONTROLLER OPERATES A MAINTENANCE ALARM WHEN THE PRESSURE DROP ACROSS THE FILTER BEING MONITORED EXCEEDS THE MANUFACTURER MAXIMUM RECOMMENDED PRESSURE DROP FOR THE MEDIA PROVIDED AS MEASURED BY THE ANALOG PRESSURE TRANSMITTER.

FREEZE PROTECTION

FREEZESTAT SENSOR (T-4) SHALL STOPS THE OUTSIDE AIR FAN AND SENDS AN ALARM TO THE CONTROLLER WHEN IT SENSES 38 °F (ADJUSTABLE) AIR ENTERING THE COOLING COIL.

SMOKE DETECTION

A SUPPLY AND RETURN DUCT SMOKE DETECTOR (SD-1 AND SD-2) I SHALL BE PROVIDED IN THE AIR HANDLING UNIT SUPPLY AND RETURN SYSTEM. WHENEVER DUCT A SMOKE DETECTOR (HARDWIRED) SENSES PRODUCTS OF COMBUSTION, RTU-1 SHALL SHUT DOWN AND AN ALARM SHALL BE SIGNALLED TO THE FIRE ALARM SYSTEM AND AND THE CONTROLLER. THE SMOKE DETECTOR AND THE FIRE ALARM CONTROL PANEL MUST BE MANUALLY RESET BEFORE SYSTEM CAN RESTART. CONNECTIONS TO PANEL RTU-1 CONTROLLER SHALL BE MADE BY THE ATC CONTRACTOR AND CONNECTIONS TO THE FIRE ALARM SYSTEM SHALL BE MADE BY THE FIRE ALARM CONTRACTOR.

HIGH DUCT STATIC PRESSURE DETECTION

STATIC PRESSURE SWITCHES SP-1 AND SP-2 IN THE SUPPLY AND RETURN DUCTS SET TO STOP THE SUPPLY AND RETURN AND EXHAUST FANS IF THE DUCT PRESSURE EXCEEDS THE PRESSURE CLASSIFICATION OF THE DUCTWORK.

AUTOMATIC SHUTDOWN/RESTART

WHEN THE AIR HANDLING UNIT IS SHUT DOWN ON A POWER FAILURE, AND THE POWER IS RESTORED, IT IS TO BE RESTARTED THROUGH A SEQUENCE PROGRAM TO PREVENT OVERLOADING OF THE ELECTRICAL DISTRIBUTION SYSTEM.

IF ANY SAFETY DEVICE SHUTS THE UNIT DOWN IT IS TO BE MANUALLY RESET.

EMERGENCY CONSTANT SPEED OPERATION

UPON FAILURE OF THE VFD THE FANS MAY BE STARTED/STOPPED MANUALLY THROUGH THE BYPASS STARTER AND THE FANS OPERATE SHALL AT FULL SPEED.

FANS STATUS

THE CONTROLLER SYSTEM USE A DIFFERENTIAL PRESSURE SENSOR INSTALLED ACROSS THE SUPPLY FAN, AND RETURN FAN TO CONFIRM THE FANS ARE IN THE DESIRED STATE (I.E. ON OR OFF) AND GENERATES AN ALARM IF STATUS DEVIATES FROM THE CONTROLLER START/STOP CONTROL.

ROOFTOP (RTU −2) SYSTEM INPUT/OUTPUT POINT SUMMARY

System Name: AIR−HANDLING UNIT (AHU−2)

POINT DESCRIPTION	ANALOG INPUTS: TEMP (DRY BULB)	TEMP (WET BULB)	PRESSURE	VOLUME	ANALOG OUT: CURRENT	RESET CAPABILITY	DIGITAL INPUTS: PRESSURE SWITCH	SWITCH CLOSURE	CURRENT SENSOR	DIGITAL OUT: CONTROL RELAY	ALARMS: EQUIPMENT STATUS	MAINTENANCE	CONTROL RELAY	HIGH LIMIT	LOW LIMIT	PROGRAMS: START/STOP	POINT HISTORY	ECONOMIZER	TEMP. CONTROL	SUPPLY AIR RESET
SUPPLY AIR	■		■																	
RETURN AIR	■	■																		
MIXED AIR	■				■															
OUTDOOR AIR	■	■		■	■													■		
RELIEF AIR					■															
SUPPLY AIR FAN					■	■			■							■				■
RETURN AIR FAN					■	■			■											
HEATING FURNACE					■										■					
COOLING COIL					■			■												
SMOKE DETECTOR (TYP OF 2)								■			■									
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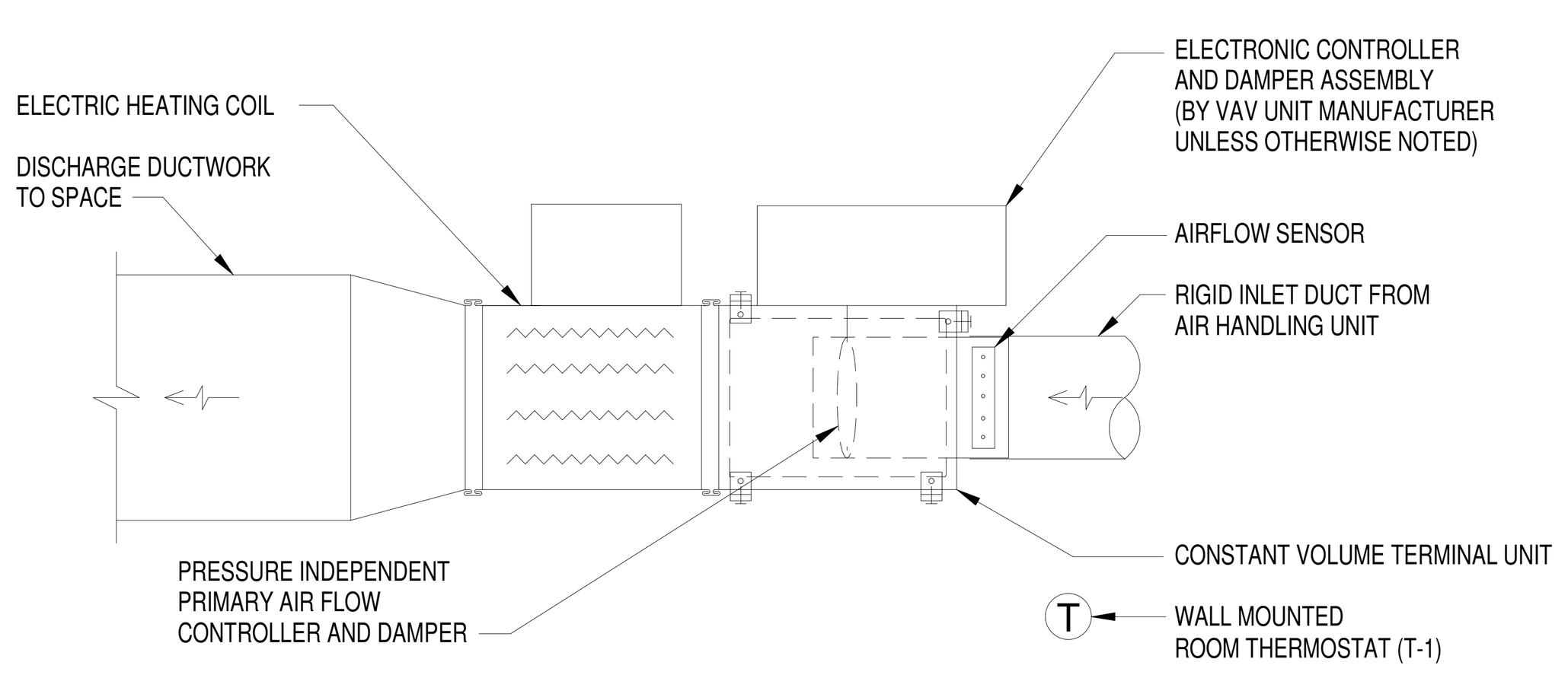


CONTROL DIAGRAM - CONSTANT VOLUME TERMINAL UNIT WITH ELECTRIC REHEAT

SEQUENCE OF OPERATION

GENERAL

THE TERMINAL UNIT SHALL BE CONTROLLED BY THE LOCAL ZONE SENSOR (T-1).

WHEN IN THE COOLING MODE, THE PRIMARY AIR DAMPER SHALL MODULATE TO MAINTAIN DESIGN SUPPLY AIRFLOW RATES. UPON A FALL IN SPACE TEMPERATURE AT SPACE SENSOR T-1, THE ELECTRIC HEATING COIL SHALL ENERGIZE THROUGH STEP OR SCR CONTROL TO MAINTAIN SPACE TEMPERATURE SETPOINT.

ON A RISE IN SPACE TEMPERATURE AT SPACE SENSOR T-1, ELECTRIC HEATING COIL SHALL DE-ENERGIZE.

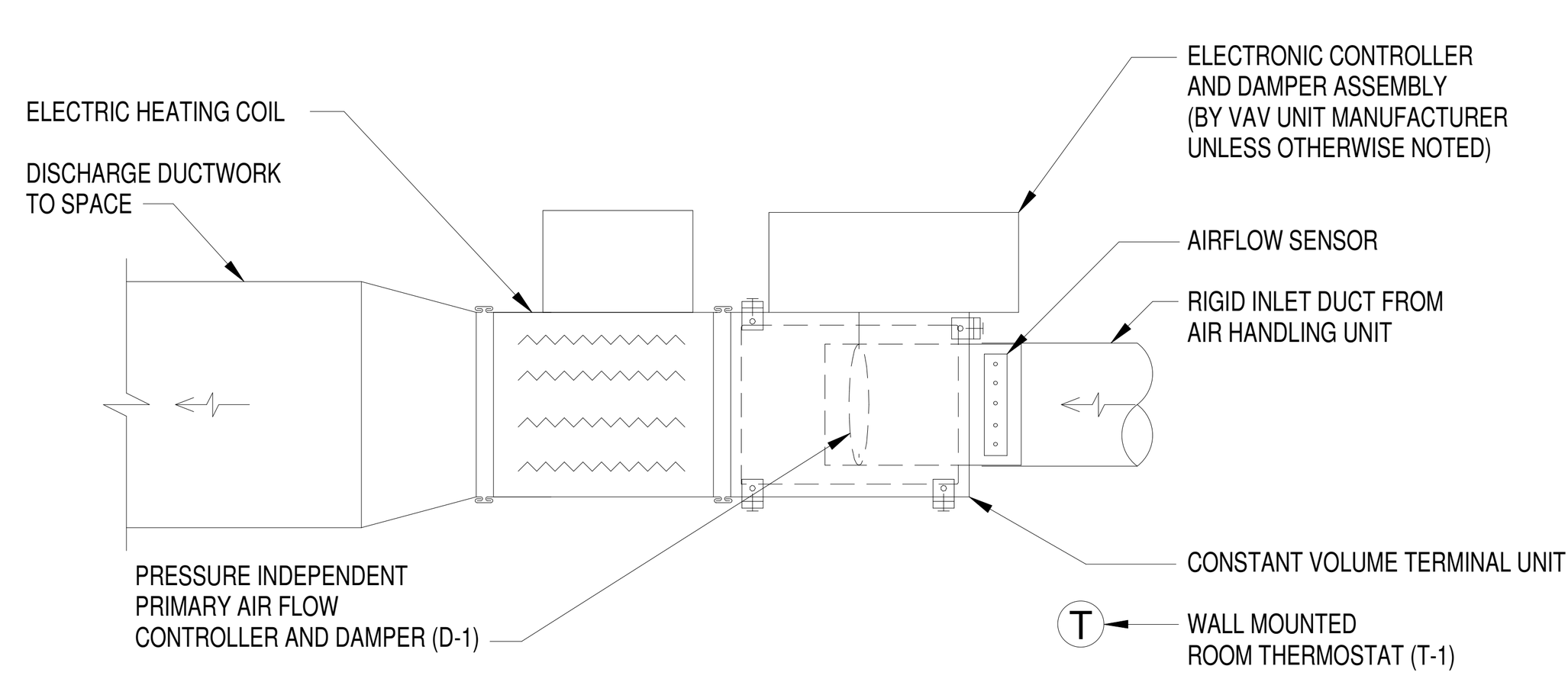
SEQUENCE OF OPERATION

GENERAL

THE TERMINAL UNIT SHALL BE CONTROLLED BY THE LOCAL ZONE SENSOR (T-1).

WHEN IN THE COOLING MODE, THE PRIMARY AIR DAMPER SHALL MODULATE TO MAINTAIN DESIGN SUPPLY AIRFLOW RATES. UPON A FALL IN SPACE TEMPERATURE AT SPACE SENSOR T-1, THE ELECTRIC HEATING COIL SHALL ENERGIZE THROUGH STEP OR SCR CONTROL TO MAINTAIN SPACE TEMPERATURE SETPOINT.

ON A RISE IN SPACE TEMPERATURE AT SPACE SENSOR T-1, ELECTRIC HEATING COIL SHALL DE-ENERGIZE.



CONTROL DIAGRAM - VARIBLE VOLUME TERMINAL UNIT WITH ELECTRIC REHEAT

SEQUENCE OF OPERATION

GENERAL

THE TERMINAL UNIT SHALL BE CONTROLLED BY THE LOCAL ZONE SENSOR (T-1).
SEE FLOOR PLANS AND SCHEDULE FOR THE QUANTITY AND LOCATION OF EACH TYPE TERMINAL UNIT.

TERMINAL EQUIPMENT CONTROLLERS (TEC'S), AND DAMPER ACTUATORS SHALL BE FURNISHED AND INSTALLED BY THE ATC CONTRACTOR.

THE ATC CONTRACTOR SHALL PROVIDE 24V AC TRANSFORMERS AND WIRING TO THE TEC'S AS REQUIRED FOR OPERATION OF THE TEC'S AND EXTEND 120 VOLT CIRCUITS IDENTIFIED ON THE ELECTRICAL DRAWINGS FOR ATC USE TO LINE SIDE OF TRANSFORMERS.

SUPPLY TERMINAL UNITS AND REHEAT COILS SHALL BE CONTROLLED BY "OCCUPIED-UNOCCUPIED" FUNCTIONS OF THE LOCAL SENSOR. IN OCCUPIED MODE, UNITS AND COILS SHALL OPERATE AS DESCRIBED BELOW. IN UNOCCUPIED MODE, TERMINAL UNITS SHALL OPERATE AT MAXIMUM AIRFLOW.

EACH TEC FOR TERMINAL UNITS SHALL BE SUITABLE FOR PRESSURE INDEPENDENT OPERATION AND SHALL ALLOW MONITORING AND ADJUSTMENT OF SPACE TEMPERATURE AND TERMINAL UNIT AIR FLOW THROUGH THE DDC SYSTEM.

UPON A FALL IN SPACE TEMPERATURE SENSOR T-1 BELOW ITS SETPOINT IT SHALL MODULATE TERMINAL UNIT DAMPER D-1 TO REDUCE AIR FROM MAXIMUM TO MINIMUM FLOW. ON A FURTHER FALL, IT SHALL MODULATE DAMPER D-1 TO THE SCHEDULED HEATING AIR FLOW (MINIMUM FLOW) AND SEQUENTIALLY ENERGIZE EACH STAGE OF THE ELECTRIC REHEAT COIL AS REQUIRED. ON A RISE IN TEMPERATURE ABOVE THE SETPOINT THE REVERSE SHALL OCCUR AND THE ELECTRIC HEATING COIL SHALL DE-ENERGIZE.

F E D C B A

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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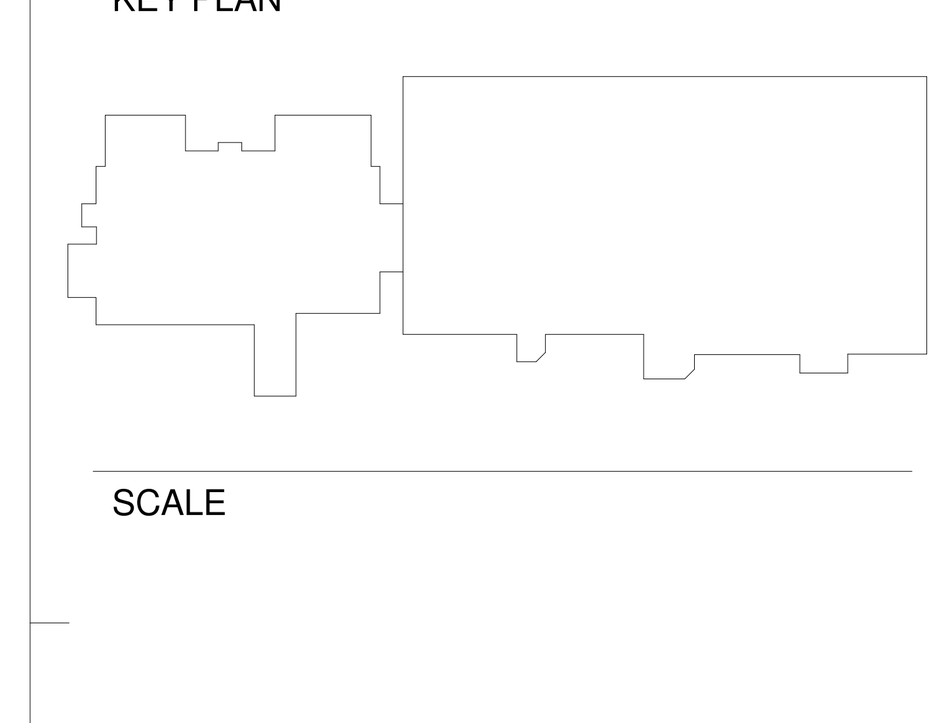
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND · DEXTER W. O'NEIL · 43481 · PROFESSIONAL ENGINEER

KEY PLAN



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APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

MECHANICAL - AUTOMATIC CONTROL DIAGRAMS

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO180

SHEET NO.

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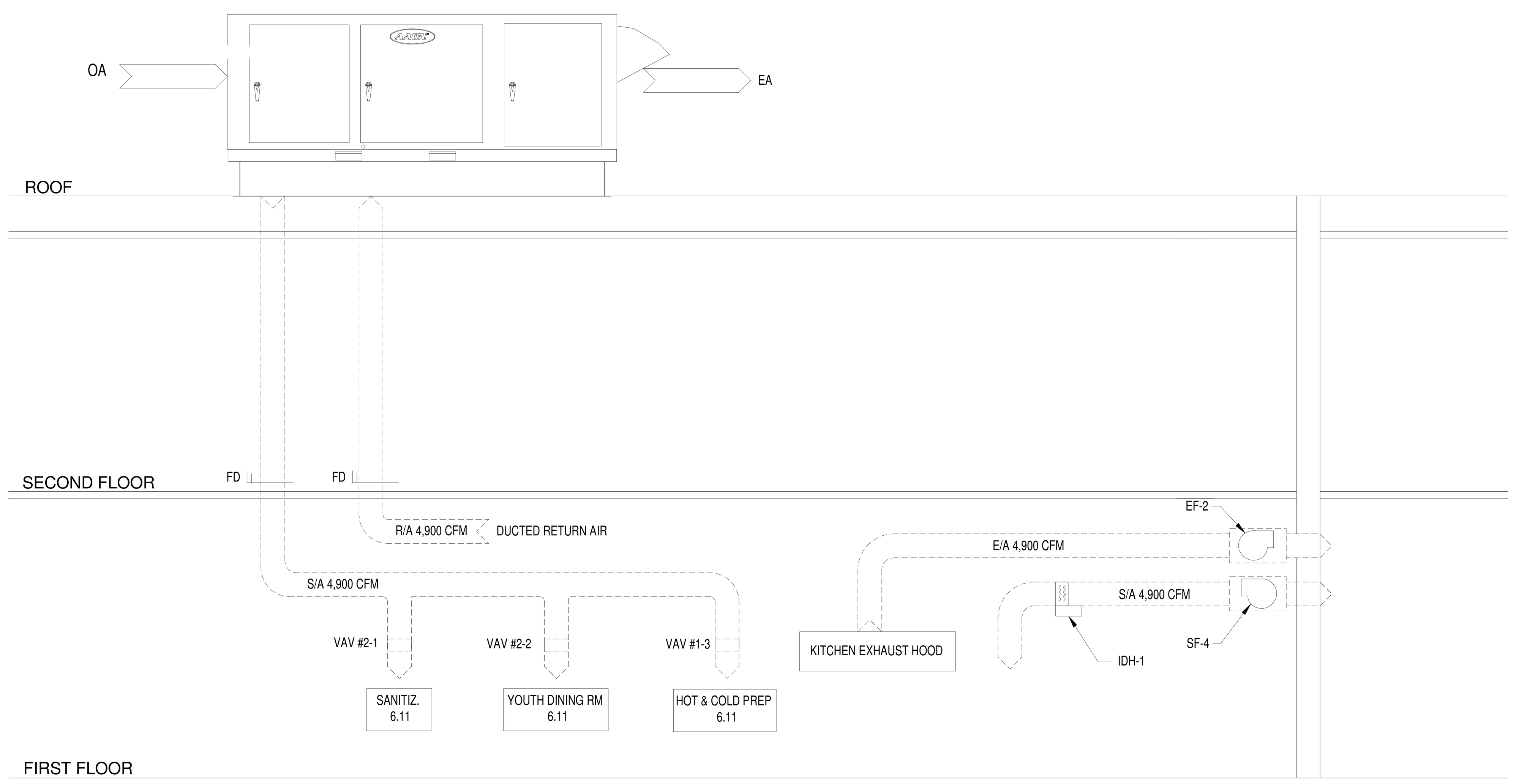
F E D C B A

AUTOMATIC TEMPERATURE CONTROL LEGEND

SYMBOL	ABBREV	DESCRIPTION
	SD-_	SMOKE DETECTOR
	D-_	CONTROL DAMPER
	T-_	SPACE TEMPERATURE SENSOR
	T-_	EQUIPMENT MOUNTED TEMPERATURE SENSOR
	DP-_	DIFFERENTIAL PRESSURE SWITCH
	HS-	GAS FURNACE COIL
	TS-	DX COIL
	SPS-	STATIC PRESSURE SENSOR
		DIFFERENTIAL PRESSURE SWITCH
		AIR FLOW MONITORING STATION
	N.C.	NORMALLY CLOSED
	N.O.	NORMALLY OPEN



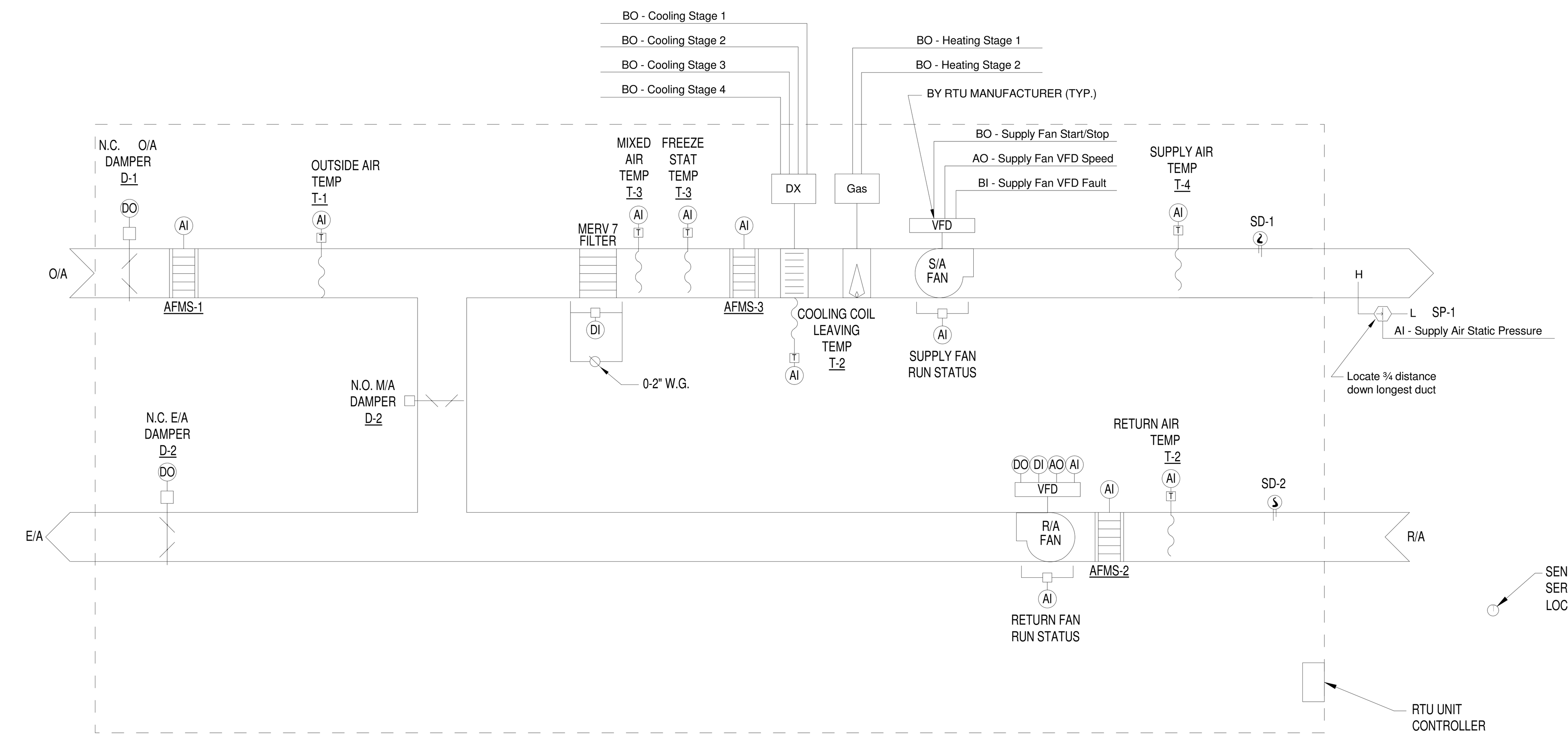
CONTROL DIAGRAM - EXHAUST FANS (EF-2 & SF-4)

SEQUENCE OF OPERATION

GENERAL

INTERLOCK ON/OFF OPERATION OF EXHAUST FAN EF-2 WITH SUPPLY AIR FAN SF-4.

EXHAUST/SUPPLY FANS SHALL BE ENERGIZED FROM LOCAL CONTROL SWITCH. SEE KITCHEN FLOOR PLAN FOR LOCATION. UPON ENERGIZING OF LOCAL SWITCH THE FAN SHALL BE ENERGIZED. THE FAN SHALL DE-ENERGIZED WHEN THE LOCAL CONTROL SWITCH IS DE-ENERGIZED. IF FAN FAILS TO START OR FAILS DURING OPERATION, A CRITICAL ALARM (VISUAL AND AUDIBLE) SHALL BE INDICATED AT THE EXHAUST HOOD .



CONTROL DIAGRAM - AHU-1

SEQUENCE OF OPERATION (SERVING KITCHEN AREA)

THE AIR HANDLING SYSTEM SHALL CONSISTS OF A SUPPLY AIR, OUTSIDE AIR, RELIEF AIR AND RETURN AIR SECTIONS WITH OUTSIDE AIR AND RELIEF AIR DAMPERS. A RETURN AIR SECTION WITH A RETURN FAN, AND A MERV 7 FILTER AND SUPPLY FAN.

THE SUPPLY AND RETURN FAN SHALL BE PROVIDED WITH VARIABLE FREQUENCY DRIVES TO MAINTAIN CONSTANT AIRFLOW TO THE SPACE. THE OUTSIDE AIR INLET, RETURN FAN AND SUPPLY FAN INLET ARE PROVIDED WITH AIRFLOW MEASURING DEVICES TO PROVIDE AIRFLOW READINGS TO THE CONTROLLER.

THE AIR HANDLING UNITS ARE SCHEDULED FOR ON/OFF MODES. THE CONTROL SEQUENCE AND SAFETY MODES ARE AS FOLLOWS (ALL SUGGESTED SET POINTS AND SETTINGS ARE ADJUSTABLE.).

GENERAL

THE UNITS IS STARTED/STOPPED AUTOMATICALLY WHENEVER ANY ZONE IS OCCUPIED. WHEN THE UNIT IS OFF, THE OUTSIDE AIR DAMPER (D-1) AND THE RETURN AIR DAMPER (D-2) SHALL BE FULLY CLOSED. VALVES AND DAMPERS OPERATORS SHALL BE DDC CONTROLLED W/ELECTRONIC OPERATORS.

AIR HANDLER SHALL BE IN:
HEATING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 54℉ OR LOWER (ADJUSTIBLE)
COOLING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 56℉ OR HIGHER (ADJUSTIBLE)

AIR HANDLING UNIT

THE SYSTEM SHOULD RUN CONTINUOUSLY TO PROVIDE SUPPLY AIR TO THE KITCHEN AREA. WHEN THE UNIT IS COMMANDED TO START, OUTSIDE AIR DAMPER (D-1) AND RETURN AIR DAMPER (D-2) OPEN FULLY, CLOSING THE DAMPER END SWITCH, ALLOWING THE SUPPLY AND RETURN FANS TO OPERATE. THE RETURN FAN SPEED MODULATES TO MAINTAIN RETURN AIRFLOW RATE MEASURED AT AIRFLOW MEASURING STATION (AFMS-2).

THE FANS ARE STARTED WITH THE VARIABLE FREQUENCY CONTROLLERS AT MINIMUM SPEED. THE RETURN FAN IS INTERLOCKED THROUGH SOFTWARE TO RUN WHEN THE SUPPLY FAN RUNS.

ALL THE CONTROL ALGORITHMS ARE ALLOWED TO FUNCTION WHEN THE UNIT STARTS.

ALL VALVES AND DAMPERS SHALL RETURN TO THEIR NORMAL POSITION WHENEVER THE UNIT IS NOT IN OPERATION. THE CONTROLLER SHALL MODULATES THE HEATING FURNACE STAGES TO MAINTAIN 40 F AS MEASURED BY TEMPERATURE SENSOR (T-1) WHENEVER THE UNIT IS NOT IN OPERATION.

TEMPERATURE CONTROL

TEMPERATURE SENSOR (T-5), THROUGH THE CONTROLLER SHALL MODULATES THE DX CYCLE AND GAS HEATING STAGES TO MAINTAIN DESIRED FAN DISCHARGE AIR TEMPERATURE SETPOINT AS FOLLOWS:

COOLING STAGES

1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE COOLING SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS GREATER THAN 60℉ (ADJ.).
   - AND THE ECONOMIZER (IF PRESENT) IS DISABLED OR FULLY OPEN.
   - AND THE SUPPLY FAN STATUS IS ON.
   - AND THE HEATING IS NOT ACTIVE.

3. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5℉ (ADJ.) GREATER THAN SETPOINT.

GAS HEATING STAGES

1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE HEATING SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS LESS THAN 65℉ (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.
   - AND THE COOLING (IF PRESENT) IS NOT ACTIVE.

3. THE HEATING STAGES SHALL RUN FOR FREEZE PROTECTION WHENEVER:
   - SUPPLY AIR TEMPERATURE DROPS FROM 40℉ TO 35℉ (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.

4. ALARMS SHALL BE PROVIDED AS FOLLOWS:
LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5℉ (ADJ.) LESS THAN SETPOINT.

ECONOMIZER:

1. THE CONTROLLER SHALL MEASURE THE MIXED AIR TEMPERATURE AND MODULATE THE ECONOMIZER DAMPERS IN SEQUENCE TO MAINTAIN A SETPOINT 2℉ (ADJ.) LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT. THE OUTSIDE AIR DAMPERS SHALL MAINTAIN A MINIMUM ADJUSTABLE POSITION OF 20% (ADJ.) OPEN WHENEVER OCCUPIED.

2. THE ECONOMIZER SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS LESS THAN 65℉ (ADJ.).
   - AND THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
   - AND THE SUPPLY FAN STATUS IS ON.

3. THE ECONOMIZER SHALL CLOSE WHENEVER:
   - MIXED AIR TEMPERATURE DROPS FROM 40℉ TO 35℉ (ADJ.).
   - OR THE FREEZESTAT (IF PRESENT) IS ON.
   - OR ON LOSS OF SUPPLY FAN STATUS.

4. THE OUTSIDE AND EXHAUST AIR DAMPERS SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN WHEN THE UNIT IS OFF. IF OPTIMAL START UP IS AVAILABLE THE MIXED AIR DAMPER SHALL OPERATE AS DESCRIBED IN THE OCCUPIED MODE EXCEPT THAT THE OUTSIDE AIR DAMPER SHALL MODULATE TO FULLY CLOSED.

MINIMUM OUTSIDE AIR VENTILATION - FIXED PERCENTAGE

1. THE OUTSIDE AIR DAMPERS SHALL MAINTAIN A MINIMUM ADJUSTABLE POSITION DURING BUILDING OCCUPIED HOURS AND BE CLOSED DURING UNOCCUPIED HOURS.

MIXED AIR TEMPERATURE

1. THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE THROUGH MIX AIR SENSOR (T-3) AND USE AS REQUIRED FOR ECONOMIZER CONTROL (IF PRESENT).

2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS GREATER THAN 90℉ (ADJ.).
   - LOW MIXED AIR TEMP: IF THE MIXED AIR TEMPERATURE IS LESS THAN 45℉ (ADJ.).

RETURN AIR TEMPERATURE

1. THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE THROUGH RETURN AIR SENSOR (T-2) AND USE AS REQUIRED FOR SETPOINT CONTROL OR ECONOMIZER CONTROL (IF PRESENT).

2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS GREATER THAN 90℉ (ADJ.).
   - LOW RETURN AIR TEMP: IF THE RETURN AIR TEMPERATURE IS LESS THAN 45℉ (ADJ.).

SUPPLY AIR TEMPERATURE:

1. THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE THROUGH SUPPLY AIR SENSOR (T-5).

2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 120℉ (ADJ.).
   - LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS LESS THAN 45℉ (ADJ.).

MORNING WARM-UP / COOL-DOWN

ONCE THE CONTROLLER IS OCCUPIED IT WILL ENTER THE MORNING WARM-UP MODE IF THE RETURN AIR TEMPERATURE IS BELOW THE RETURN AIR MORNING WARM-UP TARGET SETPOINT. IF THE RETURN AIR TEMPERATURE IS ABOVE THE RETURN AIR MORNING COOL-DOWN TARGET SETPOINT IT WILL ENTER THE COOL-DOWN MODE.

DURING MORNING WARM-UP, HEATING IS MODULATED TO MAINTAIN THE SUPPLY AIR TEMPERATURE AT THE SUPPLY AIR MORNING WARM-UP SETPOINT.

DURING MORNING COOL-DOWN, COOLING IS MODULATING AND/OR STAGED TO MAINTAIN THE SUPPLY AIR COOLING SETPOINT. THE OUTSIDE AIR DAMPER WILL REMAIN CLOSED AND THE EXHAUST FAN AND HEAT WHEEL IS OFF. THIS MODE WILL CONTINUE UNTIL THE RETURN AIR TARGET SETPOINT IS REACHED OR THE TWO-HOUR TIMER EXPIRES.

DEHUMIDIFICATION MODE

THE DEHUMIDIFICATION MODE WILL BE ENABLED WHEN THE RETURN AIR DEWPOINT RISES ABOVE THE DEHUMIDIFICATION SETPOINT PLUS HYSTERESIS. DURING THE DEHUMIDIFICATION MODE, THE DDC CONTROLLER WILL MODULATE AND/OR STAGE COOLING TO MAINTAIN THE RETURN AIR DEWPOINT AT THE DEHUMIDIFICATION SETPOINT. THE DEHUMIDIFICATION MODE WILL REMAIN ACTIVE UNTIL THE RETURN AIR DEWPOINT FALLS BELOW THE RETURN AIR DEHUMIDIFICATION SETPOINT MINUS HYSTERESIS. REHEAT WILL BE MODULATED AND/OR STAGED TO MAINTAIN THE SUPPLY AIR COOLING SETPOINT MINUS 1℉.

AIR FLOW CONTROL

MINIMUM OUTSIDE AND RETURN AIRFLOW IS MEASURED BY AIRFLOW MEASURING STATION AFMS-1 AND AFMS-2 RESPECTIVELY LOCATED IN THE OUTSIDE AND RETURN AIR INTAKE. AFMS-3 AND CONTROLLER MODULATES THE SUPPLY FAN VARIABLE FREQUENCY DRIVE TO MAINTAIN AIRFLOW SETPOINT.

FILTER ALARM

THE OUTSIDE AIR FILTRATION SYSTEM CONSISTS OF A MERV 7 FILTER. A PRESSURE TRANSMITTERS SHALL BE PROVIDED FOR THE FILTER.

THE CONTROLLER OPERATES A MAINTENANCE ALARM WHEN THE PRESSURE DROP ACROSS THE FILTER BEING MONITORED EXCEEDS THE MANUFACTURER MAXIMUM RECOMMENDED PRESSURE DROP FOR THE MEDIA PROVIDED AS MEASURED BY THE ANALOG PRESSURE TRANSMITTER.

FREEZE PROTECTION

FREEZESTAT SENSOR (T-4) SHALL STOPS THE OUTSIDE AIR FAN AND SENDS AN ALARM TO THE CONTROLLER WHEN IT SENSES 38 ℉ (ADJUSTABLE) AIR ENTERING THE COOLING COIL.

SMOKE DETECTION

A SUPPLY AND RETURN DUCT SMOKE DETECTOR (SD-1 AND SD-2) I SHALL BE PROVIDED IN THE AIR HANDLING UNIT SUPPLY AND RETURN SYSTEM. WHENEVER DUCT A SMOKE DETECTOR (HARDWIRED) SENSES PRODUCTS OF COMBUSTION, RTU-1 SHALL SHUT DOWN AND AN ALARM SHALL BE SIGNALLED TO THE FIRE ALARM SYSTEM AND AND THE CONTROLLER. THE SMOKE DETECTOR AND THE FIRE ALARM CONTROL PANEL MUST BE MANUALLY RESET BEFORE SYSTEM CAN RESTART. CONNECTIONS TO PANEL RTU-1 CONTROLLER SHALL BE MADE BY THE ATC CONTRACTOR AND CONNECTIONS TO THE FIRE ALARM SYSTEM SHALL BE MADE BY THE FIRE ALARM CONTRACTOR.

HIGH DUCT STATIC PRESSURE DETECTION

STATIC PRESSURE SWITCHES SP-1 AND SP-2 IN THE SUPPLY AND RETURN DUCTS SET TO STOP THE SUPPLY AND RETURN AND EXHAUST FANS IF THE DUCT PRESSURE EXCEEDS THE PRESSURE CLASSIFICATION OF THE DUCTWORK.

AUTOMATIC SHUTDOWN/RESTART

WHEN THE AIR HANDLING UNIT IS SHUT DOWN ON A POWER FAILURE AND THE POWER IS RESTORED, IT IS TO BE RESTARTED THROUGH A SEQUENCE PROGRAM TO PREVENT OVERLOADING OF THE ELECTRICAL DISTRIBUTION SYSTEM.

IF ANY SAFETY DEVICE SHUTS THE UNIT DOWN IT IS TO BE MANUALLY RESET.

EMERGENCY CONSTANT SPEED OPERATION

UPON FAILURE OF THE VFD THE FANS MAY BE STARTED/STOPPED MANUALLY THROUGH THE BYPASS STARTER AND THE FANS SHALL OPERATE AT FULL SPEED.

FANS STATUS

THE CONTROLLER SYSTEM SHALL USE A DIFFERENTIAL PRESSURE SENSOR INSTALLED ACROSS THE SUPPLY FAN AND RETURN FAN TO CONFIRM THE FANS ARE IN THE DESIRED STATE (I.E. ON OR OFF) AND GENERATES AN ALARM IF STATUS DEVIATES FROM THE CONTROLLER START/STOP CONTROL.

ROOFTOP (RTU -2) SYSTEM INPUT/OUTPUT POINT SUMMARY

System Name:	ANALOG INPUTS				ANALOG OUT		DIGITAL INPUTS			DIGITAL OUT	SYSTEM FEATURES ALARMS					SYSTEM FEATURES PROGRAMS				
AIR-HANDLING UNIT (AHU-2)	TEMP (DRY BULB)	TEMP (WET BULB)	PRESSURE	VOLUME	CURRENT	RESET CAPABILITY	PRESSURE SWITCH	SWITCH CLOSURE	CURRENT SENSOR	CONTROL RELAY	EQUIPMENT STATUS	MAINTENANCE	CONTROL RELAY	HIGH LIMIT	LOW LIMIT	START/STOP	POINT HISTORY	ECONOMIZER	TEMP. CONTROL	SUPPLY AIR RESET
POINT DESCRIPTION																				
SUPPLY AIR	■		■																	
RETURN AIR	■	■																		
MIXED AIR	■				■															
OUTDOOR AIR	■	■		■	■													■		
RELIEF AIR					■															
SUPPLY AIR FAN					■	■			■							■				■
RETURN AIR FAN					■	■			■											
HEATING FURNACE					■										■					
COOLING COIL					■			■												
SMOKE DETECTOR (TYP OF 2)								■			■									
—																				

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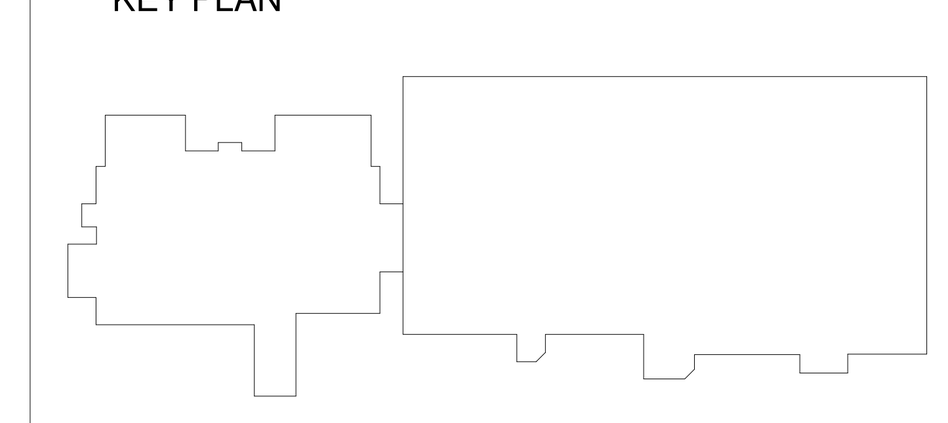
KEY PLAN



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DATE	Issue Date

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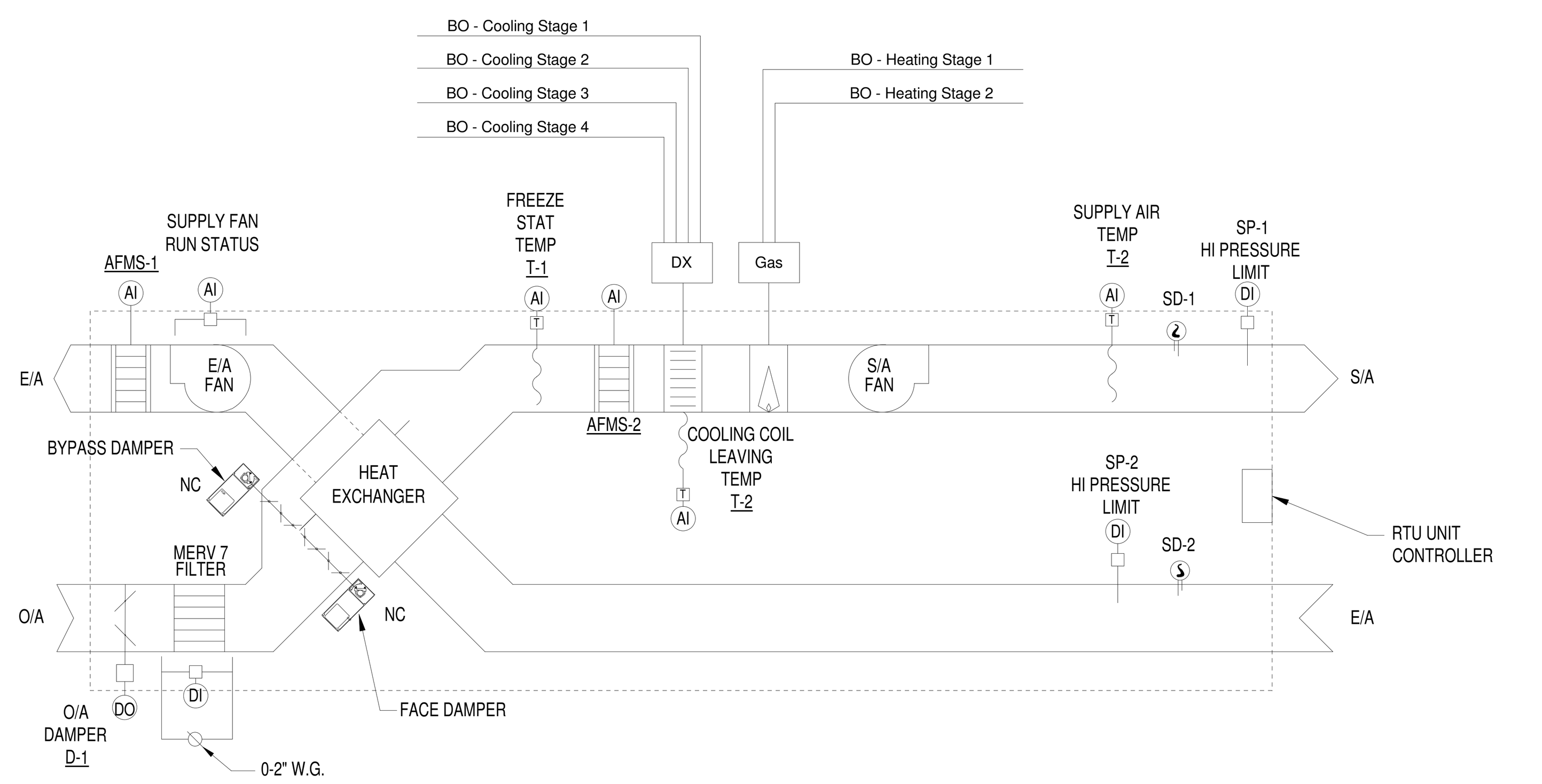
MECHANICAL - AUTOMATIC CONTROL DIAGRAMS

PSA-DEWBERRY PROJECT NO. Project Number
DPSCS CONTRACT NO. KT-000-150-C01

MO181

SHEET NO.



CONTROL DIAGRAM - AHU-3

SEQUENCE OF OPERATION (SERVING SECOND FLOOR OUTDOOR AIR)

ROOF TOP UNIT (RTU-2) SHALL BE PROVIDED WITH A DDC CONTROLLER WHICH SHALL MONITOR AND CONTROL THE UNIT IN A STAND-ALONE. THE CONTROLLER SHALL BE FACTORY PROGRAMMED, MOUNTED, AND TESTED. CONTROLLER SHALL HAVE A USER TERMINAL WITH LCD READOUT FOR CHANGING SET POINTS AND MONITORING UNIT OPERATION.

THE BUILDING AUTOMATION SYSTEM SHALL INTERFACE INTO FACTORY MOUNTED CONTROLS TO ALLOW FOR CHANGING OF SETPOINTS, MONITORING OF ALARMS, AND CHANGING FROM OCCUPIED TO UNOCCUPIED MODES.

THE ROOFTOP UNIT ARE SCHEDULED FOR ON/OFF MODES. THE CONTROL SEQUENCE AND SAFETY MODES ARE AS FOLLOWS (ALL SUGGESTED SET POINTS AND SETTINGS ARE ADJUSTABLE.).

GENERAL

THE UNIT IS STARTED/STOPPED AUTOMATICALLY WHENEVER ANY ZONE IS OCCUPIED. WHEN THE UNIT IS OFF, THE OUTSIDE AIR DAMPER (D-1) AND THE RETURN AIR DAMPER (D-2) SHALL BE FULLY CLOSED. VALVES AND DAMPERS OPERATORS SHALL BE DDC CONTROLLED W/ELECTRONIC OPERATORS.

AIR HANDLER SHALL BE IN:
HEATING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 54°F OR LOWER (ADJUSTIBLE)
COOLING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 56°F OR HIGHER (ADJUSTIBLE)

AIR HANDLING UNIT

THE SYSTEM SHOULD RUN CONTINUOUSLY TO PROVIDE SUPPLY AIR. WHEN THE UNIT IS COMMANDED TO START, OUTSIDE AIR DAMPER (D-1) SHALL OPEN FULLY, CLOSING THE DAMPER END SWITCH, ALLOWING THE SUPPLY AND EXHAUST AIR FANS TO OPERATE.

ALL THE CONTROL ALGORITHMS ARE ALLOWED TO FUNCTION WHEN THE UNIT STARTS.

ALL VALVES AND DAMPERS SHALL RETURN TO THEIR NORMAL POSITION WHENEVER THE UNIT IS NOT IN OPERATION. THE CONTROLLER SHALL MODULATES THE HEATING FURNACE STAGES TO MAINTAIN 40 F AS MEASURED BY TEMPERATURE SENSOR (T-1) WHENEVER THE UNIT IS NOT IN OPERATION.

TEMPERATURE CONTROL

TEMPERATURE SENSOR (T-5), THROUGH THE CONTROLLER SHALL MODULATES THE DX CYCLE AND GAS HEATING STAGES TO MAINTAIN DESIRED FAN DISCHARGE AIR TEMPERATURE SETPOINT AS FOLLOWS:

COOLING STAGES

1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE COOLING SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS GREATER THAN 60°F (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.
   - AND THE HEATING IS NOT ACTIVE.

3. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) GREATER THAN SETPOINT.

GAS HEATING STAGES

1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE HEATING SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.
   - AND THE COOLING (IF PRESENT) IS NOT ACTIVE.

3. THE HEATING STAGES SHALL RUN FOR FREEZE PROTECTION WHENEVER:
   - SUPPLY AIR TEMPERATURE DROPS FROM 40°F TO 35°F (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.

4. ALARMS SHALL BE PROVIDED AS FOLLOWS:
LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) LESS THAN SETPOINT.

SUPPLY AIR TEMPERATURE:

1. THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE THROUGH SUPPLY AIR SENSOR (T-3).

2. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
   - LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS LESS THAN 45°F (ADJ.).

AIR FLOW CONTROL

MINIMUM OUTSIDE AND EXHAUST AIRFLOW SHALL BE MEASURED BY AIRFLOW MEASURING STATION AFMS-1 AND AFMS-2 RESPECTIVELY LOCATED IN THE OUTSIDE AND EXHAUST AIR INTAKE.

FILTER ALARM

THE OUTSIDE AIR FILTRATION SYSTEM CONSISTS OF A MERV 7 FILTER. A PRESSURE TRANSMITTERS SHALL BE PROVIDED FOR THE FILTER.

THE CONTROLLER OPERATES A MAINTENANCE ALARM WHEN THE PRESSURE DROP ACROSS THE FILTER BEING MONITORED EXCEEDS THE MANUFACTURER MAXIMUM RECOMMENDED PRESSURE DROP FOR THE MEDIA PROVIDED AS MEASURED BY THE ANALOG PRESSURE TRANSMITTER.

FREEZE PROTECTION

FREEZESTAT SENSOR (T-1) SHALL STOPS THE OUTSIDE AIR FAN AND SENDS AN ALARM TO THE CONTROLLER WHEN IT SENSES 38 °F (ADJUSTABLE) AIR ENTERING THE COOLING COIL.

SMOKE DETECTION

A SUPPLY AND RETURN DUCT SMOKE DETECTOR (SD-1 AND SD-2) I SHALL BE PROVIDED IN THE AIR HANDLING UNIT SUPPLY AND RETURN SYSTEM. WHENEVER DUCT A SMOKE DETECTOR (HARDWIRED) SENSES PRODUCTS OF COMBUSTION, RTU-3 SHALL SHUT DOWN AND AN ALARM SHALL BE SIGNALLED TO THE FIRE ALARM SYSTEM AND AND THE CONTROLLER. THE SMOKE DETECTOR AND THE FIRE ALARM CONTROL PANEL MUST BE MANUALLY RESET BEFORE SYSTEM CAN RESTART. CONNECTIONS TO PANEL RTU-1 CONTROLLER SHALL BE MADE BY THE ATC CONTRACTOR AND CONNECTIONS TO THE FIRE ALARM SYSTEM SHALL BE MADE BY THE FIRE ALARM CONTRACTOR.

HIGH DUCT STATIC PRESSURE DETECTION

STATIC PRESSURE SWITCHES SP-1 AND SP-2 IN THE SUPPLY AND EXHAUST DUCTS SET TO STOP THE SUPPLY AND EXHAUST FANS IF THE DUCT PRESSURE EXCEEDS THE PRESSURE CLASSIFICATION OF THE DUCTWORK.

AUTOMATIC SHUTDOWN/RESTART

WHEN THE AIR HANDLING UNIT IS SHUT DOWN ON A POWER FAILURE AND THE POWER IS RESTORED, IT IS TO BE RESTARTED THROUGH A SEQUENCE PROGRAM TO PREVENT OVERLOADING OF THE ELECTRICAL DISTRIBUTION SYSTEM.

IF ANY SAFETY DEVICE SHUTS THE UNIT DOWN IT IS TO BE MANUALLY RESET.

FANS STATUS

THE CONTROLLER SYSTEM SHALL USE A DIFFERENTIAL PRESSURE SENSOR INSTALLED ACROSS THE SUPPLY FAN AND EXHAUST FAN TO CONFIRM THE FANS ARE IN THE DESIRED STATE (I.E. ON OR OFF) AND GENERATES AN ALARM IF STATUS DEVIATES FROM THE CONTROLLER START/STOP CONTROL.

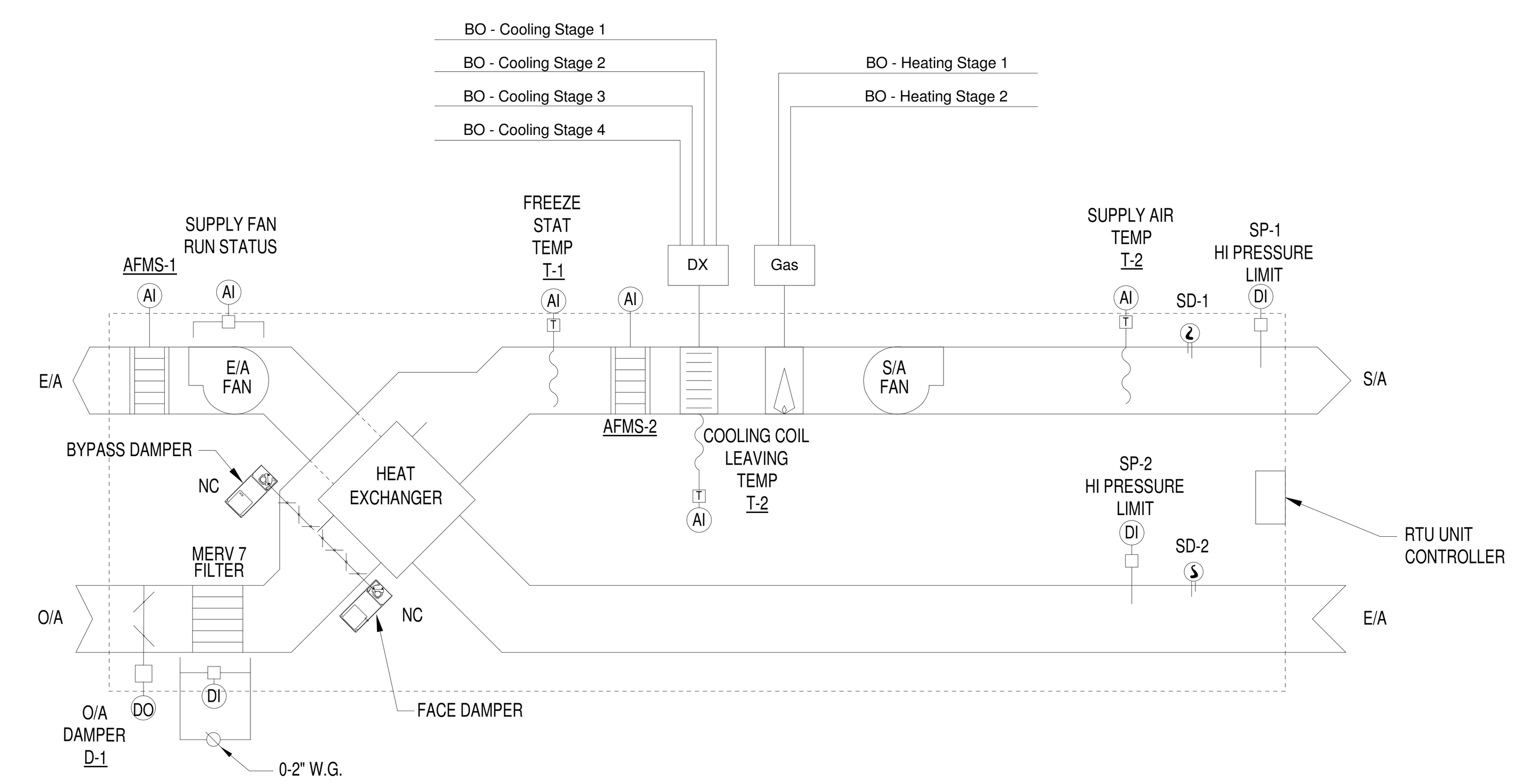
AUTOMATIC TEMPERATURE CONTROL LEGEND

SYMBOL	ABBREV	DESCRIPTION
	SD-_	SMOKE DETECTOR
	D-_	CONTROL DAMPER
	T-_	SPACE TEMPERATURE SENSOR
	T-_	EQUIPMENT MOUNTED TEMPERATURE SENSOR
	DP-_	DIFFERENTIAL PRESSURE SWITCH
	HS-	GAS FURNACE COIL
	TS-	DX COIL
	SPS-	STATIC PRESSURE SENSOR
		DIFFERENTIAL PRESSURE SWITCH
		AIR FLOW MONITORING STATION
	N.C.	NORMALLY CLOSED
	N.O.	NORMALLY OPEN

SYSTEM INPUT / OUTPUT POINT SUMMARY

System Name: ERU-4

POINT DESCRIPTION	ANALOG INPUTS: TEMPERATURE	ANALOG INPUTS: PARTS PER MILLION	ANALOG INPUTS: AIRFLOW	ANALOG OUT: CURRENT	ANALOG OUT: RESET CAPABILITY	DIGITAL INPUTS: MONITOR SYSTEM	DIGITAL INPUTS: SWITCH CLOSURE	DIGITAL INPUTS: CURRENT SENSOR	DIGITAL OUT: CONTROL SYSTEM	DIGITAL OUT: ON-OFF	ALARMS: EQUIPMENT STATUS	ALARMS: MAINTENANCE	ALARMS: CRITICAL	ALARMS: HIGH LIMIT	ALARMS: LOW LIMIT	PROGRAMS: START/STOP	PROGRAMS: POINT HISTORY	PROGRAMS: RUNTIME	PROGRAMS: OUTPUT TO EQUIPMENT	PROGRAMS: INPUT FROM EQUIP.
SUPPLY AIR TEMPERATURE																				X
SUPPLY AIR DEWPOINT																				X
OA FACE/BYPASS DAMPER POSIT.																				X
EXHAUST AIR TEMPERATURE																				X
RETURN AIR DAMPER POSITION																				X
OUTSIDE AIR TEMPERATURE																				X
SUPPLY FAN																				X
EXHAUST FAN																				X
GENERAL ALARM																				X
OCCUPIED/UNOCCUPIED																			X	
ISOLATION VALVE END SWITCH							X												X	
ISOLATION VALVE V-1										X										X
FREEZE PROTECTION PUMP ERUP										X	X									
SMOKE DETECTOR (TYP OF 2)							X						X							
SUPPLY AIRFLOW																				X
EXHAUST AIRFLOW																				X
CO2 SENSOR		X																	X	



CONTROL DIAGRAM - RTU-4

SEQUENCE OF OPERATION (SERVING SECOND FLOOR OUTDOOR AIR)

ROOF TOP UNIT (RTU-2) SHALL BE PROVIDED WITH A DDC CONTROLLER WHICH SHALL MONITOR AND CONTROL THE UNIT IN A STAND-ALONE. THE CONTROLLER SHALL BE FACTORY PROGRAMMED, MOUNTED, AND TESTED. CONTROLLER SHALL HAVE A USER TERMINAL WITH LCD READOUT FOR CHANGING SET POINTS AND MONITORING UNIT OPERATION.

THE BUILDING AUTOMATION SYSTEM SHALL INTERFACE INTO FACTORY MOUNTED CONTROLS TO ALLOW FOR CHANGING OF SETPOINTS, MONITORING OF ALARMS, AND CHANGING FROM OCCUPIED TO UNOCCUPIED MODES.

THE ROOFTOP UNIT ARE SCHEDULED FOR ON/OFF MODES. THE CONTROL SEQUENCE AND SAFETY MODES ARE AS FOLLOWS (ALL SUGGESTED SET POINTS AND SETTINGS ARE ADJUSTABLE.).

GENERAL

THE UNIT IS STARTED/STOPPED AUTOMATICALLY WHENEVER ANY ZONE IS OCCUPIED. WHEN THE UNIT IS OFF, THE OUTSIDE AIR DAMPER (D-1) AND THE RETURN AIR DAMPER (D-2) SHALL BE FULLY CLOSED. VALVES AND DAMPERS OPERATORS SHALL BE DDC CONTROLLED W/ELECTRONIC OPERATORS.

AIR HANDLER SHALL BE IN:
HEATING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 54°F OR LOWER (ADJUSTIBLE)
COOLING MODE W/ MIXED AIR TEMPERATURE (T-2) OF 56°F OR HIGHER (ADJUSTIBLE)

AIR HANDLING UNIT

THE SYSTEM SHOULD RUN CONTINUOUSLY TO PROVIDE SUPPLY AIR. WHEN THE UNIT IS COMMANDED TO START, OUTSIDE AIR DAMPER (D-1) SHALL OPEN FULLY, CLOSING THE DAMPER END SWITCH, ALLOWING THE SUPPLY AND EXHAUST AIR FANS TO OPERATE.

ALL THE CONTROL ALGORITHMS ARE ALLOWED TO FUNCTION WHEN THE UNIT STARTS.

ALL VALVES AND DAMPERS SHALL RETURN TO THEIR NORMAL POSITION WHENEVER THE UNIT IS NOT IN OPERATION. THE CONTROLLER SHALL MODULATES THE HEATING FURNACE STAGES TO MAINTAIN 40 F AS MEASURED BY TEMPERATURE SENSOR (T-1) WHENEVER THE UNIT IS NOT IN OPERATION.

TEMPERATURE CONTROL

TEMPERATURE SENSOR (T-5), THROUGH THE CONTROLLER SHALL MODULATES THE DX CYCLE AND GAS HEATING STAGES TO MAINTAIN DESIRED FAN DISCHARGE AIR TEMPERATURE SETPOINT AS FOLLOWS:

COOLING STAGES

1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE COOLING TO MAINTAIN ITS COOLING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE COOLING SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS GREATER THAN 60°F (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.
   - AND THE HEATING IS NOT ACTIVE.

3. ALARMS SHALL BE PROVIDED AS FOLLOWS:
   - HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) GREATER THAN SETPOINT.

GAS HEATING STAGES

1. THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND STAGE THE HEATING TO MAINTAIN ITS HEATING SETPOINT. TO PREVENT SHORT CYCLING, THERE SHALL BE A USER DEFINABLE (ADJ.) DELAY BETWEEN STAGES, AND EACH STAGE SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

2. THE HEATING SHALL BE ENABLED WHENEVER:
   - OUTSIDE AIR TEMPERATURE IS LESS THAN 65°F (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.
   - AND THE COOLING (IF PRESENT) IS NOT ACTIVE.

3. THE HEATING STAGES SHALL RUN FOR FREEZE PROTECTION WHENEVER:
   - SUPPLY AIR TEMPERATURE DROPS FROM 40°F TO 35°F (ADJ.).
   - AND THE SUPPLY FAN STATUS IS ON.

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SUPPLY AIR TEMPERATURE:

1. THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE THROUGH SUPPLY AIR SENSOR (T-3).

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   - HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS GREATER THAN 120°F (ADJ.).
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FREEZE PROTECTION

FREEZESTAT SENSOR (T-1) SHALL STOPS THE OUTSIDE AIR FAN AND SENDS AN ALARM TO THE CONTROLLER WHEN IT SENSES 38 °F (ADJUSTABLE) AIR ENTERING THE COOLING COIL.

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SMOKE CONTROL

UPON ACTIVATION OF THE SMOKE CONTROL SYSTEM, RTU-4 CONTROLLER SHALL SHUT DOWN THE SUPPLY AIR FAN. THE UNIT EXHAUST AIR FAN SHALL CONTINUE TO OPERATE UNTIL THE UNIT IS MANUALLY RESET.

HIGH DUCT STATIC PRESSURE DETECTION

STATIC PRESSURE SWITCHES SP-1 AND SP-2 IN THE SUPPLY AND EXHAUST DUCTS SET TO STOP THE SUPPLY AND EXHAUST FANS IF THE DUCT PRESSURE EXCEEDS THE PRESSURE CLASSIFICATION OF THE DUCTWORK.

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SYSTEM INPUT / OUTPUT POINT SUMMARY

System Name: ERU-4

POINT DESCRIPTION	ANALOG INPUTS: TEMPERATURE	ANALOG INPUTS: PARTS PER MILLION	ANALOG INPUTS: AIRFLOW	ANALOG OUT: CURRENT	ANALOG OUT: RESET CAPABILITY	DIGITAL INPUTS: MONITOR SYSTEM	DIGITAL INPUTS: SWITCH CLOSURE	DIGITAL INPUTS: CURRENT SENSOR	DIGITAL OUT: CONTROL SYSTEM	DIGITAL OUT: ON-OFF	ALARMS: EQUIPMENT STATUS	ALARMS: MAINTENANCE	ALARMS: CRITICAL	ALARMS: HIGH LIMIT	ALARMS: LOW LIMIT	PROGRAMS: START/STOP	PROGRAMS: POINT HISTORY	PROGRAMS: RUNTIME	PROGRAMS: OUTPUT TO EQUIPMENT	PROGRAMS: INPUT FROM EQUIP.
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SUPPLY AIR DEWPOINT																				X
OA FACE/BYPASS DAMPER POSIT.																				X
EXHAUST AIR TEMPERATURE																				X
RETURN AIR DAMPER POSITION																				X
OUTSIDE AIR TEMPERATURE																				X
SUPPLY FAN																				X
EXHAUST FAN																				X
GENERAL ALARM																				X
OCCUPIED/UNOCCUPIED																			X	
ISOLATION VALVE END SWITCH							X												X	
ISOLATION VALVE V-1										X										X
FREEZE PROTECTION PUMP ERUP										X	X									
SMOKE DETECTOR (TYP OF 2)							X						X							
SUPPLY AIRFLOW																				X
EXHAUST AIRFLOW																				X
CO2 SENSOR		X																	X	

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PENZA BAILEY ARCHITECTS

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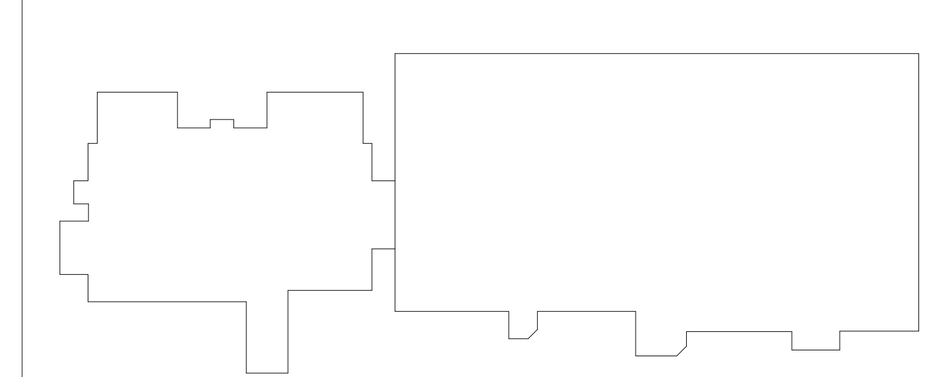
STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 43481
EXPIRATION DATE: 05/15/2015

STATE OF MARYLAND
DEXTER W. O'NEIL
43481
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	Issue Date

TITLE

MECHANICAL - AUTOMATIC CONTROL DIAGRAMS

PSA-DEWBERRY PROJECT NO.	Project Number
DPSCS CONTRACT NO.	KT-000-150-C01

MO182

SHEET NO.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	RECESSED 2'X2' LIGHT FIXTURE
	PENDANT-MOUNTED LIGHT FIXTURE
	SURFACE-MOUNTED MAXIMUN SECURITY 1'X4' LIGHT FIXTURE
	RECESSED MAXIMUN SECURITY 2'X2' LIGHT FIXTURE
	UNSWITCHED EMERGENCY EGRESS LIGHT FIXTURE
	RECESSED / SURFACE-MOUNTED MAXIMUN SECURITY 1'X1' LIGHT FIXTURE
	SURFACE-MOUNTED SCONCE
	PENDANT-MOUNTED HIGH BAY LIGHT FIXTURE
	WALL-MOUNTED LIGHT FIXTURE
	EXIT LIGHT WITH LIGHTED FACE AND CHEVRONS AS INDICATED
$	SINGLE-POLE TOGGLE SWITCH; MH=48"AFF
$3	THREEWAY TOGGLE SWITCH; MH=48"AFF
$4	FOURWAY TOGGLE SWITCH; MH=48"AFF
$O	OCCUPANCY SWITCH; MH=48"AFF
$K	KEY-OPERATED TOGGLE SWITCH; MH=48"AFF
$3K	KEY-OPERATED THREEWAY TOGGLE SWITCH; MH=48"AFF
$4K	KEY-OPERATED FOURWAY TOGGLE SWITCH; MH=48"AFF
$V	LOW VOLTAGE, MOMENTARY CONTACT SWITCH; MH=48"AFF
OS	CEILING-MOUNTED, DUAL TECHNOLOGY, OCCUPANCY SENSOR / RELAY.
DH	CEILING-MOUNTED, DAYLIGHT HARVESTING SENSOR / RELAY.
	DUPLEX RECEPTACLE; MH=24"AFF
GFIC	GROUND-FAULT CIRCUIT INTERRUPTER TYPE DUPLEX RECEPTACLE; MH=24"AFF
T	TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE; MH=24"AFF
WP	DUPLEX RECEPTACLE WITH WEATHER-PROOF COVER; MH=24"AFF
	ELECTRICAL DISTRIBUTION PANEL
	277/480VAC BRANCH CIRCUIT PANELBOARD
	120/208VAC BRANCH CIRCUIT PANELBOARD
T	TRANSFORMER
	DISCONNECT SWITCH

SYMBOL	DESCRIPTION
TV	TV OUTLET; MH=84"AFF; 3/4" C TO CABLE TRAY.
	.TELEPHONE OUTLET; MH=24"AFF; 3/4" C TO CABLE TRAY
	2 TELEPHONE / 2 DATA OUTLET; MH=24"AFF; PROVIDE DOUBLE GANG BOX & 1" C TO CABLE TRAY.
W	WALL-MOUNTED TELEPHONE OUTLET; MH=54"AFF, 3/4" C TO CABLE TRAY.
	4 DATA OUTLET; MH=24"AFF; PROVIDE DOUBLE GANG BOX & 1" C TO CABLE TRAY.
IP	IMMATE TELEPHONE OUTLET; MH=54"AFF; 3/4" C TO CABLE TRAY.
PS	NURSE CALL SYSTEM PATIENT STATION; MH=54"AFF
ES	NURSE CALL EMERGENCY STATION; 48"AFF
MS	NURSE CALL DESK-MOUNTED MASTER STATION AND OUTLET; MH=24"AFF
	NURSE CALL DOME LIGHT
R	LOW VOLTAGE LIGHTING RELAY
SC	SIDECOM OUTLET; MH=24"AFF
A/V	SPECIAL 3 GANG BOX, 2 1/4" DEEP A/V OUTLET; MH=24"AFF; SEE SPEC.
WG	DENOTES WIRE GUARD
A/V Cd RATING	FIRE ALARM SYSTEM WALL-MOUNTED COMBINATION SPEAKER / STROBE; MH=80"AFF
V Cd RATING	FIRE ALARM SYSTEM WALL-MOUNTED STROBE; MH=80"AFF
F	FIRE ALARM SYSTEM MANUAL PULL STSTION; MH=48"AFF
F K	FIRE ALARM SYSTEM MANUAL PULL STSTION KEY TYPE; MH=48"AFF
FS	FIRE ALARM SYSTEM SPRINKLER FLOW SWITCH
VPS	FIRE ALARM SYSTEM SPRINKLER VALVE POSITION SWITCH
H	FIRE ALARM SYSTEM MAGNETIC DOOR HOLD OPEN
	FIRE ALARM SYSTEM HEAT DETECTOR
	FIRE ALARM SYSTEM SMOKE DETECTOR
D	FIRE ALARM SYSTEM DUCT SMOKE DETECTOR
	EXISTING
	NEW
	RELOCATED
	REMOVED

GENERAL NOTES:

1. ALL SPECIAL SYSTEM WIRING SHALL BE IN CONDUIT.
2. ALL RECEPTACLE & SWITCHES IN INMATE AREAS SHALL BE TAMPER PROOF & SECURITY TYPE FACE PLATE WITH 4 TEMPER PROOF SCREWS.
3. ALL SPARE CONDUITS SHALL HAVE PULL STRINGS.
4. ALL SCREWS IN INMATE AREAS SHALL BE TAMPER PROOF.
5. ALL BEDROOM SWITCHES SHALL BE INSTITUTIONAL GRADE OF THE TOGGLE TYPE.
6. FOR ALL 15A AND 20A SINGLE PHASE 120V CIRCUITS, USE #10 AWG CONDUCTORS FOR CONDUCTOR LENGTHS OF 75' TO 120' AND #8 AWG CONDUCTORS FOR CONDUCTOR LENGTHS OF 120' TO 200'. FOR ALL 15A AND 20A SINGLE PHASE 277V CIRCUITS, USE # 10 AWG CONDUCTORS FOR CONDUCTOR LENGTHS OF 150' TO 250' AND #8 AWG CONDUCTORS FOR CONDUCTOR LENGTHS OF WIRE FOR LENGTHS 250' TO 450' .

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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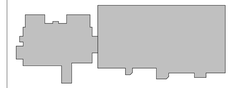
LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · MICHAEL BRYAN · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

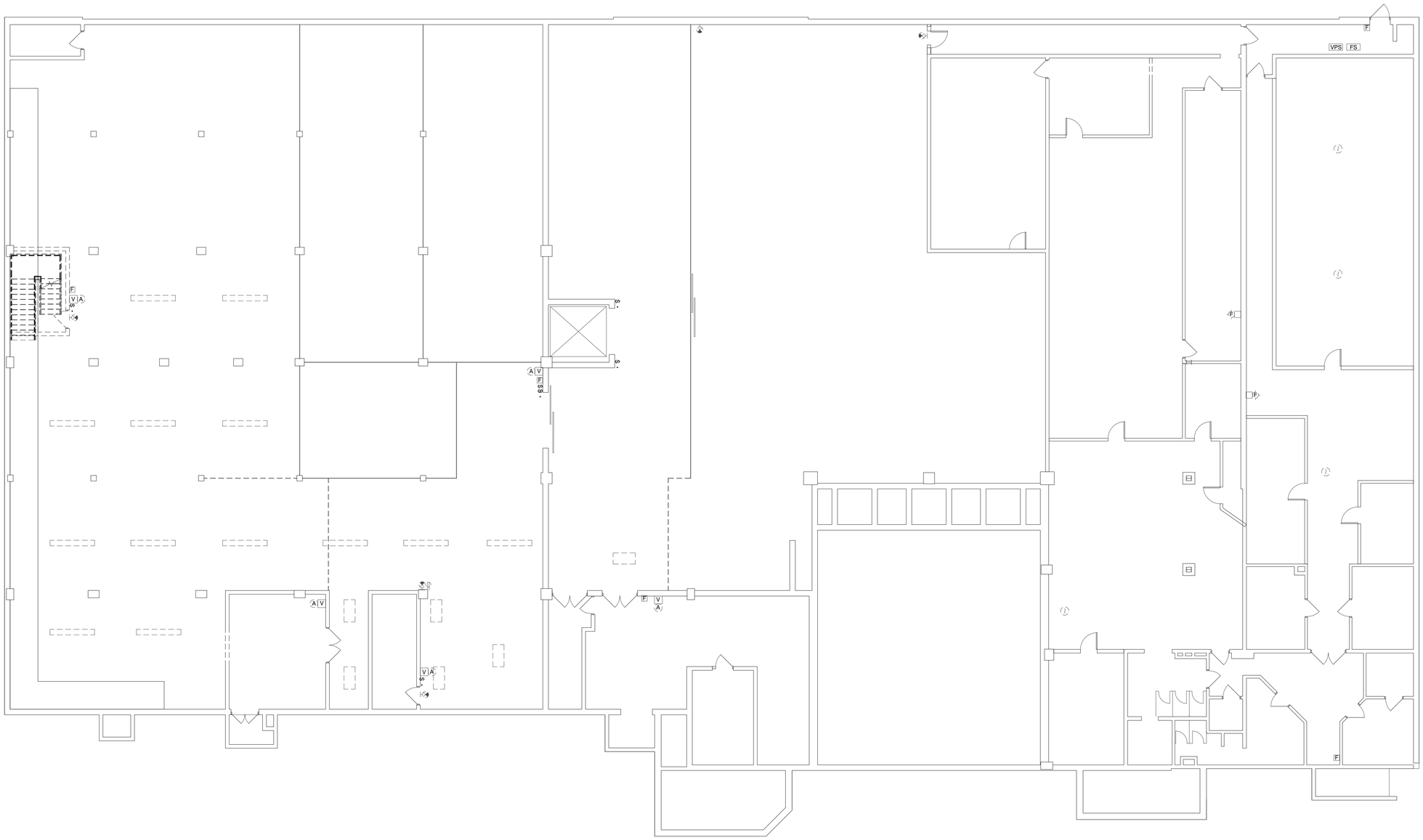
TITLE

ELECTRICAL LEGEND

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EG000

SHEET NO.



1 BASEMENT LEVEL PLAN - DEMOLITION
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

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DOMINIQUE SIDHU
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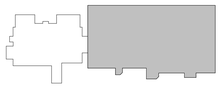


SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

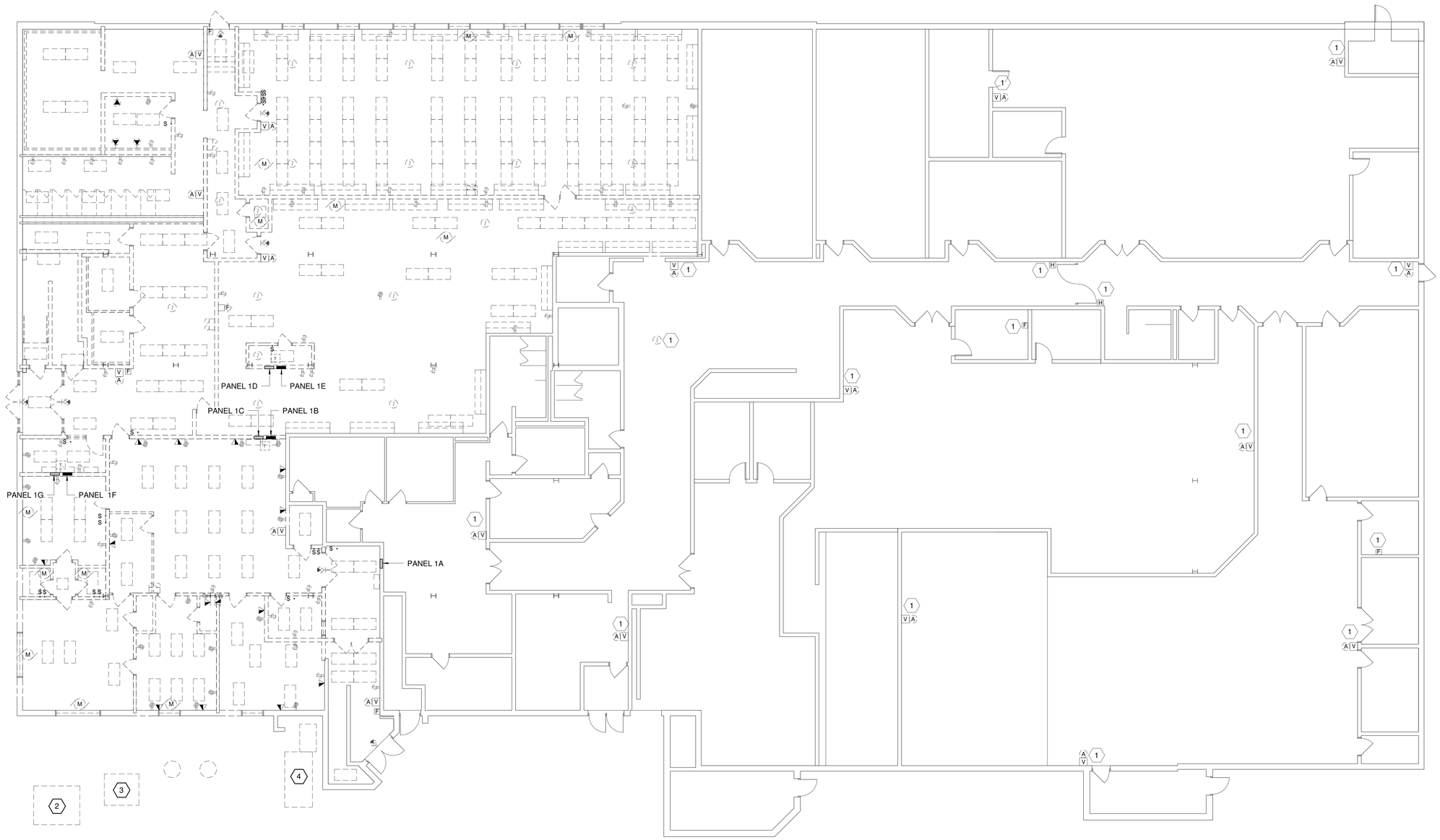
TITLE

BASEMENT LEVEL PLAN - DEMOLITION

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

ED100

SHEET NO.



1 MAIN LEVEL PLAN - DEMOLITION
Scale: N.T.S.

SHEET KEYNOTES:

1. WIRING AND CONDUITS SHALL BE REMAIN FOR THE DEMOLISHED DEVICES.
2. UTILITY PAD-MOUNTED SWITCH TO BE REMOVED.
3. UTILITY PAD-MOUNTED TRANSFORMER TO BE REMOVED.
4. DISCONNECT AND REMOVE EXISTING 300KW EMERGENCY, STANDBY GENERATOR.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE
1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE
MAIN LEVEL PLAN - DEMOLITION

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

ED110

SHEET NO.



SHEET KEYNOTES:

1 WIRING AND CONDUITS SHALL BE REMAIN FOR THE DEMOLISHED DEVICES.

1 SECOND LEVEL PLAN - DEMOLITION
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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R&R designer, inc.

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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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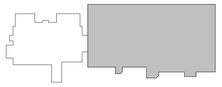
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
DEWBERRY SINGH SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

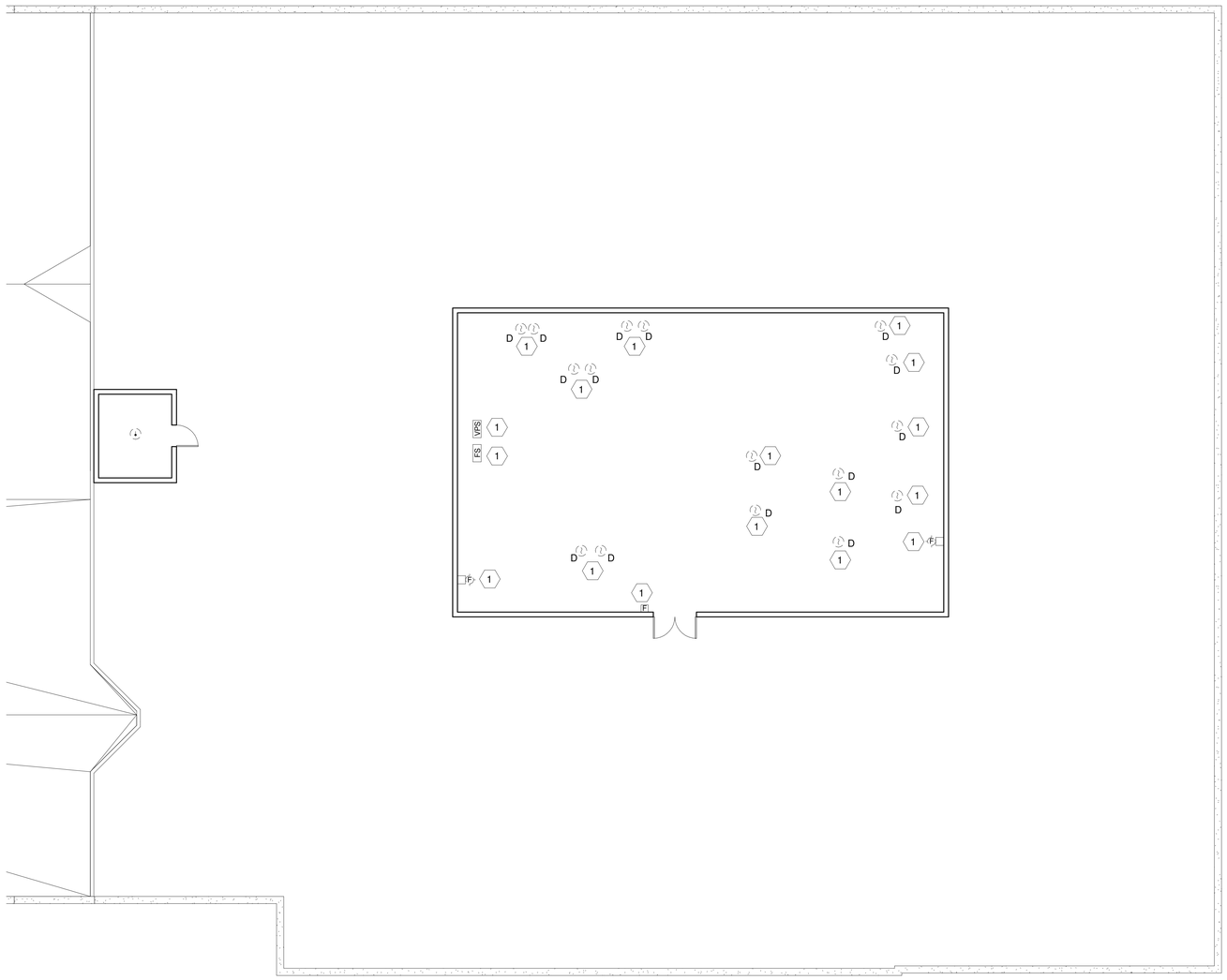
TITLE

SECOND LEVEL PLAN - DEMOLITION

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

ED120

SHEET NO.



1 PENTHOUSE PLAN - DEMOLITION
Scale: N.T.S.

SHEET KEYNOTES:

1 WIRING AND CONDUITS SHALL BE REMAIN FOR THE DEMOLISHED DEVICES.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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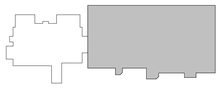
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDDHUSHKUR SINGH SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

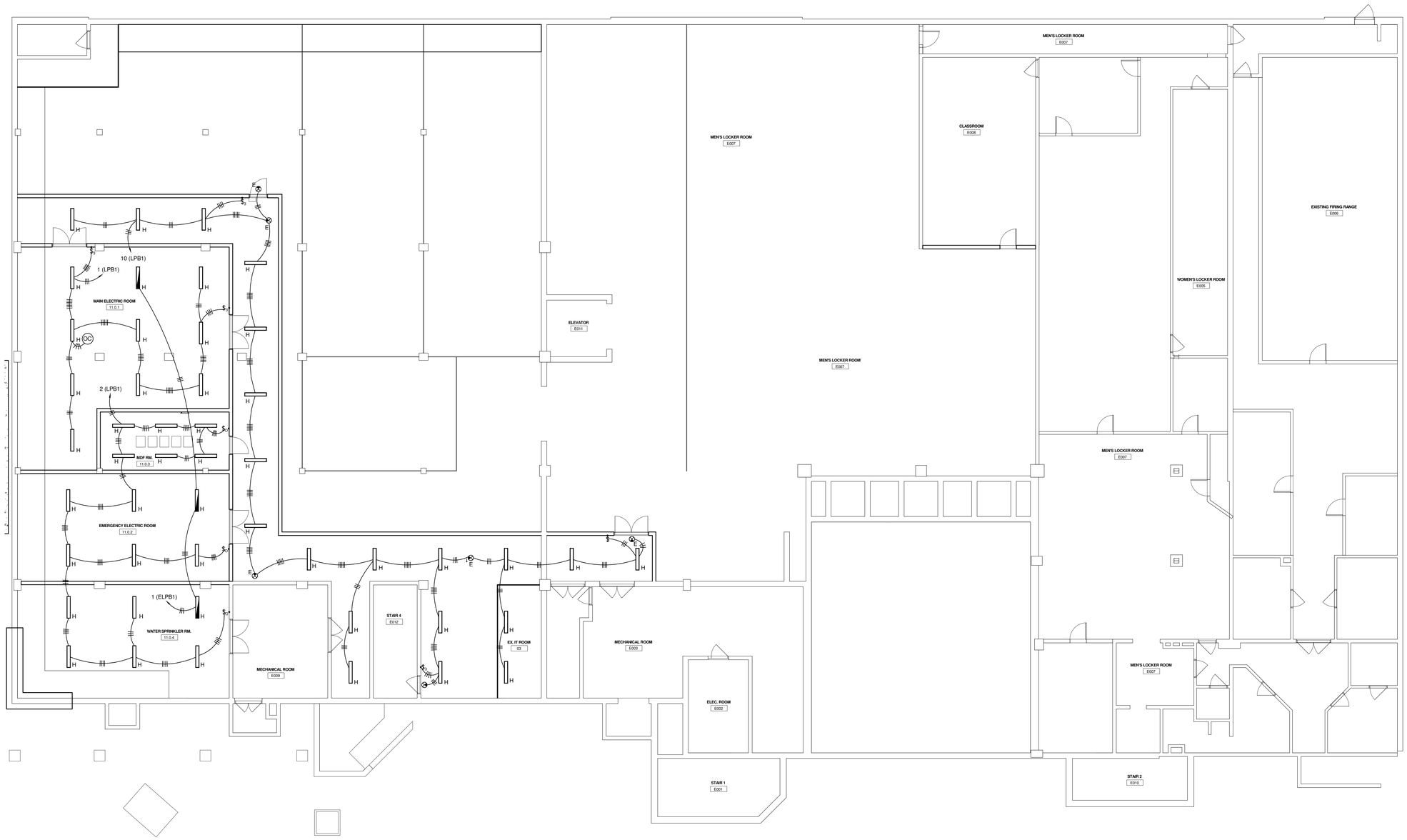
TITLE

THIRD LEVEL PLAN - DEMOLITION

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

ED121

SHEET NO.



1 BASEMENT LEVEL PLAN - LIGHTING
Scale: N.T.S.

GENERAL SHEET NOTES:

1. REFER TO SHEET E500 FOR LIGHTING FIXTURE SCHEDULE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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Consulting Engineers
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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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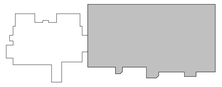
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
DEWBERRY ENGINEERS
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

BASEMENT LEVEL PLAN - LIGHTING

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL100

SHEET NO.



1 MAIN LEVEL PLAN - LIGHTING
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
Consulting Engineers
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HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
DOUGLAS BRIDGE SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

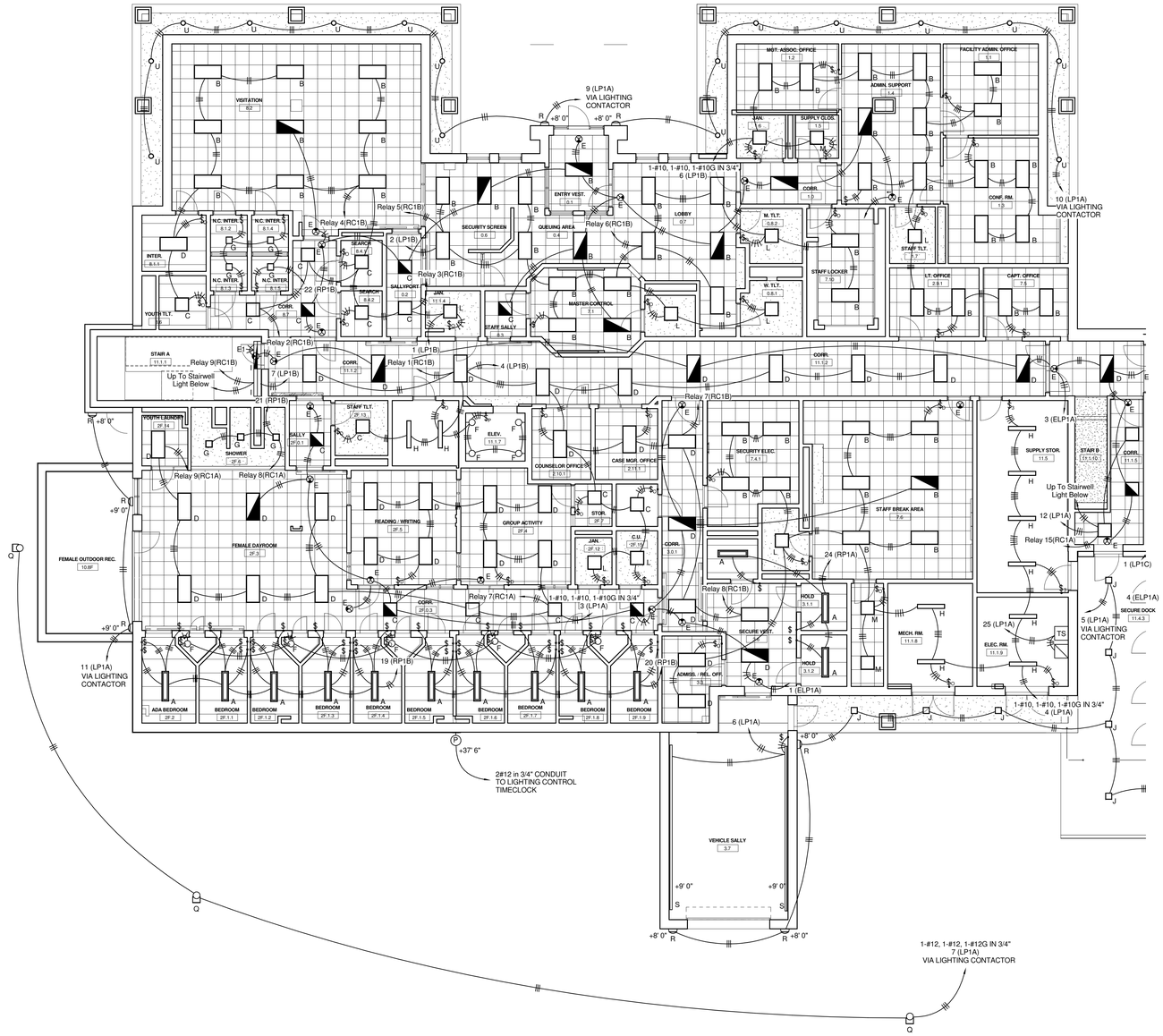
TITLE

MAIN LEVEL PLAN - LIGHTING

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL110

SHEET NO.



1 MAIN LEVEL PLAN - LIGHTING - AREA A

Scale: N.T.S.

GENERAL SHEET NOTES:

1. REFER TO SHEET E500 FOR LIGHTING FIXTURE SCHEDULE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS
ECO ARCHITECTURE, PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · MICHAEL BRUCE · 20469 · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

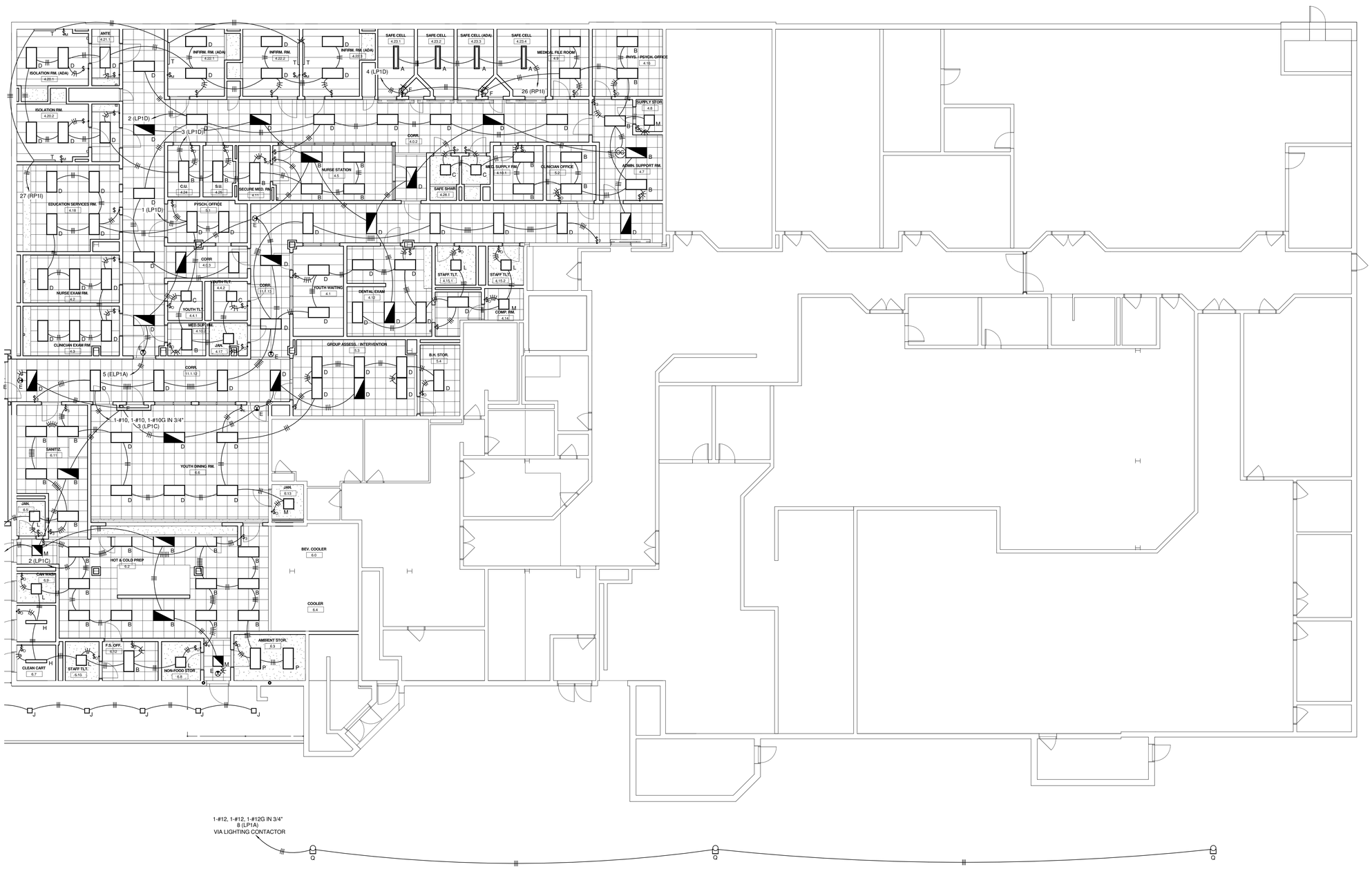
TITLE

MAIN LEVEL PLAN - LIGHTING - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL110A

SHEET NO.



1 MAIN LEVEL PLAN - LIGHTING - AREA B
Scale: N.T.S.

GENERAL SHEET NOTES:

1. REFER TO SHEET E500 FOR LIGHTING FIXTURE SCHEDULE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

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LEWICKI ESTIMATING SERVICES, INC

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDHU PRADEEP SINGH
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

MAIN LEVEL PLAN - LIGHTING - AREA B AND C

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL110B

SHEET NO.



1 SECOND LEVEL PLAN - LIGHTING
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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11350 McCORMICK ROAD
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PHONE (410) 329-1115

TERRALOGOS

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
BALTIMORE MARYLAND
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

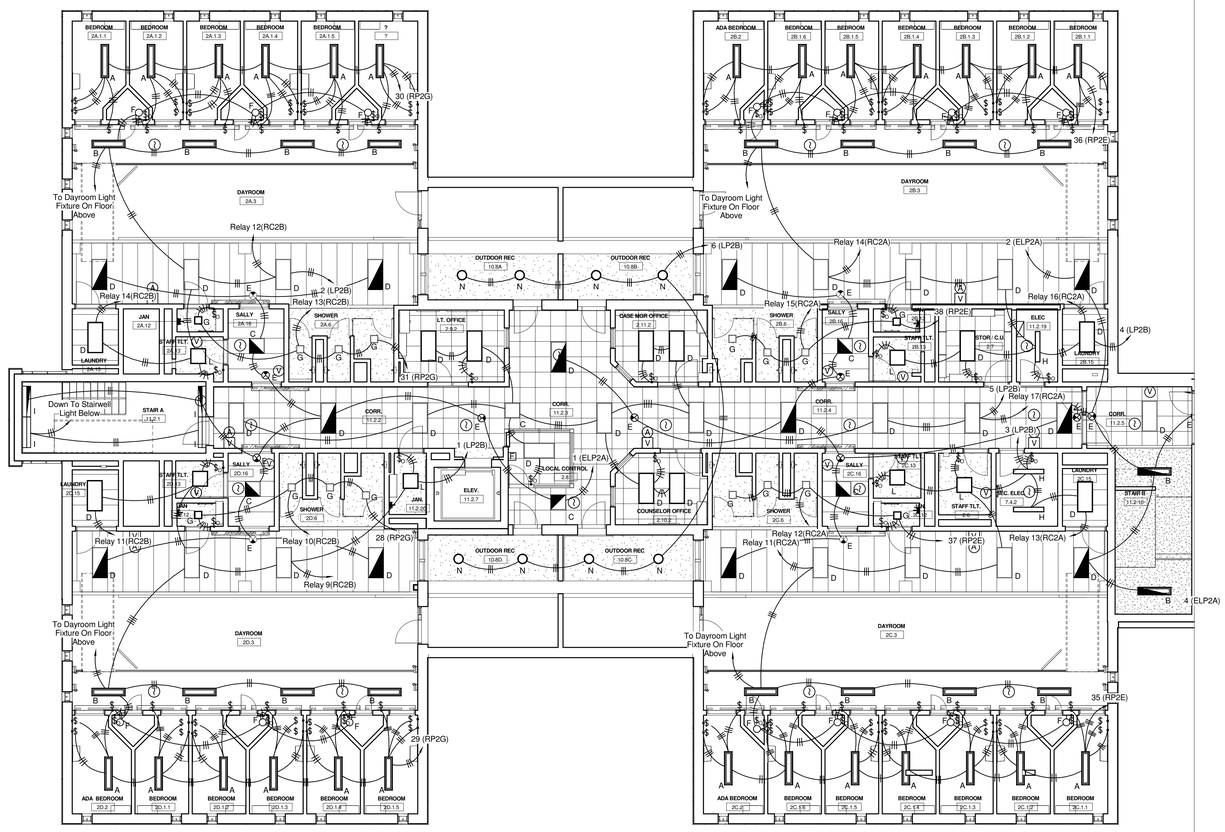
TITLE

SECOND LEVEL PLAN - LIGHTING

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL120

SHEET NO.



1 SECOND LEVEL PLAN - LIGHTING - AREA A
Scale: N.T.S.

GENERAL SHEET NOTES:

1. REFER TO SHEET E500 FOR LIGHTING FIXTURE SCHEDULE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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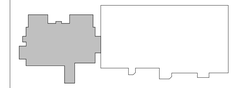
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDHU SHAHRAM SHAHRAM
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

SECOND LEVEL PLAN - LIGHTING - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL120A

SHEET NO.



1 SECOND LEVEL PLAN - LIGHTING - AREA B AND C
Scale: N.T.S.

GENERAL SHEET NOTES:

1. REFER TO SHEET E500 FOR LIGHTING FIXTURE SCHEDULE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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Consulting Engineers
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PHONE (410) 329-1115

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ECO ARCHITECTURE PC

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

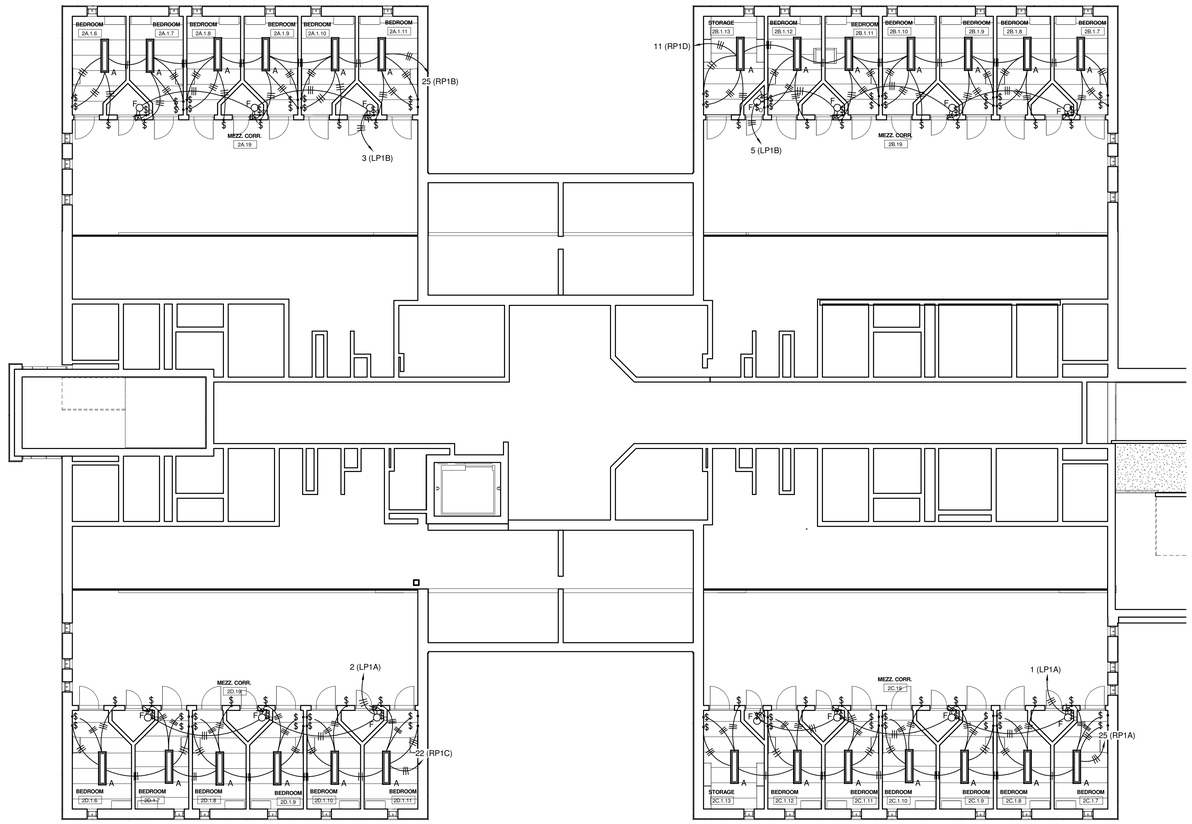
TITLE

SECOND LEVEL PLAN - LIGHTING - AREA B AND C

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL120B

SHEET NO.



1 MEZZANINE LEVEL PLAN - LIGHTING

Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
8300/8700 PLAZA BL, SUITE 1000
11350 MCCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

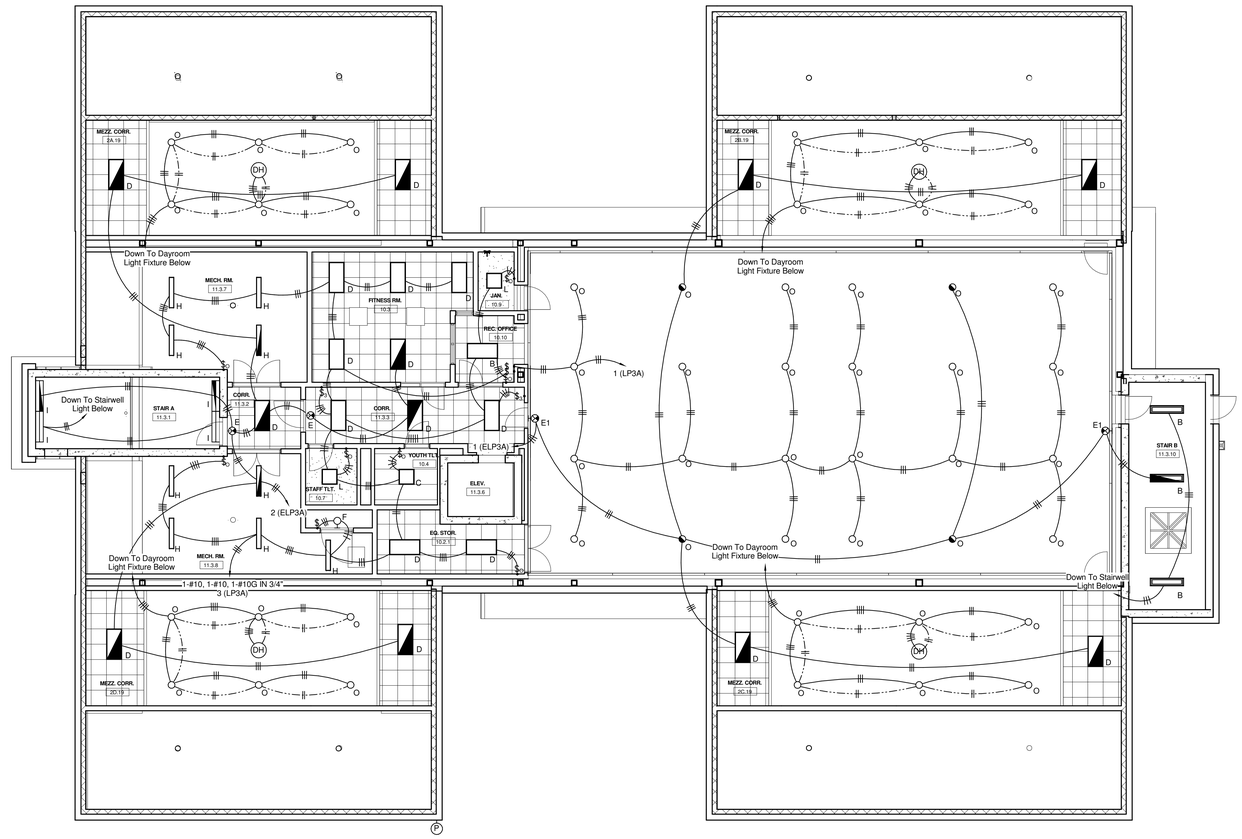
TITLE

MEZZANINE LEVEL PLAN - LIGHTING - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL121

SHEET NO.



1 THIRD LEVEL PLAN - LIGHTING
Scale: N.T.S.

GENERAL SHEET NOTES:

1. REFER TO SHEET E500 FOR LIGHTING FIXTURE SCHEDULE.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

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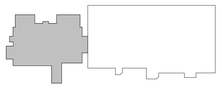
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
DOUGLAS ROBERT SHEPHERD
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

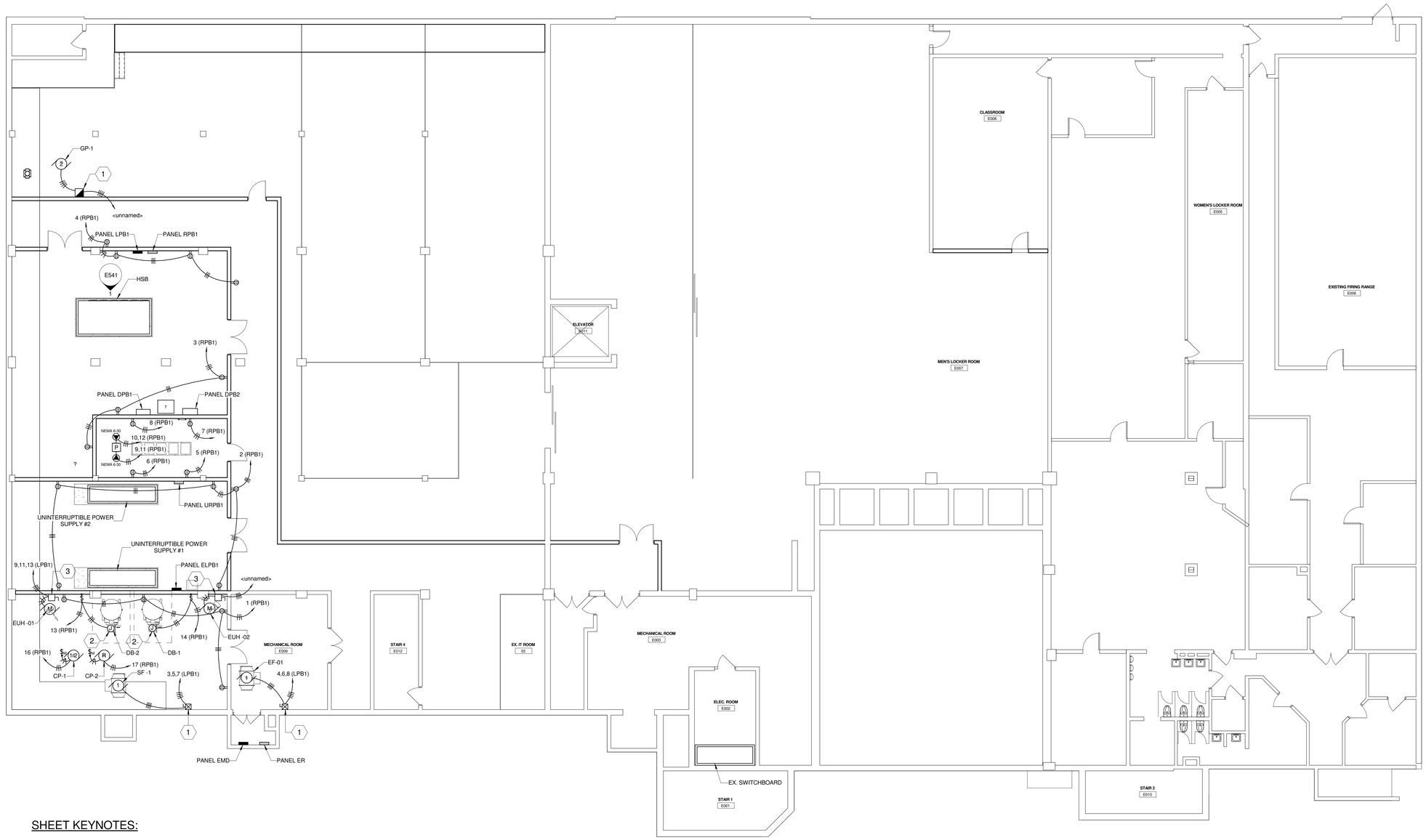
TITLE

THIRD LEVEL PLAN - LIGHTING

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EL130

SHEET NO.



SHEET KEYNOTES:

1. FVNR, 480VAC, 3 PHASE, SIZE 0, COMBINATION MOTOR STARTER IN NEMA 1 ENCLOSURE.
2. PROVIDE ELECTRICAL CONNECTION FOR DOMESTIC WATER BOILER.
3. HEAVY-DUTY, NON-FUSED, 30A, 3 POLE, 600VAC IN NEMA 1 ENCLOSURE.

1 BASEMENT LEVEL PLAN - POWER
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDHU ASSOCIATES, INC.
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

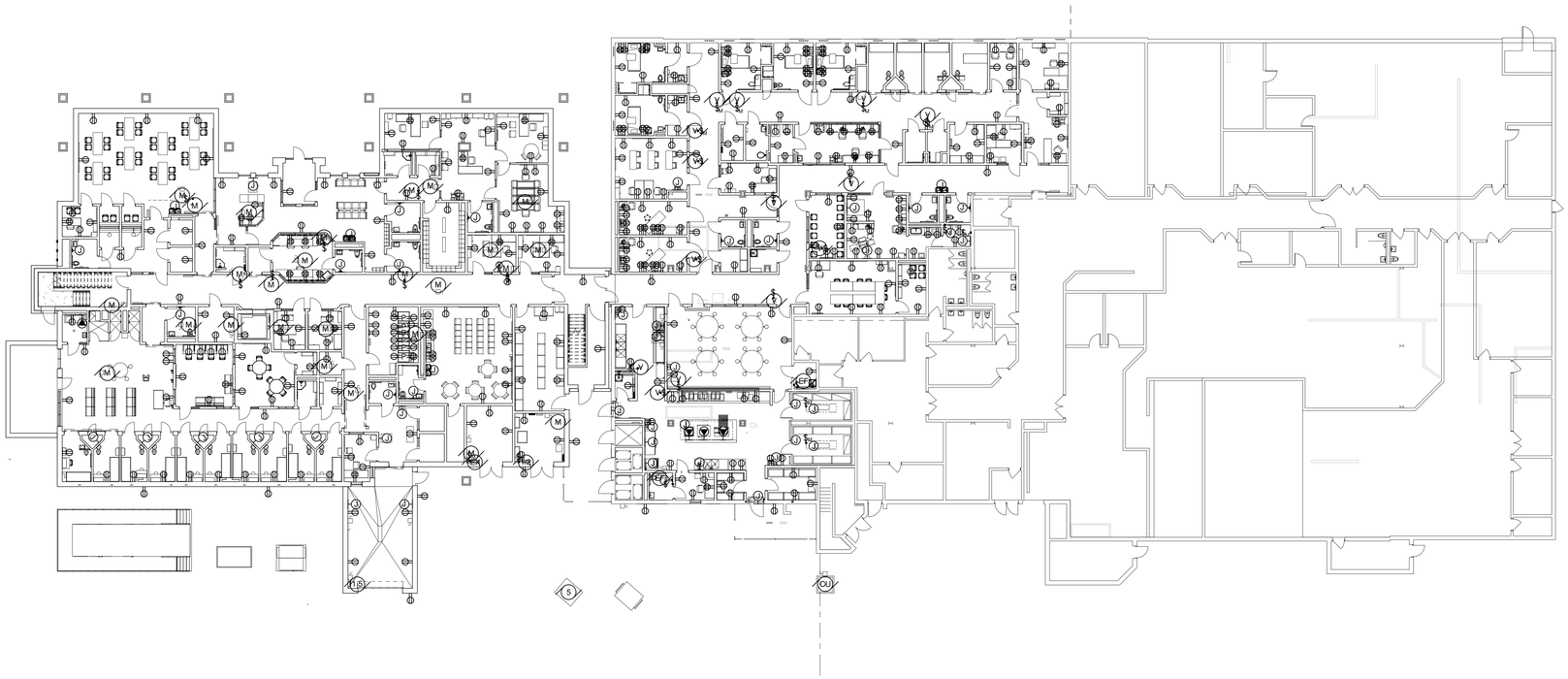
TITLE

BASEMENT LEVEL PLAN - POWER

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP100

SHEET NO.



1 MAIN LEVEL PLAN - POWER
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
BALTIMORE SINGLE DISTRICT
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

MAIN LEVEL PLAN - POWER

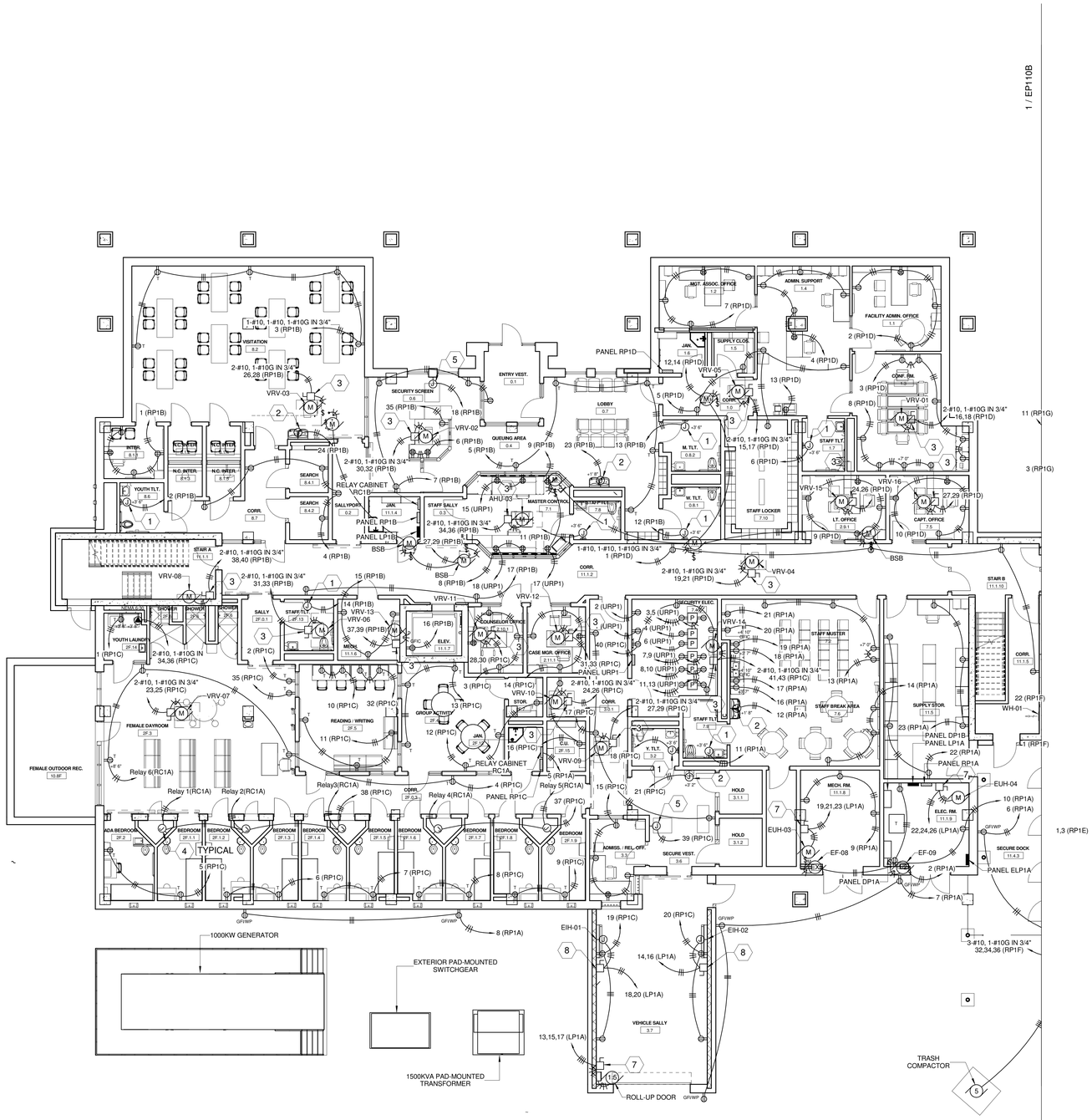
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP110

SHEET NO.

SHEET KEYNOTES:

1. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED HAND-DRYER.
2. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED ELECTRIC WATER COOLER.
3. HEAVY-DUTY, NON-FUSED, 30A, 2 POLE, 240VAC IN NEMA 1 ENCLOSURE.
4. PROVIDE ELECTRICAL CONNECTION FOR SOLENOID VALVE. OPERATION OF SOLENOID VALVE BY MASTER CONTROL WITH LOW VOLTAGE RELAY.
5. PROVIDE ELECTRICAL CONNECTION FOR PASS-THRU METAL DETECTOR.
6. FIRE PUMP AND JOCKEY PUMP CONTROLLERS.
7. HEAVY-DUTY, NON-FUSED, 30A, 3 POLE, 600VAC, IN NEMA 1 ENCLOSURE.
8. HEAVY-DUTY, NON-FUSED, 60A, 3 POLE, 240VAC, IN NEMA 1 ENCLOSURE.



1 MAIN LEVEL PLAN - POWER - AREA A
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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TERRALOGOS ECO ARCHITECTURE

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

MAIN LEVEL PLAN - POWER - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP110A

SHEET NO.



SHEET KEYNOTES:

1. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED HAND-DRYER.
2. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED ELECTRIC WATER COOLER.
3. PROVIDE ELECTRICAL CONNECTION FOR HOOD LIGHTS AND CONTROLS. PROVIDE CONTROL CIRCUIT FOR OPERATION OF SHUNT-TRIP CIRCUIT BREAKERS.
4. PROVIDE 3 POLE, 4 WIRE, 100A, 240VAC PIN AND SLEEVE CONNECTOR.
5. HEAVY-DUTY, NON-FUSED, 30A, 3 POLE, 240VAC IN NEMA 3R ENCLOSURE.
6. FVNR, SIZE 0, 480VAC, 3 PHASE COMBINATION MOTOR STARTER IN NEMA 3R ENCLOSURE.
7. HEAVY-DUTY, FUSED @ 60A, 3 POLE, 600VAC IN NEMA 3R ENCLOSURE.
8. PROVIDE ELECTRICAL CONNECTION FOR WALK-IN COOLER EVAPORATOR FAN.
9. PROVIDE ELECTRICAL CONNECTION FOR WALK-IN COOLER CONTROLS AND HEATER.
10. HEAVY-DUTY, NON-FUSED, 30A, 3 POLE, 600VAC IN NEMA 4 ENCLOSURE.
11. PROVIDE ELECTRICAL CONNECTION FOR DISPOSAL.
12. HEAVY-DUTY, NON-FUSED, 30A, 2 POLE, 240VAC IN NEMA 4 ENCLOSURE.
13. PROVIDE ELECTRICAL CONNECTION FOR ICE MAKER.
14. PROVIDE ELECTRICAL CONNECTION FOR REFRIGERATOR.
15. HEAVY-DUTY, NON-FUSED, 100A, 3 POLE, 240VAC IN NEMA 4 ENCLOSURE.
16. PROVIDE ELECTRICAL CONNECTION FOR BOOSTER HEATER.
17. PROVIDE ELECTRICAL CONNECTION FOR AIR CURTAIN.
18. PROVIDE ELECTRICAL CONNECTION FOR DENTAL X-RAY UNIT.
19. PROVIDE ELECTRICAL CONNECTION FOR VACUUM SYSTEM.
20. PROVIDE ELECTRICAL CONNECTION FOR DENTAL COMPRESSOR.
21. PROVIDE ELECTRICAL CONNECTION FOR ELECTRIC DUCT HEATER.
22. HEAVY-DUTY, NON-FUSED, 200A, 3 POLE, 600VAC IN NEMA 1 ENCLOSURE.

1 MAIN LEVEL PLAN - POWER - AREA B AND C

Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 22469

EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

MAIN LEVEL PLAN - POWER - AREA B AND C

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

EP110B

SHEET NO.



1 SECOND LEVEL PLAN - POWER
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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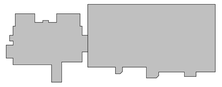
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SUBMITTED FOR SUCH DESIGN
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

SECOND LEVEL PLAN - POWER

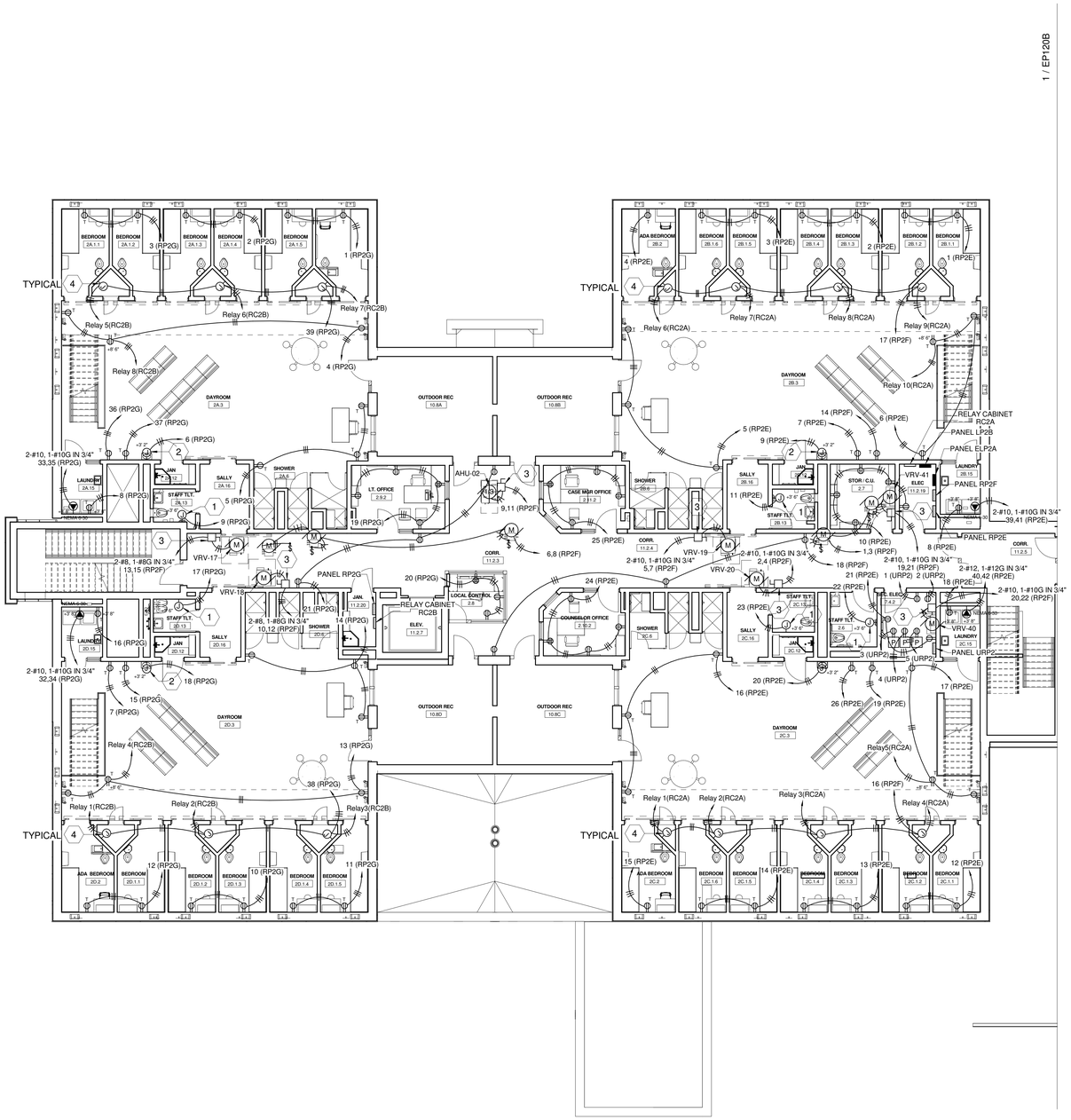
PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

EP120

SHEET NO.

SHEET KEYNOTES:

1. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED HAND-DRYER.
2. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED ELECTRIC WATER COOLER.
3. HEAVY-DUTY, NON-FUSED, 30A, 2 POLE, 240VAC IN NEMA 1 ENCLOSURE.
4. PROVIDE ELECTRICAL CONNECTION FOR SOLENOID VALVE. OPERATION OF SOLENOID VALVE BY MASTER CONTROL WITH LOW VOLTAGE RELAY.



1 SECOND LEVEL PLAN - POWER - AREA A
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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Consulting Engineers
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PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE, PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · CHRISTOPHER · BRUCE · 20469 · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

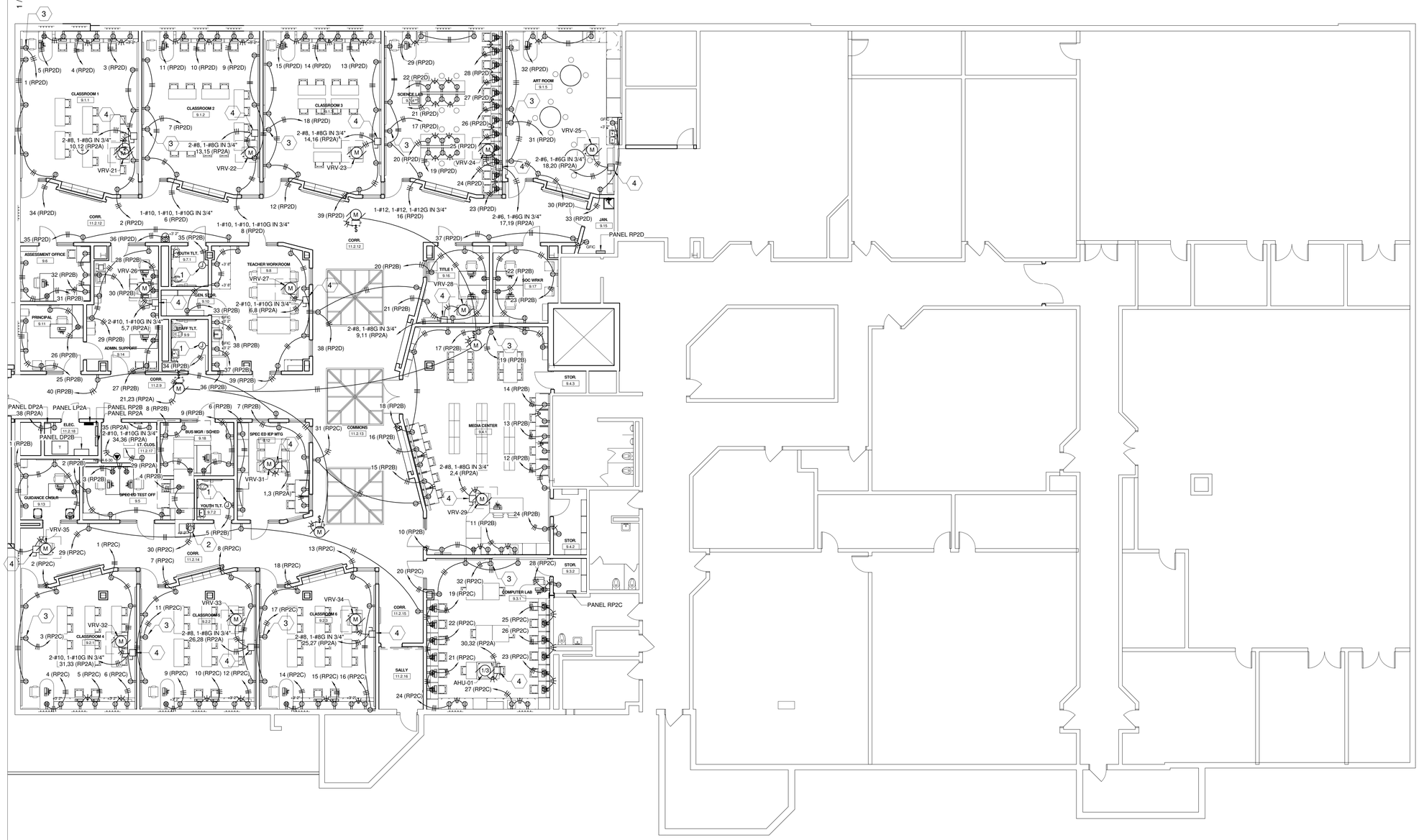
TITLE

SECOND LEVEL PLAN - POWER - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP120A

SHEET NO.



SHEET KEYNOTES:

1. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED HAND-DRYER.
2. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED ELECTRIC WATER COOLER.
3. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED PROJECTOR.
4. HEAVY-DUTY, 30A, NON-FUSED, 240VAC IN NEMA 1 ENCLOSURE

1 SECOND LEVEL PLAN - POWER - AREA B AND C
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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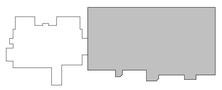
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
BURKHARD SHIDLEY SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

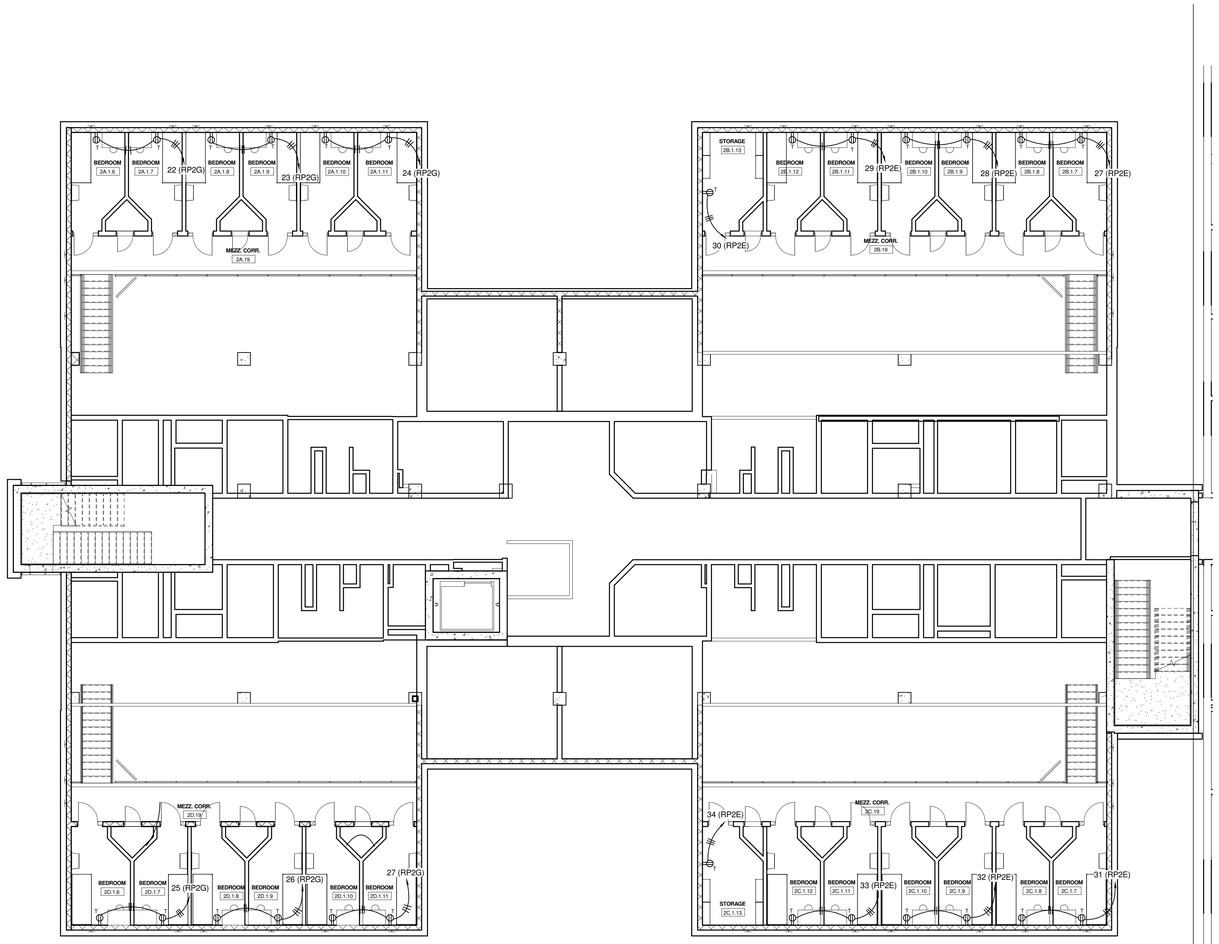
TITLE

SECOND LEVEL PLAN - POWER - AREA B AND C

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP120B

SHEET NO.



1 MEZZANINE LEVEL - POWER
Scale: N.T.S.

SHEET KEYNOTES:

1. PROVIDE ELECTRICAL CONNECTION FOR SOLENOID VALVE. OPERATION OF SOLENOID VALVE BY MASTER CONTROL WITH LOW VOLTAGE RELAY.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION.
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND — REGISTERED — PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

MEZZANINE LEVEL PLAN - POWER - AREA A

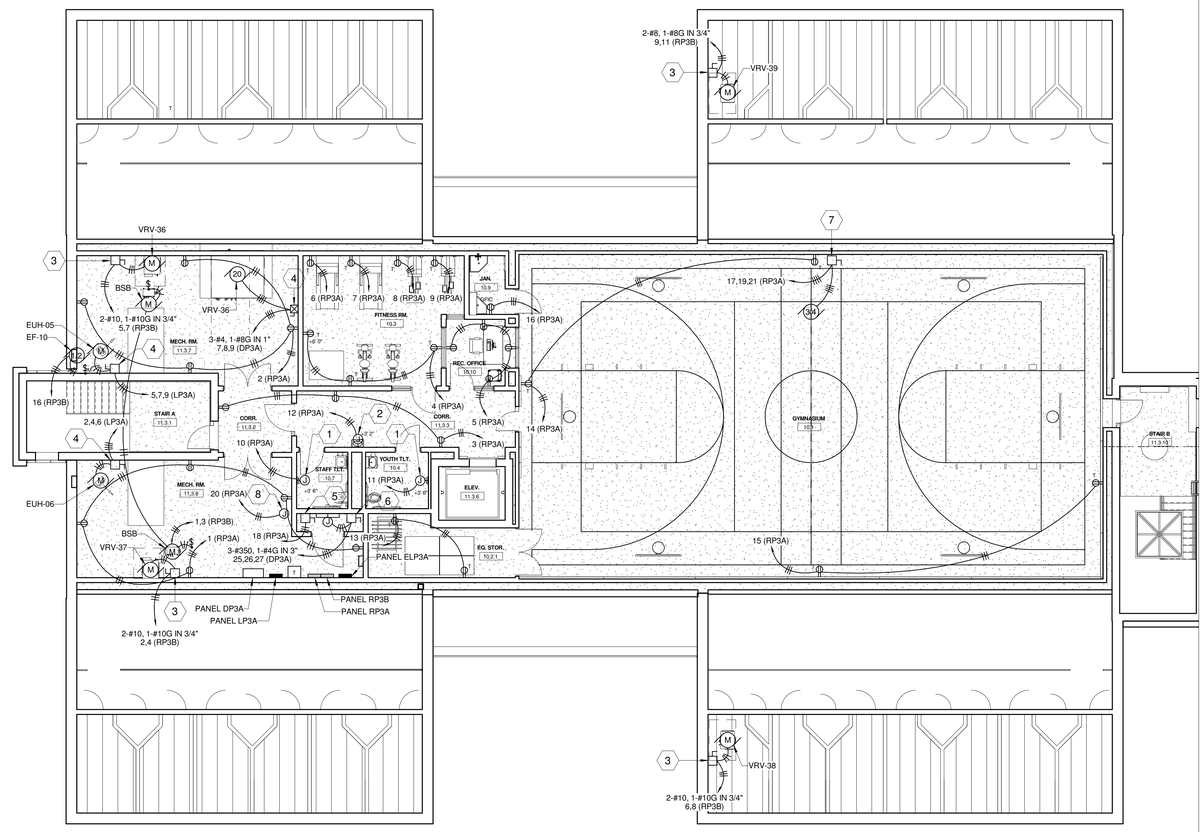
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP121

SHEET NO.

SHEET KEYNOTES:

1. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED HAND-DRYER.
2. PROVIDE ELECTRICAL CONNECTION FOR WALL-MOUNTED ELECTRIC WATER COOLER.
3. HEAVY-DUTY, NON-FUSED, 30A, 2 POLE, 240VAC IN NEMA 1 ENCLOSURE.
4. FVNR, SIZE 2, 480VAC, 3 PHASE COMBINATION STARTER IN NEMA 1 ENCLOSURE.
5. HEAVY-DUTY, NON-FUSED, 30A, 2 POLE, 120/240VAC IN NEMA 1 ENCLOSURE.
6. HEAVY-DUTY, NON-FUSED, 200A, 3 POLE, 600VAC IN NEMA 1 ENCLOSURE.
7. HEAVY-DUTY, NON-FUSED, 30A, 3 POLE, 600VAC IN NEMA 1 ENCLOSURE.
8. PROVIDE ELECTRICAL CONNECTION FOR SA/CA HEAD-END EQUIPMENT CABINET.



1 THIRD LEVEL PLAN - POWER
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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TERRALOGOS ECO ARCHITECTURE PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · 20469 · MICHAEL BRUSTEIN · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

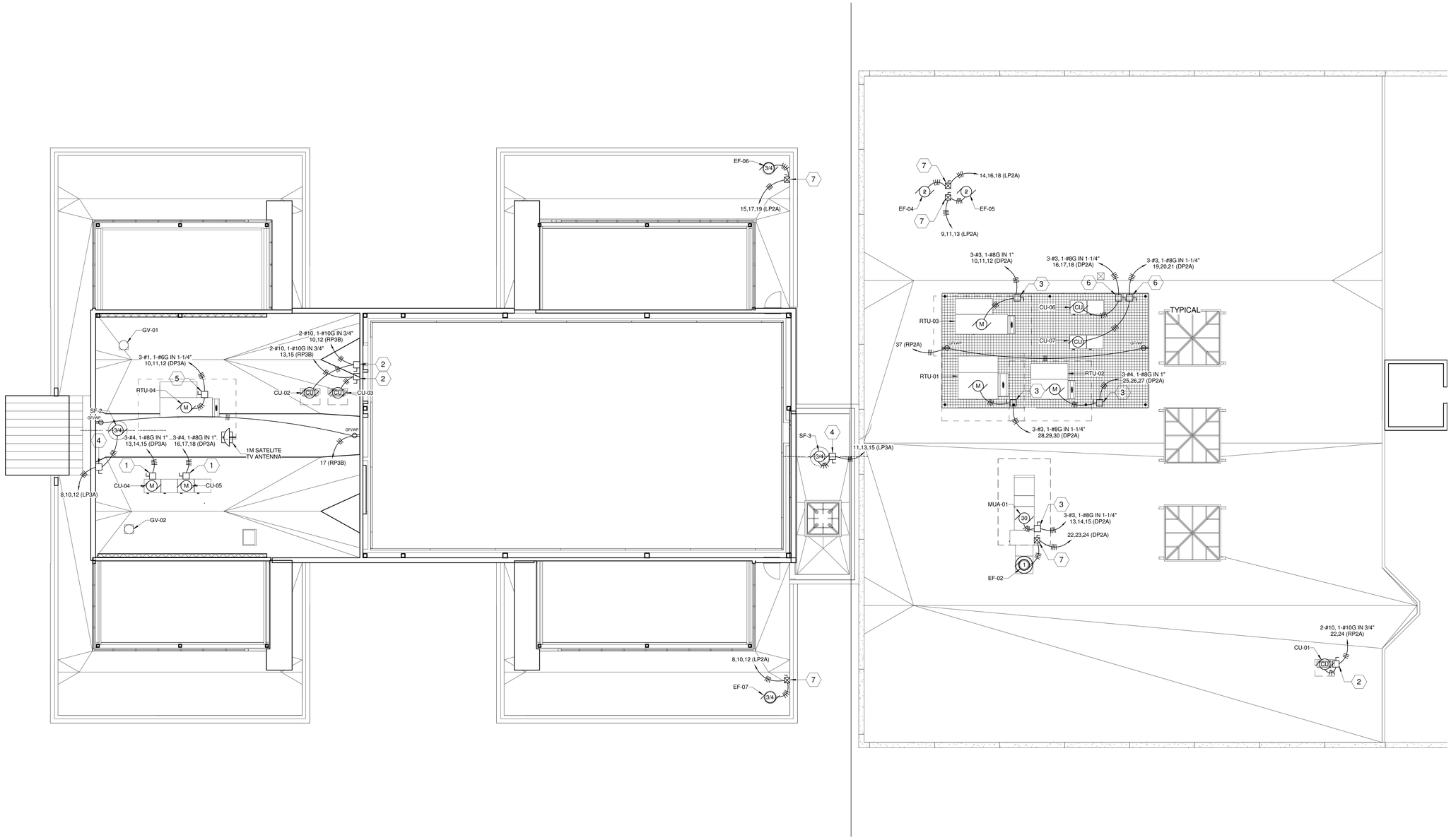
TITLE

THIRD LEVEL PLAN - POWER

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EP130

SHEET NO.



SHEET KEYNOTES:

1. HEAVY-DUTY, 100A, FUSED @ 70A, 3 POLE, 600VAC IN NEMA 3R ENCLOSURE.
2. HEAVY-DUTY, FUSED @ 30A, 2 POLE, 240VAC IN NEMA 3R ENCLOSURE.
3. HEAVY-DUTY, NON-FUSED, 100A, 3 POLE, 600VAC IN NEMA 3R ENCLOSURE.
4. HEAVY-DUTY, NON-FUSED, 30A, 3 POLE, 600VAC IN NEMA 3R ENCLOSURE.
5. HEAVY-DUTY, NON-FUSED, 200A, 3 POLE, 600VAC IN NEMA 3R ENCLOSURE.
6. HEAVY-DUTY, 100A, FUSED @ 100A, 3 POLE, 600VAC IN NEMA 3R ENCLOSURE.
7. FVNR, 480VAC, 3 PHASE, SIZE 0 COMBINATION MOTOR STARTER IN NEMA 3R ENCLOSURE.

1 ROOF AND CLERESTORY PLAN - POWER
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
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PHONE (410) 329-1115
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE
1/8" = 1'-0"

No.	Description	Date

REVISIONS

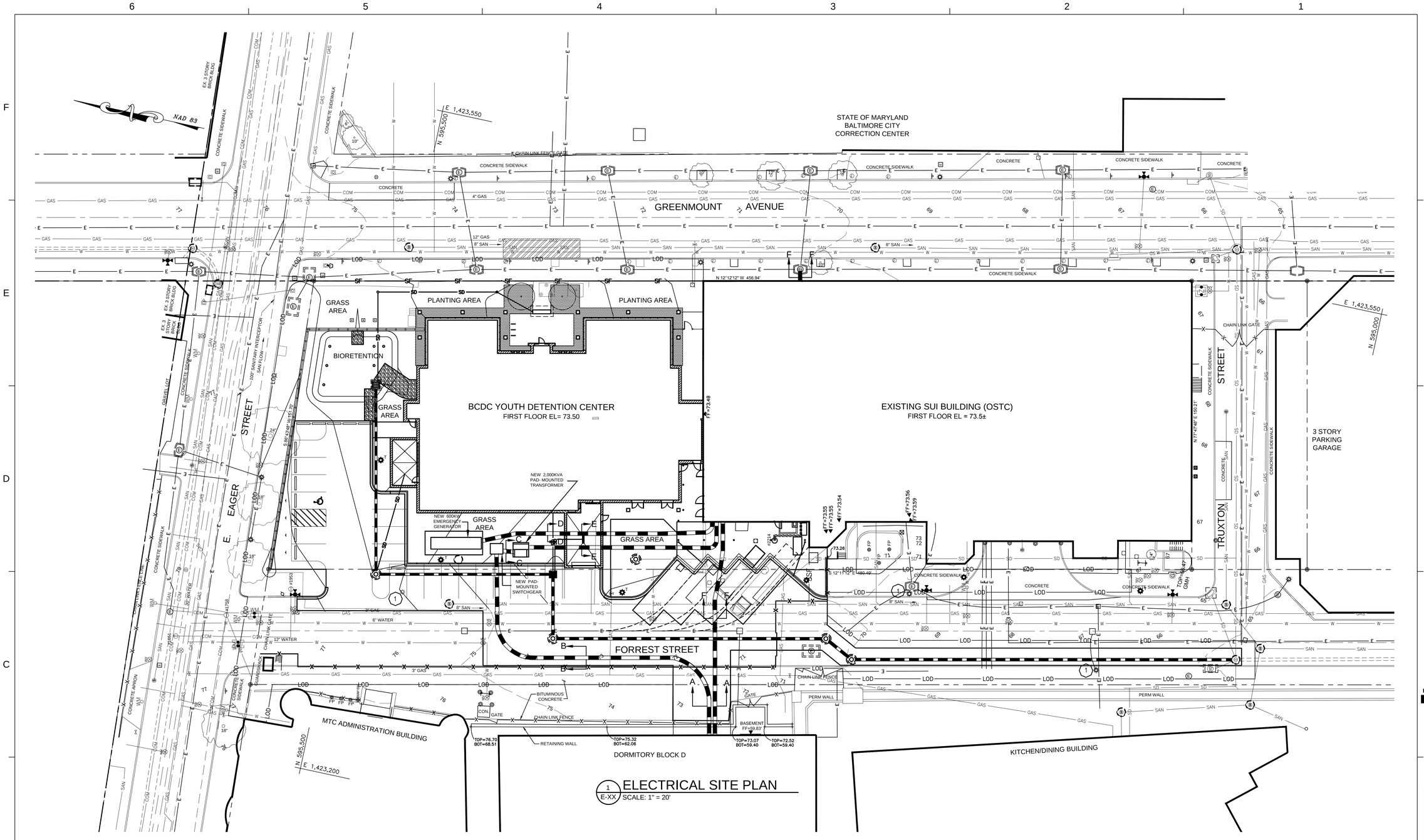
DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE
ROOF AND CLERESTORY PLAN - POWER

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

EP140

SHEET NO.



1 E-XX ELECTRICAL SITE PLAN
SCALE: 1" = 20'

DRAWING NOTES:

1. DISCONNECT AND REMOVE EXISTING POLE MOUNTED LIGHT FIXTURES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

KEY PLAN

[redacted]

SCALE

1'=20'-0"

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

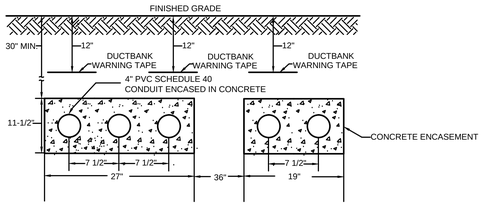
TITLE

SITE PLAN ELECTRICAL UTILITIES

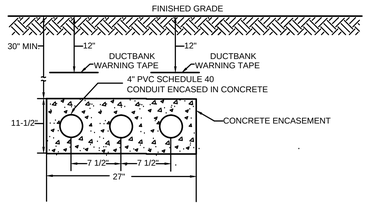
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

ES100

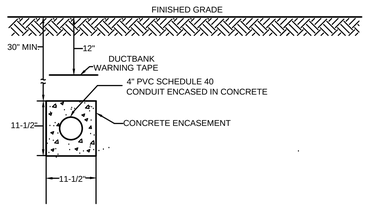
SHEET NO.



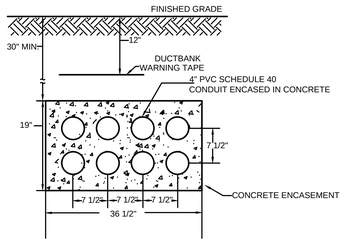
DUCTBANK SECTION A–A
NOT TO SCALE



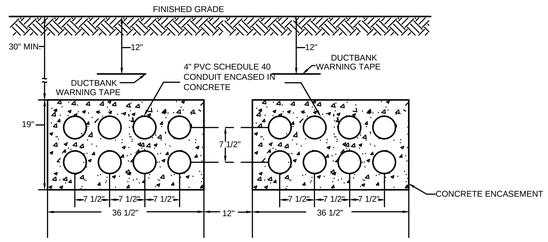
DUCTBANK SECTION B–B
NOT TO SCALE



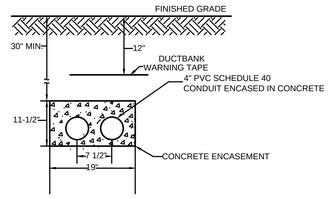
DUCTBANK SECTION C–C
NOT TO SCALE



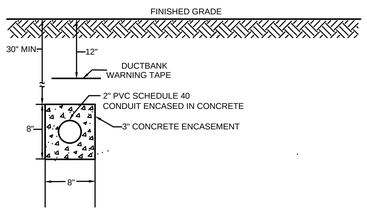
DUCTBANK SECTION D–D
NOT TO SCALE



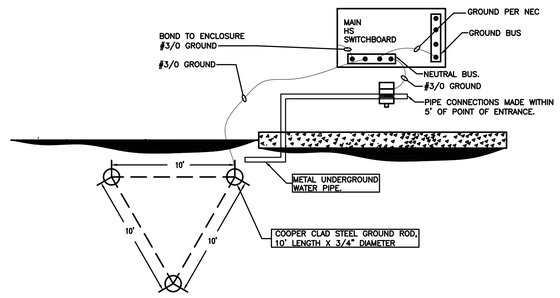
DUCTBANK SECTION E–E
NOT TO SCALE



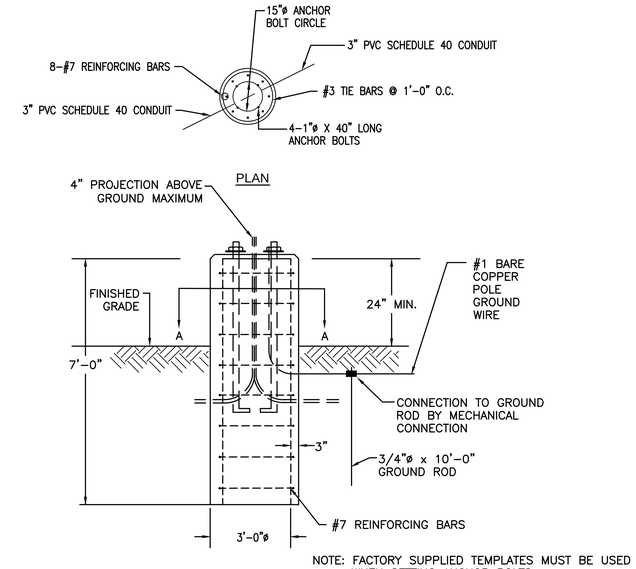
DUCTBANK SECTION F–F
NOT TO SCALE



EXTERIOR LIGHTING BRANCH CIRCUIT
NOT TO SCALE



GROUNDING & BONDING DETAIL (PER NEC ARTICLE 250)



NOTE: FACTORY SUPPLIED TEMPLATES MUST BE USED WHEN SETTING ANCHOR BOLTS.

PARKING LOT LIGHT POLE FOUNDATION DETAIL
NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS ECO ARCHITECTURE PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

NTS.

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

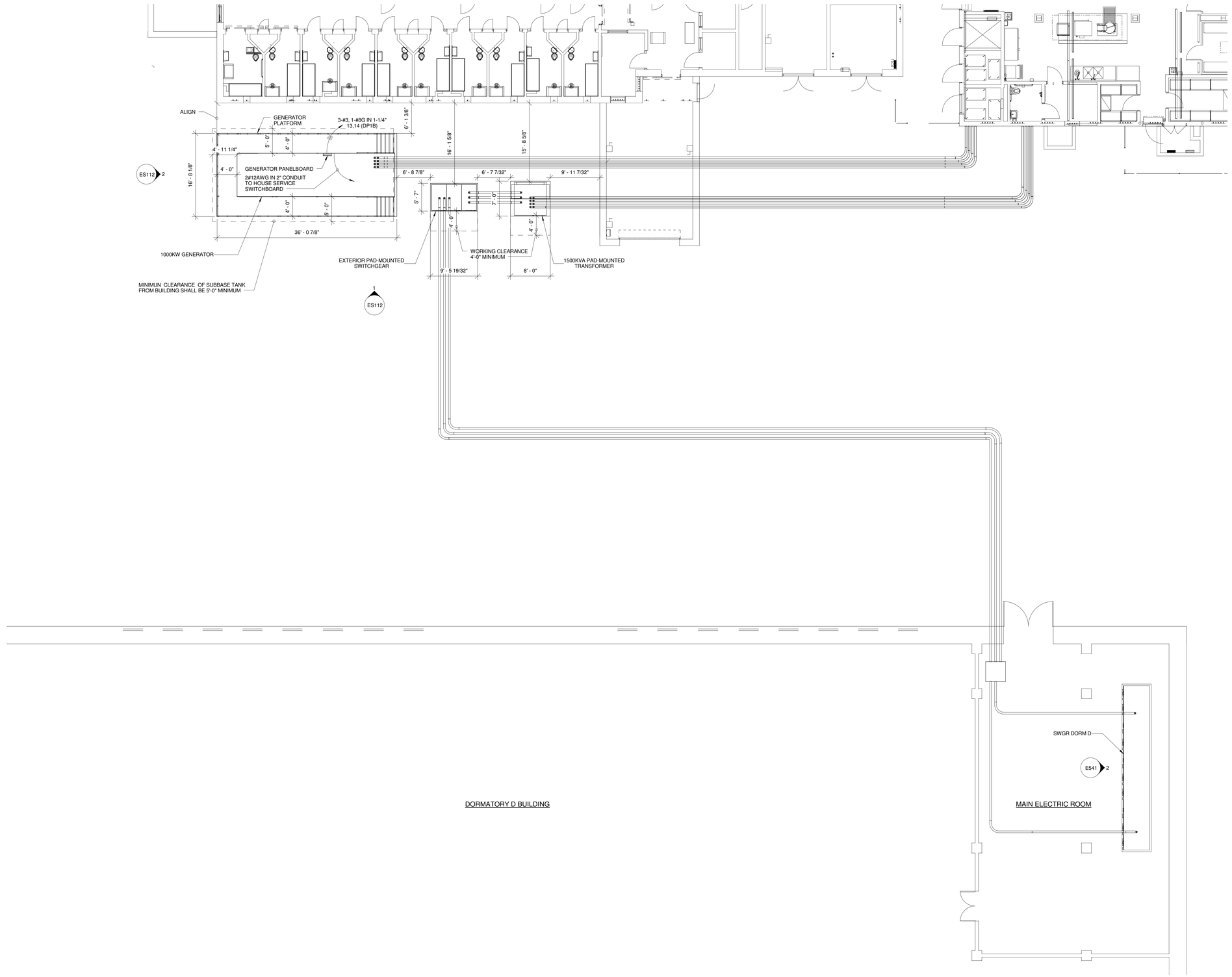
TITLE

SITE PLAN ELECTRICAL UTILITIES-DETAILS

PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

ES110

SHEET NO.



1 PART PLAN SITE / BASEMENT DORMATORY D BUILDING
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
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DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDHU ASSOCIATES, INC.
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

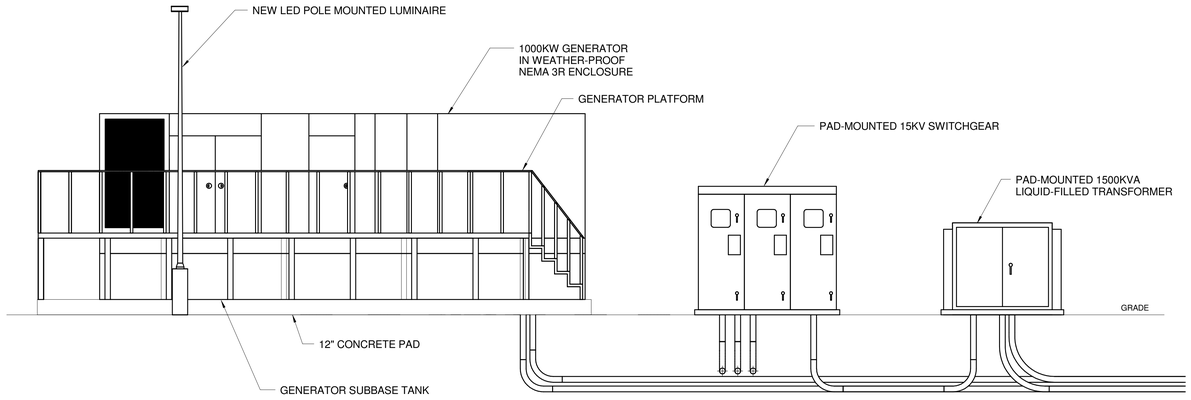
TITLE

PART PLAN SITE / DORMATORY BUILDING

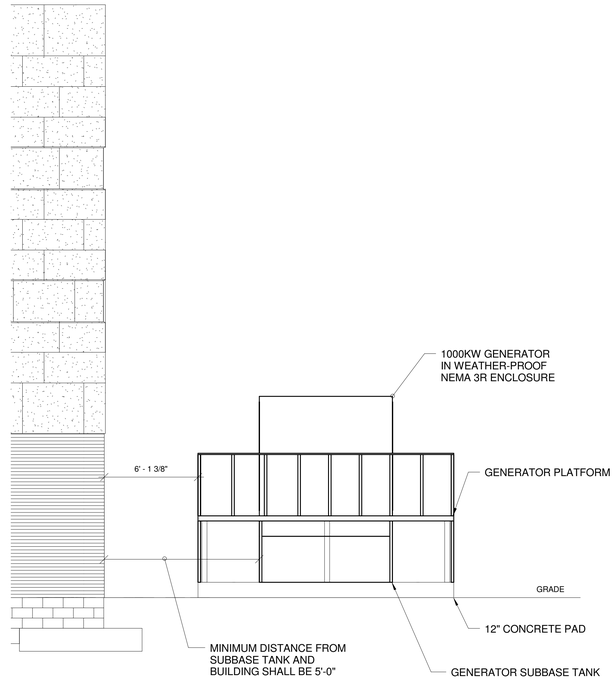
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

ES111

SHEET NO.



1 EXTERIOR SWITCHGEAR NORTH ELEVATION
Scale: N.T.S.



2 EXTERIOR SWITCHGEAR WEST ELEVATION
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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SIDHU ASSOCIATES, INC.
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TERRALOGOS ECO ARCHITECTURE, PC

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SEAL

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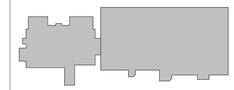
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND — 20469 — REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

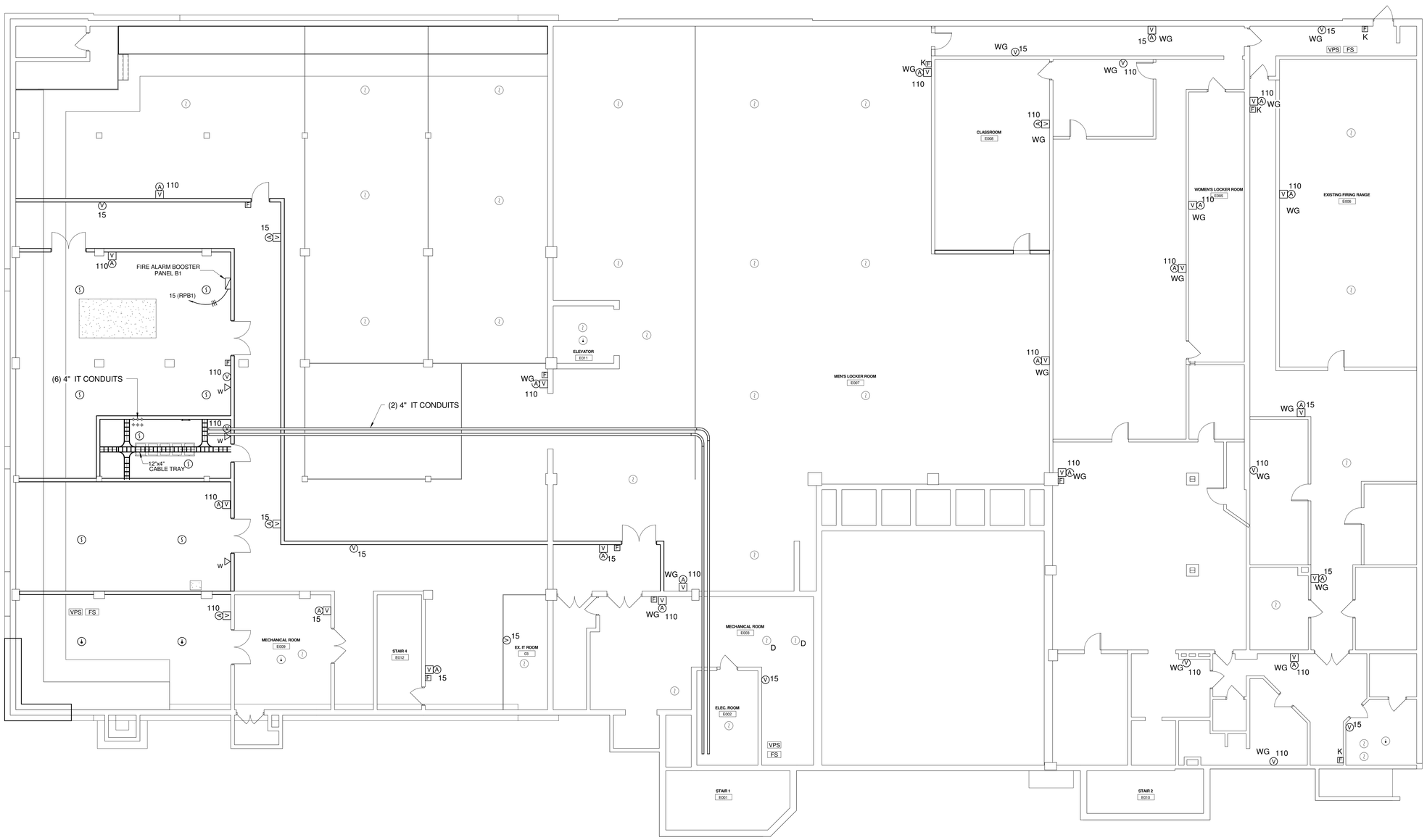
EXTERIOR ELEVATION

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

ES112

SHEET NO.



1 BASEMENT LEVEL - SYSTEMS
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

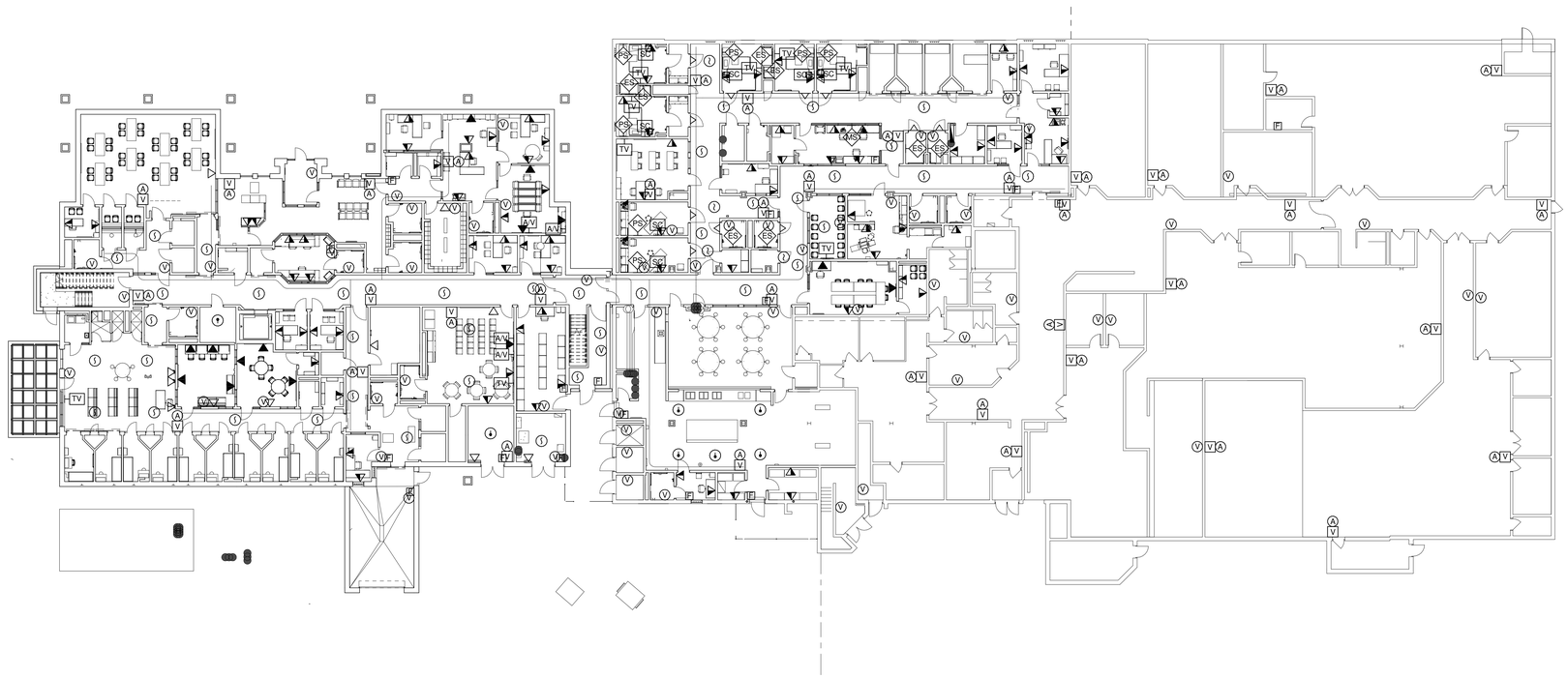
TITLE

BASEMENT LEVEL PLAN - SYSTEMS

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EY100

SHEET NO.



1 MAIN LEVEL PLAN - SYSTEMS
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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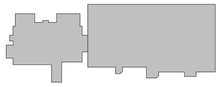
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SHUBHINDER SINGH SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

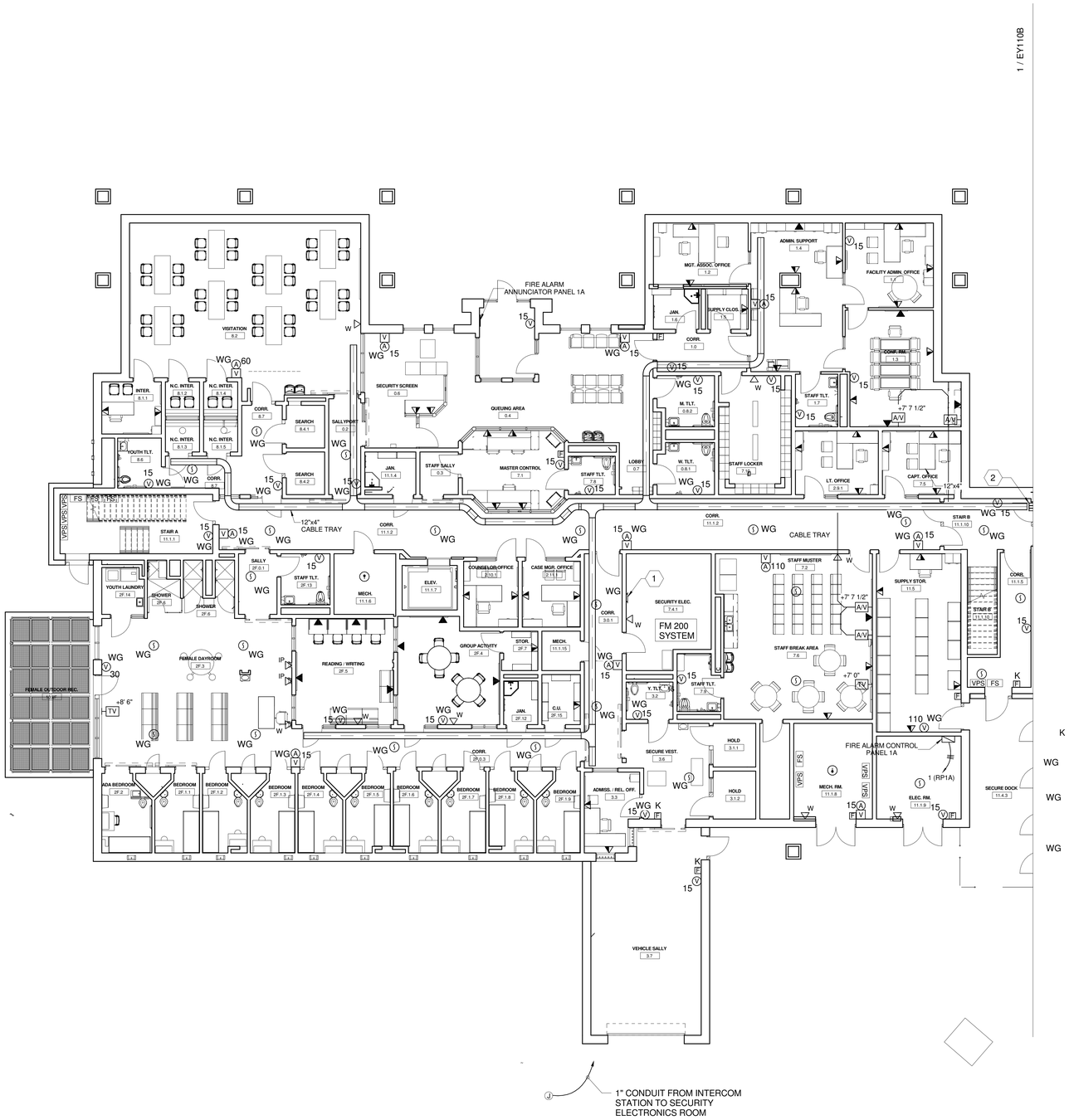
TITLE

MAIN LEVEL PLAN - SYSTEMS

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EY110

SHEET NO.



SHEET KEYNOTES:

1. PROVIDE #1/0 GROUND IN 1" CONDUIT FROM GROUND BAR TO PRINCIPLE GROUND BAR IN MAIN ELECTRIC SERVICE ROOM.
2. 3 - 4" CONDUIT SLEEVES.

1 MAIN LEVEL PLAN - SYSTEMS - AREA A
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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SEAL

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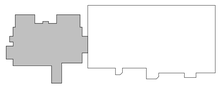
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
DEWBERRY ARCHITECTS
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

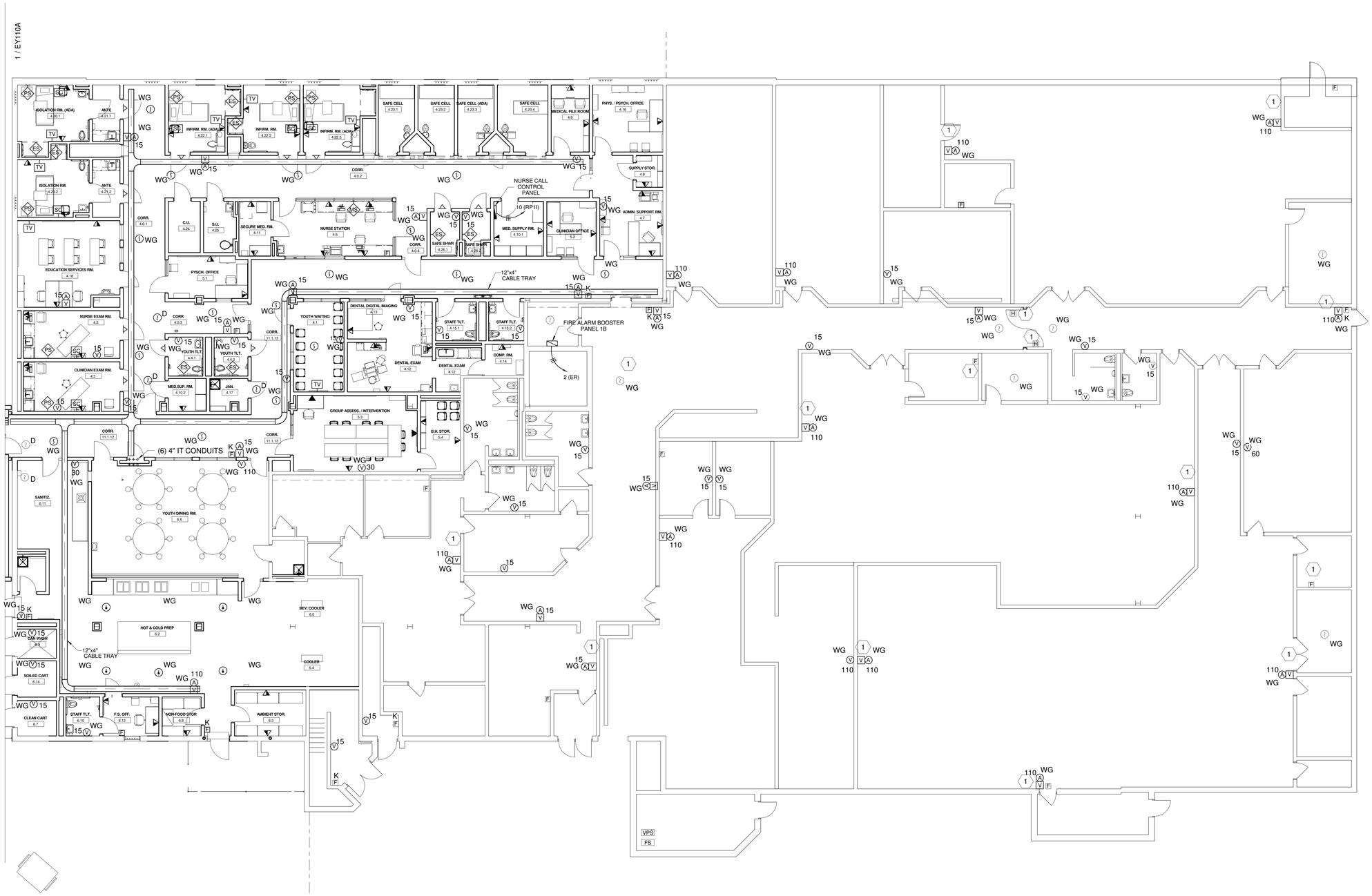
TITLE

MAIN LEVEL PLAN - SYSTEMS - AREA A

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

EY110A

SHEET NO.



SHEET KEYNOTES:

1 TEST EXITING WIRING AND CONNECT NEW FIRE ALARM DEVICES TO IT, IN CASE OF THE FAILING THE TEST REPLACE THE WIRING.

1 MAIN LEVEL PLAN - SYSTEMS - AREA B AND C
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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Consulting Engineers
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PHONE (410) 329-1115

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BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SUNDERSHIP ENGINEERING
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

MAIN LEVEL PLAN - SYSTEMS - AREA B AND C

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

EY110B

SHEET NO.



1 SECOND LEVEL PLAN - SYSTEMS
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

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LEWICKI ESTIMATING SERVICES, INC

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BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
DOMINIQUE BRIGHT SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/16" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

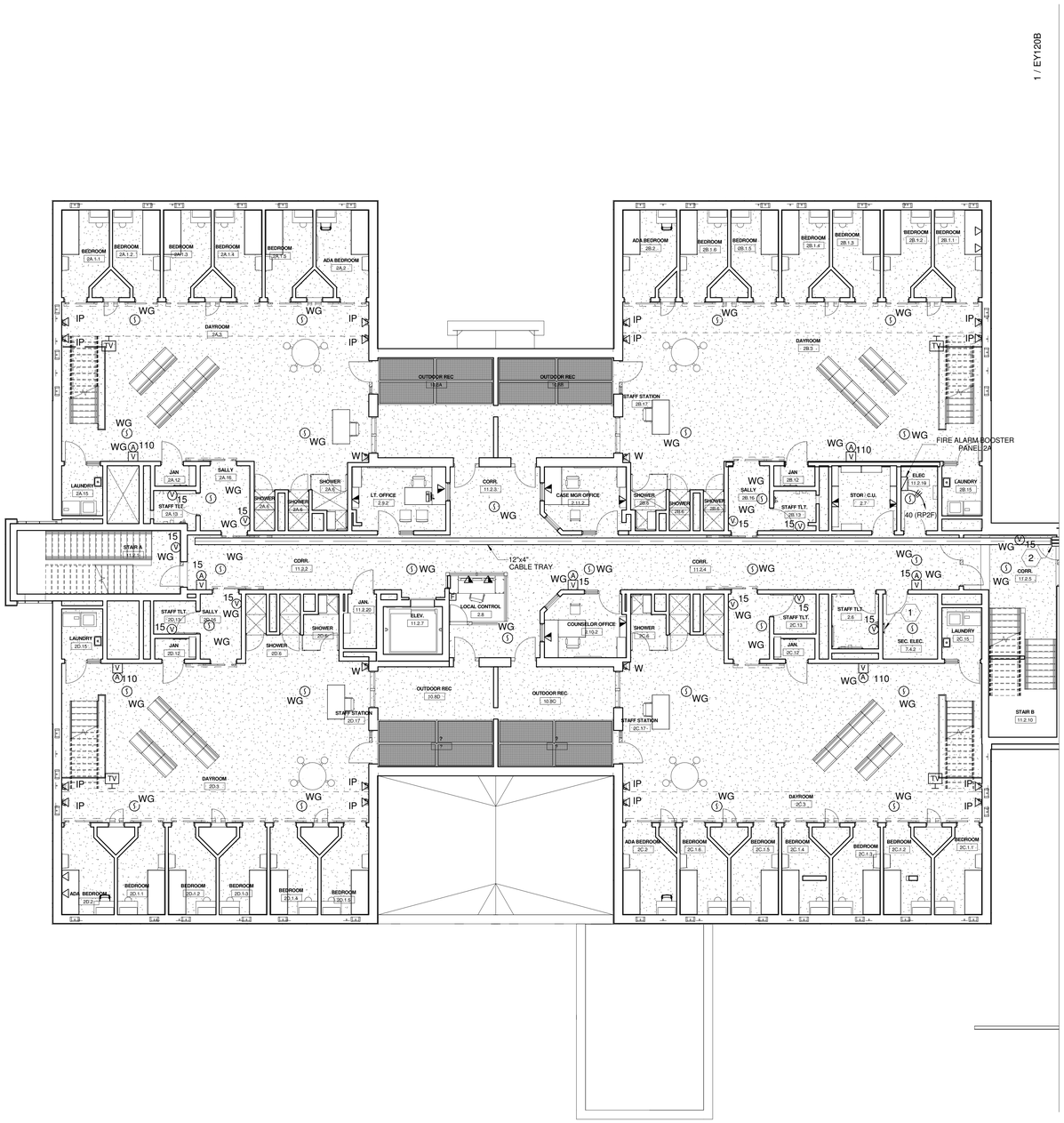
TITLE

SECOND LEVEL PLAN - SYSTEMS

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EY120

SHEET NO.



SHEET KEYNOTES:

1. PROVIDE #1/0 GROUND IN 1" CONDUIT FROM GROUND BAR TO PRINCIPLE GROUND BAR IN MAIN ELECTRIC SERVICE ROOM.
2. 3 - 4" CONDUIT SLEEVES.

1 SECOND LEVEL PLAN - SYSTEMS - AREA A
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
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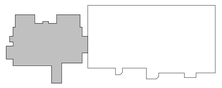
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · DOMINIQUE SIDHU · NO. 20469 · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

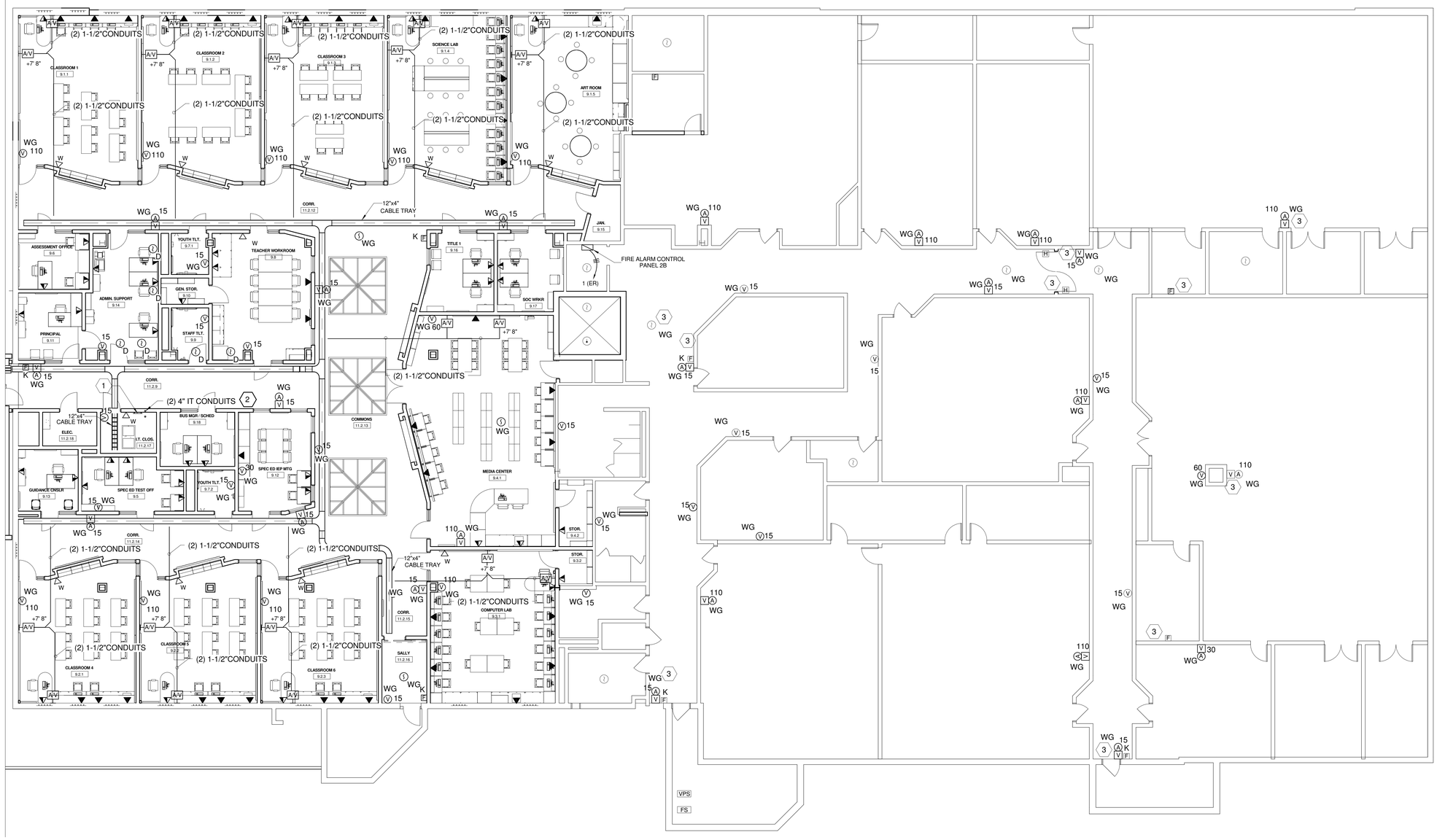
TITLE

SECOND LEVEL PLAN - SYSTEMS - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EY120A

SHEET NO.



SHEET KEYNOTES:

1. PROVIDE #1/0 GROUND IN 1" CONDUIT FROM GROUND BAR TO PRINCIPLE GROUND BAR IN MAIN ELECTRIC SERVICE ROOM.
2. (2) 4" CONDUITS DOWN TO MDF ROOM ON THE BASEMENT LEVEL.
3. TEST EXITING WIRING AND CONNECT NEW FIRE ALARM DEVICES TO IT, IN CASE OF THE FAILING THE TEST REPLACE THE WIRING.

1 SECOND LEVEL PLAN - SYSTEMS - AREA B AND C

Scale: N.T.S.

GENERAL SHEET NOTES:

1. ALL THE OUTLET ON THE OUTSIDE WALL OF THE CLASS ROOM SHALL BE SURFACE MOUNTED. COORDINATE WITH CASE WORK FOR EXACT LOCATION.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
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PHONE (410) 329-1115

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
No. 20469

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

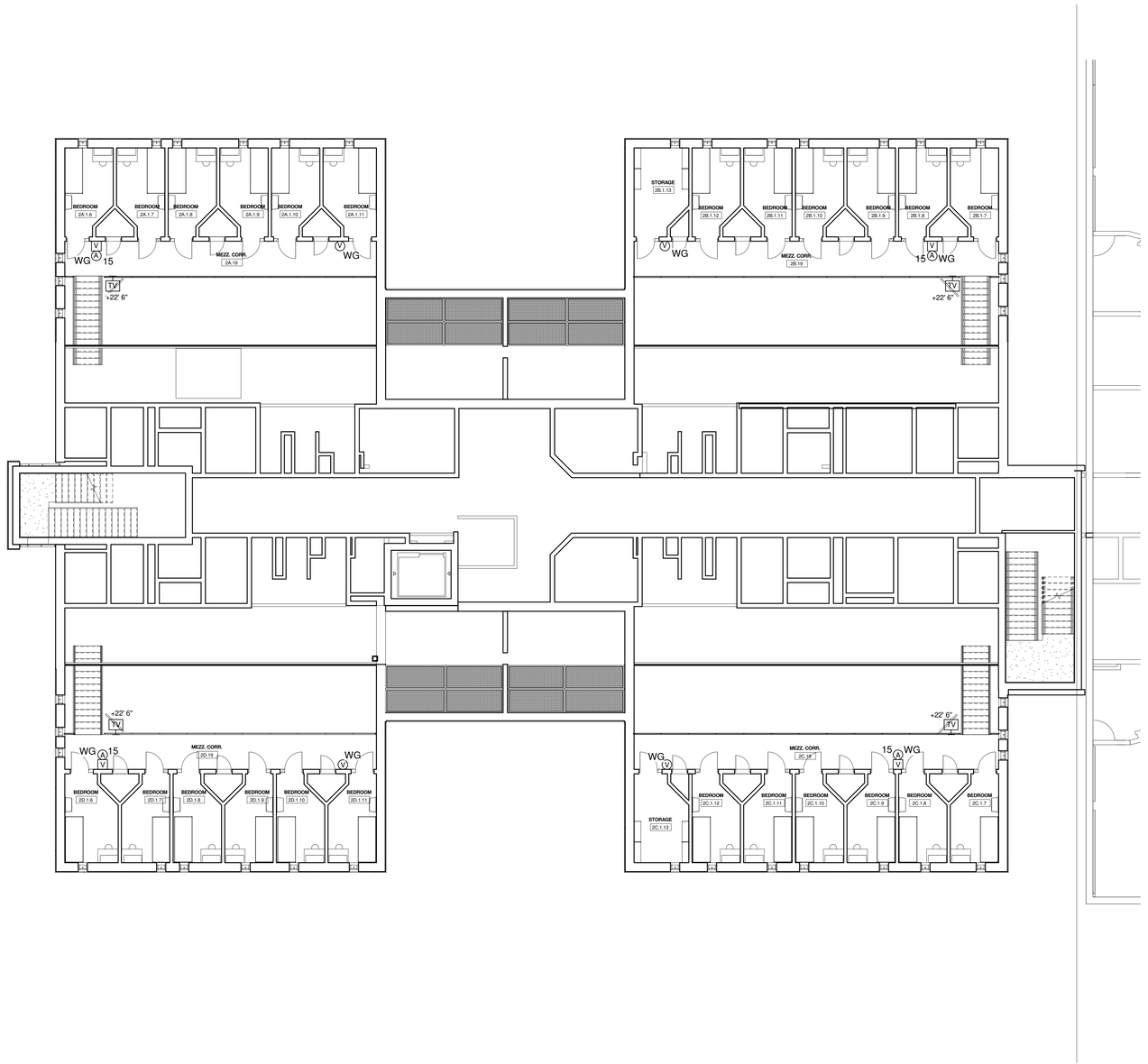
SECOND LEVEL PLAN - SYSTEMS - AREA B AND C

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

EY120B

SHEET NO.



1 MEZZANINE LEVEL - SYSTEMS
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
8303-J TWO PLAZA DR, SUITE 1000
11350 MCCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
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SEAL

PROFESSIONAL CERTIFICATION.
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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · CHRISTOPHER PHILLIP PETTERSEN · 20469 · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN

SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

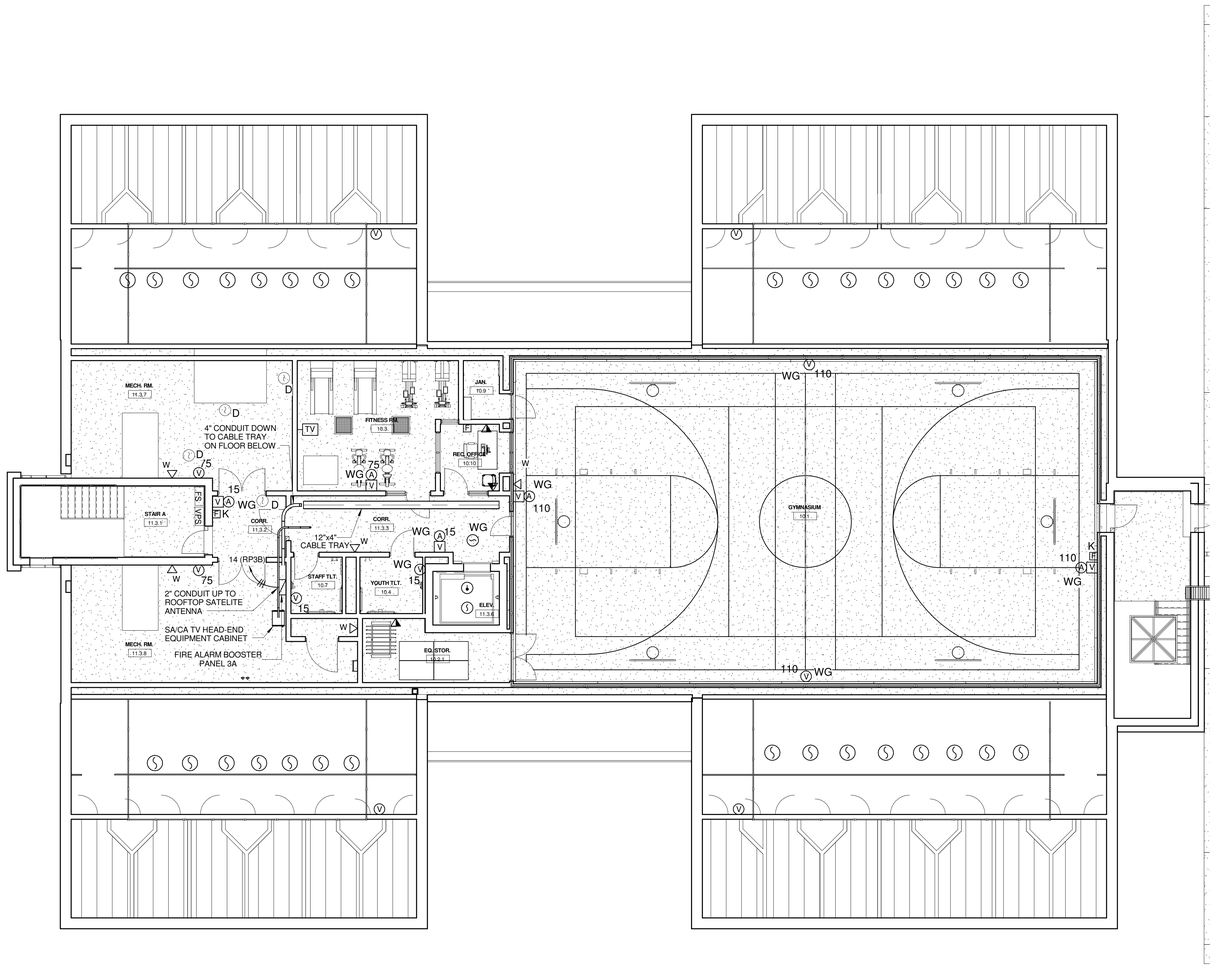
TITLE

MEZZANINE LEVEL PLAN - SYSTEMS - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EY121

SHEET NO.



1 THIRD FLOOR LEVEL - SYSTEMS
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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DESIGN DEVELOPMENT

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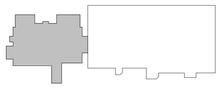
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDHU ASSOCIATES, INC.
NO. 20469
REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

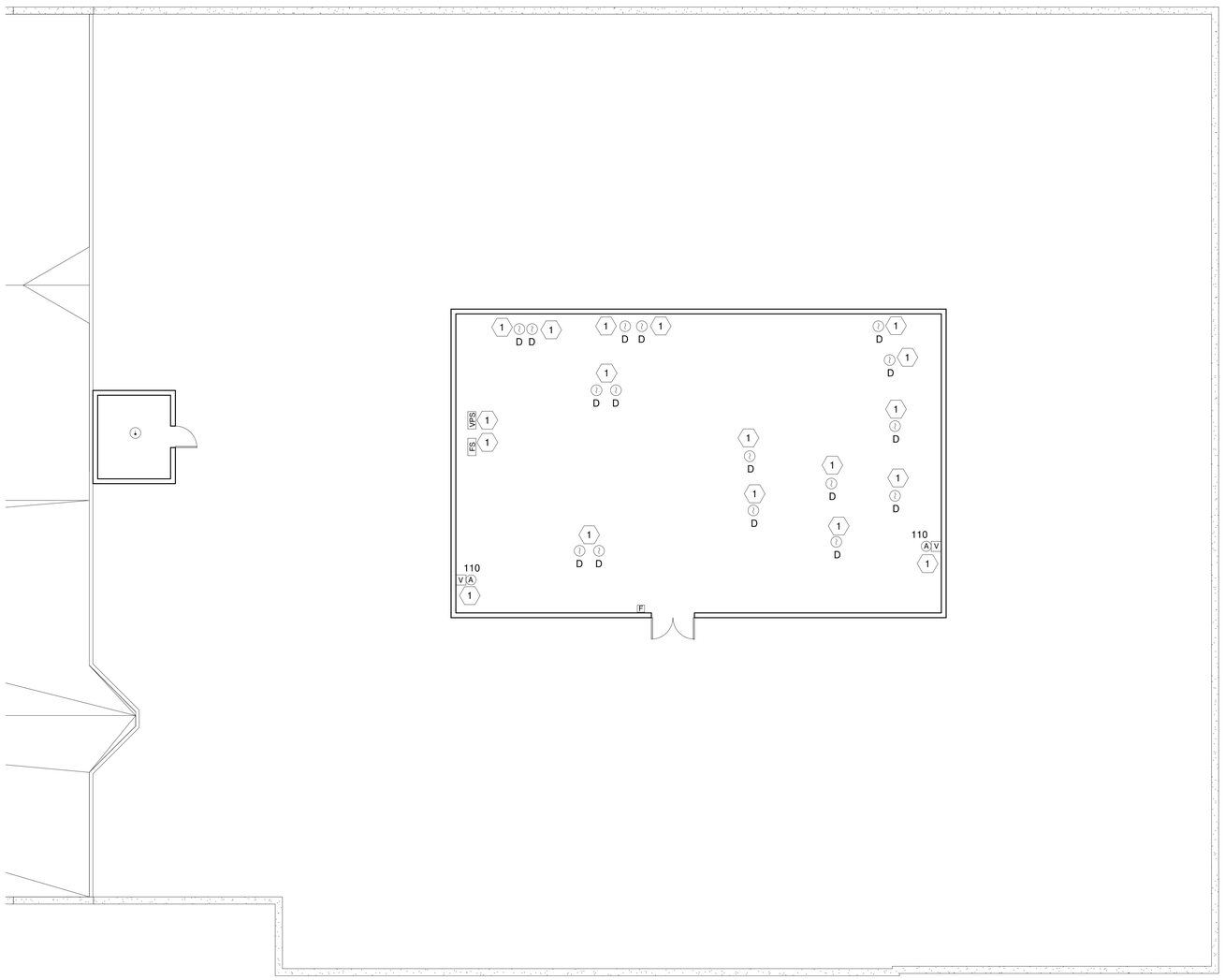
TITLE

THIRD LEVEL PLAN - SYSTEMS - AREA A

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

EY130

SHEET NO.



1 PENTHOUSE PLAN - SYSTEMS
Scale: N.T.S.

1 TEST EXITING WIRING AND CONNECT NEW FIRE ALARM DEVICES TO IT, IN CASE OF THE FAILING THE TEST REPLACE THE WIRING.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

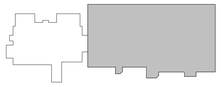
PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SUBINDER SINGH SIDHU
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

1/8" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

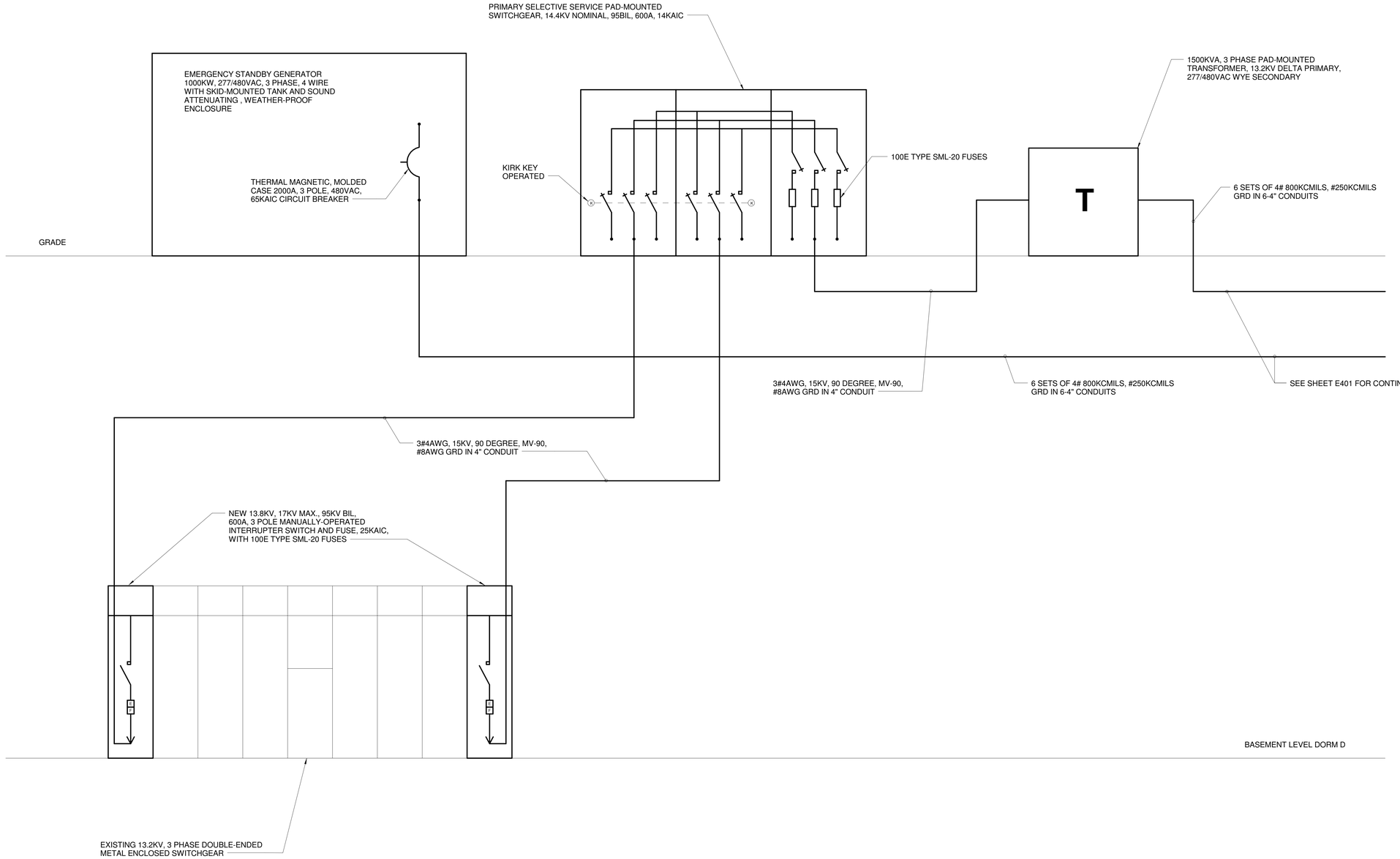
TITLE

THIRD LEVEL PLAN - SYSTEMS - AREA B AND C

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

EY131

SHEET NO.



A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

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R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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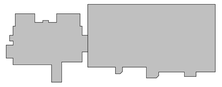
LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
SIDHU DHARMINDER SINGH
NO. 20469
REGISTERED
PROFESSIONAL ENGINEER

KEY PLAN



SCALE

12" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

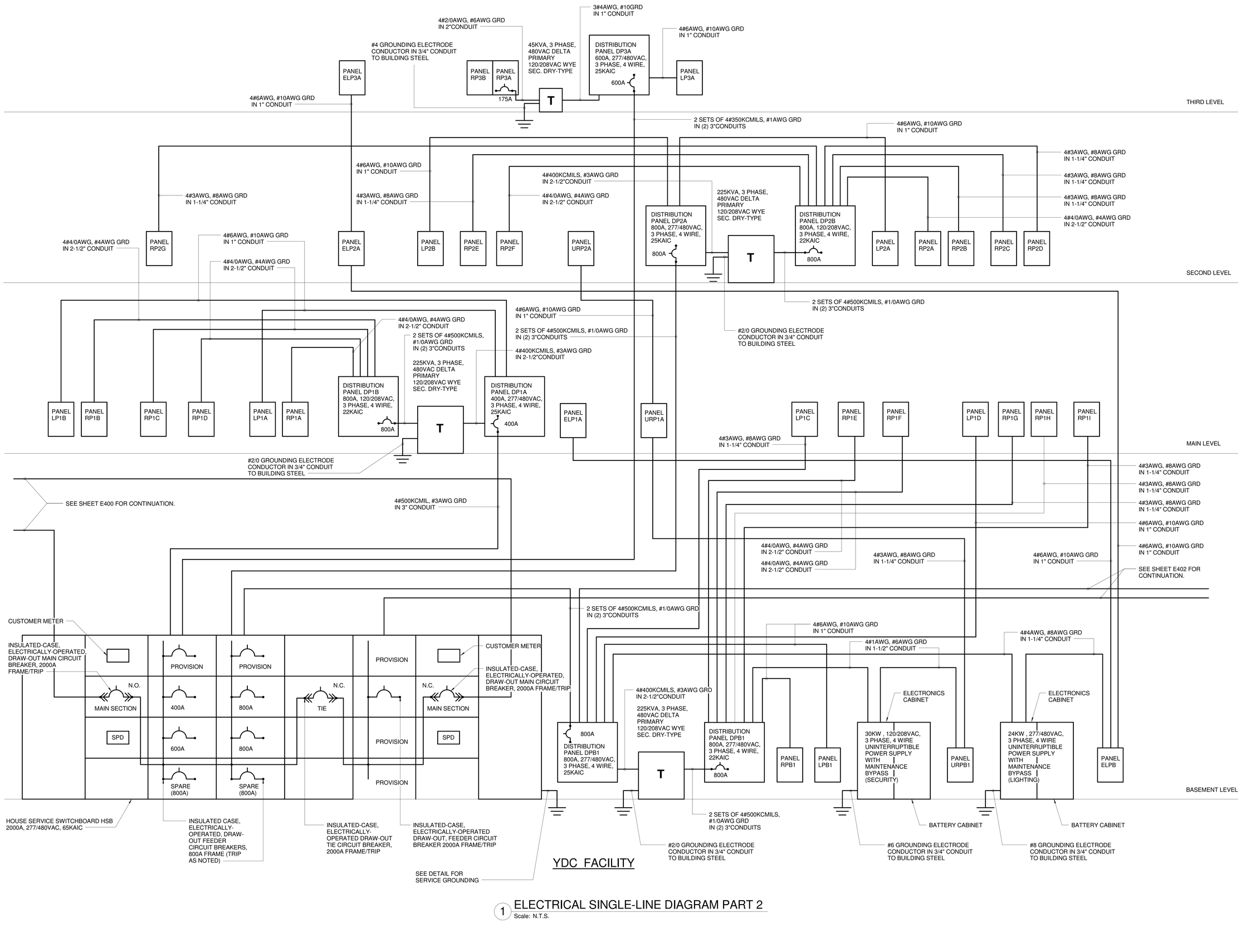
TITLE

ELECTRICAL SINGLE-LINE DIAGRAM PART 1

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E400

SHEET NO.



1 ELECTRICAL SINGLE-LINE DIAGRAM PART 2
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS
EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
10320/330 PIAZA DR. SUITE 1000
11350 MCCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 20466
EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE
12" = 1'-0"

No.	Description	Date

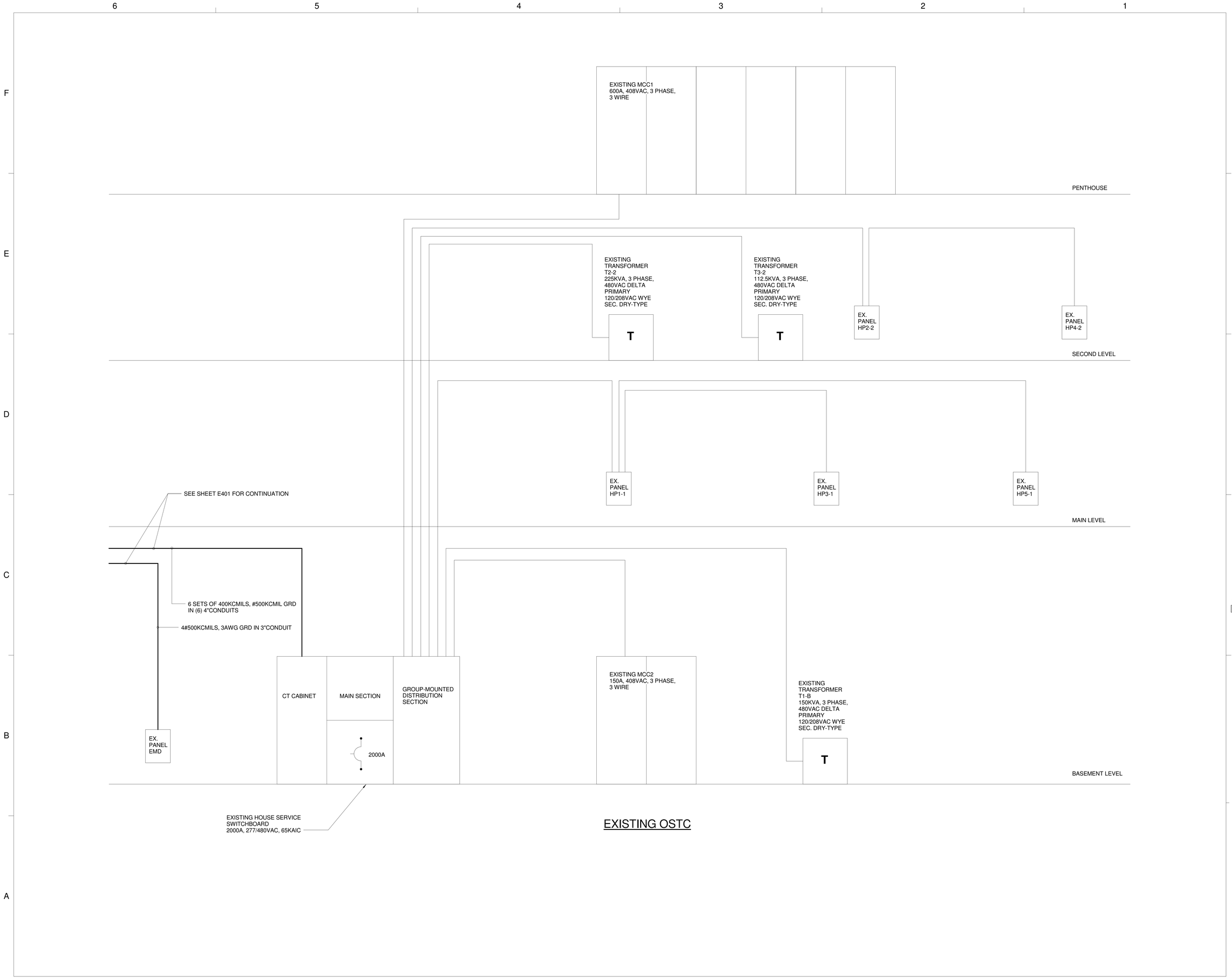
REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE
ELECTRICAL SINGLE-LINE DIAGRAM PART 2

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E401
SHEET NO.



EXISTING OSTC

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
No. 20469

KEY PLAN



SCALE

12" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

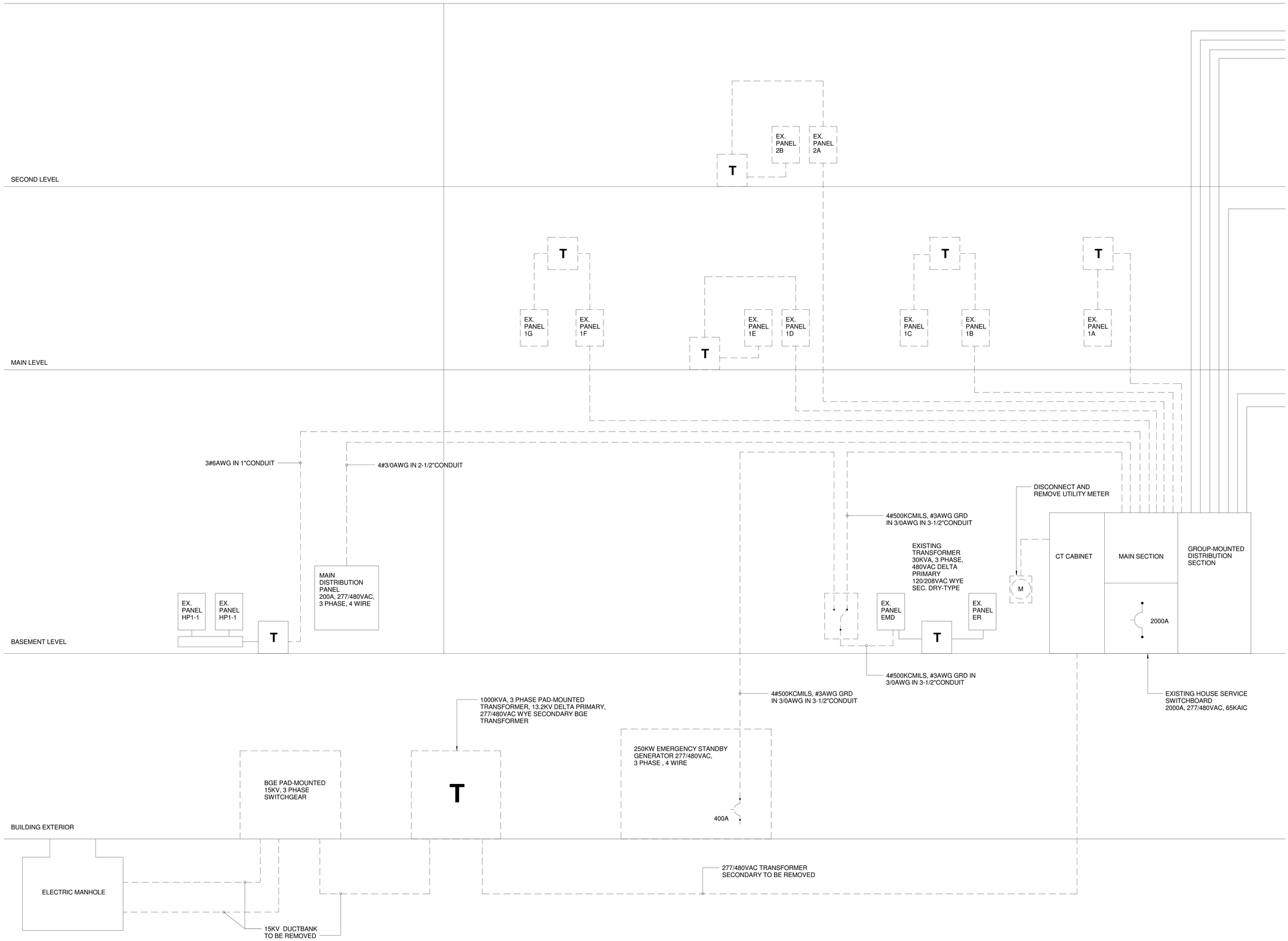
TITLE

ELECTRICAL SINGLE-LINE DIAGRAM PART 3

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E402

SHEET NO.



1 ELECTRICAL SINGLE-LINE DIAGRAM - DEMOLITION
Scale: N.T.S.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
10320 LITTLE PATUXENT PKWY, SUITE 1000
LITTLE MACGORMICK, ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 20468
EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · DONALD PAUL DAVIS · 20468 · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN

SCALE

12" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

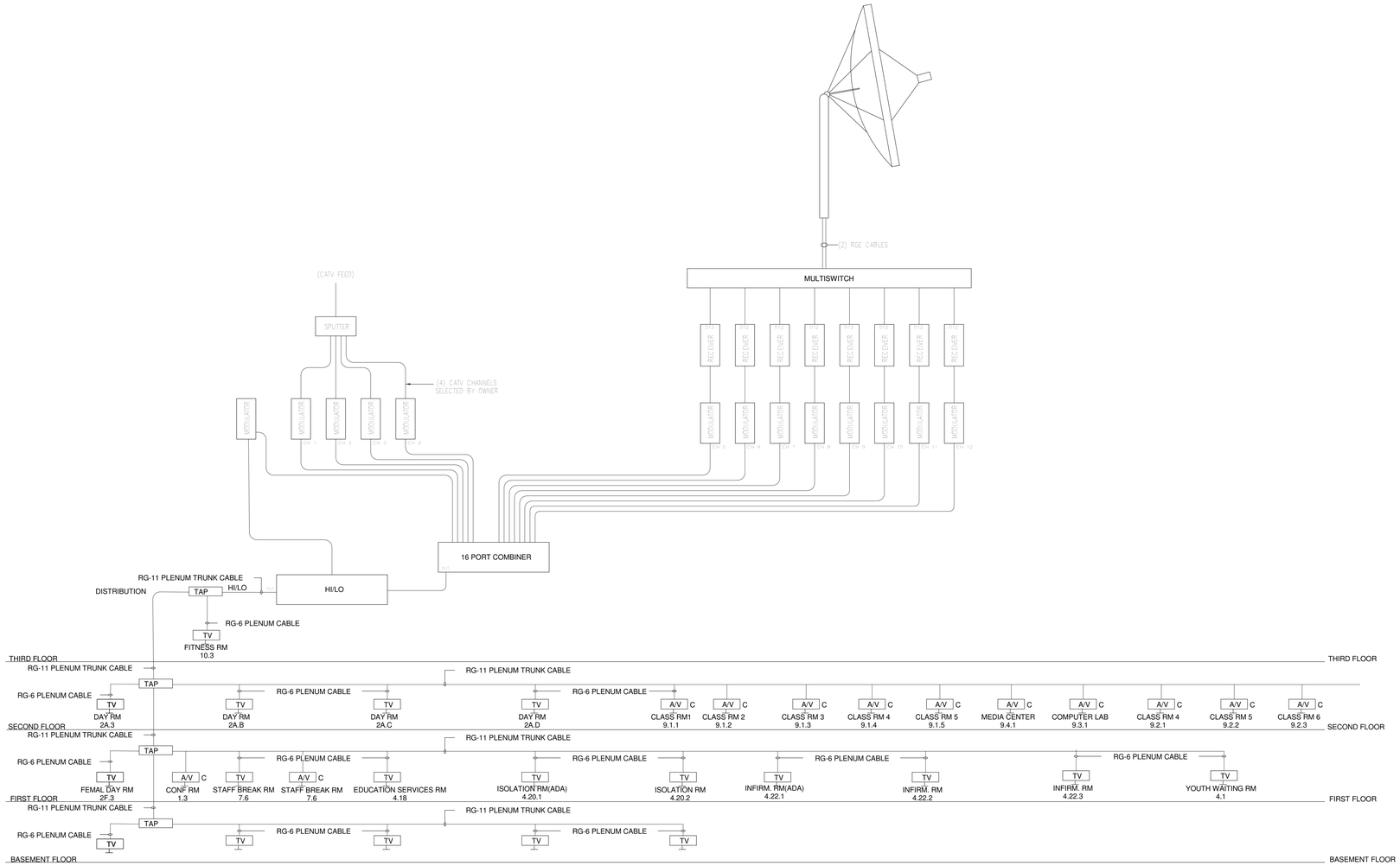
TITLE

ELECTRICAL SINGLE-LINE DIAGRAM - DEMOLITION

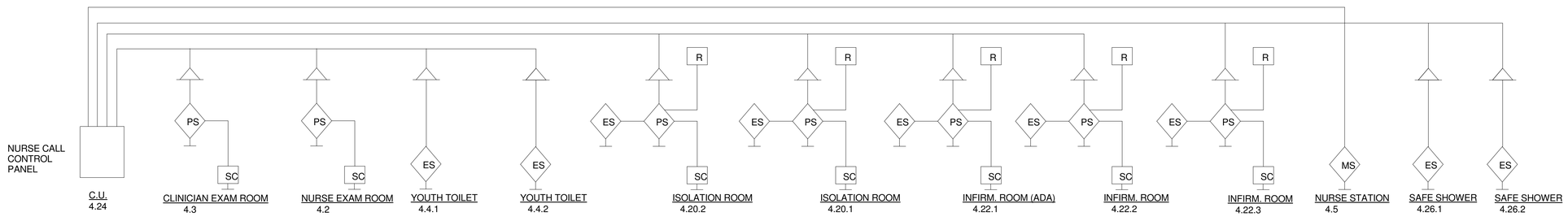
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E403

SHEET NO.



1 MATV RISER DIAGRAM
Scale: N.T.S.



2 NURSE CALL RISER DIAGRAM
Scale: N.T.S.

GENERAL NOTES:

1. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INSTALLED IN CONDUITS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

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BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

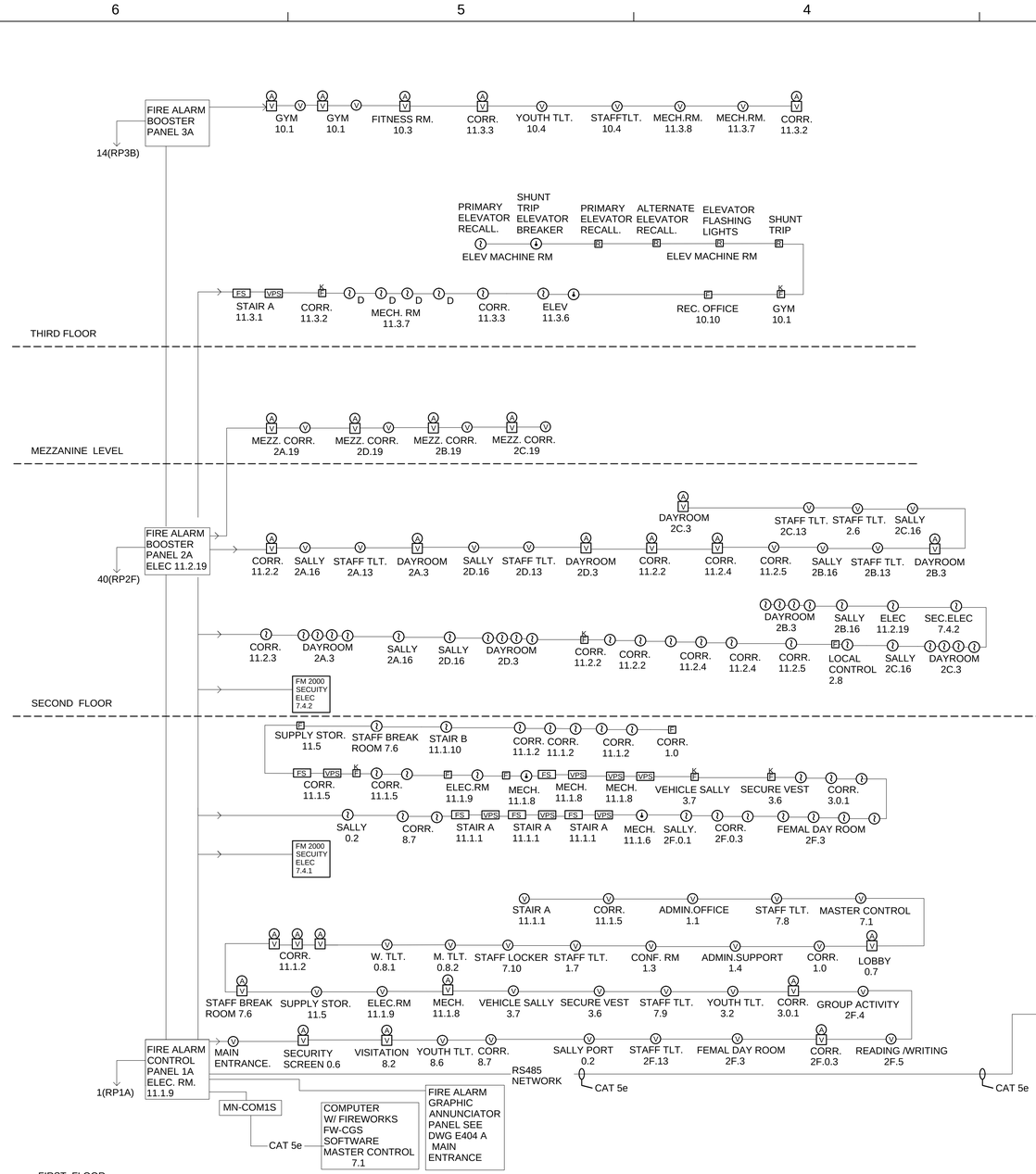
TITLE

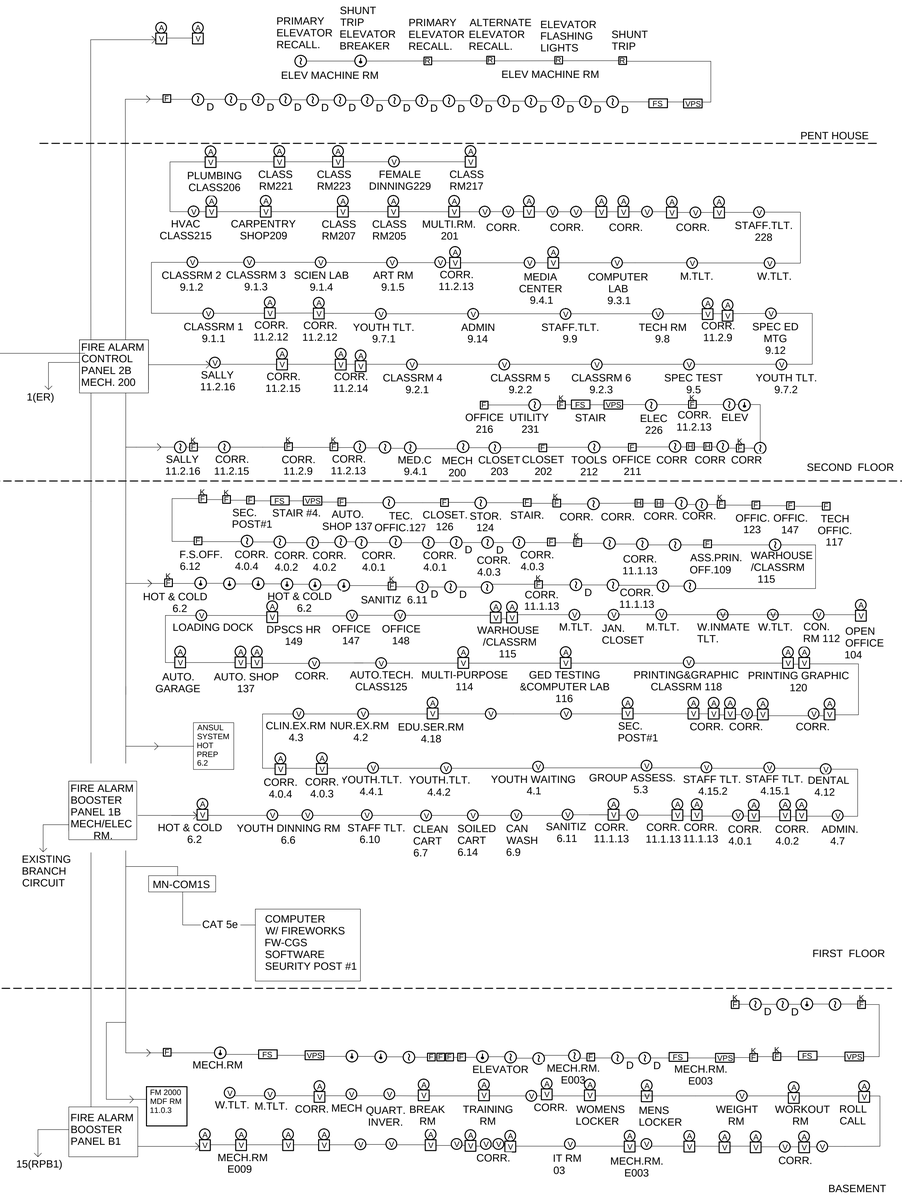
SPECIAL SYSTEMS RISER DIAGRAMS

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

E404

SHEET NO.





GENERAL NOTES:

1. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATION AND SHALL BE INSTALLED IN CONDUIT SEPARATE FROM ALL OTHER WIRING SYSTEMS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA IV, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

NTS.

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

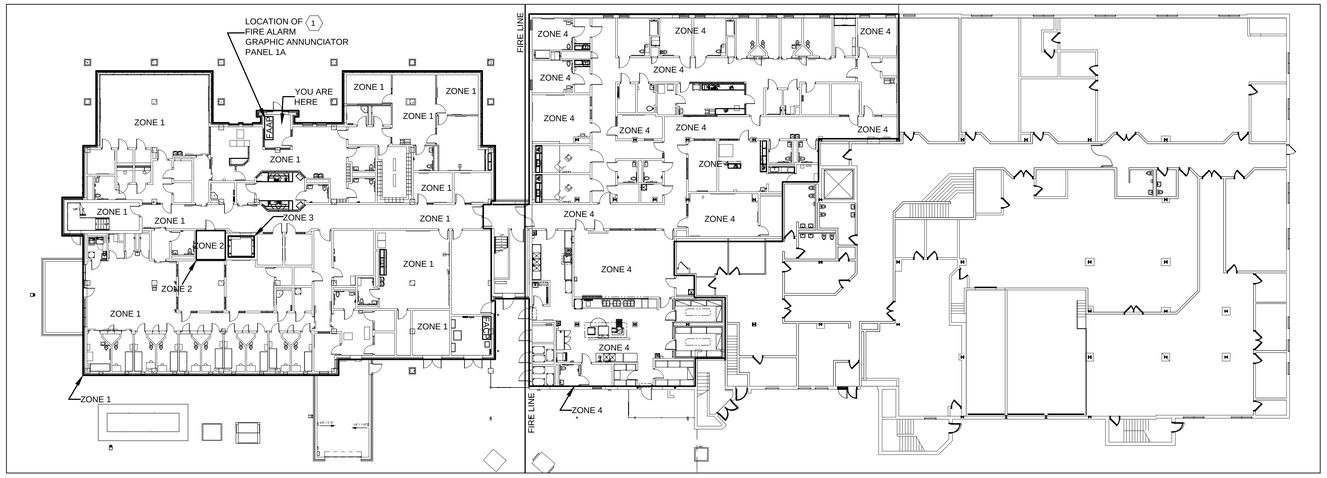
TITLE

FIREALARM RISER DIAGRAM

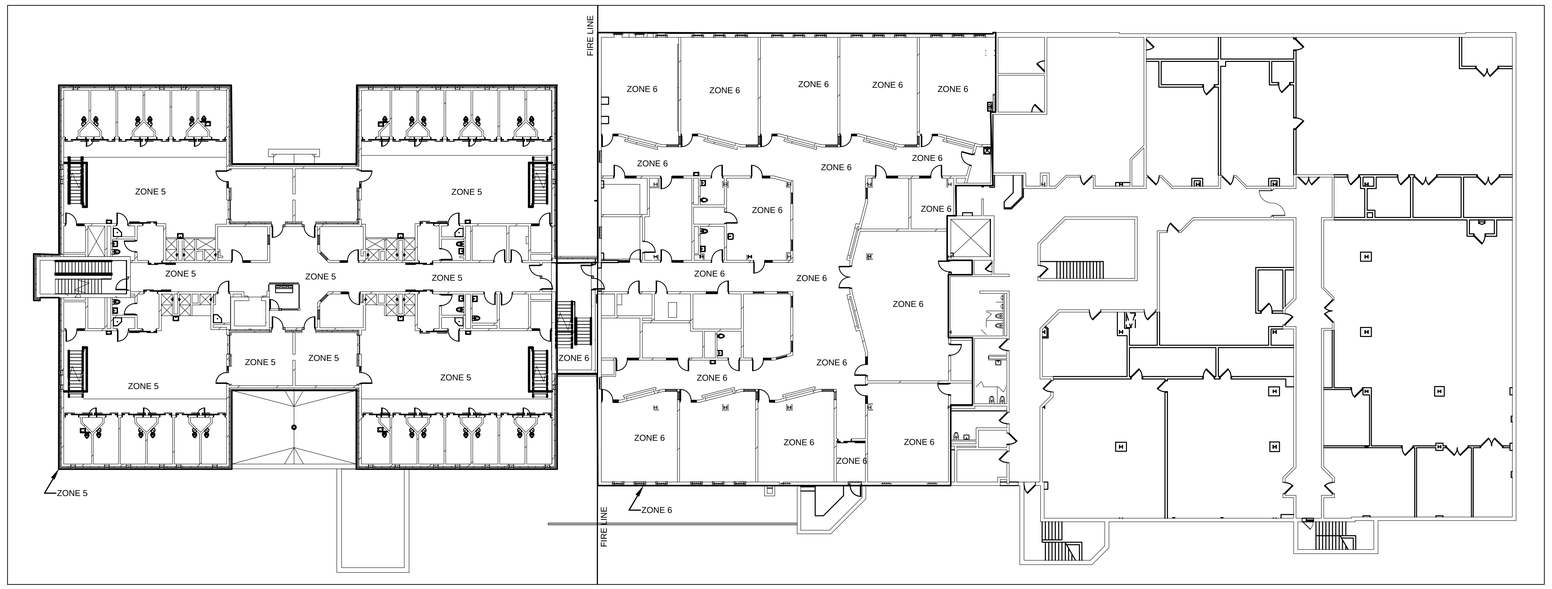
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E405

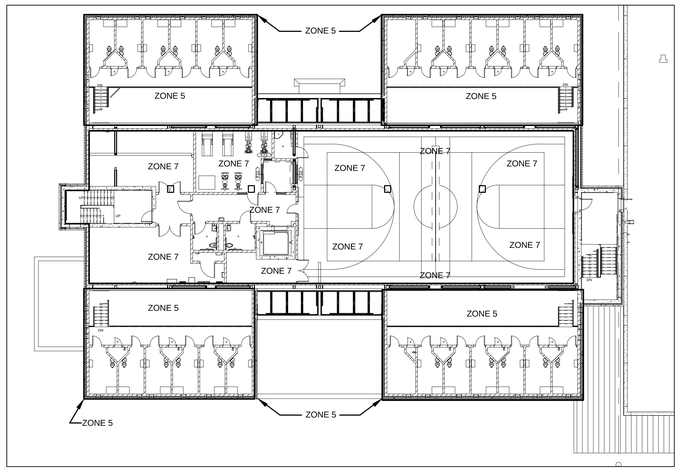
SHEET NO.



MAIN LEVEL PLAN



SECOND LEVEL PLAN



MEZZANINE &THIRD LEVEL PLAN

GENERAL NOTES:

1. REFER TO DRAWING EG000 FOR ELECTRICAL ABBREVIATION, LEGEND, NOTES & SYMBOLS.
2. ALL WIRING SHALL BE IN DEDICATED 3/4" RACEWAY WITH MINIMUM CONDUCTOR SIZE OF NO. 12 AWG. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL FIRE ALARM EQUIPMENT & DEVICES SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE ZONING FOR THE EXISTING BUILDING NOT SHOWN ON TTHE GRAPHIC ANNUNCIATOR PANEL.
5. CONTRACTOR SHALL VERIFY THE ALL ROOM NUMBERS AND NAMES WITH THE OWNER AND ARCHITECTS BEFORE FINALIZING GRAPHIC ANNUNCIATOR PANEL.

DRAWING NOTES:

1 PROVIDE NEW GRAPHIC F/A ANNUNCIATOR PANEL, MODEL NO. TO BE LOCATED @ MAIN ENTRANCE . FACEPLATE TO INCLUDE PILOT LIGHT(s) AS SPECIFIED, LABEL & LAMP COLORING TO BE AS FOLLOWS [A=AMBER, G=GREEN, R=RED & Y=YELLOW]:

- NORMAL POWER
- EMERGENCY POWER
- SYSTEM TROUBLE
- GENERATOR RUN
- GENERATOR FAULT
- LAMP TEST
- TROUBLE SILENCE
- SMOKE DETECTOR
- HEAT DETECTOR
- MANUAL PULL STATION
- SMOKE DUCT DETECTOR
- SPRINKLER FLOW SWITCH
- SPRINKLER TAMPER VALVE SWITCH
- KITCHEN FIRE SUPPRESSION SYSTEM

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115

TERRALOGOS
ECO ARCHITECTURE.CO

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

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LICENSE NO. 20469
EXPIRATION DATE 06/03/2016

KEY PLAN

SCALE

NTS.

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

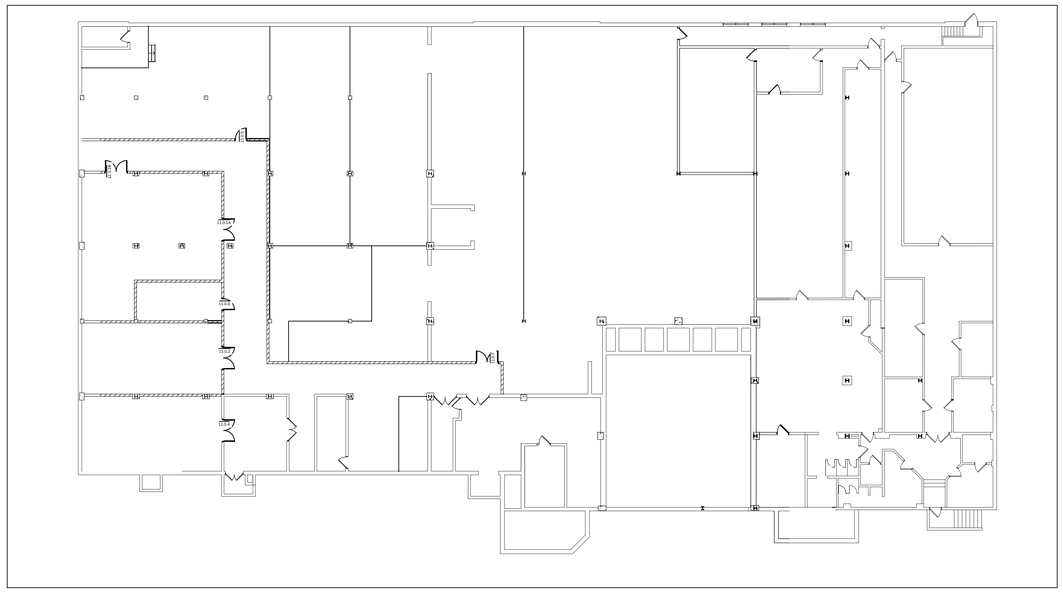
TITLE

F.A. GRAPHIC ANNUNCIATOR-PART1

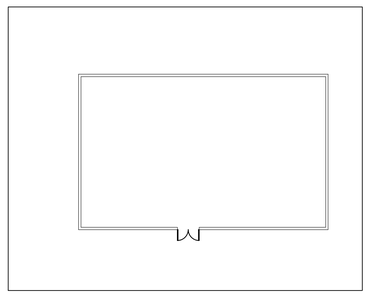
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E406

SHEET NO.



BASEMENT LEVEL PLAN



PENTHOUSE LEVEL PLAN

GENERAL NOTES:

1. REFER TO DRAWING EG000 FOR ELECTRICAL ABBREVIATION, LEGEND, NOTES & SYMBOLS.
2. ALL WIRING SHALL BE IN DEDICATED 3/4" RACEWAY WITH MINIMUM CONDUCTOR SIZE OF NO. 12 AWG. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
3. ALL FIRE ALARM EQUIPMENT & DEVICES SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
4. CONTRACTOR SHALL PROVIDE ZONING FOR THE EXISTING BUILDING NOT SHOWN ON TTHE GRAPHIC ANNUNCIATOR PANEL.
5. CONTRACTOR SHALL VERIFY THE ALL ROOM NUMBERS AND NAMES WITH THE OWNER AND ARCHITECTS BEFORE FINALIZING GRAPHIC ANNUNCIATOR PANEL.

DRAWING NOTES:

1 PROVIDE NEW GRAPHIC F/A ANNUNCIATOR PANEL, MODEL NO. TO BE LOCATED @ MAIN ENTRANCE . FACEPLATE TO INCLUDE PILOT LIGHT(s) AS SPECIFIED, LABEL & LAMP COLORING TO BE AS FOLLOWS [A=AMBER, G=GREEN, R=RED & Y=YELLOW]:

- NORMAL POWER
- EMERGENCY POWER
- SYSTEM TROUBLE
- GENERATOR RUN
- GENERATOR FAULT
- LAMP TEST
- TROUBLE SILENCE
- SMOKE DETECTOR
- HEAT DETECTOR
- MANUAL PULL STATION
- SMOKE DUCT DETECTOR
- SPRINKLER FLOW SWITCH
- SPRINKLER TAMPER VALVE SWITCH
- KITCHEN FIRE SUPPRESSION SYSTEM

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
Consulting Engineers
EXECUTIVE PLAZA IV, SUITE 1000
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ECO ARCHITECTURE PC

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION.
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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

NTS.

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

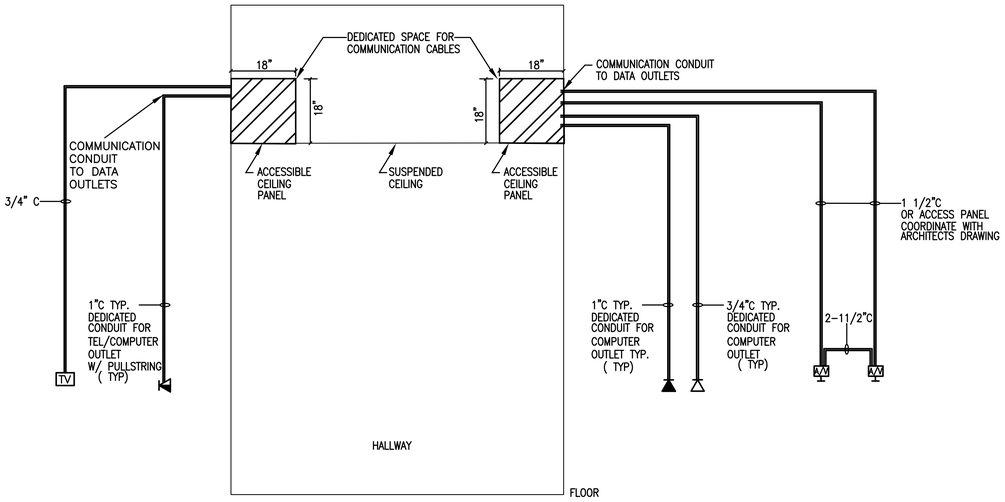
TITLE

F.A. GRAPHIC ANNUNCIATOR-PART2

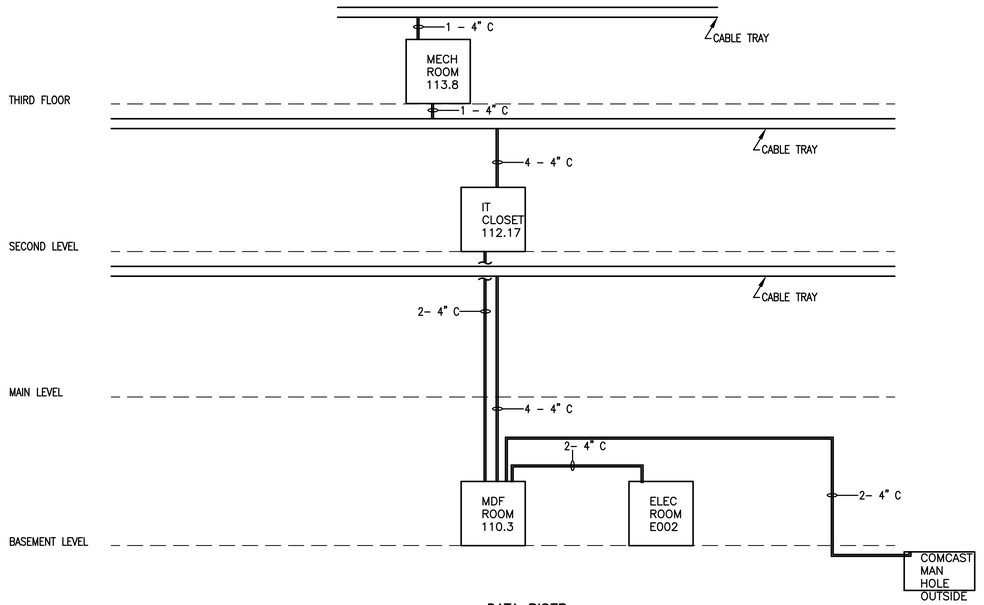
PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E407

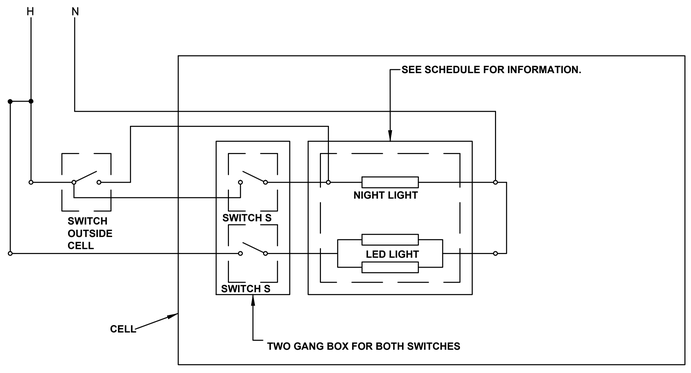
SHEET NO.



ELEVATION – COMMUNICATION CABLES ROUTING IN CORRIDORS (TYP.)
NOT TO SCALE



DATA RISER
NOT TO SCALE



LIGHTING CONTROL SCHEME CELL AREA (TYPICAL)
NOT TO SCALE

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS
EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
EXECUTIVE PLAZA III, SUITE 1000
11350 McCORMICK ROAD
HUNT VALLEY, MARYLAND 21031
PHONE (410) 329-1115
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

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PROFESSIONAL CERTIFICATION:
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LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

NTS.

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

ELECTRICAL DETAILS

PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E408

SHEET NO.

Lighting Fixture Schedule

Type Mark	Mounting Type	Description	Manufacturer	Catalog Number	Lamp	Voltage	Remark
A	SURFACE	MAXIMUM SECURITY SURFACE-MOUNTED LED LIGHT WITH CLAMSHELL HOUSING, SECURITY LENSING, TAMPER-RESISTANT FASTENERS AND INTEGRAL NIGHT LIGHT	FAIL-SAFE	FUSL-S-12-4-LD3-2STD-35000-UNV-80/86-ED2C-LLNL	LED	120	ALTERNATE MANUFACTURER: KENALL
B	RECESSED	2'X4' RECESSED LED TROFFER WITH ACRYLIC PRISMATIC DIFFUSER	LITHONIA	2TL4-46L-FW-A12-D50-LP835-N100	LED	277	ALTERNATE MANUFACTURER: METALUX
C	RECESSED	MAXIMUM SECURITY RECESSED GRID 2'X2' LED LIGHT WITH OVERLAPPING DOOR FRAME, SECURITY LENSING AND TAMPER-RESISTANT FASTENERS	FAIL-SAFE	FSR-SC-S-24-2-LD3-3-STD-35-UNV-80/86-ED1C-CPH	LED	277	ALTERNATE MANUFACTURER: KENALL
D	RECESSED	MAXIMUM SECURITY RECESSED GRID 2'X4' LED LIGHT WITH OVERLAPPING DOOR FRAME, SECURITY LENSING AND TAMPER-RESISTANT FASTENERS	FAIL-SAFE	FSR-SC-S-24-4-LD3-3-STD-35-UNV-80/86-ED1C-CPH	LED	277	ALTERNATE MANUFACTURER: KENALL
E	CEILING-MOUNTED	CEILING-MOUNTED MAXIMUM SECURITY LED EXIT LIGHT	Cooper Industries, Inc.		LED	277	ALTERNATE MANUFACTURER: KENALL
E1		UNIVERSAL MOUNTING, LED SINGLE-FACE EMERGENCY EXIT LIGHT	FAIL SAFE		LED		
F	WALL-MOUNTED	WALL-MOUNTED LED VAPOR-TITE WITH CAST ALUMINUM HOUSING AND GLASS GLOBE	LITHONIA	OLVCWM	LED	277	ALTERNATE MANUFACTURER: COOPER
G	RECESSED	MAXIMUM SECURITY RECESSED FLANGE 1'X1' LED LIGHT WITH OVERLAPPING DOOR FRAME, SECURITY LENSING AND TAMPER-RESISTANT FASTENERS	FAIL-SAFE	FMR-S-12-1-LD3-2-STD-35-UNV-80/86-ED1C-CPH-WL	LED	120	ALTERNATE MANUFACTURER: KENALL
H	PENDANT	STEM-MOUNTED LED WRAPAROUND WITH FROSTED ACRYLIC LENS	METALUX	2-WNLED-LD1-54-F-UNV-L835-CD-1-SCF-12"	LED	277	ALTERNATE MANUFACTURER: LITHONIA
I	WALL-MOUNTED	WALL-MOUNTED LED LIGHT WITH HIGH IMPACT ACRYLIC DIFFUSER	COOPER	FMB-S-4-LD3-1-STD/1-STD-35-UNV-80/86-ED1C	LED	277	ALTERNATE MANUFACTURER: KENALL
J	SURFACE	EXTERIOR SURFACE-MOUNTED LED LIGHT FIXTURE WITH ACRYLIC PRISMATIC REFRACTOR	KENALL	P-DB-50L35K-1-277-ASA	LED	277	ALTERNATE MANUFACTURER: FAIL-SAFE
L	RECESSED	2'X2' RECESSED FLANGE LED TROFFER WITH ACRYLIC PRISMATIC DIFFUSER	FAIL-SAFE	2TL2-33L-FW-A12-D38-LP835-N100-DGA22	LED	277	ALTERNATE MANUFACTURER: KENALL
M	RECESSED	2'X2' RECESSED GRID LED TROFFER WITH ACRYLIC PRISMATIC DIFFUSER	FAIL-SAFE	2TL2-33L-FW-A12-D38-LP835-N100	LED	277	ALTERNATE MANUFACTURER: KENALL
N	CEILING-MOUNTED	SHALLOW CASTING LED ROUND WITH OPAL POLYCARBONATE LENS	FAIL-SAFE	TRE15-C-LD2-40-8-35-BZ-UNV-ED-CSTG	LED	120	ALTERNATE MANUFACTURER: KENALL
O	PENDANT	FHL Luminaire LED High Bay	Cooper Lighting	FHL-11L-30-3A-UNV-PCLNS	LED		ALTERNATE MANUFACTURER: LITHONIA
P	RECESSED	2'X4' RECESSED FLANGE LED TROFFER WITH ACRYLIC PRISMATIC DIFFUSER	LITHONIA	2TL4-46L-FW-A12-D50-LP835-N100-DGA24	LED	277	ALTERNATE MANUFACTURER: METALUX
Q	POLE-MOUNTED	20' POLE-MOUNTED EXTERIOR LED LIGHT FIXTURE WITH TYPE 4 MEDIUM DISTRIBUTION	LITHONIA	DSX1LED-60C-700-30K-T4M-480-SPA-PER-DDBXD	LED	277	ALTERNATE MANUFACTURER: METALUX
R	WALL-MOUNTED	SHALLOW CASTING LED ROUND WITH HEMISPHERE POLYCARBONATE LENS	FAIL-SAFE	TRE15-W-LD2-40-8-35-BZ-UNV-ED-CSTG	LED	277	ALTERNATE MANUFACTURER: KENALL
S	WALL-MOUNTED	WALL-MOUNTED CONTINUOUS LED INDIRECT LIGHT FIXTURE WITH FIXED-MOUNT AND WIDE BEAM DISTRIBUTION AND SUITABLE FOR WET LOCATION	WINONA	WSL-405W-24-60-35K-ND24V-F-RB-X-STD	LED	277	ALTERNATE MANUFACTURER:
T	WALL-MOUNTED	4' WALL-MOUNTED LED MAXIMUM SECURITY PATIENT LIGHT WITH UP/DOWN DISTRIBUTION	FAIL-SAFE	FWL-D-4-LED3-UNV-STD/STD-35-80/86-ED2C	LED	120	ALTERNATE MANUFACTURER: FAIL SAFE, PROVIDE LOW VOLTAGE SEQUENTIAL RELAY
U	RECESSED	RECESSED EXTERIOR LED DOWNLIGHT WITH POLYCARBONATE LENS U.L. FOR WET LOCATION	KENALL	TDL6VL2-13L35-DV-5BR-9	LED	277	ALTERNATE MANUFACTURER: FAIL SAFE
V	RECESSED	RECESSED 6" LED INSTITUTIONAL-GRADE DOWNLIGHT WITH 0.125" CLEAR POLYCARBONATE LENS	KENALL	HADL6VL2-13L35K-DV-2FW-G	LED		ALTERNATE MANUFACTURER: FAIL SAFE

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EBA ENGINEERING

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R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

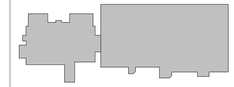
PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND — MICHAEL BRUCE — 20469 — REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	MB
APPROVED BY	MB
CHECKED BY	MB
DATE	01-30-2015

TITLE

LIGHTING FIXTURE SCHEDULE

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E500

SHEET NO.

Branch Panel: DPB1

Location: MAIN ELECTRIC ROOM 11.0.1
Supply From: HSB
Mounting:
Enclosure:

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 42,000
Mains Type: 800
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C
1,2,3	LPB1	225 A	3	4368 VA	4063 VA	2761 VA
4,5,6	LP1C	225 A	3	2216 VA	1104 VA	0 VA
7,8,9	LP1D	225 A	3	1534 VA	1932 VA	0 VA
10,11,12	225 kVA, 277 V/480 V, Three Phase, 4 Wires, Wye	350 A	3	70805 VA	65484 VA	63809 VA
13,14,15	UNINTERRUPTIBLE POWER SUPPLY #1	100 A	3	8421 VA	8421 VA	8421 VA
16,17,18	EMD	400 A	3	0 VA	0 VA	0 VA
19						
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42						
			Total Load:	87344 VA	81004 VA	74991 VA
			Total Amps:	319 A	296 A	271 A

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	30971 VA	111.48%	34526 VA		
Other	52335 VA	100.00%	52335 VA	**Total Conn. Load:**	186511 VA
Receptacle	89660 VA	55.58%	49830 VA	**Total Est. Demand:**	152699 VA
Lighting	9850 VA	125.00%	12313 VA	**Total Conn. Current:**	224 A
Power	3695 VA	100.00%	3695 VA	**Total Est. Demand Current:**	184 A

Notes:

Branch Panel: DP1A

Location: ELEC. RM. 11.1.9
Supply From: HSB
Mounting:
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25,000
Mains Type: 800 A
Mains Rating: 400 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C
1,2,3	LP1A	225 A	3	9013 VA	8580 VA	7205 VA
4,5,6	LP1B	225 A	3	2368 VA	1278 VA	1287 VA
7,8,9	225 kVA, 277 V/480 V, Three Phase, 4 Wires, Wye Transformer	350 A	3	46118 VA	44203 VA	44124 VA
10						
11						
12						
13						
14						
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42						
			Total Load:	57499 VA	54060 VA	52616 VA
			Total Amps:	208 A	196 A	190 A

Legend:

Load Classification	Connected Load	Demand Fsctor	Estimated Demand	Panel Totals	
Motor	96329 VA	101.46%	97733 VA		
Other	20782 VA	100.00%	20782 VA	**Total Conn. Load:**	168109 VA
Receptacle	36826 VA	63.58%	23413 VA	**Total Est. Demand:**	158763 VA
Lighting	10652 VA	125.00%	13315 VA	**Total Conn. Current:**	202 A
Power	3520 VA	100.00%	3520 VA	**Total Est. Demand Current:**	191 A

Notes:

Branch Panel: DPB2

Location: MAIN ELECTRIC ROOM 11.0.1
Supply From: 225 kVA, 0 V/480 V, Three Phas...
Mounting:
Enclosure:

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: 800 A
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C
1,2,3	RP1E	225 A	3	21527 VA	19971 VA	20538 VA
4,5,6	RP1F	225 A	3	19310 VA	19873 VA	17198 VA
7,8,9	RP1G	225 A	3	6780 VA	5220 VA	7800 VA
10,11,12	RP1H	225 A	3	8851 VA	8491 VA	8180 VA
13,14,15	RPB	225 A	3	4380 VA	1986 VA	397 VA
16,17,18	UNINTERRUPTIBLE POWER SUPPLY #2	125 A	3	10526 VA	10526 VA	10526 VA
19						
20						
21						
22						
23						
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25						
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27						
28						
29						
30						
			Total Load:	71374 VA	66067 VA	64640 VA
			Total Amps:	597 A	552 A	539 A

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	22481 VA	115.81%	26036 VA		
Other	52305 VA	100.00%	52305 VA	**Total Conn. Load:**	168292 VA
Receptacle	89660 VA	55.58%	49830 VA	**Total Est. Demand:**	132055 VA
Lighting	151 VA	125.00%	189 VA	**Total Conn. Current:**	467 A
Power	3695 VA	100.00%	3695 VA	**Total Est. Demand Current:**	367 A

Notes:

Branch Panel: DP1B

Location: ELEC. RM. 11.1.9
Supply From: 225 kVA, 0 V/480 V, Three Phas...
Mounting:
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: 800 A
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C
1,2,3	RP1A	225 A	3	4461 VA	3900 VA	4673 VA
4,5,6	RP1B	225 A	3	18767 VA	15998 VA	12035 VA
7,8,9	RP1C	225 A	3	14279 VA	11412 VA	16254 VA
10,11,12	RP1D	225 A	3	8711 VA	13132 VA	11423 VA
13,14	Generator Panelboard	100 A	2	0 VA	0 VA	
15						
16						
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42						
			Total Load:	46218 VA	44442 VA	44385 VA
			Total Amps:	385 A	370 A	370 A

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	83836 VA	101.67%	85240 VA		
Other	12060 VA	100.00%	12060 VA	**Total Conn. Load:**	137753 VA
Receptacle	36826 VA	63.58%	23413 VA	**Total Est. Demand:**	126122 VA
Lighting	1511 VA	125.00%	1889 VA	**Total Conn. Current:**	382 A
Power	3520 VA	100.00%	3520 VA	**Total Est. Demand Current:**	350 A

Notes:

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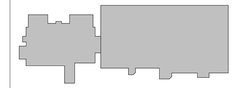
LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND — CHRISTOPHER GREGORY SIDHU — 20469 — REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E530

SHEET NO.

Branch Panel: DP2A

Location: ELEC. 11.2.18
Supply From: HSB
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 42,000
Mains Type: 800 A
Mains Rating: 800 A
MCB Rating: 800 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C
1,2,3	LP2A	225 A	3	5704 VA	4914 VA	4833 VA
4,5,6	LP2B	225 A	3	2518 VA	2927 VA	859 VA
7,8,9	225 kVA Step-down Transformer	350 A	3	80454 VA	67493 VA	56953 VA
10,11,12	RTU-03	90 A	3	9141 VA	9141 VA	9141 VA
13,14,15	MAU-01	100 A	3	11080 VA	11080 VA	11080 VA
16,17,18	CU-06	100 A	3	16897 VA	16897 VA	16897 VA
19,20,21	CU-07	100 A	3	16897 VA	16897 VA	16897 VA
22,23,24	EF-02	15 A	3	582 VA	582 VA	582 VA
25,26,27	RTU-02	80 A	3	8310 VA	8310 VA	8310 VA
28,29,30	RTU-01	100 A	3	10526 VA	10526 VA	10526 VA
31						
32						
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42						

Branch Panel: LPB1

Location: MAIN ELECTRIC ROOM 11.0.1
Supply From: DPB1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1		20 A	1	585 VA	1040...					1	20 A		2
3	SF-1	15 A	3			582 VA	582 VA			3	15 A	EF-1	4
5	--	--	--					582 VA	582 VA	--	--	--	6
7	--	--	--	582 VA	582 VA					--	--	--	8
9	EUH-1	15 A	3			1667...	1318...			1	20 A	Lighting Basement	10
11	--	--	--					1667...					12
13	--	--	--	1667...									14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		4455 VA		4148 VA		2830 VA					
		Total Amps:		17 A		16 A		10 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	8490 VA	114.72%	9740 VA		
Other	0 VA	0.00%	0 VA	**Total Conn. Load:**	11433 VA
Lighting	2943 VA	125.00%	3679 VA	**Total Est. Demand:**	13419 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	14 A
				Total Est. Demand:	16 A

Notes:

Branch Panel: LP1B

Location: JAN. 11.1.4
Supply From: DP1A
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Branch Circuit Rooms 8.1.1, 8.1.2, 8.1.3,...	20 A	1	982 VA	982 VA					1	20 A	Lighting Branch Circuit Rooms 0.6, 0.4, 7.1, 0.8.1,...	2
3	Lighting Circuit	20 A	1			45 VA	1233...			1	20 A	Lighting Circuit	4
5	Lighting Circuit	20 A	1					60 VA	1227...	1	20 A	Lighting Circuit	6
7	Lighting	20 A	1	422 VA									8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
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27													28
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31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		2385 VA		1278 VA		1287 VA					
		Total Amps:		9 A		5 A		5 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	165 VA	100.00%	165 VA		
Lighting	4785 VA	125.00%	5981 VA	**Total Conn. Load:**	4950 VA
				Total Est. Demand:	6146 VA
				Total Conn.:	6 A
				Total Est. Demand:	7 A

Notes:

Branch Panel: LP1A

Location: ELEC. RM. 11.1.9
Supply From: DP1A
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Circuit	20 A	1	60 VA	45 VA					1	20 A	Lighting Circuit	2
3	Lighting Circuit	20 A	1			1057...	1379...			1	20 A	Lighting Circuit	4
5	Loading Dock Lighting	20 A	1					789 VA	222 VA	1	20 A	Other	6
7	Lighting	20 A	1	437 VA	437 VA					1	20 A	Lighting	8
9	Lighting	20 A	1			148 VA	148 VA			1	20 A	Lighting	10
11	Lighting	20 A	1					133 VA	198 VA	1	20 A	Lighting	12
13	Overhead Door System	15 A	3	831 VA	1872...					2	15 A	IH-02	14
15	--	--	--			831 VA	1872...			--	--	--	16
17	--	--	--					831 VA	1872...	2	15 A	IH-01	18
19	EUH-03	15 A	3	1667...	1872...					--	--	--	20
21	--	--	--			1667...	1667...			3	15 A	EUH-04	22
23	--	--	--					1667...	1667...	--	--	--	24
25	Lighting Controls	20 A	1	360 VA	1667...					--	--	--	26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		9247 VA		8769 VA		7379 VA					
		Total Amps:		34 A		32 A		27 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	12493 VA	110.01%	13743 VA		
Other	8557 VA	100.00%	8557 VA	**Total Conn. Load:**	25406 VA
Lighting	4356 VA	125.00%	5445 VA	**Total Est. Demand:**	27745 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	31 A
				Total Est. Demand:	33 A

Notes:

Branch Panel: LP1C

Location: JAN. 6.5
Supply From: DPB1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Circuit Rooms 6.5, 6.11, 6.6. 6.13, 5.3 an...	20 A	1	1043...	1173...					1	20 A	Lighting Circuit Room 6.2, 6.9, 6.7, 6.10, 6.12 and...	2
3	Lighting Circuit Rooms 11.1.12, 5.3, 5.4, 4.1, 4.12,...	20 A	1			1104...							4
5													6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		2216 VA		1104 VA		0 VA					
		Total Amps:		9 A		5 A		0 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	0 VA	0.00%	0 VA		
Lighting	3320 VA	125.00%	4150 VA	**Total Conn. Load:**	3320 VA
				Total Est. Demand:	4150 VA
				Total Conn.:	4 A
				Total Est. Demand:	5 A

Notes:

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

SIDHU ASSOCIATES, INC.
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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

SEAL

SEAL

PROFESSIONAL CERTIFICATION:

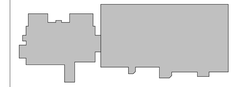
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · BRIAN PENZA · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

E532

SHEET NO.

Branch Panel: LP1D

Location: C.U. 4.24
Supply From: DPB1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Circuit Rooms 5.1, 4.18, 4.2, 4.3, 4.4.1,...	20 A	1	982 VA	552 VA					1	20 A	Lighting Circuit Rooms 4.01, 4.02 and 4.03	2
3	Lighting Circuit Rooms 4.24, 4.25, 4.11, 4.5, 4.20,...	20 A	1			1104...	828 VA			1	20 A	Lighting Circuit Rooms 4.9, 4.8 ,4.7, 5.2, 4.10.1 an...	4
5													6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		1534 VA		1932 VA		0 VA					
		Total Amps:		6 A		8 A		0 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	30 VA	100.00%	30 VA		
Lighting	3436 VA	125.00%	4295 VA	**Total Conn. Load:**	3466 VA
				Total Est. Demand:	4325 VA
				Total Conn.:	4 A
				Total Est. Demand:	5 A

Notes:

Branch Panel: LP2B

Location: ELEC 11.2.19
Supply From: DP2A
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Circuit Rooms 2D.3, 2D.15, 2D.13, 2D.16...	20 A	1	1290...	1228...					1	20 A	Lighting Circuit Rooms 11.2.9, 11.2.13, 11.2.14,...	2
3	Lighting Circuit Rooms 2C.3, 2.6, 7.4.2, 2C.15 and...	20 A	1			1496...	1431...			1	20 A	Lighting Circuit Rooms 2B.13, 2B.12, 2.7, 11.2.19,...	4
5		20 A	1					859 VA	0 VA	1	20 A	Lighting	6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		2518 VA		2927 VA		859 VA					
		Total Amps:		10 A		11 A		3 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	3356 VA	100.00%	3356 VA		
Lighting	2947 VA	125.00%	3684 VA	**Total Conn. Load:**	6303 VA
				Total Est. Demand:	7040 VA
				Total Conn.:	8 A
				Total Est. Demand:	8 A

Notes:

Branch Panel: LP2A

Location: ELEC. 11.2.18
Supply From: DP2A
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Circuit Rooms 9.13, 9.5, 9.7.2, 9.12, 9.18,...	20 A	1	935 VA	1227...					1	20 A	Lighting Circuit Rooms 9.3.1 and 9.4.1	2
3	Lighting Circuit Rooms 9.11, 9.6, 9.14, 9.7.1, 9.10,...	20 A	1			982 VA	1288...			1	20 A	Lighting Circuit Rooms 9.1.1, 9.1.2 and 9.1.3	4
5	Lighting Circuit Rooms 9.1.4, 9.1.5, 9.15, 9.17 and...	20 A	1					1166...	1021...	1	20 A	Lighting Circuit Rooms 11.2.9, 11.2.13, 11.2.14,...	6
7	Lighting Circuit Rooms 9.2.1, 9.2.2 and 9.2.3	20 A	1	920 VA	443 VA					3	15 A	EF-07	8
9		20 A	3			942 VA	443 VA			--	--	--	10
11	--	--	--					942 VA	443 VA	--	--	--	12
13	--	--	--	942 VA	942 VA					3	20 A		14
15	EF-06	15 A	3			443 VA	942 VA			--	--	--	16
17	--	--	--					443 VA	942 VA	--	--	--	18
19	--	--	--	443 VA									20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		5852 VA		5040 VA		4956 VA					
		Total Amps:		21 A		18 A		18 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	8310 VA	108.50%	9016 VA		
Other	39 VA	100.00%	39 VA	**Total Conn. Load:**	15848 VA
Lighting	7499 VA	125.00%	9374 VA	**Total Est. Demand:**	18429 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	19 A
				Total Est. Demand:	22 A

Notes:

Branch Panel: LP3A

Location: MECH. RM. 11.3.8
Supply From: DP3A
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Lighting Circuit	20 A	1	2622...	1667...					3	15 A	EUH-06	2
3	Lighting Circuit	20 A	1			1206...	1667...			--	--	--	4
5	EUH-05	15 A	3					1667...	1667...	--	--	--	6
7	--	--	--	1667...	443 VA					3	15 A	SF-2	8
9	--	--	--			1667...	443 VA			--	--	--	10
11		20 A	3					443 VA	443 VA	--	--	--	12
13	--	--	--	443 VA									14
15	--	--	--		443 VA								16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		6842 VA		5426 VA		4220 VA					
		Total Amps:		25 A		20 A		15 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	12659 VA	109.87%	13909 VA		
Other	2637 VA	100.00%	2637 VA	**Total Conn. Load:**	16487 VA
Lighting	1191 VA	125.00%	1489 VA	**Total Est. Demand:**	18035 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	20 A
				Total Est. Demand:	22 A

Notes:

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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SIDHU ASSOCIATES, INC. Consulting Engineers
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LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · GEORGE W. PENN · REGISTERED · PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

E533

SHEET NO.

6 5 4 3 2 1

F E D C B A

Branch Panel: RPB1

Location: MAIN ELECTRIC ROOM 11.0.1 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DPB2 **Phases:** 3 **Mains Type:** 100 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 100 A
Enclosure: Type 1 **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle	20 A	1	720 VA	900 VA					1	20 A	Receptacle	2
3	Receptacle	20 A	1			540 VA	720 VA			1	20 A	Receptacle	4
5	Receptacle	20 A	1					180 VA	180 VA	1	20 A	Receptacle	6
7	Receptacle	20 A	1	180 VA	180 VA					1	20 A	Receptacle	8
9	Receptacle	20 A	2			0 VA	0 VA			2	20 A	Receptacle	10
11	--	--	--					0 VA	0 VA	--	--	--	12
13	DB-2	20 A	1	1200...	1200...					1	20 A	DB-1	14
15	FIRE ALARM BOOSTER PANEL B1	20 A	1			180 VA	588 VA			1	20 A	CP-1	16
17	CP-2	15 A	1					41 VA					18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
			Total Load:	4380 VA		2028 VA		401 VA					
			Total Amps:	39 A		19 A		3 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	629 VA	123.37%	776 VA		
Other	2580 VA	100.00%	2580 VA	**Total Conn. Load:**	6809 VA
Receptacle	3600 VA	100.00%	3600 VA	**Total Est. Demand:**	6956 VA
				Total Conn.:	19 A
				Total Est. Demand:	19 A

Notes:

Branch Panel: RP1B

Location: JAN. 11.1.4 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DP1B **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 225 A
Enclosure: Type 1 **MCB Rating:** 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Room 8.1.1	20 A	1	720 VA	1200...					1	20 A	Hand Dryer Room 8.6	2
3	Receptacle Circuit Room 8.2	20 A	1			900 VA	900 VA			1	20 A	Receptacle Circuit Rooms 0.2, 8.4.1, 8.4.2, 8.7	4
5	Receptacle Circuit Rooms 0.4, 0.7	20 A	1					900 VA	360 VA	1	20 A	Receptacle Circuit Room 0.6	6
7	Receptacle Circuit 0.6	20 A	1	720 VA	600 VA					1	20 A	Plugmold Room 7.1	8
9	Plugmold Room 7.1	20 A	1			600 VA							10
11	Hand Dryer Room 7.8	20 A	1					1200...	1200...	1	20 A	Hand Dryer Room 0.8.1	12
13	Hand Dryer Room 0.8.2	20 A	1	1200...	1200...					1	20 A	Hand Dryer Room 2F.13	14
15	Receptacle Circuit Room 11.1.6	20 A	1			540 VA	180 VA			1	20 A	Receptacle Circuit Room 11.1.7	16
17	Receptacle Circuit	20 A	1					360 VA	800 VA	1	20 A	Pass-Through Metal Detector Room 0.6	18
19	Lighting	20 A	1	189 VA	189 VA					1	20 A	Lighting	20
21		20 A	1			37 VA	0 VA			1	20 A	Other	22
23	Power	20 A	1					480 VA	480 VA	1	20 A	Power	24
25	Lighting	20 A	1	227 VA	2808...					2	30 A	VRV-03	26
27	BSBs	15 A	2			150 VA	2808...			--	--	--	28
29	--	--	--					150 VA	2808...	2	30 A	VRV-02	30
31	VRV-06	30 A	2	2808...	2808...					--	--	--	32
33	--	--	--			2808...	2808...			2	30 A	VRV-01	34
35	Receptacle	20 A	1					800 VA	2808...	--	--	--	36
37	VRV-13	20 A	2	1716...	2808...					2	20 A	VRV-08	38
39	--	--	--			1716...	2808...			--	--	--	40
41													42
			Total Load:	19193 VA		16255 VA		12346 VA					
			Total Amps:	165 A		140 A		103 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	31812 VA	104.41%	33216 VA		
Other	7200 VA	100.00%	7200 VA	**Total Conn. Load:**	47794 VA
Receptacle	6380 VA	100.00%	6380 VA	**Total Est. Demand:**	49358 VA
Lighting	642 VA	125.00%	802 VA	**Total Conn.:**	133 A
Power	1760 VA	100.00%	1760 VA	**Total Est. Demand:**	137 A

Notes:

Branch Panel: RP1A

Location: ELEC. RM. 11.1.9 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DP1B **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 225 A
Enclosure: Type 1 **MCB Rating:** 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	FIRE ALARM CONTROL PANEL 1A	20 A	1	180 VA	768 VA					1	20 A	EF-8 & EF-9	2
3													4
5	Relay Cabinet RC1A	20 A	1					180 VA	540 VA	1	20 A	Receptacle	6
7	Receptacle	20 A	1	540 VA	360 VA					1	20 A	Receptacle	8
9	Receptacle Circuit Room 11.1.8	20 A	1			540 VA	540 VA			1	20 A	Receptacle Circuit Room 11.1.9	10
11	Hand Dryer Room 7.9	20 A	1					1200...	480 VA	1	20 A	Electric Water Cooler	12
13	Receptacle Circuit Room 7.6	20 A	1	853 VA	540 VA					1	20 A	Receptacle Circuit 7.6	14
15							1440...			1	20 A	Microwave Oven Room 7.6	16
17	Microwave Oven Room 7.6	20 A	1					180 VA	1440...	1	20 A	Microwave Oven Room 7.6	18
19	Microwave Oven Room 7.6	20 A	1	180 VA	840 VA					1	20 A	Refrigerator Room 7.6	20
21	Refrigerator Room 7.6	20 A	1			840 VA	540 VA			1	20 A	Receptacle Circuit Room 11.5	22
23	Receptacle Circuit Room 11.5	20 A	1					540 VA	113 VA	1	20 A	Lighting	24
25	Lighting	20 A	1	265 VA									26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
			Total Load:	4526 VA		3900 VA		4673 VA					
			Total Amps:	39 A		33 A		40 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	768 VA	119.14%	915 VA		
Other	1560 VA	100.00%	1560 VA	**Total Conn. Load:**	13099 VA
Receptacle	9913 VA	100.00%	9913 VA	**Total Est. Demand:**	13341 VA
Lighting	378 VA	125.00%	473 VA	**Total Conn.:**	36 A
Power	480 VA	100.00%	480 VA	**Total Est. Demand:**	37 A

Notes:

Branch Panel: RP1C

Location: JAN. 2F.12 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DP1B **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 225 A
Enclosure: Type 1 **MCB Rating:** 225 A

Notes:

	CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT	
*	1	Clothes Washer	20 A	1	180 VA	1440...					1	20 A	Receptacle	2	*
	3	Receptacle Circuit Room 2.10.1	20 A	1			720 VA	720 VA			1	20 A	Receptacle Circuit Rooms 2F	4	*
*	5	Receptacle Circuit Rooms 2F.2 and 2F.1.1	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Rooms 2F.1.2 and 2F.1.3	6	*
*	7	Receptacle Circuit Rooms 2F.1.4 and 2F.1.5	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Room 2F.1.6 and 2F.1.7	8	*
*	9	Receptacle Circuit Rooms 2F.1.8 and 2F.1.9	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 2F.5	10	*
*	11	Receptacle Circuit Room 2F.5	20 A	1					540 VA	540 VA	1	20 A	Receptacle Circuit Room 2F.4 and 2F.7	12	*
*	13	Receptacle Circuit Room 2F.4	20 A	1	540 VA	720 VA					1	20 A	Receptacle Circuit Room 2.11.1	14	
	15	Receptacle Circuit Room 3.3	20 A	1			720 VA	360 VA			1	20 A	Receptacle Circuit Room 2F.15	16	
	17	Receptacle Circuit Rooms 3.0.1 and 3.6	20 A	1					540 VA	1200...	1	20 A	Hand Dryer room 3.2	18	
	19	Receptacle	20 A	1	360 VA	360 VA					1	20 A	Receptacle	20	
	21	Power	20 A	1			480 VA	227 VA			1	20 A	Lighting	22	
	23	VRV-07	30 A	2					2808...	2808...	2	30 A	VRV-10	24	
	25	--	--	--	2808...	2808...					--	--	--	26	
	27	VRV-09	30 A	2			2808...	1716...			2	20 A	VRV-11	28	
	29	--	--	--					2808...	1716...	--	--	--	30	
	31	VRV-12	20 A	2	1716...	360 VA					1	20 A	Receptacle	32	*
	33	--	--	--			1716...	0 VA			2	30 A	Electric Clothes Dryer Room 2F.14	34	*
*	35	Receptacle	20 A	1					1200...	0 VA	--	--	--	36	
	37	Other	20 A	1	360 VA	540 VA					1	20 A	Other	38	
	39	Power	20 A	1			800 VA	720 VA			1	20 A	Receptacle	40	
	41		30 A	2					1716...					42	
				Total Load:	14628 VA		11707 VA		16596 VA						
				Total Amps:	126 A		98 A		142 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	27144 VA	105.17%	28548 VA		
Other	2100 VA	100.00%	2100 VA	**Total Conn. Load:**	42931 VA
Receptacle	12180 VA	91.05%	11090 VA	**Total Est. Demand:**	43302 VA
Lighting	227 VA	125.00%	284 VA	**Total Conn.:**	119 A
Power	1280 VA	100.00%	1280 VA	**Total Est. Demand:**	120 A

Notes:

* PROVIDE A GFCI CIRCUIT BREAKER

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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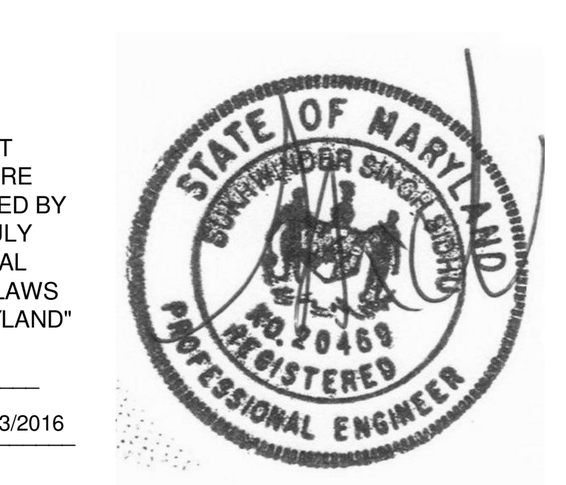

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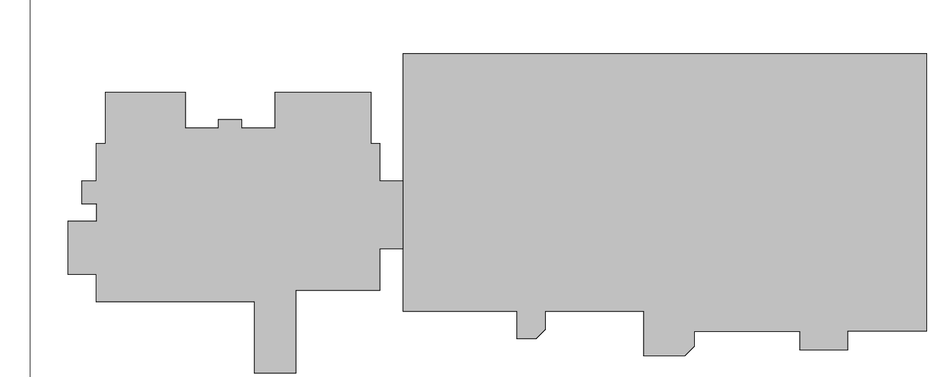

SCALE

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APPROVED BY	Approver
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DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E534

SHEET NO.

Branch Panel: RP1D

Location: JAN. 1.6
Supply From: DP1B
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 225 A
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Rooms 11.1.2 and 11.1.10	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 1.1	2
3	Receptacle Circuit Room 1.3	20 A	1			900 VA	900 VA			1	20 A	Receptacle Circuit Room 1.4	4
5	Receptacle Circuit Rooms 1.4, 1.5, 1.0, 7.10	20 A	1					900 VA	1200...	1	20 A	Hand Dryer Room 1.7	6
7	Receptacle Circuit Room 1.2	20 A	1	720 VA	853 VA					1	20 A	Receptacle Circuit Room 1.3	8
9	Receptacle Circuit Room 2.9.1	20 A	1			720 VA	720 VA			1	20 A	Receptacle Circuit Room 7.5	10
11	Lighting	20 A	1					265 VA	200 VA	2	20 A		12
13	Printer/Copier Machine	20 A	1	1200...	200 VA					--	--	--	14
15	VRV-05	30 A	2			2808...	2808...			2	30 A	VRV-08	16
17	--	--	--					2808...	2808...	--	--	--	18
19	VRV-04	30 A	2	2808...									20
21	--	--	--			2808...							22
23									1716...	2	20 A	VRV-15	24
25					1716...					--	--	--	26
27	VRV-16	20 A	2			1716...							28
29	--	--	--					1716...					30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		8937 VA		13380 VA		11613 VA					
		Total Amps:		74 A		115 A		100 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	24112 VA	105.82%	25516 VA		
Other	1200 VA	100.00%	1200 VA	**Total Conn. Load:**	33930 VA
Receptacle	8353 VA	100.00%	8353 VA	**Total Est. Demand:**	35400 VA
Lighting	265 VA	125.00%	331 VA	**Total Conn.:**	94 A
Power	0 VA	0.00%	0 VA	**Total Est. Demand:**	98 A

Notes:

Branch Panel: RP1F

Location: JAN. 6.5
Supply From: DPB2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 225 A
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle	20 A	1	540 VA	4740...					3	60 A		2
3	1HP Disposal	15 A	3			552 VA	4740...			--	--	--	4
5	--	--	--					552 VA	4740...	--	--	--	6
7	--	--	--	552 VA	1200...					1	20 A	Hand Dryer Room 6.11	8
9	Dishwasher	70 A	3			6012...	540 VA			1	20 A	Receptacle	10
11	--	--	--					6012...	180 VA	1	20 A	Walk-in Cooler Room 6.0	12
13	--	--	--	6012...	180 VA					1	20 A	walk-in Cooler Room 6.4	14
15	Power	20 A	1			480 VA	360 VA			1	20 A	Receptacle	16
17	Walk-in Cooler Evaporator Room 6.0	20 A	2					915 VA	360 VA	1	20 A	Receptacle Circuit Room 6.6	18
19	--	--	--	0 VA	360 VA					1	20 A	Receptacle	20
21	Walk-in Cooler Evaporator Room 6.4	20 A	2			915 VA	540 VA			1	20 A	Receptacle	22
23	--	--	--					0 VA	540 VA	1	20 A	VAV Units	24
25	Q O Load Center	40 A	2	2000...	1080...					3	20 A	AIR CURTAIN	26
27	--	--	--			2000...	1080...			--	--	--	28
29	AIR CURTIAN	20 A	3					1080...	1080...	--	--	--	30
31	--	--	--	1080...	2004...					3	30 A	Trash Compactor	32
33	--	--	--			1080...	2004...			--	--	--	34
35	EF-12	20 A	1					0 VA	2004...	--	--	--	36
37													38
39													40
41													42
		Total Load:		19749 VA		20304 VA		17464 VA					
		Total Amps:		168 A		172 A		146 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	20772 VA	117.11%	24327 VA		
Other	29564 VA	100.00%	29564 VA	**Total Conn. Load:**	53516 VA
Receptacle	2700 VA	100.00%	2700 VA	**Total Est. Demand:**	57071 VA
Power	480 VA	100.00%	480 VA	**Total Conn.:**	149 A
				Total Est. Demand:	158 A

Notes:

Branch Panel: RP1E

Location: JAN. 6.5
Supply From: DPB2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 225 A
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Three Door Reach-in Refrigerator	20 A	2	1342...	1373...					2	20 A	Ice Maker	2
3	--	--	--			1342...	1373...			--	--	--	4
5	Exhaust Hood	20 A	1					1200...	1200...	1	20 A	Other	6
7	Combi-Oven	70 A	3	6360...	7080...					3	80 A	Receptacle	8
9	--	--	--			6360...	7080...			--	--	--	10
11	--	--	--					6360...	7080...	--	--	--	12
13	2 HP Disposal	15 A	3	552 VA	2640...					3	30 A	Receptacle	14
15	--	--	--			552 VA	2640...			--	--	--	16
17	--	--	--					552 VA	2640...	--	--	--	18
19	Receptacle	20 A	1	720 VA	1200...					1	20 A	Other	20
21	Receptacle	20 A	1			540 VA	360 VA			1	20 A	Receptacle Circuit Room 6.2	22
23	Other	20 A	1					1200...	360 VA	1	20 A	Receptacle Circuit Room 6.2	24
25	Receptacle	20 A	1	540 VA	0 VA					1	20 A		26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		21806 VA		20246 VA		20592 VA					
		Total Amps:		182 A		169 A		172 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	0 VA	0.00%	0 VA		
Other	11885 VA	100.00%	11885 VA	**Total Conn. Load:**	62645 VA
Receptacle	50760 VA	59.85%	30380 VA	**Total Est. Demand:**	42265 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	174 A
				Total Est. Demand:	117 A

Notes:

Branch Panel: RP1G

Location: C.U. 4.24
Supply From: DPB2
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Room 4.0.1 and 4.0.3	20 A	1	540 VA	720 VA					1	20 A	Receptacle Circuit Room 4.3	2
3	Receptacle Circuit Room 4.3	20 A	1			720 VA	360 VA			1	20 A	Receptacle Circuit Room 4.3	4
5	Receptacle Circuit Room 4.3	20 A	1					180 VA	180 VA	1	20 A	Receptacle Circuit Room 4.3	6
7	Receptacle Circuit Room 4.2	20 A	1	720 VA	360 VA					1	20 A	Receptacle Circuit Room 4.2	8
9	Receptacle	20 A	1			180 VA	180 VA			1	20 A	Receptacle Circuit Room4.2	10
11	Receptacle Circuit Room 4.2	20 A	1					720 VA	900 VA	1	20 A	Receptacle Circuit Room 4.18	12
13	Power	20 A	1	480 VA	720 VA					1	20 A	Receptacle Circuit Room 4.18	14
15	Receptacle	20 A	1			360 VA	180 VA			1	20 A	Receptacle	16
17	Receptacle	20 A	1					180 VA	720 VA	1	20 A	Receptacle Circuit Rooms 4.20.2 and 4.21.2	18
19	Receptacle Circuit Room 4.20.1	20 A	1	360 VA	180 VA					1	20 A	Receptacle Circuit Room 4.20.1	20
21	Receptacle Circuit Room 4.20.1	20 A	1			180 VA	720 VA			1	20 A	Receptacle Circuit Rooms 4.20.1 and 4.21.1	22
23	Receptacle	20 A	1					360 VA	180 VA	1	20 A	Receptacle	24
25	Receptacle	20 A	1	180 VA	540 VA					1	20 A	Receptacle Circuit Room 4.22.1	26
27	Receptacle Circuit Room 4.22.2	20 A	1			360 VA	180 VA			1	20 A	Receptacle Circuit Room 4.22.2	28
29	Receptacle Circuit Room 4.22.2	20 A	1					180 VA	540 VA	1	20 A	Receptacle Circuit Room 4.22.2	30
31	Receptacle	20 A	1	360 VA	180 VA					1	20 A	Receptacle Circuit Room 4.22.3	32
33	Receptacle Circuit room 4.22.3	20 A	1			180 VA	540 VA			1	20 A	Receptacle Circuit Room 4.22.3	34
35	Receptacle	20 A	1					540 VA	720 VA	1	20 A	Receptacle	36
37	Receptacle	20 A	1	900 VA	540 VA					1	20 A	VAV Units	38
39	Receptacle Circuit Room 5.1	20 A	1			900 VA	180 VA			1	20 A	Receptacle	40
41	Other	20 A	1					1200...	1200...	1	20 A	Other	42
		Total Load:		6780 VA		5220 VA		7800 VA					
		Total Amps:		59 A		44 A		67 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	540 VA	108.33%	585 VA		
Other	2400 VA	100.00%	2400 VA	**Total Conn. Load:**	19800 VA
Receptacle	16380 VA	80.53%	13190 VA	**Total Est. Demand:**	16655 VA
Power	480 VA	100.00%	480 VA	**Total Conn.:**	55 A
				Total Est. Demand:	46 A

Notes:

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EBA ENGINEERING

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STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

DESIGN DEVELOPMENT

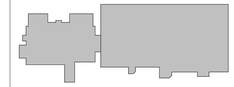
SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"

LICENSE NO. 20468

EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

E535

SHEET NO.

Branch Panel: RP1I

Location: MED. SUPPLY RM. 4.10.1 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DPB2 **Phases:** 3 **Mains Type:** 100 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 100 A
Enclosure: Type 1 **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Rooms 4.24 and 4.25	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 4.11	2
3	Receptacle Circuit Room 4.5	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 4.5	4
5	Receptacle Circuit Room 4.5	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 4.5	6
7	Receptacle Circuit Room 4.10.1	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 5.2	8
9	VAV Units	20 A	1			540 VA	250 VA			1	20 A	Nurse Call Control Panel	10
11	Receptacle Circuit Room 4.7	20 A	1					540 VA	720 VA	1	20 A	Receptacle Circuit Room 4.16	12
13	Receptacle Circuit Room 4.9	20 A	1	900 VA	540 VA					1	20 A	Receptacle Circuit room 4.13	14
15	Hand Dryer Room 4.15.2	20 A	1			1200...	1200...			1	20 A	Hand Dryer Room 4.15.1	16
17	Receptacle Circuit Room 4.12	20 A	1					540 VA	900 VA	1	20 A	Receptacle	18
19	Receptacle Circuit Room 4.13	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 4.12	20
21	Receptacle Circuit Room 4.12	20 A	1			995 VA	834 VA			1	20 A	Dental Compressor	22
23	Receptacle	20 A	1					900 VA	540 VA	1	20 A	Receptacle	24
25	Receptacle	20 A	1	540 VA	151 VA					1	20 A	Lighting	26
27	Other	20 A	1			472 VA	1800...			1	20 A	Dental Xray Unit	28
29	Autoclave	20 A	1					1400...	1920...	1	20 A	Dental Vacuum System	30
31	Printer/Copy Machine Room 4.5	20 A	1	1200...	1200...					1	20 A	Printer/Copy Machine Room 4.7	32
33	Power	20 A	1			480 VA							34
35													36
37													38
39													40
41													42
			Total Load:	8851 VA		8491 VA		8180 VA					
			Total Amps:	74 A		71 A		68 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	540 VA	108.33%	585 VA		
Other	5876 VA	100.00%	5876 VA	**Total Conn. Load:**	25522 VA
Receptacle	16220 VA	80.83%	13110 VA	**Total Est. Demand:**	22495 VA
Lighting	151 VA	125.00%	189 VA	**Total Conn.:**	71 A
Power	2735 VA	100.00%	2735 VA	**Total Est. Demand:**	62 A

Notes:

Branch Panel: RP2A

Location: ELEC. 11.2.18 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DP2B **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 225 A
Enclosure: Type 1 **MCB Rating:** 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	VRV-31	20 A	2	1716...	2808...					2	30 A	VRV-29	2
3	--	--	--			1716...	2808...			--	--	--	4
5	VRV-26	30 A	2					2808...	2808...	2	30 A	VRV-27	6
7	--	--	--	2808...	2808...					--	--	--	8
9	VRV-28	30 A	2			2808...	2808...			2	30 A	VRV-21	10
11	--	--	--					2808...	2808...	--	--	--	12
13	VRV-22	30 A	2	2808...	2808...					2	30 A	VRV-23	14
15	--	--	--			2808...	2808...			--	--	--	16
17	VRV-24	30 A	2					2808...	2808...	2	30 A	VRV-25	18
19	--	--	--	2808...	2808...					--	--	--	20
21	BSB Units	15 A	2			200 VA	1352...			2	30 A	CU-1	22
23	--	--	--					200 VA	1352...	--	--	--	24
25	VRV-34	30 A	2	2808...	2808...					2	30 A	VRV-33	26
27	--	--	--			2808...	2808...			--	--	--	28
29	Receptacle	20 A	1					180 VA	416 VA	2	15 A	VRV-35	30
31	VRV-32	30 A	2	2808...	416 VA					--	--	--	32
33	--	--	--			2808...	0 VA			2	30 A	Special Receptacle Room 11.2.17	34
35	Receptacle	20 A	1					180 VA	0 VA	--	--	--	36
37	Other	20 A	1	360 VA	180 VA					1	20 A	Receptacle Elec. 11.2.18	38
39													40
41													42
			Total Load:	30752 VA		25732 VA		19176 VA					
			Total Amps:	265 A		223 A		160 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	74760 VA	101.88%	76164 VA		
Other	360 VA	100.00%	360 VA	**Total Conn. Load:**	75660 VA
Receptacle	540 VA	100.00%	540 VA	**Total Est. Demand:**	77064 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	210 A
				Total Est. Demand:	214 A

Notes:

Branch Panel: RP1I

Location: MED. SUPPLY RM. 4.10.1 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DPB2 **Phases:** 3 **Mains Type:** 100 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 100 A
Enclosure: Type 1 **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Rooms 4.24 and 4.25	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 4.11	2
3	Receptacle Circuit Room 4.5	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 4.5	4
5	Receptacle Circuit Room 4.5	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 4.5	6
7	Receptacle Circuit Room 4.10.1	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 5.2	8
9	VAV Units	20 A	1			540 VA	250 VA			1	20 A	Nurse Call Control Panel	10
11	Receptacle Circuit Room 4.7	20 A	1					540 VA	720 VA	1	20 A	Receptacle Circuit Room 4.16	12
13	Receptacle Circuit Room 4.9	20 A	1	900 VA	540 VA					1	20 A	Receptacle Circuit room 4.13	14
15	Hand Dryer Room 4.15.2	20 A	1			1200...	1200...			1	20 A	Hand Dryer Room 4.15.1	16
17	Receptacle Circuit Room 4.12	20 A	1					540 VA	900 VA	1	20 A	Receptacle	18
19	Receptacle Circuit Room 4.13	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 4.12	20
21	Receptacle Circuit Room 4.12	20 A	1			995 VA	834 VA			1	20 A	Dental Compressor	22
23	Receptacle	20 A	1					900 VA	540 VA	1	20 A	Receptacle	24
25	Receptacle	20 A	1	540 VA	151 VA					1	20 A	Lighting	26
27	Other	20 A	1			472 VA	1800...			1	20 A	Dental Xray Unit	28
29	Autoclave	20 A	1					1400...	1920...	1	20 A	Dental Vacuum System	30
31	Printer/Copy Machine Room 4.5	20 A	1	1200...	1200...					1	20 A	Printer/Copy Machine Room 4.7	32
33	Power	20 A	1			480 VA							34
35													36
37													38
39													40
41													42
			Total Load:	8851 VA		8491 VA		8180 VA					
			Total Amps:	74 A		71 A		68 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	540 VA	108.33%	585 VA		
Other	5876 VA	100.00%	5876 VA	**Total Conn. Load:**	25522 VA
Receptacle	16220 VA	80.83%	13110 VA	**Total Est. Demand:**	22495 VA
Lighting	151 VA	125.00%	189 VA	**Total Conn.:**	71 A
Power	2735 VA	100.00%	2735 VA	**Total Est. Demand:**	62 A

Notes:

Branch Panel: RP2B

Location: ELEC. 11.2.18 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DP2B **Phases:** 3 **Mains Type:** 100 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 100 A
Enclosure: Type 1 **MCB Rating:** 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Room 9.13	20 A	1	900 VA	540 VA					1	20 A	Receptacle Circuit Room 9.5	2
3	Receptacle Circuit Room 9.5	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.5	4
5	Hand Dryer Room 9.7.2	20 A	1					1200...	540 VA	1	20 A	Receptacle Circuit Room 9.12	6
7	Receptacle Circuit Room 9.12	20 A	1	720 VA	720 VA					1	20 A	Receptacle Circuit Room 9.18	8
9	Receptacle Circuit Room 9.18	20 A	1			540 VA	540 VA			1	20 A	Receptacle Circuit Room 9.4.1	10
11	Receptacle Circuit Room 9.4.1	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 9.4.1	12
13	Receptacle Circuit Room 9.4.1	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Room 9.4.1	14
15	Receptacle Circuit Room 9.4.1	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.4.1	16
17	Receptacle Circuit Room 9.4.1	20 A	1					540 VA	540 VA	1	20 A	Receptacle Circuit Room 9.4.1	18
19	Ultra-Short Throw Projector Room 9.4.1	20 A	1	180 VA	540 VA					1	20 A	Receptacle	20
21	Receptacle	20 A	1			540 VA	360 VA			1	20 A	Receptacle	22
23	Receptacle	20 A	1					540 VA	360 VA	1	20 A	Receptacle Circuit Rooms 9.4.1 and 9.4.2	24
25	Receptacle Circuit Room 9.11	20 A	1	540 VA	360 VA					1	20 A	Receptacle Circuit Room 9.11	26
27	Receptacle Circuit Room 9.14	20 A	1			540 VA	360 VA			1	20 A	Receptacle Circuit Room 9.14	28
29	Receptacle	20 A	1					540 VA	1200...	1	20 A	Printer/Copy Machine	30
31	Receptacle	20 A	1	540 VA	540 VA					1	20 A	Receptacle	32
33	Receptacle Circuit Rooms 9.8 and 9.10	20 A	1			720 VA	1200...			1	20 A	Hand Dryer Room 9.9	34
35	Hand Dryer Room 9.7.1	20 A	1					1200...	180 VA	1	20 A	Refrigerator Circuit Room 9.8	36
37	Receptacle Circuit Room 9.8	20 A	1	180 VA	180 VA					1	20 A	Receptacle Circuit Room 9.8	38
39	Receptacle Circuit Room 9.8	20 A	1			720 VA	360 VA			1	20 A	Receptacle Circuit Room 11.2.9	40
41	VRV-36	30 A	2					2808...					42
			Total Load:	9468 VA		7320 VA		10368 VA					
			Total Amps:	82 A		61 A		89 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	5616 VA	125.00%	7020 VA		
Other	3600 VA	100.00%	3600 VA	**Total Conn. Load:**	27156 VA
Receptacle	17940 VA	77.87%	13970 VA	**Total Est. Demand:**	24590 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:**	75 A
				Total Est. Demand:	68 A

Notes:

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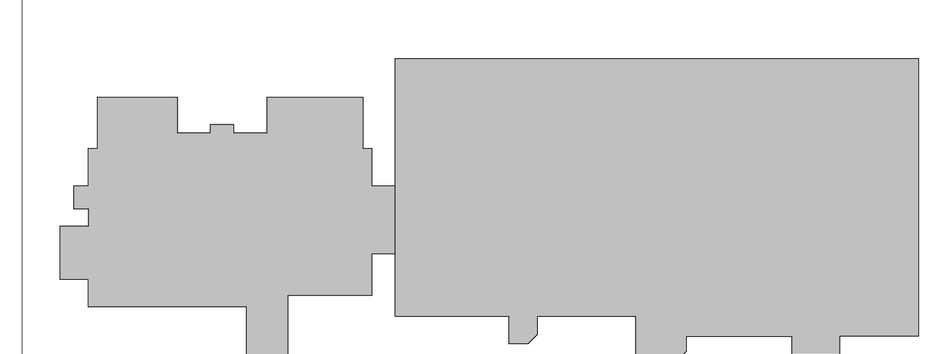
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E536

SHEET NO.

Branch Panel: RP2C

Location: STOR. 9.3.2
Supply From: DP2B
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Room 9.2.1	20 A	1	540 VA	540 VA					1	20 A	Receptacle Circuit Room 9.2.1	2
3	Ultra-Short Throw Projector Room 9.2.1	20 A	1			180 VA	360 VA			1	20 A	Receptacle Circuit Room 9.2.1	4
5	Receptacle Circuit Room 9.2.1	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 9.2.1	6
7	Receptacle Circuit Room 9.2.2	20 A	1	540 VA	540 VA					1	20 A	Receptacle Circuit Room 9.2.2	8
9	Receptacle Circuit Room 9.2.2	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.2.2	10
11	Ultra-Short Throw Projector Room 9.2.2	20 A	1					180 VA	360 VA	1	20 A	Receptacle Circuit Room 9.2.2	12
13	Receptacle Circuit Room 9.2.3	20 A	1	540 VA	360 VA					1	20 A	Receptacle Circuit Room 9.2.3	14
15	Receptacle Circuit Room 9.2.3	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.2.3	16
17	Ultra-Short Throw Projector Room 9.2.3	20 A	1					180 VA	540 VA	1	20 A	Receptacle Circuit Room 9.2.3	18
19	Receptacle Circuit Room 9.3.1	20 A	1	360 VA	540 VA					1	20 A	Receptacle Circuit Room 9.3.1	20
21	Receptacle Circuit Room 9.3.1	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.3.1	22
23	Receptacle Circuit Room 9.3.1	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 9.3.1	24
25	Receptacle Circuit Room 9.3.1	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Room 9.3.1	26
27	Receptacle Circuit Room 9.3.1	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.3.1	28
29	Receptacle Circuit Rooms 11.2.14 and 11.2.15	20 A	1					540 VA	480 VA	1	20 A	Electric Water Cooler Room 11.2.14	30
31	Receptacle Circuit Room 11.2.13	20 A	1	360 VA	180 VA					1	20 A	Ultra-Short Throw Projector Room 9.3.1	32
33													34
35													36
37													38
39													40
41													42
			Total Load:	5220 VA		3420 VA		3720 VA					
			Total Amps:	44 A		29 A		31 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Receptacle	11880 VA	92.09%	10940 VA	
Power	480 VA	100.00%	480 VA	**Total Conn. Load:** 12360 VA
				Total Est. Demand: 11420 VA
				Total Conn.: 34 A
				Total Est. Demand: 32 A

Notes:

Branch Panel: RP2D

Location: JAN. 9.15
Supply From: DP2B
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Smart Board/Projector Room 9.1.1	20 A	1	180 VA	720 VA					1	20 A	Receptacle Circuit Room 9.1.1	2
3	Receptacle Circuit Room 9.1.1	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.1.1	4
5	Receptacle Circuit Room 9.1.1	20 A	1					360 VA	720 VA	1	20 A	Receptacle Circuit Room 9.1.2	6
7	Smart Board/Projector Room 9.1.2	20 A	1	180 VA	720 VA					1	20 A	Receptacle Circuit Room 9.1.2	8
9	Receptacle Circuit Room 9.1.2	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.1.2	10
11	Receptacle Circuit Room 9.1.2	20 A	1					360 VA	720 VA	1	20 A	Receptacle Circuit Room 9.1.3	12
13	Receptacle Circuit Room 9.1.3	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Room 9.1.3	14
15	Receptacle Circuit Room 9.1.3	20 A	1			360 VA	720 VA			1	20 A	Receptacle Circuit Room 9.1.4	16
17	Smart Board/Projector Room 9.1.4	20 A	1					180 VA	180 VA	1	20 A	Smart Board/Projector Room 9.1.3	18
19	Receptacle Circuit Room 9.1.4	20 A	1	540 VA	540 VA					1	20 A	Receptacle Circuit Room 9.1.4	20
21	Receptacle Circuit Room 9.1.4	20 A	1			540 VA	540 VA			1	20 A	Receptacle Circuit Room 9.1.4	22
23	Receptacle Circuit Room 9.1.4	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 9.1.4	24
25	Receptacle Circuit Room 9.1.4	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Room 9.1.4	26
27	Receptacle Circuit Room 9.1.4	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Room 9.1.4	28
29	Receptacle Circuit Room 9.1.4	20 A	1					540 VA	720 VA	1	20 A	Receptacle Circuit Room 9.1.5	30
31	Smartboard/Projector Room 9.1.5	20 A	1	180 VA	540 VA					1	20 A	Receptacle Circuit Room 9.1.5	32
33	Receptacle Circuit Room 9.1.5	20 A	1			360 VA	720 VA			1	20 A	Receptacle Circuit Room 9.1.1	34
35	Receptacle Circuit Room 11.2.12	20 A	1					360 VA	480 VA	1	20 A	Electric Water Cooler Room 11.2.12	36
37	Receptacle Circuit Rooms 9.15 and 11.2.12	20 A	1	540 VA	360 VA					1	20 A	Receptacle Circuit Room 11.2.12	38
39	Receptacle Circuit Room 9.1.3	20 A	1			720 VA							40
41													42
			Total Load:	5940 VA		6120 VA		5340 VA					
			Total Amps:	50 A		52 A		45 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Receptacle	16920 VA	79.55%	13460 VA	
Power	480 VA	100.00%	480 VA	**Total Conn. Load:** 17400 VA
				Total Est. Demand: 13940 VA
				Total Conn.: 48 A
				Total Est. Demand: 39 A

Notes:

Branch Panel: RP2E

Location: ELEC 11.2.19
Supply From: DP2B
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

	CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT	
*	1	Receptacle Circuit Room 2B.1.1	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Rooms 2B.1.3 and 2B.1.4	2	*
*	3	Receptacle Circuit Rooms 2B.1.2 and 2B.1.3	20 A	1			360 VA	180 VA			1	20 A	Receptacle Circuit Rooms 2B.1.6 and 2B.2	4	*
*	5	Receptacle Circuit Room 2B.3	20 A	1					540 VA	540 VA	1	20 A	Receptacle Circuit Room 2B.3	6	*
*	7	Receptacle	20 A	1	1200...	180 VA					1	20 A	Clothes Washer Room 2B.3	8	*
	9	Electric Water Cooler Room 2B.3	20 A	1			480 VA	900 VA			1	20 A	Receptacle Circuit Rooms 2.7 and 11.2.19	10	
	11	Hand Dryer Room 2B.13	20 A	1					1200...	360 VA	1	20 A	Receptacle Circuit Rooms 2C.1.1 and 2C.1.2	12	*
*	13	Receptacle Circuit Rooms 2C.1.3 and 2C.1.4	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Rooms 2C.1.5 and 2C.1.6	14	*
*	15	Receptacle Circuit Room 2C.2	20 A	1			180 VA	540 VA			1	20 A	Receptacle Circuit Room 2C.3	16	*
*	17	Receptacle Circuit Room 2C.3	20 A	1					540 VA	180 VA	1	20 A	Clothes Washer Room 2C.15	18	
*	19	Microwave Oven Room 2C.3	20 A	1	1440...	1200...					1	20 A	Electric water Cooler Room 2C.3	20	
	21	Receptacle Circuit Room 7.4.2	20 A	1			360 VA	1200...			1	20 A	Hand Dryer Room 2.6	22	
	23	Hand Dryer Room 2C.13	20 A	1					1200...	720 VA	1	20 A	Receptacle	24	
	25	Receptacle	20 A	1	720 VA	1200...					1	20 A	Coffee Maker Room 2C.3	26	*
*	27	Receptacle Circuit Rooms 2B.1.7 and 2B.1.8	20 A	1			360 VA	360 VA			1	20 A	Receptacle Circuit Rooms 2B.1.9 and 2B.1.10	28	*
*	29	Receptacle Circuit Rooms 2B.1.11 and 2B.1.12	20 A	1					360 VA	180 VA	1	20 A	Receptacle Circuit Room 2B.1.13	30	*
*	31	Receptacle Circuit Rooms 2C.1.7 and 2C.1.8	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Rooms 2C.1.9 and 2C.1.10	32	*
*	33	Receptacle Circuit Rooms 2C.1.11 and 2C.1.12	20 A	1			360 VA	180 VA			1	20 A	Receptacle Circuit Room 2C.1.13	34	*
	35	Lighting Circuit Rooms 2C.1.1, 2C.1.2, 2C.1.3,...	20 A	1					265 VA	265 VA	1	20 A	Lighting Circuit Rooms 2B.1.1, 2B.1.2, 2B.1.3,...	36	
	37	Lighting Circuit Rooms 2C.6 and 2C.12	20 A	1	49 VA	49 VA					1	20 A	Lighting Circuit Rooms 2B.6 and 2B.12	38	
*	39	Clothes Dryer Room 2B.15	30 A	2			0 VA	0 VA			2	20 A	Receptacle	40	*
	41	--	--	--					0 VA	0 VA	--	--	--	42	
			Total Load:		8198 VA		5460 VA		6349 VA						
			Total Amps:		69 A		46 A		54 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Other	5160 VA	100.00%	5160 VA	
Receptacle	13740 VA	86.39%	11870 VA	**Total Conn. Load:** 20008 VA
Lighting	628 VA	125.00%	785 VA	**Total Est. Demand:** 18295 VA
Power	480 VA	100.00%	480 VA	**Total Conn.:** 56 A
				Total Est. Demand: 51 A

Notes:

* PROVIDE A GFCI CIRCUIT BREAKER

Branch Panel: RP2F

Location: ELEC 11.2.19
Supply From: DP2B
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 225 A
Mains Rating: 225 A
MCB Rating: 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	BSB Units	15 A	2	100 VA	2808...					2	30 A	VRV-39	2
3	--	--	--			100 VA	2808...			--	--	--	4
5	VRV-41	30 A	2					2808...	150 VA	2	15 A	BSB Units	6
7	--	--	--	2808...	150 VA					--	--	--	8
9	VRV-17	15 A	2			416 VA	2808...			2	30 A	VRV-37	10
11	--	--	--					416 VA	2808...	--	--	--	12
13	VRV-42	30 A	2	2808...	1440...					1	20 A	Receptacle	14
15	--	--	--			2808...	720 VA			1	20 A	Other	16
17	Other	20 A	1					720 VA	540 VA	1	20 A	Receptacle	18
19	VRV-41	30 A	2	2808...	2808...					2	30 A	VRV-40	20
21	--	--	--			2808...	2808...			--	--	--	22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39							180 VA			1	20 A	FIRE ALARM BOOSTER PANEL 2A	40
41													42
		Total Load:		15730 VA		15456 VA		7442 VA					
		Total Amps:		141 A		139 A		62 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Motor	35028 VA	104.01%	36432 VA	
Other	1620 VA	100.00%	1620 VA	**Total Conn. Load:** 38628 VA
Receptacle	1980 VA	100.00%	1980 VA	**Total Est. Demand:** 40032 VA
Power	0 VA	0.00%	0 VA	**Total Conn.:** 107 A
				Total Est. Demand: 111 A

Notes:

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

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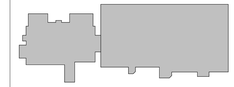
LICENSE NO. 20468

EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO. 50061725

DPSCS CONTRACT NO. KT-000-150-C01

E537

SHEET NO.

6 5 4 3 2 1

F E D C B A

Branch Panel: RP2G

Location: JAN. 11.2.20 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: DP2B **Phases:** 3 **Mains Type:** 100 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 100 A
Enclosure: Type 1 **MCB Rating:** 100 A

Notes:

	CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT	
*	1	Receptacle Circuit Room 2A.1.5	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Rooms 2A.1.3 and 2A.1.4	2	*
*	3	Receptacle Circuit Rooms 2A.1.1 and 2A.1.2	20 A	1			360 VA	540 VA			1	20 A	Receptacle Circuit Room 2A.3	4	*
*	5	Receptacle Circuit Room 2A.3	20 A	1					540 VA	480 VA	1	20 A	Electric Water Cooler Room 2A.3	6	*
*	7	Microwave Oven Room 2D.3	20 A	1	1440...	180 VA					1	20 A	Clothes Washer Room 2A.15	8	*
	9	Hand Dryer Room 2A.13	20 A	1			1200...	360 VA			1	20 A	Receptacle Circuit Rooms 2D.1.2 and 2D.1.3	10	*
*	11	Receptacle Circuit Rooms 2D.1.4 and 2D.1.5	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Rooms 2D.1.1 and 2D.2	12	*
*	13	Receptacle Circuit Room 2D.3	20 A	1	540 VA	540 VA					1	20 A	Receptacle Circuit Room 2D.3	14	*
*	15	Coffee Maker Room 2D.3	20 A	1			1200...	180 VA			1	20 A	Clothes Washer Room 2D.15	16	*
	17	Hand Dryer Room 2D.13	20 A	1					1200...	480 VA	1	20 A	Electric Water Cooler Room 2D.3	18	
	19	Receptacle Circuit Room 2.9.2	20 A	1	720 VA	540 VA					1	20 A	Receptacle Circuit Room 2.8	20	
	21	Receptacle	20 A	1			540 VA	360 VA			1	20 A	Receptacle Circuit Rooms 2A.1.6 and 2A.1.7	22	*
*	23	Receptacle Circuit Rooms 2A.1.8 and 2A.1.9	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Rooms 2A.1.10 and 2A.1.11	24	*
*	25	Receptacle Circuit Rooms 2D.1.6 and 2D.1.7	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Rooms 2D.1.8 and 2D.1.9	26	*
*	27	Receptacle Circuit Rooms 2D.1.10 and 2D.1.11	20 A	1			360 VA	49 VA			1	20 A		28	
	29	Lighting	20 A	1					227 VA	227 VA	1	20 A	Lighting	30	
	31		20 A	1	49 VA	0 VA					2	30 A	Clothes Dryer Room 2D.15	32	*
*	33	Clothes Dryer Room 2A.15	30 A	2			0 VA	0 VA			--	--	--	34	
	35	--	--	--					0 VA	1440...	1	20 A	Receptacle	36	
	37	Receptacle	20 A	1	1200...	540 VA					1	20 A	Other	38	
	39	Other	20 A	1			540 VA							40	
	41													42	
				Total Load:	7189 VA		5689 VA		6034 VA						
				Total Amps:	60 A		47 A		51 A						

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	3840 VA	100.00%	3840 VA		
Receptacle	13560 VA	86.87%	11780 VA	**Total Conn. Load:**	18912 VA
Lighting	552 VA	125.00%	690 VA	**Total Est. Demand:**	17270 VA
Power	960 VA	100.00%	960 VA	**Total Conn.:**	52 A
				Total Est. Demand:	48 A

Notes:

* PROVIDE A GFCI CIRCUIT BREAKER

Branch Panel: RP3B

Location: MECH. RM. 11.3.8 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: 45 kVA, 0 V/480 V, Three Phase... **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 225 A
Enclosure: Type 1 **MCB Rating:** 175 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	BSB Units	15 A	2	100 VA	2808...					2	30 A	VRV-19	2
3	--	--	--			100 VA	2808...			--	--	--	4
5	VRV-43	30 A	2					2808...	2808...	2	30 A	VRV-51	6
7	--	--	--	2808...	2808...					--	--	--	8
9	VRV-50	30 A	2			2808...	1352...			2	30 A	CU-2	10
11	--	--	--					2808...	1352...	--	--	--	12
13	CU-3	30 A	2	1352...	180 VA					1	20 A	FIRE ALARM BOOSTER PANEL 3A	14
15	--	--	--			1352...	588 VA			1	20 A	EF-10	16
17	Receptacle	20 A	1					360 VA					18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
			Total Load:	10056 VA		9008 VA		10136 VA					
			Total Amps:	85 A		75 A		86 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	28660 VA	104.90%	30064 VA		
Other	540 VA	100.00%	540 VA	**Total Conn. Load:**	29200 VA
Power	0 VA	0.00%	0 VA	**Total Est. Demand:**	30604 VA
				Total Conn.:	81 A
				Total Est. Demand:	85 A

Notes:

Branch Panel: RP3A

Location: MECH. RM. 11.3.8 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: 45 kVA, 0 V/480 V, Three Phase... **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 225 A
Enclosure: Type 1 **MCB Rating:** 175 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle Circuit Room 11.3.8	20 A	1	900 VA	720 VA					1	20 A	Receptacle Circuit Room 11.3.7	2
3	Receptacle Circuit Rooms 11.3.2 and 11.3.3	20 A	1			540 VA	540 VA			1	20 A	Receptacle Circuit Room 10.3	4
5	Receptacle Circuit Room 10.10	20 A	1					720 VA	1440...	1	20 A	Treadmill Room 10.3	6
7	Treadmill Room 10.3	20 A	1	1440...	180 VA					1	20 A	Elliptical Machine Room 10.3	8
9	Elliptical Machine Room 10.3	20 A	1			180 VA	1200...			1	20 A	Hand Dryer Room 10.7	10
11	Hand Dryer Room 10.4	20 A	1					1200...	480 VA	1	20 A	Electric Water Cooler Room 10.4	12
13	Receptacle	20 A	1	360 VA	360 VA					1	20 A	Receptacle Circuit Room 10.1	14
15	Receptacle Circuit Room 10.1	20 A	1			360 VA	180 VA			1	20 A	Receptacle Circuit Room 10.9	16
17	Motorized Partition	15 A	3					420 VA	1200...	1	20 A	Elevator Lights and Controls	18
19	--	--	--	420 VA	360 VA					1	20 A	SA/CA Head-ene Equipment Cabinet	20
21	--	--	--			420 VA							22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
			Total Load:	4740 VA		3420 VA		5460 VA					
			Total Amps:	41 A		29 A		47 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	1260 VA	125.00%	1575 VA		
Other	2760 VA	100.00%	2760 VA	**Total Conn. Load:**	13620 VA
Receptacle	7920 VA	100.00%	7920 VA	**Total Est. Demand:**	13935 VA
Power	1680 VA	100.00%	1680 VA	**Total Conn.:**	38 A
				Total Est. Demand:	39 A

Notes:

Branch Panel: URPB1

Location: EMERGENCY ELECTRIC ROO... **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: **Phases:** 3 **Mains Type:** 225 A
Mounting: Surface **Wires:** 4 **Mains Rating:** 125 A
Enclosure: Type 1 **MCB Rating:** 225 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	URP1	100 A	3	1260...									2
3	--	--	--			1260...							4
5	--	--	--					1620...					6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
			Total Load:	1260 VA		1260 VA		1620 VA					
			Total Amps:	11 A		11 A		14 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	4140 VA	100.00%	4140 VA		
				Total Conn. Load:	4140 VA
				Total Est. Demand:	4140 VA
				Total Conn.:	11 A
				Total Est. Demand:	11 A

Notes:

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
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R&R designer, inc.
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STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
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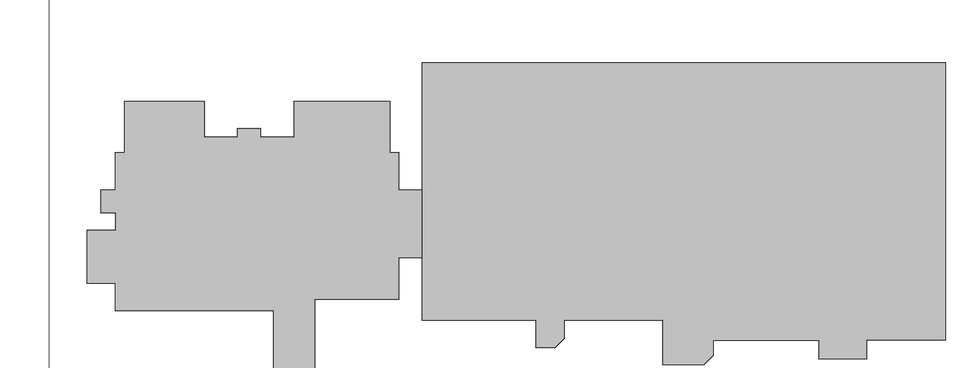
LICENSE NO. 20469
EXPIRATION DATE: 06/03/2016

KEY PLAN



SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E538

SHEET NO.

Branch Panel: URP1

Location: SECURITY ELEC. 7.4.1
Supply From: URPB1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle	20 A	1	180 VA	180 VA					1	20 A	Receptacle	2
3	Receptacle	20 A	1			180 VA	180 VA			1	20 A	Receptacle	4
5	Receptacle	20 A	1					180 VA	180 VA	1	20 A	Receptacle	6
7	Receptacle	20 A	1	180 VA	180 VA					1	20 A	Receptacle	8
9	Receptacle	20 A	1			180 VA	180 VA			1	20 A	Receptacle	10
11	Receptacle	20 A	1					180 VA	360 VA	3	60 A	URP2	12
13	Receptacle	20 A	1	180 VA	360 VA					--	--	--	14
15	Receptacle Circuit Room 7.1	20 A	1			360 VA	180 VA			--	--	--	16
17	Receptacle Circuit Room 7.1	20 A	1					360 VA	360 VA	1	20 A	Receptacle Circuit Room 7.1	18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		1260 VA		1260 VA		1620 VA					
		Total Amps:		11 A		11 A		14 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	4140 VA	100.00%	4140 VA		
				Total Conn. Load:	4140 VA
				Total Est. Demand:	4140 VA
				Total Conn.:	11 A
				Total Est. Demand:	11 A

Notes:

Branch Panel: URP2

Location: SEC. ELEC. 7.4.2
Supply From: URP1
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	Receptacle	20 A	1	180 VA	180 VA					1	20 A	Receptacle	2
3	Receptacle	20 A	1			180 VA	180 VA			1	20 A	Receptacle	4
5	Receptacle	20 A	1					180 VA					6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
		Total Load:		360 VA		360 VA		180 VA					
		Total Amps:		3 A		3 A		2 A					

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Receptacle	900 VA	100.00%	900 VA		
				Total Conn. Load:	900 VA
				Total Est. Demand:	900 VA
				Total Conn.:	2 A
				Total Est. Demand:	2 A

Notes:

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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LICENSE NO. 20468
EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

E539

SHEET NO.

Branch Panel: ELPB1

Location: EMERGENCY ELECTRIC ROO...
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 25,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Lighting	20 A	1	195 VA						2
3	ELP1A	60 A	3		1152...					4
5	--	--	--			968 VA				6
7	--	--	--	745 VA	1319...		3	60 A	ELP2A	8
9						1441...	--	--	--	10
11							--	--	--	12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
		Total Load:		2259 VA	2593 VA	2507 VA				
		Total Amps:		8 A	9 A	9 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	524 VA	100.00%	524 VA		
Lighting	6854 VA	125.00%	8567 VA	**Total Conn. Load:**	7378 VA
				Total Est. Demand:	9091 VA
				Total Conn.:	9 A
				Total Est. Demand:	11 A

Notes:

Branch Panel: ELP2A

Location: ELEC 11.2.19
Supply From: ELPB1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Lighting	20 A	1	668 VA	652 VA		1	20 A	Lighting	2
3	Lighting	20 A	1		748 VA	693 VA	1	20 A	Lighting	4
5	ELP3A	60 A	3			1538...				6
7	--	--	--	0 VA						8
9	--	--	--		0 VA					10
11										12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
		Total Load:		1320 VA	1441 VA	1538 VA				
		Total Amps:		5 A	5 A	6 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	524 VA	100.00%	524 VA		
Lighting	3789 VA	125.00%	4736 VA	**Total Conn. Load:**	4313 VA
				Total Est. Demand:	5260 VA
				Total Conn.:	5 A
				Total Est. Demand:	6 A

Notes:

Branch Panel: ELP1A

Location: ELEC. RM. 11.1.9
Supply From: ELPB1
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Lighting	20 A	1	456 VA	696 VA		1	20 A	Lighting	2
3	Lighting	20 A	1		405 VA	564 VA	1	20 A	Lighting	4
5	Lighting	20 A	1			745 VA				6
7										8
9										10
11										12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
		Total Load:		1152 VA	969 VA	745 VA				
		Total Amps:		4 A	4 A	3 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	2870 VA	125.00%	3587 VA		
				Total Conn. Load:	2870 VA
				Total Est. Demand:	3587 VA
				Total Conn.:	3 A
				Total Est. Demand:	4 A

Notes:

Branch Panel: ELP3A

Location: MECH. RM. 11.3.8
Supply From: ELP2A
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14,000
Mains Type: 100 A
Mains Rating: 100 A
MCB Rating: 60 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Lighting	20 A	1	811 VA	728 VA		1	20 A	Lighting	2
3										4
5										6
7										8
9										10
11										12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37										38
39										40
41										42
		Total Load:		1539 VA	0 VA	0 VA				
		Total Amps:		6 A	0 A	0 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Other	524 VA	100.00%	524 VA		
Lighting	1021 VA	125.00%	1277 VA	**Total Conn. Load:**	1546 VA
				Total Est. Demand:	1801 VA
				Total Conn.:	2 A
				Total Est. Demand:	2 A

Notes:

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PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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LICENSE NO. 20469

EXPIRATION DATE: 06/03/2016

STATE OF MARYLAND · JOSEPH CHRISTOPHER SIDHU · 20469 · REGISTERED PROFESSIONAL ENGINEER

KEY PLAN

SCALE

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

PANELBOARD SCHEDULES

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

E540

SHEET NO.

Switchboard: HSB

Location: MAIN ELECTRIC ROOM 11.0.1
Supply From:
Mounting:
Enclosure:

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 65,000
Mains Type: 2000 A
Mains Rating: 2000 A
MCB Rating: 2000 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	Power Quality Meter	3	400 A	20 A	0 VA	
2	Main Draw-Out Magnum Power Circuit Breaker	3	2000 A	3000 A	0 VA	
3	TVSS for Draw-Out Magnum Power Switchboard	3	400 A	20 A	0 VA	
4	Provision	3	1200 A	1200 A	0 VA	
5						
6	DPB1	3	400 A	400 A	243156 VA	
7	DP1A	3	400 A	400 A	163932 VA	
8	Provision	3	1200 A	1200 A	0 VA	
9	Provision	3	1200 A	1200 A	0 VA	
10	DP2A	3	800 A	800 A	444247 VA	
11	DP3A	3	800 A	800 A	314460 VA	
12	Provision	3	1200 A	1200 A	0 VA	
13	Provision	3	1200 A	1200 A	0 VA	
14	Draw-Out Magnum Power Tie Circuit Breaker	3	2000 A	3000 A	0 VA	
15	Provision	3	1200 A	1200 A	0 VA	
16	Provision	3	1200 A	1200 A	0 VA	
17	Provision	3	1200 A	1200 A	0 VA	
18	Existing SUI Switchboard	3	2000 A	2000 A	249300 VA	
19	Provision	3	1200 A	1200 A	0 VA	
20	Provision	3	1200 A	1200 A	0 VA	
21	Power Quality Meter	3	400 A	20 A	0 VA	
22	Generator Main Draw-Out Magnum Power Circuit Breaker	3	2000 A	2000 A	0 VA	
23	TVSS for Draw-Out Magnum Power Switchboard	3	400 A	20 A	0 VA	
24	Provision	3	1200 A	1200 A	0 VA	
25						
26						
27						
28						
29						
30						
				Total Conn. Load:	1124114 VA	
				Total Amps:	1352 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Motor	771504 VA	103.34%	797265 VA		
Other	97030 VA	100.00%	97030 VA	**Total Conn. Load:**	1124114 VA
Receptacle	210966 VA	52.37%	110483 VA	**Total Est. Demand:**	1057721 VA
Lighting	33319 VA	125.00%	41649 VA	**Total Conn.:**	1352 A
Power	11295 VA	100.00%	11295 VA	**Total Est. Demand:**	1272 A

Notes:

Switchboard: SWGR DORM D

Location:
Supply From:
Mounting:
Enclosure:

Volts: 13200 Delta
Phases: 3
Wires: 3

A.I.C. Rating:
Mains Type:
Mains Rating:
MCB Rating:

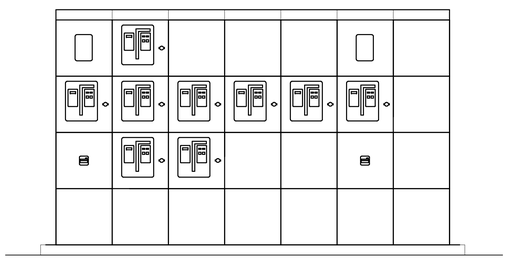
Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	NEW FEEDER SWITCH AND FUSE	3	600 A	125 A	0 VA	
2	EXISTING FEEDER SWITCH AND FUSE	3	600 A	0 A	0 VA	
3	EXISTING METERING / CONTROLS	3	600 A	20 A	0 VA	
4	EXISTING MAIN SWITCH	3	600 A	20 A	0 VA	
5	EXISTING METERING / CONTROLS	3	600 A	20 A	0 VA	
6	EXISTING TIE	3	600 A	20 A	0 VA	
7	EXISTING MAIN SWITCH	3	600 A	20 A	0 VA	
8	EXISTING METERING / CONTROLS	3	600 A	20 A	0 VA	
9	EXISTING FEEDER SWITCH AND FUSE	3	600 A	20 A	0 VA	
10	NEW FEEDER SWITCH AND FUSE	3	600 A	125 A	0 VA	
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
				Total Conn. Load:	0 VA	
				Total Amps:	0 A	

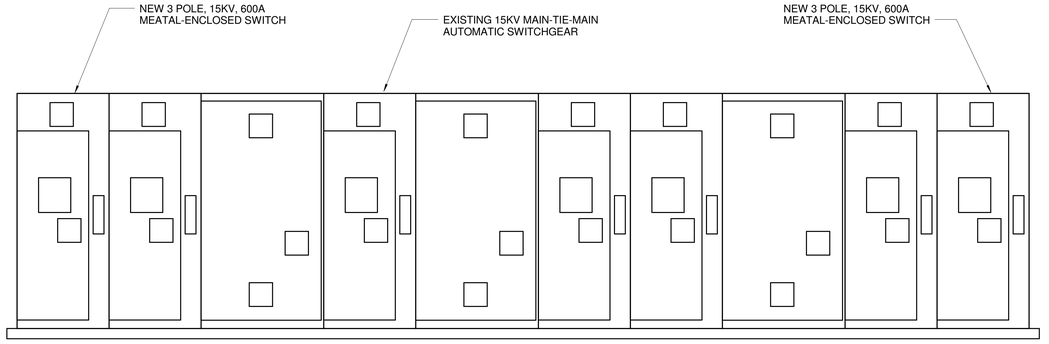
Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Power	0 VA	0.00%	0 VA		
				Total Conn. Load:	0 VA
				Total Est. Demand:	0 VA
				Total Conn.:	0 A
				Total Est. Demand:	0 A

Notes:



1 HOUSE SERVICE SWITCHBOARD ELEVATION
Scale: N.T.S.



2 EXISTING 15KV SWITCHGEAR ELEVATION
Scale: N.T.S.

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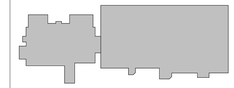
KEY PLAN



SCALE

1/2" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

SWITCHBOARD SCHEDULE

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

E541

SHEET NO.

RELAY CABINET RC1A		
RELAY	BRANCH CIRCUIT	ROOM DESIGNATIONS
1	38(RP1C)	ADA BEDROOM 2.F.2 & 2.F.1.1 WATER SOLENOID VALVE
2	38(RP1C)	BEDROOM 2.F.1.2 & 2.F.1.3 WATER SOLENOID VALVE
3	38(RP1C)	BEDROOM 2.F.1.4 & 2.F.1.5 WATER SOLENOID VALVE
4	37(RP1C)	BEDROOM 2.F.1.6 & 2.F.1.7 WATER SOLENOID VALVE
5	37(RP1C)	BEDROOM 2.F.1.8 & 2.F.1.9 WATER SOLENOID VALVE
6	4(RP1C)	FEMALE DAYROOM 2.F.3 RECEPTACLES
7	3(LP1A)	CORR. 2.F.0.3 - LIGHTING
8	1(ELP1A)	FEMALE DAYROOM 2.F.3 - LIGHTING
9	3(LP1A)	FEMALE DAYROOM 2.F.3 - LIGHTING
10		
11		
12		
13		
14		
15		
16		

RELAY CABINET RC1B		
RELAY	BRANCH CIRCUIT	ROOM DESIGNATIONS
1	4(LP1B)	CORR.11.1.2 - LIGHITNG
2	1(LP1B)	CORR. 8.7 - LIGHTING
3	1(LP1B)	SALLY PORT 0.2 - LIGHTING
4	1(LP1B)	VISITATION 8.2 - LIGHTING
5	2(LP1B)	SECURITY SCREEN 0.6 - LIGHTING
6	2(LP1B)	LOBBY 0.7 - LIGHTING
7	4(LP1B)	CORR.3.01 - LIGHTING
8	4(LP1B)	SECURE VEST 3.6 - LIGHTING
9		
10		
11		
12		
13		
14		
15		
16		

RELAY CABINET RC2A		
RELAY	BRANCH CIRCUIT	ROOM DESIGNATIONS
1	16(RP2F)	ADA BEDROOM 2.C.2 WATER SOLENOID VALVE
2	16(RP2F)	BEDROOM 2.C.1.6 & 2.C.1.5 WATER SOLENOID VALVE
3	16(RP2F)	BEDROOM 2.C.1.4 & 2.C.1.3 WATER SOLENOID VALVE
4	16(RP2F)	BEDROOM 2.C.1.2 &2.C.1.1 WATER SOLENOID VALVE
5	17(RP2E)	DAYROOM 2.C.3 RECEPTACLES
6	17(RP2F)	ADA BEDROOM 2.B.2 WATER SOLENOID VALVE
7	17(RP2F)	BEDROOM 2.B.1.6 &2.B.1.5 WATER SOLENOID VALVE
8	17(RP2F)	BEDROOM 2.B.1.4 &2.B.1.3 WATER SOLENOID VALVE
9	17(RP2F)	BEDROOM 2.B.1.2 &2.B.1.1 WATER SOLENOID VALVE
10	6(RP2E)	DAYROOM 2.B.3 RECEPTACLES
11	3(LP2B)	DAYROOM 2.C.3 - LIGHTING
12	37(RP2E)	SHOWER 2.C.6 - LIGHTING
13	3(LP2B)	LAUNDRY 2.C.15 - LIGHTING
14	4(LP2B)	DAYROOM 2.B.3 - LIGHTING
15	38(RP2E)	SHOWER 2.B.6 - LIGHTING
16	4(LP2B)	LAUNDRY 2.B.15 - LIGHTING
17	5(LP2B)	CORR. 11.2.4 - LIGHTTING
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RELAY CABINET RC2B		
RELAY	BRANCH CIRCUIT	ROOM DESIGNATIONS
1	38(RP2G)	ADA BEDROOM 2.D.2 & 2.D.1.1 WATER SOLENOID VALVE
2	38(RP2G)	BEDROOM 2.D.1.2 & 2.D.1.3 WATER SOLENOID VALVE
3	38(RP2G)	BEDROOM 2.D.1.4 & 2.D.1.5 WATER SOLENOID VALVE
4	13(RP2G)	DAYROOM 2.D.3 RECEPTACLES
5	39(RP2G)	BEDROOM 2.A.1.1 & 2.A.1.2 WATER SOLENOID VALVE
6	39(RP2G)	BEDROOM 2.A.1.3 & 2.A.1.4 WATER SOLENOID VALVE
7	39(RP2G)	BEDROOM 2.A.1.5 & 2.A.1.6 WATER SOLENOID VALVE
8	4(RP2G)	DAYROOM 2.A.3 RECEPTACLES
9	1(LP2B)	DAYROOM 2.D.3 - LIGHTING
10	28(RP2G)	SHOWER 2.D.6 - LIGHTING
11	1(LP2B)	LAUNDRY 2.D.15 - LIGHTING
12	2(LP2B)	DAYROOM 2.A.3 - LIGHTING
13	31(RP2G)	SHOWER 2.A.6 - LIGHTING
14	2(LP2B)	LAUNDRY 2.A.15 - LIGHTING
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1 RELAY CABINET SCHEDULE
Scale: N.T.S.

GENERAL NOTES:

1. RELAY PANEL SHALL BE BY SCHNEIDER ELECRIC (LPB) WITH NATIVE BACnet PROTOCOL. SERPBC601 BACnet CONTAROLLER CARDS AND SERPC401 RELAY CONTTROLLER CARDS .

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND
DESIGN DEVELOPMENT

SEAL

PROFESSIONAL CERTIFICATION:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND"
LICENSE NO. 20468
EXPIRATION DATE: 06/03/2016

KEY PLAN

SCALE

12" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	01-30-2015

TITLE

LIGHTING RELAY PANEL SCHEDULES

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

E542

SHEET NO.

LOCK TYPE — X — DOOR IS CONTROLLED AND MONITORED FROM DESIGNATED SECURITY CONTROL TOUCH SCREEN AND ACCESS CONTROL SYSTEM.
DOOR IS MONITORED ONLY FROM DESIGNATED SECURITY CONTROL TOUCH SCREEN AND ACCESS CONTROL SYSTEM.

SECURITY SYSTEMS SYMBOL LEGEND

SYMBOL	DESCRIPTION	WIRING REQUIREMENTS	SPECIFICATION SECTION	CONDUIT SIZE	BACK BOX	MOUNTING HEIGHT	NOTES
A	CONTROLLED AND MONITORED DOOR. (8" JAMB)	(4) #14 THHN, (3) #18 THHN	DIVISION 11	REFER TO DETAIL	REFER TO DETAIL	REFER TO DETAIL	1
B	MONITORED ONLY DOOR.	(3) #18 THHN	DIVISION 11	REFER TO DETAIL	REFER TO DETAIL	REFER TO DETAIL	2
C	CONTROLLED AND MONITORED ARCHITECTURAL DOOR.	(4) #14 THHN, (3) #18 THHN	DIVISION 8	REFER TO DETAIL	REFER TO DETAIL	REFER TO DETAIL	3
D	CONTROLLED AND MONITORED SLIDING DOOR DEVICE.	(10) #14 THHN	DIVISION 11	REFER TO DETAIL	REFER TO DETAIL	REFER TO DETAIL	4
O	CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.	(10) #14 THHN	DIVISION 8 / 28 50 00	REFER TO DETAIL	REFER TO DETAIL	REFER TO DETAIL	5
R	MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.	(3) #18 THHN	DIVISION 11	PER ESSC.	PER ESSC.	PER ESSC.	6
▭	PROXIMITY CARD READER.	9/C #22	28 13 00	3/4"	1 GANG 3 1/2" DEEP	48" AFF	7
DA	DURESS ALARM PUSHBUTTON. WALL MOUNTED.	(2) #18 TFFN	28 50 00	3/4"	1 GANG 3 1/2" DEEP	SEE DETAIL	8
PA	PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).	(2) #18 TFFN	28 50 00	3/4"	1 GANG 3 1/2" DEEP	48" AFF	9
◀▭	FIXED CCTV CAMERA.	(1) CATEGORY 6 4 PAIR UTP, CMP	28 23 13	1"	2 GANG 3 1/2" DEEP	REFER TO PLANS	10
CCTV	CCTV MONITOR.	(2) CATEGORY 6 4 PAIR UTP, CMP	28 23 13	3/4"	1 GANG 3 1/2" DEEP	18" AFF	11
◆	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.	(1) 2 PAIR #18 SHEILDED	28 51 23	3/4"	2 GANG 3 1/2" DEEP	48" AFF	12
◆WP	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF	(1) 2 PAIR #18 SHEILDED	28 51 23	3/4"	2 GANG 3 1/2" DEEP	48" AFF	13
◈	INTERCOM MASTER STATION.	(1) CATEGORY 6 4 PAIR UTP, CMP	28 51 23	3/4"	1 GANG 3 1/2" DEEP	18" AFF	14
S	CEILING MOUNTED PAGING SPEAKER.	(1) PAIR #18 SHEILDED PER ZONE	28 51 23	3/4"	5 3/8" ROUND 7 5/8" DEEP/161 SES	FLUSH IN CEILING	15
W	WALL MOUNTED PAGING SPEAKER.	(1) PAIR #18 SHEILDED PER ZONE	28 51 23	3/4"	1 GANG 3 1/2" DEEP	108" AFF	16
TV	TELEVISION POWER OUTLET CONTROL.	(2) #12 THHN & (1) #12 THHN GRD	27 11 20	NA	1 GANG 3 1/2" DEEP	REFER TO PLANS	17
I	DOOR INTERLOCK.	N/A	N/A	N/A	N/A	N/A	18
▱	TOUCH SCREEN CONTROL LOCATION.	(2) CATEGORY 6 4 PAIR UTP, CMP	28 46 19	1"	1 GANG 3 1/2" DEEP	18" AFF	19
WC MV	WATER VALVE CONTROL.	(3) #14 THHN	22 09 00	3/4"	1 GANG WITH FLEX WHIP	CONNECT IN CHASE	20
▽	INMATE TELEPHONE CONTROL.	(3) #18 THHN	28 46 20	PER DIVISION 27	BY OTHERS	BY OTHERS	21
◠	REQUEST-TO-EXIT PIR.	(1) 2 PAIR #18 SHEILDED	28 13 00	3/4"	1 GANG 3 1/2" DEEP	90" AFF	22
PB	DOOR RELEASE PUSHBUTTON.	(1) 2 PAIR #18 SHEILDED	28 50 00	3/4"	1 GANG 3 1/2" DEEP	48" AFF	23
♀	TOUCHCREEN LIGHTING CONTROL.	(3) #18 THHN	28 46 20	3/4"	2 GANG 3 1/2" DEEP	REFER TO DETAILS AND BLOCK DIAGRAMS	24
E	EMERGENCY RELEASE FOR DOORS ON EGRESS PATH	(1) 2 PAIR #18 SHEILDED	28 50 00	3/4"	1 GANG 3 1/2" DEEP	48" AFF	25
DS	DURESS HORN AND LIGHT STROBE.	(1) 2 PAIR #18 SHEILDED	28 26 13	3/4"	4" SQUARE BOX WITH RING	108" AFG	26

NOTES:
1. THE DURESS HORN AND LIGHT STROBE, OUTSIDE THE ROOM, WILL BE ACTUATED ONCE THE DURESS OR PANIC ALARM WITH IN THE ROOM HAS BEEN PUSHED.
2. DOOR INTERLOCKS THAT ARE SHOWN ON THE PLANS MAY BE ADDED TO OR DELETED FROM PER THE OWNER UP TO THE PHASE I MEETING. AFTER THE PHASE I MEETING THE DOOR INTERLOCKS SHALL BE SET AND NOT CHANGED. THIS SOFTWARE CHANGE SHALL BE PERMITTED AT NO COST TO THE OWNER. DOOR INTERLOCK LOCATIONS SHALL BE FINAL AFTER THE PHASE I MEETING.

A JOINT-VENTURE BETWEEN
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EBA ENGINEERING
HOPE FURRER Associates, Inc.
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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND

SEAL

EXP: 03-14-2015
DATE: 02-05-2015

"I hereby certify that these documents were prepared or approved by me, and that I am a duly liscensed professional engineer under the laws of the State of Maryland, Liscense No. 31549, Expiration Date 03/14/2015."

KEY PLAN

SCALE

12" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

TITLE

SECURITY SYMBOL MATRIX

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-001

SHEET NO.

LEGEND KEYED NOTES:

(1) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE CONTROLLED AND MONITIRED DOOR (7" JAMB). DOOR POSITON SWITCH AND LATCH BOLT MONITOR SWITCH SHALL BE CONFIGURED AS TWO INDEPENDENT INPUTS TO THE PLC. UNDER THE DIVISION 28 SECTION SCOPE OF WORK, PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20. INSTALLATION, ADJUSTMENT, MAINTENANCE, ETC. OF THE LOCK IS PER DIVISION 11.

(2) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE MONITIRED ONLY DOOR. DOOR POSITON SWITCH AND LATCH BOLT MONITOR SWITCH SHALL BECONFIGURED AS TWO INDEPENDENT INPUTS TO THE PLC. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20. INSTALLATION, ADJUSTMENT, MAINTENANCE, ETC OF THE LOCK IS PER DIVISION 11.

(3) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE CONTROLLED AND MONITIRED ARCHITECTURAL DOOR. DOOR POSITON SWITCH AND LATCH BOLT MONITOR SWITCH SHALL BECONFIGURED AS TWO INDEPENDENT INPUTS TO THE PLC. UNDER THE DIVISION 28 SECTION SCOPE OF WORK, PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20. INSTALLATION, ADJUSTMENT, MAINTENANCE, ETC OF THE LOCK IS PER DIVISION 8.

(4) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE CONTROLLED AND MONITIRED SLIDING DOOR DEVICE. UNDER THE DIVISION 28 SECTION SCOPE OF WORK, PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20. INSTALLATION, ADJUSTMENT, MAINTENANCE, ETC OF THE LOCK IS PER DIVISION 11.

(5) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE CONTROLLED AND MONITIRED OVERHEAD DOOR / GATES (WITH LOOPS). UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20. INSTALLATION, ADJUSTMENT, MAINTENANCE, ETC OF THE LOCK IS PER DIVISION 8.

(6) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE MONITIRED ROOF HATCH. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20. INSTALLATION, ADJUSTMENT, MAINTENANCE, ETC OF THE LOCK IS PER DIVISION 8.

(7) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE PROXIMITY CARD READER. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 13 00 AND SECTION 28 46 20.

(8) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE DURESS ALARM PUSH BUTTON. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 50 00 AND SECTION 28 46 20.

(9) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE PANIC ALARM PUSH BUTTON. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 50 00 AND SECTION 28 46 20.

(10) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE FIXED CCTV CAMERA. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE CCTV HEAD END AND THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 23 13 AND SECTION 28 46 20.

(11) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE CCTV MONITOR. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE CCTV HEAD END AND THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 23 13 AND SECTION 28 46 20.

(12) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE INTERCOM SUBSTATION, DETENTION GRADE WITH CALL BUTTON. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE INTERCOM EXCHANGE AND THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 51 23 AND SECTION 28 46 20.UNDER

(13) THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE INTERCOM SUBSTATION, WEATHER PROOF, DETENTION GRADE. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE INTERCOM EXCHANGE AND THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 51 23 AND SECTION 28 46 20.

(14) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE INTERCOM MASTER STATION. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE INTERCOM EXCHANGE AND THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 51 23 AND SECTION 28 46 20.

(15) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE CEILING MOUNTED PAGING SPEAKER. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE INTERCOM EXCHANGE AND THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 51 23 AND SECTION 28 46 20.

(16) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE WALL MOUNTED PAGING SPEAKER. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE INTERCOM EXCHANGE AND THE PLC/GUI AND ALL PROGRAMMING, TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 51 23 AND SECTION 28 46 20.

(17) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE TV POWER OUTLET CONTROL. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 51 23 AND SECTION 28 46 20.

(18) THE DOOR INTERLOCK SYMBOL ON THE PLANS REPRESENTS AN INTERLOCK GROUP FUNCTION FOR THE ASSOCIATED DOORS. THERE IS NOT CONDUIT OR FIELD WORING NECESSARY OR ASSOCIATED WITH THIS SYMBOL. PROVIDE THE INTERLOCK FUNCTION AS DESCRIBED IN SECTION 28 46 20.

(19) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE TOUCHSCREEN CONTROL LOCATION. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 46 19 AND SECTION 28 46 20.

(20) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE WATER CONTROL VALVE. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20.

(21) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE INMATE TELEPHONE CONTROL. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20.

(22) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE REQUEST TO EXIT PIR. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE ACCESS CONTROL SYSTEM AND THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED SECTION 28 46 20.

(23) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE DOOR RELEASE PUSH BUTTON. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE ACCESS CONTROL SYSTEM AND THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20.

(24) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE TOUCHSCREEN LIGHTING CONTROL CIRCUIT. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20.

(25) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE EMERGENCY DOOR LOCK RELEASE. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTION 28 46 20.

(26) UNDER THE DIVISION 26 ELECTRICAL SCOPE OF WORK, PROVIDE CONDUIT AND WIRE ASSOCIATED WITH THE DURESS HORN AND LIGHT STROBE. UNDER THE DIVISION 28 SECTION SCOPE OF WORK,PROVIDE TERMINATION OF THE FIELD WIRING, INTEGRATION OF THE DEVICE WITH THE PLC/GUI AND ALL PROGRAMMING,TESTING, COMMISSIONING AND ANY APPUTENANCES NECESSARY FOR THE DEVICE TO FUNCTION AS SPECIFIED IN SECTIONS 28 50 00 AND SECTION 28 46 20. TWO OUTPUTS ARE REQUIRED FOR THE PLC, ONE FOR THE HORN AND ONE FOR THE STROBE.

GENERAL NOTES:

1. MINIMUM CONDUIT SIZE FOR A SINGLE DEVICE IS 3/4" U.O.N. WHERE PRACTICAL, SIMILAR DEVICES MAY BE GROUPED TOGETHER AND CONDUIT SIZE INCREASED TO COMPLY WITH NEC CONDUIT FILL REQUIREMENTS. PROVIDE CONTINUOUS CONDUIT RUN BACK TO SYSTEM HEAD END LOCATION.
2. CONTRACTOR IS REQUIRED TO ACCOMMODATE INCIDENTAL MOVEMENT OF THE FIELD DEVICES AS DIRECTED BY THE ARCHITECT. FROM THE LOCATION INDICATED, UP TO 10 FEET, PROVIDED THE DEVICE ROUGH-IN HAS NOT COMMENCED.
3. INDICATED MOUNTING HEIGHTS ARE FOR DESIGN PURPOSES ONLY. COORDINATE FINAL MOUNTING HEIGHT WITH SURROUNDING EQUIPMENT AND SURROUNDING CONDITIONS. MOUNTING HEIGHTS INDICATED ARE TO CENTER OF BOX.
4. CABLE WILL BE TYPE CMP.
5. ALL WORK SHOWN ON THE LEGEND IS TO BE FURNISHED AND INSTALLED UNDER THE DIVISION 28 SERIES SCOPE OF WORK, UNLESS OTHERWISE NOTED.
6. COORDINATE THE WORK OF DIVISION 28 WITH OTHER TRADES TO AVOID CONFLICTS.
7. STORE EQUIPMENT IN A CLEAN, DRY PLACE UNTIL READY FOR INSTALLATION. PROTECT FROM WEATHER, THEFT, DIRT, FUMES, WATER, CONSTRUCTION DEBRIS, ETC., AT ALL TIMES. DAMAGED EQUIPMENT WILL BE RESTORED TO LIKE NEW CONDITION OR REPLACED BY THE CONTRACTOR.
8. CLEAN ALL EQUIPMENT TO PRESENT A "NEW" CONDITION AT PROJECT COMPLETION. VACUUM CLEAN INTERNAL AREAS OF EQUIPMENT RACKS AND ENCLOSURES.
9. INTEGRATION MODULE ESSC, IS TO BE LOCATED AT CATV FEED LOCATIONS. SEE ELECTRICAL DWGS.
10. WIRING REQUIREMENTS SHOWN ARE FOR REFERENCE ONLY. COORDINATE FINAL REQUIREMENTS WITH SECTION SHOP DRAWINGS PRIOR TO INSATLLATION.
11. DRAWINGS SHALL HAVE PRECEDENCE OVER THE SPECS SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE TWO.
12. COORDINATION OF FIRE ALARM TO THE SECURITY SYSTEM MAY BE A REQUIREMENT. SEC TO REVIEW AND COORDINATE AS NECESSARY.

MAXIMUM # OF UTP CABLES PER TRADE SIZE)

3/4"	2
1"	4
1-1/4"	7
1-1/2"	9
2"	16

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

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HOPE FURRER Associates, Inc.
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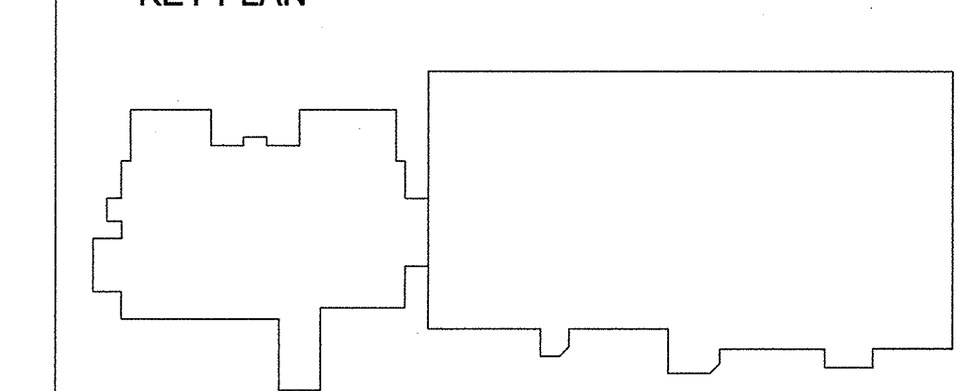
STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND

SEAL

EXP: 03-14-2015
DATE: 02-05-2015

"I hereby certify that these documents were prepared or approved by me, and that I am a duly liscensed professional engineer under the laws of the State of Maryland, Liscense No. 31549, Expiration Date 03/14/2015."

KEY PLAN



SCALE

12" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

TITLE

SECURITY SYMBOL NOTES

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-002

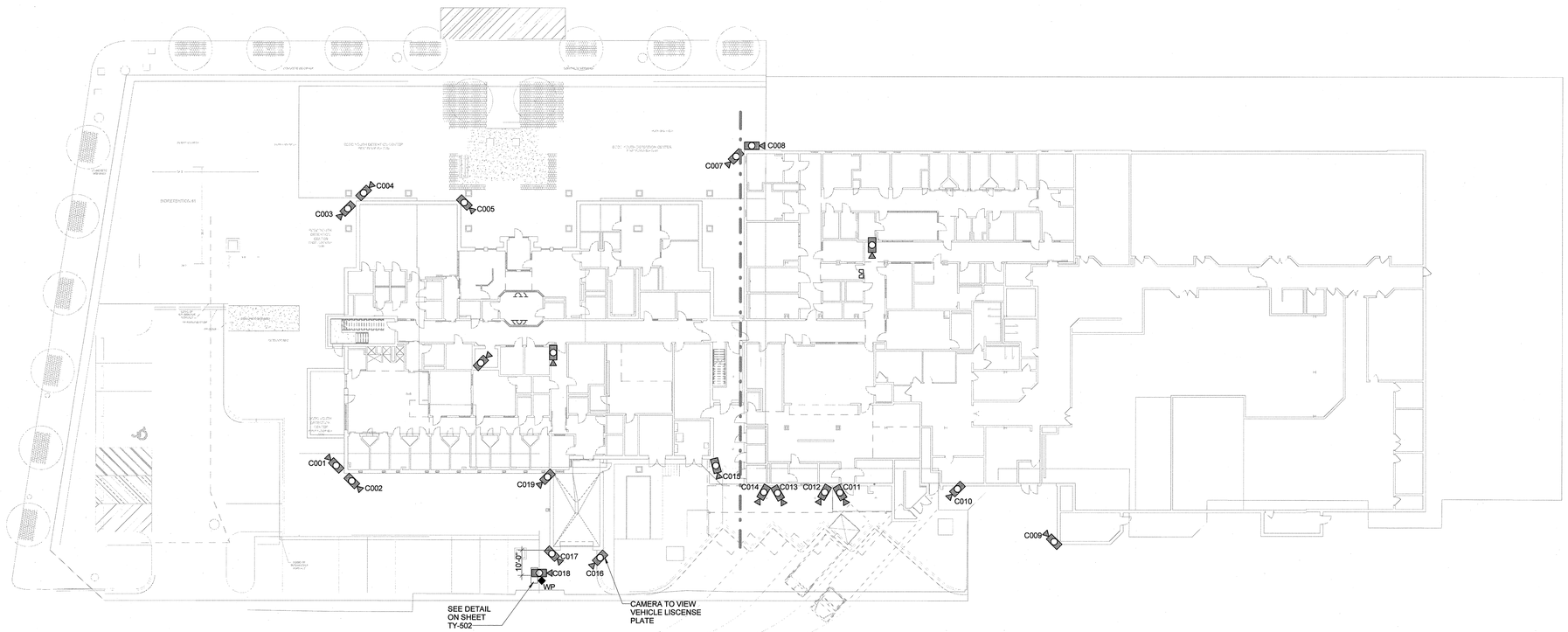
SHEET NO.

SECURITY SYMBOL LEGEND:

A	CONTROLLED AND MONITORED DOOR. (8" JAMB)
B	MONITORED ONLY DOOR.
C	CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
D	CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
O	CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
R	MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
	PROXIMITY CARD READER.
DA	DURESS ALARM PUSHBUTTON. WALL MOUNTED.
PA	PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
	FIXED CCTV CAMERA.
CCTV	CCTV MONITOR.
	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
WP	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
	INTERCOM MASTER STATION.
S	CEILING MOUNTED PAGING SPEAKER.
	WALL MOUNTED PAGING SPEAKER.
TV	TELEVISION POWER OUTLET CONTROL.
I	DOOR INTERLOCK.
	TOUCH SCREEN CONTROL LOCATION.
WC MV	WATER VALVE CONTROL.
	INMATE TELEPHONE CONTROL.
	REQUEST-TO-EXIT PIR.
PB	DOOR RELEASE PUSHBUTTON.
	TOUCHSCREEN LIGHTING CONTROL.
E	EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
DS	DURESS HORN AND LIGHT STROBE.

GENERAL NOTES:

1. REFER TO 'CAMERA SCHEDULE' LOCATED IN SPECIFICATION SECTION 282313 FOR MOUNTING HEIGHT OF CAMERAS.
2. ALL DEVICES SHOWN ON THE SHEET ARE TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.1.



1 SITE PLAN - SECURITY
Scale: 1" = 20'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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TERRALOGOS

R&R designer, inc.

LEWICKI ESTIMATING SERVICES, INC.

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

SEAL

EXP: 03-14-2015
DATE: 02-05-2015

"I hereby certify that these documents were prepared or approved by me, and that I am a duly liscensed professional engineer under the laws of the State of Maryland, Liscense No. 31549, Expiration Date 03/14/2015."

KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	Author
APPROVED BY	Approver
CHECKED BY	Checker
DATE	02-05-2015

TITLE

SECURITY - SITE PLAN

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-100

SHEET NO.



1 FIRST FLOOR PLAN AREA A - SECURITY

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

SECURITY SYMBOL LEGEND:

- A — CONTROLLED AND MONITORED DOOR. (8" JAMB)
- B — MONITORED ONLY DOOR.
- C — CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
- D — CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
- O — CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
- R — MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
- PROXIMITY CARD READER.
- DA — DURESS ALARM PUSHBUTTON. WALL MOUNTED.
- PA — PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
- FIXED CCTV CAMERA.
- CCTV — CCTV MONITOR.
- INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
- WP — INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
- INTERCOM MASTER STATION.
- S — CEILING MOUNTED PAGING SPEAKER.
- W — WALL MOUNTED PAGING SPEAKER.
- TV — TELEVISION POWER OUTLET CONTROL.
- I — DOOR INTERLOCK.
- TOUCH SCREEN CONTROL LOCATION.
- WP / MV — WATER VALVE CONTROL.
- INMATE TELEPHONE CONTROL.
- REQUEST-TO-EXIT PIR.
- PB — DOOR RELEASE PUSHBUTTON.
- TOUCHSCREEN LIGHTING CONTROL.
- E — EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
- DS — DURESS HORN AND LIGHT STROBE.

GENERAL NOTES:

1. TV LOCATIONS AND QUANTITY ARE SUBJECT TO CHANGE.
2. ONE WATER CONTROL VALVE FOR EACH CHASE. SO TWO TOILETS PER VALVE IN THE WOMENS DETENTION AREA. COORDINATE WITH PLUMBING SHEETS AND SCHEDULES.
3. PROVIDE CPU FOR WALL MOUNTED CCTV MONITOR. WALL MOUNTED MONITOR TO BE 42".
4. ALL DEVICES SHOWN ON THIS SHEET TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.1.

KEYED NOTES:

1. CEILING MOUNTED CAMERA. CAMERA SHALL BE MOUNTED ON CEILING OF FIRST FLOOR.
2. WALL MOUNTED CAMERA. CAMERA SHALL BE MOUNTED ON WALL NEAREST TO CORNER AT 10'-0" ABOVE FINISHED FLOOR OF STAIR LANDING.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY +
PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

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EXP: 03-14-2015
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KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

TITLE

FIRST FLOOR PLAN AREA A - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-110A

SHEET NO.

GENERAL NOTES:

1. ALL DEVICES SHOWN ON THIS SHEET TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.1.
2. ALL DOORS THAT ARE CONTROLLED BY THE "NURSE STATION" TOUCHSCREEN (NS), WILL HAVE THE ASSOCIATED INTERCOMS TO THOSE DOORS, DIRECTED TO THE NURSE STATION AS WELL.

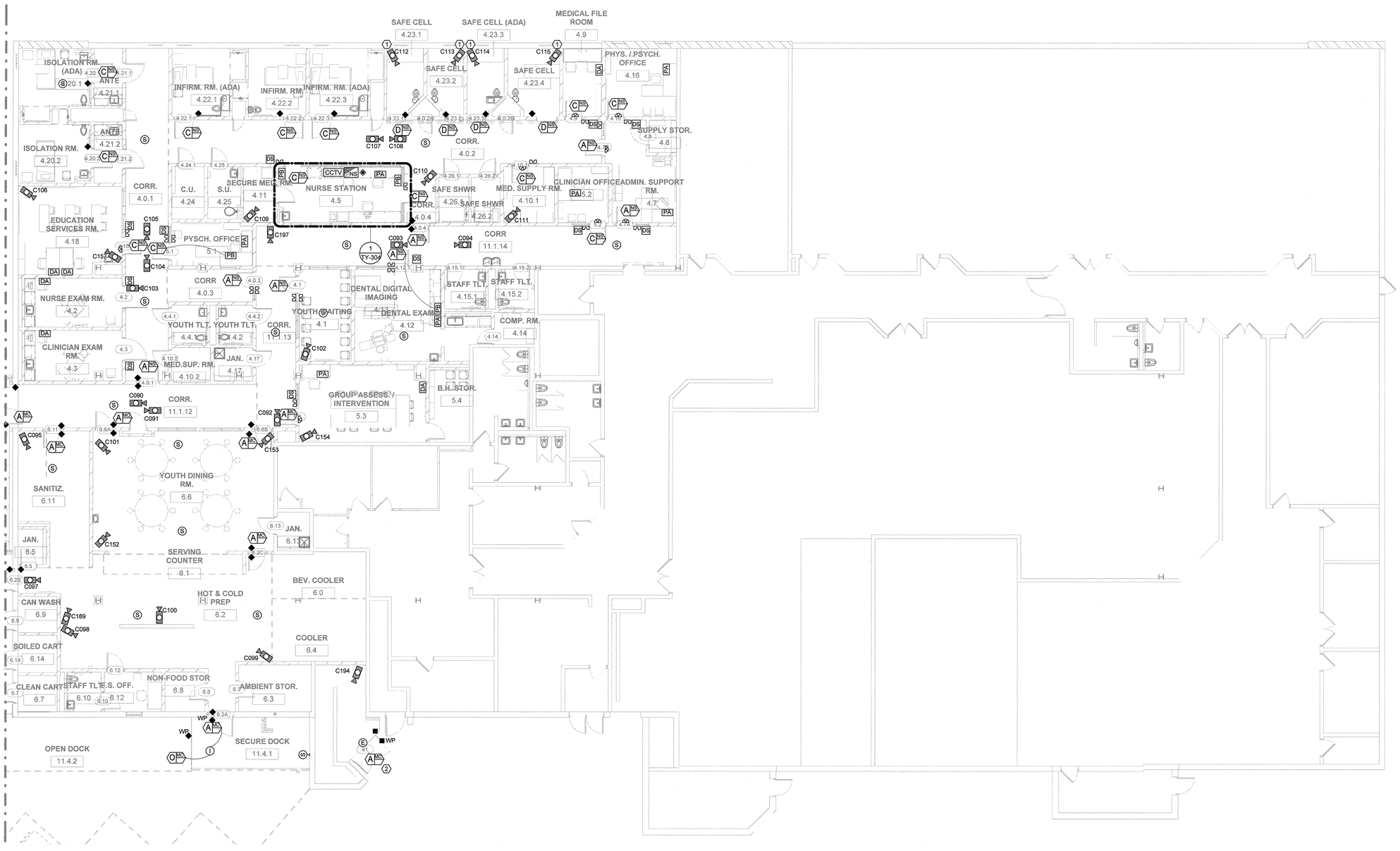
KEYED NOTES:

(1) CAMERAS ARE TO BE VIEWED FROM THE NURSES STATION ONLY. LIVE VIDEO IS NOT TO BE ALLOWED TO BE WATCHED FROM ANYWHERE ELSE.

(2) EXISTING DOOR TO BE MONITORED AND CONTROLLED VIA THE NEW SECURITY SYSTEM.

SECURITY SYMBOL LEGEND:

- (A) CONTROLLED AND MONITORED DOOR. (8" JAMB)
- (B) MONITORED ONLY DOOR.
- (C) CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
- (D) CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
- (O) CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
- (R) MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
- PROXIMITY CARD READER.
- DA — DURESS ALARM PUSHBUTTON. WALL MOUNTED.
- PA — PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
- FIXED CCTV CAMERA.
- CCTV — CCTV MONITOR.
- INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
- WP — INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
- INTERCOM MASTER STATION.
- (S) CEILING MOUNTED PAGING SPEAKER.
- WALL MOUNTED PAGING SPEAKER.
- TV — TELEVISION POWER OUTLET CONTROL.
- (I) DOOR INTERLOCK.
- TOUCH SCREEN CONTROL LOCATION.
- WC MV — WATER VALVE CONTROL.
- INMATE TELEPHONE CONTROL.
- REQUEST-TO-EXIT PIR.
- PB — DOOR RELEASE PUSHBUTTON.
- TOUCHSCREEN LIGHTING CONTROL.
- (E) EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
- DS — DURESS HORN AND LIGHT STROBE.



1 FIRST FLOOR PLAN AREA B - SECURITY
Scale: 1/8" = 1'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

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KEY PLAN

SCALE

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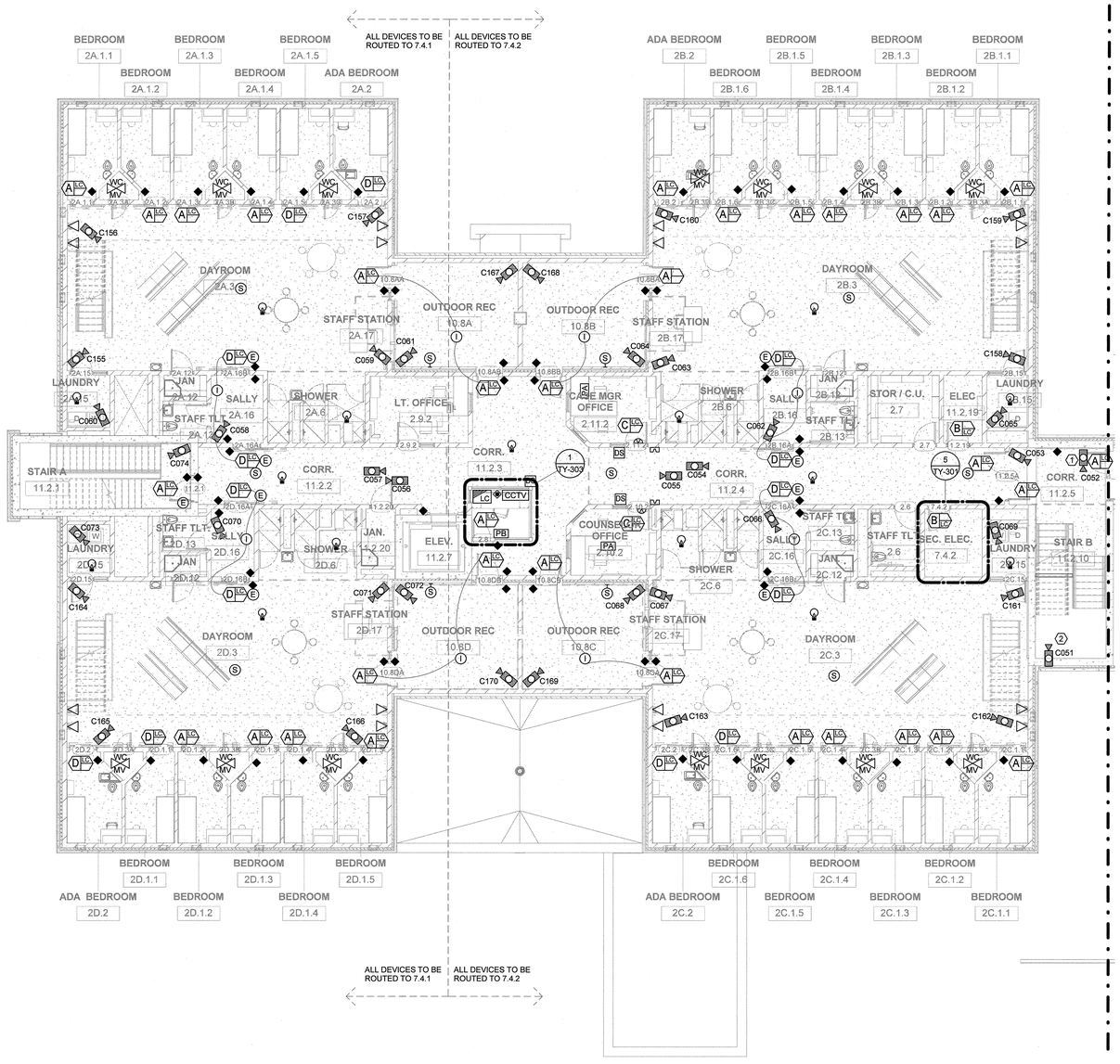
FIRST FLOOR PLAN AREA B - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-110B

SHEET NO.



1 SECOND FLOOR PLAN AREA A - SECURITY
Scale: 1/8" = 1'-0"

SECURITY SYMBOL LEGEND:

- A — CONTROLLED AND MONITORED DOOR. (8" JAMB)
- B — MONITORED ONLY DOOR.
- C — CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
- D — CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
- O — CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
- R — MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
- PROXIMITY CARD READER.
- DA — DURESS ALARM PUSHBUTTON. WALL MOUNTED.
- PA — PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
- FIXED CCTV CAMERA.
- CCTV — CCTV MONITOR.
- INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
- WP — INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
- INTERCOM MASTER STATION.
- S — CEILING MOUNTED PAGING SPEAKER.
- WALL MOUNTED PAGING SPEAKER.
- TV — TELEVISION POWER OUTLET CONTROL.
- I — DOOR INTERLOCK.
- TOUCH SCREEN CONTROL LOCATION.
- WC MV — WATER VALVE CONTROL.
- INMATE TELEPHONE CONTROL.
- REQUEST-TO-EXIT PIR.
- PB — DOOR RELEASE PUSHBUTTON.
- TOUCHSCREEN LIGHTING CONTROL.
- E — EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
- DS — DURESS HORN AND LIGHT STROBE.

GENERAL NOTES:

1. TV LOCATIONS AND QUANTITY ARE SUBJECT TO CHANGE.
2. ONE WATER CONTROL VALVE FOR EACH CHASE. EACH VALVE CONTROLS 4 CELLS STACKED. TWO BELOW AND 2 TOP. COORDINATE WITH PLUMBING AND ELECTRICAL SHEETS AND SCHEDULES.

KEYED NOTES:

1. WALL MOUNTED CAMERA. CAMERA SHALL BE MOUNTED 8'-8" ABOVE FINISHED FLOOR OF STAIR LANDING.
2. WALL MOUNTED CAMERA. CAMERA SHALL BE MOUNTED 10'-0" ABOVE FINISHED FLOOR OF STAIR LANDING.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
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DATE	02-05-2015

TITLE

SECOND FLOOR PLAN AREA A - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-120A

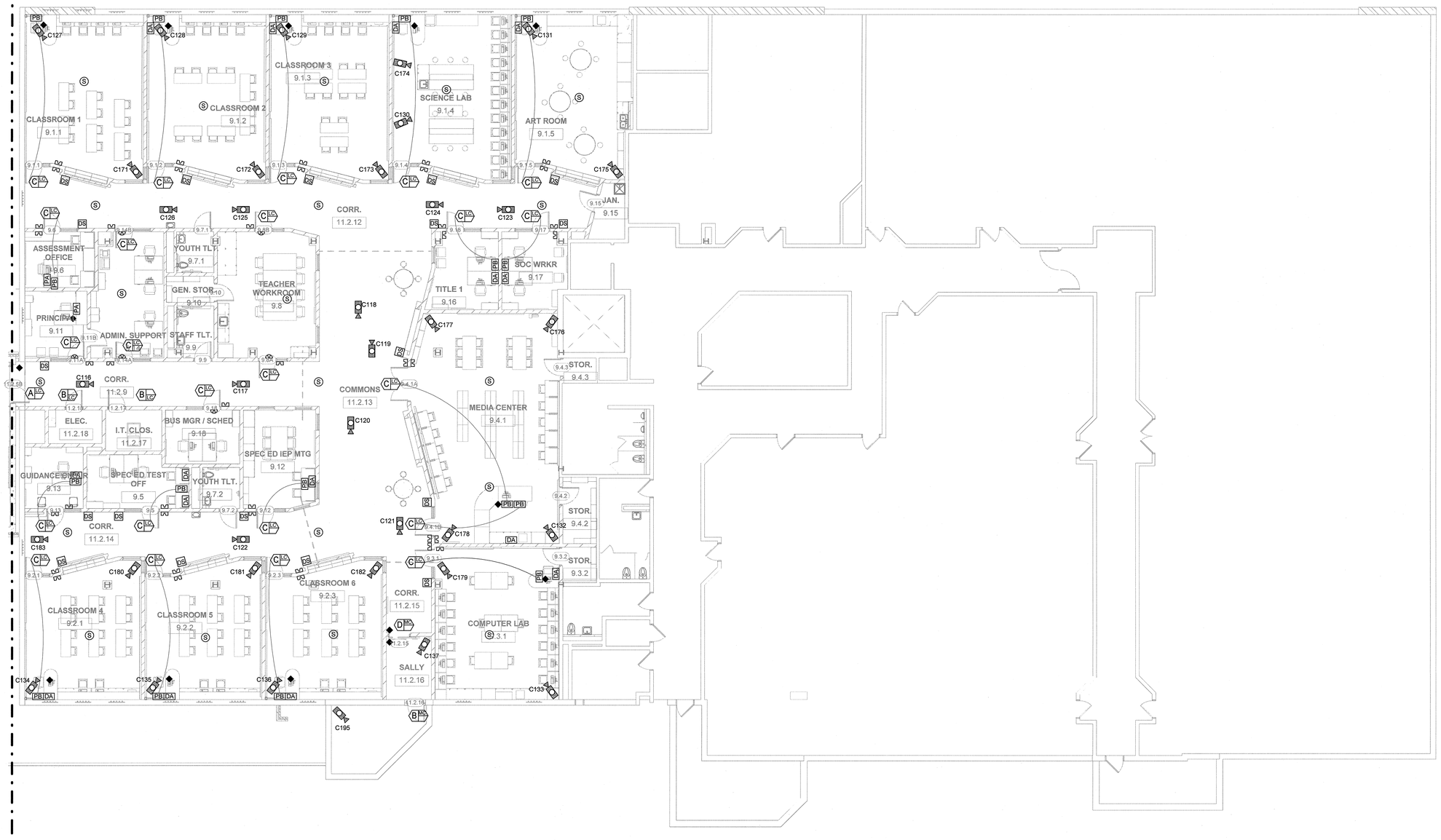
SHEET NO.

GENERAL NOTES:

1. ALL DEVICES SHOWN ON THIS SHEET TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.2.

SECURITY SYMBOL LEGEND:

A	CONTROLLED AND MONITORED DOOR. (8" JAMB)
B	MONITORED ONLY DOOR.
C	CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
D	CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
O	CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
R	MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
	PROXIMITY CARD READER.
DA	DURESS ALARM PUSHBUTTON. WALL MOUNTED.
PA	PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
	FIXED CCTV CAMERA.
CCTV	CCTV MONITOR.
◆	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
◆WP	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
	INTERCOM MASTER STATION.
S	CEILING MOUNTED PAGING SPEAKER.
W	WALL MOUNTED PAGING SPEAKER.
TV	TELEVISION POWER OUTLET CONTROL.
I	DOOR INTERLOCK.
	TOUCH SCREEN CONTROL LOCATION.
WC MV	WATER VALVE CONTROL.
▽	INMATE TELEPHONE CONTROL.
	REQUEST-TO-EXIT PIR.
PB	DOOR RELEASE PUSHBUTTON.
	TOUCHSCREEN LIGHTING CONTROL.
E	EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
DS	DURESS HORN AND LIGHT STROBE.



1 SECOND FLOOR PLAN AREA B - SECURITY
Scale: 1/8" = 1'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING

HOPE FURRER Associates, Inc.

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TERRALOGOS
SGD ARCHITECTURE, LLC

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LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

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KEY PLAN

SCALE

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APPROVED BY	JMP
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DATE	02-05-2015

TITLE

SECOND FLOOR PLAN AREA B - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-120B

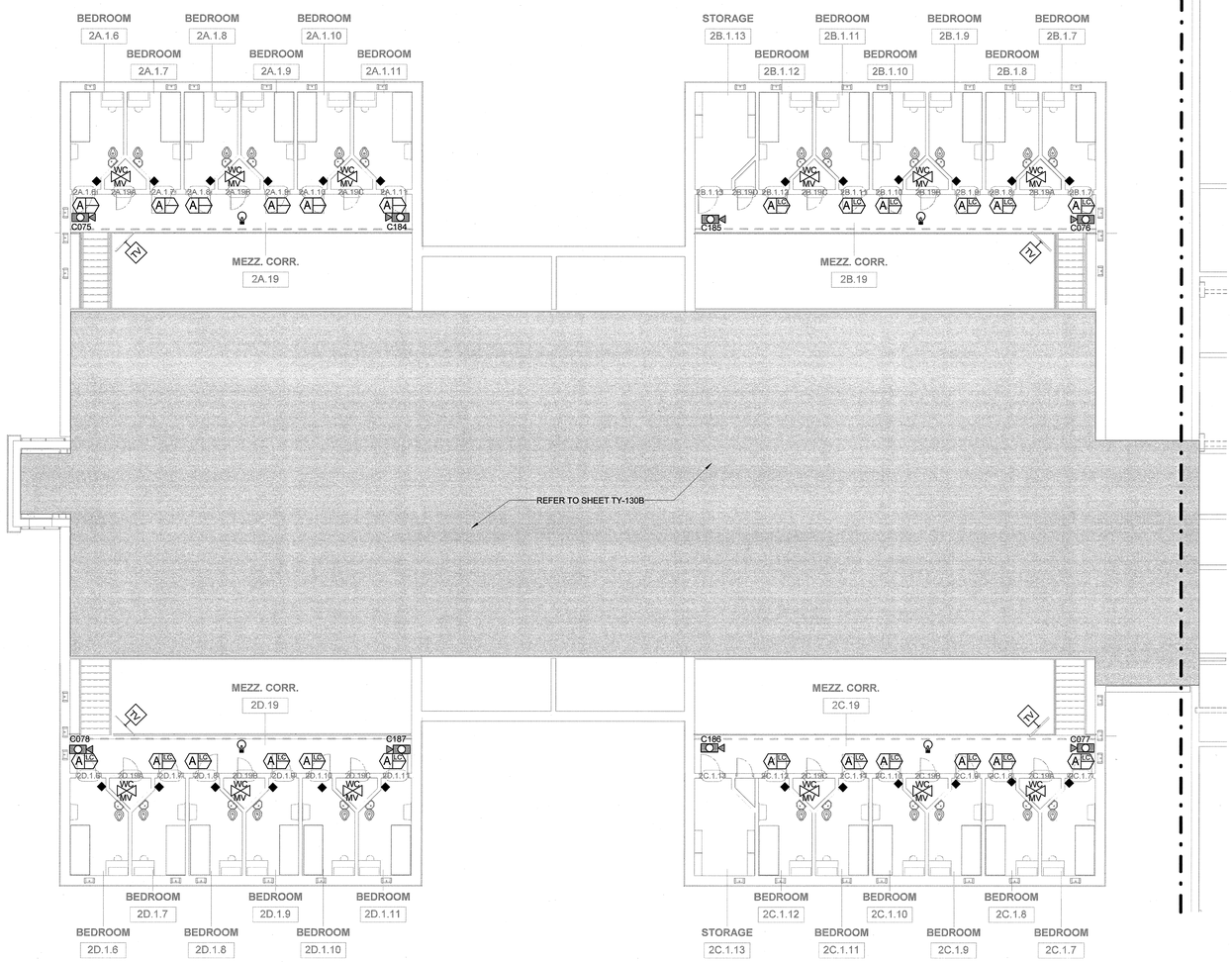
SHEET NO.

GENERAL NOTES:

1. TV LOCATIONS AND QUANTITY ARE SUBJECT TO CHANGE.
2. ONE WATER CONTROL VALVE PER CHASE. EACH VALVE IS TO CONTROL FOUR CELLS STACKED. TWO UP AND TWO DOWN. COORDINATE WITH PLUMBING AND ELECTRICAL SHEETS AND SCHEDULES.
3. ALL DEVICES SHOWN ON THIS SHEET TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.2.

SECURITY SYMBOL LEGEND:

A	CONTROLLED AND MONITORED DOOR. (8" JAMB)	CCTV	CCTV MONITOR.
B	MONITORED ONLY DOOR.	◆	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
C	CONTROLLED AND MONITORED ARCHITECTURAL DOOR.	◆WP	INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
D	CONTROLLED AND MONITORED SLIDING DOOR DEVICE.	◈	INTERCOM MASTER STATION.
O	CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.	Ⓢ	CEILING MOUNTED PAGING SPEAKER.
R	MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.	WP	WALL MOUNTED PAGING SPEAKER.
	PROXIMITY CARD READER.	TV	TELEVISION POWER OUTLET CONTROL.
DA	DURESS ALARM PUSHBUTTON. WALL MOUNTED.	I	DOOR INTERLOCK.
PA	PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).		TOUCH SCREEN CONTROL LOCATION.
	FIXED CCTV CAMERA.	WC MV	WATER VALVE CONTROL.
		▽	INMATE TELEPHONE CONTROL.
			REQUEST-TO-EXIT PIR.
		PB	DOOR RELEASE PUSHBUTTON.
			TOUCHSCREEN LIGHTING CONTROL.
		E	EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
		DS	DURESS HORN AND LIGHT STROBE.



1 SECOND FLOOR PLAN & MEZZ PLAN - SECURITY
Scale: 1/8" = 1'-0"

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
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STATE OF MARYLAND - DPSCS
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KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

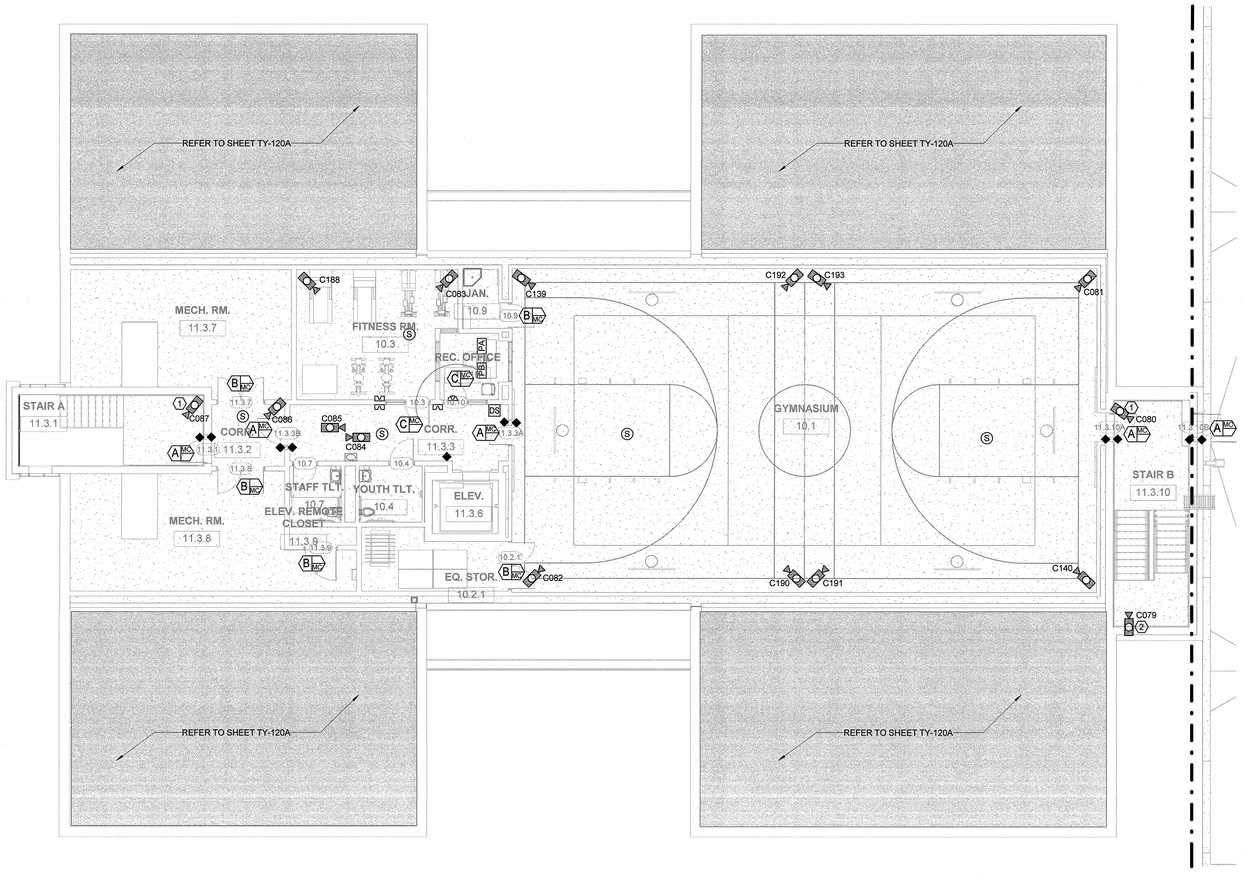
TITLE

SECOND FLOOR PLAN & MEZZ PLAN - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-130A

SHEET NO.



1 THIRD FLOOR PLAN - SECURITY
Scale: 1/8" = 1'-0"

SECURITY SYMBOL LEGEND:

- A — CONTROLLED AND MONITORED DOOR. (8" JAMB)
- B — MONITORED ONLY DOOR.
- C — CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
- D — CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
- O — CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
- R — MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
- PROXIMITY CARD READER.
- DA — DURESS ALARM PUSHBUTTON. WALL MOUNTED.
- PA — PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
- FIXED CCTV CAMERA.
- CCTV — CCTV MONITOR.
- INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
- WP — INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
- INTERCOM MASTER STATION.
- S — CEILING MOUNTED PAGING SPEAKER.
- WALL MOUNTED PAGING SPEAKER.
- TV — TELEVISION POWER OUTLET CONTROL.
- I — DOOR INTERLOCK.
- TOUCH SCREEN CONTROL LOCATION.
- WC MV — WATER VALVE CONTROL.
- INMATE TELEPHONE CONTROL.
- REQUEST-TO-EXIT PIR.
- PB — DOOR RELEASE PUSHBUTTON.
- TOUCHSCREEN LIGHTING CONTROL.
- E — EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
- DS — DURESS HORN AND LIGHT STROBE.

GENERAL NOTES:

1. ALL DEVICES SHOWN ON THIS SHEET TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.2.

KEYED NOTES:

1. WALL MOUNTED CAMERA. CAMERA SHALL BE MOUNTED 8'-8" ABOVE FINISHED FLOOR OF STAIR LANDING.
2. WALL MOUNTED CAMERA. CAMERA SHALL BE MOUNTED 10'-0" ABOVE FINISHED FLOOR OF STAIR LANDING.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Consulting Engineers
EXECUTIVE PLAZA NO. SUITE 1000
11350 McCORMICK ROAD
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TERRALOGOS
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

SEAL

STATE OF MARYLAND PROFESSIONAL ENGINEER

EXP: 03-14-2015
DATE: 02-05-2015

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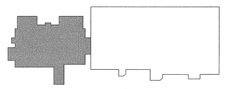
KEY PLAN



SCALE

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No.	Description	Date

REVISIONS

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APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

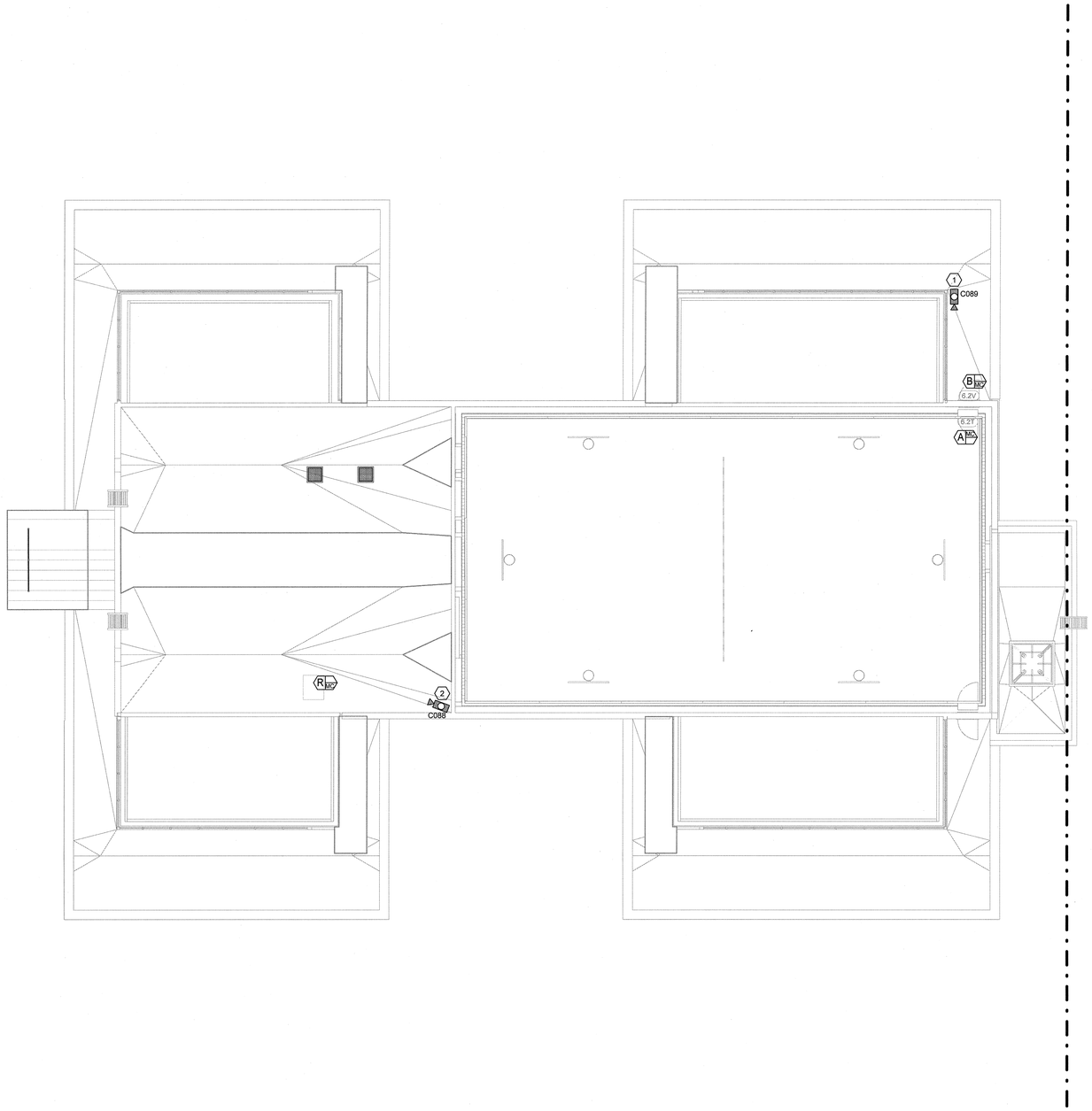
TITLE

THIRD FLOOR PLAN - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-130B

SHEET NO.



1 ROOF AND CLERESTORY PLAN - SECURITY
Scale: 1/8" = 1'-0"

SECURITY SYMBOL LEGEND:

- A — CONTROLLED AND MONITORED DOOR. (8" JAMB)
- B — MONITORED ONLY DOOR.
- C — CONTROLLED AND MONITORED ARCHITECTURAL DOOR.
- D — CONTROLLED AND MONITORED SLIDING DOOR DEVICE.
- O — CONTROLLED AND MONITORED OVERHEAD DOOR / GATES.
- R — MONITORED ONLY ROOF HATCH. ESSC TO PROVIDE DPS.
- PROXIMITY CARD READER.
- DA — DURESS ALARM PUSHBUTTON. WALL MOUNTED.
- PA — PANIC ALARM PUSHBUTTON. MOUNTED UNDERNEATH DESK (COVERT).
- FIXED CCTV CAMERA.
- CCTV — CCTV MONITOR.
- INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED ON 8" JAMB FRAMES. FLUSH IN WALL ALL OTHERS.
- WP — INTERCOM SUB-STATION. DETENTION GRADE STATION WITH CALL BUTTON DOOR FRAME MOUNTED. WEATHERPROOF
- INTERCOM MASTER STATION.
- S — CEILING MOUNTED PAGING SPEAKER.
- WALL MOUNTED PAGING SPEAKER.
- TV — TELEVISION POWER OUTLET CONTROL.
- I — DOOR INTERLOCK.
- TOUCH SCREEN CONTROL LOCATION.
- WC MV — WATER VALVE CONTROL.
- INMATE TELEPHONE CONTROL.
- REQUEST-TO-EXIT PIR.
- PB — DOOR RELEASE PUSHBUTTON.
- TOUCHSCREEN LIGHTING CONTROL.
- E — EMERGENCY RELEASE FOR DOORS ON EGRESS PATH.
- DS — DURESS HORN AND LIGHT STROBE.

GENERAL NOTES:

1. ALL DEVICES SHOWN ON THIS SHEET TO BE ROUTED TO SECURITY ELECTRONICS ROOM 7.4.2.

KEYED NOTES:

1. EXTERIOR SECURITY CAMERA TO BE LOCATED ON UNDERSIDE OF OVERHANG.
2. MOUNT CAMERA 6" BELOW SILL OF CLEARSTORY WINDOWS.

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

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SEAL

EXP: 03-14-2015
DATE: 02-05-2015

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KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

TITLE

ROOF PLAN AREA A - SECURITY

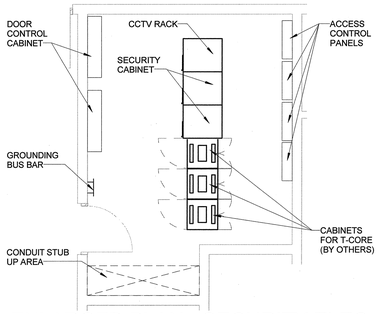
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-140A

SHEET NO.

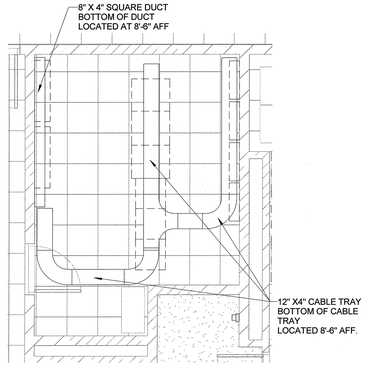
GENERAL NOTES:

1. ALL PERSPECTIVE VIEWS ARE SCHEMATIC ONLY. DEVICES AND EQUIPMENT SHOWN MAY NOT BE WHAT IS LISTED IN SPECIFICATIONS.
2. CONTRACTOR TO CLARIFY AND COORDINATE CABINET RESPOSIBILITIES WITH ELECTRICAL CONTRACTOR AND THE SEC.



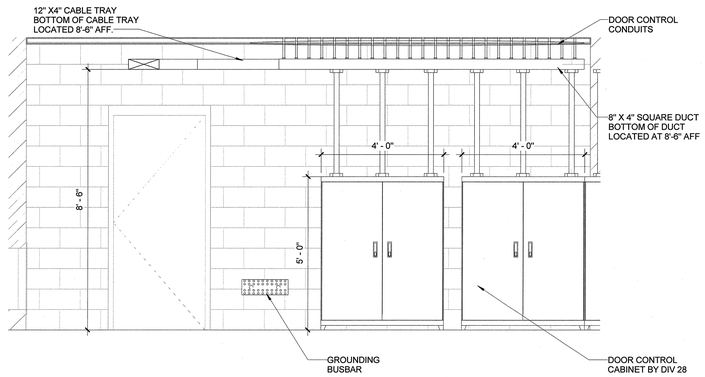
ENLARGED PLAN - SECURITY ELEC. ROOM 7.4.1 - SECURITY

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



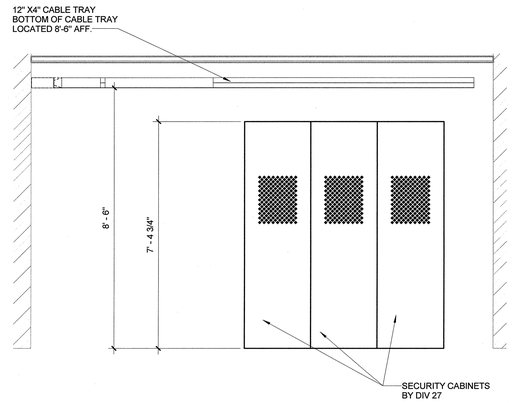
RCP SECURITY ELEC RM #7.4.1

2 Scale: 1/4" = 1'-0"



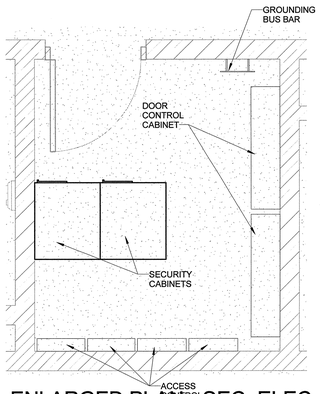
DOOR CABINET ELEVATION SEC ELEC RM #7.4.1

3 Scale: 1/2" = 1'-0"



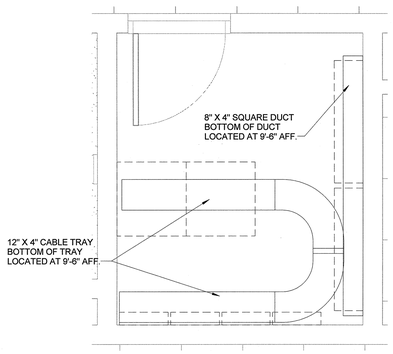
SECURITY CABINET ELEVATION SEC ELEC RM 7.4.1

4 Scale: 1/2" = 1'-0"



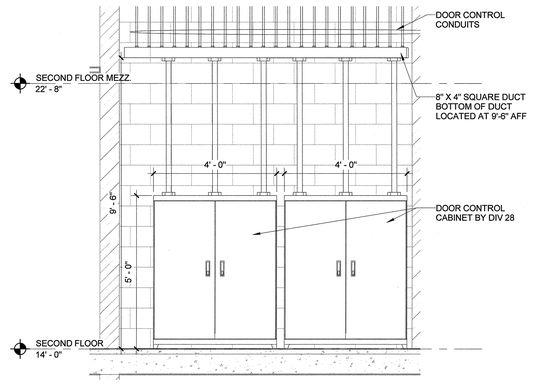
ENLARGED PLAN - SEC. ELEC. ROOM 7.4.2 - SECURITY

5 Scale: 1/2" = 1'-0"



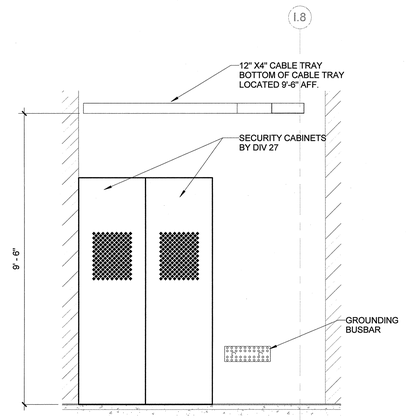
RCP SECURITY ELEC RM #7.4.2

6 Scale: 1/2" = 1'-0"



DOOR CABINET ELEVATION SEC ELEC RM #7.4.2

7 Scale: 1/2" = 1'-0"



SECURITY CABINET ELEVATION SEC ELEC RM 7.4.2

8 Scale: 1/2" = 1'-0"

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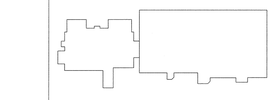
KEY PLAN



SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

TITLE

ENLARGED PLANS - SECURITY

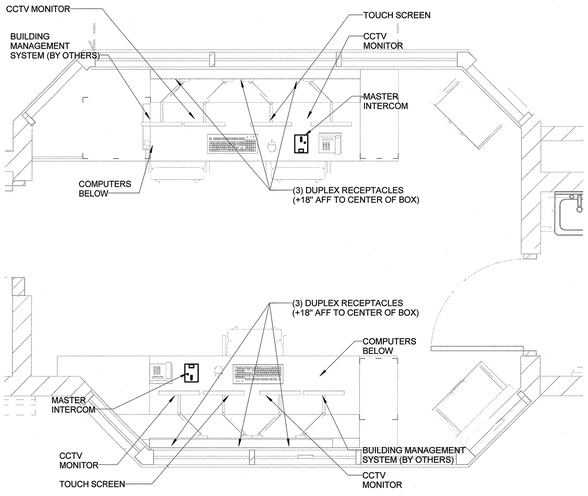
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-301

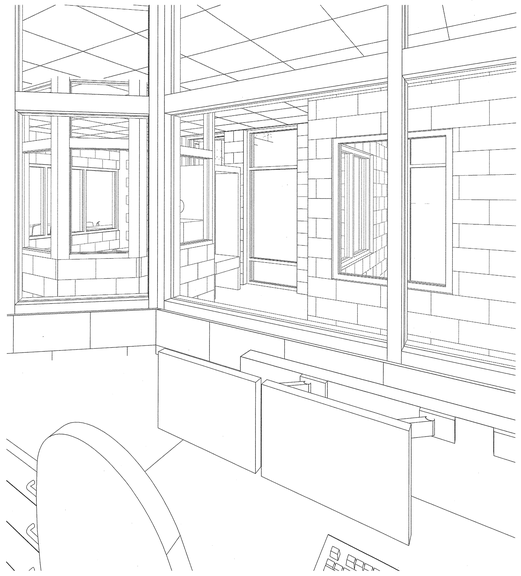
SHEET NO.

GENERAL NOTES:

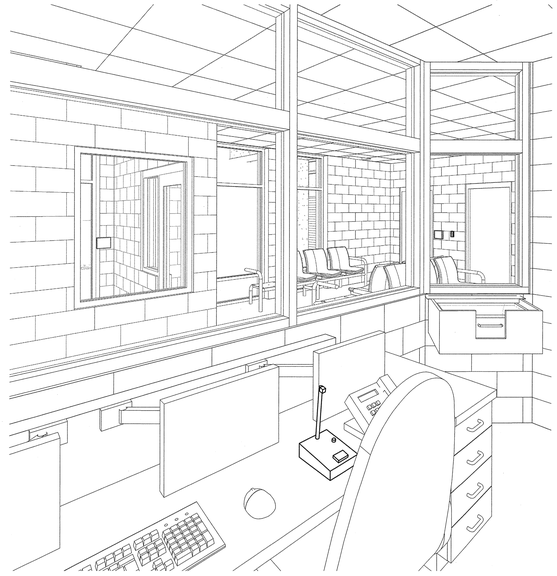
1. ALL PERSPECTIVE VIEWS ARE SCHEMATIC ONLY. DEVICES AND EQUIPMENT SHOWN MAY NOT BE WHAT IS LISTED IN SPECIFICATIONS.



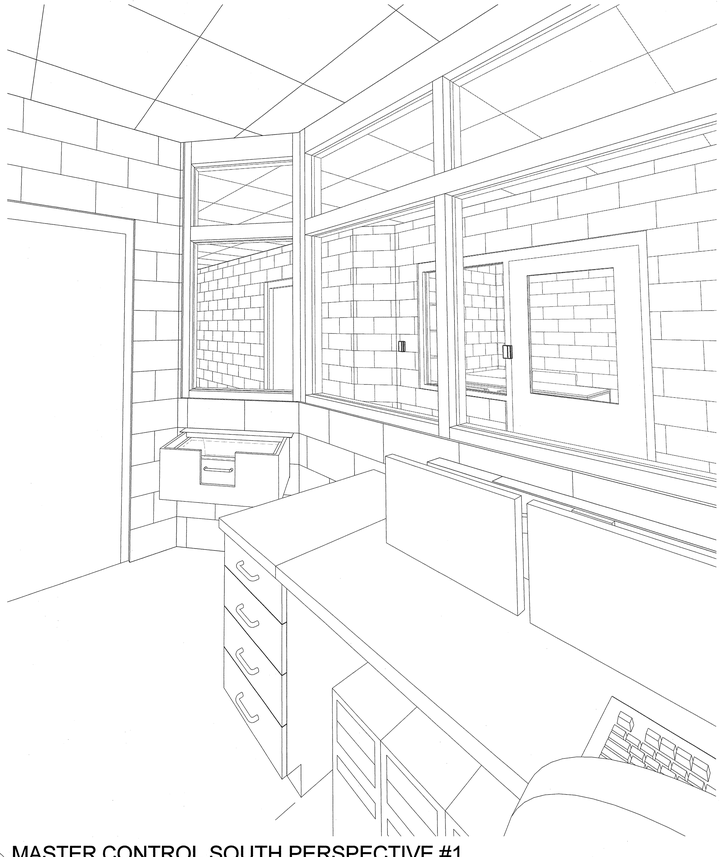
1 ENLARGED PLAN - MASTER CONTROL - SECURITY
Scale: 1/2" = 1'-0"



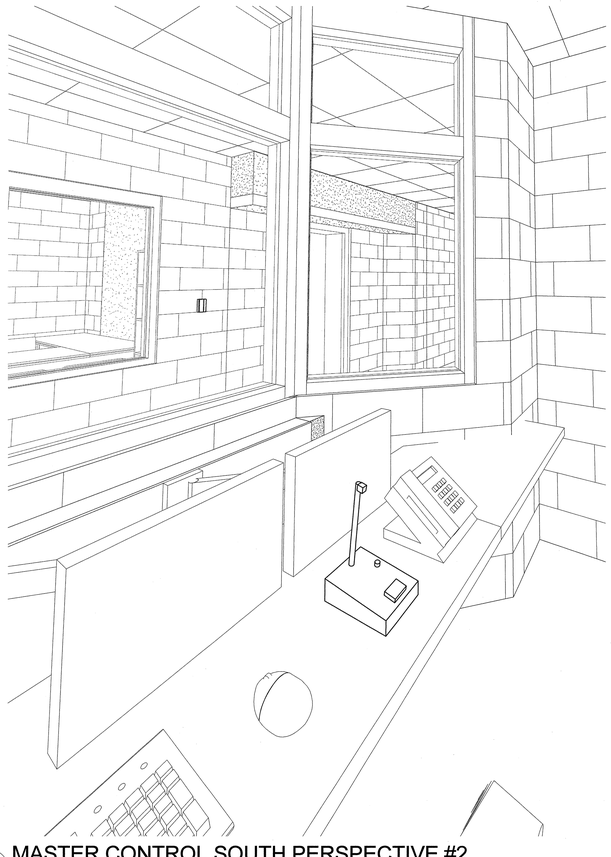
2 MASTER CONTROL NORTH PERSPECTIVE #1
Scale: N.T.S.



3 MASTER CONTROL NORTH PERSPECTIVE #2
Scale: N.T.S.



4 MASTER CONTROL SOUTH PERSPECTIVE #1
Scale: N.T.S.



5 MASTER CONTROL SOUTH PERSPECTIVE #2
Scale: N.T.S.

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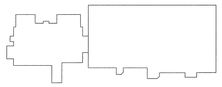
KEY PLAN



SCALE

1/2" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

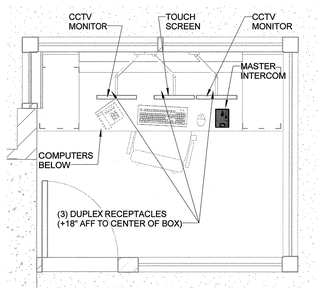
TITLE

ENLARGED PLANS - SECURITY

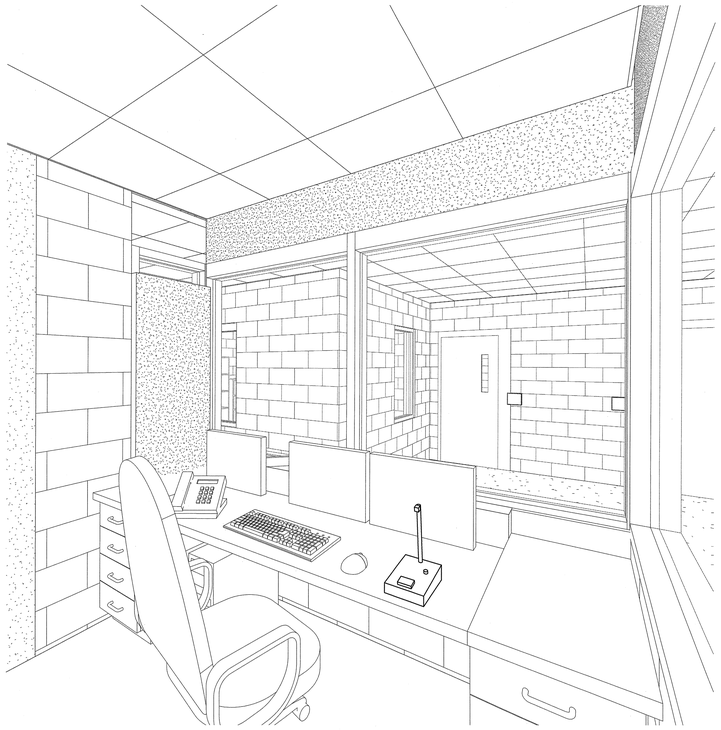
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-302

SHEET NO.



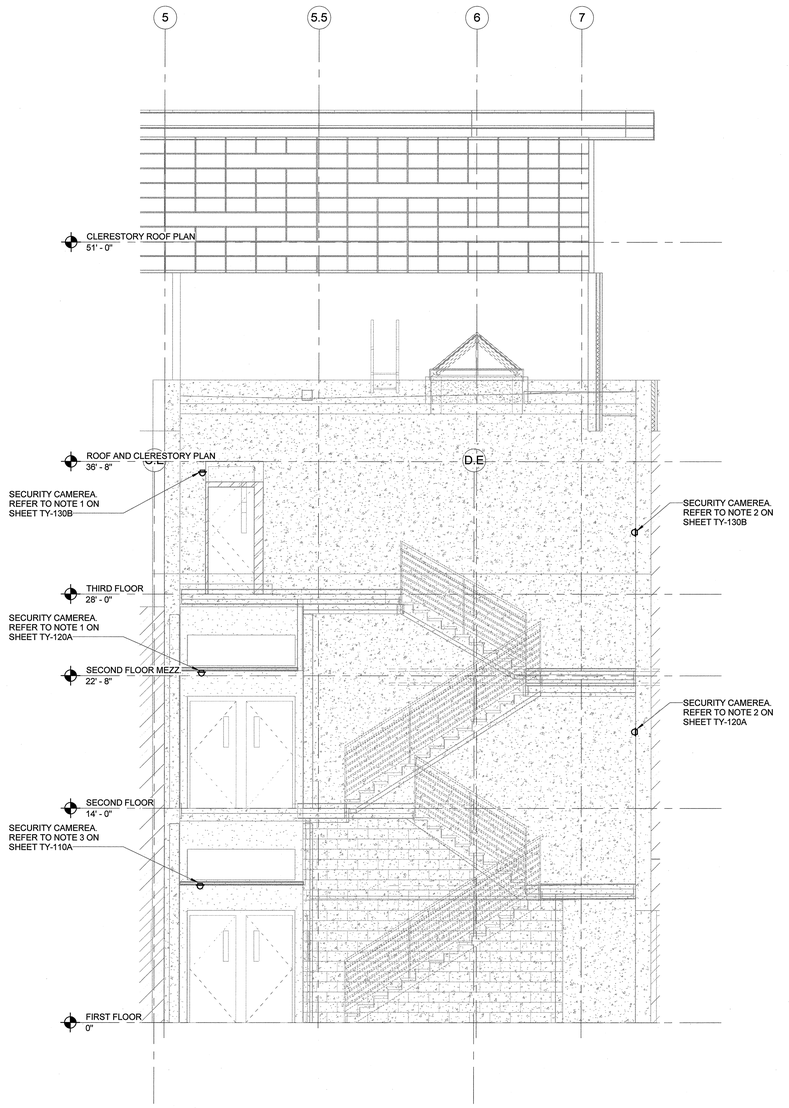
1 ENLARGED PLAN - LOCAL CONTROL - SECURITY
Scale: 1/2" = 1'-0"



2 LOCAL CONTROL PERSPECTIVE #2
Scale: N.T.S.



3 LOCAL CONTROL PERSPECTIVE #1
Scale: N.T.S.



4 MAIN STAIRWELL - SECUIRTY
Scale: 1/4" = 1'-0"

A JOINT-VENTURE BETWEEN
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PENZA BAILEY ARCHITECTS

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KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
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CHECKED BY	TWS
DATE	02-05-2015

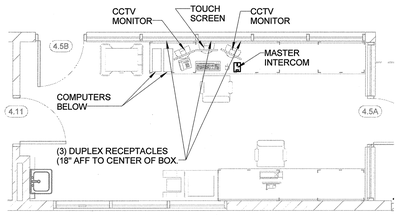
TITLE

ENLARGED PLANS - SECURITY

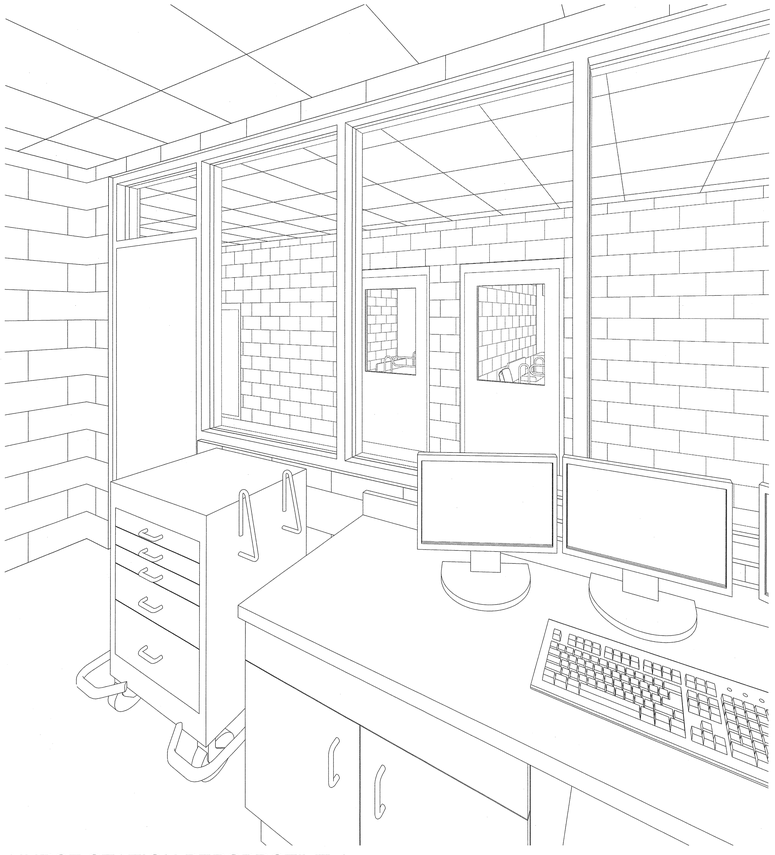
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-303

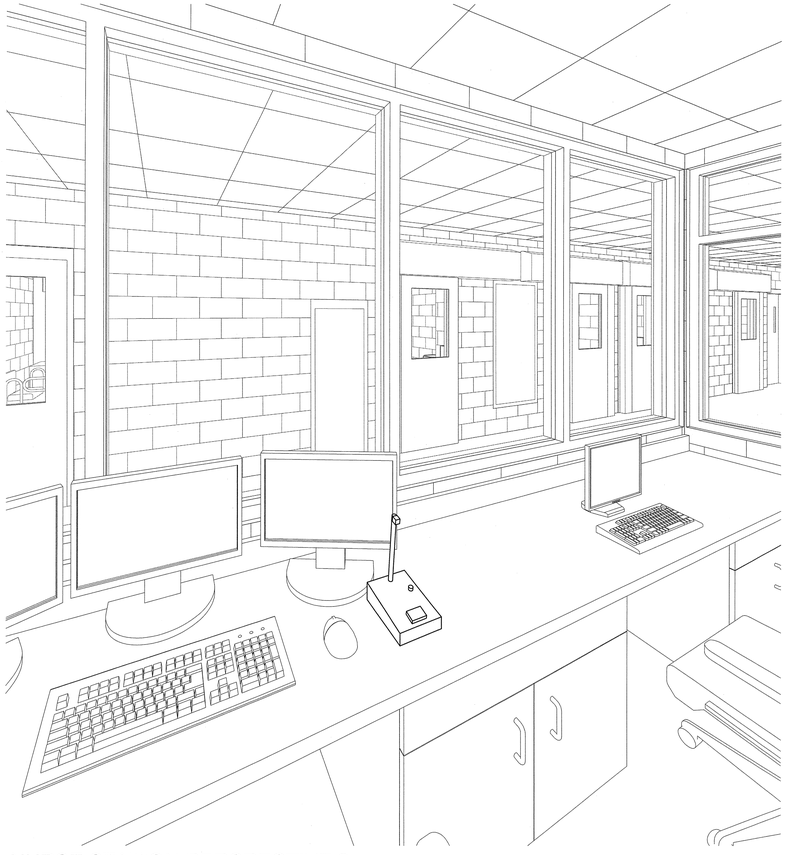
SHEET NO.



1 ENLARGED PLAN - NURSE STATION ROOM 4.5 - SECURITY
Scale: 1/4" = 1'-0"



2 NURSE STATION PERSPRCTIVE 1
Scale:



3 NURSE STATION PERSPECTIVE 2
Scale:

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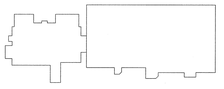
KEY PLAN



SCALE

1/4" = 1'-0"

No.	Description	Date

REVISIONS

DRAWN BY	KDW
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

TITLE

ENLARGED PLANS - SECURITY

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-304

SHEET NO.

CAMERA NUMBER	ROOM NUMBER	ROOM NAME	MOUNTING TYPE	MOUNTING HEIGHT	NOTES
C001	SITE	EXTERIOR	WALL	12'-0"	FIXED
C002	SITE	EXTERIOR	WALL	12'-0"	FIXED
C003	SITE	EXTERIOR	WALL	12'-0"	FIXED
C004	SITE	EXTERIOR	WALL	12'-0"	FIXED
C005	SITE	EXTERIOR -ENTRY VEST EXT	WALL	12'-0"	FIXED
C006	NOT USED	NOT USED	N/A	N/A	N/A
C007	SITE	EXTERIOR - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C008	SITE	EXTERIOR - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C009	SITE	EXTERIOR	WALL	12'-0"	FIXED
C010	SITE	EXTERIOR	WALL	12'-0"	FIXED
C011	SITE	EXTERIOR	WALL	12'-0"	FIXED
C012	SITE	EXTERIOR	WALL	12'-0"	FIXED
C013	SITE	EXTERIOR	WALL	12'-0"	FIXED
C014	SITE	EXTERIOR	WALL	12'-0"	FIXED
C015	SITE	EXTERIOR	WALL	12'-0"	FIXED
C016	SITE	EXTERIOR - VIEWING LISCENSE PLATE	WALL	4'-0"	FIXED
C017	SITE	EXTERIOR - VEHICLE SALLYPORT EXT	WALL	12'-0"	FIXED
C018	SITE	EXTERIOR - DRIVER OF VEHICLE	PEDESTAL	SEE DETAIL	FIXED
C019	SITE	EXTERIOR	WALL	12'-0"	FIXED
C020	0.1	ENTRY VEST.	CEILING	N/A	FIXED
C021	0.7	LOBBY	CEILING	N/A	FIXED
C022	0.7	LOBBY	CEILING	N/A	FIXED
C023	0.6	SECURITY SCREEN	CEILING	N/A	FIXED
C024	0.2	SALLYPORT	CEILING	N/A	FIXED
C025	0.2	SALLYPORT	CEILING	N/A	FIXED
C026	8.2	VISITATION	CORNER V-CELL	N/A	FIXED
C027	8.7	CORR.	CEILING	N/A	FIXED
C028	8.1.1	INTER.	CEILING	N/A	FIXED
C029	11.1.2	CORR.	CEILING	N/A	FIXED
C030	11.1.2	CORR.	CEILING	N/A	FIXED
C031	11.1.2	CORR.	CEILING	N/A	FIXED
C032	11.1.2	CORR.	CEILING	N/A	FIXED
C033	11.1.2	CORR.	CEILING	N/A	FIXED
C034	11.1.1	STAIR A	CEILING	N/A	FIXED
C035	11.1.1	STAIR A	WALL	SEE TY-110A	FIXED
C036	0.3	STAFF SALLY	CEILING	N/A	FIXED
C037	10.8F	FEMALE OUTDOOR REC.	WALL	12'-0"	FIXED
C038	2F.3	FEMALE DAYROOM	WALL	12'-0"	FIXED
C039	2F.5	READING/WRITING	CORNER V-CELL	N/A	FIXED
C040	2F.4	GROUP ACTIVITY	CORNER V-CELL	N/A	FIXED
C041	2F.0.3	CORR.	CEILING	N/A	FIXED
C042	3.0.1	CORR.	CEILING	N/A	FIXED
C043	3.6	SECURE VEST.	CEILING	N/A	FIXED
C044	3.7	VEHICLE SALLY	CEILING	N/A	FIXED
C045	3.7	VEHICLE SALLY	CEILING	N/A	FIXED
C046	3.7	VEHICLE SALLY	CEILING	N/A	FIXED
C047	3.7	VEHICLE SALLY	CEILING	N/A	FIXED
C048	11.1.5	CORR.	CEILING	N/A	FIXED
C049	11.1.5	CORR.	CEILING	N/A	FIXED
C050	11.1.10	STAIR B	CEILING	N/A	FIXED
C051	11.2.10	STAIR B	WALL	SEE TY-120A	FIXED
C052	11.2.5	CORR.	WALL	SEE TY-120A	FIXED
C053	11.2.5	CORR.	CEILING	N/A	FIXED
C054	11.2.4	CORR.	CEILING	N/A	FIXED
C055	11.2.4	CORR.	CEILING	N/A	FIXED
C056	11.2.4	CORR.	CEILING	N/A	FIXED
C057	11.2.4	CORR.	CEILING	N/A	FIXED
C058	2A.16	SALLY	CEILING	N/A	FIXED
C059	2A.3	DAYROOM	WALL	12'-0"	FIXED
C060	2A.15	LAUNDRY	CEILING	N/A	FIXED
C061	10.8A	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C062	2B.16	SALLY	CEILING	N/A	FIXED
C063	2B.3	DAYROOM	WALL	12'-0"	FIXED
C064	10.8B	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C065	2B.15	LAUNDRY	CEILING	N/A	FIXED
C066	2C.16	SALLY	CEILING	N/A	FIXED

CAMERA NUMBER	ROOM NUMBER	ROOM NAME	MOUNTING TYPE	MOUNTING HEIGHT	NOTES
C067	2C.3	DAYROOM	WALL	12'-0"	FIXED
C068	10.8C	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C069	2C.15	LAUNDRY	CEILING	N/A	FIXED
C070	2D.16	SALLY	CEILING	N/A	FIXED
C071	2D.3	DAYROOM	WALL	12'-0"	FIXED
C072	10.8D	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C073	2D.15	LAUNDRY	CEILING	N/A	FIXED
C074	11.2.1	STAIR A	CEILING	SEE TY-120A	FIXED
C075	2A.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C076	2B.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C077	2C.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C078	2D.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C079	11.3.10	STAIR B	CEILING	SEE TY-130B	FIXED
C080	11.3.10	STAIR B	CEILING	SEE TY-130B	FIXED
C081	10.1	GYMNASIUM - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C082	10.1	GYMNASIUM - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C083	10.3	FITNESS RM.	CEILING	N/A	FIXED
C084	11.3.3	CORR.	CEILING	N/A	FIXED
C085	11.3.3	CORR.	CEILING	N/A	FIXED
C086	11.3.2	CORR.	CEILING	N/A	FIXED
C087	11.3.1	STAIR B	CEILING	SEE TY-130B	FIXED
C088	ROOF	ROOF	WALL	SEE TY-140A	FIXED
C089	ROOF	ROOF	CANOPY	N/A	FIXED
C090	11.1.12	CORR.	CEILING	N/A	FIXED
C091	11.1.12	CORR.	CEILING	N/A	FIXED
C092	11.1.12	CORR.	CEILING	N/A	FIXED
C093	11.1.14	CORR.	CEILING	N/A	FIXED
C094	11.1.14	CORR.	CEILING	N/A	FIXED
C095	6.11	SANITIZ.	CEILING	N/A	FIXED
C096	3.0.1	CORR.	CEILING	N/A	FIXED
C097	6.2	HOT & COLD PREP	CEILING	N/A	FIXED
C098	6.2	HOT & COLD PREP	CEILING	N/A	FIXED
C099	6.2	HOT & COLD PREP	CEILING	N/A	FIXED
C100	6.2	HOT & COLD PREP	CEILING	N/A	FIXED
C101	6.6	YOUTH DINING RM.	CORNER V-CELL	N/A	FIXED
C102	4.1	YOUTH WAITING	CORNER V-CELL	N/A	FIXED
C103	4.0.3	CORR.	CEILING	N/A	FIXED
C104	4.0.1	CORR.	CEILING	N/A	FIXED
C105	4.0.1	CORR.	CEILING	N/A	FIXED
C106	4.18	EDUCATION SERVICES RM.	CORNER V-CELL	N/A	FIXED
C107	4.0.2	CORR.	CEILING	N/A	FIXED
C108	4.0.2	CORR.	CEILING	N/A	FIXED
C109	4.11	SECURE MED. RM.	CEILING	N/A	FIXED
C110	4.0.4	CORR.	CEILING	N/A	FIXED
C111	4.10.1	MED. SUPPLY. RM	CEILING	N/A	FIXED
C112	4.23.1	SAFE CELL	CORNER V-CELL	N/A	FIXED
C113	4.23.2	SAFE CELL	CORNER V-CELL	N/A	FIXED
C114	4.23.3	SAFE CELL	CORNER V-CELL	N/A	FIXED
C115	4.23.4	SAFE CELL	CORNER V-CELL	N/A	FIXED
C116	11.2.9	CORR.	CEILING	N/A	FIXED
C117	11.2.9	CORR.	CEILING	N/A	FIXED
C118	11.2.13	CORR.	CEILING	N/A	FIXED
C119	11.2.13	CORR.	CEILING	N/A	FIXED
C120	11.2.13	CORR.	CEILING	N/A	FIXED
C121	11.2.13	CORR.	CEILING	N/A	FIXED
C122	11.2.14	CORR.	CEILING	N/A	FIXED
C123	11.2.12	CORR.	CEILING	N/A	FIXED
C124	11.2.12	CORR.	CEILING	N/A	FIXED
C125	11.2.12	CORR.	CEILING	N/A	FIXED
C126	11.2.12	CORR.	CEILING	N/A	FIXED
C127	9.1.1	CLASSROOM 1	CEILING	N/A	FIXED
C128	9.1.2	CLASSROOM 2	CEILING	N/A	FIXED
C129	9.1.3	CLASSROOM 3	CEILING	N/A	FIXED
C130	9.1.4	SCIENCE LAB	WALL MT V-CELL	N/A	FIXED
C131	9.1.5	ART ROOM	CEILING	N/A	FIXED
C132	9.4.1	MEDIA CENTER-1.3 MP CAMERA	CEILING	N/A	FIXED

CAMERA NUMBER	ROOM NUMBER	ROOM NAME	MOUNTING TYPE	MOUNTING HEIGHT	NOTES
C133	9.3.1	COMPUTER LAB	CEILING	N/A	FIXED
C134	9.2.1	CLASSROOM 4	CEILING	N/A	FIXED
C135	9.2.2	CLASSROOM 5	CEILING	N/A	FIXED
C136	9.2.3	CLASSROOM 6	CEILING	N/A	FIXED
C137	11.2.16	SALLY	CEILING	N/A	FIXED
C138	2F.0.1	SALLY	CEILING	N/A	FIXED
C139	10.1	GYMNASIUM-1.3 MP CAMERA	WALL	12'-0"	FIXED
C140	10.1	GYMNASIUM-1.3 MP CAMERA	WALL	12'-0"	FIXED
C141	2F.14	LAUNDRY	CEILING	N/A	FIXED
C142	10.8F	FEMALE OUTDOOR REC.	WALL	12'-0"	FIXED
C143	8.2	VISITATION	CORNER V-CELL	N/A	FIXED
C144	8.2	VISITATION	CORNER V-CELL	N/A	FIXED
C145	8.2	VISITATION	CORNER V-CELL	N/A	FIXED
C146	2F.5	READING/WRITING	CORNER V-CELL	N/A	FIXED
C147	2F.4	GROUP ACTIVITY	CORNER V-CELL	N/A	FIXED
C148	2F.3	FEMALE DAYROOM	CEILING	N/A	FIXED
C149	2F.3	FEMALE DAYROOM	CEILING	N/A	FIXED
C150	2F.3	FEMALE DAYROOM	CEILING	N/A	FIXED
C151	4.18	EDUCATION SERVICES RM.	CORNER V-CELL	N/A	FIXED
C152	6.6	YOUTH DINING RM.	CORNER V-CELL	N/A	FIXED
C153	6.6	YOUTH DINING RM.	CORNER V-CELL	N/A	FIXED
C154	5.3	GROUP ASSESMENT	CORNER V-CELL	N/A	FIXED
C155	2A.3	DAYROOM	WALL	12'-0"	FIXED
C156	2A.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C157	2A.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C158	2B.3	DAYROOM	WALL	12'-0"	FIXED
C159	2B.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C160	2B.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C161	2C.3	DAYROOM	WALL	12'-0"	FIXED
C162	2C.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C163	2C.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C164	2D.3	DAYROOM	WALL	12'-0"	FIXED
C165	2D.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C166	2D.3	DAYROOM - UNDER OVERHANG	CEILING	N/A	FIXED
C167	10.8A	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C168	10.8B	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C169	10.8C	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C170	10.8D	OUTDOOR REC	CORNER V-CELL	N/A	FIXED
C171	9.1.1	CLASSROOM 1	CEILING	N/A	FIXED
C172	9.1.2	CLASSROOM 2	CEILING	N/A	FIXED
C173	9.1.3	CLASSROOM 3	CEILING	N/A	FIXED
C174	9.1.4	SCIENCE LAB	WALL MT V-CELL	N/A	FIXED
C175	9.1.5	ART ROOM	CEILING	N/A	FIXED
C176	9.4.1	MEDIA CENTER-1.3 MP CAMERA	CEILING	N/A	FIXED
C177	9.4.1	MEDIA CENTER-1.3 MP CAMERA	CEILING	N/A	FIXED
C178	9.4.1	MEDIA CENTER-1.3 MP CAMERA	CEILING	N/A	FIXED
C179	9.3.1	COMPUTER LAB	CEILING	N/A	FIXED
C180	9.2.1	CLASSROOM 4	CEILING	N/A	FIXED
C181	9.2.2	CLASSROOM 5	CEILING	N/A	FIXED
C182	9.2.3	CLASSROOM 6	CEILING	N/A	FIXED
C183	11.2.14	CORR.	CEILING	N/A	FIXED
C184	2A.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C185	2B.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C186	2C.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C187	2D.19	MEZZ. CORR.	WALL	12'-0"	FIXED
C188	10.3	FITNESS RM.	CEILING	N/A	FIXED
C189	6.2	HOT AND COLD PREP	CEILING	N/A	FIXED
C190	10.1	GYMNASIUM - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C191	10.1	GYMNASIUM - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C192	10.1	GYMNASIUM - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C193	10.1	GYMNASIUM - 1.3 MP CAMERA	WALL	12'-0"	FIXED
C194	11.4.0	ENTRANCE	CEILING	N/A	FIXED
C195	11.2.17	ENTRANCE	CEILING	N/A	FIXED
C196	11.1.7	ELEVATOR	CORNER V-CELL	N/A	FIXED
C197	11.1.14	CORR.	CEILING	N/A	FIXED

A JOINT-VENTURE BETWEEN
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TERRALOGOS
LEWICKI ESTIMATING SERVICES, INC

STATE OF MARYLAND - DPSCS

BCDC YOUTH DETENTION CENTER

BALTIMORE MARYLAND

SEAL

EXP: 03-14-2015
DATE: 02-05-2015

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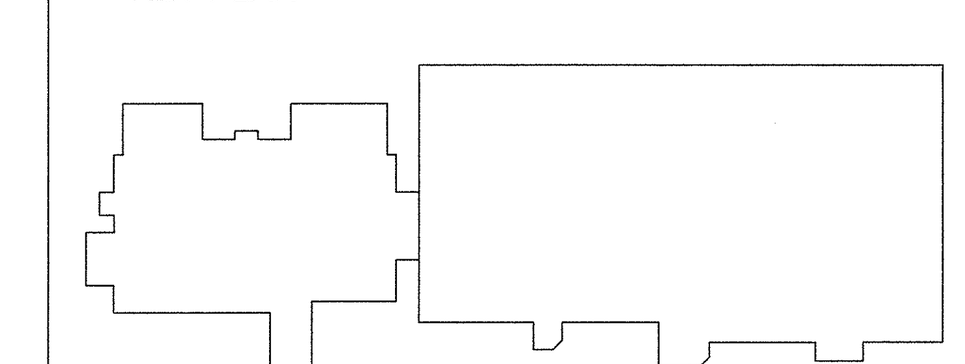
KEY PLAN



SCALE

NTS

No.	Description	Date

REVISIONS

DRAWN BY CAC
APPROVED BY JMP
CHECKED BY TWS
DATE 02-05-2015

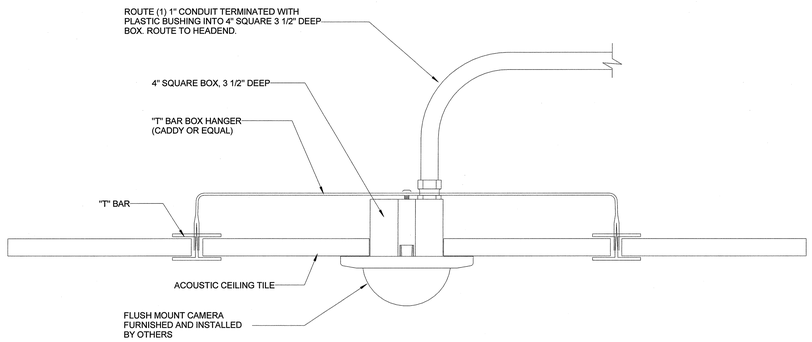
TITLE

CAMERA SCHEDULE

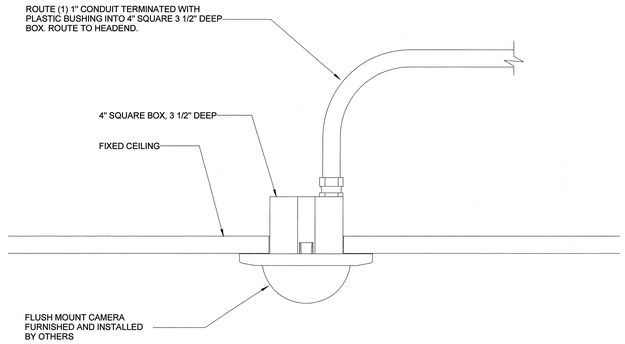
PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

TY-400

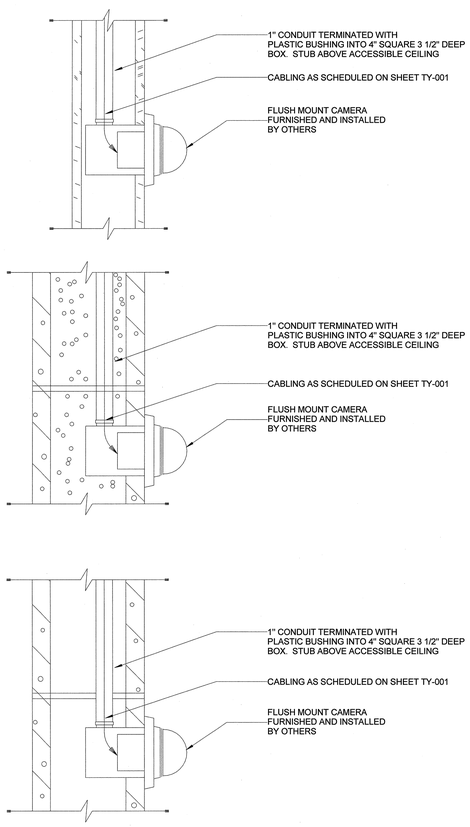
SHEET NO.



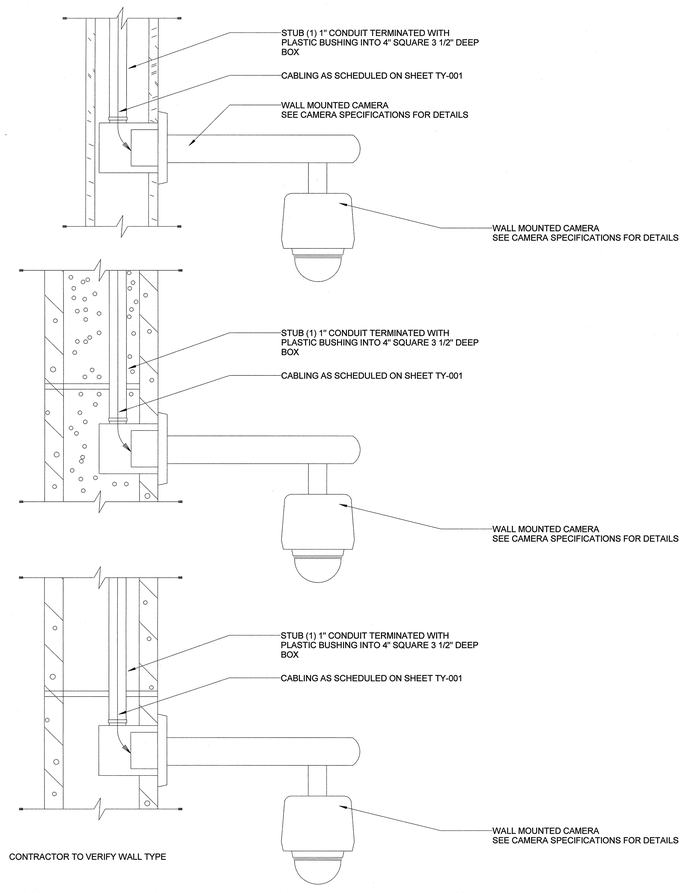
1 CCTV CEILING MOUNT INSTALLATION - ACOUSTICAL CEILING
Scale: NTS



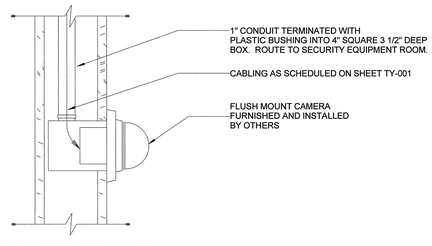
2 CCTV CEILING MOUNT INSTALLATION - FIXED CEILING
Scale: NTS



3 CCTV WALL MOUNT INSTALLATION DETAILS
Scale: NTS



4 CCTV EXTERIOR WALL MOUNT INSTALLATION DETAILS
Scale: NTS



5 4'-0" AFG - CCTV EXTERIOR WALL MOUNT INSTALLATION DETAILS
Scale: NTS

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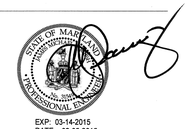

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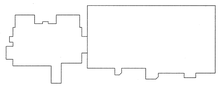
KEY PLAN



SCALE

NTS

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

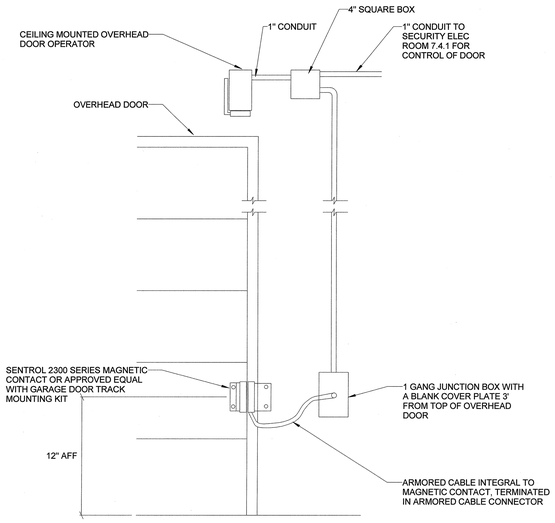
TITLE

SECURITY DETAILS

PSA-DEWBERRY PROJECT NO. 50061725
DPSCS CONTRACT NO. KT-000-150-C01

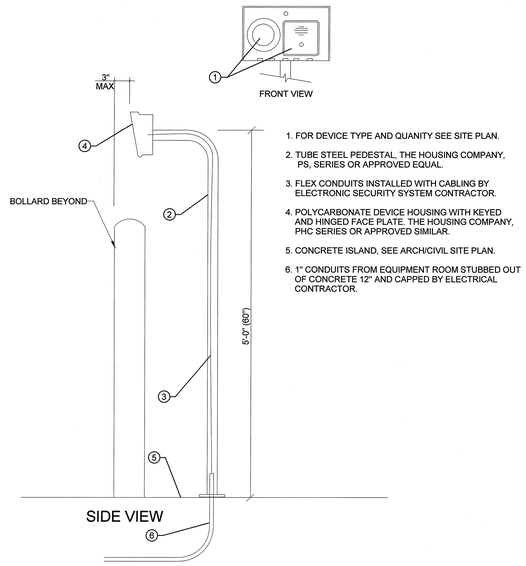
TY-501

SHEET NO.



1 OVERHEAD DOOR POSITION SWITCH DETAIL

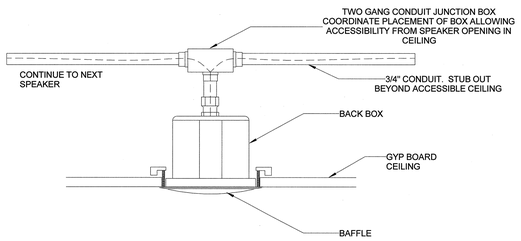
Scale: NTS



1. FOR DEVICE TYPE AND QUANITY SEE SITE PLAN.
2. TUBE STEEL PEDESTAL, THE HOUSING COMPANY, PS, SERIES OR APPROVED EQUAL.
3. FLEX CONDUITS INSTALLED WITH CABLING BY ELECTRONIC SECURITY SYSTEM CONTRACTOR.
4. POLYCARBONATE DEVICE HOUSING WITH KEYED AND HINGED FACE PLATE. THE HOUSING COMPANY, PHC SERIES OR APPROVED SIMILAR.
5. CONCRETE ISLAND, SEE ARCH/CIVIL SITE PLAN.
6. 1" CONDUITS FROM EQUIPMENT ROOM STUBBED OUT OF CONCRETE 12" AND CAPPED BY ELECTRICAL CONTRACTOR.

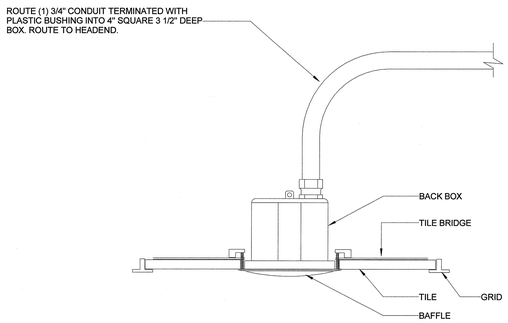
2 SITE PEDESTAL DETAIL

Scale: NTS



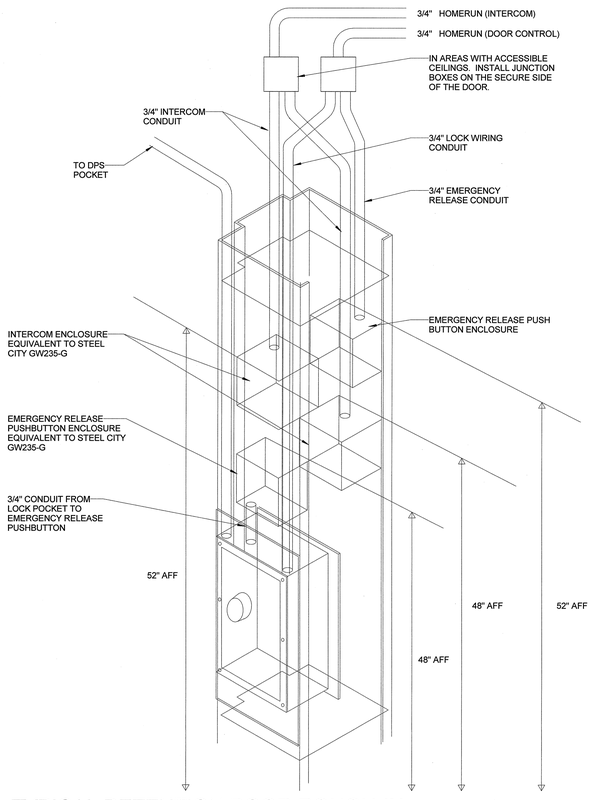
3 CEILING MOUNTED SPEAKER - FIXED CEILING

Scale: NTS



4 CEILING MOUNTED SPEAKER - ACOUSTICAL CEILING

Scale: NTS



5 TYPICAL DETENTION DOOR ROUGH-IN

Scale: NTS

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LEWICKI ESTIMATING SERVICES, INC

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STATE OF MARYLAND — PROFESSIONAL ENGINEER

EXP: 03-14-2015
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KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

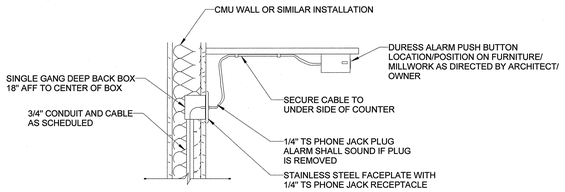
TITLE

SECURITY DETAILS

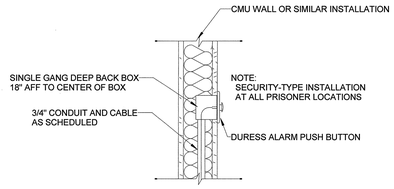
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-502

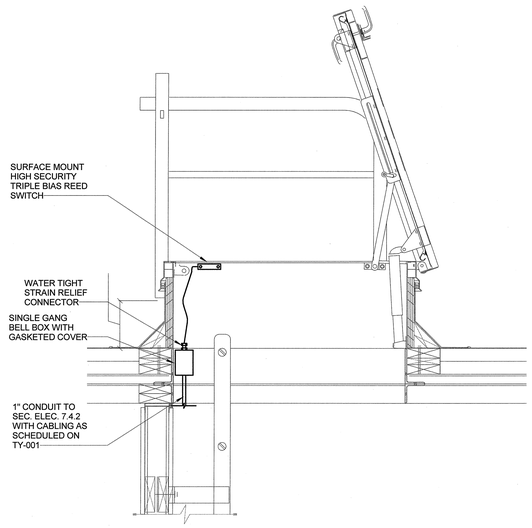
SHEET NO.



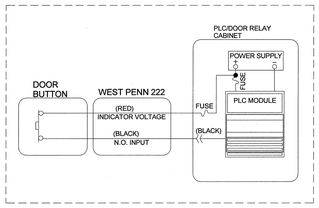
1 PANIC ALARM DETAIL - UNDER COUNTER
Scale: NTS



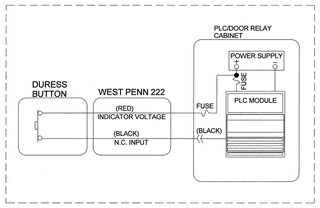
2 DURESS ALARM DETAIL - WALL
Scale: NTS



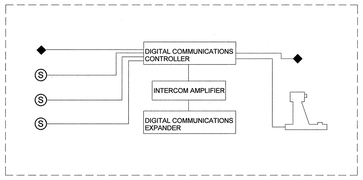
3 ROOF HATCH DETAIL
Scale: NTS



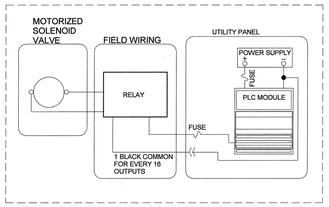
4 DOOR RELEASE PUSH BUTTON ONE LINE DIAGRAM
Scale: NTS



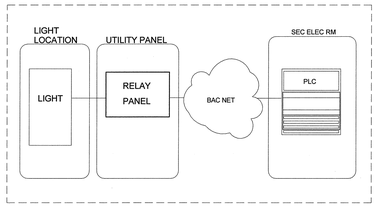
5 DURESS BUTTON ONE LINE DIAGRAM
Scale: NTS



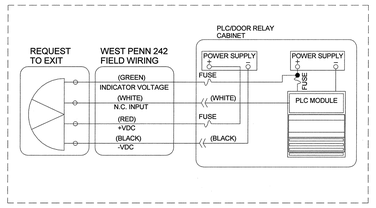
6 INTERCOM PAGING SPEAKER ONE LINE DIAGRAM
Scale: NTS



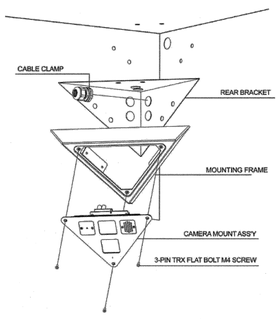
7 WATER CONTROL ONE LINE DIAGRAM
Scale: NTS



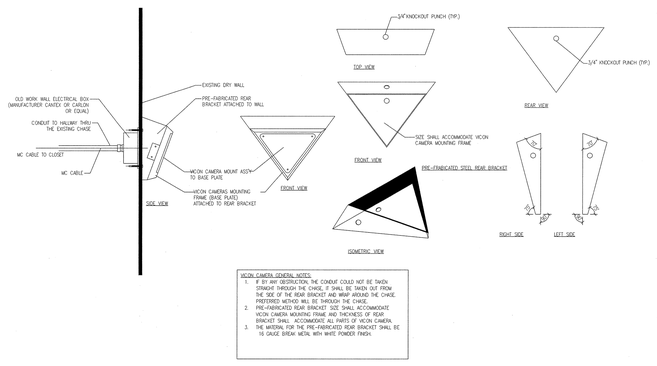
8 LIGHTING CONTROL ONE LINE DIAGRAM
Scale: NTS



9 REQUEST TO EXIT ONE LINE DIAGRAM
Scale: NTS



10 CORNER MOUNT CAMERA DETAIL
Scale: NTS



11 WALL MOUNT V-CELL DETAIL
Scale: NTS

A JOINT-VENTURE BETWEEN
PSA-DEWBERRY + PENZA BAILEY ARCHITECTS

EBA ENGINEERING
HOPE FURRER Associates, Inc.
SIDHU ASSOCIATES, INC. Civil Engineers
10003 TYLER PLAZA DR., SUITE 1000
11350 McCORMICK ROAD
LUTHERVILLE, MARYLAND 21031
PHONE (410) 329-1115
TERRALOGOS SITE ARCHITECTURE, PC
R&R designer, inc.
LEWICKI ESTIMATING SERVICES, INC.

STATE OF MARYLAND - DPSCS
BCDC YOUTH DETENTION CENTER
BALTIMORE MARYLAND

SEAL

EXP: 03-14-2015
DATE: 02-05-2015

"I hereby certify that these documents were prepared or approved by me, and that I am a duly liscensed professional engineer under the laws of the State of Maryland, Liscense No. 31549, Expiration Date 03/14/2015."

KEY PLAN

SCALE

As indicated

No.	Description	Date

REVISIONS

DRAWN BY	CAC
APPROVED BY	JMP
CHECKED BY	TWS
DATE	02-05-2015

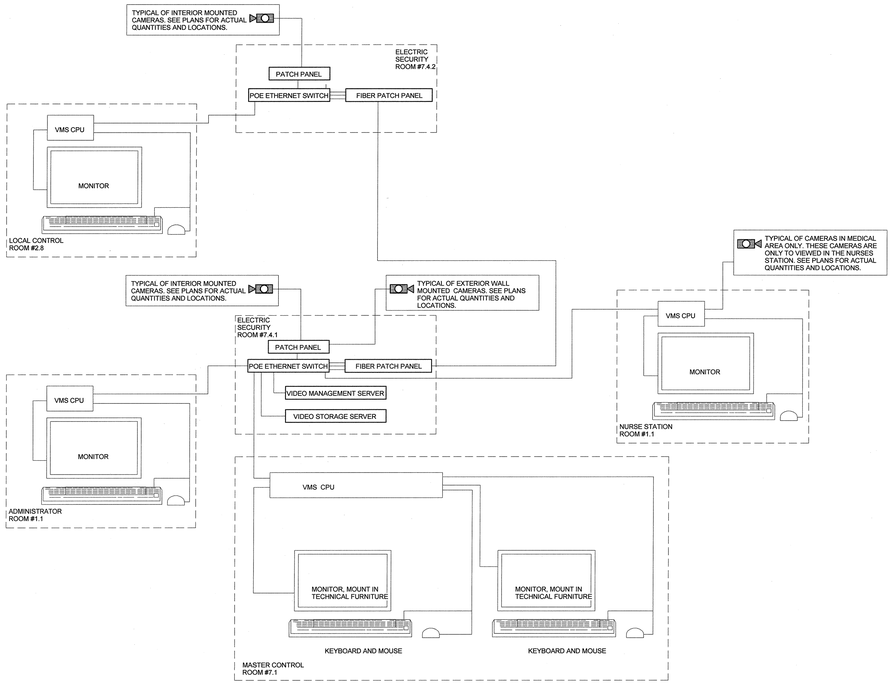
TITLE

SECURITY DETAILS

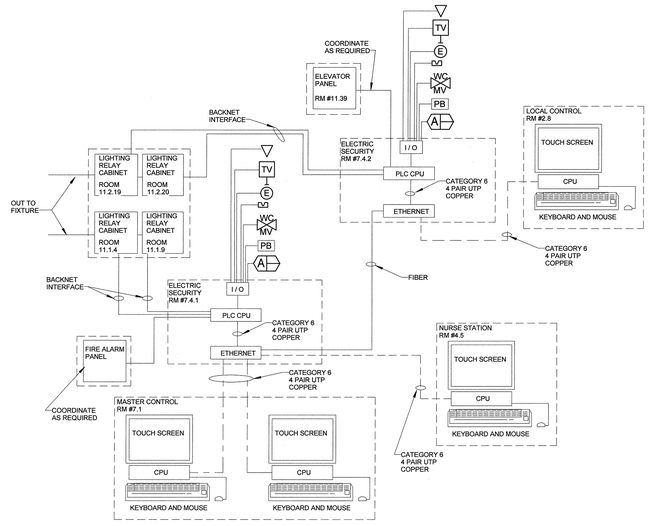
PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-503

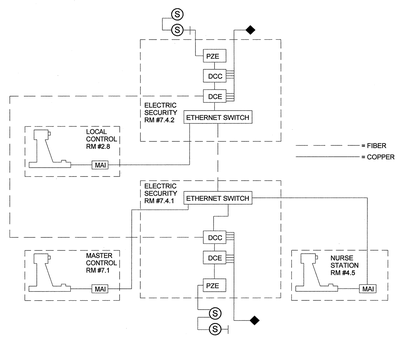
SHEET NO.



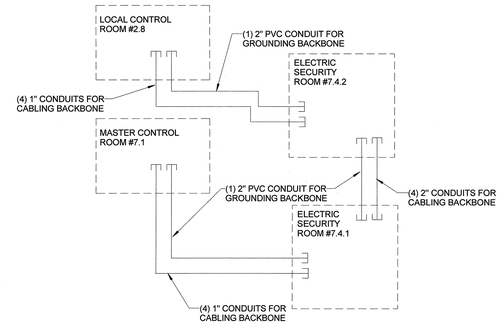
1 CCTV BLOCK DIAGRAM
Scale: NTS



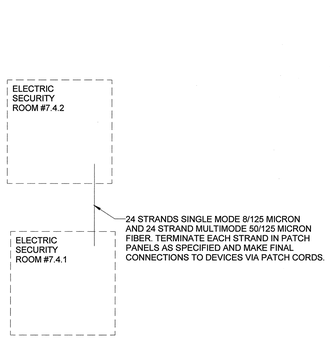
2 PLC/GUI BLOCK DIAGRAM
Scale: NTS



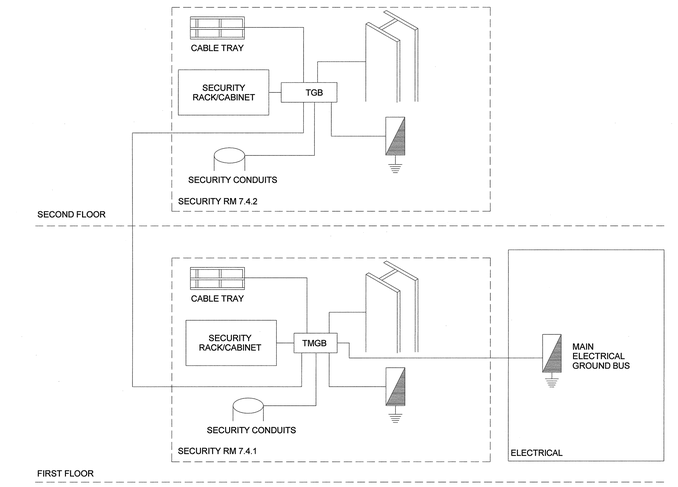
3 INTERCOM BLOCK DIAGRAM
Scale: NTS



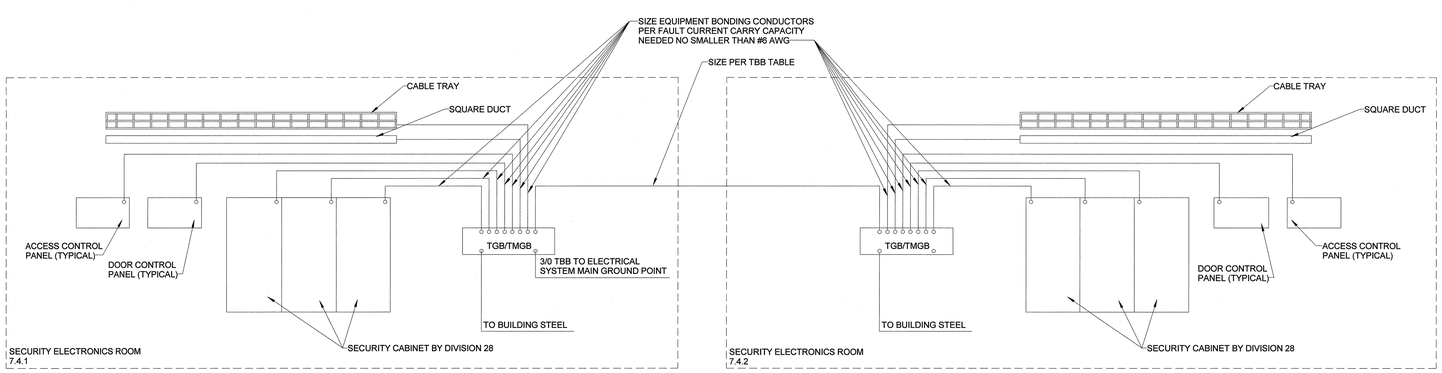
4 BACKBONE CONDUIT BLOCK DIAGRAM
Scale: NTS



5 BACKBONE CABLING RISER DIAGRAM
Scale: NTS



6 STRUCTURED CABLING GROUNDING BLOCK DIAGRAM
Scale: NTS



7 GROUNDING BLOCK DIAGRAM
Scale: NTS

TBB LENGTH	TBB SIZE
LESS THAT 4'	#6 AWG
4' - 6'	#4 AWG
6' - 8'	#3 AWG
8' - 10'	#2 AWG
10' - 13'	#1 AWG
13' - 16'	1/0 AWG
16' - 20'	2/0 AWG
GREATER THAN 20'	3/0 AWG

8 TBB BLOCK TABLE
Scale: NTS

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SIDHU ASSOCIATES, INC. Consulting Engineers
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MANASSAS, VIRGINIA 20110
SUNY VALLEY, MARYLAND 21031
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CHECKED BY	TWS
DATE	02-05-2015

TITLE

SECURITY BLOCK DIAGRAMS

PSA-DEWBERRY PROJECT NO.	50061725
DPSCS CONTRACT NO.	KT-000-150-C01

TY-601

SHEET NO.