DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

FINAL SUBMITTAL

21 OCT 2020

HILL AIR FORCE BASE

FOR WATER LINE AND STORM DRAIN REPLACEMENT (CAPITAL PROJECT 1042814) SEE SHEETS CD101-1, CD102-1, CG102-2, CG302-1, CU102-1, AND CU302-1.

OGDEN, UTAH

DEPARTMENT OF THE AIR FORCE

OGDEN AIR LOGISTICS CENTER

75TH CIVIL ENGINEER GROUP

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501.372.2900 cromwell.com

CIVIL/STRUCTURAL REVIEW DATE				
MECHANICAL REVIEW DATE	REVISION	DATE	DESCRIPTION	BY
ELECTRICAL REVIEW DATE	DEPARTMENT OF THE AIR FORCE OGDEN AIR LOGISTICS CENTER 75TH CIVIL ENGINEER GROUP HILL AIR FORCE BASE — OGDEN, UTAH			
ARCHITECTURAL COMPATIBILITY DATE				A-E FIRM: CROMWELL
PHYS HANDICAP/INT DESIGN DATE	COVER SHEET		G-001-1	DESIGNER: M. DEIERLEIN
BASE COMPREHENSIVE PLANNER DATE				ENGINEERING ASSISTANT
ENERGY CONSERVATION REVIEW DATE	BIOENVIRONMENTAL REVIEW DATE	FORCE PROTECTION DATE		BASE PROJECT MANAGER: R. SPAGNUOLO
FIRE PROTECTION REVIEW DATE	ENVIRONMENTAL REVIEW DATE	MAINTENANCE ENGINEERING DATE		DATE: 21 OCT 2020
CORROSION ENGINEER DATE	SAFETY DATE	CHIEF PROJECT MANAGEMENT DATE		CAPITAL PROJECT NO.: 1035671
CUSTOMER-FUNCTIONAL REVIEW DATE	COMMUNICATIONS DATE	CHIEF ENGINEER DATE		WORK TASK NO.: # 5890007
SECURITY FORCES DATE	FIRE DEPARTMENT DATE	APPROVED-75 CEG DATE		SHEET 01 OF 66

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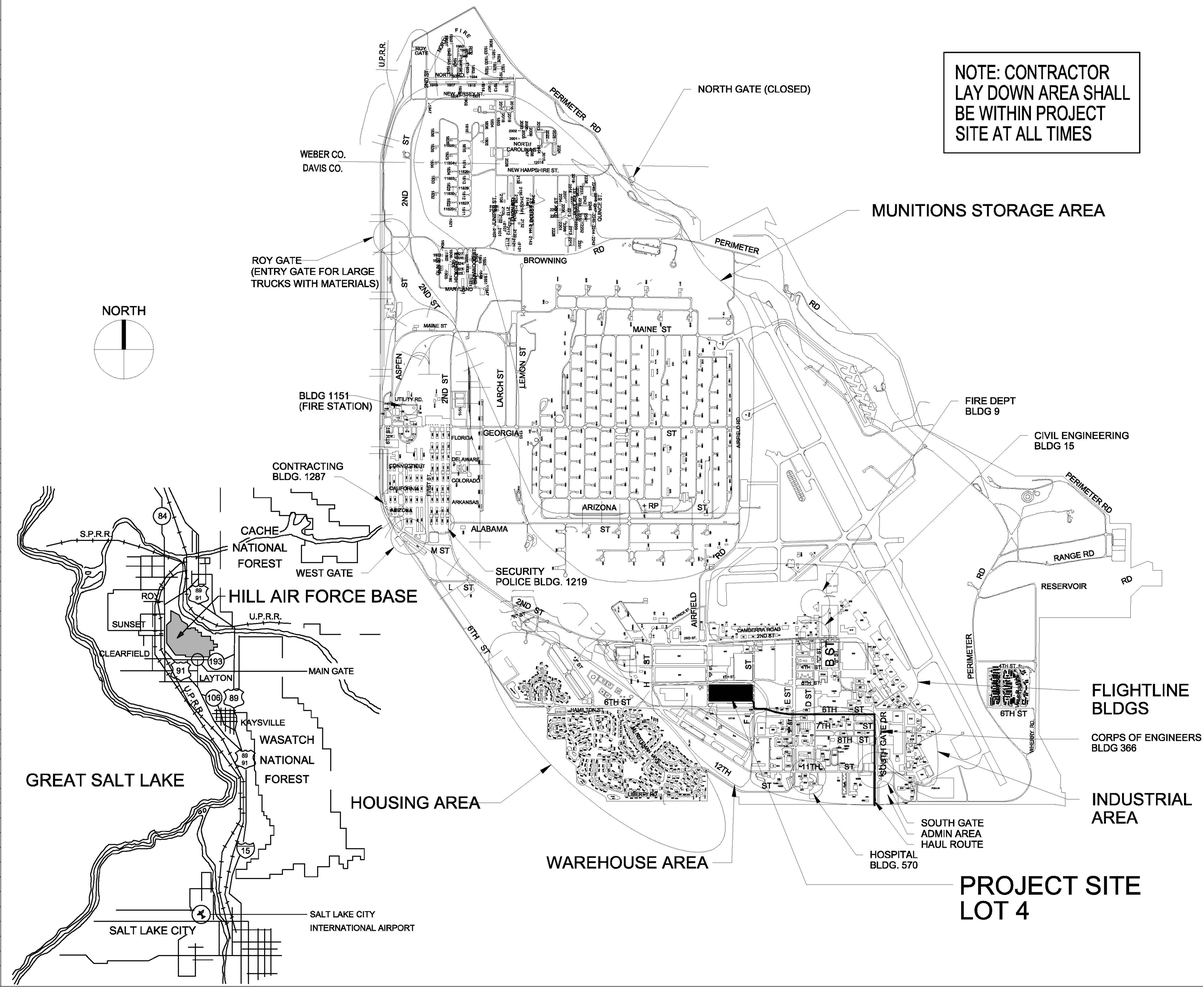
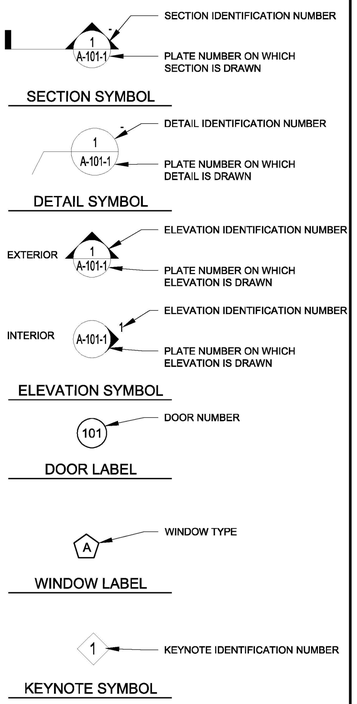


DRAWING SYMBOLS



MATERIAL INDICATIONS

- EARTH (ORIGINAL GRADE)
- EARTH (COMPACTED FILL)
- GRAVEL
- CONCRETE
- MORTAR - CEMENT - PLASTER - STUCCO
- CONCRETE MASONRY UNITS (C.M.U., SMALL\ SCALE - PLAN)
- CONCRETE MASONRY UNITS (C.M.U., LARGE SCALE - SECTION)
- CONCRETE MASONRY UNITS OR HOLLOW TILE (SMALL SCALE - SECTION)
- METAL (ELEVATION)
- STEEL (CROSS SECTION)
- INSULATION (RIGID)
- INSULATION (LOOSE OR BATT)
- BRICK
- WOOD (BLOCKING)
- WOOD (FINISH)

STANDARD ABBREVIATIONS

A

A.C.	AIR CONDITIONED
A.D.	AREA DRAIN
A.H.U.	AIR HANDLING UNIT
ALT.	ALTERNATE
ALUM.	ALUMINUM
AMP., A.	AMPERES
A.O.	ACCESS OPENING
APPROX.	APPROXIMATELY
ARCH.	ARCHITECTURAL
A.T.	ASPHALT TILE
A.T.C.	ACOUSTIC TILE CEILING

B

BAL.	BALANCE
BD.	BOARD
BLDG.	BUILDING
BLK.	BLANK
BM.	BEAM
BOT.	BOTTOM
BRG.	BEARING
B.T.U.H.	BRITISH THERMO UNIT/HOUR

C

CAB.	CABINET
CAP.	CAPACITY
C/B	CIRCUIT BREAKER
C.D.	CEILING DIFFUSER
CEM.	CEMENT
CER.	CERAMIC
C.F.M.	CUBIC FEET/MINUTE
C.F.S.	COLD FORMED STEEL
CIRC.	CIRCULATING
C.J.	CONTROL JOINT
CK'D	CHECKERED
CKT.	CIRCUIT
℄	CENTER LINE
CEIL.	CEILING
CL.	CLOSET
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
COND.	CONDENSATE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR. JT.	CONTRACTION JOINT
C.T.	CERAMIC TILE
C.T.B.	CERAMIC TILE BASE
C. TO C.	CENTER TO CENTER
C.F.H.	CUBIC FEET PER HOUR

D

DET.	DETAIL
DIA.	DIAMETER
DIFF.	DIFFUSER
DIM.	DIMENSION
DISC.	DISCONNECT
D.J.	DUMMY JOINT
DN.	DOWN
DR.	DRAIN
D.S.	DOWN SPOUT
DWG.(S)	DRAWING(S)

E

EA.	EACH
E.C.	EMPTY CONDUIT
E.F.	EXHAUST FAN
EL.	ELEVATION
ELEC.	ELECTRIC
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXP. JT.	EXPANSION JOINT
EXT.	EXTERIOR
EXIST.	EXISTING

F

F.A.	FIRE ALARM
F.C.	FLEXIBLE CONNECTION
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER ON HANGER
F.E.C.	FIRE EXTINGUISHER CABINET
FIN.	FINISH
FL.	FLOOR
FT.	FOOT, FEET
FTG.	FOOTING
F.	FLOW

G

GA.	GAGE
GAL.	GALLON
GALV.	GALVANIZED
G.F.E.	GOVERNMENT FURNISHED EQUIPMENT
GL.	GLASS
GND.	GROUND
GOV'T	GOVERNMENT
G.P.H.	GALLONS/HOUR
G.P.M.	GALLONS/MINUTE
GR.	GRILLE
G.W.B.	GYPSUM WALL BOARD
GYP.	GYPSUM
G.P.M.	GALLONS PER MINUTE

H

H.	HIGH
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HT.	HEIGHT
H.M.	HOLLOW METAL
H.P.	HORSE POWER
HR.	HOUR
HTG.	HEATING
HTR.	HEATER
H.&V.	HEATING AND VENTILATING
HW.	HARDWARE
HYD.	HYDRANT

I

I.D.	INSIDE DIAMETER
I.E.	INVERT ELEVATION
IN.	INCHES
INCAND.	INCANDESCENT
INSUL.	INSULATION
INT.	INTERIOR

J

J.B.	JUNCTION BOX
JCT.	JUNCTION
JT.	JOINT

K

KVA	KILOVOLT AMPERE
KW	KILOWATT

L

LB.,#	POUND
LG.	LONG
L.P.	LIGHTING PANEL
LTG.	LIGHTING

M

M.	MOTOR
MAINT.	MAINTENANCE
MAX.	MAXIMUM
M.D.P.	MAIN DISTRIBUTION PANEL
MECH.	MECHANICAL
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.T.	METAL THRESHOLD
MTD.	MOUNTED
MTG.	MOUNTING
M.V.	MECHANICAL VENTILATION
M.G.T.	MATT GLAZE TILE

N

N.A.	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER

O

O.A.	OUTDOOR AIR
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OH.	OVERHEAD
OL.	OVERLOAD
OPNG.	OPENING
OPP.	OPPOSITE
O.S.D.	OPEN SIGHT DRAIN

P

P.	PAPER
PART.	PARTITION
PER.	PERIMETER
PL, PL.	PLATE
PLBG.	PLUMBING
PLYW'D	PLYWOOD
PNL.	PANEL
PRESS.	PRESSURE
PSF	POUNDS/SQUARE FOOT
PSI	POUNDS/SQUARE INCH
PSIG	POUNDS/SQUARE INCH GAGE
PT.	POINT
PTD.	PAINTED

Q

QTR.	QUARTER
QUAN.	QUANTITY

R

R.	RISER
R.A.	RETURN AIR
RAD.	RADIUS
RD.	ROUND
REC'D.	RECESSED
RECIRC.	RECIRCULATING
RECP.	RECEPTACLE
REG.	REGISTER
REINF.	REINFORCING
REQ.	REQUIRED
RET.	RETURN
R.G.	RETURN GRILLE
RM.	ROOM
R.P.M.	REVOLUTION/MINUTE

S

S.	SUPPLY
S.A.	SUPPLY AIR
SCH.	SCHEDULE
SECT.	SECTION
SERV.	SERVICE
SHT.	SHEET
S.J.	SLIP JOINT
SPEC.	SPECIFICATIONS
SQ. FT.	SQUARE FEET
ST.	STEEL
STOR.	STORAGE
STRUC.	STRUCTURAL
SUSP.	SUSPENDED
SW.	SWITCH

T

TEL.	TELEPHONE
TEMP.	TEMPERATURE
THK.	THICKNESS
THD.	THRESHOLD
TOIL.	TOILET
TYP.	TYPICAL

V

V.	VOLT
V.A.T.	VINYL ASBESTOS TILE
VENT.	VENTILATION
VERT.	VERTICAL
VTR	VENT THRU ROOF

W

W.	WATT
W/	WITH
WC	WAINSCOATING
WD.	WOOD
W.D.	WINDOW DIMENSION
WF	WIDE FLANGE
W.G.	WATER GAGE
WP.	WEATHERPROOF
WTR.	WATER
W.W.F.	WELDED WIRE FABRIC

HILL AIR FORCE BASE

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: M. DEIERLEIN | CHECKED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN | SITE CODE:
CAPITAL PROJECT NO. | DATE: 21 OCT 2020
CONTRACT NO. | PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

INDEX OF DRAWINGS, MATERIALS, SYMBOLS, ABBREVIATIONS & MAPS

G-002-1

SHEET 02 OF 66

FINAL SUBMITTAL

INTRODUCTION

1. THE BUILDING IS A NEW TYPE II-B CONSTRUCTION. THE BUILDING HAS LOAD BEARING METAL STUD WALLS WITH A SPLIT FACED CMU VENEER, THE ROOF CONSISTS OF COLD FORMED STEEL TRUSSES, METAL DECK WITH RIGID INSULATION, COVER BOARD, AND A STANDING SEAM METAL ROOFING SYSTEM.

2. AN AUTOMATIC SPRINKLER SYSTEM IS NOT REQUIRED FOR THIS BUILDING PER UFC 3-600-01 9-7.2

3. A FIRE ALARM SYSTEM SHALL BE INCLUDED AS PART OF THIS PROJECT.

4. A MASS NOTIFICATION SYSTEM SHALL BE INCLUDED AS PART OF THIS PROJECT.

APPLICABLE CODES AND STANDARDS

- UFC 1-200-01 GENERAL BUILDING REQUIREMENTS
- UFC 3-101-01 ARCHITECTURE
- UFC 3-600-01 FIRE PROTECTION ENGINEERING FOR FACILITIES
- UFC 4-010-01 MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS
- INTERNATIONAL BUILDING CODE 2018 - FOR TYPE OF CONSTRUCTION
- NFPA 101 2018 - LIFE SAFETY CODE - FOR LIFE SAFETY AND EGRESS
- NFPA 10 2018 - STANDARD FOR PORTABLE FIRE EXTINGUISHERS
- NFPA 70 2017 - NATIONAL ELECTRIC CODE
- NFPA 72 2019 - NATIONAL FIRE ALARM AND SIGNALING CODE
- NFPA 90A 2018 - STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING SYSTEMS
- NFPA 291 2019 - RECOMMENDED PRACTICE FOR FIRE FLOW TESTING AND MARKING OF HYDRANTS

OCCUPANCY / CONSTRUCTION CLASSIFICATION

BUILDING DESCRIPTION	THIS IS AN ADMIN BUILDING ON LOT 4
• OCCUPANCY CLASSIFICATION PRIMARY USE	 BUSINESS
• CONSTRUCTION CLASSIFICATION	II-B PER IBC / II (000) PER NFPA 101
• ACTUAL STORIES	ONE-STORY
• ACTUAL HEIGHT	14' MAXIMUM
• ACTUAL AREA	435 +/- SQUARE FEET
• SPRINKLER SYSTEM HAZARD	BUILDING DOES NOT REQUIRE SPRINKLER PROTECTION

ALLOWABLE HEIGHT AND AREA

OCCUPANCY B / BUILDING CONSTRUCTION II B

TABULAR AREA	23,000 SQ FT
TABULAR HEIGHT	55'
TABULAR STORIES	3 STORY

PERIMETER	87'
PERIMETER WITH FRONTAGE	87'
FRONTAGE WIDTH	>30'

If=[(f/p)-0.25](w/30)
If=[(87/87)-0.25](30/30)
If=[1.00-0.25](1)
If=0.75

SPRINKLER FACTOR Is=0 (1 ACTUAL STORY)

EQUATION - Aa=[At+(At*If)+(At*Is)]
Aa=[23,000+(23,000*0.75)+(23,000*0)
Aa=[23,000+17,250+0]
Aa=40,250

ACTUAL AREA:	435 SQFT
ALLOWABLE AREA:	40,250 SQFT

EXITING AND EGRESS REQUIREMENTS

TOTAL OCCUPANTS	4
EXITS REQUIRED	1 [PER NFPA 101 7.4.1.2 (2)]
EXITS PROVIDED	1
MAXIMUM TRAVEL DISTANCE	200FEET
COMMON PATH	750 FEET
DEAD END LENGTH	20 FEET
EGRESS WIDTH	0.2" PER PERSON
CLEAR OPENING DOOR WIDTH	32" MINIMUM
EGRESS CAPACITY	4 OCCUPANTS * 0.2" PER OCCUPANT= 0.8" TOTAL EGRESS REQUIRED 36" TOTAL EGRESS PROVIDED
ILLUMINATION OF EGRESS EMERGENCY EGRESS LIGHTING	1 FT-CANDLE AT THE FLOOR AND 0.2 FT-CANDLES FOR A SINGLE LIGHT FAILURE EXIT ACCESS AND DISCHARGE ONLY. ACCESS INCLUDES DESIGNATED CORRIDORS, AISLES AND PASSAGEWAYS. DISCHARGE INCLUDES DESIGNATED DOORS, WALKWAYS, AND RAMPS LEADING TO A PUBLIC WAY. PERFORMANCE PER NFPA 101 7.9.
EXIT MARKING	MARKING OF EXITS AND THE MEANS OF EGRESS SHALL BE PER NFPA 101 7.10.

CONSTRUCTION REQUIREMENTS

STRUCTURAL ELEMENT	FIRE-RESISTANCE RATING
STRUCTURAL FRAME	0 HOURS
BEARING WALLS	
EXTERIOR	0 HOURS - SEE BELOW
INTERIOR	0 HOURS
NONBEARING WALLS	
EXTERIOR	SEE BELOW
INTERIOR	0 HOURS - SEE HAZARD SECTION
FLOOR CONSTRUCTION	0 HOURS
ROOF CONSTRUCTION	0 HOURS

EXPOSURE PROTECTION
ALL EXTERIOR WALLS ARE AT LEAST 30' AWAY FROM ANOTHER NEIGHBORING BUILDING AND NOT REQUIRED TO BE RATED.

HAZARD PROTECTION REQUIREMENTS

OPENING PROTECTIVES	IF WALL IS RATED:	THEN RATE DOORS:	AND WINDOWS AS:
FIRE BARRIERS	3-HOURS	3 HOURS	NP
	2-HOURS	1.5 HOURS	NP
	1-HOUR	45 MINUTES	45 MINUTES
	30 MINUTES	20 MINUTES	20 MINUTES

NOTE - WALL RATINGS ARE NOT REQUIRED FOR EACH COMPONENT, JUST A GUIDELINE TO SHOW REQUIRED RATING OF DOOR / WINDOW FOR THAT SPACE IF RATED WALLS ARE REQUIRED

FIRE AND SMOKE DUCT DAMPERS - PER NFPA 90A
SEE MECHANICAL PLANS FOR LOCATIONS

PORTABLE FIRE EXTINGUISHERS

PORTABLE FIRE EXTINGUISHERS WILL BE LOCATED AT 75 FEET OF TRAVEL DISTANCE, 150 FEET O.C.MAXIMUM
EXTINGUISHERS SHALL BE 4A:80B:C
FLOOR AREA PER UNIT OF "A" - 1500 SQUARE FEET
FLOOR AREA PER EXTINGUISHER - 6,000 SQUARE FEET (4*1500 UP TO 11,250 SQUARE FEET MAXIMUM WITH 8A)

PER NFPA 10 2013 - WHERE THERE IS A POTENTIAL FOR FLAMMABLE LIQUID FIRES, ADDITIONAL "B" EXTINGUISHERS MUST BE INSTALLED.

AT STUD WALLS AND OTHER LOCATIONS WHERE PRACTICAL, FIRE EXTINGUISHERS TO BE MOUNTED IN RECESSED OR FLUSH-MOUNTED CABINETS PER UFC 3-600-01 4-9.1

EXTINGUISHERS SHALL BE MOUNTED AT 48" OR LESS ABOVE THE FLOOR.

EXTINGUISHER CABINETS SHALL BE CONTRACTOR FURNISHED/CONTRACTOR INSTALLED. EXTINGUISHERS SHALL BE GOVERNMENT FURNISHED/ GOVERNMENT INSTALLED.

INTERIOR FINISH REQUIREMENTS

BUSINESS - NEW	EXITS	EXIT ACCESS CORRIDORS	OTHER SPACES
WALL AND CEILING FINISHES	A / B	A / B	A / B / C
FLOOR COVERINGS	I or II	I or II	N/A

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. WORSHAM
DRAWN BY: J. WORSHAM
CHECKED BY: B. GERDWAGEN
SHEET CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

LIFE SAFETY CODE ANALYSIS

GI001-1

SHEET 03 OF 66

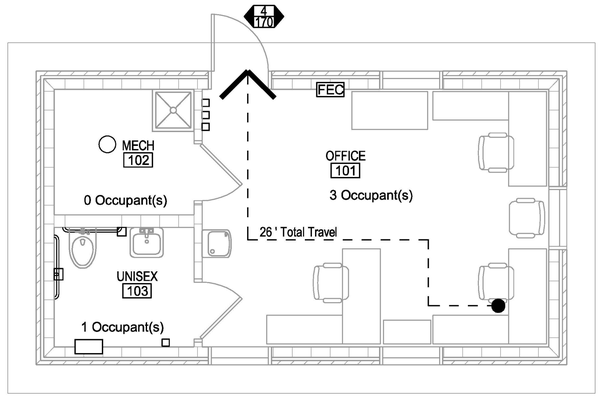
FINAL SUBMITTAL

SYMBOL LEGEND

FEC	FIRE EXTINGUISHER CABINET
4 / 170	DOOR EGRESS CAPACITY (ACTUAL/ALLOWED)

GENERAL NOTES

1. FEC IS CFCI, FIRE EXTINGUISHER IS GFGI.



NORTH

1 LIFE SAFETY FLOOR PLAN

1/4"=1'-0"

0 2' 4' 8'

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

MARK	APPR	DATE	DESCRIPTION

DESIGNED BY: J. WORSHAM
DRAWN BY: J. WORSHAM
CHECKED BY: B. GERDWAGEN
SHEET CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

LIFE SAFETY FLOOR PLAN

GI101-1

SHEET 04 OF 66

FINAL SUBMITTAL

FOUND FOUND USGOVT BM MARKER
ENSIGN CP #3015 IN THE SOUTHEAST OF THE INTERSECTION OF 6TH STREET AND "F" AVENUE

ELEV = 4767.79'

SITE SURVEY NOTES:

1. THIS SHEET IS TAKEN FROM A SURVEY PROVIDED BY:
   ENSIGN ENGINEERING & LAND SURVEYING
   1485 W. HILL FIELD RD. STE. 204
   LAYTON, UT 84041
   801-547-1100
2. THIS SHEET IS A PRESENTATION DRAWING FOR INFORMATION ONLY TO SHOW THE EXISTING CONDITIONS OF THE SITE .
3. SOME TEXT ITEMS HAVE BEEN MOVED TO FIT ONTO SHEET.
4. THE ORIGINAL FULL SURVEY WAS STAMPED AND SEALED BY MICHAEL B. HERBST LICENSE NO. UT 5046930

Narrative

This Survey was requested by John Peterson with Cromwell Inc. The purpose of this survey is to show topography, improvements and visible above-ground utilities throughout the site prior to constructing a new parking lot.

The basis of bearing is as noted on this survey, being North 39°08'49" West 2223.03 feet measured along the line between two found HAFB Monuments, Ensign CP #3015 (FOUND USGOVT BM MARKER) AND CP #3013 (FOUND ALUMINUM CAP USAF GEO MARKER) as shown on this survey.

The Vertical Datum used for this survey was based upon said FOUND USGOVT BM MARKER, with an elevation of 4767.79' and located on the Southeast side of 6th street and "F" Ave. measured with GPS in US-Survey Feet, and stored as Ensign CP #3015, as shown on this survey.

Note: There were a couple of manhole lids and storm sewer grate which was full of silt and debris. As such the invert elevations or directions for these underground utilities were not able to be provided.

Record HAFB GIS utility maps were provided by the client and used during the course of this survey. There were discrepancies between what was found in the field, blue staked on the ground by the Civil Engineering utilities locating service (Red Stakes), and also said record utility maps.

CP #3013
(FOUND ALUMINUM CAP USAF GEO MARKER)
N=14934514.44
E=1367570.78
ELEV =4774.03
(CP #3013 LOCATION IS 1019.58' FART NW FROM LOCATION SHOWN ALONG BASE LINE BEYOND DRAWING BORDE

5TH STREET

6TH STREET

"F" AVENUE

"G" AVENUE

N 39°08'49" W 2223.03' MEASURED (2223.11' RECORD) (BASIS OF BEARING)

BENCHMARK
CP #3015
(FOUND USGOVT BM MARKER)
N=14932791.13
E=1368973.62

PLAN NORTH

1 SITE SURVEY
SCALE: 1"=50'

SCALE:1"=50'

FOR LEGEND AND NOTES, SEE C-001

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

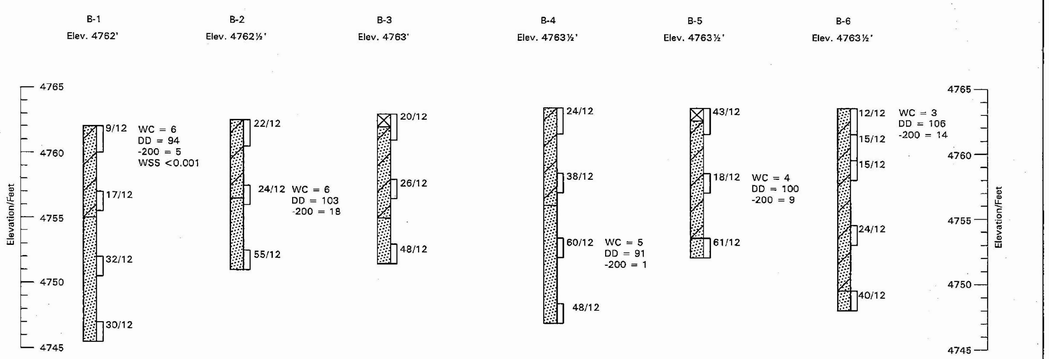
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE SURVEY

VF101-1

SHEET 05 OF 66

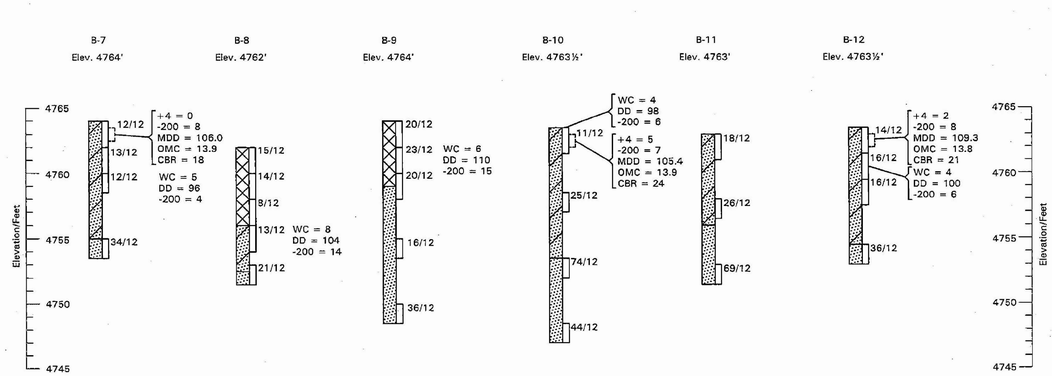
FINAL SUBMITTAL



Approximate Vertical Scale 1" = 8'

See Figure 5 for Legend and Notes

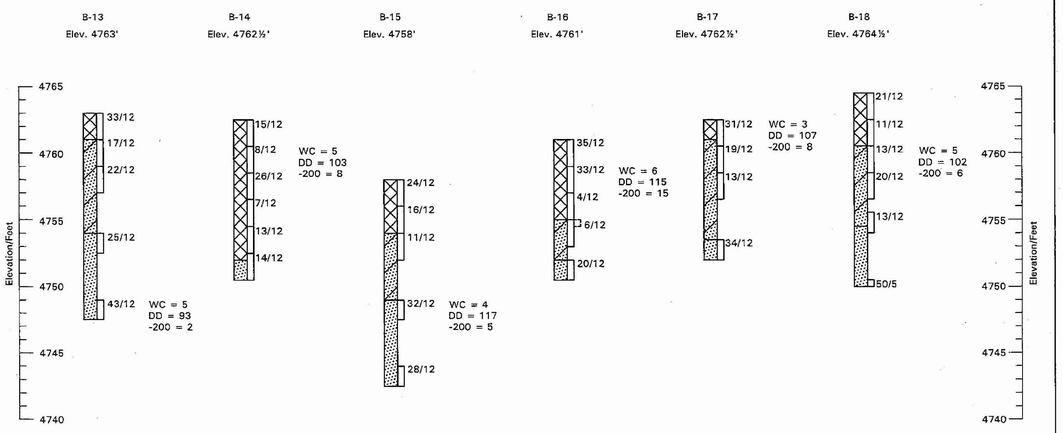
1190295	AGEC	Exploratory Boring Logs	Figure 2



Approximate Vertical Scale 1" = 8'

See Figure 5 for Legend and Notes

1190295	AGEC	Exploratory Boring Logs	Figure 3



Approximate Vertical Scale 1" = 8'

See Figure 5 for Legend and Notes

1190295	AGEC	Exploratory Boring Logs	Figure 4

LEGEND:

- Fill; sand, small to moderate amounts of silt and occasional gravel, slightly moist, mottled, brown to dark brown.
- Poorly-graded Sand with Silt (SP-SM); small to moderate amounts of silt, occasional gravel, medium dense, slightly moist, brown to grayish brown.
- Poorly-graded Sand (SP); small amounts of silt, occasional gravel, medium dense to dense, slightly moist, brown to grayish brown.
- 10/12 California Drive sample taken. The symbol 10/12 indicates that 10 blows from a 140 pound automatic hammer falling 30 inches were required to drive the sampler 12 inches.

NOTES:

1. Borings B-1 through B-5, B-10 and B-11 were drilled on August 14, 2019 using a truck-mounted drill rig with 6-inch diameter hollow-stem auger. The other borings were drilled on August 26, 2019 using direct-push.
2. Locations of the borings were measured approximately by pacing from features shown on the site plan provided.
3. Elevations of the borings were estimated by interpolating between contours shown on Figure 1.
4. The boring locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between materials shown on the boring logs represent the approximate boundaries between material types and the transitions may be gradual.
6. No free water was encountered in the borings at the time of drilling.
7. WC = Water Content (%);
   DD = Dry Density (pcf);
   +4 = Percent Retained on the No. 4 Sieve;
   -200 = Percent Passing the No. 200 Sieve;
   WSS = Water Soluble Sulfates (%);
   MDD = Maximum Dry Density as determined by AASHTO T-99 (pcf);
   OMC = Optimum Moisture Content as determined by AASHTO T-99 (%);
   CBR = California Bearing Ratio (%).

1190295	AGEC	Exploratory Boring Legend and Notes	Figure 5

DESCRIPTION	DATE	APPR.	MARK

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CHECKED BY: M. TARINI
SITE CODE:
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DATE: 21 OCT 2020
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OGDEN AIR LOGISTICS CENTER
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HILL AIR FORCE BASE

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SOIL BORING LOGS

B-301-1

SHEET 06 OF 66

FINAL SUBMITTAL

SURVEY LEGEND (VF101-1)

ENSIGN ENG. LAND SURV.

- MONUMENT
- EXIST REBAR AND CAP
- SET ENSIGN REBAR AND CAP
- WM WATER METER
- W WATER MANHOLE
- WV WATER VALVE
- FIRE HYDRANT
- S SANITARY SEWER MANHOLE
- D STORM DRAIN CLEAN OUT
- STORM DRAIN CATCH BASIN
- UTILITY POLE
- TELEPHONE BOX
- CENTERLINE
- X FENCE
- EDGE OF ASPHALT
- SS SANITARY SEWER LINE
- SD STORM DRAIN LINE
- W CULINARY WATER LINE
- OHP OVERHEAD POWER LINE
- E ELECTRICAL LINE
- G GAS LINE
- EXISTING CONTOURS
- CONCRETE
- BUILDING

ABBREVIATIONS:

AD = AREA DRAIN
AHJ = AUTHORITY HAVING JURISDICTION
BM = BENCH MARK
BMP = BEST MANAGEMENT PRACTICE
CB = CATCH BASIN
CI = CURB INLET
CL = CENTER LINE
℄ = CENTER LINE
CO = CLEAN OUT
FDC = FIRE DEPARTMENT CONNECTION
FFE = FINISHED FLOOR ELEVATION
FH = FIRE HYDRANT
FL = FLOW LINE
LF = LINEAR FOOT
MH = MANHOLE
OHE = OVERHEAD ELECTRIC
RCP = REINFORCED CONCRETE PIPE
SD = STORM DRAIN
SS = SANITARY SEWER
SWPPP = STORM WATER POLLUTION PREVENTION PLAN
TBM = TEMPORARY BENCH MARK
TC = TOP OF CURB
TW = TOP OF WALL
UGE = UNDERGROUND ELECTRIC
W = WATER
Ø = DIAMETER

SITE UTILITY PLAN NOTES (CU101-1)

1. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATING. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
2. THERE ARE NUMEROUS PUBLIC AND PRIVATE UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND AN ATTEMPT HAS BEEN MADE TO INDICATE THEIR PRESENCE ON THE PLAN. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR LOCATION OF THE UTILITY ON THE GROUND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NEEDED. EXISTING AND ABANDONED UTILITY LOCATIONS ARE UNKNOWN. SURVEY MARKERS ARE APPROXIMATE LOCATIONS ONLY. ALL UTILITIES ARE TO BE RELOCATED PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER OF ANY DAMAGED OR INTERRUPTED UTILITIES IMMEDIATELY.
4. EXISTING UTILITIES THAT ARE TO REMAIN ARE TO BE PROTECTED AND ADJUSTED TO MATCH NEW GRADE.
5. **DIG CAREFULLY.** STATE LAWS GENERALLY PROHIBIT THE USE OF MECHANIZED EQUIPMENT WITHIN 18-24 INCHES OF A MARKED UTILITY, WHICH IS CALLED THE "TOLERANCE ZONE". CONTACT THE PROPER LOCAL AGENCY PRIOR TO DIGGING.
6. CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS AND/OR COMPARABLE OSHA-APPROVED STATE PLAN REQUIREMENTS FOR TRENCHING AND EXCAVATION.
7. COORDINATE WITH EACH LOCAL UTILITY COMPANY FOR CONNECTION OF NEW LINES AND METERS. PAY ALL COSTS IF ANY.
8. ALL WATER AND SEWER WORK TO MEET THE REQUIREMENTS OF AMERICAN WATER. REQUIREMENTS AND STANDARDS CAN BE FOUND AT HTTPS://AMWATER.COM/CORP/PRODUCTS-SERVICES/MILITARY-SERVICES/HILL-AIR-FORCE-BASE
9. SEE ELECTRICAL SHEETS FOR ADDITIONAL UTILITY WORK.

DEMOLITION LEGEND (CD101-1)

- REMOVE ASPHALT PAVEMENT OR WALK
- REMOVE CONCRETE PAVEMENT OR WALK
- REMOVE CURB & GUTTER
- EXIST. STORM DRAIN TO BE REMOVED (18")
- EXIST. INLET TO BE REMOVED

UTILITY LEGEND (CU101-1)

- EXISTING UTILITY LINE (W=WATER; S.S.=SANITARY SEWER; G=GAS; O.H.E.=OVERHEAD ELECTRIC)
- NEW UTILITY LINE (W=WATER; S.S.=SANITARY SEWER)
- NEW WATER VALVE
- NEW FIRE HYDRANT (F.H.)
- EXISTING SANITARY SEWER MANHOLE (M.H.)
- EXISTING WATER VALVE (WV)
- EXISTING FIRE HYDRANT (FH)
- NEW SANITARY CLEANOUT (COTG)

DEMOLITION NOTES (CD101-1):

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL, IN A LOCATION OFF OF HILL AFB, OF ALL STRUCTURES, PADS, WALLS, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER SPECIFICATIONS.
2. THERE IS NO LANDFILL AVAILABLE ON HAFB. ALL CONSTRUCTION GENERATED WASTE, INCLUDING DEMOLITION DEBRIS, SHALL BE DISPOSED OF BY CONTRACTOR OFF BASE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
3. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING PARKING, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC TO AND FROM THE SITE.
4. PRIOR TO CLEARING, THE CONTRACTOR SHALL INSTALL EROSION CONTROL STRUCTURES AND DEVICES.
5. ANY DAMAGE TO THE EXISTING STREET OR OTHER INFRASTRUCTURE DUE TO THE CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR SHALL SAW CUT IMPROVEMENTS FULL DEPTH AT REMOVAL LINES. THE CONTRACTOR SHALL PROTECT SAW CUT EDGE OF ASPHALT FROM RAVELING DURING CONSTRUCTION. WHERE RAVELING OCCURS PRIOR TO NEW PAVEMENT BEING PLACED THE CONTRACTOR MAY BE REQUIRED TO PROVIDE ADDITIONAL SAW CUT, AT THE CONTRACTOR'S EXPENSE, TO PROVIDE A CLEAN EDGE.
7. THE CONTRACTOR IS TO PROTECT THE EXISTING STORM DRAIN SYSTEM. DURING FINAL INSPECTION THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE ENTIRE STORM DRAIN SYSTEM TO THE CONNECTION TO THE MAIN STORM DRAIN IF CONSTRUCTION MATERIAL IS FOUND IN THE NEW STORM DRAIN SYSTEM.
8. ALL UTILITIES SHOWN FOR REMOVAL BACK TO MAIN SHALL BE REMOVED AND CAPPED PER UTILITY STANDARD REQUIREMENTS. UTILITY REMOVAL SHALL BE COORDINATED WITH THE UTILITY AND THE OWNER. 72 HOURS WRITTEN NOTICE SHALL BE GIVEN TO THE OWNER AND UTILITY PRIOR TO DEMOLISHING ANY UTILITY.
9. EXISTING UTILITIES TO REMAIN ARE TO BE PROTECTED AND ADJUSTED TO MATCH PROPOSED GRADE.
10. SEE ELECTRICAL SITE PLAN FOR ELECTRIC SERVICE REMOVAL.
11. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL EXISTING SITE CONDITIONS DISTURBED BY CONSTRUCTION ACTIVITIES BACK TO EXISTING OR BETTER CONDITIONS.

LAYOUT LEGEND (CS101-1)

	DETAIL REFERENCE
NEW ASPHALT PAVEMENT	1 C-501-1
NEW CONCRETE PAVEMENT (SEE CP101 FOR REINFORCEMENT AND JOINT LOCATIONS) CJ (TYP)	2 C-501-1; 3 C-501-1
NEW CONCRETE WALK	4 C-501-1
STREET REPAIR AT UTILITY CUT	7 C-502-1
NEW LANDSCAPING STONE	8 C-502-1
NEW FENCE BY OTHERS (N.I.C.)	
SOIL BORING LOCATION (SEE B-301) B-18	

EROSION CONTROL LEGEND (CG701-1)

	DETAIL REFERENCE
INLET PROTECTION	1 CG702-1
SILT FENCE SF SF	2 CG702-1
CONSTRUCTION ENTRANCE	3 CG702-1

DEMOLITION NOTES CONTINUED (CD101-1)

12. CONTRACTOR WILL CONTROL AND PREVENT OFF-SITE TRACKING OF CONSTRUCTION RUNOFF AND SEDIMENT TO ADJACENT PROPERTY AND PUBLIC ROADS.
13. ANY CONSTRUCTION ACTIVITIES THAT WILL REQUIRE ROAD OR LANE CLOSURES SHALL BE COORDINATED WITH THE APPROPRIATE ORGANIZATION PRIOR TO CLOSURE.
14. SHOULD REMOVAL AND/OR RELOCATIONS ACTIVITIES DAMAGE FENCING, SIDEWALKS, LIGHTING, AND/OR STORM INLET STRUCTURES, THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIAL/STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. EXCEPT FOR MATERIALS DESIGNATED TO BE RELOCATED ON THIS PLAN, ALL OTHER CONSTRUCTION MATERIALS SHALL BE NEW.
15. CONTRACTOR SHALL PAY FOR ALL TRAFFIC CONTROL DEVICES AND PERSONNEL FOR ROAD CLOSURES AND DETOURS.
16. ALL EXISTING SIGNS AND POSTS TO BE REMOVED SHALL BE RELOCATED, STOCKPILED, OR REMOVED AS DIRECTED.
17. **DIG CAREFULLY.** STATE LAWS GENERALLY PROHIBIT THE USE OF MECHANIZED EQUIPMENT WITHIN 18-24 INCHES OF A MARKED UTILITY, WHICH IS CALLED THE "TOLERANCE ZONE". CONTACT THE PROPER LOCAL AGENCY PRIOR TO DIGGING.

EROSION CONTROL PLAN NOTES (CG701-1)

1. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION. FLAG OR OTHERWISE DELINEATE AREAS NOT TO BE DISTURBED. EXCLUDE VEHICLES AND CONSTRUCTION EQUIPMENT FROM THESE AREAS TO PRESERVE NATURAL VEGETATION.
2. IF TOPSOIL IS REQUIRED FOR THE ESTABLISHMENT OF VEGETATION, IT SHALL BE STOCKPILED IN THE AMOUNT NECESSARY TO COMPLETE FINISHED GRADING AND PROTECTED FROM EROSION DURING THE INTERIM.
3. ROUGHEN THE SURFACE OF ALL SLOPES DURING THE CONSTRUCTION OPERATION TO RETAIN WATER, INCREASE INFILTRATION, AND FACILITATE VEGETATION ESTABLISHMENT. PROVIDE MULCH OR OTHER GROUND COVER AS SOON AS GRADING IS COMPLETED.
4. STABILIZE ALL GRADED AREAS WITH VEGETATION, CRUSHED STONE, OR MULCH WHEN WORK IS INTERRUPTED FOR 14 WORKING DAYS OR MORE.
5. USE MULCH TO STABILIZE AREAS TEMPORARILY WHERE FINAL GRADING MUST BE DELAYED. PLACE BEFORE STRIPPING.
6. PUT SILT FENCES, CONSTRUCTION ENTRANCE, INLET PROTECTION AND OTHER CONTROLS INTO PLACE TO RETAIN SEDIMENT ON SITE.
7. CONTRACTOR IS REQUIRED TO GET A STORM WATER PERMIT FROM UTAH DIVISION OF WATER QUALITY, INCLUDING DEVELOPING A SWPPP. CONSTRUCTION SWPPP MUST BE SUBMITTED TO DR. BARBARA HALL (801-777-0493) FOR APPROVAL PRIOR TO CONTRACTOR SUBMITTING NOTICE OF INTENT TO THE UTAH DIVISION OF WATER QUALITY TO OBTAIN A STORMWATER CONSTRUCTION PERMIT.

GRADING LEGEND (CG101-1)

	DETAIL REFERENCE
EXISTING GRADE CONTOUR (1 FOOT INTERVAL) 382	
EXISTING GRADE CONTOUR (5 FOOT INTERVAL) 375	
FINISHED GRADE CONTOUR (1 FOOT INTERVAL) 382	
FINISHED GRADE CONTOUR (5 FOOT INTERVAL) 380	
FINISHED SPOT ELEVATION (T.C.=TOP OF CURB) T.C.384.00	
NEW RIDGELINE	
NEW CATCH BASIN (C.B.)	1 C-502-1
NEW MANHOLE (M.H.)	2 C-502-1

LAYOUT PLAN NOTES (CS101-1)

1. CONTRACTOR SHALL BE CONFINED TO THE LIMITS OF CONSTRUCTION SHOWN UNLESS OTHER PROVISIONS HAVE BEEN MADE WITH THE OWNER.
2. PARKING LOT STRIPING SHALL BE 4" WIDE, WHITE NON-REFLECTIVE TRAFFIC PAINT. ZONE STRIPING SHALL BE @ 2' CENTERS AND AT 45° TO LINE OF TRAFFIC.
3. DIMENSIONS TO CURBS ARE TO BACK OF CURB. DIMENSIONS TO BUILDINGS ARE TO OUTSIDE FACE OF BUILDING WALL.
4. MINIMUM CURB RADIUS SHALL BE 2'.
5. THE CONTRACTOR SHALL LAYOUT AND VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE C.O.R. FOR DIRECTION AND RESOLUTION PRIOR TO PROCEEDING.
6. PROVIDE EXPANSION JOINTS IN ALL CASES WHERE CONCRETE FLATWORK MEETS VERTICAL STRUCTURES OR WHERE NEW CONCRETE FLATWORK ABUTS EXISTING CONCRETE PAVING.
7. RESTORATION AND CLEANUP SHALL BE COMPLETE PRIOR TO ACCEPTANCE OF THE JOB.
8. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. CONTRACTORS ARE TO USE THE LIMITS OF CONSTRUCTION FOR ANY STAGING AND LAY DOWN AREA REQUIRED FOR THE PROJECT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING NEWLY PAVED AREAS THAT SHOW DIFFERENTIAL SETTLEMENT OR RANDOM CRACKING AT C.O.R.'S DISCRETION.

GRADING AND DRAINAGE PLAN NOTES (CG101-1)

1. AREAS THAT ARE TO BE SODDED OR SEEDED SHALL BE RELATIVELY FREE OF WEEDS AT TIME OF FINAL ACCEPTANCE.
2. ALL IMPORTED FILL SHALL BE FREE OF ORGANIC MATERIAL.
3. MAXIMUM LAWN GRADE SLOPE SHALL BE 3:1, UNLESS SHOWN OTHERWISE.
4. MAXIMUM WALK CROSS SLOPE SHALL BE 2%. MAXIMUM LINEAR GRADE SHALL BE 5%.
5. CONTRACTOR SHALL SPREAD 4" TOPSOIL AND INSTALL SEED AND FERTILIZER ON ALL DISTURBED EARTH SURFACES RESULTING FROM THE CONTRACTOR'S OPERATIONS, UNLESS SHOWN OTHERWISE.
6. CONTRACTOR IS RESPONSIBLE FOR PURSUING AND OBTAINING ALL NECESSARY CONSTRUCTION PHASE STORM WATER PERMITS.
7. CONTRACTOR SHALL CLEAN ALL EXISTING STORM DRAINS OF SEDIMENT AND CONSTRUCTION DEBRIS FROM INLET TO DISCHARGE POINT AT HEADWALL OR JUNCTION BOX AT STREET. INCLUDE ROOF, DRAINS, GUTTER SYSTEMS AND LATERAL LINES.
8. CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS AND/OR COMPARABLE OSHA-APPROVED STATE PLAN REQUIREMENTS FOR TRENCHING AND EXCAVATION.
9. PER THE GEOTECHNICAL REPORT, THE TOP 2' OF SOIL ON THE SITE IS UNSATISFACTORY FOR USE UNDER PAVEMENTS. REMOVE ALL UNSATISFACTORY MATERIAL AND REPLACE, WHERE REQUIRED, WITH SATISFACTORY FILL. A GEOTECHNICAL ENGINEER MUST OBSERVE ALL EARTH DISTURBING ACTIVITIES AND DETERMINE WHICH SOILS ARE SATISFACTORY FOR USE UNDER PAVEMENTS.

OGDEN AIR LOGISTICS CENTER

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: J. PETERSON | CHECKED BY: M. TARINI
DRAWN BY: S. KINCANNON | SITE CODE:
CAPITAL PROJECT NO. | DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP
HILL AIR FORCE BASE

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

GENERAL NOTES & LEGENDS

C-001-1

SHEET 07 OF 66

FINAL SUBMITTAL

N = 14933491.60
E = 1367652.48

N = 14933533.88
E = 1367756.98

SAWCUT (TYP.)

LIMITS OF CONSTRUCTION

N = 14933523.30
E = 1368870.39

5TH STREET

N = 14933467.03
E = 1367635.79

TRENCH WIDTH VARIES BASED ON UTILITY DEPTH, SIZE, AND CONTRACTOR MEANS AND METHODS (TYP.)

EXISTING ASPHALT IS UP TO 4" OF ASPHALT OVER UP TO 8" OF GRAVEL BASE COURSE - SOME MAY HAVE BE REMOVE BY REPAIR PROJECT REMOVING AND INSTALLING STORM DRAINAGE THIS AREA - SEE CD102-1 - REMOVAL ALL THAT REMAINS IN AREA SHOWN FOR REMOVAL

SAWCUT (TYP.)

N = 14933388.53
E = 1368869.42

N = 14933359.12
E = 1368869.21

N = 14933223.31
E = 1368868.23

"G" AVENUE

"F" AVENUE

6TH STREET

EXIST. BUILDING

PLAN NORTH

1 SITE DEMOLITION PLAN

0 50' 100'

SCALE:1"=50'

FOR LEGEND AND NOTES, SEE C-001-1

OGDEN AIR LOGISTICS CENTER

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HILL AIR FORCE BASE

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75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE DEMOLITION PLAN

CD101-1

SHEET 08 OF 66

FINAL SUBMITTAL

5 4 3 2 1

A

B

C

D

N = 14933491.60
E = 1367652.48

N = 14933533.88
E = 1367756.98

SAWCUT (TYP.)

LIMITS OF CONSTRUCTION

N = 14933523.30
E = 1368870.39

5TH STREET

EXIST. SDCB
TOG=4762.02
FL(12" E & W)=4755.70
FL(8" N)=4756.27

CUT END OF PIPE SMOOTH TO BE FLUSH WITH INSIDE OF NEW CATCH BASIN - SEE CG102-1

EXIST. SDCB
TOG=4761.67
FL(8" S)=4759.42

EXIST. SDCB
TOG=4762.24
FL(12" E&W)=4756.36
FL(8" N)=4758.08

SAWCUT (TYP.)

N = 14933467.03
E = 1367635.79

TRENCH WIDTH VARIES BASED ON UTILITY DEPTH, SIZE, AND CONTRACTOR MEANS AND METHODS (TYP.)

EXISTING ASPHALT IS UP TO 4" OF ASPHALT OVER UP TO 8" OF GRAVEL BASE COURSE - REMOVE AS NEEDED TO REMOVE EXISTING STORM DRAINAGE AND TO INSTALL NEW STORM DRAINAGE

REMOVE EXISTING STORM DRAIN

REMOVE EXISTING ABANDONED WATER MAIN - NEW WATER MAIN TO BE IN SAME TRENCH

TRENCH WIDTH VARIES BASED ON UTILITY DEPTH, SIZE, AND CONTRACTOR MEANS AND METHODS (TYP.)

"G" AVENUE

"F" AVENUE

6TH STREET

EXIST. BUILDING

PLAN NORTH

1 SITE DEMOLITION PLAN FOR COORDINATION PURPOSES REPAIR PROJECT BY OTHERS (N.I.C.)

0 50' 100'

SCALE:1"=50'

1. FOR LEGEND AND NOTES, SEE C-001-1
2. THIS SHEET REFLECTS REPAIR WORK TO BE COMPLETED BY OTHERS PRIOR TO CONTRACTOR ARRIVING ON SITE (FOR COORDINATION PURPOSES ONLY).

OGDEN AIR LOGISTICS CENTER

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75TH CIVIL ENGINEER GROUP

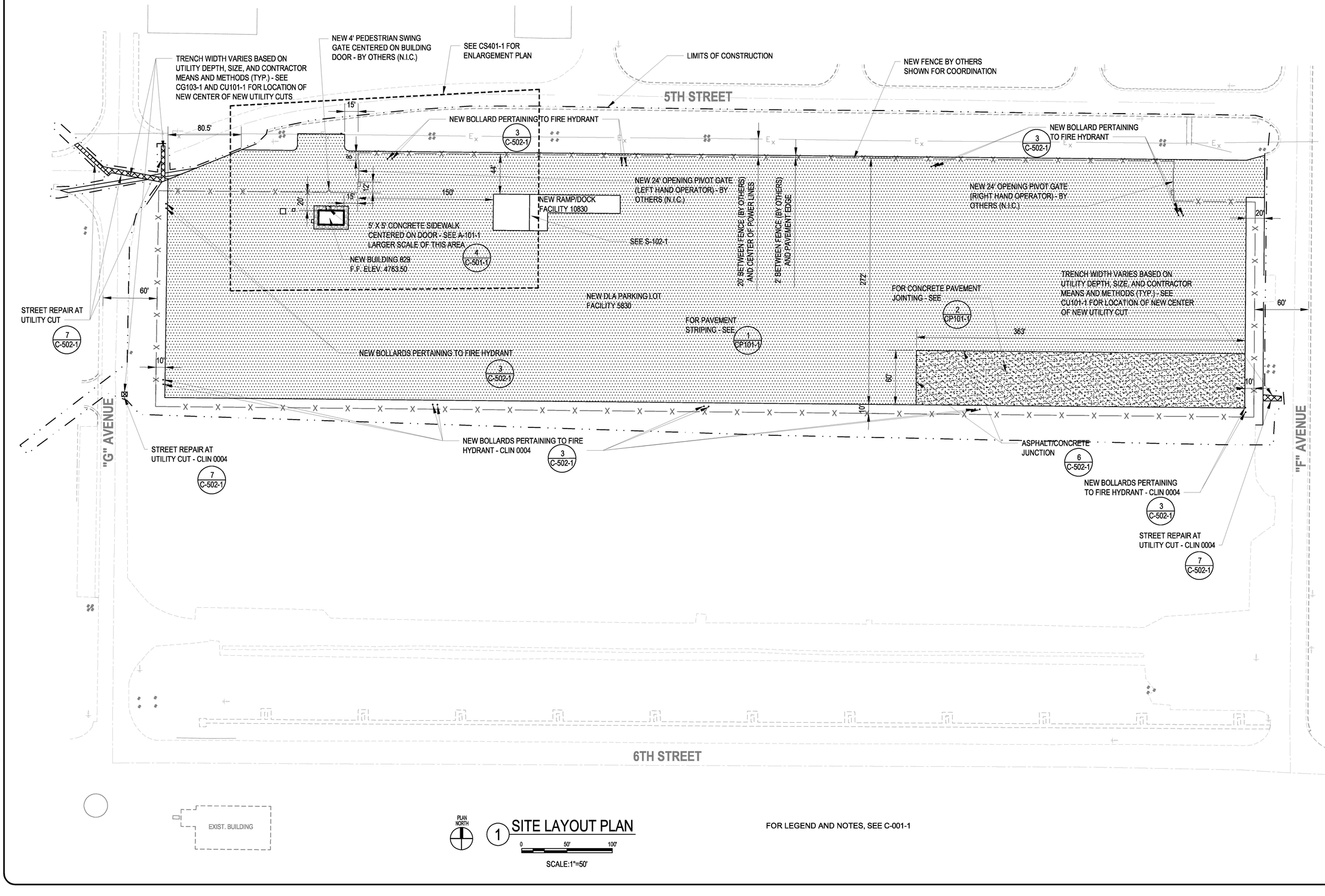
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE DEMOLITION PLAN FOR COORDINATION PURPOSES REPAIR PROJECT BY OTHERS (N.I.C.)

CD102-1

SHEET08A OF 66

FINAL SUBMITTAL



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SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

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75TH CIVIL ENGINEER GROUP

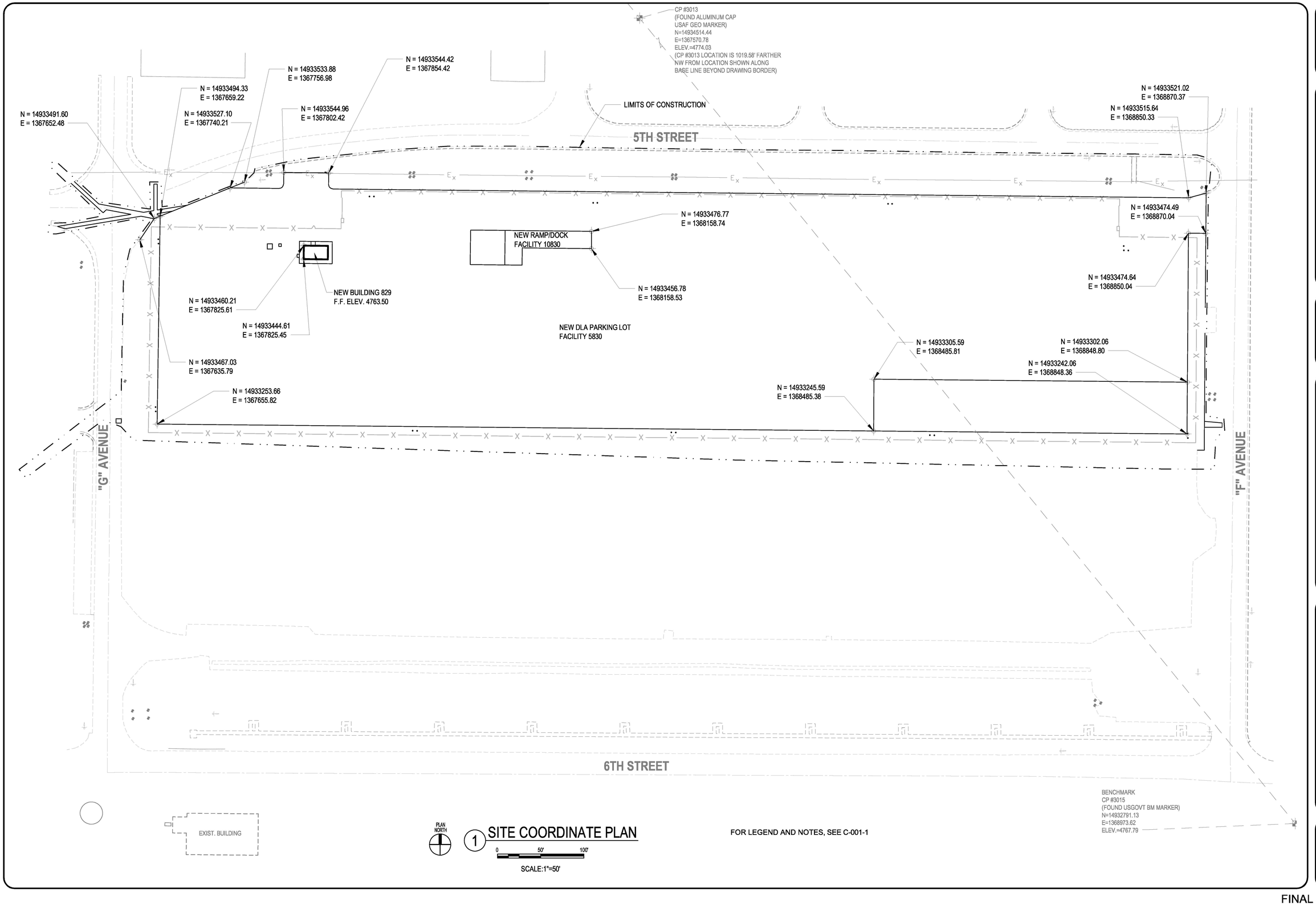
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE LAYOUT PLAN

CS101-1

SHEET 09 OF 66

FINAL SUBMITTAL



1 SITE COORDINATE PLAN

SCALE:1"=50'

FOR LEGEND AND NOTES, SEE C-001-1

OGDEN AIR LOGISTICS CENTER

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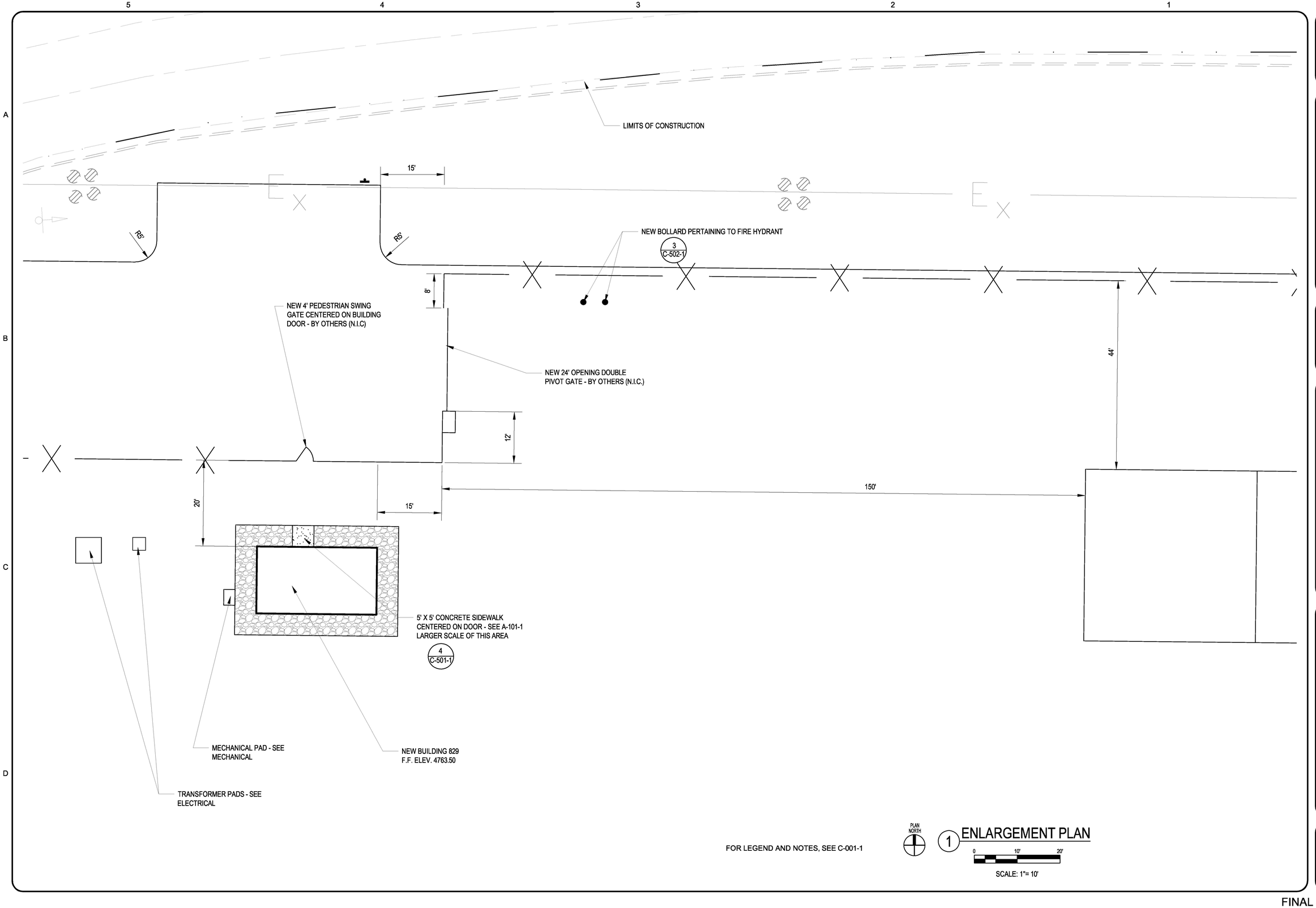
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE COORDINATE PLAN

CS102-1

SHEET 10 OF 66

FINAL SUBMITTAL



FOR LEGEND AND NOTES, SEE C-001-1

PLAN NORTH

1 ENLARGEMENT PLAN

0 10' 20'

SCALE: 1"= 10'

OGDEN AIR LOGISTICS CENTER

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CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

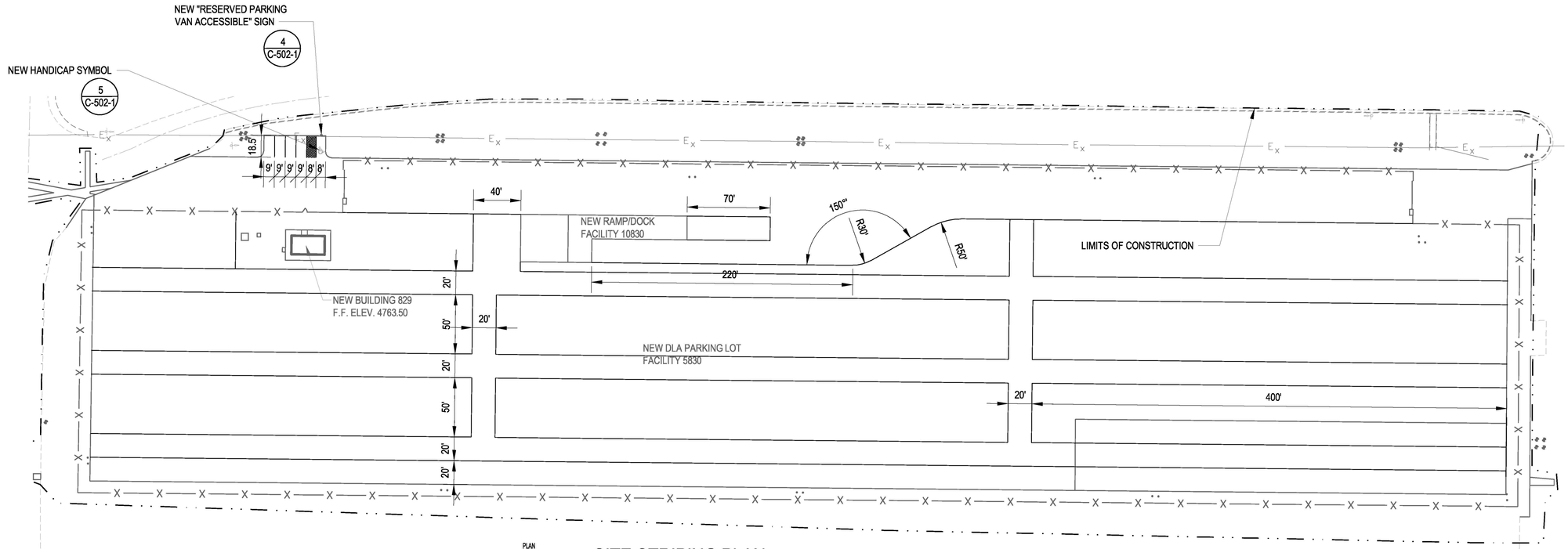
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ENLARGEMENT PLAN

CS401-1

SHEET 11 OF 66

FINAL SUBMITTAL

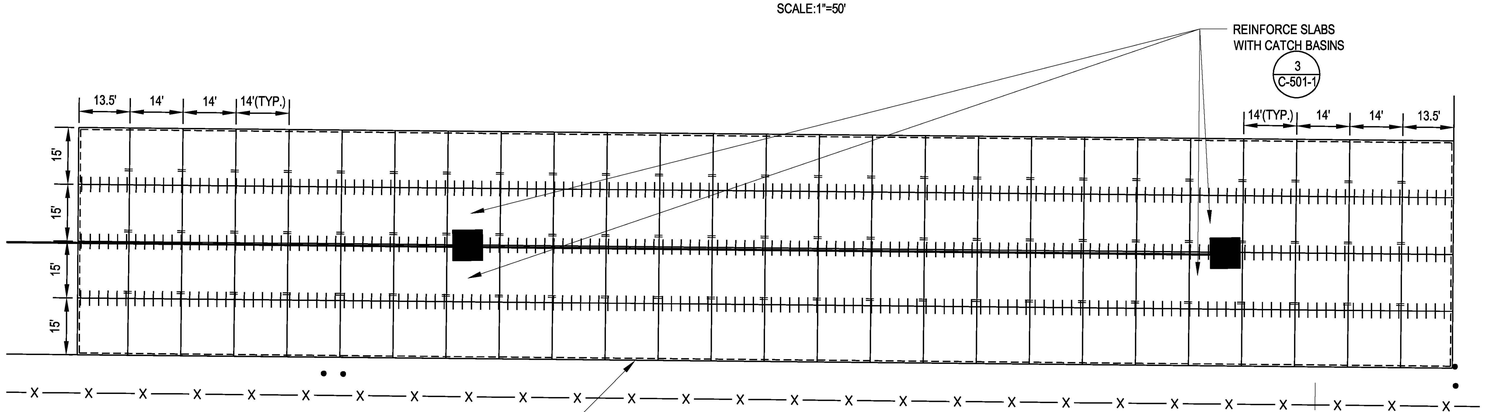


PLAN NORTH

1 SITE STRIPING PLAN

0 50' 100'

SCALE:1"=50'



PLAN NORTH

2 CONCRETE JOINTING PLAN

0 10' 20' 40'

SCALE:1"=20'

LEGEND

	DETAIL REFERENCE
CONSTRUCTION JOINT	6 C-501-1
CONTRACTION JOINT	5 C-501-1
THICKENED FREE EDGE	7 C-501-1

OGDEN AIR LOGISTICS CENTER

MARK	APPR.	DATE	DESCRIPTION

DESIGNED BY: J. PETERSON
DRAWN BY: S. KONCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE PAVEMENT PLANS

CP101-1

SHEET 12 OF 66

FINAL SUBMITTAL

NEW C.B. #22
BY OTHERS (N.I.C.)
TOP ELEV.= 4761.50
INV. ELEV.= 4750.50
FL ELEV. EX. 8" IN 4757.5±
FL ELEV. 24"Ø IN 4751.50
FL ELEV. 30"Ø IN 4751.09

LIMITS OF CONSTRUCTION

5TH STREET

EXISTING M.H. #23
TOP ELEV.=4762.36
INV. ELEV.=4745.96

135 L.F. OF 30" Ø S.D.
@ 0.3% SLOPE

NEW BUILDING 829
F.F. ELEV. 4763.50

NEW RAMP/DOCK
FACILITY 10830

NEW DLA PARKING LOT
FACILITY/5830

NEW C.B. #21
TOP ELEV.= 4762.00
INV. ELEV.= 4751.50
FL ELEV. 15"Ø IN 4755.00
FL ELEV. 24"Ø IN 4752.03

125 L.F. OF 15" Ø S.D.
@ 0.3% SLOPE

NEW C.B. #20
TOP ELEV.= 4762.00
INV. ELEV.= 4755.38

NEW C.B. #19
TOP ELEV.= 4762.00
INV. ELEV.= 4752.60
FL ELEV. 15"Ø IN 4755.00

190 L.F. OF 24" Ø S.D.
@ 0.3% SLOPE

NEW C.B. #18
TOP ELEV.= 4762.00
INV. ELEV.= 4755.47

155 L.F. OF 15" Ø S.D.
@ 0.3% SLOPE

200 L.F. OF 24" Ø S.D.
@ 0.3% SLOPE

NEW C.B. #16
TOP ELEV.= 4762.00
INV. ELEV.= 4754.30

200 L.F. OF 18" Ø S.D.
@ 0.3% SLOPE

NEW C.B. #17
TOP ELEV.= 4762.00
INV. ELEV.= 4753.20
FL ELEV. 18"Ø IN 4753.70

200 L.F. OF 18" Ø S.D.
@ 0.3% SLOPE

NEW C.B. #15
TOP ELEV.= 4762.00
INV. ELEV.= 4754.90
FL ELEV. 15" Ø IN 4755.15

NEW C.B. #14
TOP ELEV.= 4762.00
INV. ELEV.= 4755.75

200 L.F. OF 15" Ø S.D.
@ 0.3% SLOPE

B-1 B-2 B-3 B-4 B-5 B-6 B-7 B-8 B-9 B-10 B-11 B-12 B-13 B-14 B-15 B-16 B-17 B-18

"G" AVENUE

"F" AVENUE

6TH STREET

EXIST. BUILDING

PLAN NORTH

1 SITE GRADING & DRAINAGE PLAN

0 50' 100'

SCALE:1"=50'

FOR LEGEND AND NOTES, SEE C-001-1

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

HILL AIR FORCE BASE

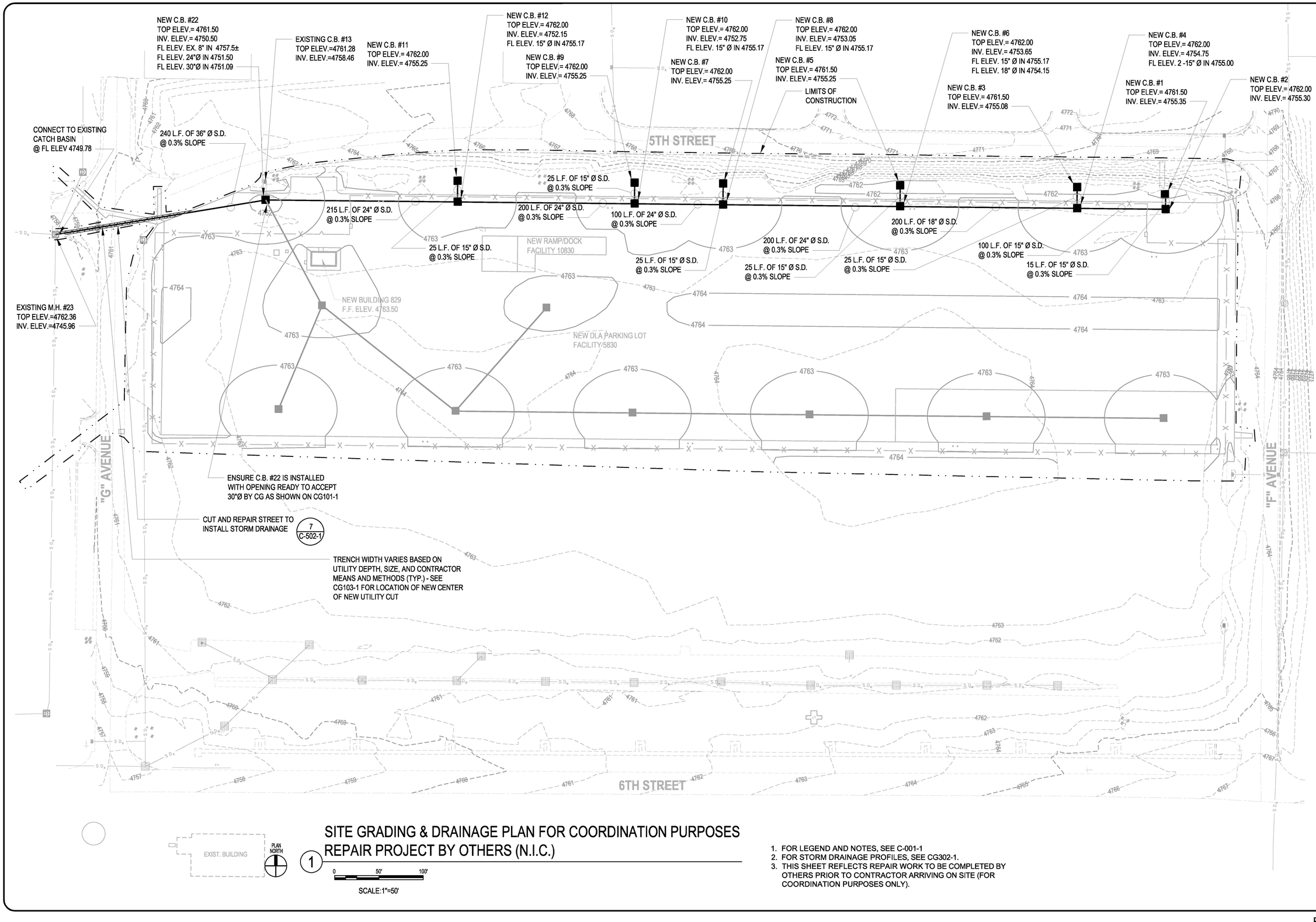
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE GRADING & DRAINAGE PLAN

CG101-1

SHEET 13 OF 66

FINAL SUBMITTAL



SITE GRADING & DRAINAGE PLAN FOR COORDINATION PURPOSES REPAIR PROJECT BY OTHERS (N.I.C.)

1. FOR LEGEND AND NOTES, SEE C-001-1
2. FOR STORM DRAINAGE PROFILES, SEE CG302-1.
3. THIS SHEET REFLECTS REPAIR WORK TO BE COMPLETED BY OTHERS PRIOR TO CONTRACTOR ARRIVING ON SITE (FOR COORDINATION PURPOSES ONLY).

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KONCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE GRADING & DRAINAGE PLAN
FOR COORDINATION PURPOSES
REPAIR PROJECT BY OTHERS (N.I.C.)

CG102-1

SHEET 14 OF 66

FINAL SUBMITTAL

5 4 3 2 1

A B C D

CP #3013
(FOUND ALUMINUM CAP
USAF GEO MARKER)
N=14934514.44
E=1367570.78
ELEV.=4774.03
(CP #3013 LOCATION IS 1019.58' FARTHER
NW FROM LOCATION SHOWN ALONG
BASE LINE BEYOND DRAWING BORDER)

LIMITS OF CONSTRUCTION

5TH STREET

N = 14933518.75
E = 1367774.07

N = 14933479.86
E = 1367536.53

N = 14933516.51
E = 1367990.66

N = 14933540.51
E = 1367990.91

N = 14933538.38
E = 1368190.90

N = 14933514.45
E = 1368190.65

N = 14933537.42
E = 1368290.89

N = 14933513.42
E = 1368290.65

N = 14933535.35
E = 1368490.88

N = 14933511.35
E = 1368490.64

N = 14933533.29
E = 1368690.87

N = 14933509.29
E = 1368690.62

N = 14933508.26
E = 1368790.62

N = 14933525.57
E = 1368790.38

NEW RAMP/DOCK
FACILITY 10830

NEW BUILDING 829
F.F. ELEV. 4763.50

ALL STORM DRAINAGE SHOWN
INSIDE THIS AREA - REPAIR BY
OTHERS (N.I.C.) - SEE CG102-1

N = 14933399.54
E = 1367837.70

NEW DLA PARKING LOT
FACILITY 5830

N = 14933396.84
E = 1368091.02

"G" AVENUE

"F" AVENUE

N = 14933282.36
E = 1367788.35

N = 14933280.30
E = 1367988.22

N = 14933278.23
E = 1368188.45

N = 14933276.17
E = 1368388.20

N = 14933274.10
E = 1368588.58

N = 14933272.04
E = 1368788.18

6TH STREET

EXIST. BUILDING

BENCHMARK
CP #3015
(FOUND USGOVT BM MARKER)
N=14932791.13
E=1368973.62
ELEV.=4767.79

PLAN NORTH

1 SITE DRAINAGE COORDINATE PLAN

0 50' 100'

SCALE:1"=50'

FOR LEGEND AND NOTES, SEE C-001-1

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KONCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

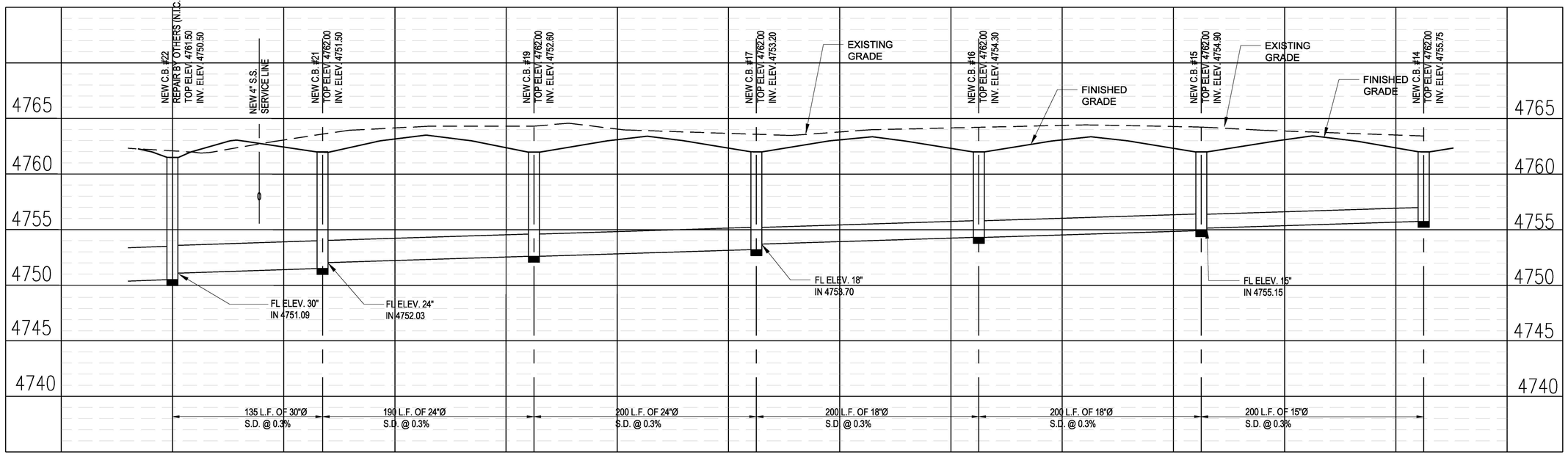
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE DRAINAGE COORDINATE PLAN

CG103-1

SHEET 15 OF 66

FINAL SUBMITTAL



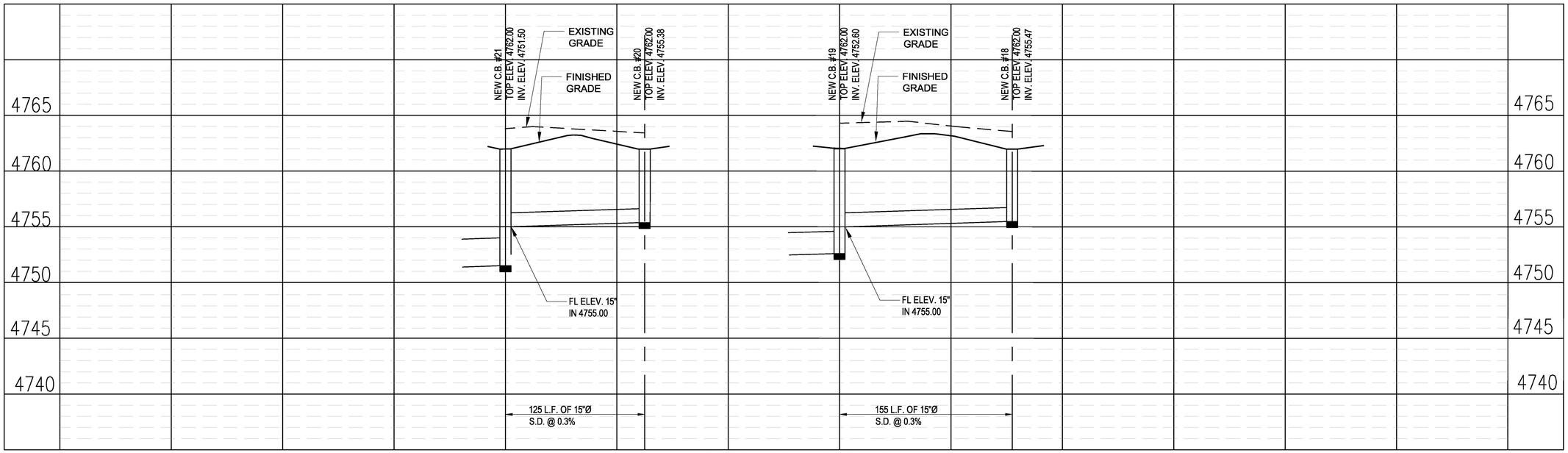
STORM DRAIN PROFILE

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

50' 0' 50' 100'

5' 0' 5' 10'

NOTE: FIELD VERIFY ALL EXISTING UTILITY DEPTHS PRIOR TO INSTALLING ANY NEW STORM SEWER TO CHECK AGAINST GRADE CONFLICTS. EXISTING UTILITY DEPTHS ARE ESTIMATED BASED ON STANDARD BURY DEPTHS. NOTIFY C.O.R. OF ALL DIFFERENCES FOUND.



STORM DRAIN PROFILE

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

50' 0' 50' 100'

5' 0' 5' 10'

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SEIL CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

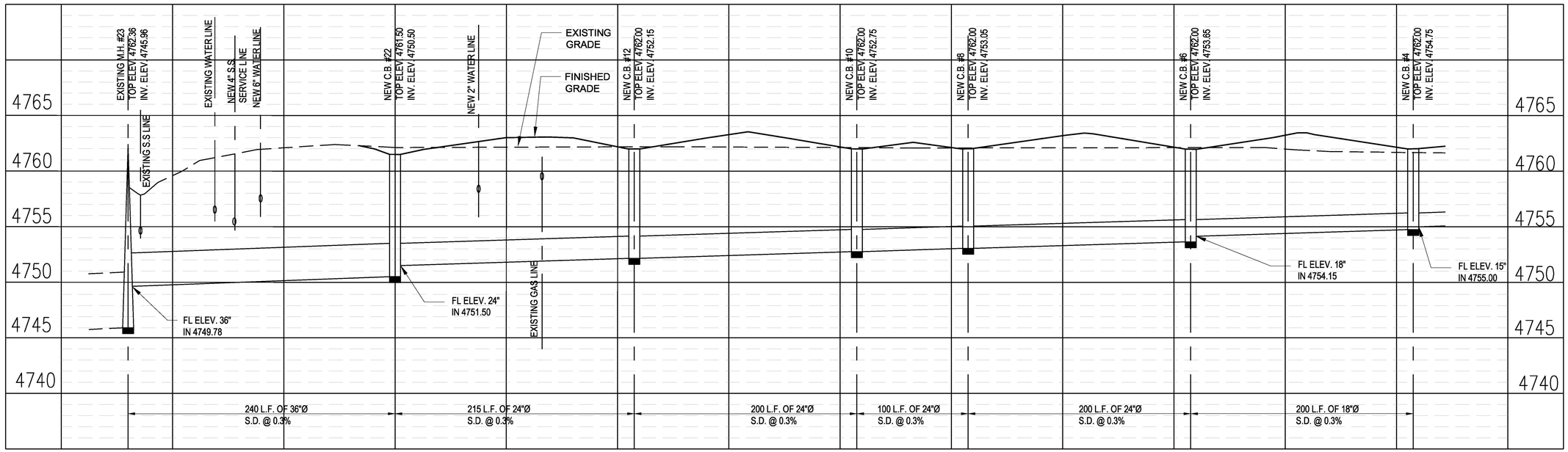
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

STORM DRAIN PROFILES

CG301-1

SHEET 16 OF 66

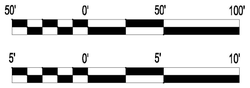
FINAL SUBMITTAL

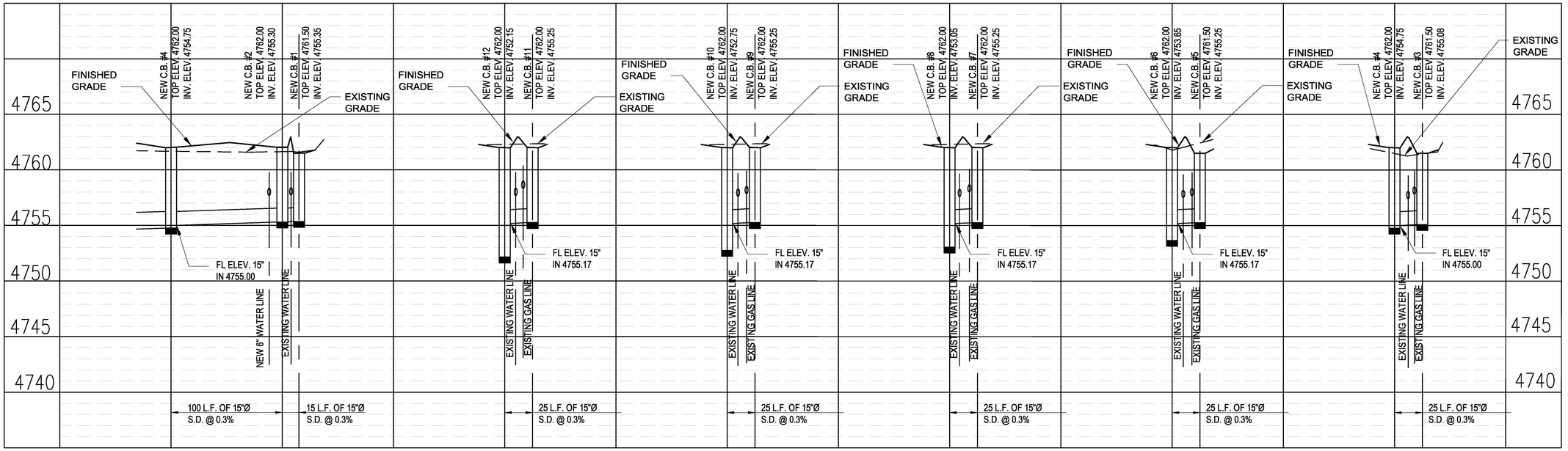


NOTE: FIELD VERIFY ALL EXISTING UTILITY DEPTHS PRIOR TO INSTALLING ANY NEW STORM SEWER TO CHECK AGAINST GRADE CONFLICTS. EXISTING UTILITY DEPTHS ARE ESTIMATED BASED ON STANDARD BURY DEPTHS. NOTIFY C.O.R. OF ALL DIFFERENCES FOUND.

STORM DRAIN PROFILE FOR COORDINATION PURPOSES - REPAIR PROJECT BY OTHERS (N.I.C.)

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

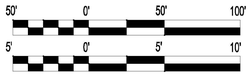




NOTE: THIS SHEET REFLECTS REPAIR WORK TO BE COMPLETED BY OTHERS PRIOR TO CONTRACTOR ARRIVING ON SITE (FOR COORDINATION PURPOSES ONLY).

STORM DRAIN PROFILE FOR COORDINATION PURPOSES - REPAIR PROJECT BY OTHERS (N.I.C.)

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



HILL AIR FORCE BASE
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DESCRIPTION | DATE | APPR. MARK

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

STORM DRAIN PROFILES FOR COORDINATION PURPOSES
REPAIR PROJECT BY OTHERS (N.I.C.)

CG302-1

SHEET 17 OF 66

FINAL SUBMITTAL

LIMITS OF CONSTRUCTION

5TH STREET

NEW RAMP/DOCK FACILITY 10830

NEW BUILDING 829
F.F. ELEV. 4763.50

NEW DLA PARKING LOT
FACILITY 5830

"G" AVENUE

"F" AVENUE

6TH STREET

EXIST. BUILDING

PLAN NORTH

SITE SEDIMENTATION & EROSION CONTROL PLAN

1

0 50' 100'

SCALE:1"=50'

FOR LEGEND AND NOTES, SEE C-001-1

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KONCANNON
CAPITAL PROJECT NO.:
CHECKED BY: M. TARINI
SITE CODE:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

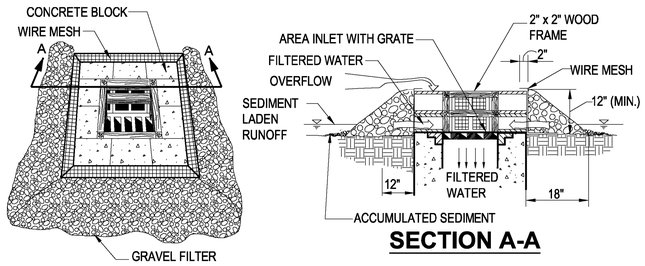
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE SEDIMENTATION & EROSION CONTROL PLAN

CG701-1

SHEET 18 OF 66

FINAL SUBMITTAL



SECTION A-A

BLOCK AND GRAVEL AREA INLET PROTECTION

NO SCALE

INLET PROTECTION NOTES:

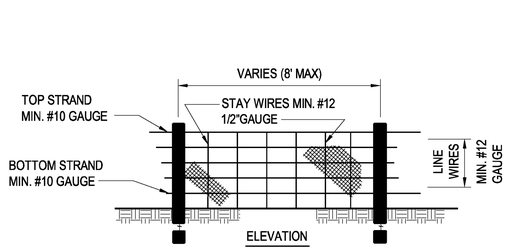
1. FOR GRAVEL FILTERS USE 2 TO 3 INCH DIAMETER COARSE, WASHED AGGREGATE, FREE OF FINES.

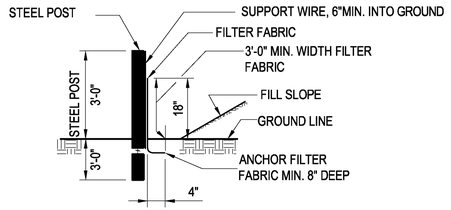
2. USE WIRE MESH WITH 1/2 x 1/2 INCH OPENINGS WITH 19 GAUGE WIRE.

3. POROUS BAGS WITH 1/4" TO 1" GRAVEL FILL MAY BE USED FOR INLET PROTECTION IN LIEU OF THESE DETAILS PROVIDED THAT SEDIMENTS ARE CAPTURED BY THIS TECHNIQUE.

1 BLOCK AND GRAVEL INLET PROTECTION DETAILS

NOT TO SCALE





GENERAL NOTES:

1. SILT FENCE SHALL BE INSTALLED OUTSIDE TOP AND TOE OF EARTHFILL EMBANKMENTS.
2. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MIN. OF 6 LINE WIRES WITH 12" STAY SPACING.
3. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED SECURELY TO THE WIRE.
4. STEEL POSTS SHALL BE 6'-0" (3' ABOVE GROUND AND 3' BELOW GROUND) IN HEIGHT AND BE OF SELF-FASTENER ANGLE STEEL TYPE.
5. CONTRACTOR SHALL PERIODICALLY REMOVE ACCUMULATED SEDIMENT, AS REQUIRED
   NOTE: THE FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS:
   A) EQUIVALENT OPENING SIZE (EOS) IS NOT LARGER THAN U.S. STANDARD SIEVE NO.70
   B) GRAB STRENGTH 90-120 LB
   C) CONFORM TO ASTM D-1682 OR ASTM D-177

2 TEMPORARY SEDIMENT FENCE DETAIL

NOT TO SCALE

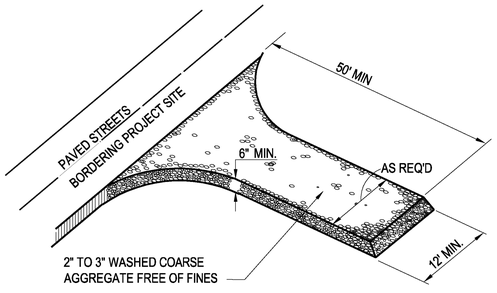
TEMPORARY SEDIMENT FENCE MAINTENANCE:

1) INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

2) SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

3) REMOVE SEDIMENT DEPOSITS AS NECESSARY (WHEN SEDIMENT IT HALF THE HEIGHT OF THE FENCE FABRIC) TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE, TAKING CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.

4) REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



NOTE:
1. GRAVEL PAD IS REQUIRED TO PROVIDE BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PAVED STREETS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST.
2. PLACE AT ENTRANCE FROM PAVED ROAD TO SITE AS LOCATED ON THE DRAWINGS.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

LOCATION:
LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT FROM LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID STEEP GRADES, AND ENTRANCES AT CURVES IN PUBLIC ROADS WHERE VEHICLES ENTER AND LEAVE A CONSTRUCTION SITE. THE PURPOSE IS TO PROVIDE A BUFFER AREA WHERE VEHICLES CAN DROP THEIR MUD AND SEDIMENT TO AVOID TRANSPORTING IT ONTO PUBLIC ROADS, TO CONTROL EROSION FROM SURFACE RUNOFF, AND TO HELP CONTROL DUST.

CONDITIONS WHERE PRACTICE APPLIES:
WHEREVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD OR OTHER PAVED OFF-SITE AREA.

WASHING:
IF CONDITIONS AT THE SITE ARE SUCH THAT MOST OF THE MUD AND SEDIMENT ARE NOT REMOVED BY VEHICLES TRAVELING OVER THE GRAVEL, THE TIRES SHOULD BE WASHED. WASHING SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO A SUITABLE DISPOSAL AREA.

MAINTENANCE:
MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

3 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PAD DETAIL

NOT TO SCALE

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE SEDIMENTATION & EROSION CONTROL DETAILS

CG702-1

SHEET 19 OF 66

FINAL SUBMITTAL

EXIST. S.S. LIFT STATION
TOP ELEV.=4760.0±
INV. ELEV.=4745.0± (VERIFY)

CONNECT TO EXISTING
LIFT STATION WITH
DROP CONNECTION

EXIST. SSMH
(PER BASE UTILITIES MAP
UNABLE TO LOCATE)

CP #3013
(FOUND ALUMINUM CAP
USAF GEO MARKER)
N=14934514.44
E=1367570.78
ELEV.=4774.03
(CP #3013 LOCATION IS 1019.58' FARTHER
NW FROM LOCATION SHOWN ALONG
BASE LINE BEYOND DRAWING BORDER)

CONNECT TO EXISTING 8" WATER MAIN WITH
6"x8" TAPPING SLEEVE AND VALVE (TYP.)

N = 14933529.44
E = 1367653.87

N = 14933528.04
E = 1367827.53

N = 14933527.43
E = 1367904.03

N = 14933525.35
E = 1368162.77

N = 14933522.21
E = 1368503.80

N = 14933519.21
E = 1368777.54

NEW WATER METER
(28 GPM DEMAND)

5TH STREET

F.H.

N = 14933463.34
E = 1367815.94

NEW RAMP/DOCK
FACILITY 10830

LIMITS OF CONSTRUCTION

FIRE HYDRANTS SHALL BE 4' OFF OF
EDGE OF PAVEMENT (2' INSIDE OF
FENCE) (TYP. NORTH SIDE)

FIRE HYDRANTS SHALL BE
2' INSIDE OF FENCE

COTG

NEW 4" SANITARY
SEWER SERVICE
LINE @ 2.4% SLOPE

NEW BUILDING 829
F.F. ELEV. 4763.50

NEW 2" DOMESTIC
WATER SERVICE LINE

N = 14933452.31
E = 1367818.02

N = 14933506.10
E = 1367587.80

NEW DLA PARKING LOT
FACILITY 5830

EXIST. SSMH
(PRESSURE SEWER MANHOLE)
RIM=4761.61
BOTTOM OF MH=4757.01
(NO INVERT OUT VISIBLE)

"G" AVENUE

"F" AVENUE

EXIST. SSMH
RIM=4760.41
FL(8" N)=4755.69
FL(8" S)=4755.69

EXIST. SSMH
RIM=4759.17
FL(8" E)=4750.65
FL(8" S)=4750.65

EXIST. SSMH
RIM=4758.98
FL(8" N)=4750.19
FL(8" S)=4750.19

EXIST. SSMH
RIM=4767.13
FL(8" N)=4760.38
FL(8" SW)=4760.38

EXIST. SSMH
RIM=4761.46
FL(8" NE)=4757.38
FL(8" W)=4757.38

EXIST. SSMH
RIM=4761.23
FL(8" E)=4752.07
FL(8" W)=4752.07

EXIST. SSMH
RIM=4761.50
FL(8" E)=4753.30
FL(8" W)=4753.30

6TH STREET

EXIST. BUILDING

BENCHMARK
CP #3015
(FOUND USGOVT BM MARKER)
N=14932791.13
E=1368973.62
ELEV.=4767.79

PLAN NORTH

1 SITE UTILITY PLAN

SCALE:1"=50'

1. FOR LEGEND AND NOTES, SEE C-001-1
2. FOR SANITARY SEWER PROFILE, SEE CU301-1.

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KONCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE UTILITY PLAN

CU101-1

SHEET 20 OF 66

FINAL SUBMITTAL

5 4 3 2 1

A B C D

CP #3013
(FOUND ALUMINUM CAP
USAF GEO MARKER)
N=14934514.44
E=1367570.78
ELEV.=4774.03
(CP #3013 LOCATION IS 1019.58' FARTHER
NW FROM LOCATION SHOWN ALONG
BASE LINE BEYOND DRAWING BORDER)

EXIST. SSMH
(PER BASE UTILITIES MAP
UNABLE TO LOCATE)

5TH STREET

LIMITS OF CONSTRUCTION

NEW RAMP/DOCK
FACILITY 10830

NEW BUILDING 829
F.F. ELEV. 4763.50

NEW DLA PARKING LOT
FACILITY 5830

EXIST. SSMH
(PRESSURE SEWER MANHOLE)
RIM=4761.61
BOTTOM OF MH=4757.01
(NO INVERT OUT VISIBLE)

CONNECT TO EXISTING 8" WATER MAIN
WITH 8" TAPPING SLEEVE AND VALVE

NEW 8" DOMESTIC WATER
MAIN LINE - CAN BE IN
SAME TRENCH USED TO
REMOVE ABANDONED LINE

FIRE HYDRANTS SHALL BE 4' OFF
OF EDGE OF PAVEMENT (6' INSIDE
OF FENCE) (TYP. SOUTH SIDE)

6"x8" TEE (TYP.)

N = 14933255.94
E = 1367954.28

N = 14933254.79
E = 1368253.84

N = 14933253.64
E = 1368553.32

N = 14933252.49
E = 1368853.04

N = 14933257.10
E = 1367651.45

N = 14933257.26
E = 1367610.58

N = 14933252.36
E = 1368886.45

EXIST. SSMH
RIM=4760.41
FL(8" N)=4755.69
FL(8" S)=4755.69

EXIST. SSMH
RIM=4759.17
FL(8" E)=4750.65
FL(8" S)=4750.65

EXIST. SSMH
RIM=4758.98
FL(8" N)=4750.19
FL(8" S)=4750.19

"G" AVENUE

"F" AVENUE

CONNECT TO EXISTING 12" WATER MAIN WITH
8"x12" TAPPING SLEEVE AND VALVE (DO NOT
ATTACH TO ABANDONED WATER MAIN)

EXIST. SSMH
RIM=4767.13
FL(8" N)=4760.38
FL(8" SW)=4760.38

EXIST. SSMH
RIM=4761.46
FL(8" NE)=4757.38
FL(8" W)=4757.38

EXIST. SSMH
RIM=4761.23
FL(8" E)=4752.07
FL(8" W)=4752.07

EXIST. SSMH
RIM=4761.50
FL(8" E)=4753.30
FL(8" W)=4753.30

6TH STREET

EXIST. BUILDING

BENCHMARK
CP #3015
(FOUND USGOVT BM MARKER)
N=14932791.13
E=1368973.62
ELEV.=4767.79

F.H.

PLAN NORTH

1 SITE UTILITY PLAN FOR COORDINATION PURPOSES
REPAIR PROJECT BY OTHERS (N.I.C.)

SCALE:1"=50'

1. FOR LEGEND AND NOTES, SEE C-001-1
2. THIS SHEET REFLECTS REPAIR WORK TO BE COMPLETED BY OTHERS PRIOR TO CONTRACTOR ARRIVING ON SITE (FOR COORDINATION PURPOSES ONLY).

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KONCANNON
CHECKED BY: M. TARINI
SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

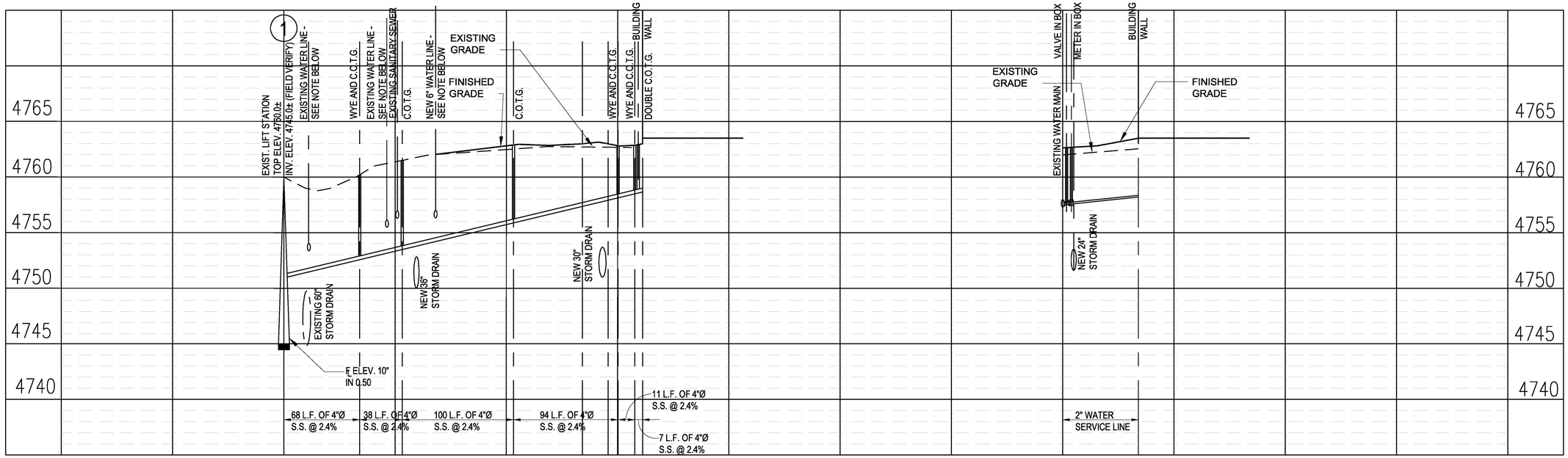
DDHU LOT 4 IMPROVEMENTS PACKAGE 1

SITE UTILITY PLAN FOR COORDINATION PURPOSES
REPAIR PROJECT BY OTHERS (N.I.C.)

CU102-1

SHEET 21 OF 66

FINAL SUBMITTAL



SANITARY SEWER PROFILE

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

50' 0' 50' 100'

5' 0' 5' 10'

NOTE: FIELD VERIFY ALL EXISTING UTILITY DEPTHS PRIOR TO INSTALLING ANY NEW SANITARY SEWER TO CHECK AGAINST GRADE CONFLICTS. EXISTING UTILITY DEPTHS ARE ESTIMATED BASED ON STANDARD BURY DEPTHS. NOTIFY C.O.R. OF ALL DIFFERENCES FOUND.

NOTE: ENSURE SANITARY SEWER IS AT LEAST 18" CLEAR UNDER WATER LINE. ADJUST SANITARY SEWER DOWN AS NECESSARY. FIELD VERIFY DEPTHS OF ALL WATER LINES ON ROUTE PRIOR TO INSTALLING ANY SANITARY SEWER TO CHECK AGAINST GRADE CONFLICTS.

DOMESTIC WATER SERVICE LINE PROFILE

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

50' 0' 50' 100'

5' 0' 5' 10'

HOOEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SEIL CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

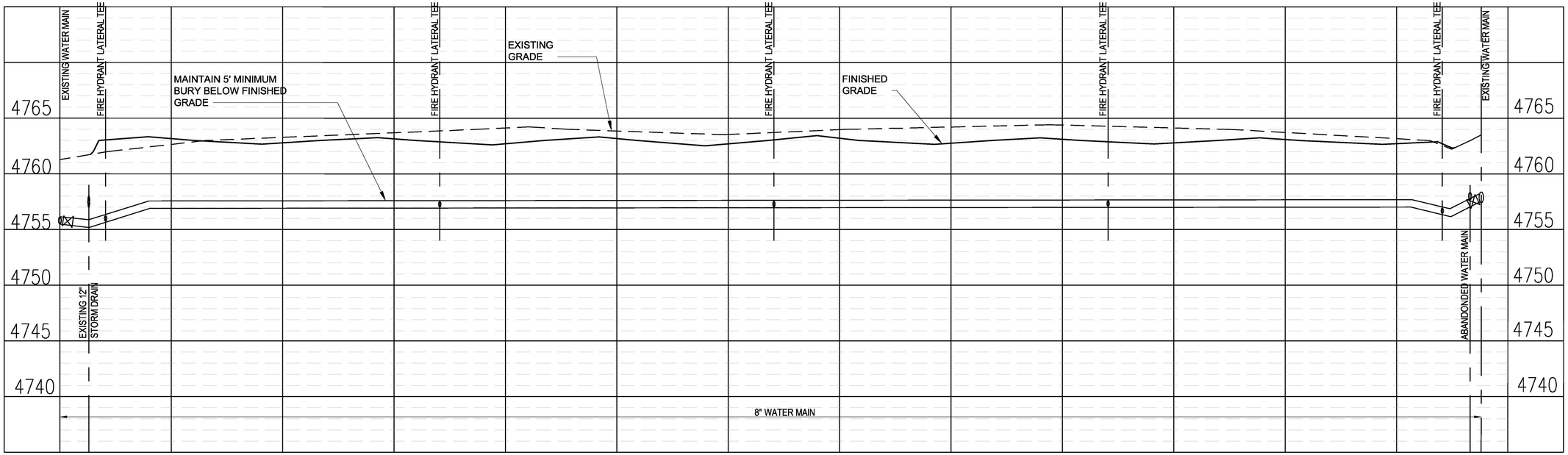
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SANITARY SEWER AND
DOMESTIC WATER PROFILE

CU301-1

SHEET 22 OF 66

FINAL SUBMITTAL



NOTE: FIELD VERIFY ALL EXISTING UTILITY DEPTHS PRIOR TO INSTALLING ANY NEW SANITARY SEWER TO CHECK AGAINST GRADE CONFLICTS. EXISTING UTILITY DEPTHS ARE ESTIMATED BASED ON STANDARD BURY DEPTHS. NOTIFY C.O.R. OF ALL DIFFERENCES FOUND.

NOTE: THIS SHEET REFLECTS REPAIR WORK TO BE COMPLETED BY OTHERS PRIOR TO CONTRACTOR ARRIVING ON SITE (FOR COORDINATION PURPOSES ONLY).

DOMESTIC WATER MAIN PROFILE FOR COORDINATION PURPOSES REPAIR PROJECT BY OTHERS (N.I.C.)

HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

50' 0' 50' 100'

5' 0' 5' 10'

DESCRIPTION | DATE | APPR. | MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SEIL CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

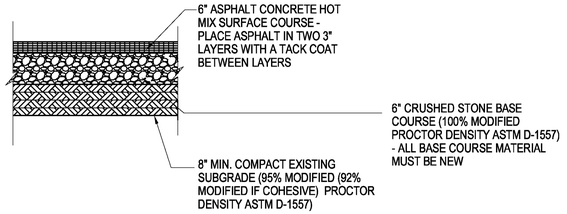
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

DOMESTIC WATER PROFILE
FOR COORDINATION PURPOSES
REPAIR PROJECT BY OTHERS (N.I.C.)

CU302-1

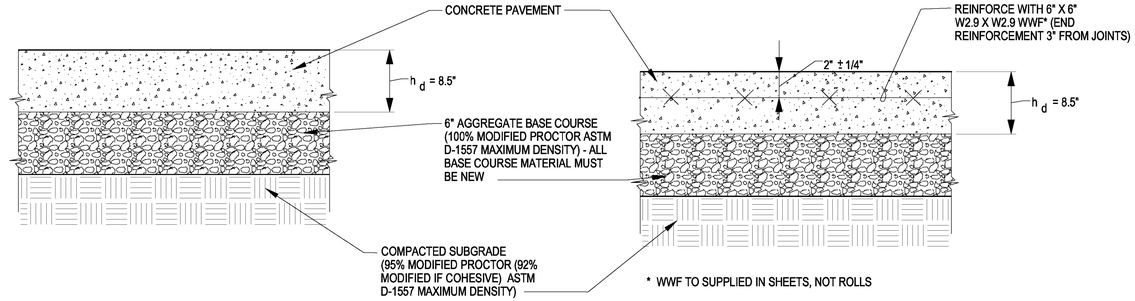
SHEET 23 OF 66

FINAL SUBMITTAL



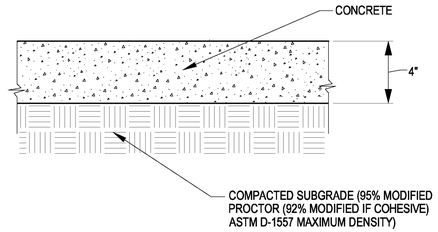
NOTE: WHERE FILL IS TO BE PLACED ON EXISTING SUBGRADE, FULL DEPTH COMPACTION OF SELECT MATERIAL IS REQUIRED (SEE EARTHWORK SECTION OF SPECS.)

1 ASPHALT PAVING DESIGN SECTION
NOT TO SCALE

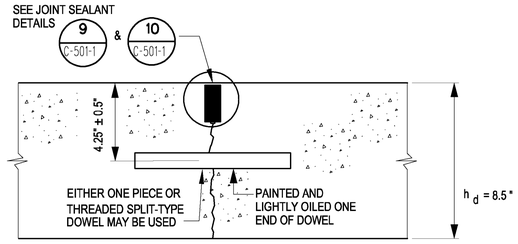


2 NON-REINFORCED CONCRETE PAVEMENT SECTION
NOT TO SCALE

3 REINFORCED CONCRETE PAVEMENT SECTION
NOT TO SCALE



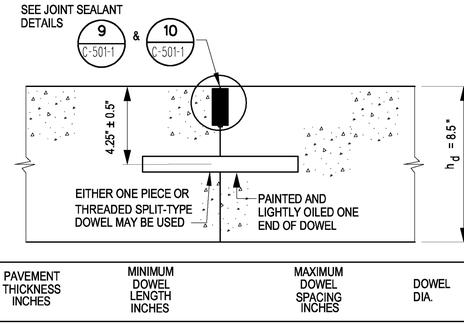
4 SIDEWALK SECTION
NOT TO SCALE



PAVEMENT THICKNESS INCHES	MINIMUM DOWEL BAR LENGTH INCHES	MAXIMUM DOWEL BAR SPACING INCHES	DOWEL DIA.
8" TO 11"	16"	12"	1-INCH

NOTES :
1. DOWELS ARE TO BE SUPPORTED BY BASKETS.

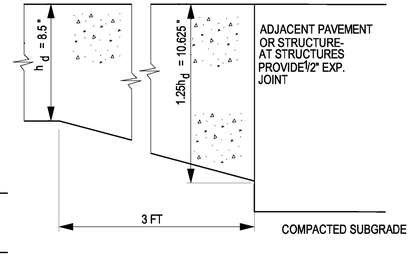
5 DOWELED CONTRACTION JOINT DETAIL
NOT TO SCALE



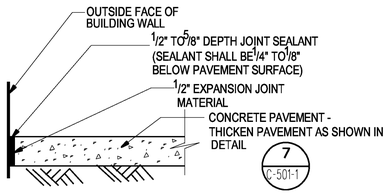
PAVEMENT THICKNESS INCHES	MINIMUM DOWEL LENGTH INCHES	MAXIMUM DOWEL SPACING INCHES	DOWEL DIA.
8" TO 11"	16	12	1-INCH

NOTES :
1. THE DOWELS SHALL BE DRILLED AND GROUTED ON ONE END UNLESS INSERTED DURING CONCRETE PLACEMENT.
2. SEE PLAN FOR LOCATION OF TIED JOINTS.

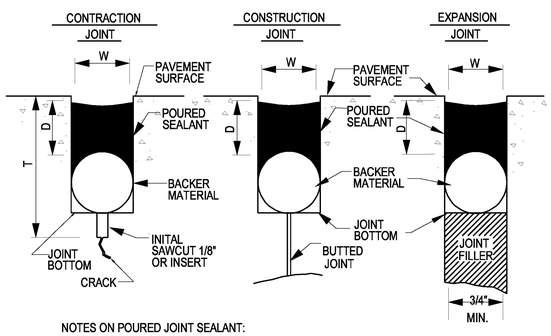
6 DOWELED CONSTRUCTION JOINT DETAIL
NOT TO SCALE



7 THICKENED FREE EDGE
NOT TO SCALE

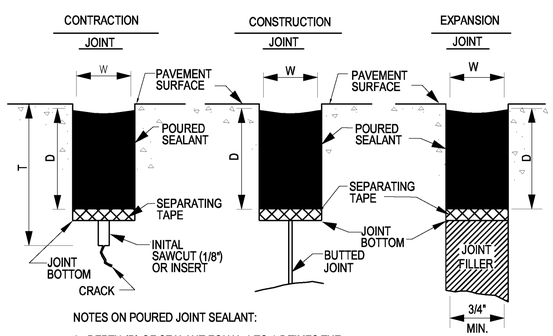


8 EXPANSION JOINT AT STRUCTURE DETAIL
NOT TO SCALE



NOTES ON POURED JOINT SEALANT:
1. DEPTH (D) OF SEALANT EQUAL 1 TO 1.5 TIMES THE WIDTH (W) OF THE SEALANT RESERVIOR.
2. WIDTH (W) OF SEALANT RESERVIOR IS 1/2" MIN TO 5/8" MAX.
3. DEPTH OF INITIAL SAWCUT (T) OR INSERT TYPE JOINT FORMER (CONTRACTION JOINT), 1/4 THICKNESS OF SLAB WITH PAVEMENT LESS THAN 18".
4. TOP OF SEALANT WILL BE 1/4" BELOW TOP OF PAVEMENT.

9 POURED JOINT SEALANT DETAILS FOR RIGID PAVEMENT (WITH BACKER MATERIAL)
NOT TO SCALE



NOTES ON POURED JOINT SEALANT:
1. DEPTH (D) OF SEALANT EQUAL 1 TO 1.5 TIMES THE WIDTH (W) OF THE SEALANT RESERVIOR.
2. WIDTH (W) OF SEALANT RESERVIOR IS 1/2" MIN TO 5/8" MAX.
3. DEPTH OF INITIAL SAWCUT (T) OR INSERT TYPE JOINT FORMER (CONTRACTION JOINT), 1/4 THICKNESS OF SLAB WITH PAVEMENT LESS THAN 18".
4. TOP OF SEALANT WILL BE 1/4" BELOW TOP OF PAVEMENT.

10 POURED JOINT SEALANT DETAILS FOR RIGID PAVEMENT (SEPARATING TAPE)
NOT TO SCALE

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

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SEIL CODE:
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CAPITAL PROJECT NO.
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

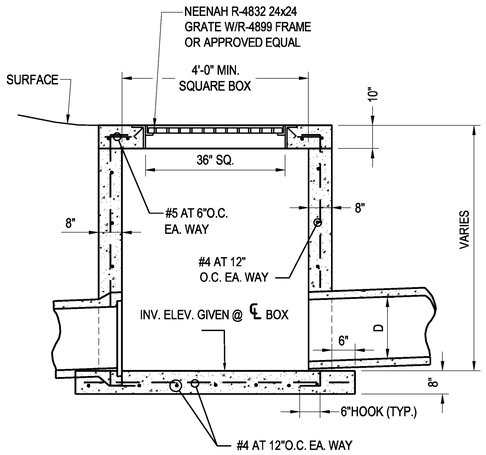
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE DETAILS

C-501-1

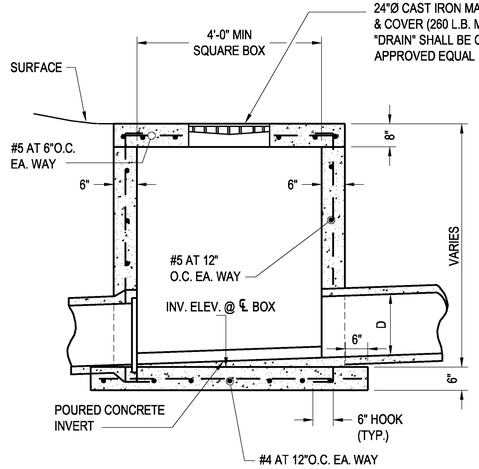
SHEET 24 OF 66

FINAL SUBMITTAL



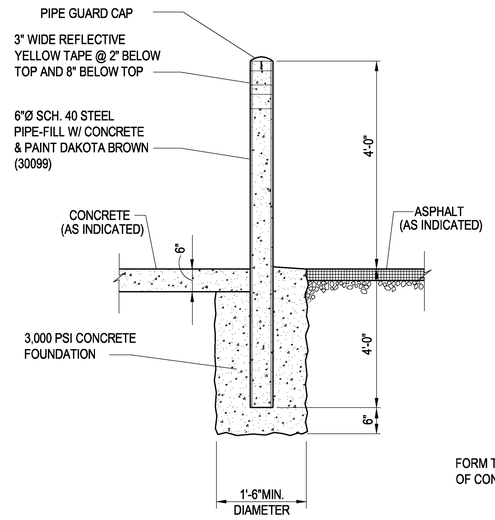
NOTE:
CATCH BASINS 4'-0" DEEP AND GREATER SHALL HAVE MANHOLE STEPS CAST IN WALL.

1 CATCH BASIN DETAIL
NOT TO SCALE

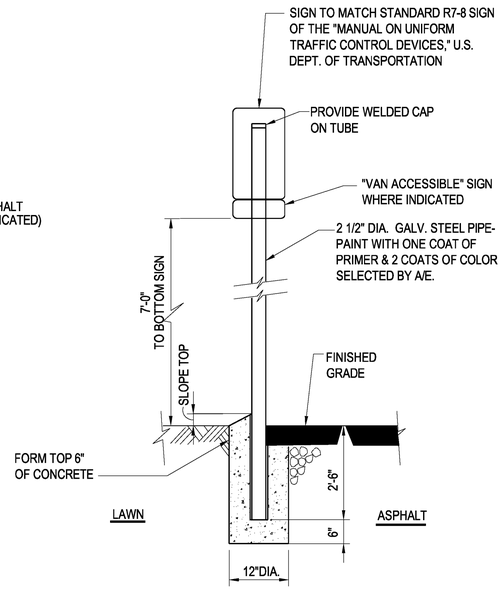


NOTE:
MANHOLE 4'-0" DEEP & GREATER SHALL HAVE STANDARD MANHOLE STEPS CAST IN SIDE OF BOX.

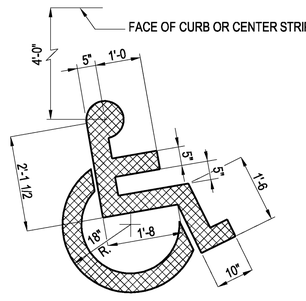
2 NEW MANHOLE DETAIL
NOT TO SCALE



3 BOLLARD DETAIL
NOT TO SCALE

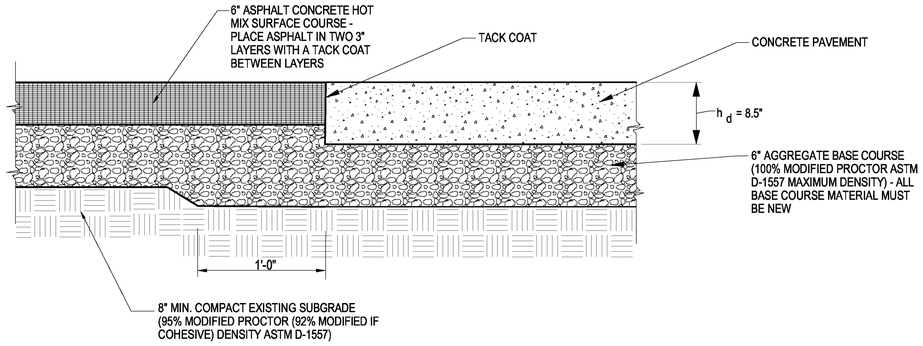


4 HANDICAPPED PARKING SIGN DETAIL
NOT TO SCALE

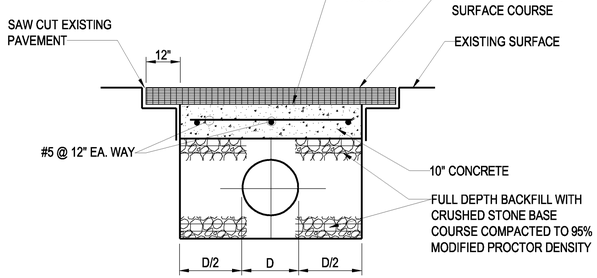


NOTE: SYMBOL TO BE PAINTED WITH WHITE NON- REFLECTIVE TRAFFIC PAINT

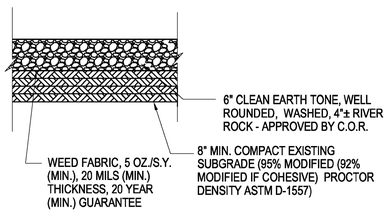
5 HANDICAP SYMBOL DETAIL
NOT TO SCALE



6 CONCRETE/ASPHALT JUNCTION DETAIL
NOT TO SCALE



7 STREET REPAIR DETAIL
NOT TO SCALE



NOTE: WHERE FILL IS TO BE PLACED ON EXISTING SUBGRADE, FULL DEPTH COMPACTION OF SELECT MATERIAL IS REQUIRED (SEE EARTHWORK SECTION OF SPECS.)

8 LANDSCAPING STONE SECTION
NOT TO SCALE

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: J. PETERSON
DRAWN BY: S. KINCANNON
CHECKED BY: M. TARINI
SITE CODE:
DATE: 21 OCT 2020
CAPITAL PROJECT NO.:
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

SITE DETAILS

C-502-1

SHEET 25 OF 66

FINAL SUBMITTAL

STRUCTURAL DESIGN CRITERIA

BUILDING CODE: UFC 1-200-01 DoD BUILDING CODE (BASED ON 2015 IBC)

RISK CATEGORY (ADMINISTRATION BUILDING) (2015 IBC TABLE 1604.5): (UFC 3-301-01 TABLE 2-2): I

GRAVITY LOADS (REFERENCE: 2015 IBC & ASCE 7-10): (REFERENCE: UFC 3-301-01):

DEAD LOADS:	UNIFORM
ADMINISTRATION ROOF	15 PSF
LIVE LOADS:	
ADMINISTRATION BUILDING ROOF (SNOW):	20.4 PSF (NON-REDUCIBLE)
SNOW LOADS:	
GROUND SNOW LOAD	Pg = 47 PSF
FLAT ROOF SNOW LOAD	Pf = 23.7 PSF
SNOW LOAD IMPORTANCE FACTOR	Is = 0.80
SNOW EXPOSURE FACTOR	Ce = 0.9
THERMAL FACTOR	Ct = 1.0

LATERAL LOADS (REFERENCE: 2015 IBC & ASCE 7-10): (REFERENCE: UFC 3-301-01):

WIND:	
ULTIMATE WIND SPEED	Vult = 105 MPH
NOMINAL WIND SPEED	Vasd = 81.3 MPH
EXPOSURE	C
INTERNAL PRESSURE COEFFICIENTS	+/- 0.18 (ADMINISTRATION BUILDING)
COMPONENTS & CLADDING WIND LOAD	SEE SHEETS S-101-1
SEISMIC:	
SEISMIC IMPORTANCE FACTOR	Ie = 1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS	Ss = 1.29
	S1 = 0.43
SITE CLASS	D
DESIGN SPECTRAL RESPONSE ACCELERATIONS	SDS = 0.860
	SD1 = 0.450
SEISMIC DESIGN CATEGORY	D
SEISMIC FORCE RESISTING SYSTEM	(From ASCE 7 Table 12.2-1)
ADMINISTRATION BUILDING – COLD FORMED METAL STUD SHEAR WALLS SHEATHED WITH GYPSUM BOARD	
DESIGN BASE SHEAR	V = 0.430W
SEISMIC RESPONSE COEFFICIENT	Cs = 0.43
RESPONSE MODIFICATION COEFFICIENT	R = 2
ANALYSIS PROCEDURE	EQUIVALENT STATIC FORCE

SYSTEMS AND COMPONENTS REQUIRING SPECIAL INSPECTION: SEE SPECIFICATION SECTION 01 45 35

STRUCTURAL FIRE RATING REQUIREMENTS:

NONE, ADMINISTRATION BUILDING IS TYPE IIB NONCOMBUSTIBLE.

STRUCTURAL DESIGN APPROACH:

ADMINISTRATION BUILDING

ROOF CONSTRUCTION CONSISTS OF ARCHITECTURAL ROOFING SYSTEM OVER 1.5" METAL ROOF DECK SPANNING BETWEEN COLD FORMED STEEL TRUSSES WHICH BEAR ON METAL STUD WALLS WHICH BEAR ON CONTINUOUS CONCRETE SPREAD FOOTINGS. LATERAL STABILITY IS PROVIDED BY THE METAL DECK DIAPHRAGM, BENT PLATES USED AS COLLECTORS, AND COLD FORMED METAL STUD SHEAR WALLS SHEATHED WITH GYPSUM BOARD.

DOCK AND RAMP

CONCRETE DOCK AND RAMP SLAB ON GRADE, WALLS, AND FOUNDATIONS WILL BE CONSTRUCTED.

STRUCTURAL GENERAL NOTES

A. SPECIAL INSPECTIONS:

1. QUALIFIED INSPECTORS SHALL CONDUCT SPECIAL INSPECTIONS AND TESTS AND FURNISH REPORTS AS SPECIFIED IN SECTION 01 45 35 AND IN ACCORDANCE WITH CHAPTER 17, INTERNATIONAL BUILDING CODE.
2. THE CONTRACTOR SHALL COORDINATE THE SPECIAL INSPECTIONS AND TESTING SERVICES WITH THE PROGRESS OF THE WORK, PROVIDE THE APPROPRIATE DOCUMENTATION AND PERFORM OTHER TASKS AS SPECIFIED IN SECTION 01 45 35.
3. CONSTRUCTION THAT REQUIRES CONTINUOUS INSPECTION PER SECTION 01 45 35 CAN NOT PROGRESS WITHOUT INSPECTORS PRESENT.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER INSPECTIONS OR TESTS IN THE SPECIFICATIONS, NOT LISTED IN THE SCHEDULE OF SPECIAL INSPECTION SERVICES IN SECTION 01 45 35.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIR, REINSPECTION AND RETESTING FOR ITEMS THAT DO NOT PASS THE INSPECTIONS OR TESTS.
6. SPECIAL INSPECTION SERVICES DO NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLIANCE WITH OTHER CONSTRUCTION DOCUMENT REQUIREMENTS OR REGULATORY REQUIREMENTS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF DEMOLITION, RECONSTRUCTION, INSPECTION AND TESTING OF ANY WORK COMPLETED WITHOUT INSPECTION AND TESTING AS SPECIFIED IN SECTION 01 45 35.

B. STABILITY DURING CONSTRUCTION, SHORING, & TEMPORARY STRUCTURES:

1. PERMANENT STABILITY OF THE BUILDING AND COMPONENTS IS NOT PROVIDED UNTIL ALL THE STRUCTURAL ELEMENTS ARE INSTALLED AS SHOWN ON THE CONTRACT DRAWINGS; PROVIDE STABILITY TO ALL NON-SELF SUPPORTING ELEMENTS AND SAFETY TO ALL WORKERS AND PROPERTY DURING CONSTRUCTION AND UNTIL ALL PERMANENT BRACING ELEMENTS ARE INSTALLED.
2. WHERE SHORING AND/OR TEMPORARY STRUCTURES ARE REQUIRED IN ORDER TO SATISFY THE CONTRACT REQUIREMENTS; TEMPORARY STRUCTURES SHALL BE DESIGNED AND BUILT WITHOUT EXTRA COST TO THE CONTRACT. THE DESIGN SHALL BE DONE BY A REGISTERED PROFESSIONAL ENGINEER.
3. THE TEMPORARY BRACING USED TO STABILIZE THE BUILDING DURING THE ERECTION PHASE SHALL BE DESIGNED FOR LOADS AS REQUIRED BY THE APPLICABLE CODES.
4. THE ANCHOR RODS FOR STEEL COLUMNS ARE NOT DESIGNED TO STABILIZE STRUCTURE BY PROVIDING FIXITY OF THE COLUMN BASE DURING ERECTION OF THE STEEL. PROVIDE TEMPORARY BRACING FOR STABILITY DURING THE ERECTION PHASE AND UNTIL ALL GRAVITY AND LATERAL LOAD RESISTING ELEMENTS ARE IN PLACE AND WELDING AND/OR BOLTING INSPECTION IS COMPLETE.
5. COMPLY WITH THE OSHA SAFETY STANDARDS FOR STEEL ERECTION FOR THE ERECTION OF THE BUILDING FRAME.

C. MISCELLANEOUS:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH DRAWINGS RELATING TO OTHER TRADES. CHECK AND COORDINATE DIMENSIONS, CLEARANCES, OPENINGS, PIPE SLEEVES, CURBS, ETC. WITH THE WORK OF OTHER TRADES.
2. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. EXAMINE THE DRAWINGS FOR REQUIRED OPENINGS AND PROVIDE FOR ALL OPENINGS WHETHER SHOWN ON THESE DRAWINGS OR NOT, AND VERIFY SIZE AND LOCATION OF ALL OPENINGS WITH ALL SUB-CONTRACTORS. NOMINAL PIPE SLEEVES THROUGH THE DECK WILL NOT REQUIRE FRAMING UNLESS THE OPENING EXCEEDS 10" IN DIAMETER.
3. WORK NOT INDICATED ON A PART OF THE DRAWING BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
4. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
5. ENSURE THAT ALL CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT PUT ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT THE CONCRETE REACHES THE FULL DESIGN STRENGTH AND ALL FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE.
6. THE DETAILS SHOWN AND DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN ALL AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS UNLESS NOTED OTHERWISE.
7. THE DETAILS ON THE CONTRACT DRAWINGS SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL BY THE A/E. IF PERMITTED, THE REVISED DETAILS AND CALCULATIONS SHALL BE DONE ONLY BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE A/E FOR APPROVAL.
8. ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL. INCOMPLETE SHOP DRAWINGS AND SHOP DRAWINGS THAT HAVE NOT BEEN REVIEWED BY THE CONTRACTOR WILL BE RETURNED WITHOUT REVIEW BY THE ARCHITECT/ENGINEER.

D. EARTHWORK:

1. FOUNDATION DESIGN IS BASED ON SOIL INVESTIGATION AND REPORT BY:
   AGEC, APPLIED GEOTECH
   600 WEST SANDY PARKWAY
   SANDY, UTAH 84070
   (801) 566-6399
2. EXCAVATION SHOULD BE INITIATED DURING DRIER SEASONS OF THE YEAR. POSITIVE SURFACE DRAINAGE IS IMPORTANT DURING THE INITIAL PHASES OF SITE GRADING AND SHOULD BE MAINTAINED DURING CONSTRUCTION AND FOLLOWING COMPLETION OF THE STRUCTURE TO PREVENT SURFACE PONDING AND SUBSEQUENT SATURATION OF THE SUB GRADE SOILS. IF CONSTRUCTION IS INITIATED DURING WETTER SEASONS OF THE YEAR, IT IS POSSIBLE THAT A PERCHED GROUND WATER CONDITION WILL EXIST AND MINOR SEEPAGE INTO EXCAVATIONS MAY OCCUR IN LOCALIZED AREAS.
3. THE SITE SHALL BE STRIPPED A MINIMUM OF 8", PROOF ROLLED, COMPACTED FILL PLACED, AND EXCAVATED AS REQUIRED FOR FOUNDATION. SEE SPECIFICATION DIVISION 31 FOR EARTHWORK REQUIREMENTS.
4. REMOVE EXISTING SUB GRADE MATERIAL AND FILL AS REQUIRED BY THE GEOTECH REPORT DOWN TO NATURAL SOIL AND EXTEND THE CUT THAT SAME DISTANCE AROUND THE PERIMETER OF THE BUILDING AND BACKFILL AS PER SPECIFICATION DIVISION 31, EARTHWORK, USING SPECIFIED BORROW MATERIAL.
5. TAKE ADEQUATE MEASURES TO ALLOW FOR WORKING SURFACE DURING CONSTRUCTION OF FOUNDATIONS AND SLAB-ON-GRADE, SUCH AS GRAVEL BED OF ADEQUATE DEPTH, ETC.
6. PROVIDE FOR DRAINAGE OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER, AND SEEPAGE. SOME GROUND WATER IS ANTICIPATED IN FOOTING EXCAVATIONS, AND THEY SHALL BE DRAINED OR PUMPED DRY BEFORE POURING CONCRETE.
7. PROVIDE AND INSTALL ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS. SHORING AND BRACING OF TRENCHES SHALL MEET THE REQUIREMENTS OF OSHA.
8. PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.
9. NOTIFY THE GENERAL CONTRACTORS CONSULTANT AND THE CONTRACTING OFFICER ONE WEEK PRIOR TO STARTING EXCAVATION.
10. BOTTOM OF ELEVATIONS FOR FOOTINGS GIVEN ARE FOR BIDDING PURPOSES ONLY. EXTERIOR FOOTINGS SHALL BE FOUNDED A MINIMUM OF 2.5 FEET BELOW EXISTING GRADE (FOR FROST DEPTH) IN THE NATURAL SOIL STRATUM (POORLY GRADED SAND WITH SILT). NET ALLOWABLE PRESSURE USED FOR DESIGN OF THE FOOTINGS IS 5 KSF. REFERENCE GEOTECHNICAL REPORT.
11. ALL FOUNDATION BEARING CONDITIONS SHALL BE VERIFIED AND APPROVED BY THE GENERAL CONTRACTOR'S GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
12. NO BACKFILLING SHALL BE DONE AGAINST FOUNDATION WALLS AND GRADE BEAMS UNTIL CONCRETE HAS ATTAINED ITS 28 DAYS STRENGTH.
13. IN NO CASE SHALL BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY FOUNDATION WALL.

E. CONCRETE AND REINFORCING STEEL:

1. THE DESIGN OF THE CONCRETE STRUCTURE IS BASED ON ACI 318-11.
2. ALL REINFORCING SHALL BE A-615 GRADE 60 STEEL, U.N.O.
3. ALL REINFORCING SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS OR STIRRUPS SHALL BE PROVIDED AS REQUIRED TO FURNISH SUPPORT FOR ALL BARS.
4. ALL REINFORCING BARS SHALL BE LAPPED 48 BAR DIAMETERS (24" MIN.), U.N.O. TERMINATE CONTINUOUS BARS AT NON CONTINUOUS END WITH STANDARD HOOKS.
5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE 1" FOR SLABS AND WALLS. ALL CONCRETE EXPOSED TO WEATHER OR EARTH SHALL HAVE CONCRETE COVER OF 2" FOR BARS LARGER THAN #5, 1-1/2" FOR #5 BARS OR SMALLER, AND 3" FOR ALL CONCRETE PLACED AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH, U.N.O. TOLERANCES SHALL BE AS PER ACI-318.
6. SUBMIT DRAWINGS SHOWING INTENDED POURING SEQUENCE AND LOCATION OF CONSTRUCTION JOINTS TO THE COR FOR APPROVAL.
7. PIPES OR CONDUITS PLACED IN FOUNDATIONS AND SLABS SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTERS. PIPES AND CONDUITS PLACED IN SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 OF SLAB THICKNESS. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE.
8. PROVIDE CORNER BARS IN ALL CONCRETE MEMBERS AT INTERSECTIONS. MATCH SIZE AND SPACING OF HORIZONTAL BARS IN THOSE MEMBERS.
9. LOCATION OF SLOTTED INSERTS, WELD PLATES AND ALL OTHER ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE COORDINATED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
10. REINFORCING BARS SHALL NOT BE WELDED.
11. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST ACI CODE AND DETAILING MANUAL.
12. VERIFY DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVE CURBS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.
13. PROVIDE SUPPORT FOR WELDED WIRE REINFORCEMENT IN SLAB ON GRADE AS REQUIRED TO MAINTAIN THE CLEAR COVER DIMENSIONS INDICATED.
14. ALL LAPS IN WELDED WIRE REINFORCEMENT SHALL BE ONE MESH PLUS TWO INCHES AT SPLICES.
15. PROVIDE STANDARD BAR CHAIRS AND SPACERS AT MAXIMUM 3'-0" CENTERS OR CLOSER AS REQUIRED FOR ALL SLABS AND BEAMS ABOVE GRADE.
16. AGGREGATE FOR CONCRETE SHALL NOT CONTAIN LIGNITE, STEEL, OR OTHER MATERIALS THAT MAY BE DETRIMENTAL TO THE CONCRETE.
17. ALKALI-SILICA REACTIVE (ASR) AGGREGATES ARE NOT ALLOWED.
18. MAXIMUM TOLERANCE FOR SLAB EDGES IS 1/2" +/- EXCEPT WHERE TIGHTER TOLERANCE IS REQUIRED FOR ARCHITECTURAL REASONS.
19. CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH THE SPECIFICATIONS. WHEN THE AIR TEMPERATURE IS OVER 85 DEGREES FOLLOW THE RECOMMENDATIONS OF ACI 305R. WHEN THE AIR TEMPERATURE IS BELOW 40 DEGREES FOLLOW THE RECOMMENDATIONS OF ACI 306R.
20. ALL WELDED WIRE REINFORCEMENT SHALL BE PROVIDED IN SHEETS. ROLLS ARE NOT ACCEPTABLE.
21. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (f'c):

USE	MINIMUM COMPRESSIVE STRENGTH
FOOTINGS	4500 PSI
EXTERIOR SLABS	4500 PSI
INTERIOR SLABS ON GRADE	4500 PSI

SEE SPECIFICATION SECTION 033000 FOR ADDITIONAL MIX DESIGN REQUIREMENTS.

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: J. STORY
DRAWN BY: S. MOORE
CHECKED BY: M. CALLAHAN
SITE CODE:
DATE: 21 OCT 2020
CAPITAL PROJECT NO.
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

STRUCTURAL DESIGN CRITERIA AND GENERAL NOTES

S-001-1

SHEET 26 OF 66

FINAL SUBMITTAL

GENERAL NOTES CONT.:

F. METAL DECKING, ROOF AND FLOORS, ETC.:

1. STEEL DECK:
   a. ROOF DECK - SEE SECTION 1 ON SHEET S-502 FOR SIZE AND ANCHORAGE.
2. SUSPENDED CEILINGS, LIGHT FIXTURES, EQUIPMENT, DUCTS, OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL ROOF DECK.
3. PROVIDE MINIMUM 3/16" X 8" BENT PLATES AT HIPS, VALLEYS, AND RIDGES AS REQUIRED TO SUPPORT AND CONNECT DECK TO STRUCTURE.
4. ROOF DECK ENDS SHALL BE BUTTED OR LAPPED OVER SUPPORTS.

G. COLD-FORMED STEEL (LIGHT-GAUGE) FRAMING:

1. THE DESIGN OF THE COLD FORMED STEEL FRAMING IS BASED ON AISI S100.
2. COLD-FORMED STEEL (CFS) STUDS AND JOISTS SHALL BE AS SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. TYPICAL STEEL EXTERIOR STUDS SHALL BE 600S162-43, AT 16" O.C. SEE SCHEDULES AND DETAILS ON SHEET S-503-1.
3. HORIZONTAL BRIDGING SHALL BE PROVIDED PER STUD AND LIGHT-GAUGE JOIST MANUFACTURER'S SPECIFICATION.
4. SEE SECTION 1 ON SHEET S-501-1 FOR CMU VENEER ANCHORAGE.
5. ALL MATERIAL SHALL BE COLOR CODED TO INDICATE THE GAUGE OF THE MATERIAL.

H. COLD-FORMED STEEL (LIGHT-GAUGE) TRUSSES:

1. CARE MUST BE EXERCISED DURING LIFTING TO PREVENT EXCESSIVE FLAT WISE BENDING OF THE TRUSSES. TRUSSES ARE NOT DESIGNED TO BEND IN THIS FASHION AND DAMAGE MAY RESULT IN LOCALIZED BUCKLING OF MEMBERS OR DAMAGE TO THE CONNECTIONS. IT IS RECOMMENDED THAT A SPREADER BAR, AT LEAST EQUAL TO ONE-HALF THE TRUSS LENGTH, BE USED IN THE LIFTING SLING. SLING LINES SHOULD CONNECT VERTICALLY DOWNWARD FROM THE TWO ENDS AND MID-POINT OF SPREADER BAR TO THE TRUSS TO BE LIFTED.
2. PERFORM ALL FIELD ERECTION OF TRUSSES, INCLUDING ITEMS SUCH AS PROPER HANDLING, SAFETY PRECAUTIONS, TEMPORARY BRACING TO PREVENT TOPPLING OR DOMINOING OF THE TRUSSES DURING ERECTION, AND ANY OTHER SAFEGUARDS OR PROCEDURES CONSISTENT WITH GOOD WORKMANSHIP AND GOOD BUILDING ERECTION PRACTICES.
3. THE PERMANENT STRUCTURAL CROSS-BRACING, TO ENSURE STABILITY TO THE TRUSSES SHALL BE IN ACCORDANCE WITH THE TRUSS MANUFACTURER'S PLANS.
4. INSTALL PERMANENT BRACING AND RELATED COMPONENTS TO ENABLE TRUSSES TO MAINTAIN DESIGN SPACE, WITHSTAND LIVE AND DEAD LOADS, INCLUDING LATERAL LOADS, AND TO COMPLY WITH OTHER INDICATED REQUIREMENTS.
5. IN ORDER TO DEVELOP THE FULL LOAD-CARRYING CAPACITY, ROOF TRUSSES MUST BE INSTALLED IN A STRAIGHT AND PLUMB CONDITION. THE PLUMB OF EACH TRUSS SHALL BE CHECKED WITH A BUILDER'S LEVEL AND ADJUSTED AT EACH TRUSS. A STRING LINE SHALL BE DRAWN ON THE BOTTOM CHORD BETWEEN SUPPORTING WALLS TO CHECK THE STRAIGHTNESS OF EACH TRUSS. THE TRUSS SHALL BE HELD IN CORRECT ALIGNMENT WITH THE SPECIFIED PERMANENT STRUT BRACING OF THE BOTTOM CHORD AND TEMPORARY STRUT BRACING OF TOP CHORD UNTIL SHEATHING IS INSTALLED.
6. DO NOT PLACE CONCENTRATED LOADS ATOP THE TRUSSES UNTIL ALL SPECIFIED BRACING HAS BEEN INSTALLED AND THE SHEATHING PERMANENTLY ANCHORED IN PLACE.
7. TRUSSES SHALL BE DESIGNED FOR THE LOADS NOTED IN THE DESIGN CRITERIA ON S-001-1 AND SHALL CONFORM TO APPLICABLE BUILDING CODES.
8. TRUSS MANUFACTURER SHALL ATTACH TAGS TO THE TRUSSES INDICATING LOCATIONS WHERE WEB BRACING AND PERMANENT LATERAL BRACING IS TO BE INSTALLED.
9. TRUSS MANUFACTURER SHALL DESIGN AND PROVIDE CONNECTOR MATERIAL AS REQUIRED TO FASTEN TRUSSES TO TRUSS SUPPORTS INCLUDING WALLS, BEAMS, AND GIRDER TRUSSES AND OTHER CONNECTOR MATERIAL REQUIRED BY THE TRUSS DESIGN BUT NOT SHOWN ON THE DRAWINGS.
10. TRUSSES SHALL BEAR DIRECTLY OVER STUDS. IF A TRUSS CENTERLINE IS MORE THAN TWO INCHES FROM THE CENTERLINE OF THE CLOSEST STUD, PROVIDE AN ADDITIONAL STUD DIRECTLY UNDER THE TRUSS BEARING.

I. POST-INSTALLED ANCHORS IN CONCRETE OR MASONRY:

1. POST-INSTALLED ANCHORS (MECHANICAL OR ADHESIVE) SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER-OF-RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS OR DOWELS. POST-INSTALLED ANCHORS SHALL BE BUILDING CODE COMPLIANT, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND INSPECTED PER THE APPLICABLE ICC-ES OR IAPMO UES EVALUATION REPORT.

DESCRIPTION	DATE	APPR.	MARK

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CHECKED BY: M. CALLAHAN
SITE CODE:
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PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

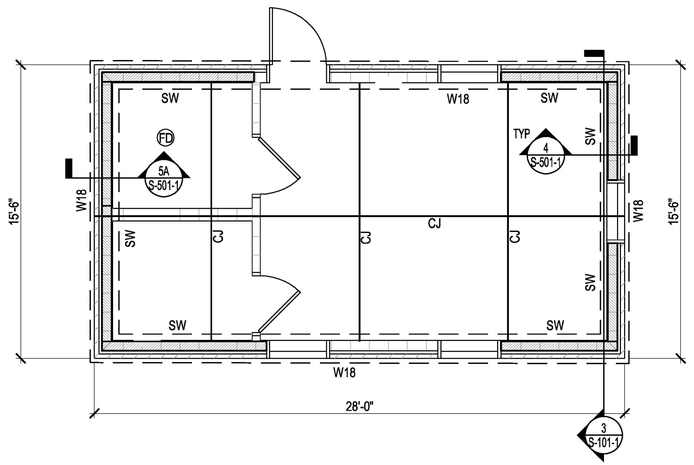
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

STRUCTURAL GENERAL NOTES

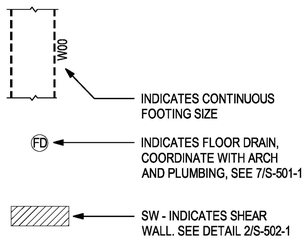
S-002-1

SHEET 27 OF 66

FINAL SUBMITTAL

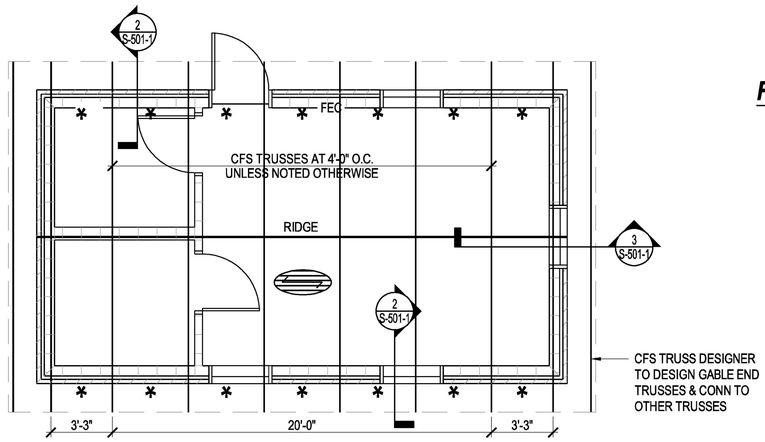


FOUNDATION AND SLAB LEGEND

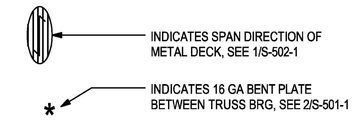


NOTE:
SEE ARCH FOR LOCATIONS OF CMU CONTROL JOINTS.

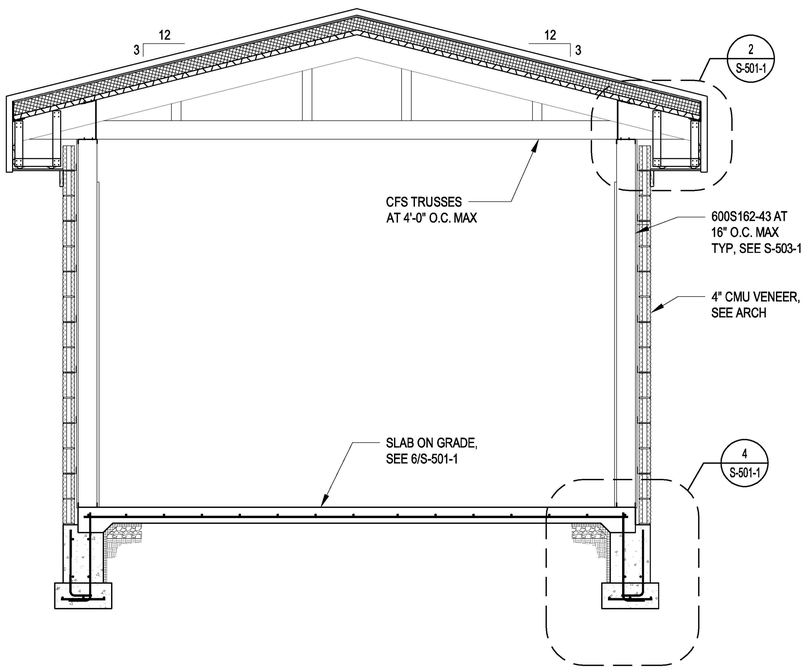
NORTH 1 ADMIN BLDG 829 FOUNDATION AND SLAB PLAN
1/4"=1'-0"



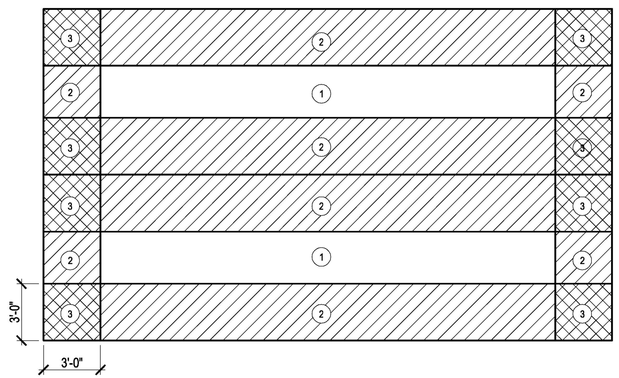
FRAMING LEGEND



NORTH 2 ADMIN BLDG 829 ROOF FRAMING PLAN
1/4"=1'-0"



3 SECTION THRU ADMIN BLDG 829
1/2"=1'-0"



GROSS WIND UPLIFT
(STRENGTH DESIGN)

		TRIBUTARY AREA (SQ. FT.)		
		10	50	100
ZONE 1		-22/+16 PSF	-21/+16 PSF	-20/+16 PSF
ZONE 2		-38/+16 PSF	-31/+16 PSF	-28/+16 PSF
ZONE 3		-57/+16 PSF	-48/+16 PSF	-45/+16 PSF

NOTES:

1. **ULTIMATE WIND SPEED: 105 MPH**
   NOMINAL WIND SPEED: 81 MPH
2. **SERVICE LEVEL LOADS MAY BE CALCULATED BY MULTIPLYING THE NUMBERS ABOVE BY 0.6**
3. **TRUSS MANUFACTURER MAY USE JOIST SELF WEIGHT IN ADDITION TO 2 PSF (SERVICE LOAD) TO RESIST WIND UPLIFT**

COMPONENTS AND CLADDING ROOF WIND PRESSURES

NORTH 4 WIND UPLIFT PLAN
1/4"=1'-0"

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

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

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: J. STORY
DRAWN BY: S. MOORE
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SITE CODE:
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PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

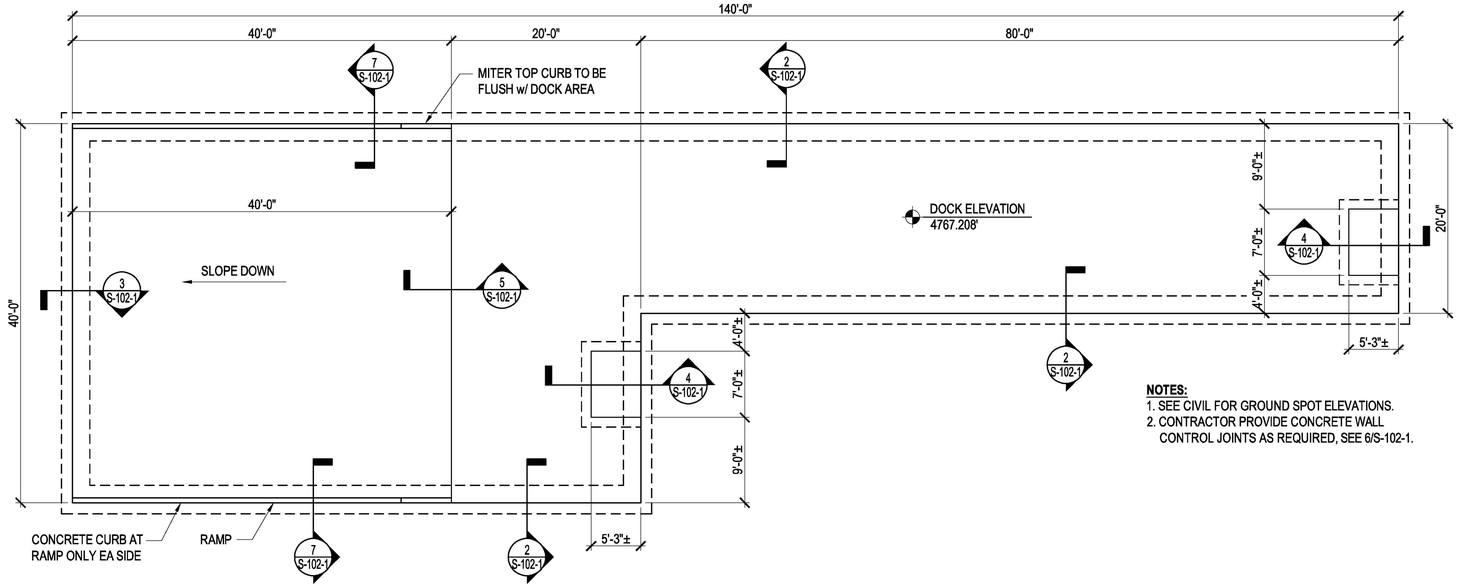
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PLANS AND SECTIONS

S-101-1

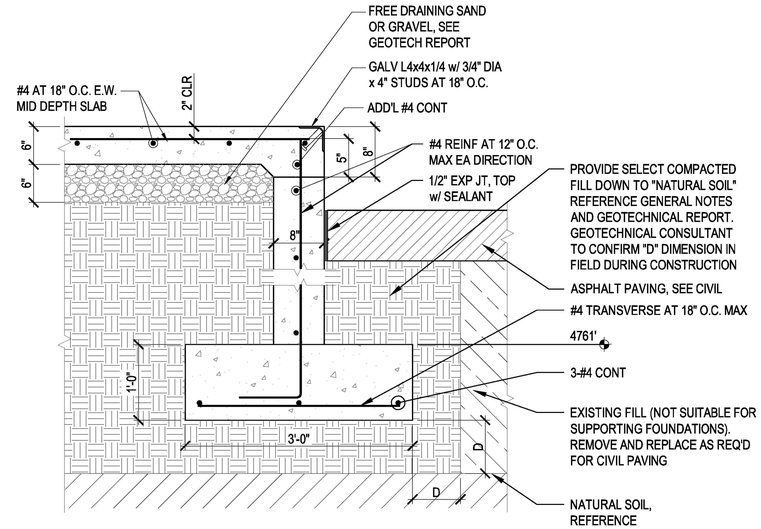
SHEET 28 OF 66

FINAL SUBMITTAL

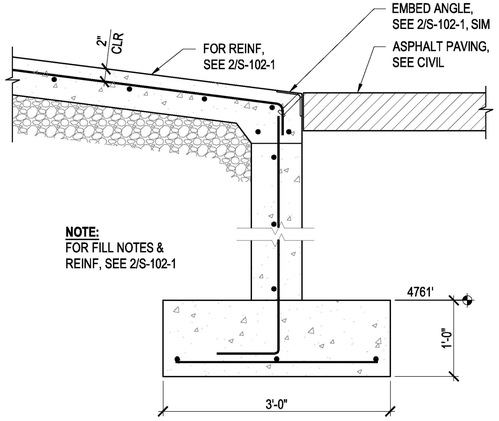


NORTH

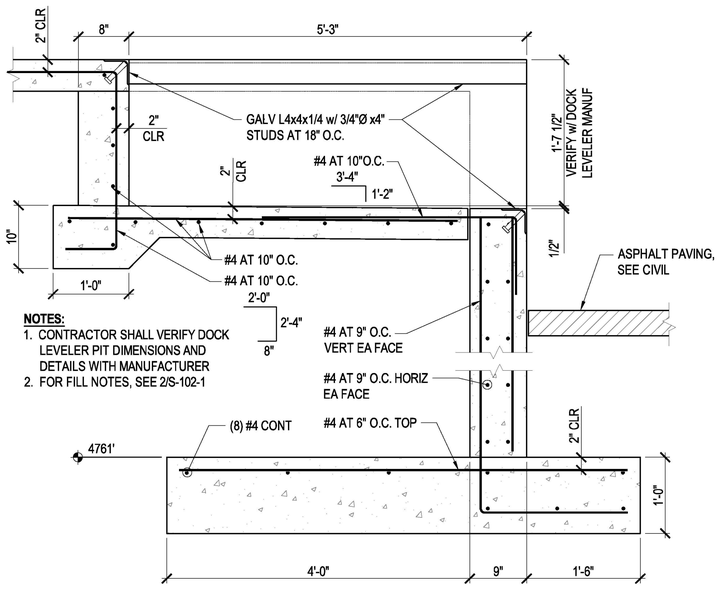
1 RAMP / DOCK FACILITY 10830 FOUNDATION AND SLAB PLAN
1/8"=1'-0"



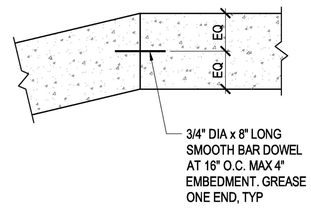
2 TYP DOCK SLAB AND FOUNDATION
1"=1'-0"



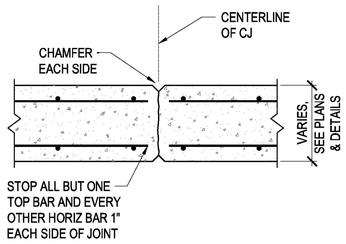
3 SECTION AT RAMP AND PAVEMENT
1"=1'-0"



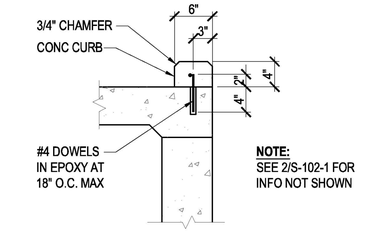
4 TYP DOCK LEVELER DETAIL
1"=1'-0"



5 DOWELS AT SLOPE TRANSITION
1"=1'-0"



6 TYP CONCRETE WALL CONTROL JOINT
1"=1'-0"



7 CONCRETE CURB AT RAMP
1"=1'-0"

SCALE: 1" = 1'-0"

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

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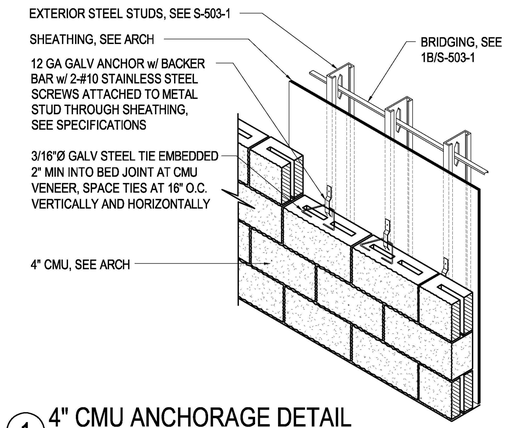
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PLANS AND SECTIONS

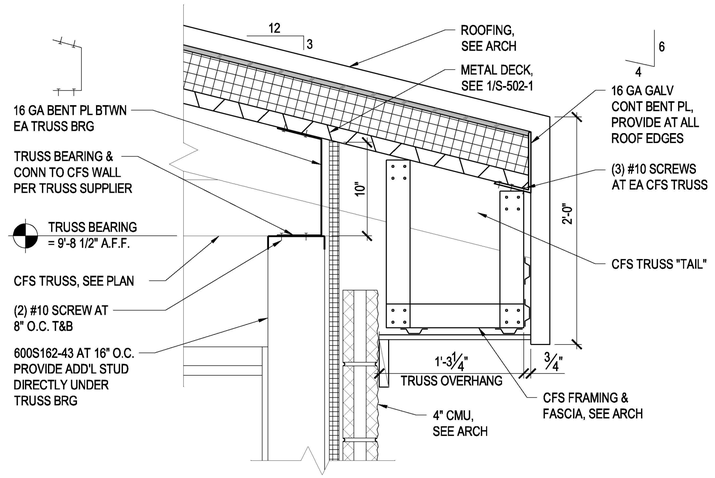
S-102-1

SHEET 29 OF 66

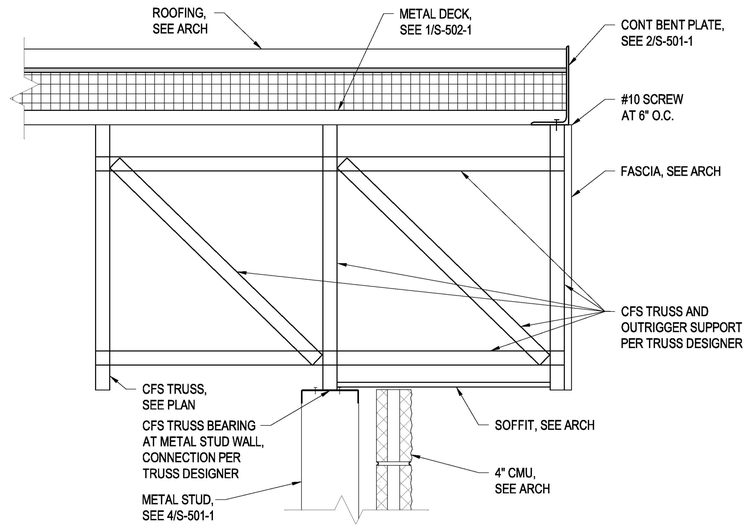
FINAL SUBMITTAL



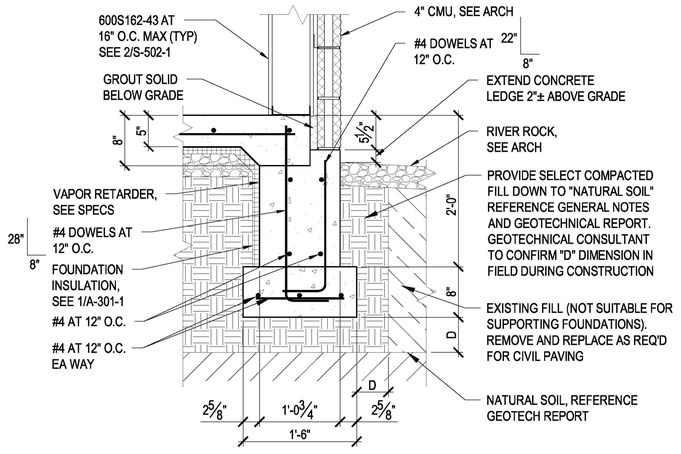
1 4" CMU ANCHORAGE DETAIL
NOT TO SCALE



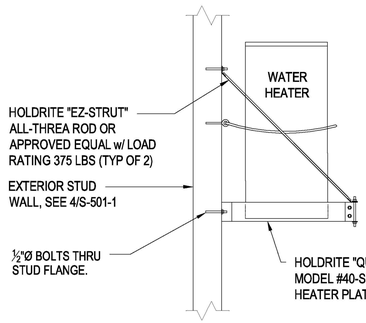
2 DETAIL AT ROOF OVERHANG
1-1/2"=1'-0"



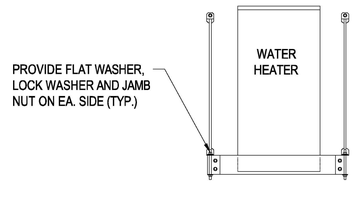
3 DETAIL AT TRUSS AND OUTRIGGER SUPPORT
1-1/2"=1'-0"



4 DETAIL AT FOOTING
1"=1'-0"



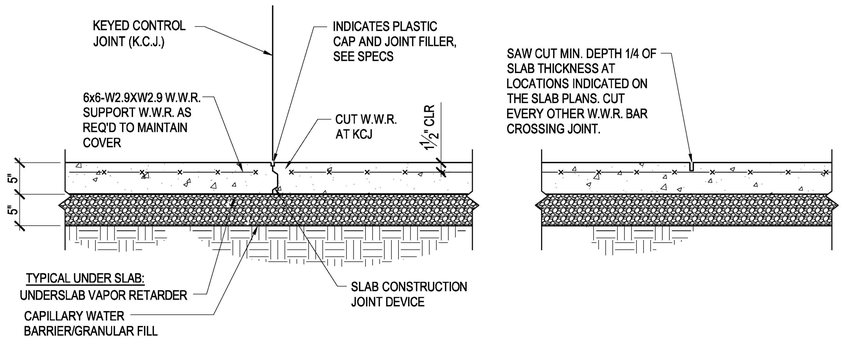
A SIDE VIEW



B FRONT VIEW

NOTE:
SEE PLUMBING FOR INSTALLATION INSTRUCTIONS

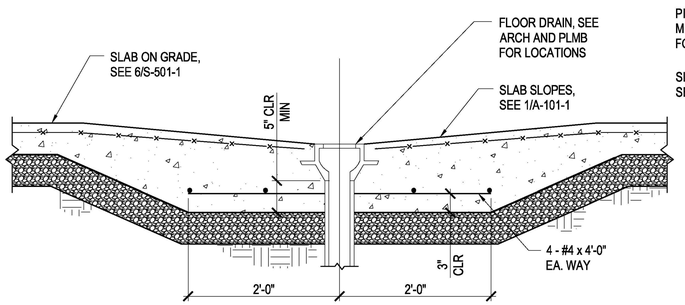
5 DETAIL AT WATER HEATER WALL MOUNT
1"=1'-0"



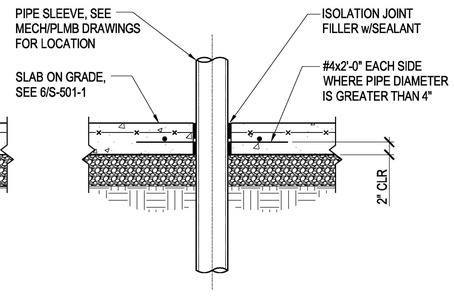
A K.C.J. (KEYED CONTROL JOINT)

B S.J. (SAWN JOINT)

6 TYP SLAB ON GRADE REINFORCING AND JOINT DETAILS
NOT TO SCALE



A FLOOR DRAIN AT SLOPED SLAB



B MECH/PLMB PIPE THROUGH SLAB

7 TYP SLAB ON GRADE PENETRATION DETAILS
NOT TO SCALE

0 6" 1' 2'
SCALE: 1 1/2" = 1'-0"

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

DATE	APPR.	MARK	DESCRIPTION

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DRAWN BY: S. MOORE
CHECKED BY: M. CALLAHAN
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PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

HILL AIR FORCE BASE

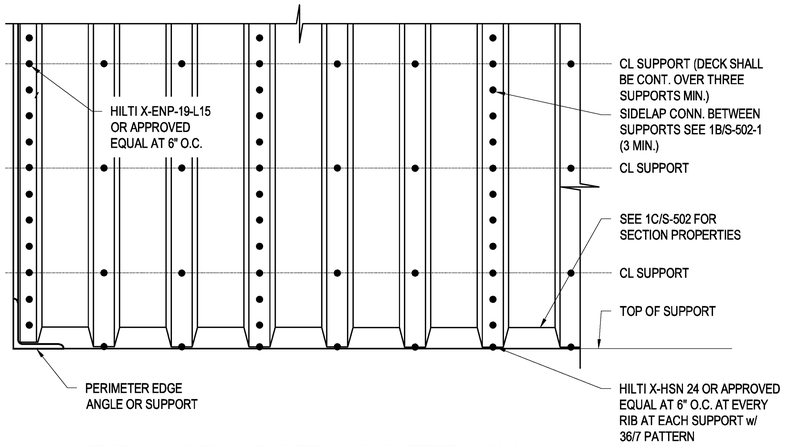
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

FOUNDATION AND FRAMING DETAILS

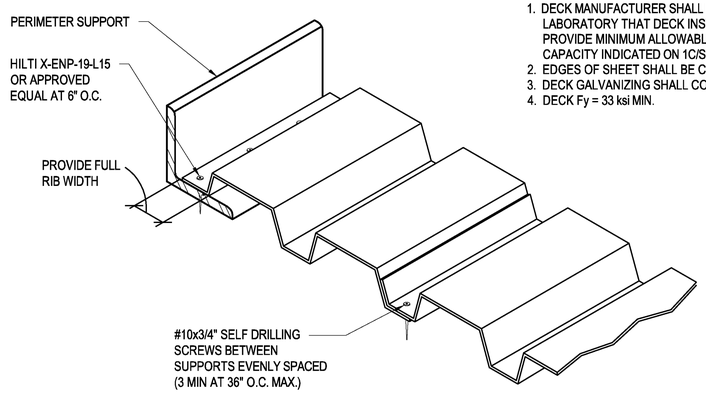
S-501-1

SHEET 30 OF 66

FINAL SUBMITTAL

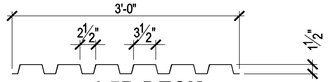


A TYPICAL DECK FASTENING PATTERN PLAN



B ISOMETRIC AT TYPICAL SIDE LAP

1. DECK MANUFACTURER SHALL PROVIDE CERTIFICATION FROM TESTING LABORATORY THAT DECK INSTALLED AS SHOWN ON PLANS SHALL PROVIDE MINIMUM ALLOWABLE DIAPHRAGM SHEAR TRANSFER CAPACITY INDICATED ON 1C/S-502.
2. EDGES OF SHEET SHALL BE COMPLETELY ENGAGED.
3. DECK GALVANIZING SHALL CONFORM TO ASTM A653 G60.
4. DECK Fy = 33 ksi MIN.



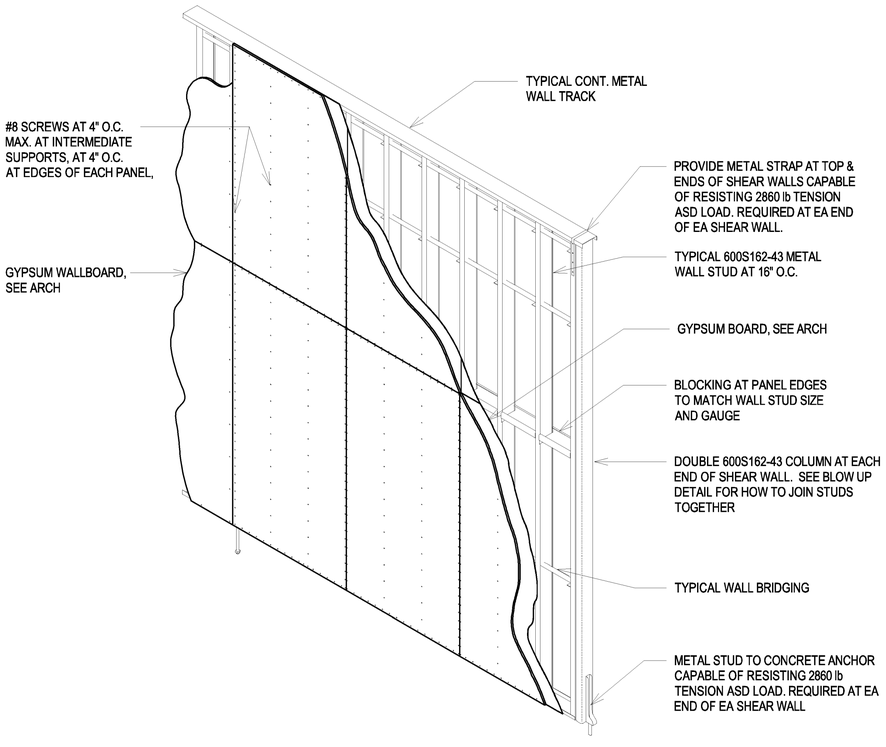
1.5B DECK

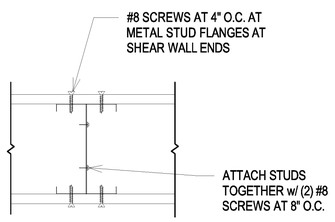
LOCATION	DEPTH	GAGE	DIAPHRAGM SHEAR VALUE	WEIGHT LBS./SQ. FT.	I	Sp	Sn
				GALVANIZED	$\frac{(IN^4)}{FT.}$	$\frac{(IN^3)}{FT.}$	$\frac{(IN^3)}{FT.}$
ROOF DECK	1.5"	20	464 PLF AT 4'-0" SPAN	2.14	0.211	0.234	0.247

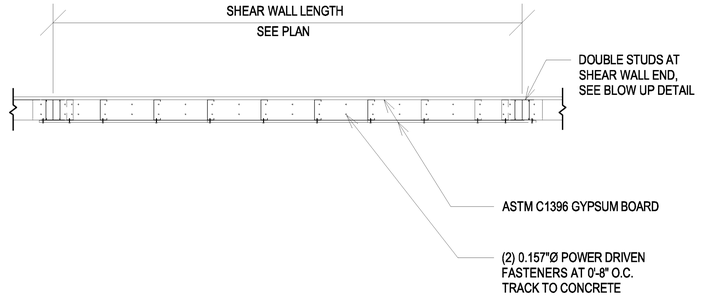
NOTES:
1.SECTION PROPERTIES SHOWN MAY VARY 10%.
2. DECK Fy = 33 ksi MIN.

C SECTION PROPERTIES

1 TYPICAL ROOF DECK ANCHORAGE
NOT TO SCALE







NOTES:
1. ASTM C1396 GYPSUM BOARD SHALL BE LOCATED BOTH SIDES OF WALL.

2. FASTENERS USED FOR ATTACHING THE GYPSUM BOARD TO STEEL FRAMING SHALL BE SELF-DRILLING/SELF TAPPING/#2 PILOT POINT BUGLE HEAD #8 SCREWS MINIMUM AND 1 1/4" MINIMUM LENGTH, COMPLYING WITH SAE J78 AND ASTM C954

3. STEEL FRAMING MEMBERS SHALL HAVE A MINIMUM YIELD OF 33 ksi AND TENSILE STRENGTH OF 45 ksi.

4. ALL PANEL EDGES, TOP AND BOTTOM SHALL BE FULLY BLOCKED BY FRAMING STUDS, TRACK, OR BLOCKING OF AT LEAST THE SAME GAUGE AS THE FRAMING MATERIAL.

5. SCREWS SHALL BE LOCATED 3/8" MINIMUM FROM PANEL EDGES. SCREW HEADS SHALL BE DRIVEN FLUSH WITH SURFACE. SCREWS SHALL PENETRATE AT LEAST THREE EXPOSED THREADS INTO FRAMING MEMBERS.

6. ALL PANELS SHALL BE FASTENED AT PANEL JOINT STUD WITHOUT STAGGERING THE FASTENERS AT EACH PANEL.

7. 1/8" MAX. JOINT SPACING BETWEEN PANELS.

2 TYPICAL DETAILS AT STUD METAL & GYPSUM BOARD SHEAR WALLS
NOT TO SCALE

DESIGNED BY: J. STORY
DRAWN BY: S. MOORE
CHECKED BY: M. CALLAHAN
SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

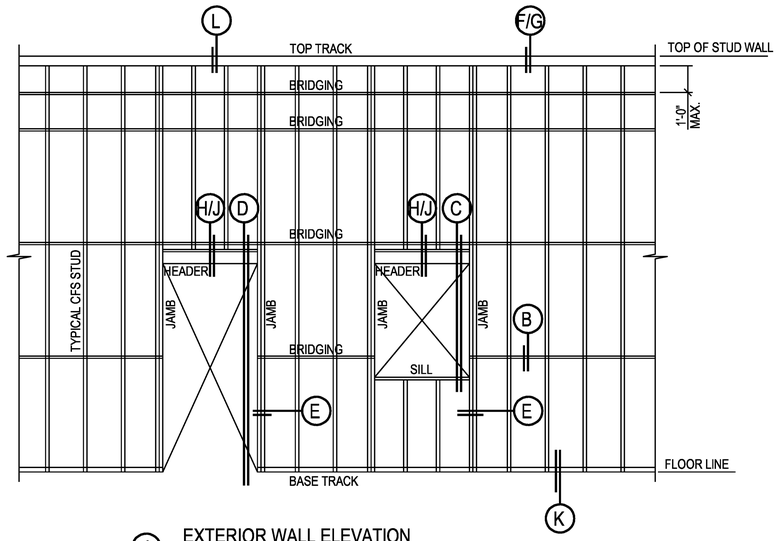
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP
HILL AIR FORCE BASE

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1
FRAMING DETAILS

S-502-1

SHEET 31 OF 66

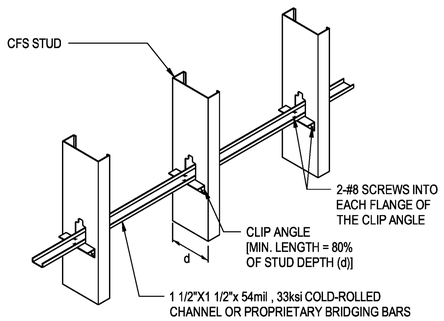
FINAL SUBMITTAL



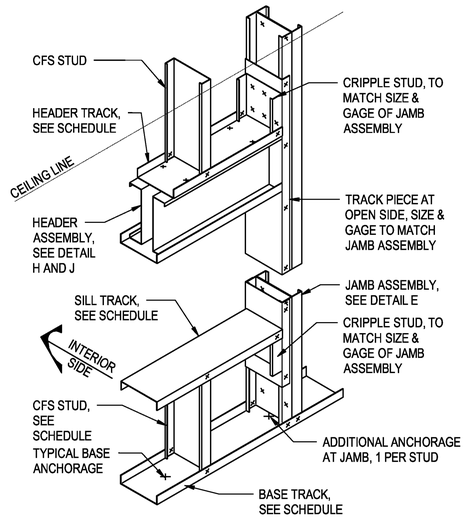
A EXTERIOR WALL ELEVATION

HORIZONTAL BRIDGING NOTES:

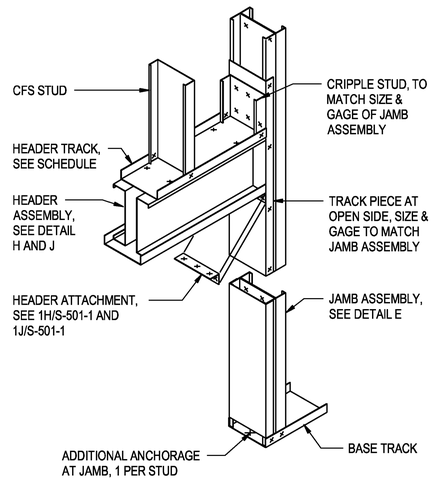
1. HORIZONTAL BRIDGING REQUIRED AT 4'-0" O.C. SPACING:
   a. ALONG ENTIRE HEIGHT OF ALL EXTERIOR AND LOAD BEARING WALLS UNLESS NOTED OTHERWISE.
   b. STUD KNOCKOUTS MUST ALIGN HORIZONTALLY FOR THE BRIDGING TO THREAD CONTINUOUSLY THROUGHOUT THE WALL LENGTH.
   c. INSTALL A CONTINUOUS ROW OF BRIDGING TO EACH STUD, AT UPPER-MOST KNOCKOUT, NOT MORE THAN 12 INCHES FROM TOP OF WALL.
   d. AT BRIDGING SPLICE USE 12" U CHANNEL INVERTED OVER CENTER OF SPLICE w/3-#10-16 SCREWS ON EACH SIDE OF SPLICE.



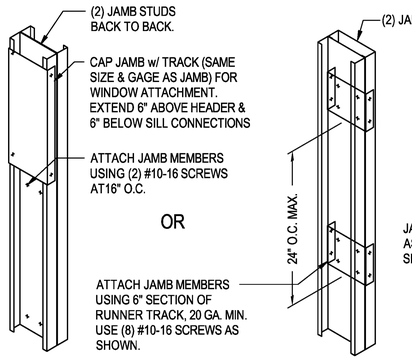
B TYPICAL BRIDGING



C TYPICAL WINDOW HEAD AND SILL

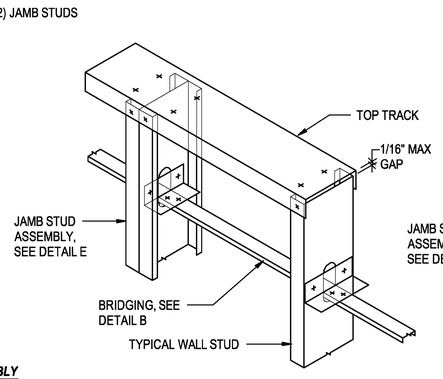


D TYPICAL DOOR HEAD

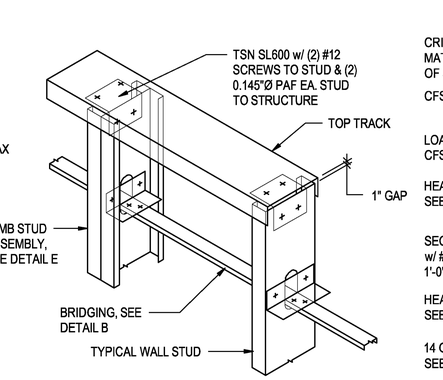


BACK TO BACK JAMB ASSEMBLY *FACE TO BACK JAMB ASSEMBLY*

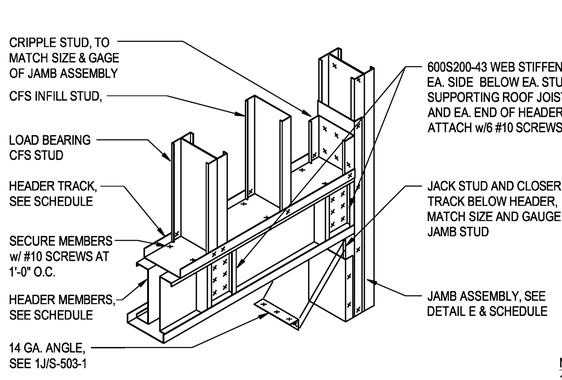
E TYPICAL JAMB ASSEMBLIES



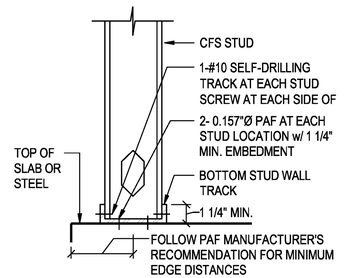
F TYPICAL LOAD BEARING TOP TRACK



G TYPICAL NON-LOAD BEARING TOP TRACK



H LOAD BEARING HEADER ASSEMBLIES



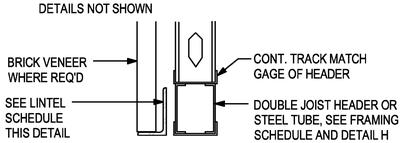
K TYPICAL BASE TRACK ANCHORAGE

NOTES:

1. LINTEL SCHEDULE APPLIES UNLESS NOTED OR DETAILED OTHERWISE.
2. 8" MIN. BEARING EACH END IN MASONRY.
3. STEEL LINTELS FOR EXTERIOR WALLS SHALL BE GALVANIZED.

MASONRY LINTEL SCHEDULE		
NOMINAL WALL THICKNESS	WIDTH OF OPENING	
	10" TO 5'-4"	5'-4" TO 7'-10"
BRICK	L5x5x5/16*	L5x5x3/8*

*NOTE:
MAXIMUM ALLOWABLE BRICK OVERHANG = 1".
SEE ARCH DWGS FOR SPECIAL CONDITIONS OR DETAILS NOT SHOWN

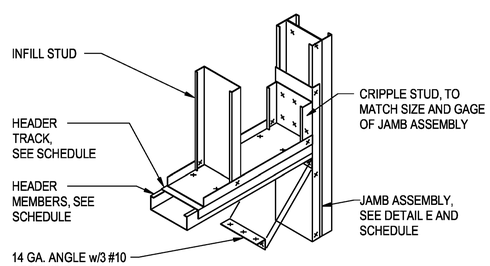


M TYPICAL LINTEL AT OPENINGS

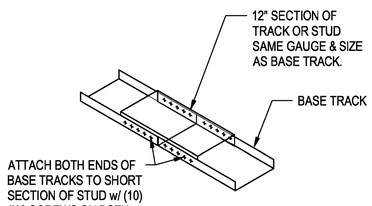
COLD-FORMED STEEL STUD WALL OPENING FRAMING SCHEDULE					
WALL TYPE	MAX. OPENING WIDTH	JAMB ASSEMBLY TYPE & SIZE	HEAD ASSEMBLY TYPE & SIZE	DETAIL	HEADER / SILL TRACK
LOAD BRG	6'-0"	(2)600S200-43	(2)800S200-68 (50ksi)	1H/S-503-1	600T200-54
NON-BRG	6'-0"	(2)600S200-43	(1)600S200-43	1J/S-503-1	600T200-54

NOTES:

1. CONTRACTOR VERIFY ANY SUBSTITUTIONS MADE.
2. SEE DETAIL 1C/S-503-1 AND 1D/S-503-1 FOR CONDITIONS AT WALL OPENINGS.
3. SCHEDULE APPLIES UNO IN SPECIFIC DETAILS.
4. AT BEARING WALLS, PLACE ADDITIONAL STUDS AS NECESSARY TO PROVIDE 1 STUD DIRECTLY BELOW EA. ROOF FRAMING JOIST.
5. LOAD BEARING WALL TRACK (600SGT150-54) IS MANUF. BY 'THE STEEL NETWORK' (TSN). APPROVED EQUAL MAY BE USED BUT MUST ALLOW FOR FULL BEARING OF WALL STUD AGAINST BOTTOM OF TRACK



J NON-LOAD BEARING HEADER ASSEMBLIES



L TYPICAL SPLICE IN TRACK

1 TYPICAL LOAD BEARING STRUCTURAL COLD FORMED STEEL (CFS) STUD WALL DETAILS

NOT TO SCALE

HILL AIR FORCE BASE
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DESIGNED BY: J. STORY
DRAWN BY: S. MOORE
CHECKED BY: M. CALLAHAN
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DESCRIPTION | DATE | APPR. MARK

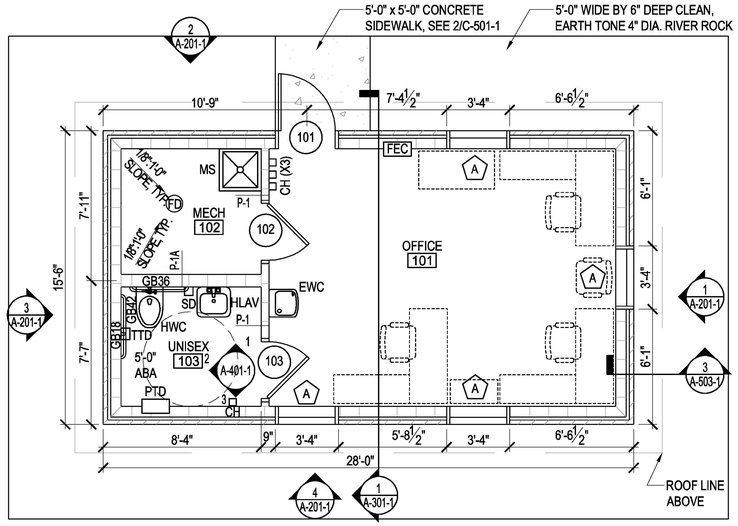
DDHU LOT 4 IMPROVEMENTS PACKAGE 1

CFS WALL DETAILS

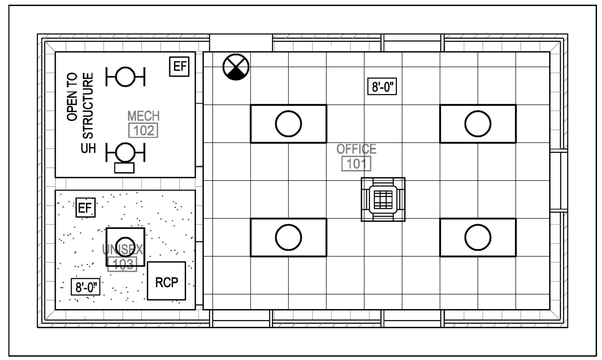
S-503-1

SHEET 32 OF 66

FINAL SUBMITTAL



NORTH 1 ADMIN BLDG 829 FLOOR PLAN
1/4"=1'-0"



NORTH 2 ADMIN BLDG 829 REFLECTED CEILING PLAN
1/4"=1'-0"

GENERAL NOTES

1. INSTALL BRACING AND/OR BLOCKING IN WALLS WHERE WALL MOUNTED EQUIPMENT IS INDICATED.
2. DIMENSIONS ARE TO FACE OF GYPSUM BOARD.
3. SEE SHEET A-502-1 FOR CEILING DETAILS.

SYMBOL LEGEND

CH	COAT HOOK
EF	EXHAUST FAN, COORD. W/ M-101-1
EWC	ELECTRIC WATER COOLER, COORD. W/ P-101-1
FD	FLOOR DRAIN, COORD. W/ P-101-1
FEC	FIRE EXTINGUISHER CABINET
FRP	FIBERGLASS REINFORCED PANEL
GB36	GRAB BAR (IN.)
HLAV	HANDICAP LAVATORY, COORD. W/ P-101-1
HWC	HANDICAP WATER CLOSET, COORD. W/ P-101-1
MS	MOP SINK, COORD. W/ P-101-1
PTD	PAPER TOWEL DISPENSER
RCP	RADIANT CEILING PANEL, COORD. W/ M-101-1
SD	SOAP DISPENSER
TTD	TOILET TISSUE DISPENSER
UH	UNIT HEATER, COORD. W/ M-101-1
VTR	VENT THRU ROOF, SEE 2/A-503-1, COORD. W/ P-101-1

CHAIN HUNG LIGHT FIXTURE

CEILING MOUNTED LIGHT FIXTURE

ACOUSTICAL TILE CEILING, SEE A-601-1

GYP BD CEILING, SEE 5/A-502-1

8'-0" CEILING HEIGHT A.F.F.

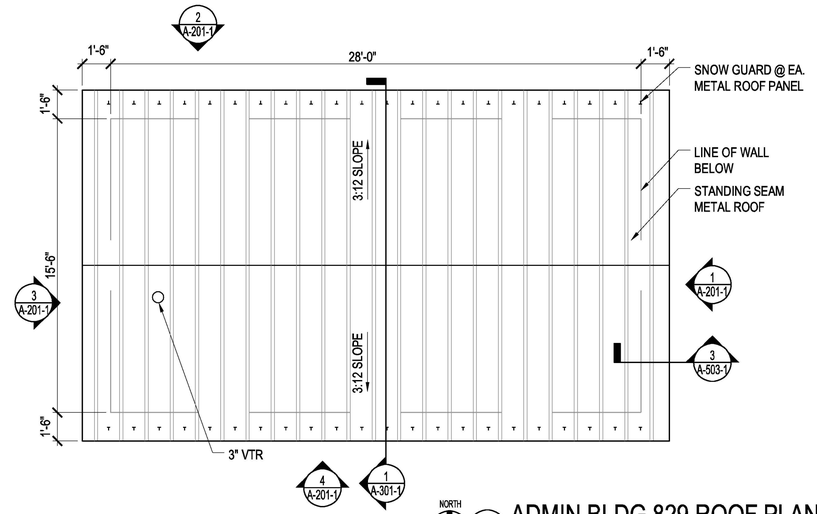
EXIT SIGN

CEILING MOUNTED HVAC UNIT, COORD. W/ M-101-1

P-1 PARTITION TAG, SEE SHEET A-501-1

A WINDOW TAG, SEE SHEET A-602-1

101 DOOR TAG, SEE SHEET A-602-1



NORTH 3 ADMIN BLDG 829 ROOF PLAN
1/4"=1'-0"

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

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CAPITAL PROJECT NO.
CHECKED BY: M. DEIERLEIN
SITE CODE:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

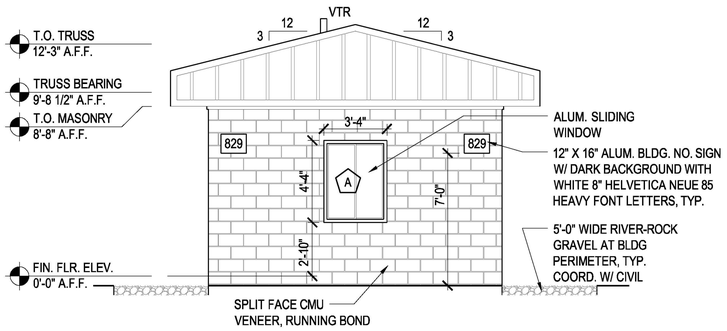
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ADMIN BLDG FLOOR, REFLECTED CEILING AND ROOF PLANS

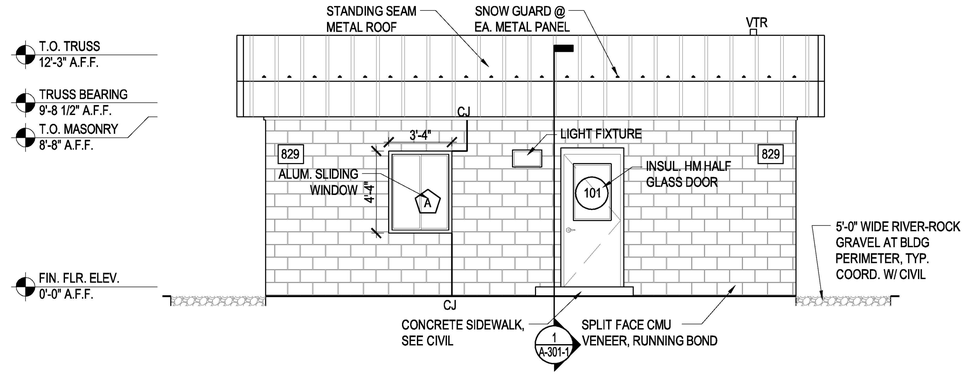
A-101-1

SHEET 33 OF 66

FINAL SUBMITTAL



1 BLDG 829 EAST ELEVATION
1/4"=1'-0"



2 BLDG 829 NORTH ELEVATION
1/4"=1'-0"

EXTERIOR FINISH COLORS

SPLIT FACE CMU: COLOR-TUMBLEWEED OR EQUAL

STANDING SEAM METAL ROOF: DAKOTA BROWN (30099)

TRIM: DAKOTA BROWN (30099)

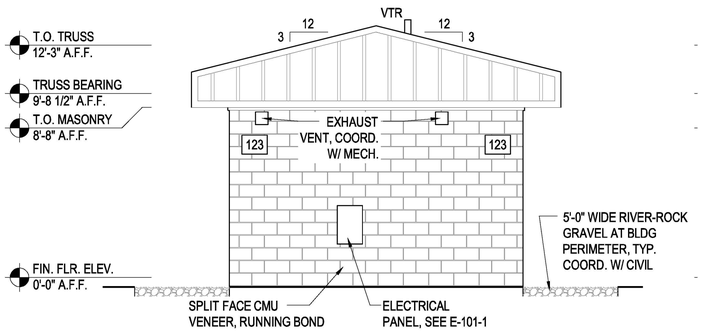
RAIL: DAKOTA BROWN (30099)

DOOR: DAKOTA BROWN (30099)

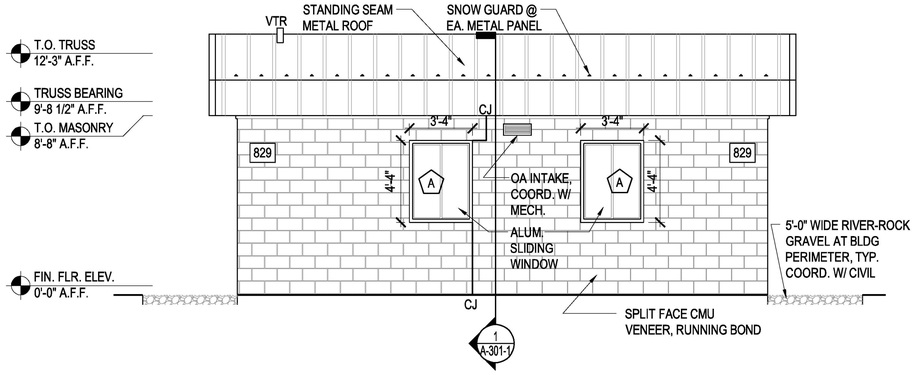
WINDOW: MATCH DAKOTA BROWN (30099)

GENERAL NOTES

1. STANDING SEAM METAL ROOF SHALL HAVE 16" WIDE PANELS AND 1-1/2" TALL SEAMS.



3 BLDG 829 WEST ELEVATION
1/4"=1'-0"



4 BLDG 829 SOUTH ELEVATION
1/4"=1'-0"

0 2' 4' 8'

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

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CHECKED BY: M. DEIERLEIN
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

EXTERIOR ELEVATIONS

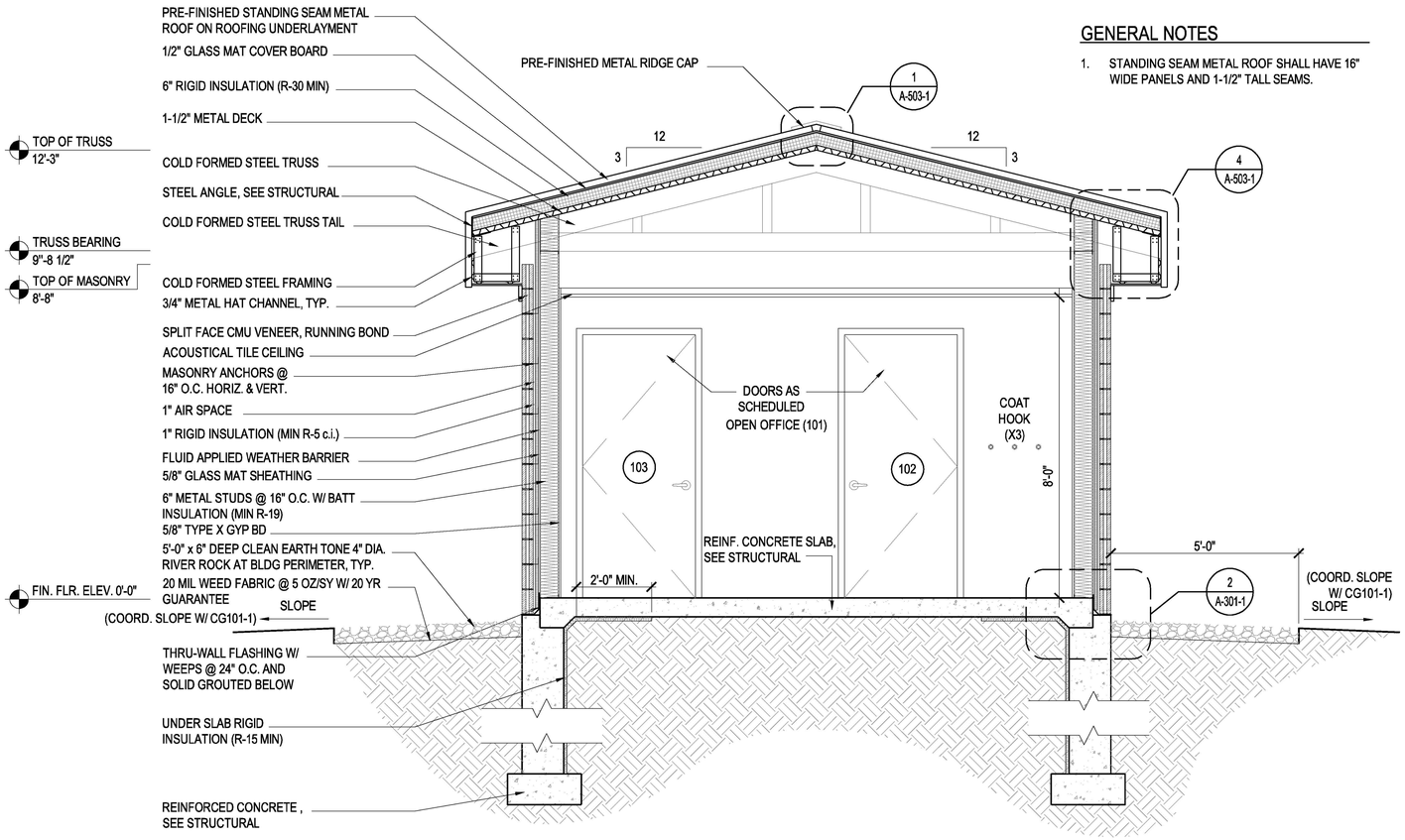
A-201-1

SHEET 34 OF 66

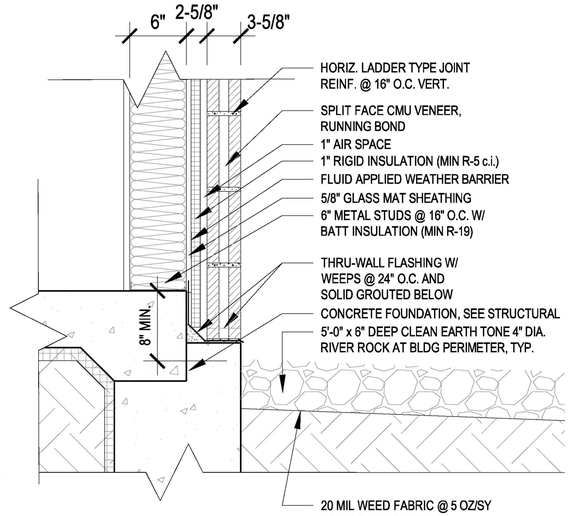
FINAL SUBMITTAL

GENERAL NOTES

1. STANDING SEAM METAL ROOF SHALL HAVE 16" WIDE PANELS AND 1-1/2" TALL SEAMS.



1 BUILDING 829 SECTION
1/2"=1'-0"



2 FOUNDATION DETAIL
1-1/2"=1'-0"

0 6" 1' 2'
SCALE: 1 1/2" = 1'-0"

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

DESCRIPTION | DATE | APPR | MARK

CHECKED BY: M. DEIERLEIN
SITE CODE:
DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP
HILL AIR FORCE BASE

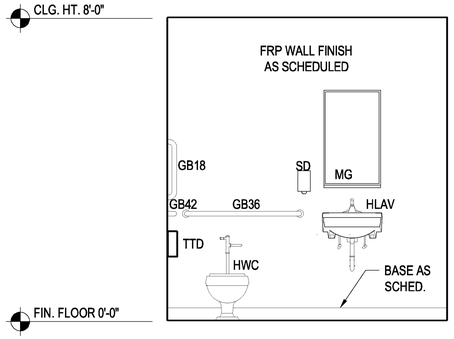
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

BUILDING SECTION

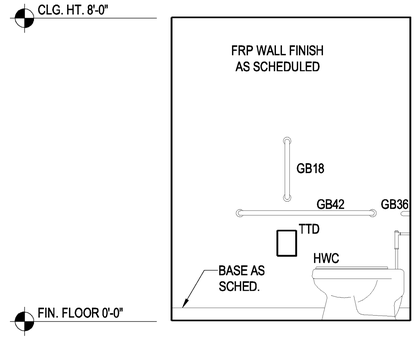
A-301-1

SHEET 35 OF 66

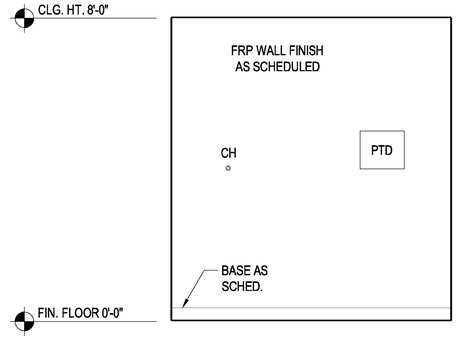
FINAL SUBMITTAL



1 UNISEX ELEVATION 1
1/2"=1'-0"



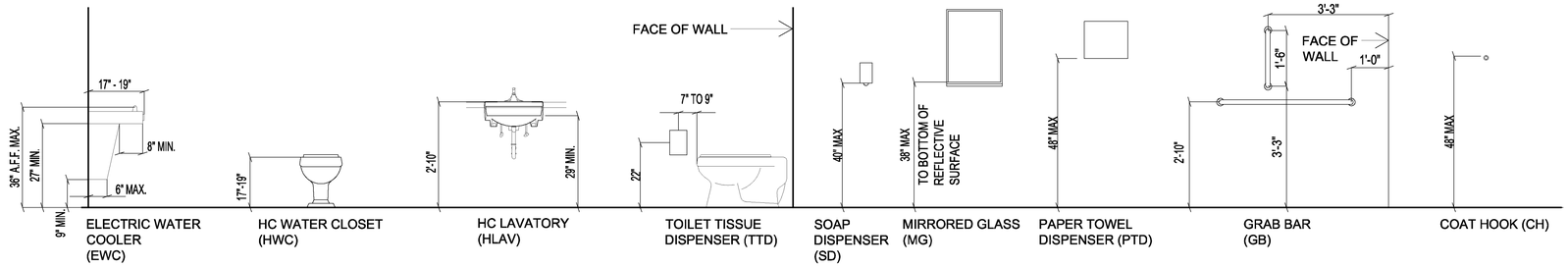
2 UNISEX ELEVATION 2
1/2"=1'-0"



3 UNISEX ELEVATION 3
1/2"=1'-0"

SYMBOL LEGEND

CH	COAT HOOK
EWC	ELECTRIC WATER COOLER
FRP	FIBERGLASS REINFORCED PANEL
GB36	GRAB BAR (IN.)
HLAV	HANDICAP LAVATORY
HWC	HANDICAP WATER CLOSET
MG	MIRRORED GLASS
PTD	PAPER TOWEL DISPENSER
SD	SOAP DISPENSER
TTD	TOILET TISSUE DISPENSER



4 FIXTURE MOUNTING HEIGHTS
1/2"=1'-0"

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

MARK	APPR.	DATE	DESCRIPTION

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CHECKED BY: M. DEIERLEIN
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

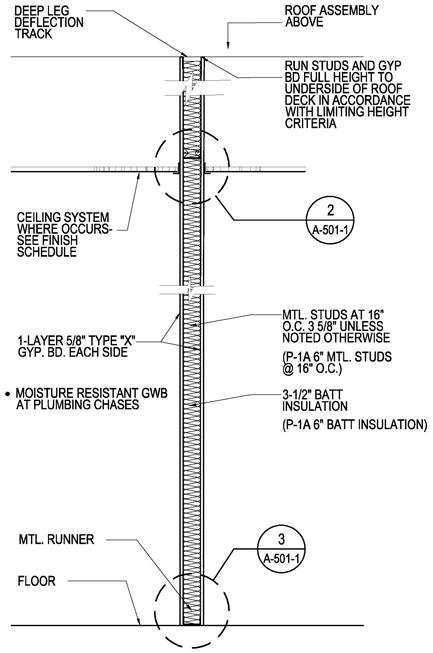
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

INTERIOR ELEVATIONS

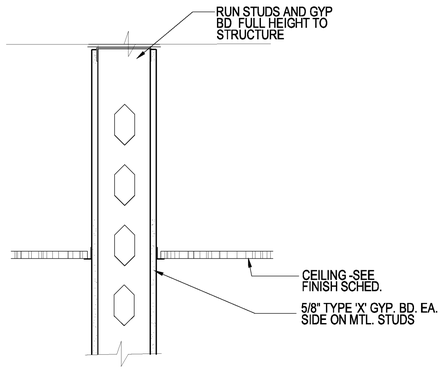
A-401-1

SHEET 36 OF 66

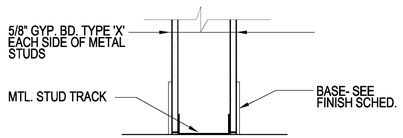
FINAL SUBMITTAL



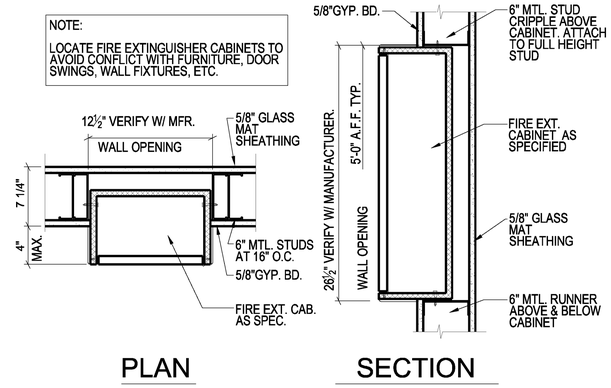
1 PARTITION TYPE (P-1) (P-1A)
3/4"=1'-0"



2 TOP OF METAL STUD PARTITION
3"=1'-0"

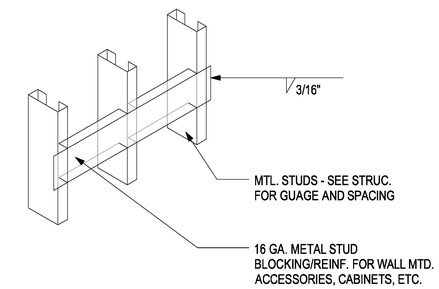


3 BOTTOM OF METAL STUD PARTITION
3"=1'-0"



PLAN SECTION

4 SEMI-RECESSED FIRE EXTINGUISHER CABINET DETAILS
N.T.S.



5 TYPICAL STUD WALL WALL BLOCKING
N.T.S.

0 3" 6" 9" 12"
SCALE: 3" = 1'-0"

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

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CHECKED BY: M. DEIERLEIN
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

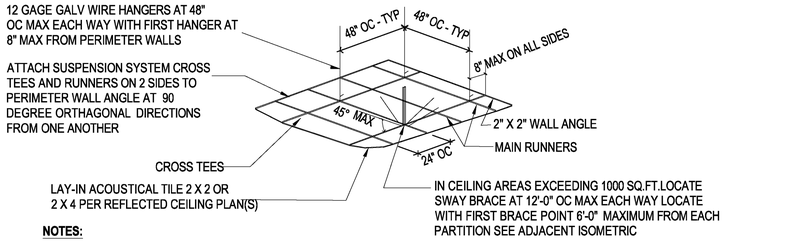
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PARTITION TYPES AND DETAILS

A-501-1

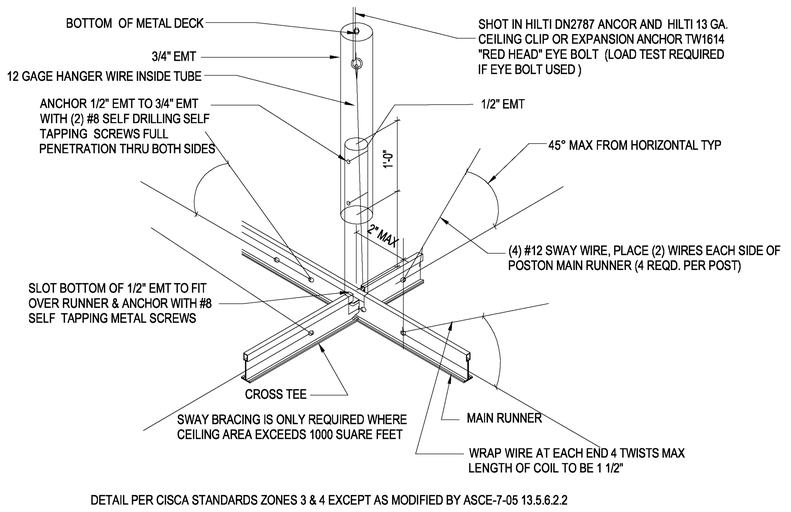
SHEET 37 OF 66

FINAL SUBMITTAL



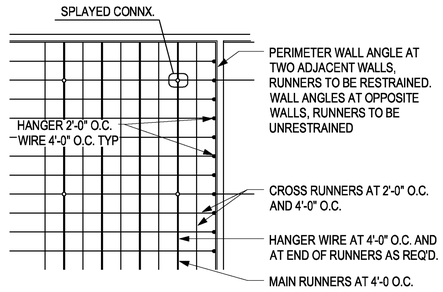
NOTES:

1. AIR TERMINALS ARE TO BE ATTACHED TO THE MAIN RUNNERS OF THE SUSPENSION SYSTEM. TERMINALS WEIGHING OVER 20 lbs ARE TO BE SUPPORTED BY (2) SEPARATE NO 12 GA. WIRES ANCHORED TO THE STRUCTURE ABOVE PER CISCA STANDARDS ZONES 3 &4
2. SUSPENSION SYSTEM IS TO BE A HEAVY DUTY SYSTEM PER ASCE CHAPTER 13.5.6.2.2 - WALL ANGLES TO HAVE 2" MINIMUM HORIZONTAL AND VERTICAL LEGS.
3. SPECIAL INSPECTION OF LATERAL SWAY BRACING AND CEILING SUSPENSION SYSTEM INSTALLATION SHALL BE PERFORMED
4. SUSPENSION SYSTEM SUPPORT WIRES ARE TO BE ANCHORED TO THE STRUCTURE ABOVE PER CISCA STANDARDS - ZONES 3 &4
5. PROVIDE SIESMIC EXPANSION JOINTS IN CEILING AREAS THAT EXCEED 2500 SQ.FT. SIESMIC EXPANSION JOINTS SHOULD BE LOCATED TO DIVIDE CEILING INTO APPROXIMATELY EQUAL AREAS.
6. REQUIREMENTS. TERMINALS IN EXCESS OF 56 lbs ARE TO BE SUPPORTED DIRECTLY FROM STRUCTURE. LIGHT FIXTURES OVER 10 lbs. ARE TO HAVE A NO 12 GA. WIRE SUPPORT TIED TO THE FIXTURE HOUSING AT EACH CORNER AND ANCHORED TO THE STRUCTURE ABOVE PER CISCA STANDARDS - ZONES 3 &4 REQUIREMENTS.

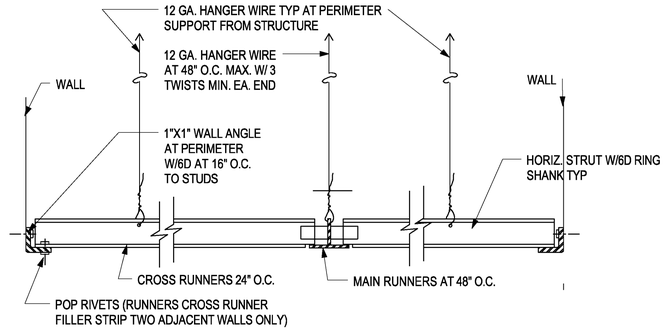


DETAIL PER CISCA STANDARDS ZONES 3 & 4 EXCEPT AS MODIFIED BY ASCE-7-05 13.5.6.2.2

1 SEISMIC CEILING BRACING
N.T.S.



2 SUSPENDED CEILING BRACING
N.T.S.



3 SUSPENDED CEILING HANGER WIRE DETAIL
N.T.S.

4 SUSPENDED LIGHT FIXTURE SUPPORT
N.T.S.

5 SUSPENDED GYP. BD CEILING DETAIL
N.T.S.

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: M. DEERLEIN
DRAWN BY: M. DEERLEIN
CHECKED BY: M. DEERLEIN
SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

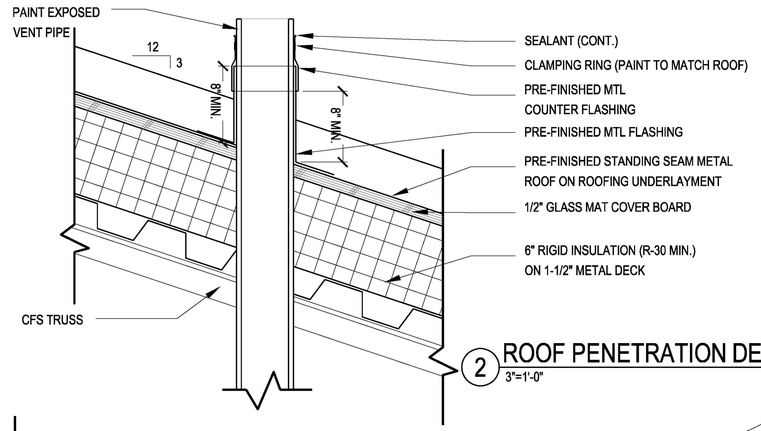
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

CEILING DETAILS

A-502-1

SHEET 38 OF 66

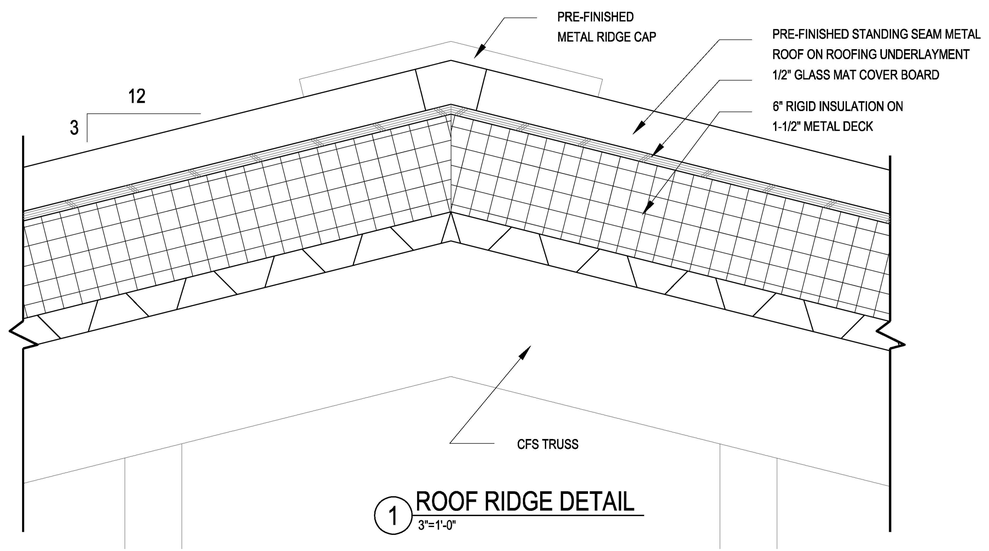
FINAL SUBMITTAL



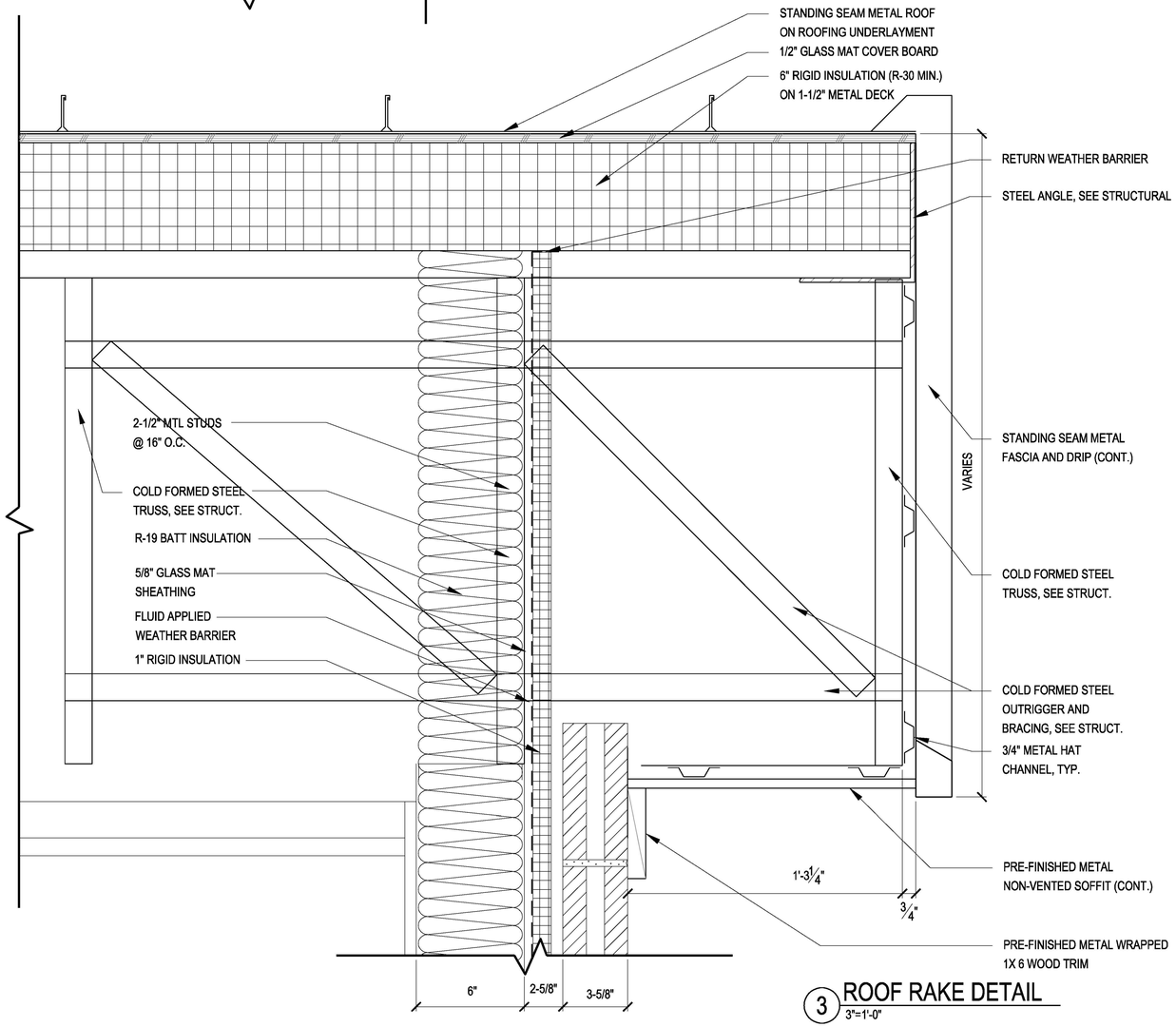
2 ROOF PENETRATION DETAIL
3"=1'-0"

GENERAL NOTES

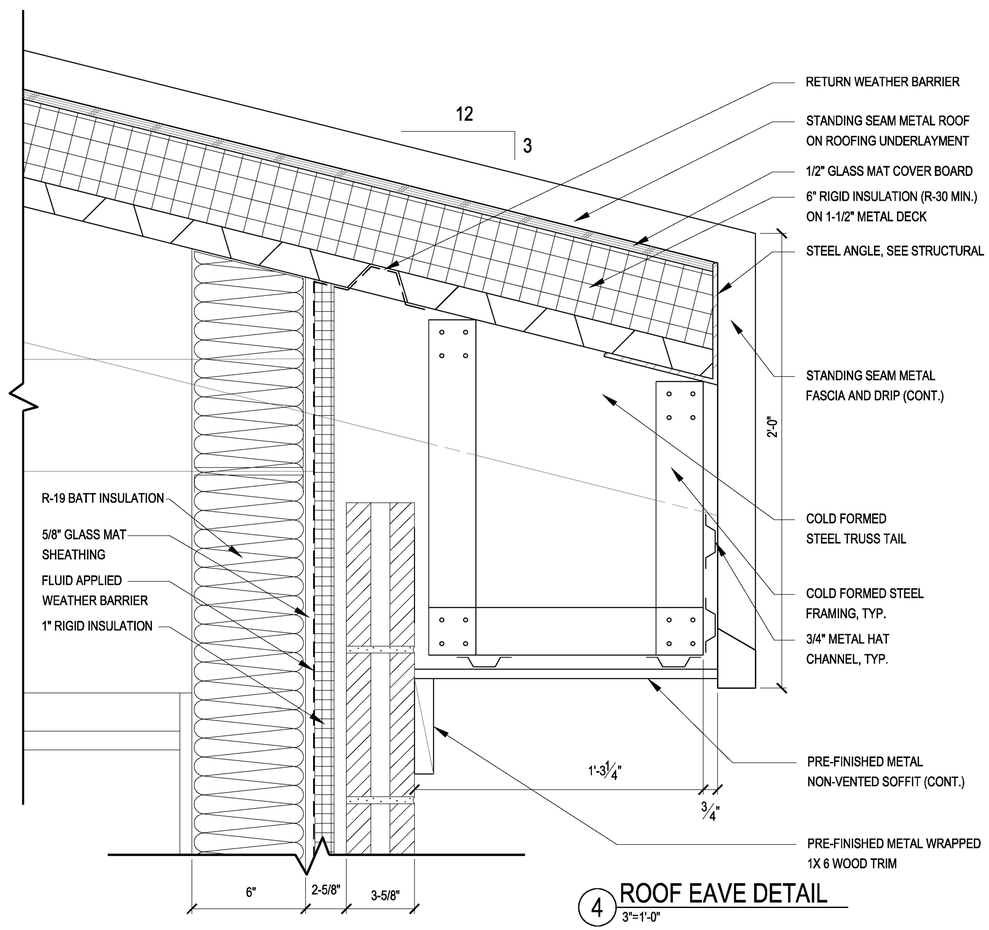
1. STANDING SEAM METAL ROOF SHALL HAVE 16" WIDE PANELS AND 1-1/2" TALL SEAMS.



1 ROOF RIDGE DETAIL
3"=1'-0"



3 ROOF RAKE DETAIL
3"=1'-0"



4 ROOF EAVE DETAIL
3"=1'-0"

0 3" 6" 9" 12"

SCALE: 3" = 1'-0"

MARK	APPR	DATE	DESCRIPTION

CHECKED BY: M. DEIERLEIN
SITE CODE:
DATE: 21 OCT 2020

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CAPITAL PROJECT NO.:
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP
HILL AIR FORCE BASE

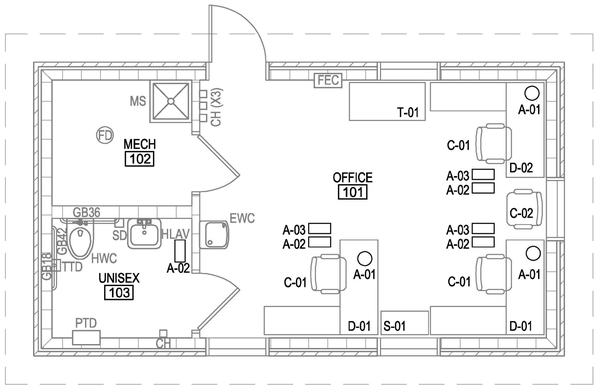
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ROOF DETAILS

A-503-1

SHEET 39 OF 66

FINAL SUBMITTAL



NORTH

1 FURNITURE PLAN

1/4"=1'-0"

**FOR FURTHER DESCRIPTION ON FURNITURE ITEMS SEE COMPREHENSIVE INTERIOR DESIGN (CID) PACKAGE

ROOM FINISH SCHEDULE															
ROOM		FLOOR	BASE	NORTH WALL		SOUTH WALL		EAST WALL		WEST WALL		CEILING			NOTES
NUMBER	NAME			MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	HEIGHT	
101	OFFICE	VCT-1	RB-1	GWB	P-1	GWB	P-1	GWB	P-1	GWB	P-1	ACT	ACT-1	8'-0"	1
102	MECH	VCT-1	RB-1	GWB	FRP-1/P-1	GWB	P-1	GWB	FRP-1/P-1	GWB	P-1	EXP	---	---	4
103	UNISEX	VCT-1	RB-1	GWB	FRP-1	GWB	FRP-1	GWB	FRP-1	GWB	FRP-1	ACT	ACT-1	8'-0"	

ABBREVIATIONS

NAME	DESCRIPTION
---	"NONE" OR "NO"
ACT	ACOUSTICAL CEILING TILE
EXP	EXPOSED TO STRUCTURE
FRP	FIBERGLASS REINFORCED PANEL
GWB	GYPSUM WALL BOARD
P	PAINT
RB	RESILIENT BASE
VCT	VINYL COMPOSITION TILE

TOILET ACC. SCHED.

ABBRV.	BASIS OF DESIGN (OR EQUAL)
TDD	GP 52783A GRAY
PTD	GP 52109 SPLASH BLUE

INTERIOR COLOR LEGEND

CEILING	
ACT-1	ARMSTRONG, FINE FISSURED TEGULAR, #1831, 24"X24"X5/8" TILE WITH 15/16" HEAVY DUTY PRELUDE XL SUSPENSION SYSTEM, COLOR: WHITE
FLOORS	
VCT-1	ARMSTRONG, STANDARD EXCELON IMPERIAL TEXTURE, COLOR: EARTHSTONE GREIGE #51804, SIZE: 12"X12"
BASE	
RB-1	JOHNSONITE, 4" HIGH BASEWORKS,TYPE: TS BASE, COLOR: 29 MOON ROCK
WALLS	
P-1	SHERWIN WILLIAMS, SW7567 NATURAL TAN, FINISH: EGGSHELL (TYP. WALL PAINT)
P-2	SHERWIN WILLIAMS, SW7048 URBANE BRONZE, FINISH: SEMI-GLOSS (H.M. DOORS AND FRAMES)
FRP-1	CRANE COMPOSITES, GLASBORD .09" THICKNESS- EMBOSSED TEXTURE, COLOR: 85 WHITE COORIDNATING MOLDINGS TO BE USED FOR ALL SEAMS

GENERAL FINISH NOTES:

1. EXTERIOR WINDOWS TO RECEIVE 3" VINYL VERTICAL BLINDS, COLOR: WHITE.
2. HOLLOW METAL DOOR AND TRIM TO BE PAINTED P-2.
3. WOOD DOORS TO BE FACTORY FINISHED. COLOR TO BE SELECTED BY COR FROM MANUFACTURER'S STANDARD COLOR LINE.
4. MECHANICAL 102 FRP-1 PANELS TO BE INSTALLED IN 4'-0" HIGH WAINSCOT AROUND MOP SINK ONLY. FRP TO START AT TOP OF SPECIFIED BASE.
5. ROOM 103 FRP-1 PANELS TO BE INSTALLED FROM TOP OF BASE TO CEILING.

0 2' 4' 8'

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

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: E. HILL
DRAWN BY: E. HILL
CHECKED BY: C. HAWKINS
SITE CODE:
CAPITAL PROJECT NO:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ROOM FINISH SCHEDULE
AND FURNITURE PLAN

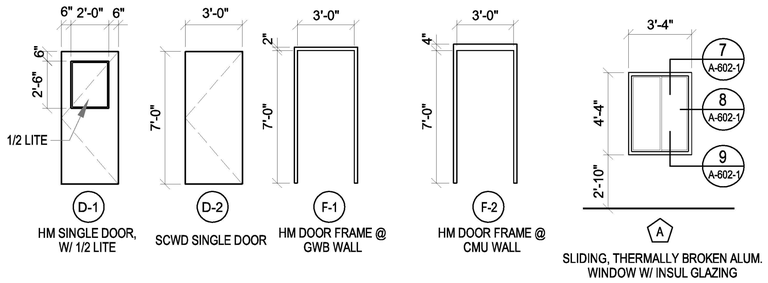
A-601-1

SHEET 40 OF 66

FINAL SUBMITTAL

DOOR SCHEDULE

DOOR/OPENING							FRAME		DETAILS			HDW SET	FIRE RATING	SIGNAGE (SEE A-701-1)		REMARKS
NO.	TYPE	MAT'L	WIDTH	HEIGHT	THK.	FIN.	TYPE	MAT'L	HEAD	JAMB	SILL			TYPE/MNTG	NAME	
101	D-1	IHM	3'-0"	7'-0"	1-3/4"	P	F-2	GHM	4/A-602	5/A-602	6/A-602	1	---	---	---	1
102	D-2	SCWD	3'-0"	7'-0"	1-3/4"	P	F-1	HM	3A/A-602	3B/A-602	---	2	---	1A	MECHANICAL	---
103	D-2	SCWD	3'-0"	7'-0"	1-3/4"	P	F-1	HM	3A/A-602	3B/A-602	---	3	---	2A	UNISEX	---
																---

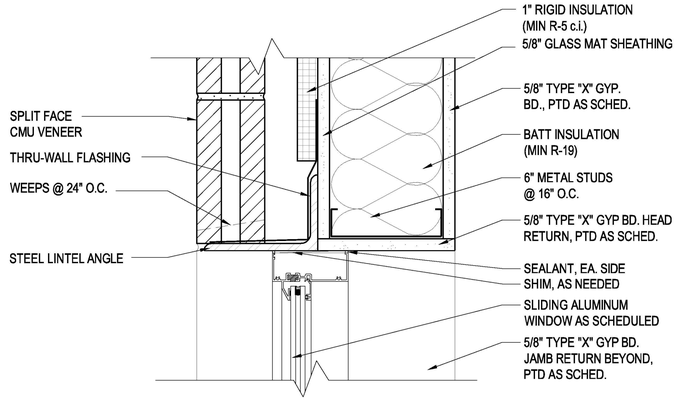


MATERIAL/FINISH LEGEND:

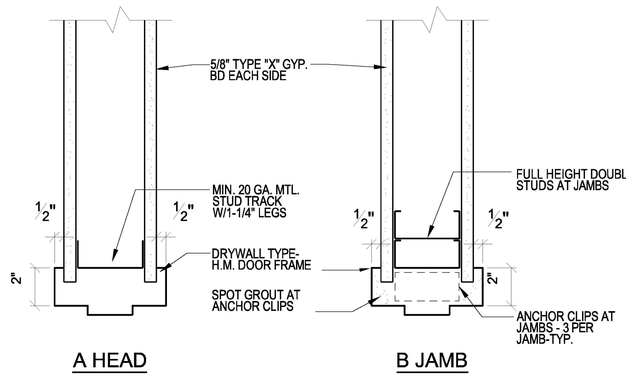
HM	HOLLOW METAL
GHM	GALVANIZED HOLLOW METAL
IHM	INSULATED HOLLOW METAL
P	PAINTED
SCWD	SOLID CORE WOOD

DOOR SCHEDULE REMARKS

1. 1/2 LITE DOOR W/ INSULATED LAMINATED GLAZING.



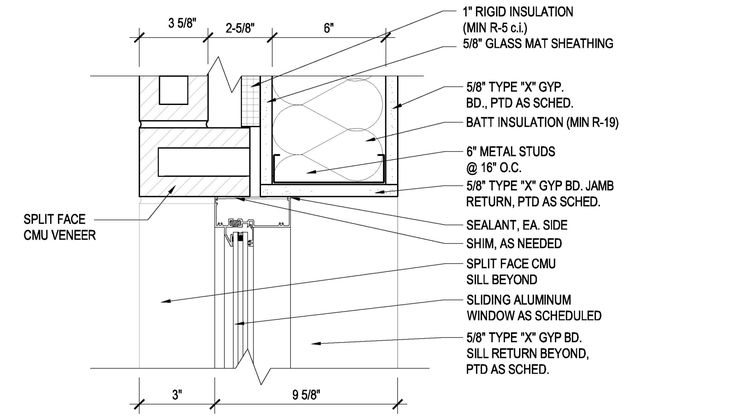
1 DOOR AND FRAME ELEVATIONS
1/4"=1'-0"



2 WINDOW ELEVATIONS
1/4"=1'-0"

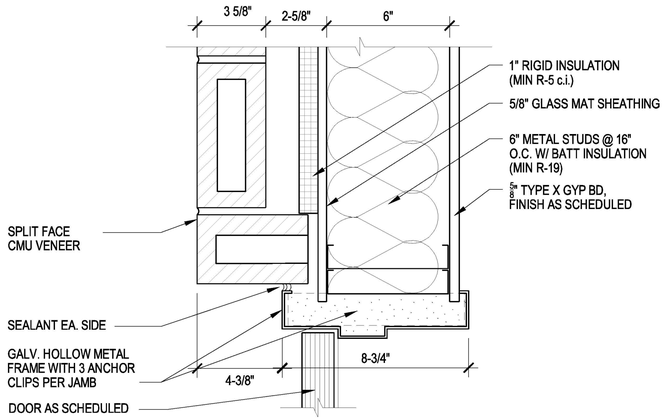
3 DOOR OPENINGS LESS THAN 4'-0"
3"=1'-0"

4 EXTERIOR DOOR HEAD DETAIL
3"=1'-0"

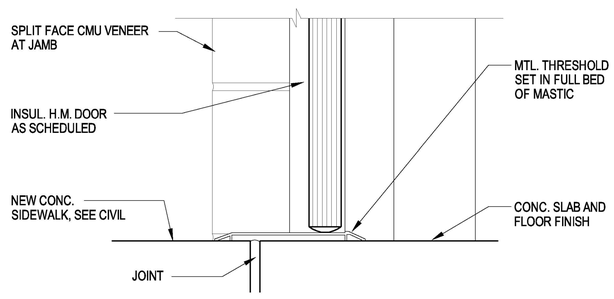


7 WINDOW HEAD DETAIL
3"=1'-0"

8 WINDOW JAMB DETAIL
3"=1'-0"



5 EXTERIOR DOOR JAMB DETAIL
3"=1'-0"



6 EXTERIOR DOOR SILL DETAIL
3"=1'-0"

9 WINDOW SILL DETAIL
3"=1'-0"

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CHECKED BY: M. DEIERLEIN
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

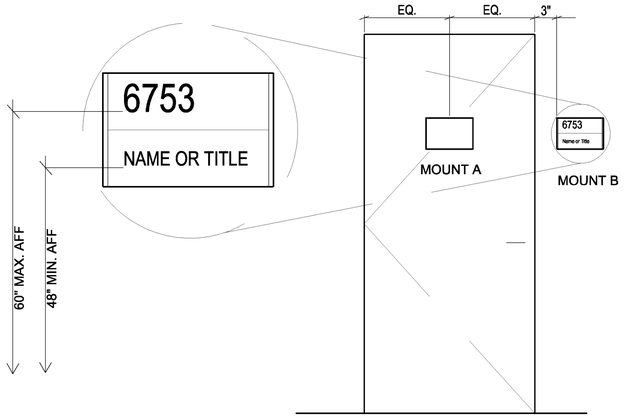
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

DOOR AND WINDOW SCHEDULE AND DETAILS

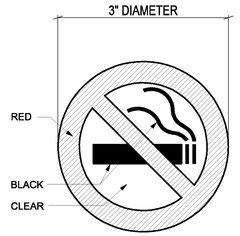
A-602-1

SHEET 41 OF 66

FINAL SUBMITTAL



2 SIGN MOUNTING DETAIL
NOT TO SCALE



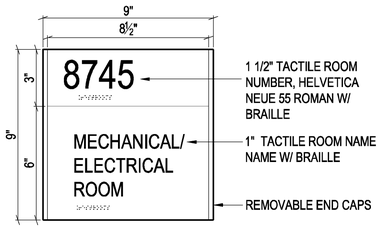
PEEL & STICK VINYL DECAL WITH 3.0 MIL COATING FOR UV, CHEMICAL, ABRASION, & MOISTURE RESISTANCE. UV STABLE INK.

(LOCATE ON EXTERIOR DOOR)

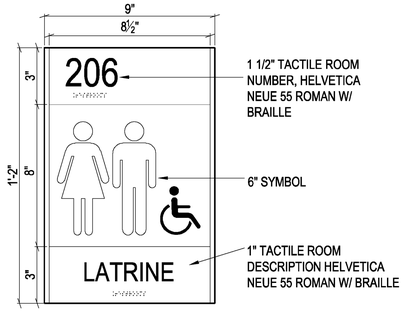
3 NO SMOKING SIGN
NOT TO SCALE

GENERAL NOTES

1. REFER TO SHEET A-602-1 DOOR SCHEDULE FOR ROOM NUMBERS AND ROOM NAMES PER DOOR LOCATIONS.
2. FONT: HELVETICA NEUE 55 ROMAN (ALL CAPITAL LETTERS) RAISED 0.03125" FROM THE SURFACE AND GRADE 2 BRAILLE - SEE DETAIL 1/A-701-1.
3. SIGNS TO BE MOUNTED ON THE LATCH SIDE OF DOOR. SEE DETAIL 2/A-701-1. SEE DOOR SCHEDULE A-602-1 FOR MOUNTING LOCATION.
4. CONFIRM ALL SIGNAGE LOCATIONS, ROOM NUMBERING AND NAMING WITH CONTRACTING OFFICERS REPRESENTATIVE.
5. REFER TO SPECIFICATION SECTION 10 14 00.20 INTERIOR SIGNAGE FOR ADDITIONAL INFORMATION.
6. INTERIOR SIGNAGE COLORS TO MATCH FEDERAL STANDARD PAINT COLOR #20059. ALL SIGNAGE TO COMPLY WITH ALL SPECIFIED MANUFACTURERS FABRICATION MATERIALS AND FINISHES



TYPE 1
PERMANENT ROOM IDENTIFICATION SIGN



TYPE 2
RESTROOM IDENTIFICATION SIGN

1 ROOM NAME SIGNAGE TYPES
3" = 1'-0"

0 3" 6" 9" 12"
SCALE: 3" = 1'-0"

HAFB AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: M. DEIERLEIN
DRAWN BY: M. DEIERLEIN
CHECKED BY: M. DEIERLEIN
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP
HILL AIR FORCE BASE

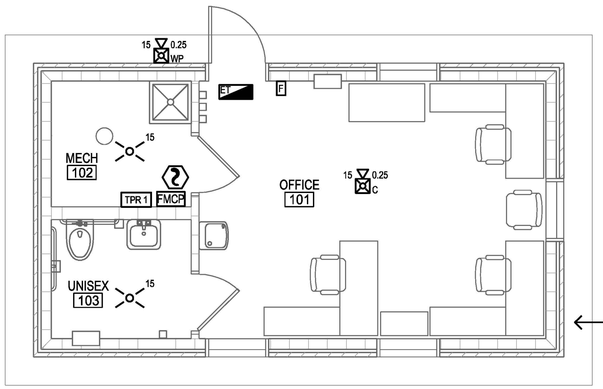
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

INTERIOR SIGNAGE TYPES

A-701-1

SHEET 42 OF 66

FINAL SUBMITTAL



PROVIDE MONACO TRANSCEIVER AND ANTENNA TO REPORT FIRE ALARM STATUS BACK TO HEAD END UNIT AT EMERGENCY DISPATCH

LOCATE ANTENNA

NORTH

1 FIRE ALARM FLOOR PLAN

1/4"=1'-0"

0 2' 4' 8'

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

FIRE ALARM GENERAL NOTES:

1. FIRE ALARM SYSTEM AND DEVICES SHALL BE INSTALLED TO THE LATEST EDITION OF NFPA 72, NFPA 70, NFPA 13, AND LOCAL REQUIREMENTS.
2. ALL FIRE ALARM INSTALLATIONS, INCLUDING PULLING OF WIRE AND MOUNTING OF DEVICES, SHALL HAVE OVERSIGHT OF A NICET LEVEL II FIRE ALARM TECHNICIAN OR HIGHER.
3. STROBES SHALL BE SYNCHRONIZED PER NFPA 72.
4. THESE DESIGN DOCUMENTS PROVIDE GENERAL SPACING, LOCATION, AND COORDINATION CRITERIA. CONTRACTOR SHALL BE RESPONSIBLE FOR CIRCUIT CONFIGURATION, SYSTEM PERFORMANCE, SOFTWARE CONFIGURATION, DEVICE PROGRAMMING, SYSTEM COMMISSIONING, AND SYSTEM WARRANTY.
5. CONTRACTOR SHALL SUBMIT FIRE ALARM/ MNS PLANS, DATA CUT SHEETS, AND VOLTAGE DROP CALCULATIONS TO AHJ AND A/E FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY WORK ON THE FA/ECS SYSTEM.
6. NO FA/MNS DOCUMENT/PLANS SHALL BE USED FOR INSTALLATION OF THIS SYSTEM UNLESS THEY CONTAIN A REVIEW AND APPROVAL STAMP FROM THE AHJ AND A COMPLETED REVIEW BY A/E. THE OWNER, CROMWELL, THE LOCAL AHJ HAS THE AUTHORITY TO STOP ANY WORK UNTIL SUCH PLANS ARE ON SITE AND IN USE.
7. SEPARATE FIRE ALARM AND MASS NOTIFICATION SPECIFICATIONS CONTAIN VERY DETAILED INFORMATION ABOUT THIS SYSTEM AND SHALL BE FOLLOWED, ON-SITE AND AVAILABLE DURING ANY CONSTRUCTION.
8. SECONDARY POWER PERFORMANCE TO MEET NFPA 72. 48 HOURS OF STANDBY POWER FOLLOWED BY 15 MINUTES OF ALARM FOR ALL CONNECTED DEVICES AT MAXIMUM LOAD. SECONDARY POWER FOR THE SYSTEM SHALL ALSO BE DESIGNED TO OPERATE MAXIMUM CONNECTED ALARM LOAD FOR 60 MINUTES IMMEDIATELY FOLLOWING DISCONNECTION OF PRIMARY POWER. SECONDARY POWER MUST BE PROVIDED FOR THE LED TEXT SIGN A MINIMUM OF 2 HOURS OF CONTINUOUS DISPLAY TIME AFTER THE LOSS OF PRIMARY POWER.
9. SPEAKER CIRCUITS TO BE 70V TYPICAL. OTHER CIRCUITS TO BED 24V TYPICAL.
10. MANUAL PULL STATIONS TO BE DUEL ACTION TYPE WITH AN ALARMED POLYCARBONATE COVER. USE STI STOPPER II OR APPROVED EQUAL.
11. ALL CONDUIT, JUNCTION/BACK BOXES, COVERS, AND COUPLINGS, WHEN PROVIDED, MUST BE FACTORY PAINTED RED IN UNFINISHED AREAS (E.G., ABOVE CEILINGS, MECHANICAL ROOMS, ETC.).
12. ALL CONDUIT, JUNCTION/BACK BOXES, COVERS AND COUPLINGS, WHEN PROVIDED, ARE PERMITTED TO BE PAINTED TO MATCH THE ROOM FINISHING IN FINISHED AREAS. THE INSIDE COVER OF THE JUNCTION BOX MUST BE IDENTIFIED AS "FIRE ALARM" AND THE CONDUIT MUST HAVE PAINTED RED BANDS 3/4-IN. (20MM) WIDE AT 20 FEET (6M) INTERVALS AND ON BOTH SIDES OF ALL FLOOR, WALL, AND CEILING PENETRATIONS.

FIRE ALARM LOCATION/SPACING:

1. IN ACCORDANCE WITH 2019 NFPA 72, STROBES MAY BE MORE THAN 15 FEET OFF THE END OF A CORRIDOR WHEN ROOM SPACING CRITERIA APPLIES USING THE APPROPRIATE CANDELA.
2. WALL MOUNTED SPEAKERS, STROBES, OR SPEAKER/STROBES SHALL BE AT 96" OR 6" BELOW THE CEILING, WHICHEVER IS LOWER.
3. ALL SMOKE DETECTORS SHALL BE LOCATED WHERE THEY CAN BE READILY SERVICED.
4. ALL SMOKE DETECTORS SHALL BE CEILING MOUNTED OR WITHIN 12" OF THE CEILING.
5. SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 3' OF AN AIR SUPPLY OR RETURN GRILL PER MFG CRITERIA AND APPENDIX "A" OF NFPA 72.
6. EACH POWER BOOSTER PANEL OR FIRE ALARM PANEL SHALL BE PROTECTED BY A SMOKE DETECTOR. WHEN PROVIDED, AREA DETECTORS WITHIN THE SAME SPACE WILL SATISFY THIS REQUIREMENT.

FIRE ALARM PERFORMANCE:

1. ANY SMOKE DETECTOR THAT HAS BEEN INSTALLED PRIOR TO THE CONSTRUCTION CLEANUP OF ALL TRADES AND WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER AND LOCAL AHJ SHALL BE MARKED IN A MANNER THAT WILL IDENTIFY IT FROM RE USE AND SHALL BE REPLACED PRIOR TO COMMISSIONING OF THE SYSTEM OR TURNING OVER TO THE OWNER. SUCH DETECTORS SHALL BE REPLACED AT THE SOLE EXPENSE OF THE INSTALLING CONTRACTOR.
2. FIRE ALARM AUDIBLE ALERT SIGNALS SHALL BE SET TO TEMPORAL CODE PER NFPA 72. MASS NOTIFICATION AUDIBLE CUES SHALL TAKE PRECEDENCE AND OVERRIDE FIRE ALARM AND PA/MUSIC TONES.
3. INTELLIGIBILITY OF MNS MESSAGES SHALL BE 0.8 CIS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MEET OR EXCEED. COMMISSION TESTING SHALL BE DONE PRIOR TO FINAL SYSTEM ACCEPTANCE TO VERIFY THAT THE MINIMUM CIS SCORES HAVE BEEN ACHIEVED.
4. UNLESS OTHERWISE NOTED THE FOLLOWING MINIMUM SURVIVABILITY CRITERIA SHALL BE MET: SIGNALING LINE CIRCUITS CLASS "A", AND NOTIFICATION CIRCUITS CLASS "A".
5. INITIATING DEVICES SHALL BE INDIVIDUALLY ADDRESSABLE.

FIRE ALARM ACCEPTANCE TESTING:

1. A COMPLETED AND SIGNED RECORD (CERTIFICATE) OF COMPLETION FORM SHALL BE PROVIDED BY THE CONTRACTOR TO THE AHJ, OWNER, AND ARCHITECT ENGINEER PRIOR TO COMMISSION TESTING. THIS CERTIFICATE SHALL CERTIFY THAT THE CONTRACTOR HAS PRE-TESTED EVERY DEVICE AND FUNCTION OF THE SYSTEM AND REPAIRED ANY DEFICIENCIES PRIOR TO THE COMMISSIONING TEST.
2. ALL SMOKE DETECTORS SHALL BE COMMISSIONED USING CANNED SMOKE OR A METHOD THAT WILL FUNCTIONALLY TEST THE SMOKE CHAMBER. THE USE OF MAGNETS FOR COMMISSION TESTING OF SMOKE DETECTORS IS STRICTLY PROHIBITED.
3. EVERY DEVICE SHALL BE TESTED DURING COMMISSIONING AND PRIOR TO BEING TURNED OVER TO THE OWNER.
4. EACH NOTIFICATION CIRCUIT SHALL BE TESTED UNDER STANDBY/BATTERY POWER. END OF LINE VOLTAGE READINGS SHALL BE TAKEN AT THE BOOSTER PANEL FOR CLASS "A" CIRCUITS. ANY CIRCUIT THAT MEASURES LESS THAN 20 VOLTS DC OR THE NAMEPLATE VOLTAGE, WHICHEVER IS HIGHER, SHALL BE CONSIDERED AS FAILING THE DESIGN. NOTE: SOME SYSTEMS INCORPORATING SYNCHRONIZING MODULES CAN IMPAIR RESULTS. IF THE MODULE CANNOT BE BYPASSED FOR VOLTAGE READINGS, THE MANUFACTURER SHOULD BE CONTACTED FOR GUIDANCE. WHEN VOLTAGE CANNOT BE MEASURE, CIRCUIT WIRE RESISTANCE READINGS AND DEVICE LOAD MAY BE COMPARED TO DESIGN CALCULATIONS (MAKE SURE CIRCUIT IS REMOVED FROM POWER SUPPLY WHEN OBTAINING WIRE RESISTANCE). ONLY A QUALIFIED TECHNICIAN EMPLOYED BY THE INSTALLING CONTRACTOR SHOULD PERFORM THIS FUNCTION.
5. EACH CIRCUIT'S END OF LINE VOLTAGE SHALL BE DOCUMENTED FOR COMPARISON TO THE DESIGN END OF LINE CALCULATIONS.

FIRE ALARM SYMBOLS: NOTE: ALL SYMBOLS MAY NOT BE USED.

SYMBOL	DESCRIPTION
15 / 0.25 / C	CEILING MOUNT SPEAKER AND CLEAR STROBE, 15 CANDELA AND 0.25 WATT TAP UNLESS NOTED OTHERWISE, WP-WEATHERPROOF
15 / 0.25	WALL MOUNT SPEAKER AND CLEAR STROBE, 15 CANDELA AND 0.25 WATT TAP UNLESS NOTED OTHERWISE
S / 0.25 / C	CEILING MOUNT SPEAKER, 0.25 WATT TAP UNLESS NOTED OTHERWISE
S / 0.25	WALL MOUNT SPEAKER, 0.25 WATT TAP UNLESS NOTED OTHERWISE
15	CEILING MOUNT CLEAR STROBE, 15 CANDELA UNLESS NOTED OTHERWISE
15	WALL MOUNT CLEAR STROBE, 15 CANDELA UNLESS NOTED OTHERWISE
P	SPOT-TYPE SMOKE DETECTOR (P-PHOTO, I-IONIZATION, SB-SOUNDER BASE)
S	DUCT SMOKE DETECTOR (S-SUPPLY, R-RETURN)
F	MANUAL PULL STATION (48" AFF UNLESS NOTED OTHERWISE) WITH COVER - STI STOPPER II OR APPROVED EQUAL
TPR 1	FIRE ALARM TRANSCEIVER (MONACO)
FMCP	COMBINATION FIRE ALARM/ MASS NOTIFICATION CONTROL PANEL
ST	LED TEXT DISPLAY FOR MNS MESSAGES

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: J. WORSHAM
DRAWN BY: J. WORSHAM
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SHT'L CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

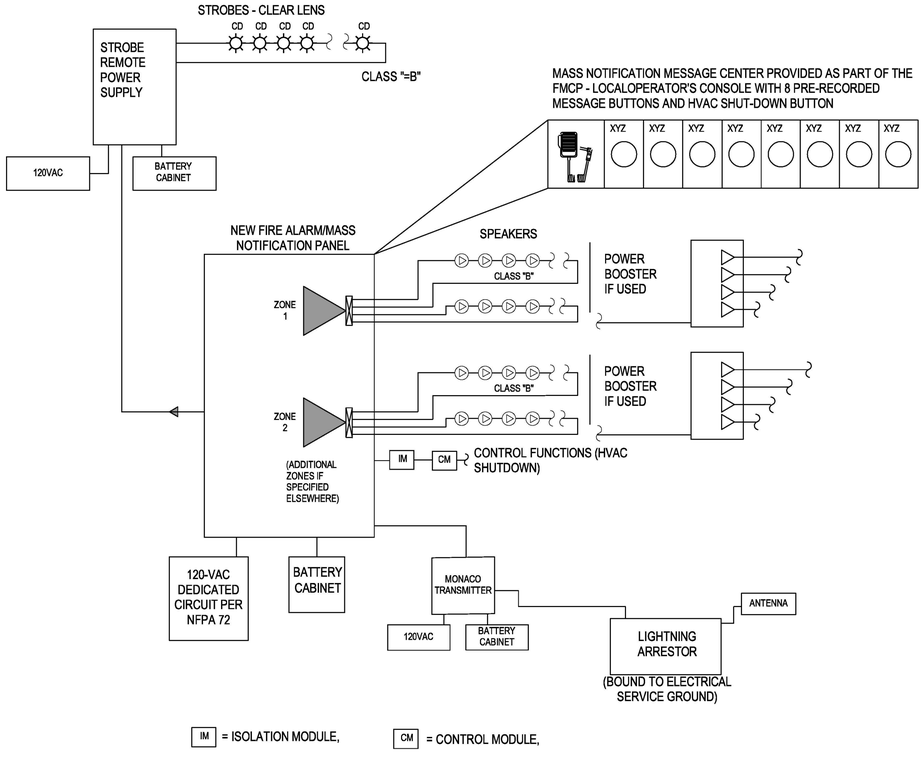
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

FIRE ALARM FLOOR PLAN

FA101-1

SHEET 43 OF 66

FINAL SUBMITTAL



THIS IS A TYPICAL RISER DETAIL. ALTHOUGH THE NUMBER OF DEVICES MAY VARY BY PROJECT, THE FUNCTION AND FEATURE OF EACH DEVICE INDICATED IS MANDATORY FOR THIS PROJECT.

THIS VOICE NOTIFICATION SYSTEM SHALL SERVE AS A FIRE ALARM NOTIFICATION SYSTEM AND A MASS NOTIFICATION SYSTEM. A VOICE EVACUATION TYPE FIRE ALARM/MASS NOTIFICATION PANEL SHALL BE USED.

COMBINATION SPEAKER AND CLEAR STROBES WITH THE LETTERING "ALERT" ON WHITE FACE PLATES SHALL BE INSTALLED FOR ALL FIRE ALARM AND MASS NOTIFICATION MESSAGES.

STROBES SHALL ONLY ACTIVATE UPON EMERGENCY NOTIFICATION FUNCTIONS.

STROBES SHALL BE SYNCHRONIZED.

NO STROBES SHALL FLASH UPON ACTIVATION OF BUILDING PAGING FUNCTIONS.

MASS NOTIFICATION FUNCTIONS SHALL OVERRIDE ALL OTHER FUNCTIONS. MESSAGES GENERATED BY THE MNS SYSTEM SHALL SOUND BASED ON PRIORITY. ALL MASS NOTIFICATION MESSAGES, EXCEPT FIRE, SHALL SOUND FOR A MAXIMUM OF 15 MINUTES BEFORE AUTOMATICALLY SILENCING. FIRE MESSAGE SHALL LATCH ACTIVE UNTIL MANUALLY SILENCED. IF A HIGHER PRIORITY MNS MESSAGE OVERRIDES THE FIRE MESSAGE AND THEN TIMES OUT, FIRE ALARM NOTIFICATION MESSAGE SHALL SOUND AGAIN UNTIL SILENCED AT FACP OR SYSTEM RESET. ALL MNS FUNCTIONS SHALL OVERRIDE BUILDING PAGING AND BACKGROUND MUSIC FUNCTIONS.

CONTRACTOR TO PROVIDE ADDITIONAL BOOSTER PANELS AND AMPLIFIERS AS NEEDED BASED ON SELECTED PRODUCTS LOADING, VOLTAGE DROP CALCULATIONS AND CIRCUIT CONFIGURATION.

SYSTEM SHALL BE INSTALLED AND TESTED FOR SPEECH INTELLIGIBILITY IN ACCORDANCE WITH NFPA 72 APPENDIX A USING APPROPRIATE FIELD MEASURING DEVICES.

AUDIBLE TONES SHALL PRECEDE EMERGENCY MESSAGES. FIRE TONE SHALL BE TEMPORAL. MASS NOTIFICATION TONE SHALL BE PER BASE STANDARDS.

SURGE SUPPRESSION SHALL BE INSTALLED ON EACH 120-VAC AND TELEPHONE CIRCUIT.

ISOLATION MODULES AND ADDRESSABLE CONTROL/RELAY MODULES SHALL BE INSTALLED PER MANUFACTURER INSTRUCTIONS TO PROTECT EACH CIRCUIT.

MNS PANEL MUST BE MONACO TO MATCH BASE STANDARD.

MARK	APPR	DATE	DESCRIPTION

CHECKED BY: B. GERDWAGEN
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HILL AIR FORCE BASE

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OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

FIRE ALARM RISER

FA601-1

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FINAL SUBMITTAL

FIRE ALARM / MASS NOTIFICATION SEQUENCE MATRIX

	EMERGENCY COMM SIGNALING								NOTIFICATION DEVICES							OTHER SYSTEMS
	ALARM SIGNAL AT FMCP	SUPERVISORY SIGNAL AT FMCP	SUPERVISORY AT REMOTE ANNUNCIATOR / LOC	TROUBLE SIGNAL AT FMCP	TROUBLE SIGNAL AT REMOTE ANNUNCIATOR / LOC	TRANSMIT SIGNAL TYPE TO INSTALLATION DISPATCH VIA BASE-WIDE REPORTING	ACTIVATE INTERIOR AND EXTERIOR FIRE ALARM STROBES	ACTIVATE INTERIOR AND EXTERIOR MASS NOTIFICATION STROBES	ACTIVATE SPEAKERS FOR LIVE VOICE PAGING	ACTIVATE SPEAKERS AND BROADCAST MNS MESSAGE	ACTIVATE SPEAKERS AND BROADCAST FIRE MESSAGE	SHUT DOWN ALL AIR HANDLING UNITS				
MANUAL PULL STATIONS																
- FIRE ALARM PULL STATION	■					■		■						■		■
SMOKE DETECTION																
- ABOVE THE FMCP AND EACH NAC PANEL	■					■								■		
MANUAL CONTROLS AT FMCP / LOC																
- MICROPHONE LIVE VOICE PAGE						■			■				■			
- MNS MESSAGE AS APPROPRIATE PER BASE STANDARD						■		■				■				
- FIRE MESSAGE						■		■						■		
- HVAC SHUT DOWN		■	■													■
MANUAL FIRE DEPARTMENT CONTROLS AT FMCP ONLY																
- MICROPHONE LIVE VOICE PAGE									■							
- BYPASS / SILENCE NOTIFICATION CIRCUITS AND DEVICES						■										
- BYPASS / SILENCE FIRE/MNS REPORTING SYSTEMS						■						■	■			
- BYPASS AHU SHUT DOWN						■										■
LOSS OF PRIMARY POWER FOR THE FMCP, LOC, NAC BOOSTER, REPORTING SYSTEM, OR OTHER NORMALLY POWERED REQUIRED ALARM DEVICES				■	■	■										
LOC MICROPHONE DOOR OPEN				■	□	■										
ABNORMAL OR NON-RESPONSIVE CIRCUIT OR DEVICE				■	■	■										

OGDEN AIR LOGISTICS CENTER

MARK	APPR	DATE	DESCRIPTION

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HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

FIRE ALARM MATRIX

FA602-1

SHEET 45 OF 66

FINAL SUBMITTAL

PLUMBING SYMBOL LEGEND

(NOTE: NOT ALL SYMBOLS ARE USED IN THIS PROJECT)

SYMBOL	DESCRIPTION
	PIPE ANCHOR
	FLEXIBLE CONNECTOR (FLEX. CONN.)
	WATER HAMMER ARRESTOR
	PRESSURE GAUGE
	THERMOMETER
	VALVE IN CAST IRON BOX
	NATURAL GAS CONNECTION
	COMPRESSED AIR CONNECTION
AAV	AIR ADMITTANCE VALVE (MAXI STUDOR VENT)
	NEW PLUMBING FIXTURE
DWH-X	TANKLESS DOMESTIC WTR. HEATER
DWH-X	DOMESTIC WATER HEATER
	WASHING MACHINE BOX
	WATER CONNECTION BOX
	WALL HYDRANT AND HOSE BIBB
	NATURAL GAS METER W/ REGULATOR
R	NATURAL GAS REGULATOR
M	WATER METER
X"RD	PRIMARY ROOF DRAIN (AS SHOWN ON ROOF PLAN)
X"ARD	AUXILIARY ROOF DRAIN (AS SHOWN ON ROOF PLAN)
X"RD	PRIMARY ROOF DRAIN (AS SHOWN FROM BELOW)
X"ARD	AUXILIARY ROOF DRAIN (AS SHOWN FROM BELOW)
X"AS	AUXILIARY OVERFLOW SCUPPER
X"FD-X	FLOOR DRAIN (ROUND AND SQUARE)
X"HD	HUB DRAIN
X"FS-X	FLOOR SINK (FULL GRATE, 1/2 GRATE AND 3/4 GRATE)
X"TD-X	TRENCH DRAIN
	SUMP PUMP
WC-X	FIXTURE TAG
X	KEYED NOTE
	CONNECT TO EXISTING
	POINT OF DEMOLITION
1	REVISION TAG
X" VTR R X	PLUMBING RISER TAG
	EXISTING PIPE TO REMAIN
	DEMOLISHED PIPE
	NEW PIPE

PLUMBING SYMBOL LEGEND

(NOTE: NOT ALL SYMBOLS ARE USED IN THIS PROJECT)

SYMBOL		DESCRIPTION
		90° ELBOW
		45° ELBOW
		BRANCH CONNECTION OUT OF SIDE
		BRANCH CONNECTION OUT OF TWO SIDES
		RISER DOWN (ELBOW)
		RISER UP (ELBOW)
		BRANCH CONNECTION OUT OF BOTTOM
		BRANCH CONNECTION OUT OF BOTTOM TO 90° ELBOW
		BRANCH CONNECTION OUT OF TOP TO 90° ELBOW
		RISER DOWN TO 90° ELBOW
		BALL VALVE
		BUTTERFLY VALVE
		CHECK VALVE
		CIRCUIT SETTER
		GAS COCK
		GATE VALVE
		GLOBE VALVE
		PLUG VALVE
		PRESSURE REDUCING VALVE
		SOLENOID VALVE
		2-WAY MOTORIZED VALVE
		3-WAY MOTORIZED VALVE
		3-WAY VALVE
		ANGLE VALVE
		SWING CHECK VALVE
		UNION
		FLOW - IN DIRECTION OF ARROW
		CONCENTRIC REDUCER
		REDUCED PRESSURE ZONE BACKFLOW ASSEMBLY (RPZ)
		STRAINER-WYE
		STRAINER-WYE WITH BLOW OFF
		CAP ON END OF PIPE
FCO	FCO	FLOOR CLEANOUT (SAME SIZE AS PIPE)
COTG	COTG	CLEANOUT TO GRADE (SAME SIZE AS CARRIER PIPE)
DCOTG	DCOTG	DOUBLE CLEANOUT TO GRADE (SAME SIZE AS CARRIER PIPE)
WCO	WCO	WALL CLEANOUT
CO	CO	CLEANOUT PLUG

PLUMBING SYSTEM LEGEND

(NOTE: NOT ALL SYSTEMS ARE USED IN THIS PROJECT)

SYMBOL	DESCRIPTION
DOMESTIC WATER	
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
140°F	DOMESTIC HOT WATER SUPPLY (140°F)
140°F HWR	DOMESTIC HOT WATER RETURN (140°F)
160°F	DOMESTIC HOT WATER SUPPLY (160°F)
160°FHWR	DOMESTIC HOT WATER RETURN (160°F)
SW	SOFT WATER
DE	DE-IONIZED WATER
DI	DISTILLED WATER
RO	REVERSE OSMOSIS WATER
NP	NON-POTABLE WATER
WASTE AND VENT	
SS	SANITARY SEWER
	VENT
CWV	COMBINATION WASTE AND VENT
GW	GREASE WASTE
AW	ACID WASTE
AV	ACID VENT
PD	PUMP DISCHARGE
SD	STORM DRAIN
ASD	AUXILIARY STORM DRAIN
OW	OIL WASTE
CD	CONDENSATE DRAIN
FUEL GAS	
G	NATURAL GAS - 7"WC - 11"WC
2PSI-G	NATURAL GAS - 2 PSI
5PSI-G	NATURAL GAS - 5 PSI

PLUMBING ABBREVIATIONS

AIR COMPRESSOR	AC	HEATING, VENTILATION, AIR COND.	HVAC
AIR CONDITIONING UNIT	ACU	HORSE POWER	HP
AREA DRAIN	AD	HEAT RECLAIM WATER HEATER	HRWH
ABOVE FINISH CEILING	AFC	HOSE STATION	HS
ABOVE FINISH FLOOR	AFF	HOT WATER	HW
ABOVE FINISHED GRADE	AFG	HOT WATER GENERATOR	HWG
AUTHORITY HAVING JURISDICTION	AHJ	HOT WATER RETURN	HWR
APPROXIMATE	APPROX	HOT WATER STORAGE TANK	HWST
ARCHITECT/ARCHITECTURAL	ARCH	INSIDE DIAMETER/DIMENSION	ID
AUXILIARY ROOF DRAIN	ARD	KILOWATTS	KW
BELOW FINISH FLOOR	BFF	LAVATORY	LAV
BUILDING	BLDG	LINEAR FEET	LF
BRITISH THERMAL UNITS	BTU	LIQUID PETROLEUM GAS	LPG
BRITISH THERMAL UNITS/HOUR	BTUH	LEAVING WATER TEMPERATURE	LWT
CAPACITY	CAP	MAXIMUM	MAX
CATCH BASIN	CB	THOUSAND BTU/PER HOUR	MBH
CONDENSATE DRAIN	CD	MECHANICAL	MECH
CUBIC FEET/HOUR	CFH	MODEL	MDL
CUBIC FEET/MINUTE	CFM	MANUFACTURER	MFR
CAST IRON	CI	MANHOLE	MH
CEILING	CLG	MINIMUM	MIN
CLEAN OUT	CO	MISCELLANEOUS	MISC
COLUMN	COL	MOUNTED	MTD
CONCRETE	CONC	NOT APPLICABLE	NA
CONNECT	CONN	NATIONAL FIRE PROTECTION ASSO.	NFPA
CONSTRUCTION	CONST	NOT TO SCALE	NTS
CONTINUE	CONT	OUTSIDE AIR	OA
CLEAN OUT TO GRADE	COTG	OUTSIDE DIAMETER/DIMENSION	OD
CIRCULATING PUMP	CP	PRESSURE DROP	PD
CONDENSATE RETURN	CR	PLUMBING	PLBG
COLD WATER	CW	PRESSURE	PRESS
DOUBLE CLEANOUT TO GRADE	DCOTG	PRESSURE REDUCING VALVE	PRV
DESICCANT DEHUMIDIFIER	DD	POUNDS PER SQUARE INCH	PSI
DEGREE	DEG(°)	RETURN AIR	RA
DEMOLITION	DEMO	ROOF DRAIN	RD
DRINKING FOUNTAIN	DF	REFERENCE	REF
DOWN SPOUT	DS	REQUIRED	REQD
DIAMETER	DIA	REVISION, REVISED	REV
DETAIL	DTL	ROOM	RM
DOMESTIC WATER HEATER (G) GAS	GWH/	REVOLUTIONS PER MINUTE	RPM
(E) ELECTRIC	EWH	STEAM CONDENSATE	SC
EFFICIENT	EFF	SCHEDULE	SCH
ELEVATION	ELEV	SECTION	SECT
ELECTRICAL	ELEC	SINK	SK
EQUAL	EQ	STATIC PRESSURE	SP
EQUIPMENT	EQUIP	SPECIFICATION(S)	SPEC
ENTERING WATER TEMPERATURE	EWT	SANITARY SEWER	SS
EXISTING	EX,EXT	STEAM	ST
EXPANSION	EXP	STEEL	STL
FLOOR CLEANOUT	FCO	SUCTION	SUCT
FLOOR DRAIN	FD	TEMPERATURE	TEMP
FLOW LINE	FL	TOTAL DYNAMIC HEAD	TDH
FLEXIBLE CONNECTION	FLEX CONN	TOTAL HEAD	TH
FLOOR SINK	FS	THREE WAY MODULATING VALVE	TWMV
FLOOR	FLR	THERMOSTATIC MIXING VALVE	TMV
FEET PER MINUTE	FPM	TYPICAL	TYP
FREEZE PROOF WALL HYDRANT	FPWH	UNDERWRITERS LABORATORY	UL
FREEZE PROOF ROOF HYDRANT	FPRH	URINAL	UR
GAS	G	VENT	V
GAUGE	GA	VALVE	VLV
GALLON	GAL	VELOCITY	VEL
GALVANIZED	GALV	VERTICAL	VERT
GREASE INTERCEPTOR	GI	VENT THROUGH ROOF	VTR
GALLONS PER HOUR	GPH	VOLUME	VOL
GALLONS PER MINUTE	GPM	WATER CLOSET	WC
GREASE TRAP	GT	WALL CLEANOUT	WCO
HOSE BIBB	HB	WATER	WTR
HEIGHT	HT	WORKING PRESSURE	WP
HEATING	HTG	WEIGHT	WT

HILL AIR FORCE BASE
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OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

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DATE: 21 OCT 2020
PROJECT MANAGER:

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PLUMBING LEGEND

P-001-1

SHEET 46 OF 66

FINAL SUBMITTAL

PLUMBING GENERAL NOTES

1. ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES.
2. ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) IF INFORMATION CONFLICTS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS FOR COMPLETE INFORMATION.
3. BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (HVAC, ELECTRICAL, STRUCTURAL, ETC.). IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.
4. EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
5. CONTRACTOR SHALL PAY ALL UTILITY FEES & CHARGES AS PART OF BASE BID IN THE CONTRACT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES; i.e., ARCHITECTURAL, HVAC, ELECTRICAL, STRUCTURAL, FIRE PROTECTION AND CIVIL PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS, SIZES AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION; i.e., SANITARY SEWER, STORM DRAIN, FIRE PROTECTION, DOMESTIC WATER AND NATURAL GAS. ALL SERVICES SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING, EXCEPT WHERE SHOWN OTHERWISE. SEE SITE UTILITY DRAWINGS FOR CONTINUATION OF ALL SERVICE LINES.
8. PROVIDE ISOLATION VALVES AT EACH FIXTURE GROUP OR BATTERY OF FIXTURES IN THE DOMESTIC CW, HW, HWR AND GAS PIPING. VALVES SHALL BE EASILY ACCESSIBLE. WHERE HARD CEILINGS ARE LOCATED, VALVES SHALL BE ACCESSED THROUGH ACCESS PANELS. ACCESS PANELS SHALL BE COORDINATED WITH ARCHITECT PRIOR TO CONSTRUCTION.
9. PROVIDE STOP VALVES AT ALL PLUMBING FIXTURES ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC., SHALL BE CHROME PLATED AND INSTALLED TIGHT TO WALL. WHERE PIPING IS EXPOSED, CHROME PLATED PIPE SHALL BE USED.
10. ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.
11. SLOPE 21/2" AND SMALLER DRAIN WASTE AND VENT (DWV) LINES AT MIN, (2%) 1/4" FALL PER FT., 3" TO 6" DWV LINES AT MIN. (1%) 1/8" FALL PER FT. AND 8" AND LARGER DWV LINES AT MIN. (.5%) 1/16" FALL PER FT. SANITARY SEWER AND WATER SHALL BE A MINIMUM OF 10' APART OR THE DOMESTIC WATER SERVICE SHALL BE 12" ABOVE THE TOP OF THE SEWER LINE, AT ITS HIGHEST POINT, IF PLACED IN SAME TRENCH.
12. PROVIDE ALL FITTINGS, TRANSITIONS, COUPLINGS, ADAPTERS, UNIONS, AND OTHER ACCESSORIES NEEDED TO COMPLETE CONNECTIONS AND PROPER OPERATION AND MAINTENANCE OF PLUMBING FIXTURES AND PLUMBING EQUIPMENT.
13. REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF SAME.
14. PROVIDE CLEANOUTS IN ALL SEWERS, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 50 FEET, AT EACH CHANGE OF DIRECTION GREATER THAN 45 DEGREES, AND ALL VERTICAL STACKS AT A HEIGHT OF 30" ABOVE FINISH FLOOR AT THE BASE OF EACH STACK.
15. WHERE WATER PRESSURES EXCEED 70 PSI, PROVIDE WATER PRESSURE REDUCING VALVES (PRV) WITH STRAINER IN WATER SUPPLY LINES, SETTING AT 70 PSI. SEE CODE AND MANUFACTURER INFORMATION FOR ACCEPTABLE PRESSURE REQUIREMENTS.
16. ALL PIPING PENETRATIONS OF THE RATED CEILING AND WALL MUST BE MADE WITH METAL PIPE OR UL LISTED APPROVED DEVICES. FIRE STOP ALL PIPE PENETRATIONS THRU RATED WALLS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, RATINGS AND FIRE STOPPING DETAILS.
17. DO NOT ROUTE ANY PIPING OVER ELEC. ROOMS, COMPUTER ROOMS, OR ELEC. PANELS.
18. INSTALL AN AGA LISTED NATURAL GAS COCK, DIRT LEG AND UNION IMMEDIATELY UPSTREAM OF EQUIPMENT CONNECTIONS. AS NOTED ON DRAWINGS PROVIDE AN AGA LISTED VENT LIMITING GAS REGULATOR. GAS REGULATORS SHALL NOT BE INSTALLED IN AIR PLENUMS (SEE HVAC PLANS FOR AIR PLENUM LOCATIONS).
19. ALL DOMESTIC WATER PIPING ROUTED IN AREAS SUBJECT TO FREEZING TEMPERATURES SHALL BE ROUTED BELOW INSULATION AND WITHIN THE HEATED ENVELOPE OF THE BUILDING. WHERE PIPING CAN NOT BE ROUTED BELOW INSULATION, PIPING SHALL HAVE 5 WATT/FT HEAT TRACING ATTACHED. SEE ARCHITECTURAL DRAWINGS FOR INSULATION PLACEMENT AND DETAILS. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND ENGINEER.
20. UNLESS OTHERWISE INDICATED DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS. WHEN ROUTED IN EXTERIOR WALLS, CAREFULLY POSITION WATER PIPING ON THE HEATED SIDE (INTERIOR SIDE) OF THE WALL INSULATION.
21. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES, OPERABLE WINDOWS AND FLUES, PLUMBING VENTS AND GAS REGULATORS.
22. ALL STORM DRAIN, CONDENSATE DRAIN, SEWER & VENT PIPING SHALL BE RODDED AND CLEANED AT END OF CONSTRUCTION. ALL TRAPS SHALL BE CLEANED AND PRIMED AT END OF CONSTRUCTION.
23. ALL PIPE DROPS FROM CEILING PLENUM TO FLOOR SHALL BE MADE IN FURROUTS AT COLUMNS, IN WEB OF BEAMS AT COLUMNS OR IN WALLS. PIPING SHALL BE CONCEALED UNLESS APPROVED BY ARCHITECT.
24. PROVIDE WATER HAMMER ARRESTORS IN FIXTURE BRANCHES WHERE QUICK CLOSING VALVES ARE INSTALLED; i.e., FLUSH VALVES, ICE MAKERS, DISHWASHERS, ETC.
25. BELOW SLAB WATER PIPE TO BE TYPE K SOFT DRAWN COPPER WITHOUT FITTINGS OR JOINTS. SLEEVE IN ENTIRETY WITH ARMAFLEX OR APPROPRIATE POLYETHYLENE SLEEVE MATERIAL.
26. PROVIDE APPROVED BACKFLOW PREVENTION OR ANTI-SIPHON DEVICES AT ALL FIXTURES THAT COULD CONTAMINATE THE POTABLE WATER SYSTEM.
27. INSULATE ALL WATER, CONDENSATE, STORM DRAIN PIPING (VERTICAL AND HORIZONTAL) AND ROOF DRAIN BODIES ABOVE FINISH FLOOR. SEE SPECIFICATIONS FOR THICKNESS SCHEDULE.
28. INSULATE ALL EXPOSED HOT WATER & DRAIN PIPING FOR ACCESSIBLE FIXTURES PER ANSI A117.1 AND ABA REQUIREMENTS.
29. ALL EXPOSED MATERIALS WITHIN RETURN AIR PLENUMS (EXISTING AND NEW) SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 OR A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50, AS DETERMINED IN ACCORDANCE WITH ASTM E84 AND U.L. LISTINGS. IF ANY MATERIALS (EXISTING OR NEW) DO NOT MEET THESE STANDARDS, THE ITEMS SHALL BE ENCLOSED IN A GYPSUM-BOARD ENCLOSURE, BE REPLACED WITH PLENUM RATED MATERIALS (I.E. CAST IRON), OR BE WRAPPED WITH AN APPROVED FIRE RATING MATERIAL, SUCH AS 3M FYRE WRAP. PLASTIC PIPING (PVC, ABS, AND CPVC) IS NOT APPROVED TO BE INSTALLED WITHIN RETURN AIR PLENUMS. BY NECESSITY, WE HAVE NOTED AS MANY AREAS AS POSSIBLE ON THE PLANS WHERE THESE CONDITIONS OCCUR, BUT IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTING CONDITIONS (WHETHER SHOWN ON THE PLANS OR NOT) AND INCLUDE THE REPLACEMENT/WRAPPING OF THESE ITEMS IN THE BID PRICE (SEE NOTE 7 ABOVE). COORDINATE RETURN AIR PLENUM LOCATIONS AND ANY NOTED DISCREPANCIES FROM THE PLANS WITH MECHANICAL ENGINEER PRIOR TO BID.
30. FLOOR DRAINS IN MECHANICAL ROOMS ARE SHOWN FOR GENERAL LOCATION ONLY. FLOOR DRAINS SHALL BE ACCESSIBLE AND SHALL BE VERIFIED WITH EQUIPMENT LAYOUT FOR INTERFERENCES.
31. AN APPROVED TRAP GUARD PRODUCT CONFORMING TO ASSE 1072 SHALL BE INSTALLED AT ALL FLOOR AND HUB DRAINS. ALL DRAINS SHALL HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM. INSTALL TRAP GUARD DEVICES PER MANUFACTURER'S INSTRUCTIONS.
32. DOMESTIC WATER SERVICE PIPING AND FITTINGS; E.G., CHECK VALVES, RPZA, SHUT-OFF VALVES, STRAINERS, PRESSURE REGULATORS, ETC. SHALL COMPLY WITH NSF61 CRITERIA. ALL CAST IRON EQUIPMENT IS TO BE INTERNALLY EPOXY COATED.
33. PER INTERNATIONAL PLUMBING CODE (2015 EDITION) SECTION 705.16 "JOINTS BETWEEN DIFFERENT MATERIALS" STATES THAT "JOINTS BETWEEN DIFFERENT PIPING MATERIAL SHALL BE MADE WITH MECHANICAL JOINT OF THE COMPRESSION OR MECHANICAL-SEALING TYPE CONFORMING TO ASTM C 1173, ASTM C 1460 OR ASTM C 1461. CONNECTORS AND ADAPTERS SHALL HAVE AN ELASTOMERIC SEAL CONFORMING TO ASTM C 425, ASTM C 443, ASTM C 564, ASTM C 1440, ASTM D 1869, ASTM F 477, CSA A257.3M OR CSA B602, OR AS REQUIRED IN SECTIONS 705.18.1 THRU 705.18.7".

ABA REQUIREMENTS

THIS SECTION APPLIES TO HANDICAPPED ACCESSIBLE FIXTURES ONLY.

WATER CLOSETS: THE HEIGHT OF WATER CLOSETS SHALL BE 17"-19" MEASURED FROM THE TOP OF THE TOILET SEAT. SEATS SHALL NOT BE SPRUNG OR RETURN TO A LIFTED POSITION. THE WATER CLOSET SHALL BE LOCATED 18" FROM THE SIDE WALL TO THE CENTER OF THE BOWL. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS NO MORE THAN 29" ABOVE FINISHED FLOOR. SEE ARCHITECTURAL SHEETS FOR GRAB BAR LOCATIONS.

LAVATORIES: LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO MORE THAN 34" ABOVE FINISHED FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29" ABOVE FINISHED FLOOR TO THE BOTTOM OF THE APRON. KNEE SPACE SHALL BE 8" FROM THE BOTTOM EDGE OF APRON TO THE LEADING EDGE OF THE BOTTOM OF BOWL. THE BOTTOM OF THE BOWL SHALL BE A MINIMUM OF 27" ABOVE FINISHED FLOOR. ALL WATER AND DRAIN PIPING UNDER LAVATORIES SHALL BE INSULATED WITH FOAM INSERT, COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.

FAUCETS: CONTROLS SHALL BE LEVER HANDLES OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 lbf.

DRINKING FOUNTAINS-WATER COOLERS: WHEN INSTALLING A HI-LO ACCESSIBLE FOUNTAIN MOUNT THE LOWEST SPOUT AT NO MORE THAN 36" ABOVE FINISHED FLOOR AND THE HIGH SPOUT AT 40" ABOVE FINISHED FLOOR. SPOUT SHALL BE AT THE FRONT OF THE UNIT AND SHALL DIRECT THE WATER FLOW IN A TRAJECTORY THAT IS PARALLEL OR NEARLY PARALLEL TO THE FRONT OF THE UNIT. THE SPOUT SHALL PROVIDE A WATER FLOW OF AT LEAST 4" HIGH. THE CONTROLS SHALL BE FRONT MOUNTED OR SIDE MOUNTED NEAR THE FRONT EDGE. CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NO GREATER THAN 5 lbf. WALL MOUNTED UNITS SHALL HAVE A CLEAR KNEE SPACE BETWEEN THE BOTTOM OF THE APRON AND THE FINISHED FLOOR OF 27" HIGH, 30" WIDE, AND 17"-19" DEEP. FOUNTAINS SHALL NOT PROTRUDE MORE THAN 4" INTO WALKWAYS.

SEISMIC INFORMATION

THE SITE HAS BEEN DESIGNATED AS SEISMIC DESIGN CATEGORY "D" WITH AN IMPORTANCE FACTOR OF 1.0 FOR ALL PLUMBING SYSTEMS. SEISMIC BRACING SHALL BE PROVIDED AS SPECIFIED.

HAEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: F. LEE
DRAWN BY: F. LEE
CHECKED BY: R. SEAY
SEIL CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

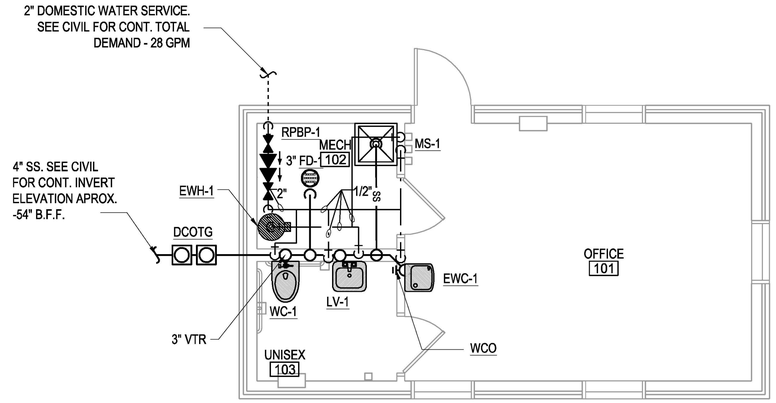
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PLUMBING LEGEND

P-002-1

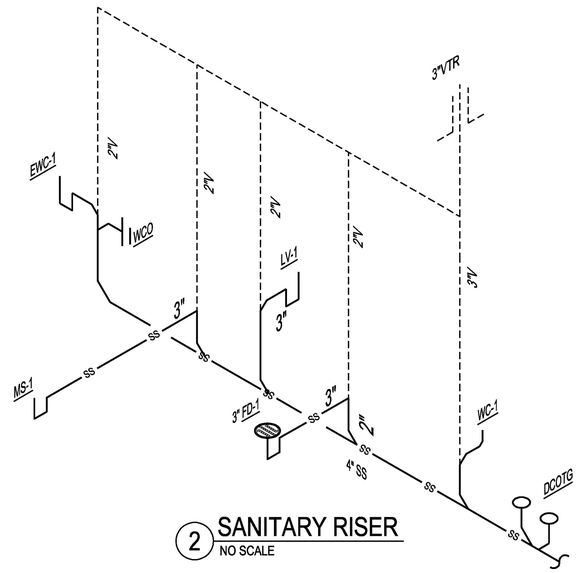
SHEET 47 OF 66

FINAL SUBMITTAL

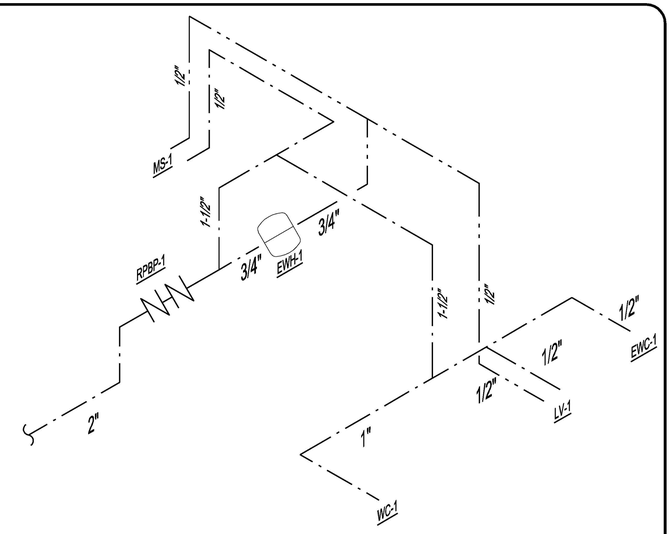


NOTE: WATER PIPE SIZES ARE BASED ON A MINIMUM WORKING PRESSURE OF 50 PSIG AT A FLOW RATE OF 28 GPM AT THE LOCATION WHERE THE MAIN SERVICE ENTERS THE BUILDING.

1 PLUMBING PLAN
1/4"=1'-0"



2 SANITARY RISER
NO SCALE



3 DOMESTIC WATER RISER
NO SCALE

PLUMBING FIXTURE SCHEDULE

(NOTE: FIXTURES SCHEDULED ARE BASIS OF DESIGN. PROVIDE LISTED APPROVED "EQUAL TO" FIXTURES SCHEDULED)

FIXTURE TAG	FIXTURE	COLD	HOT	WASTE	VENT	TRAP	CAPACITY/SIZE	MFR/MODEL OR EQUAL	REMARKS
WC-1	WATER CLOSET - FLOOR MTD, VITREOUS CHINA, INTEGRAL STOPS AND TRAP, SIPHON JET, 1-1/2" EXPOSED TOP SPUD, FLUSH VALVE - MASHAERATOR SELF-CLEANING BYPASS DIAPHRAGM, EXTERNALLY ADJUSTABLE FLOW RATE, SEAT - OPEN FRONT SEAT, SELF SUSTAINING, LESS COVER	1"	---	3"	2"	INTEGRAL	1.28 GPF	AMERICAN STANDARD "MADERA 16-1/2 H" 3461.001, AMERICAN STANDARD SEAT #5901.110, DELANY FLUSH VALVE "SABER" #S402-1.28	ABA COMPLIANT, RIM AT 17" TO 19" AFF, SEE "ABA REQUIREMENTS" ON SHEET P-002-1, PROVIDE MCGUIRE STOPS #2166CCLK
LV-1	LAVATORY - WALL HUNG, WHITE VITREOUS CHINA, FRONT OVERFLOW, TWO FAUCET HOLES ON 4" CENTERS, FAUCET - MANUAL, 4" WRIST BLADE, LEAD FREE, 4" SPOUT, DUAL HOT/COLD SUPPLY ON 4" CENTERS, CARRIER - CONCEALED ARM WALL CARRIER	½"	½"	2"	2"	1-1/4" P-TRAP	0.5 GPM	AMERICAN STANDARD "LUCERNE" #0355.012, ZURN FAUCET#Z81104-3M-XL, CARRIER - ZURN #1231	ABA COMPLIANT - SEE "ABA REQUIREMENTS" ON SHEET P-002-1, PROVIDE MCGUIRE GRID STRAINER #155WC, MCGUIRE STOPS #LF2165CCLK, MCGUIRE P-TRAP #8872, TRUEBRO TRAP AND SUPPLY COVERS
EWH-1	ELEC. WATER HEATER - WALL MTD, 30 GAL, 2KW HEATING ELEMENT, 8 GPH @ 100°F RISE, SURFACE THERMOSTATS, STEEL TANK WITH PORCELAIN ENAMEL INTERIOR COATING, 150 PSI WORKING PRESSURE	3/4"	3/4"	---	---	---	30 GAL	RHEEM #EGSP30	REQUIRES 240V/1Ø/2KW ELECTRICAL INPUT. PROVIDE FULL PORT 1/4 TURN BALL VALVE AND DIELECTRIC UNION ON CW/HW TANK CONNECTIONS. PROVIDE FULL PORT 1/4 TURN BALL VALVE TO ISOLATE EXPANSION TANK
ET-1	EXPANSION TANK - SERVES EWH-1, 2.0 GAL TOTAL CAPACITY, 0.9 GAL ACCEPTANCE VOL, 250 PSI WORKING PRESSURE, 8"Ø x 14" H,	---	---	---	---	---	---	THERM-X-TROL-ST-5C	
EWC-1	ELECTRIC WATER COOLER - BARRIER FREE, LEAD FREE, FLEXIBLE ONE PIECE BUBBLER, 8 GPH OF 50F WATER AT 90°F AMBIENT AND 80°F INLET WATER, MECHANICAL PUSH-BUTTON ACTIVATION WITH ANTI-MICROBIAL PUSH PADS, EXTERNAL STREAM HEIGHT ADJUSTMENT, POWDER COATED GALVANIZED CABINET, BOTTLE FILLER WITH HANDS FREE ACTIVATION, BUILT IN FILTER MONITOR AND BOTTLE COUNTER	½"	---	2"	2"	1-1/4" P-TRAP	8 GPH	ELKAY #LZS8WSLP, MCGUIRE P-TRAP #8872, MCGUIREVALVE #LFBV2165, WADE CARRIER #403 SERIES SUPPLY STOP	ABA COMPLIANT - SEE "ABA REQUIREMENTS" ON SHEET P-002-1 ELEC. REQUIREMENTS - GFCI RECEPTACLE, 120V/1PH/60Hz, 1/4 HP COMPRESSOR, 4.4 FLA, 450 RATED WATTS
RPBP-1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER - FOR DOMESTIC WATER, LEAD FREE, 175 PSI MAX WORKING PRESSURE, BRONZE BODY, WYE STRAINER, QUARTER-TURN BALL VALVE.	2"	---	---	---	---	2"	WATTS #LF909-2"-S-QT	SHALL MEET REQUIREMENTS OF ASSE STD. 1013; AWWA STD. C511-92; CSA B64.5. PROVIDE WALL SUPPORT SYSTEM, BRACING, SHUT-OFF VALVES, UNIONS, REDUCERS, ETC.
WHA	WATER HAMMER ARRESTOR - PROPERLY SIZED WATER HAMMER ARRESTORS SHALL BE PROVIDED AND LOCATED ON ALL QUICK CLOSING VALVES (FLUSH VALVES, DISHWASHERS, ICE MAKERS, SOLENOID VALVES, ETC.)	SAME SIZE AS LINE	---	---	---	---	24	WADE "SHOKTROL"	SEE WATER HAMMER ARRESTOR SCHEDULE FOR PROPER SIZING OF WATER HAMMER ARRESSTORS
WCO	WALL CLEANOUT - CAST IRON FERRULE, ROUND STAINLESS STEEL SECURE ACCESS COVER.	---	---	SAME SIZE AS LINE	---	---	SAME SIZE AS LINE MAX. OF 3"	ZURN #Z-1441 SERIES	USE CORRECT SIZE FOR PIPE INDICATED ON PLANS
DCOTG	DOUBLE-CLEANOUT-TO-GRADE - HEAVY DUTY CAST IRON FERRULE CLEANOUT W/ BRONZE PLUG, HEAVY DUTY TOP	---	---	SAME SIZE AS LINE	---	---	SAME SIZE AS LINE MAX. OF 4"	ZURN #Z-1400-HD-BP	USE CORRECT SIZE FOR PIPE INDICATED ON PLANS
FD-1	FLOOR DRAIN - PAINTED CAST IRON W/ FLANGE, INTEGRAL REVERSE CLAMPING COLLAR, SEEPAGE OPENINGS, 7"Ø SECURE SLOTTED GRATE AND EXTENDED RIM, ADJUSTABLE SATIN NICKEL BRONZE TOP	---	---	SEE PLAN	2"	SEE PLAN	7"DIA TOP	WADE #1100-ER7-1	PROVIDE SURE SEAL TRAP GUARD INSERT
MS-1	FIXTURE - 30" X 30" X 10", 16 GA. STAINLESS STEEL WITH INTEGRAL BACK SPLASH, FAUCET - CHROME PLATED FAUCET WITH VACUUM BREAKER AND PAIL HOOK, MOUNTED 36" AFF	1/2"	1/2"	3"	2"	2" P-TRAP	---	JUST #B-33213, JUST #JVB-1200	PROVIDE ACCESSORIES JUST #J-127B-3" DRAIN, STERN-WILLIAMS #T-35 RUBBER HOSE AND HANGER, STERN-WILLIAMS #T-40 MOP HANGER, (2) STERN-WILLIAMS #BP SPLASH PANELS

WATER HAMMER ARRESTOR

WADE SHOKTROL SIZE	#5	#10	#20	#50	#75	#100
P.D.I.	A	B	C	D	E	D
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330

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

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: F. LEE
DRAWN BY: F. LEE
CHECKED BY: R. SEAY
SITE CODE:
DATE: 21 OCT 2020
CAPITAL PROJECT NO:
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP
HILL AIR FORCE BASE

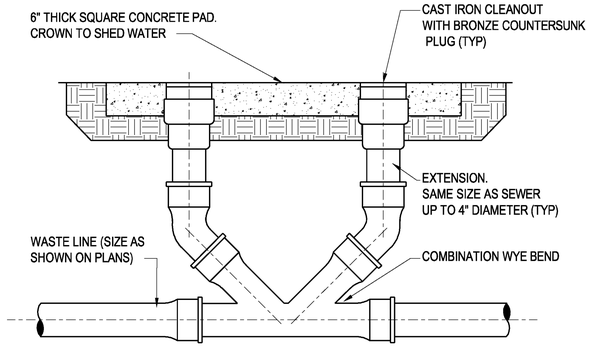
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PLUMBING PLAN AND
PLUMBING SCHEDULES

P-101-1

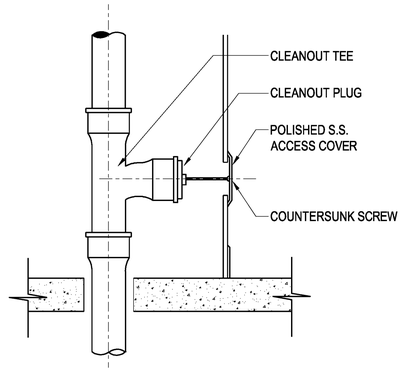
SHEET 48 OF 66

FINAL SUBMITTAL



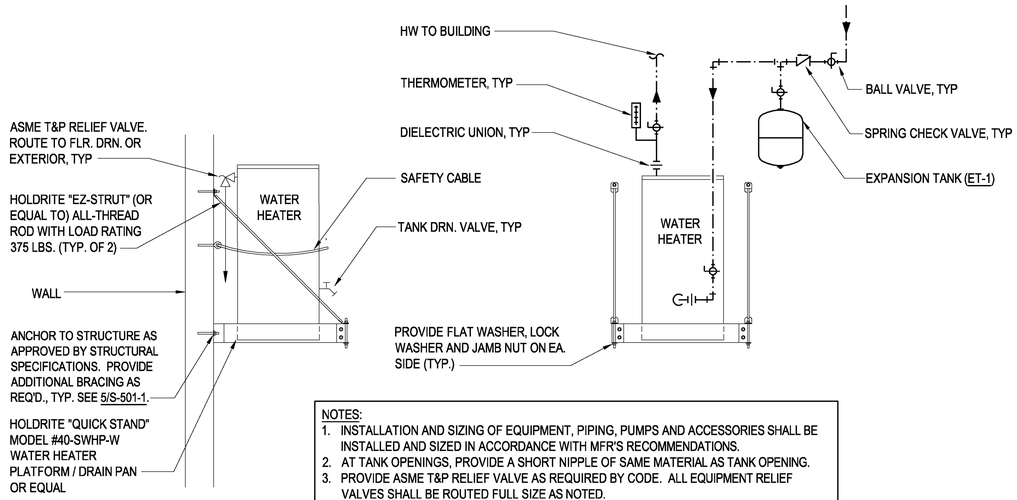
1 DOUBLE CLEANOUT-TO-GRADE

NOTE: SEE SPECIFICATIONS FOR MATERIALS



2 WALL CLEANOUT

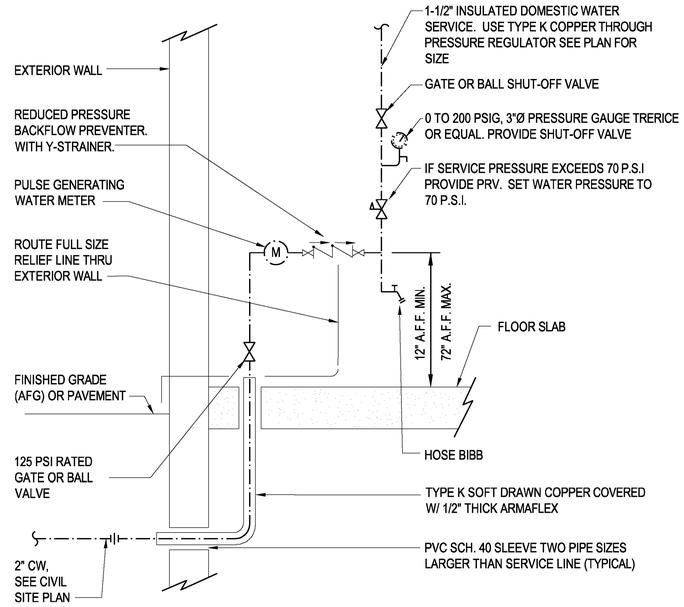
NOTE: SEE SPECIFICATIONS FOR MATERIALS



NOTES:
1. INSTALLATION AND SIZING OF EQUIPMENT, PIPING, PUMPS AND ACCESSORIES SHALL BE INSTALLED AND SIZED IN ACCORDANCE WITH MFR'S RECOMMENDATIONS.
2. AT TANK OPENINGS, PROVIDE A SHORT NIPPLE OF SAME MATERIAL AS TANK OPENING.
3. PROVIDE ASME T&P RELIEF VALVE AS REQUIRED BY CODE. ALL EQUIPMENT RELIEF VALVES SHALL BE ROUTED FULL SIZE AS NOTED.
4. INSTALL SPRING CHECK VALVE IN GRAVITY CLOSED POSITION.
5. DETAIL SHOWS GENERIC HOT WATER SYSTEM FOR GENERAL SYSTEM REQUIREMENTS.
6. ALL ISOLATION BALL VALVE SHALL BE FULL PORT TYPE.
7. PIPING ARRANGEMENT IS DIAGRAMMATIC AND IS SHOWN FOR CLARITY. PIPING SHALL BE INSTALLED NEATLY AND GROUPED FOR EASY ACCESS AND SERVICEABILITY.
8. PROVIDE SEISMIC SUPPORT AS REQUIRED BY CODE.

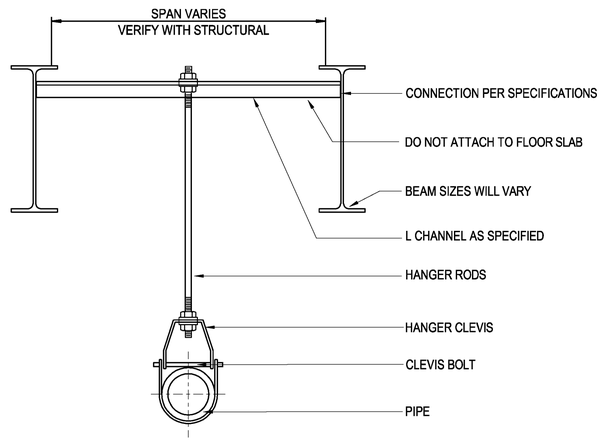
3 EWH - WALL MOUNTED

NO SCALE



4 DOMESTIC WATER RISER

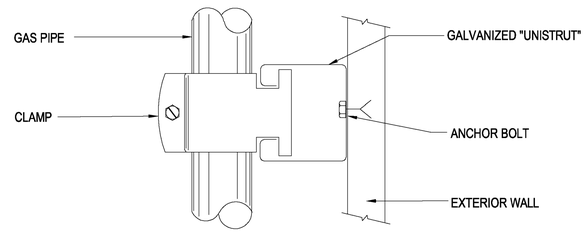
NO SCALE



NOTE:
ADJUSTABLE WROUGHT STEEL CLEVIS PIPE HANGER SHALL BE INSTALLED AT EACH PIPE JOINT.

5 PIPE SUPPORTING HANGER

NO SCALE



6 PIPE WALL SUPPORT

NO SCALE

DESIGNED BY: F. LEE
DRAWN BY: F. LEE
CHECKED BY: R. SEAY
SEAL CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

PLUMBING DETAILS

P-501-1

SHEET 49 OF 66

FINAL SUBMITTAL

ABBREVIATIONS & SYMBOLS

ABBREVIATION	DESCRIPTION
AFF	- ABOVE FINISHED FLOOR
AHU	- AIR HANDLING UNIT
BHP	- BRAKE HORSE POWER
BTU	- BRITISH THERMAL UNIT
CFM	- CUBIC FEET PER MINUTE
CV	- CONSTANT VOLUME
CU	- CONDENSING UNIT
DB	- DRY BULB TEMPERATURE (°F)
DDC	- DIRECT DIGITAL CONTROLS
DOAS	- DEDICATED OUTSIDE AIR SYSTEM
DN	- DOWN
EAT	- ENTERING AIR TEMPERATURE
EF	- EXHAUST FAN
EMCS	- ENERGY MANAGEMENT CONTROL SYSTEM
ESP	- EXTERNAL STATIC PRESSURE
EWT	- ENTERING WATER TEMPERATURE
FCU	- FAN COIL UNIT
FD	- FIRE DAMPER
FLA	- FULL LOAD AMPS
FPI	- FINS PER INCH
FPM	- FEET PER MINUTE
GPM	- GALLONS PER MINUTE
IV	- INTAKE VENTILATOR
KW	- KILOWATT
LAT	- LEAVING AIR TEMPERATURE
LWT	- LEAVING WATER TEMPERATURE
MBH	- THOUSAND BTUs PER HOUR
MCA	- MINIMUM CIRCUIT AMPS
MOCP	- MAXIMUM OVER CURRENT PROTECTION
NTS	- NOT TO SCALE
OA	- OUTSIDE AIR
PSI	- POUNDS PER SQUARE INCH
PSIG	- PSI GAUGE
PVC	- POLYVINYL CHLORIDE PIPE
RA	- RETURN AIR
RH	- RELATIVE HUMIDITY
RHC	- REHEAT COIL
RLA	- RUNNING LOAD AMPS
RPM	- REVOLUTIONS PER MINUTE
RS/RL	- REFRIGERANT SUCTION & LIQUID LINES
RTU	- ROOFTOP AIR HANDLING UNIT
SA	- SUPPLY AIR
SF	- SUPPLY FAN
SP	- STATIC PRESSURE
TSP	- TOTAL STATIC PRESSURE
VFD	- VARIABLE FREQUENCY DRIVE
WB	- WET BULB TEMPERATURE (°F)

SYMBOL	DESCRIPTION
20/12	- RECTANGLE DUCT SIZE (WIDTH x HEIGHT)
20"Ø	- ROUND DUCT SIZE (DIAMETER)
20/14	- OVAL DUCT SIZE (WIDTH x HEIGHT)
1	- KEYED NOTE
T	- THERMOSTAT / TEMPERATURE SENSOR
T	- THERMOSTAT WITH LOCKING COVER
H	- HUMIDISTAT / HUMIDITY SENSOR
M	- MOTORIZED ACTUATOR
	- DEMOLISH TO POINT INDICATED
	- CONNECT TO EXISTING POINT INDICATED
1	- REVISION REFERENCE
!	- VERY IMPORTANT
NECK SIZE / CALL-OUT / X Y Z / CFM	- DIFFUSER / GRILLE TAG
OR	
NECK SIZE / CALL-OUT / X Y/Y Z / CFM	- DIFFUSER / GRILLE TAG
AHU-1	- EQUIPMENT TAG

DUCTWORK LEGEND

SYMBOL	DESCRIPTION
	- SUPPLY DUCT UP
	- RETURN DUCT UP
	- EXHAUST DUCT UP
	- SUPPLY DUCT DOWN
	- RETURN DUCT DOWN
	- EXHAUST DUCT DOWN
	- ROUND DUCT UP
	- ROUND DUCT DOWN
	- ROUND/OVAL DUCT BREAK
	- RECTANGULAR DUCT BREAK
	- 90° BEND, ROUND DUCT
	- 45° BEND, ROUND DUCT
	- 90° BEND W/ TURNING VANE
	- 45° BEND
	- TRANSITION, SQUARE-TO-ROUND
	- TRANSITION, CONCENTRIC
	- TRANSITION, ECCENTRIC
	- STANDARD BRANCH TAKE-OFF
	- TAKE-OFF W/ MANUAL DAMPER
	- SQUARE THROAT TEE W/ TURNING VANES
	- FIRE DAMPER
	- COMBINATION FIRE/SMOKE DAMPER

DIFFUSER / GRILLE LEGEND

SYMBOL	DESCRIPTION
	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE

PIPING LEGEND

SYMBOL	DESCRIPTION
CD	- CONDENSATE DRAIN
RS/RL	-REFRIGERANT SUCTION/LIQUID
	- ELBOW, TURNED UP
	- ELBOW, TURNED DOWN
	- TEE, OUTLET UP
	- TEE, OUTLET DOWN
	- CONNECTION TOP / BOTTOM
	- ELBOW, 90° / 45°
	- CAP

EQUIPMENT LEGEND

SYMBOL	DESCRIPTION
XXX-X	EQUIPMENT WILL VARY. ALL EQUIPMENT SHALL BE SHOWN HATCHED WITH THE APPROPRIATE EQUIPMENT TAG DESIGNATION. REFER TO THE SCHEDULE SHEETS FOR ADDITIONAL INFORMATION.

DESIGN CONDITIONS

LOCATION: HILL AIR FORCE BASE, UTAH

OUTDOOR SUMMER (0.4% OCCURRENCE)	93°F DB / 65°F WB
OUTDOOR WINTER (99.0% OCCURRENCE)	12°F DB
INSIDE SETPOINT SUMMER	72°F DB (55% MAX. RH)
INSIDE SETPOINT WINTER	70°F DB

SEISMIC DESIGN CRITERIA

1. SEISMIC DESIGN DATA:
   A. SEISMIC DESIGN CATERGORY: D
   B. MECHANICAL COMPONENTS IMPORTANCE FACTOR Ip= 1.0
2. SEISMIC RESTRAINTS ARE REQUIRED FOR THE MECHANICAL COMPONENTS AND SYSTEMS PER THE REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE (IBC) AS DEFINED IN ASCE-7-10 SECTION 13.1.14.
3. REFER TO THE SPECIFICATIONS

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2015 EDITION OF THE "INTERNATIONAL MECHANICAL CODE", NFPA 90A, AND ALL CITY, STATE, AND LOCAL REQUIREMENTS.
2. REFER TO THE PROJECT MANUAL FOR ALL REQUIREMENTS.
3. REFER TO ARCHITECTURAL PLANS FOR:
   - REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES AND CEILING TYPES.
   - EXACT LOCATIONS AND MOUNTING HEIGHTS OF EXTERIOR LOUVERS.
   - FIRE RATED WALLS AND PARTITIONS. PROVIDE FIRE DAMPERS IN DUCT PENETRATIONS OF ALL FIRE RATED WALLS AND PARTITIONS AS NECESSARY TO MEET CITY AND STATE REQUIREMENTS.
   - ALL WALL AND ROOF PENETRATIONS AND EQUIPMENT MOUNTING DETAILS.
4. ALL DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION.
5. U.L. LISTED FLEXIBLE DUCT RUN-OUTS MAY BE USED, BUT SHALL NOT EXCEED 5'-0" IN LENGTH. ALL FLEXIBLE DUCT TO BE PROPERLY SUPPORTED WITH NO KINKS OR HARD BENDS.
6. DUCTWORK TO BE COORDINATED WITH STRUCTURAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, COMPONENTS AND SYSTEMS. ALL DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE SLOPED WITH 2-30° ELBOWS UNLESS OTHERWISE NOTED.
7. PROVIDE ACCESS PANELS IN CEILINGS OTHER THAN LAY-IN TYPE WHERE NECESSARY:
   - CLOSELY COORDINATE LOCATIONS AND SIZE OF ACCESS PANELS WITH INSTALLED EQUIPMENT TO ACHIEVE GREATEST ACCESSIBILITY FOR MAINTENANCE PURPOSES.
   - PROVIDE ACCESS PANEL AT BALANCING DAMPERS, FIRE DAMPERS, CONTROLS, VALVES, CLEAN OUTS, ETC.
8. COMPLETELY INSULATE THE TOPS OF ALL CEILING DIFFUSERS.
9. CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.
10. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL EXHAUST FANS, FLUES, PLUMBING VENTS, ETC.
11. CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.
12. PROVIDE APPROVED, NON-FLAMMABLE PIPE INSULATION ON ALL INSULATED PIPES AND PIPES OF PVC MATERIAL PASSING THRU AREAS OF BUILDING WITH RETURN AIR PLENUMS.
13. ALL EXTERIOR EXPOSED PIPING SUSCEPTIBLE TO FREEZING, SUCH AS CONDENSATE PIPING, SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET AND HEAT TRACED AT 5 WATTS/FOOT. SEAL JACKET WATER-TIGHT.
14. ALL WALL-MOUNTED, OCCUPANT-CONTROLLED HVAC DEVICES, I.E., THERMOSTATS, HUMIDISTAT, CO2 CONTROLLERS, CONTROL PANELS, ETC., SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR. CONTROLS LOCATED IN PUBLIC AREAS SHALL HAVE CLEAR PLASTIC LOCKING COVERS.

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: F. LEE
DRAWN BY: F. LEE
CHECKED BY: R. SEAY
SHT'L CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

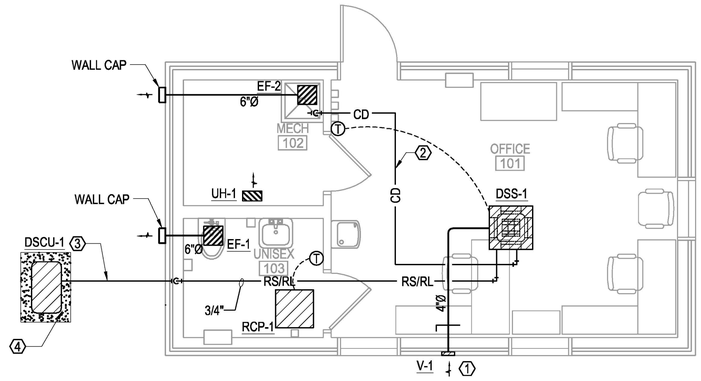
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

HVAC LEGEND

M-001-1

SHEET 50 OF 66

FINAL SUBMITTAL



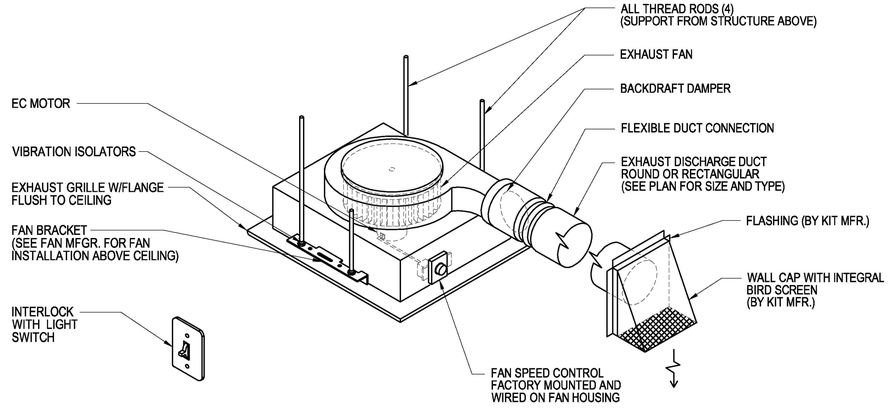
NORTH

1 MECHANICAL PLAN

1/4"=1'-0"

KEYED NOTES

1. 4" Ø MAKE UP AIR DUCT TO V-1 (55 CFM). SEE ARCH FOR ELEVATION.
2. ROUTE CONDENSATE PIPE TO MOP SINK.
3. ROUTE REFRIGERATION LINES TO DSCU-1. SIZE PER MANUFACTURER RECOMMENDATION. SLEEVE AND SEAL PIPE PENETRATIONS THRU WALL.
4. PROVIDE 4" CONCRETE PAD, EXTENDED 6" BEYOND UNIT ON ALL SIDES.



NOTE:

CEILING AND WALL TYPE MAY VARY.
SEE ARCHITECTURAL PLANS FOR TYPE.

2 CEILING MOUNTED EXHAUST FAN

NO SCALE

0 2' 4' 8'

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

DESCRIPTION	DATE	APPR	MARK

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75TH CIVIL ENGINEER GROUP

HILL AIR FORCE BASE

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

HVAC PLAN AND DETAILS

M-101-1

SHEET 51 OF 66

FINAL SUBMITTAL

EXHAUST FAN

MARK	SERVES	CFM	ESP	RPM	HP	VOLTS/Ø	MAX SONES	DRIVE	TYPE	WEIGHT	REFERENCE PRODUCT
EF-1	SEE PLANS	75	0.1	850	1/100	120/1	0.3	DIRECT	CEILING CABINET	12	GREENHECK: SP-A70
EF-2	SEE PLANS	75	0.1	850	1/100	120/1	0.3	DIRECT	CEILING CABINET	12	GREENHECK: SP-A70

NOTES:
1. PROVIDE UNIT MOUNTED SPEED CONTROL.
2. CONNECT TO LIGHT SWITCH.
3. PROVIDE MANUFACTURER'S WALL CAP AND PAINT TO MATCH CMU.
4. INSTALL FAN PER MANUFACTURER'S INSTRUCTIONS.

DUCTLESS SPLIT SYSTEM

MARK		SERVES	COOLING MBH	HEATING MBH	MAX CFM	MIN CFM	COOLING EAT (DB / WB)	COOLING LAT (DB / WB)	HEATING EAT / LAT	ELECTRICAL			SEER	REFRIG.	REFERENCE PRODUCT
INDOOR	OUTDOOR									MCA	MOCP	VOLTS/Ø			
DSS-1	DSCU-1	SEE PLANS	7.3	9.6	400	268	(73.6 / 58.4)	(55.0 / 51.2)	(64.7 / 90.5)	13.0	15.0	240/1	20.9	R410-A	DAIKIN: FFQ09Q2VJU / RXQ09MVJU

NOTES:
1. PROVIDE MANUFACTURER'S PROGRAMMABLE THERMOSTAT.
2. PROVIDE LOW AMBIENT KIT.
3. INDOOR UNIT IS POWERED BY THE OUTDOOR UNIT.

BRICK VENT

MARK	SERVES	DESCRIPTION	SIZE (W/L)	REFERENCE PRODUCT
V-1	SEE PLANS	EXTRUDED ALUMINUM	8-1/8"/ 4-3/4"	GREENHECK - BVF

RADIANT CEILING PANEL - ELECTRIC

MARK	SERVES	HEATING CAPACITY		ELECTRICAL DATA			SIZE	MANUFACTURER	MODEL	REMARKS
		WATTS	MBH	AMPS	VOLTS	Ø				
RCP-1	SEE PLANS	250	0.85	2.1	120	1	24" X 24"	BERKO	CP251	1, 2

NOTES:
1. PROVIDE REMOTE THERMOSTAT.
2. PROVIDE SURFACE MOUNTING FRAME "QSF2424."

UNIT HEATER - ELECTRIC

MARK	LOCATION	CFM	MBH	KW	FAN HP	VOLTS/Ø	WEIGHT	REFERENCE PRODUCT
UH-1	MECH	270	6.4	1.9	6 WATTS	208 / 1	24 LBS	QMARK: MWUH5004

NOTES:
1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. PROVIDE MANUFACTURER'S MOUNTING BRACKET.

MARK	DATE	APPR.	DESCRIPTION

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HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

HVAC SCHEDULES AND CONTROLS

M-601-1

SHEET 52 OF 66

FINAL SUBMITTAL

ELECTRICAL SYMBOLS

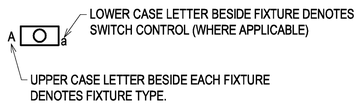
RECEPTACLES (MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)

- DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- DUPLEX RECEPTACLE OUTLET WITH RECEPTACLE CONTROLLED BY OCCUPANCY SENSOR (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- DUPLEX RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R) MOUNT 4" ABOVE COUNTER TOP, SINK, OR BACKSPLASH (IF PRESENT).
- SINGLE RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- FLOOR RECEPTACLE OUTLET (20A, 125V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 5-20R)
- SINGLE RECEPTACLE OUTLET (20A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-20R)
- SINGLE RECEPTACLE OUTLET (30A, 250V, 2 POLE, 3 WIRE, GROUNDING TYPE, NEMA 6-30R)
- SINGLE SPECIAL-PURPOSE RECEPTACLE OUTLET; NUMBER CORRESPONDS TO THE SPECIAL-PURPOSE RECEPTACLE SCHEDULE. (1)
- DUPLEX RECEPTACLE MOUNTED IN CEILING (20A, 125V, 2 POLE, 3 WIRE GROUNDING TYPE NEMA 5-20R)
- TWO (2) DUPLEX RECEPTACLES MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE GROUNDING TYPE NEMA 5-20R)
- TWO (2) DUPLEX RECEPTACLES FLOOR MOUNTED IN DOUBLE GANG BACKBOX (20A, 125V, 2 POLE, 3 WIRE GROUNDING TYPE NEMA 5-20R)

LIGHT FIXTURES (SEE FIXTURE SCHEDULE ON E-601-1 FOR TYPE)

- LIGHT FIXTURE, CEILING MOUNTED.
- LIGHT FIXTURE, CEILING MOUNTED ON EMERGENCY CIRCUIT.
- LIGHT FIXTURE, CEILING MOUNTED WITH EMERGENCY SELF CONTAINED BATTERY PACK. BATTERY PACK IS TO REMAIN UNSWITCHED.
- LIGHT FIXTURE, WALL MOUNTED.
- LIGHT FIXTURE, INDUSTRIAL STRIP, SURFACE OR PENDANT MOUNTED.
- LIGHT FIXTURE, CEILING MOUNTED.
- LIGHT FIXTURE, WALL MOUNTED.
- EMERGENCY BATTERY POWERED LIGHTING UNIT, WITH SELF CONTAINED BATTERY, CHARGER, ETC. (REFER TO FIXTURE SCHEDULE FOR BATTERY TYPE, VOLTAGE, LAMP TYPE, WATTAGE, ETC.) TRIANGLES DEPICT QUANTITY AND AIMING OF LAMP HEADS.
- EXIT SIGN, LIGHTED, CEILING MOUNTED. SHADED AREA INDICATES FACE. ARROW DEPICTS DIRECTIONAL ARROW ON SIGN. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
- EXIT SIGN, LIGHTED, WALL MOUNTED AT 7'-0" AFF UNLESS INDICATED OTHERWISE. WHEN REQUIRED BY THE FIXTURE SCHEDULE, AN EMERGENCY SELF-CONTAINED BATTERY PACK IS TO REMAIN UNSWITCHED.
- FLOOD LIGHT. ARROW INDICATES DIRECTION OF BEAM.
- DOCK LIGHT

LIGHT FIXTURE IDENTIFICATION



SWITCHGEAR

- MAGNETIC MOTOR STARTER (FURNISHED BY DIVISION 23, UNLESS NOTED OTHERWISE)
- ELECTRICAL PANELBOARD, FLUSH MOUNTED
- ELECTRICAL PANELBOARD, SURFACE MOUNTED
- SAFETY SWITCH; 30A CURRENT RATING UNLESS NOTED OTHERWISE. +4'-0" TO HANDLE
- 30 F20 FUSIBLE SAFETY SWITCH; CURRENT RATING AND FUSE RATING NOTED. +4'-0" TO HANDLE.
- CB CIRCUIT BREAKER IN WALL MOUNTED ENCLOSURE
- T ELECTRICAL TRANSFORMER. FLOOR MOUNTED UNLESS INDICATED OTHERWISE.

ELECTRICAL SYMBOLS

SWITCHES (MOUNTED AT 46", UNLESS INDICATED OTHERWISE)

- S_0 SWITCH, SINGLE POLE, 20A; LOWER CASE LETTER INDICATES DEVICES CONTROLLED.
- S_2 SWITCH, DOUBLE POLE, 20A SWITCH,
- S_3 3-WAY, 20A SWITCH,
- S_4 4-WAY, 20A SWITCH,
- S_M SINGLE POLE MANUAL MOTOR STARTING SWITCH, WITH THERMAL OVERLOAD ELEMENT AND PROVISIONS FOR LOCKING OPEN
- S_D SWITCH, DIMMING (ON FLUORESCENT FIXTURES, COORDINATE WITH BALLAST MANUFACTURER)
- S_{LV} LOW VOLTAGE WITH MOMENTARY CONTACTS SWITCH,
- S_O OCCUPANCY SENSOR, COMBINATION ULTRASONIC SWITCH AND PASSIVE INFRARED
- OS OCCUPANCY SENSOR, CEILING MOUNTED, COMBINATION ULTRASONIC AND PASSIVE INFRARED
- +6" AFF MULTIPLE DEVICES LOCATED SIDE BY SIDE (OR ABOVE AND BELOW, IF DIFFERENT ELEVATIONS ARE SHOWN) AT THE LOCATION INDICATED).

SINGLE LINE

- CIRCUIT BREAKER, TRIP RATING AS INDICATED, 3 POLE OR AS INDICATED.
- 60A DISCONNECT SWITCH OR LOAD INTERRUPTER SWITCH, CURRENT RATING AS INDICATED, 3 POLE OR AS INDICATED.
- GFI SWITCH WITH GROUND FAULT INTERRUPTER
- F30 FRS FUSE, CURRENT RATING AND TYPE WHEN INDICATED.
- TRANSFORMER, DESCRIPTION AS NOTED OR PER SCHEDULE
- CURRENT TRANSFORMER
- WH WATT-HOUR METER
- G GENERATOR

PAGING DEVICES

- LOUDSPEAKER OUTLET, CEILING MOUNTED, DIRECTIONAL. SUBSCRIPT "V" DENOTES VOLUME CONTROL.
- LOUDSPEAKER OUTLET, WALL MOUNTED, DIRECTIONAL. SUBSCRIPT "V" DENOTES VOLUME CONTROL.
- LOUDSPEAKER OUTLET, CEILING MOUNTED, BI-DIRECTIONAL. SUBSCRIPT "V" DENOTES VOLUME CONTROL.
- S_V LOUDSPEAKER OUTLET, CEILING MOUNTED. SUBSCRIPT "V" DENOTES VOLUME CONTROL. MOUNT TO ROOF WITH BAFFLE BOX IN AREAS WITHOUT CEILINGS.
- S_V SPEAKER VOLUME CONTROL

SECURITY

- M MAGNETIC ALARM SWITCH
- D DURESS ALARM SWITCH
- MD MOTION DETECTOR
- CD CAPACITIVE DETECTOR
- CCTV CAMERA LOCATION, CEILING MOUNTED UNLESS INDICATED OTHERWISE
- KS KEYPAD ACCESS ALARM OVERRIDE CONTROL
- ELECTRIC PUSH-BUTTON
- CARD READER
- REX REQUEST TO EXIT PUSH BUTTON

ELECTRICAL SYMBOLS

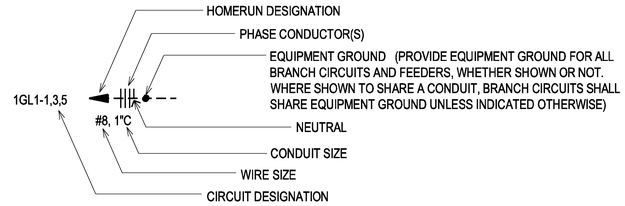
TELEPHONE/COMMUNICATIONS/DATA (OUTLETS SHALL BE MOUNTED 18" AFF UNLESS INDICATED OTHERWISE)

- TELEPHONE OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE. CABLING INCLUDED. SUBSCRIPT: W - WALL MOUNTED AT 54" AFF
- TELEPHONE FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE. CABLING INCLUDED.
- DATA OUTLET. OUTLET BOX WITH 1" EMT STUBBED ABOVE ACCESSIBLE CEILING SPACE WITH 90 DEGREE SWEEP AND CAPPED WITH AN INSULATED BUSHING. CABLING INCLUDED. NUMBER INDICATES NUMBER OF DATA JACKS. ABSENCE OF A NUMBER INDICATES FOUR DATA JACKS. EACH JACK REQUIRES A DEDICATED CABLE.
- DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE. CABLING INCLUDED.
- COMBINATION VOICE/DATA OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE. CABLING INCLUDED.
- COMBINATION VOICE/DATA FLOOR OUTLET. OUTLET BOX WITH 1" C STUBBED ABOVE ACCESSIBLE CEILING SPACE. CABLING INCLUDED.
- 4'-0" HIGH x 3/4" THICK FIRE-RETARDANT PLYWOOD BACKBOARD. SEE PLANS FOR LENGTH.

MISCELLANEOUS

- J JUNCTION BOX. WALL MOUNT AS INDICATED. FINAL CONNECTION TO BE MADE BY ELECTRICAL CONTRACTOR.
- J JUNCTION BOX CEILING MOUNT AS INDICATED
- C CLOCK OUTLET. WALL MOUNTED 7'-6" AFF
- MOTOR
- 10' BARE #6 COILED & EXOTHERMICALLY WELDED TO COLUMN
- TV CABLE TELEVISION OUTLET BOX MOUNTED 18" AFF WITH CONDUIT STUBBED ABOVE CEILING. PROVIDE PULL CORD.
- CONDUIT RUN, EXPOSED
- CONDUIT RUN, CONCEALED
- FLEXIBLE CONDUIT

CIRCUIT INFORMATION



ABBREVIATIONS:

AFF = ABOVE FINISHED FLOOR
AFL = ABOVE FINISHED LANDING
GFI = GROUND FAULT INTERRUPTER
IG = ISOLATED GROUND
UIO = UNLESS INDICATED OTHERWISE
WP = WEATHERPROOF CONSTRUCTION
OF/OI = OWNER FURNISHED / OWNER INSTALLED
CF/CI = CONTRACTOR FURNISHED / CONTRACTOR INSTALLED
TYP = TYPICAL

GENERAL SYMBOLS NOTES:

1. ALL SYMBOLS MAY NOT BE USED.

2. MOUNTING HEIGHTS ARE ABOVE FINISHED FLOOR OR GRADE TO THE CENTER LINE OF THE OUTLET, DEVICE, ETC. UNLESS INDICATED OTHERWISE.

3. LARGE AMPACITY CIRCUIT DESIGNATION EXAMPLE: "4 SETS OF 3#500, #250N, #1/0G, 4"C MEANS IN EACH OF FOUR 4" CONDUITS INSTALL THREE 500 kCM CONDUCTORS, ONE 250 kCM NEUTRAL AND ONE #1/0 GROUND.

- CIRCUIT DESIGNATION INDICATES PANELBOARD AND CIRCUIT(S) TO WHICH HOMERUN IS CONNECTED.
- WIRE SIZE SHALL BE NO. 12, UNLESS INDICATED OTHERWISE.
- CONDUIT SIZE SHALL BE MINIMUM ALLOWED BY SPECIFICATIONS FOR NO. 12 SIZE WIRE, 3/4" FOR NO. 10, UNLESS INDICATED OTHERWISE.
- CIRCUIT INFORMATION PROVIDED AT THE HOMERUN SYMBOL SHALL APPLY THE ENTIRE LENGTH OF THE CIRCUIT (FROM PANELBOARD TO LAST LOAD).
- WHEN NO PHASE CONDUCTOR OR NEUTRAL IS INDICATED AT THE HOMERUN SYMBOL, PROVIDE ONE PHASE CONDUCTOR AND ONE NEUTRAL, BOTH NO. 12.
- SWITCHING CONDUCTORS, CONDUCTORS FOR NIGHT LIGHT CIRCUITS (UNSWITCHED), ETC. ARE NOT SHOWN, BUT SHALL BE PROVIDED AS NECESSARY.
- WIRE SIZE INDICATED ON THESE DOCUMENTS AS INDICATED BY "NO." OR "#" HAS THE SAME MEANING AS "AWG" (N.E.C. NOMENCLATURE). (i.e. "NO. 12" OR "#12" MEANS "12AWG" IN N.E.C. NOMENCLATURE.)

SEISMIC DESIGN CATEGORY IS "D". EMERGENCY LIGHTING AND EXIT SIGN ARE CONSIDERED TO HAVE AN IMPORTANCE FACTOR OF 1.5. PROVIDE SEISMIC PROTECTION FOR THESE COMPONENTS. PROVIDE ATTACHMENT FOR ALL CEILING-MOUNTED LIGHT FIXTURES. PROVIDE OTHER BRACING AS REQUIRED.

OGDEN AIR LOGISTICS CENTER

DESCRIPTION | DATE | APPR. MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEIE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
HILL AIR FORCE BASE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

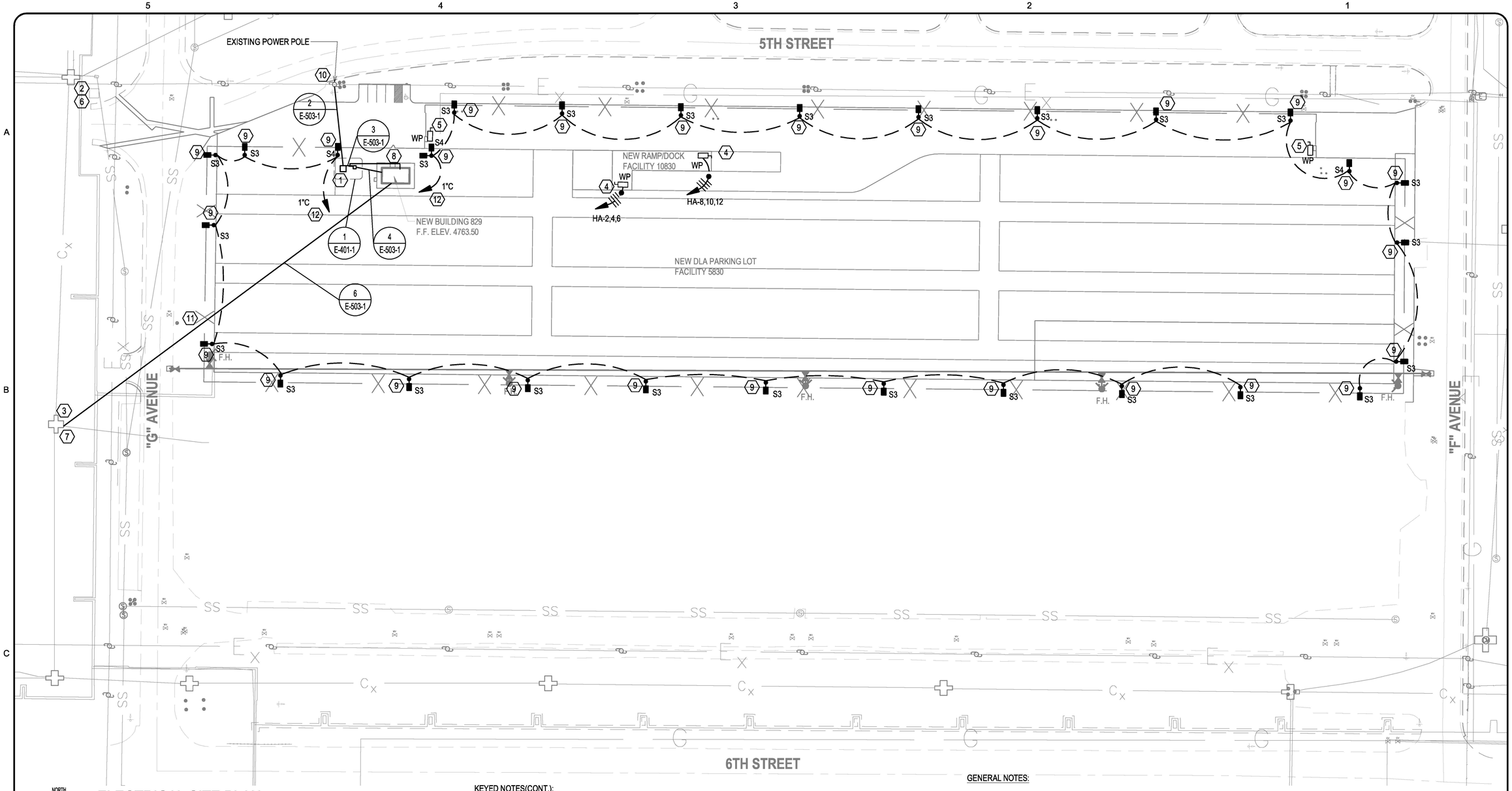
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL LEGEND

E-001-1

SHEET 53 OF 66

FINAL SUBMITTAL



1 ELECTRICAL SITE PLAN

NORTH

1"=50'

0 50' 100'

SCALE:1"=50'

KEYED NOTES:

1. LOCATION OF TRANSFORMER UT1, TRANSFORMER T1, AND PANEL HA.
2. LOCATION OF EXISTING COMM MANHOLE MH-22014-18
3. LOCATION OF EXISTING COMM MANHOLE MH-22014-23
4. DISCONNECT FOR DOCK LEVELER. COORDINATE REQUIREMENTS FOR DOCK LEVELER WITH MANUFACTURER. PROVIDE CONNECTION FROM DISCONNECT TO DOCK LEVELER. MOUNT ON UNISTRUT FRAME ON TOP OF DOCK NEAR CORNER ORIENTED TO OPERATE DISCONNECT WHILE STANDING ON DOCK
5. PROVIDE 1"C, WITH PULL CORD, BACK TO ADMIN BUILDING IN THE LOT FOR CONTROLS. PROVIDE 1"C, WITH PULL CORD, FROM DISCONNECT LOCATION TO PANEL HA. DISCONNECT FOR MOTORIZED GATE TO BE PROVIDED IN PACKAGE 2 (NOT IN PACKAGE 1 CONTRACT). COORDINATE EXACT LOCATION WITH PACKAGE 2 CONTRACT.

KEYED NOTES(CONT.):

6. INSTALL 25 PAIR 24AWG PE-89 COPPER CABLE FROM MH22014-18 TO MH 22014-23 TO NEW ADMIN BUILDING. SPLICE CASE IS PLP STAINLESS STEEL. UTILIZE EXISTING CONDUIT TO MH22014-23 AND NEW CONDUIT TO NEW ADMIN BUILDING.
7. INSTALL 12 STRAND SINGLE MODE FIBER OPTIC CABLE FROM MH 22014-23 THROUGH NEW CONDUITS UNDER THE ROAD TO THE NEW ADMIN BUILDING.
8. 1" PVC CONDUIT FROM SMART METER TO BUILDING DATA CABINET.
9. LIGHT FIXTURE, POLE, POLE, BASE, AND CONDUCTORS PART OF PACKAGE 2 BY OTHER. SHOWN FOR LOCATION PURPOSES ONLY.
10. VERIFY TIE IN POINT AND ROUTING WITH UTILITY.
11. INSTALL TWO 4" CONDUITS FROM EXISTING COMM MANHOLE MH-22014-23 TO NEW ADMIN BUILDING. ONE OF THE CONDUITS SHALL HAVE FOUR 1" INNERDUCTS INSTALLED. THIS WILL BE A DIRECT ROUTE FROM MH 22014-23 TO THE NEW ADMIN BUILDING. DIRECTIONAL BORE UNDER THE ROAD.
12. PROVIDE 1" CONDUIT, WITH PULL CORD, FROM PANEL HA TO POLE MOUNTED LIGHT FIXTURES SHOWN ON THIS CIRCUIT. CONDUCTORS PART OF PACKAGE 2 BY OTHER.

GENERAL NOTES:

1. PROVIDE NEMA 3R ENCLOSURES FOR ALL TRANSFORMERS, PANELS, AND DISCONNECTS LOCATED OUTSIDE.
2. PAINT ALL NEW EXTERIOR ELECTRICAL GEAR TRUSTY TAN.
3. MOUNT PANEL HA AND SMART METER TO UNISTRUT AS NECESSARY.
4. VERIFY WITH CONTRACTING OFFICER ELECTRICAL REQUIREMENTS OF GATE MOTORS AND DOCK LEVELERS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT MOTORS AND MOTOR CIRCUITS, INCLUDING DISCONNECT, STARTER, CONTROLLER, SHORT CIRCUIT PROTECTION, AND OVERLOAD PROTECTION ARE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE NEC.
6. COORDINATE GATE AND GATE CONTROLS WITH FIRE CHIEF TO ENSURE THE FIRE DEPARTMENT HAS ACCESS TO THE LOT.
7. ALL LIGHT POLES MUST BE A MINIMUM OF 6' AWAY FROM THE PERIMETER FENCE.
8. CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER'S REPRESENTATIVE IMMEDIATELY OF ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS.
9. UNDERGROUND CONDUIT CHANGES IN DIRECTION SHALL BE RIGID METALLIC CONDUIT FACTORY COATED PVC (RN1).
10. COORDINATE WORK INVOLVING SITE LIGHT FIXTURES AND GATE MOTORS WITH CONTRACTOR FOR PACKAGE 2.

OGDEN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SITE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
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HILL AIR FORCE BASE

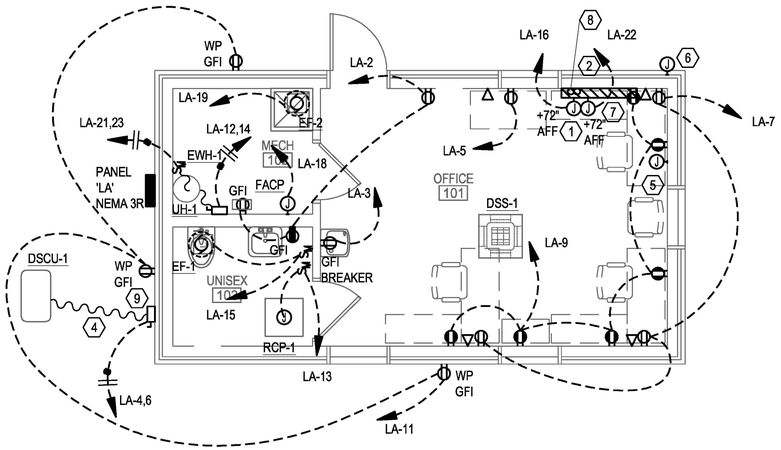
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL SITE PLAN

ES101-1

SHEET 54 OF 66

FINAL SUBMITTAL



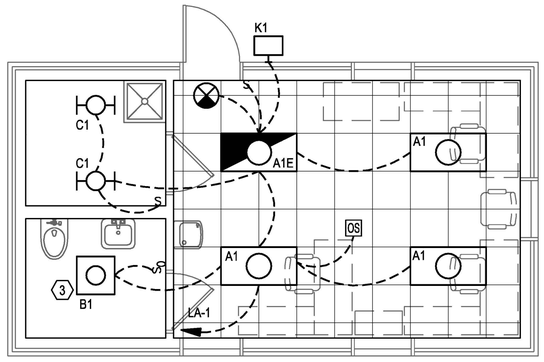
1 POWER AND SYSTEMS PLAN

1/4"=1'-0"

NORTH

0 2' 4' 8'

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



2 LIGHTING PLAN

1/4"=1'-0"

NORTH

0 2' 4' 8'

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

GENERAL NOTES:

1. TELECOMMUNICATIONS CABLES AND JACKS SHALL BE GREEN. FACEPLATES SHALL BE WHITE.
2. TELEPHONES SHALL BE VOICE OVER IP. CONTRACTOR IS NOT RESPONSIBLE TO PROVIDE TELEPHONES.
3. PROVIDE NEMA 3R ENCLOSURES FOR ALL TRANSFORMERS, PANELS, AND DISCONNECTS LOCATED OUTSIDE.
4. PAINT ALL NEW EXTERIOR ELECTRICAL GEAR TRUSTY TAN.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT MOTORS AND MOTOR CIRCUITS, INCLUDING DISCONNECT, STARTER, CONTROLLER, SHORT CIRCUIT PROTECTION, AND OVERLOAD PROTECTION ARE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE NEC.
6. THE QUANTITY AND LOCATIONS OF OCCUPANCY SENSORS SHALL BE ADJUSTED AS NECESSARY FOR FULL ROOM COVERAGE (MAXIMUM OF 500 SQ. FT COVERAGE PER SENSOR). THE DISTANCE BETWEEN SENSORS AND HVAC REGISTERS SHALL BE NO LESS THAN THE MINIMUM DISTANCE RECOMMENDED BY THE SENSOR MANUFACTURER.
7. OCCUPANCY SENSORS SHALL CONTROL ALL NORMAL POWER LIGHT FIXTURES IN THE ROOM IN WHICH THEY ARE INSTALLED UNLESS OTHERWISE INDICATED.
8. ALL WALL-MOUNT OCCUPANCY SENSORS SHALL BE SET TO MANUAL-ON / AUTOMATIC-OFF.
9. OCCUPANCY SENSORS SHALL CONTROL RECEPTACLES INDICATED ON POWER PLAN IN THE ROOM IN WHICH THEY ARE INSTALLED. RECEPTACLE RATED SWITCH PACKS TO BE INCLUDED AS NECESSARY.
10. PROVIDE OCCUPANCY SENSOR POWER PACKS AND OTHER ACCESSORIES AS REQUIRED. LOCATE ABOVE ACCESSIBLE CEILING.
11. OCCUPANCY SENSORS WILL NOT CONTROL ANY EGRESS LIGHTING FIXTURES.
12. PROVIDE J-HOOKS 6" ABOVE CEILING ON NORTH, EAST, AND SOUTH WALLS TO SUPPORT CABLING.

KEYED NOTES:

1. INSTALL 3' WALL CABINET WITH PLEXIGLASS DOOR, 36"H(18U)X24"WX32.13"D WITH EXHAUST FANS. GREAT LAKES #GL36WD OR EQUAL. INSTALL A DUPLEX, 120VAC, 20A ELECTRICAL OUTLET INSIDE CABINET ON DEDICATED CIRCUIT BREAKER. INCLUDE CABINET GROUND BUS BAR.
2. INSTALL 1" EMT CONDUIT FROM CABINET TO 4"X4" JUNCTION BOX ON EXTERIOR WALL JUST BELOW EAVE OF ROOF. FOR (GFE) CAT6 DATA CIRCUITS FOR (GFE) OUTDOOR ACCESS POINT.
3. RECESS IN GYP CEILING. INCLUDE MOUNT ACCESSORIES. INCLUDE FLANGE KIT.
4. MAKE POWER AND CONTROL WIRING CONNECTIONS, AS REQUIRED, BETWEEN OUTDOOR UNIT (DSCU-1) AND INDOOR UNIT (DSS-1).
5. LOCATION OF GATE CONTROLS.
6. LOCATION OF EXTERIOR JUNCTION BOX. MOUNT JUST BELOW EAVE OF ROOF.
7. MOUNT COMMUNICATIONS GROUND BAR TO WALL AT THIS LOCATION.
8. LOCATION OF 2-4" TELECOMMUNICATION CONDUIT STUB UPS.
9. FUSED DISCONNECT. NEMA 3R ENCLOSURE. USE CLASS R FUSE HOLDERS AND FUSES. 15A FUSE.

MARK	DESCRIPTION	DATE	APPR

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

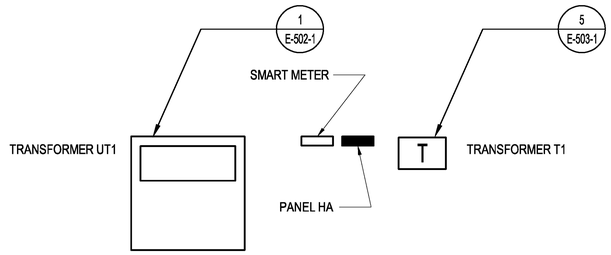
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL PLANS

E-101-1

SHEET 55 OF 66

FINAL SUBMITTAL



1 ENLARGED ELECTRICAL SITE PLAN
1/4"=1'-0"

NORTH

0 2' 4' 8'

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

GENERAL NOTES:

1. PROVIDE NEMA 3R ENCLOSURES FOR ALL TRANSFORMERS, PANELS, AND DISCONNECTS LOCATED OUTSIDE.
2. PAINT ALL NEW EXTERIOR ELECTRICAL GEAR TRUSTY TAN.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT MOTORS AND MOTOR CIRCUITS, INCLUDING DISCONNECT, STARTER, CONTROLLER, SHORT CIRCUIT PROTECTION, AND OVERLOAD PROTECTION ARE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE NEC.
4. PROVIDE A STEEL ANGLE AND CHANNEL SUPPORT RACK FOR THE METER, PANELS, AND TRANSFORMER.
5. PROVIDE A CONCRETE PAD FOR THE METER, PANELS, AND TRANSFORMER THAT EXTEND 3 FEET IN FRONT OF PANELBOARDS.

MARK	APPR	DATE	DESCRIPTION

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

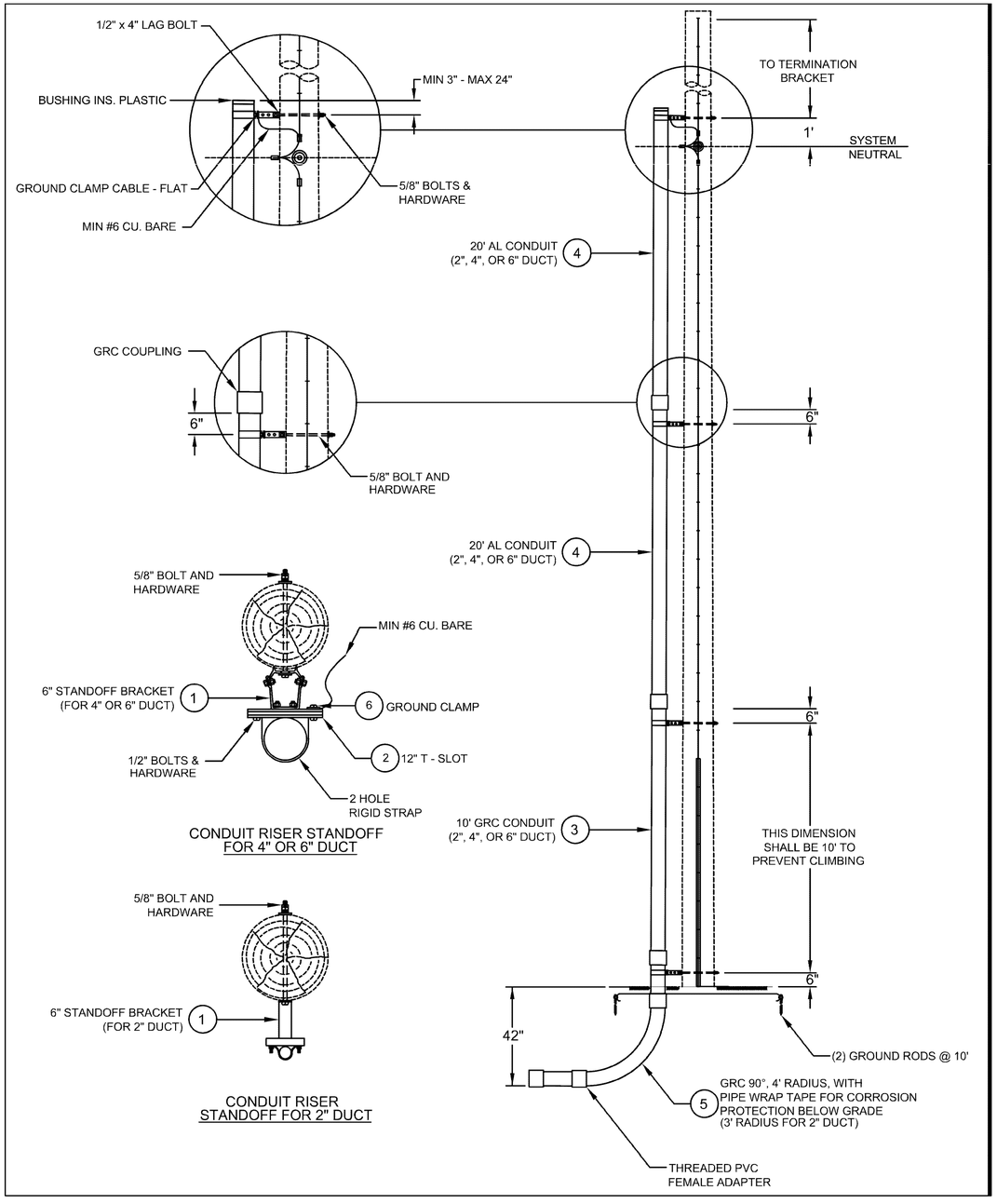
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ENLARGED ELECTRICAL PLANS

E-401-1

SHEET 56 OF 66

FINAL SUBMITTAL



GENERAL NOTES:

1. REFER TO CITY LIGHT & POWER ELECTRIC SERVICE CONNECTION STANDARDS MANUAL FOR HILL AIR FORCE BASE, UT FOR ADDITIONAL DETAILS FOR MEDIUM VOLTAGE AND UTILITY TRANSFORMER INSTALLATION.
2. NOTES IN DETAIL ABOVE REFER TO CITY LIGHT & POWER ELECTRIC SERVICE CONNECTION STANDARDS MANUAL FOR HILL AIR FORCE BASE, UT.

1 UNDERGROUND CONDUIT STANDOFF RISER

NOT TO SCALE

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

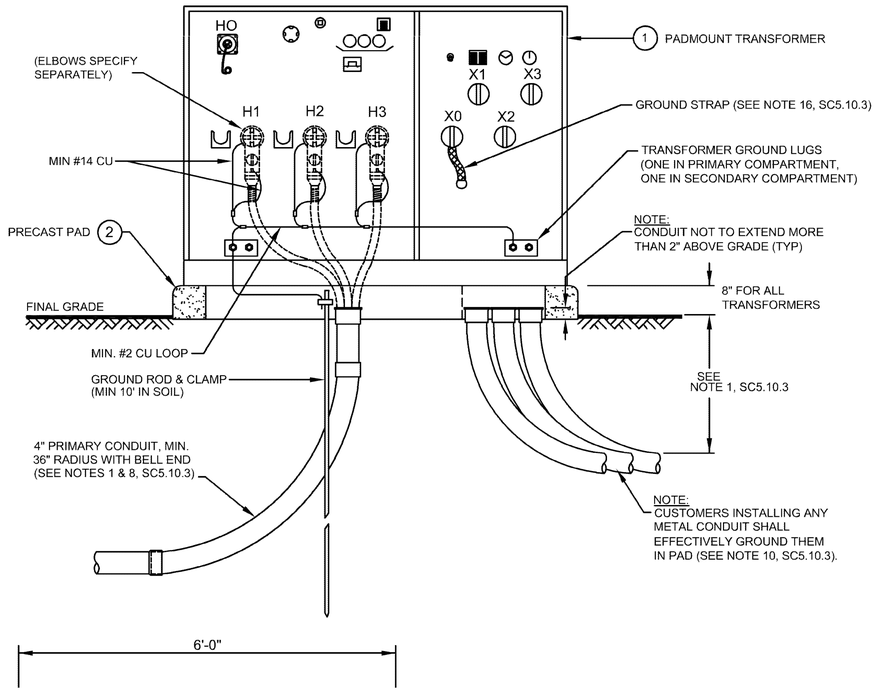
ELECTRICAL DETAILS

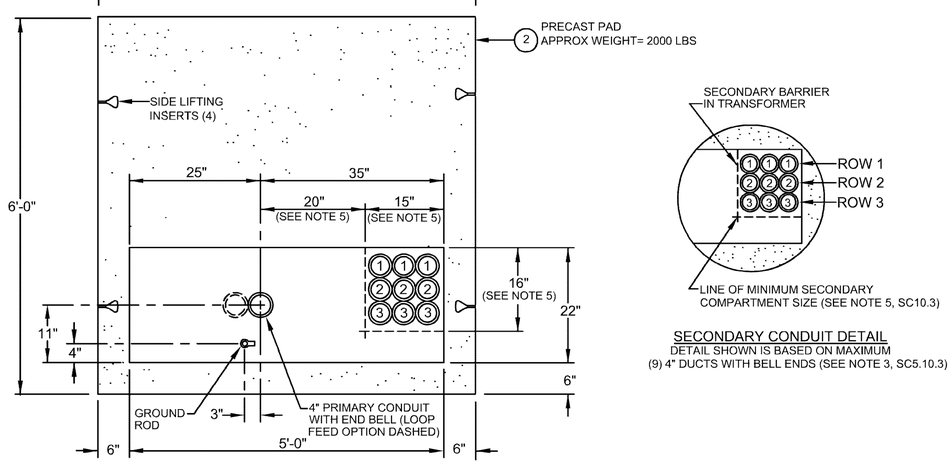
E-501-1

SHEET 57 OF 66

FINAL SUBMITTAL

3-PHASE RADIAL FEED OPTION





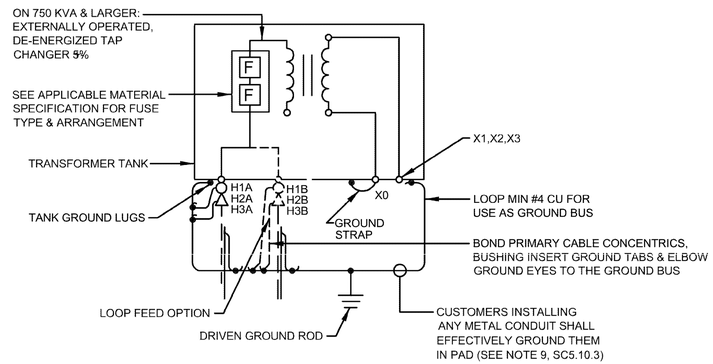
SECONDARY CONDUIT DETAIL
DETAIL SHOWN IS BASED ON MAXIMUM (9) 4" DUCTS WITH BELL ENDS (SEE NOTE 3, SC5.10.3)

TOP VIEW
TYPICAL 45-150 KVA
PAD & CONDUIT DETAILS

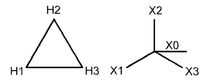
GENERAL NOTES:

1. SEE DETAIL 2 AND 3 SHEET E-503-1 FOR CONDUIT NUMBERS AND PLACEMENT.
2. NOTES IN DETAIL ABOVE REFER TO CITY LIGHT & POWER ELECTRIC SERVICE CONNECTION STANDARDS MANUAL FOR HILL AIR FORCE BASE, UT.

1 PADMOUNT 12.47KV 3-PHASE TRANSFORMER INSTALLATION
NOT TO SCALE



ONE LINE SCHEMATIC



PHASOR DIAGRAM

NOTES:

1. All conduits shall be installed per City Light and Power service connection manual. Refer to SC 5.7 for primary conduit, trench backfilling and compaction, and pad requirements.
2. For radial feed installation of a loop-type transformer, both primary conduits shall be installed. If one is not used, it shall be stubbed and capped at least 2' out from the front edge of the pad with an 8" UG marker installed above the end.
3. Placement of multiple secondary conduits shall be by rows from back to front, example: row 1 first, then row 2, etc. Fill back row first prior to starting the next row forward, filling front row last or used for future use.
4. Do not pour concrete in the conduit window opening unless an older style transformer is issued (see note 6). Pea gravel may routinely be used as a filler if needed.
5. For 45-150 kVA transformers, frame 9 secondary conduits maximum (3 rows of 3 conduits). Each row to fit within 15" maximum width from right side of window opening, and within 16" maximum depth from back side of window opening. The distance from the secondary compartment to the center of the primary conduit shall be 22" maximum, 10" minimum. This framing arrangement works with both current and older style transformer secondary compartment dimensions.
6. For 300-2500 kVA older style transformers, frame 16 secondary conduits maximum (4 rows of 4 conduits). Each row to fit within 22" maximum width from right side of window opening, and within 22" maximum depth from back side window opening. This framing arrangement works with current style transformer secondary compartment dimensions.
7. Minimum radius of 4" primary conduit vertical bend shall be 36". Utility inspector may require 48" radius GRC bend if necessary for longer pulling length.
8. CLP Engineer to specify for pads poured-in-place when access with precast pad is not available.
9. NESC-314B: Conductive-material ducts and riser guards that enclose electric supply lines, or are exposed to contact with open supply conductors, shall be effectively grounded.
10. When terminating three phase loop feed transformers, cables using conduit on the left side shall be terminated to the HxA bushings. Cables using conduit on the right side shall be terminated to HxB bushings to prevent crossing of primary cables.
11. Leave slack in secondary and primary cables to permit transformer removal and replacement for maintenance, train primary cables to permit parking elbows.
12. Leave sufficient slack on concentric neutrals to allow removing elbows without disconnecting neutrals.
13. Ground loop in all cases shall be installed in front of primary cables.
14. CAUTION: Ground strap on neutral bushing shall remain connected to tank in all cases (except for XO bushing in special cases, such as 2400V motor loads), tank will be energized to primary voltage if primary neutral tank grounds are disconnected and one open primary phase exists on the source side of the transformer without H0 bushings.
15. NESC Rule 384C: Bond all above ground metallic supply and communication enclosures that are separated by 6 feet or less. Use minimum #6 bare copper wire direct buried a minimum 18" below grade, to a suitable bolted or screw connection that can be temporarily opened when locating cables. Treat open ground connections as energized!

MARK	APPR	DATE	DESCRIPTION

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SHEET CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

HILL AIR FORCE BASE

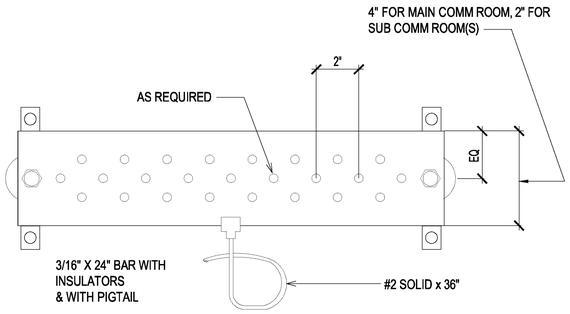
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL DETAILS

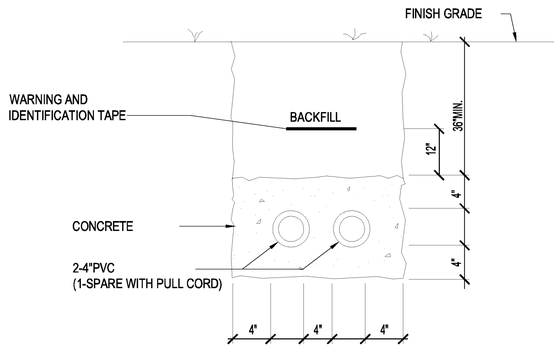
E-502-1

SHEET 58 OF 66

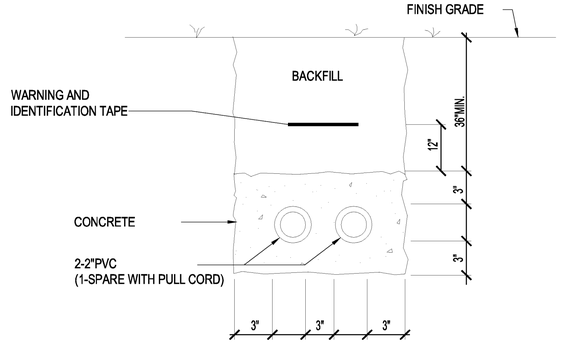
FINAL SUBMITTAL



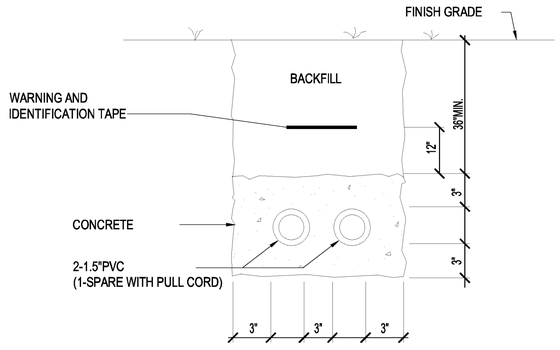
1 COMMUNICATIONS GROUND BAR
NOT TO SCALE



2 PRIMARY ELECTRICAL DUCT ENCASEMENT
NOT TO SCALE



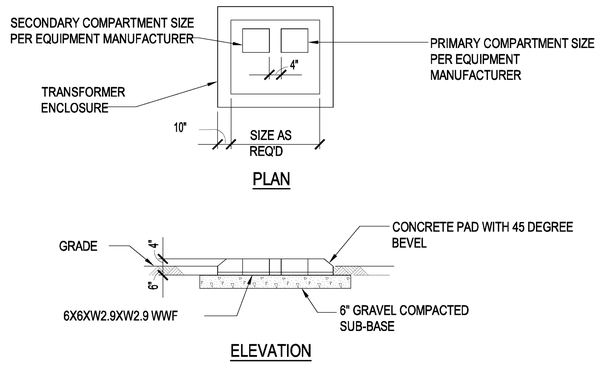
3 SECONDARY ELECTRICAL DUCT ENCASEMENT
NOT TO SCALE



GENERAL NOTE:

1. LIGHT AND POWER CONDUITS MUST BE SEPARATED FROM CONTROL, SIGNAL, AND TELEPHONE CONDUITS BY A MINIMUM DISTANCE OF 12"

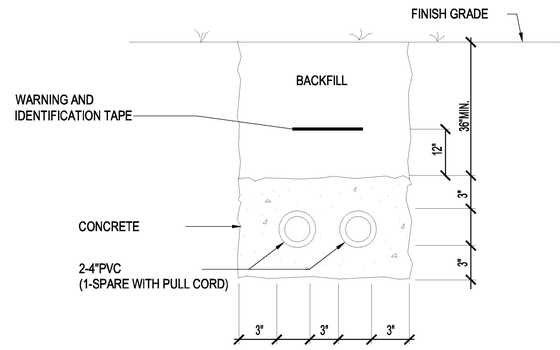
4 ELECTRICAL DUCT ENCASEMENT
NOT TO SCALE



NOTE:

1. PROVIDE A CONCRETE TRANSFORMER PAD PER TRANSFORMER MANUFACTURER SPECIFICATIONS OR A PRE-MANUFACTURED FIBERGLASS TRANSFORMER PAD PER TRANSFORMER MANUFACTURER SPECIFICATIONS.

5 TRANSFORMER PAD DETAIL
NOT TO SCALE



GENERAL NOTE:

1. LIGHT AND POWER CONDUITS MUST BE SEPARATED FROM CONTROL, SIGNAL, AND TELEPHONE CONDUITS BY A MINIMUM DISTANCE OF 12"

6 COMMUNICATIONS DUCT ENCASEMENT
NOT TO SCALE

DESCRIPTION	DATE	APPR. MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL DETAILS

E-503-1

SHEET 59 OF 66

FINAL SUBMITTAL

5 4 3 2 1

A

B

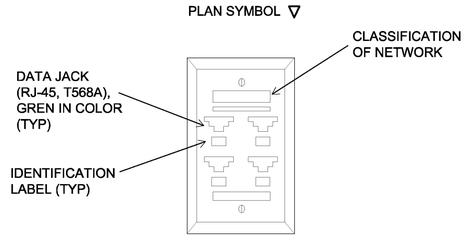
C

D

1 NOT USED
NOT TO SCALE

2 NOT USED
NOT TO SCALE

1 GANG COVERPLATE, 4-11/16" SQUARE BY 2-1/8" DEEP BOX, 1"C



NOTE: NIPR CAT 6 VOICE/DATA CABLING SHALL BE GREEN IN COLOR.

NOTE: OUTLET AND 1" CONDUIT SHALL BE RECESSED IN THE WALL. 1" EMT SHALL TERMINATE ABOVE THE DROP CEILING WITH A 90 DEGREE SWEEP AND CAPPED WITH AN INSULATED BUSHING.

3 NOT USED
NOT TO SCALE

4 NIPR DATA OUTLET
NOT TO SCALE

HOLMAN AIR LOGISTICS CENTER

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SHEET CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

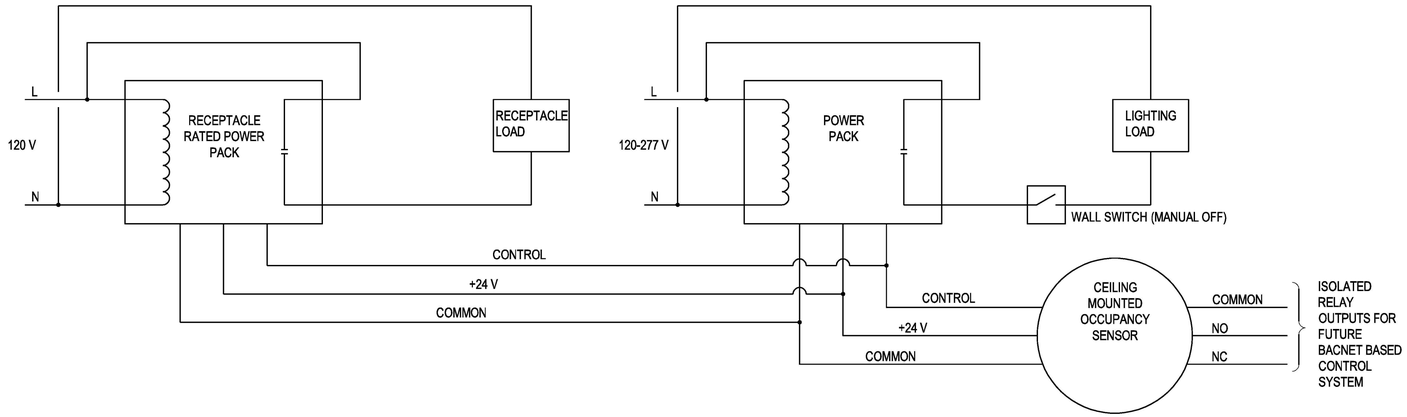
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL DETAILS

E-504-1

SHEET 60 OF 66

FINAL SUBMITTAL



1 TYPICAL CEILING MOUNTED OCCUPANCY SENSOR SCHEMATIC
NO SCALE

AUTOMATIC MODE OPERATION:

1. WHEN SENSOR ACTIVATES, LOADS TURN ON.
2. WHEN SENSOR TIMES OUT, LOADS TURN OFF.
3. SWITCHES CAN BE USED TO TURN LOADS ON OR OFF.

GENERAL NOTES:

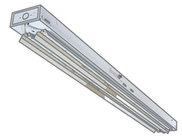
1. PROVIDE POWER PACKS ABOVE ACCESSIBLE CEILING.
2. EMERGENCY BATTERY PACKS SHALL BE CIRCUITED AHEAD OF POWER PACKS AND/OR WALL SWITCHES.

LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-FORMED, COLD ROLLED STEEL, WITH ONE-PIECE LOWER REFLECTOR HAVING TEXTURED, HIGH REFLECTANCE, WHITE POLYESTER POWDER-COATED FINISH. OPTIONAL SIZES OF 1FT x 4FT, 2FT x 2FT, AND 2FT x 4FT AVAILABLE.
2. LIGHT SOURCE - UPWARD-FACING LEDS WITH DIFFUSE LENS TO ELIMINATE DIRECT VIEW OF LIGHT SOURCE. 3500K COLOR TEMPERATURE UON, MAXIMUM BINNING TOLERANCE OF A 4-STEP MCADAM ELLIPSE, MINIMUM EFFICACY OF 90 LUMENS/WATT, WITH A MINIMUM CRI OF 80. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 120-277V, THERMAL MANAGEMENT, < 20% TOTAL HARMONIC DISTORTION. STEP-DIMMABLE OR FULLY DIMMABLE AS INDICATED IN LUMINAIRE SCHEDULE.
5. CERTIFICATION - UL 1598, DAMP LOCATION, DLC QUALIFIED, AND ROHS COMPLIANT. COMPLIES WITH LM79, LM80 AND TM21 TESTING STANDARDS. UL 924 WHEN EQUIPPED WITH EMERGENCY BATTERY BACK-UP. IC RATED WHEN INDICATED.
6. MOUNTING - RECESSED IN SUSPENDED ACOUSTICAL TILE OR HARD CEILING.
7. THIS SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS. IT IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER OR PREFERENCE.

DIRECT/INDIRECT LED TROFFER

REVISED APRIL 2016 | LIGHTING PLATE: NL-1



LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-FORMED, COLD-ROLLED STEEL, WITH REINFORCEMENT RIBS FOR RIGIDITY AND SPECULAR ALUMINUM OR HIGHLY-REFLECTIVE PAINTED STEEL REFLECTORS. OPTIONAL LENGTHS OF 4FT OR 8FT.
2. FINISH - MULTI-STAGE PHOSPHATE BONDING TREATMENT FINISHED WITH HIGH-REFLECTANCE, WHITE POLYESTER POWDER COAT, PAINTED AFTER FABRICATION.
3. LIGHT SOURCE - SOLID STATE LEDS WITH MINIMUM 50K HOURS RATED LIFE AT L70, 3500K CCT UON, MINIMUM 80 CRI, MAXIMUM 4-STEP MCADAM ELLIPSE BINNING TOLERANCE FOR COLOR CONSISTENCY, AND MINIMUM EFFICACY OF 100 LUMENS/WATT. INITIAL LUMEN OUTPUT AS INDICATED IN LUMINAIRE SCHEDULE.
4. DRIVER - REPLACEABLE, INTEGRAL, HIGH-EFFICIENCY DRIVER WITH MINIMUM 0.9 PF, OPERATING VOLTAGE OF 120-277V, THERMAL MANAGEMENT, < 20% TOTAL HARMONIC DISTORTION. ON-OFF CONTROL, STEP-DIMMABLE OR FULLY DIMMABLE AS INDICATED.
5. CERTIFICATION - UL 1598, DAMP LOCATION, DLC QUALIFIED, AND ROHS COMPLIANT. COMPLIES WITH LM79, LM80 AND TM21 TESTING STANDARDS. UL 924 WHEN EQUIPPED WITH EMERGENCY BATTERY BACK-UP.
6. MOUNTING - SURFACE ON CEILING OR SUSPENDED.
7. OPTIONS - WIRE GUARD AND CHAIN HANGERS.
8. THIS SKETCH IS A NON-PROPRIETARY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS. IT IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER OR PREFERENCE.

LED INDUSTRIAL STRIP

REVISED APRIL 2016 | LIGHTING PLATE: NL-7

GENERAL LIGHTING DETAIL NOTE:
1. REFER TO SHEET E-601-1 FOR THE LIGHT FIXTURE SCHEDULE FOR LIGHT FIXTURE WATTAGE, VOLTAGE, AND MOUNTING TYPE.

MARK	DATE	DESCRIPTION

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SITE CODE:
CAPITAL PROJECT NO.
DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE
DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

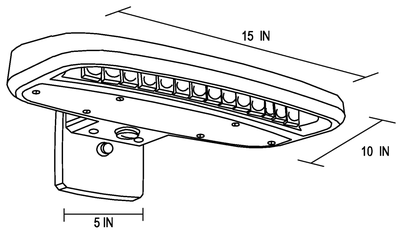
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL DETAILS

E-505-1

SHEET 61 OF 66

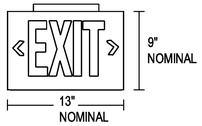
FINAL SUBMITTAL



LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-CAST OR EXTRUDED ALUMINUM WITH INTEGRAL PASSIVE COOLING MECHANISM. HEAT SINK SHALL BE INCORPORATED DIRECTLY INTO HOUSING OR DRIVER COMPARTMENT TO ENSURE MAXIMUM HEAT TRANSFER AND DISSIPATION.
2. FINISH - MULTI-STAGE PRE-TREATMENT, FINISHED WITH BAKED-ON POLYESTER POWDER COAT. FINISH SHALL PASS 2500 HOUR SALT SPRAY TEST PER ASTM B117. STANDARD FINISH IS DARK BRONZE, WITH OTHER CUSTOM COLORS AVAILABLE.
3. POWER SUPPLY/LED DRIVER - CLASS 1 DRIVER SHALL OPERATE AT 120/277 VOLTS, 50/60 HZ, WITH OTHER VOLTAGES OPTIONAL; POWER FACTOR GREATER THAN 0.9 AND THD LESS THAN 20% AT FULL LOAD. MINIMUM EFFICACY SHALL BE 60 LM/W AT MAXIMUM 600mA OPERATING CURRENT.
4. LED OPTICAL ASSEMBLY - PRECISION MOLDED ACRYLIC LENS PROVIDED FOR MULTIPLE HIGH-POWERED LEDS PRODUCING NEMA TYPE III DISTRIBUTION OR AS OTHERWISE INDICATED. BUG UPLIGHT RATING OF U0, WITH GLARE RATING AS DETERMINED BY LIGHTING ZONE INSTALLED. MINIMUM COLOR RENDERING INDEX (CRI) SHALL BE 70 FOR CORRELATED COLOR TEMPERATURE (CCT) OF 4000-4500 DEGREES K.
5. CERTIFICATION - UL AND/OR ETL LISTED FOR DAMP OR WET LOCATIONS AS INDICATED, AND RoHS COMPLIANT.
6. OTHER - THE ABOVE SKETCH IS A NON-PROPRIETY GRAPHIC REPRESENTATION OF A LUMINAIRE THAT MAY MEET THE SPECIFICATION REQUIREMENTS AND IS NOT INTENDED TO INDICATE A CERTAIN MANUFACTURER'S PREFERENCE. ALL DIMENSIONS ARE NOMINAL AND VARY PER MANUFACTURER.

LED WALL PACK	
REVISED: MARCH 2013	LUMINAIRE PLATE: XL-17



LUMINAIRE REQUIREMENTS:

1. HOUSING - DIE-CASE ALUMINUM OR HIGH-IMPACT, UV-STABILIZED, INJECTION-MOLDED THERMOPLASTIC. SINGLE OR DOUBLE-FACED AS INDICATED
2. FINISH (ON CAS ALUMINUM HOUSING ONLY) - TEXTURED POWDER COAT FINISH OPTIONS INCLUDE WHITE, WHITE WITH BRUSHED ALUMINUM FACE, BLACK, OR BLACK WITH BRUSHED ALUMINUM FACE.
3. LETTERS/CHEVRONS - MINIMUM 6" HIGH WITH 3 /4" STROKE, RED OR GREEN LETTERS AS INDICATED. PROVIDE CHEVRONS AS INDICATED EITHER LEFT, RIGHT OR BOTH DIRECTIONS AS INDICATED. CHEVRONS PUNCHED OUT THROUGH HOUSING AS REQUIRED.
4. EMERGENCY PACK - SOLID -STATE CONSTANT-CURRENT TYPE BATTERY CHARGER WITH MAINTENANCE-FREE, NICKEL-CADMIUM BATTERY, AC-ON INDICATOR LAMP AND TEST SWITCH.
5. MOUNTING - UNIVERSAL MOUNTING KIT FOR CEILING, WALL OR END-OF-FIXTURE MOUNTING.
6. ILLUMINATION - PROVIDED BY RED, GREEN OR WHITE HIGH OUTPUT LEDS INSIDE OF FIXTURE HOUSING. PROVIDE POLYSTRENE DIFFUSER IN COLOR INDICATED WITH FREQUENCY-MATCHED SILKSCREEN COATING FOR MAXIMUM LED LIGHT OUTPUT
7. CETRTIFICATION - UL LISTED AND CERTIFIED FOR DAMP LOCATIONS

LED EXIT SIGN	
REVISED: AUGUST 2004	LUMINAIRE PLATE: NL-63

GENERAL LIGHTING DETAIL NOTE:
1. REFER TO SHEET E-601-1 FOR THE LIGHT FIXTURE SCHEDULE FOR LIGHT FIXTURE WATTAGE, VOLTAGE, AND MOUNTING TYPE.

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEE CODE:
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DATE: 21 OCT 2020
PROJECT MANAGER:

HILL AIR FORCE BASE

DEPARTMENT OF THE AIR FORCE
OGDEN AIR LOGISTICS CENTER
75TH CIVIL ENGINEER GROUP

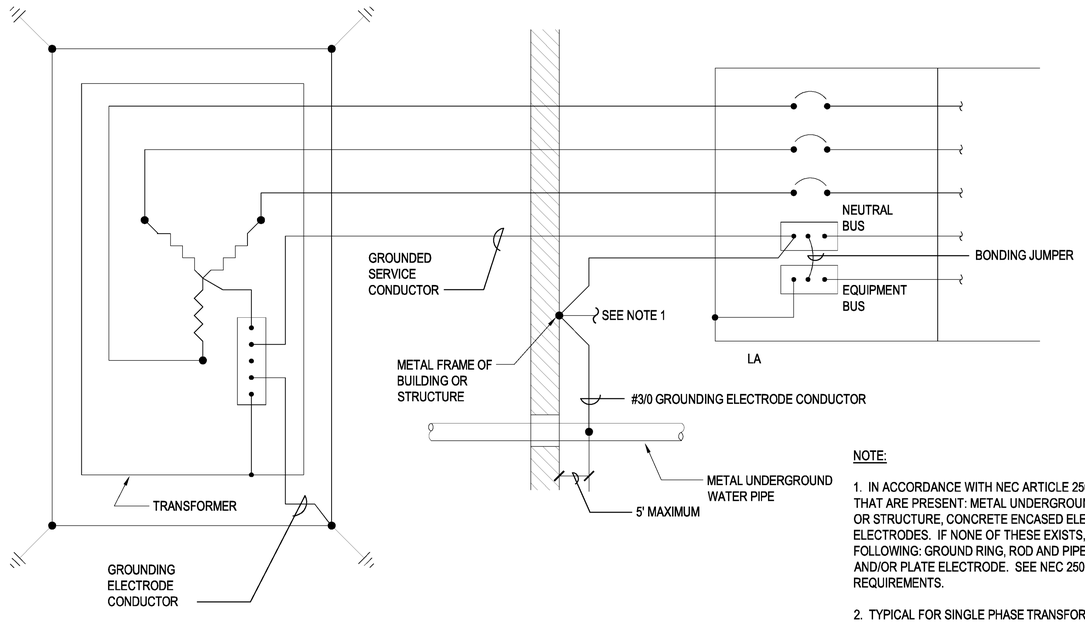
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL DETAILS

E-506-1

SHEET 62 OF 66

FINAL SUBMITTAL



NOTE:

1. IN ACCORDANCE WITH NEC ARTICLE 250, BOND TOGETHER EACH OF THE FOLLOWING THAT ARE PRESENT: METAL UNDERGROUND WATER PIPE, METAL FRAME OF BUILDING OR STRUCTURE, CONCRETE ENCASED ELECTRODE, GROUND RING, ROD AND PIPE ELECTRODES. IF NONE OF THESE EXISTS, PROVIDE AND BOND TO ONE OF THE FOLLOWING: GROUND RING, ROD AND PIPE ELECTRODE, OTHER LISTED ELECTRODE AND/OR PLATE ELECTRODE. SEE NEC 250 AND SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

2. TYPICAL FOR SINGLE PHASE TRANSFORMER.

1 PRIMARY SERVICE GROUNDING
NOT TO SCALE

DESCRIPTION	DATE	APPR.	MARK

DESIGNED BY: A. ERBACH
DRAWN BY: A. ERBACH
CHECKED BY: P. MCELRATH
SEE CODE:
CAPITAL PROJECT NO.:
DATE: 21 OCT 2020
PROJECT MANAGER:

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OGDEN AIR LOGISTICS CENTER
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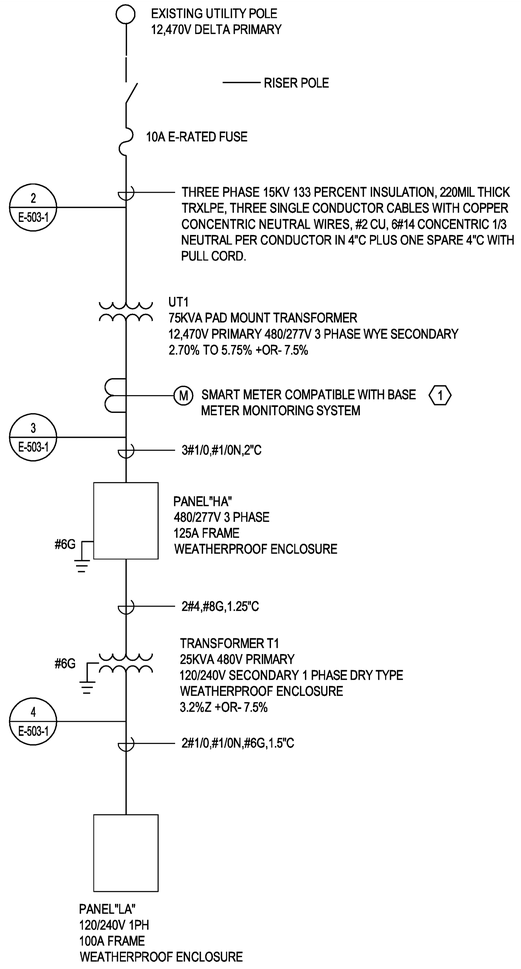

1 LOT 4 ELECTRICAL SINGLE LINE DIAGRAM
NOT TO SCALE

GENERAL NOTES:

1. VERIFY SIZES OF MEDIUM VOLTAGE COMPONENTS WITH CITY LIGHT & POWER.
2. CONTRACTOR WILL PAY ALL INSPECTION AND INSTALLATION FEES.
3. AFTER INSTALLATION AND INSPECTION OF NEW UTILITY TRANSFORMER, OWNERSHIP OF THE TRANSFORMER AND MEDIUM VOLTAGE PRIMARY WILL BE TURNED OVER TO CITY LIGHT & POWER. VERIFY ALL CITY LIGHT & POWER REQUIREMENTS AND SPECIFICATIONS ARE MET WITH INSTALLATION.
4. ALL CONDUCTORS, BUSES, AND TRANSFORMER WINDINGS TO BE COPPER.
5. PROVIDE ARC FLASH LABELS PER SPECIFICATION SECTION 26 28 01.00 10 PARAGRAPH 2.5.7.5 RESULTING FROM ARC FLASH STUDY.
6. PAINT ALL NEW EXTERIOR GEAR TRUSTY TAN.
7. COORDINATE ALL MEDIUM VOLTAGE WORK WITH CITY LIGHT & POWER.

KEYED NOTES:

1 PROVIDE 1" CONDUIT WITH WATERPROOF INSULATED CAT6 CABLING FROM SMART METER TO WALL MOUNTED DATA RACK IN ADMIN BUILDING. COORDINATE CABLING REQUIREMENTS WITH MANUFACTURER.

LIGHTING FIXTURE SCHEDULE

FIXTURE SYMBOL	STYLE NO & TYPE	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	NOTES
A1	NL-1, TYPE A1	LED, 3500 LUMEN 26WATT	120	RECESSED CEILING	1
A1E	NL-1, TYPE A1E	LED, 3500 LUMEN 26WATT	120	RECESSED CEILING	1, 8, 7
B1	NL-1, TYPE B1	LED, 2000 LUMEN 17WATT	120	SURFACE CEILING	2
C1	NL-7, TYPE C1	LED, 1800 LUMEN 16WATT	120	SURFACE CEILING	3
K1	XL-17, TYPE K1	LED, 2200 LUMEN 20WATT	120	WALL MTD. 8' AFF	4, 9
⊗	NL-63, EXIT	LED, 5 WATT	120	CEILING MTD.	6, 7

LIGHTING FIXTURE NOTES:

1. 2X4 LENSED TROFFER
2. 2X2 LENSED TROFFER
3. 2' WITH LENS
4. EXTERIOR WALL PACK WITH COLD WEATHER BATTERY PACK THAT PROVIDES 90 MINUTES OF RATED EMERGENCY LUMEN OUTPUT (14W)
5. PROVIDE PHOTOCELL CONTROL
6. EXIT SIGN WITH EMERGENCY BATTERY PACK, ARROWS, AND FACES PER PLANS
7. WITH SELF DIAGNOSTICS
8. WITH EMERGENCY BATTERY PACK THAT PROVIDES 90 MINUTES OF RATED EMERGENCY LUMEN OUTPUT (14W)
9. TYPE 3 DISTRIBUTION WITH SPILL CONTROL
10. TYPE 4 DISTRIBUTION WITH SPILL CONTROL
11. APPROXIMATE EPA 1.0

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ELECTRICAL SINGLE LINE DIAGRAM AND SCHEDULES

E-601-1

SHEET 64 OF 66

FINAL SUBMITTAL

PANEL HA | MOUNTING SURFACE | LOCATION EXTERIOR | MAIN BUS RATING 125 AMPS
MAIN CB | POLES 3 | FRAME 125 | TRIP 125
VOLTAGE 480Y/277 | PHASE 3 | MINIMUM BREAKER INTERRUPTING CAPACITY 14KAIC (2)
ACCESSORIES SN + EQP GND

DEVICE			BRANCH CIRCUIT				PHASE LOAD VOLT AMPS				BRANCH CIRCUIT				DEVICE		
AMPS TRIP	POLES	TYPE	LOAD	DESCRIPTION	VOLT AMPS	NO	A	B	C	NO	VOLT AMPS	DESCRIPTION	LOAD	TYPE	POLES	AMPS TRIP
20	1		L	SITE LIGHTING	1000	1	1582			2	582	DOCK LEVELER	M		3	15
20	1			SPARE		3		582		4	582	-	M			-
20	1			SPARE		5			582	6	582	-	M			-
20	1		L	SITE LIGHTING	1000	7	1582			8	582	DOCK LEVELER	M		3	15
70	2		S	TRANSFORMER T1	10467	9		11049		10	582	-	M			-
-			S	TRANSFORMER T1	7672	11			8254	12	582	-	M			-
20	1			SPARE		13				14		SPARE	M		3	15
20	1			SPARE		15				16		-	M			-
15	3			SPARE		17				18		-	M			-
-				-		19	943			20	943	GATE MOTOR NW	M		3	15
-				-		21		943		22	943	2HP	M			-
15	3		M	GATE MOTOR NE	943	23			1886	24	943	-	M			-
-			M	2HP	943	25	943			26		SPARE			1	20
-			M	-	943	27		943		28		SPARE			1	20
20	1			SPARE		29				30		SPARE			1	20
20	1			SPARE		31				32		SPARE			1	20
20	1			SPARE		33				34		SPARE			1	20
20	1			SPARE		35				36		SPARE			1	20
20	1			SPARE		37				38		SPD			3	(1)
20	1			SPARE		39				40		-				-
20	1			SPARE		41				42		-				-
				TOTAL			5050	13517	10722		29 KVA (CONNECTED)				35 AMPS (CONNECTED)		
											26 KVA (DEMAND)				32 AMPS (DEMAND)		

PANEL LA | MOUNTING SURFACE | LOCATION 102 | MAIN BUS RATING 100 AMPS
MAIN CB | POLES 2 | FRAME 100 | TRIP 100
VOLTAGE 120/240 | PHASE 1 | MINIMUM BREAKER INTERRUPTING CAPACITY 10KAIC (2)
ACCESSORIES SN + EQP GND

DEVICE			BRANCH CIRCUIT				PHASE LOAD VOLT AMPS			BRANCH CIRCUIT				DEVICE		
AMPS TRIP	POLES	TYPE	LOAD	DESCRIPTION	VOLT AMPS	NO	A	B	NO	VOLT AMPS	DESCRIPTION	LOAD	TYPE	POLES	AMPS TRIP
20	1		L	LIGHTING	163	1	883		2	720	RM 101,102,103 REC	R		1	20
20	1		M	EWC-1	540	3		1892	4	1352	DSCU-1	H		2	15
20	1		M	PRINTER	1000	5	2352		6	1352	-	H			-
20	1		R	OFF 101 REC	540	7		540	8		SPARE			1	20
20	1		R	OFF 101 REC	1080	9	1080		10		SPARE			1	20
20	1		R	EXT REC	540	11		1790	12	1250	EWH-1	M		2	15
20	1		H	RCP-1	252	13	1502		14	1250	-	M			-
20	1		H	EF-1	500	15		2000	16	1500	DATA RACK	M		1	20
20	1			SPARE		17	1200		18	1200	FACP	M		1	20
20	1		H	EF-2	500	19		500	20		SPARE			1	20
20	2		H	UH-1	950	21	3450		22	2500	DATA RACK	M		1	30
-			H	-	950	23		950	24		SPARE			1	20
20	1			SPARE		25			26		SPARE			1	20
20	1			SPARE		27			28		SPARE			1	20
20	1			SPARE		29			30		SPARE			1	20
						31			32						
						33			34						
						35			36						
						37			38						
						39			40						
						41			42						
				TOTAL			10467	7672		18 KVA (CONNECTED)				76 AMPS (CONNECTED)		
										15 KVA (DEMAND)				63 AMPS (DEMAND)		

LEGEND

MAIN
CB = CIRCUIT BREAKER
LO = LUGS ONLY

BRANCH CIRCUIT BREAKER TYPE
A = ARC FAULT CIRCUIT INTERRUPTER
G = GROUND FAULT CIRCUIT INTERRUPTER
S = SHUNT TRIP
V = VARIABLE (ADJUSTABLE TRIP)
E = EQUIPMENT GROUND FAULT PROTECTION
L = LOCKOUT DEVICE

LOAD TYPE
L = LIGHTING
R = RECEPTACLE
H = HVAC
M = MISCELLANEOUS
V = VARIOUS

MISCELLANEOUS
SN = SOLID NEUTRAL
EQP GND = EQUIPMENT GROUND BUS
IG = INSULATED GROUND BUS
SPD = SURGE PROTECTIVE DEVICE

KEYED NOTES:

(1) SIZE BREAKER FOR SPD PER MANUFACTURER RECOMMENDATIONS. THE SPD SHALL BE IN A DEDICATED WEATHER PROOF ENCLOSURE, SEPARATE FROM THE PANELBOARD, AND THE MAXIMUM LEAD LENGTH BETWEEN THE BREAKER AND SPD IS 3 FEET. SPD SHALL BE TYPE 2.

(2) PANEL SHALL BE RATED NEMA 3R.

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HILL AIR FORCE BASE

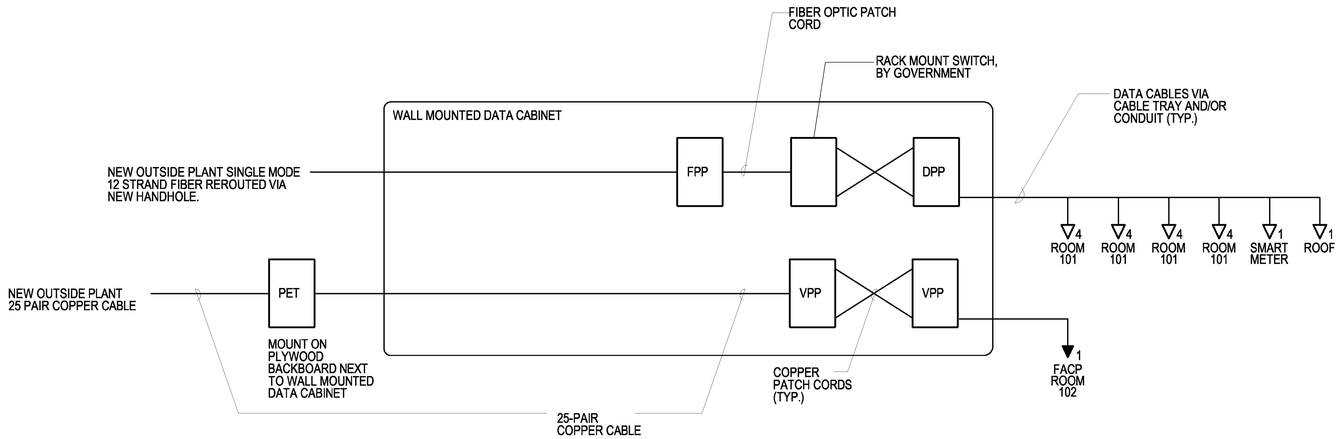
DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL SCHEDULES

E-602-1

SHEET 65 OF 66

FINAL SUBMITTAL



LEGEND: (UNLESS OTHERWISE INDICATED ALL EQUIPMENT IS CF/CI)

PET - PROTECTED ENTRANCE TERMINAL

VB - WALL MOUNTED 110-TYPE BLOCKS FOR VOICE

VPP - COPPER PATCH PANEL - VOICE

DPP - 48 PORT CATEGORY 6 COPPER PATCH PANEL - DATA

FPP - FIBER PATCH PANEL WITH 12 LC CONNECTORS

FSC - FIBER SPLICE CASE

NOTE:
VERIFY QUANTITIES PER PLANS. PROVIDE FACTORY COPPER AND FIBER OPTIC PATCH CORDS TO MEET NUMBER OF TERMINATED OUTLET JACKS. PROVIDE 6FT WORK AREA CORDS FOR THE WORKSTATIONS.

1 PREMISES DISTRIBUTION SYSTEM SCHEMATIC

NOT TO SCALE

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DDHU LOT 4 IMPROVEMENTS
PACKAGE 1

ELECTRICAL COMMUNICATIONS SCHEMATIC

E-603-1

SHEET 66 OF 66

FINAL SUBMITTAL