Development Services

From Concept to Construction

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More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

APPEAL SUMMARY

Status: Hold for Additional Information

Appeal ID: 18780	**Project Address:** 7759 NE Mary Olson Way
Hearing Date: 12/19/18	**Appellant Name:** Wesley Tafoya
Case No.: B-002	**Appellant Phone:** 650-874-8592
Appeal Type: Building	**Plans Examiner/Inspector:** Terry Whitehill
Project Type: commercial	**Stories:** 1 **Occupancy:** S-1 **Construction Type:** II-B
Building/Business Name: United Air Lines	**Fire Sprinklers:** Yes - in service areas, foam in hangar area
Appeal Involves: other: Acceptance of existing building constructed as maintenance hangar for national guard	**LUR or Permit Application No.:** Acceptance of existing building constructed as maintenance hangar for national guard
Plan Submitted Option: pdf [File 1]	**Proposed use:** Maintenance Hangar

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	OSSC
Requires	Proposal to accept the existing construction as code compliant structure.
Proposed Design	Proposal to accept the existing construction as code compliant structure. See attached PDF scans of original design drawings. Shell construction is precast concrete walls with metal siding finish, metal siding walls and standing seam roofing.
Reason for alternative	Building was constructed as a National Guard Facility. It was not processed through the city permit process.

APPEAL DECISION

Determination of existing construction of National Guard hangar as code compliant structure: Hold for additional information.
Appellant may contact John Butler (503 823-7339) with questions.

1. APPLICABLE CODES AND STANDARDS

ABBREVIATIONS	TITLE	EDITION
AISC	SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS	
ASCE 7-98	MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES	
NFPA 10	STANDARD FOR PORTABLE FIRE EXTINGUISHERS	2010
NFPA 13	STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS	2010
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2017
IBC	INTERNATIONAL BUILDING CODE	2000
TI 800-1	CORPS OF ENGINEERS DESIGN CRITERIA	
TI 809-04	SEISMIC DESIGN FOR BUILDINGS	
TI 809-07	DESIGN OF COLD-FORMED LOAD BEARING STEEL SYSTEMS AND MASONRY VENEER/ STEEL STUD WALLS	
TI 809-26	WELDING - DESIGN PROCEDURES AND INSPECTIONS	
TI 809-27	CONCRETE FLOOR SLAB ON GRADE SUBJECTED TO HEAVY LOADS	
TI 809-29	STRUCTURAL CONSIDERATIONS FOR METAL ROOFING	
TI 809-30	METAL BUILDING SYSTEMS	
TI 809-52	COMMENTARY ON SNOW LOADS	
TI 809-53	SELECTION CONSIDERATION FOR ROOFING SYSTEMS	
UFC 3-310-01	LOAD ASSUMPTIONS FOR BUILDINGS	
UFC 4-211-01	AIRCRAFT MAINTENANCE HANGARS	

2. TYPE OF CONSTRUCTION (IBC 601)

BUILDING ELEMENT	TYPE OF CONSTRUCTION	FIRE RESISTANCE RATING
PRIMARY STRUCTURAL FRAME	II B SPRINKLERED	0 HR ***
BEARING EXTERIOR WALL	II B SPRINKLERED	0 HR **
BEARING INTERIOR WALL	II B SPRINKLERED	0 HR *
NON-BEARING EXTERIOR WALL	II B SPRINKLERED	0 HR **
NON-BEARING INTERIOR WALL	II B SPRINKLERED	0 HR *
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	II B SPRINKLERED	0 HR *
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	II B SPRINKLERED	0 HR

* EXCEPT AS REQUIRED FOR OCCUPANCY SEPARATION, INCIDENTAL USE, AND OTHER PASSIVE FIRE PROTECTION.
** EXCEPT AS REQUIRED FOR BUILDING SEPARATION.
*** EXCEPT AS REQUIRED TO SUPPORT HORIZONTAL ASSEMBLY (IBC 714.4)

3. CLASSIFICATION OF OCCUPANCY

AREAS	OCCUPANCY	IBC
OFFICE, CIRCULATION, RESTROOMS, LOBBY, TRAINING	BUSINESS, GROUP B	304.1
AIRCRAFT HANGAR, STORAGE, , PAINT SHOP, FUEL FOAM/STORAGE, JANITOR, TOOL, MECHANICAL ELECTRICAL, TELECOM AND REPAIR	MODERATE-HAZARD STORAGE, GROUP S-1	311.2

4. ACCESSORY OCCUPANCY 10% LIMITATION (508.2)

FLOOR	FLOOR AREA (SF)	ACCESSORY	ACCESSORY AREA (SF)	PERCENTAGE OF AREA (SUM < 10%)	IBC AREA LIMITATION (SF)
1	33,675	BUSINESS, GROUP B	830	3%	3,367

6. MODIFIED ALLOWABLE AREA (IBC 503)

OCCUPANCY	*ALLOWABLE AREA (SF)	FRONTAGE INCREASE (SF)	SPRINKLER INCREASE (SF)	MODIFIED ALLOWABLE AREA (SF)
S-1	17,500	0	52,500	70,000
H-2	7,000	0	21,000	70,000

* FOR NONSEPARATED OCCUPANCIES THE MOST RESTRICTIVE OCCUPANCY LIMITATIONS ARE USED.

7. BUILDING ALLOWABLE AREA - NONSEPARATED (IBC 508)

FLOOR	FLOOR AREA (SF)	RESTRICTING OCCUPANCY	RESTRICTING OCCUPANCY MODIFIED ALLOWABLE AREA (SF)
LEVEL 1	33,675	S-1	70,000

* FOR NONSEPARATED OCCUPANCIES THE MOST RESTRICTIVE OCCUPANCY LIMITATIONS ARE USED.

8. MODIFIED ALLOWABLE HEIGHT (IBC 504)

OCCUPANCY	*RESTRICTING ALLOWABLE HEIGHT (FT / STORY)	SPRINKLER INCREASE (FT / STORY)	MODIFIED ALLOWABLE HEIGHT (FT / STORY)
S-1	55 / 2	20 / 1	75 / 3

9. INCIDENTAL USE AND OTHER PASSIVE FIRE PROTECTION

AREA	REQUIRED RATING	CODE
CORRIDOR	0 HOUR BARRIER	NFPA 101 SECTION 12.3.6, 38.3.6, 40.3.6, AND 42.3.6.
HANGAR BAY / ANCILLARY SUPPORT AREAS	2 HR FIRE BARRIER	UFC 4-211-01 , 3-3.1.3

10. BUILDING SEPARATION (IBC TABLE 602)

OCCUPANCY	ELEVATION	RESTRICTIVE FIRE SEPARATION DISTANCE (FT)*	FIRE RESISTIVE RATING OF EXTERIOR WALL
S-1	NORTH/SOUTH/WEST/EAST	10< X < 30	NO RATING
H-2	WEST	> 30	NO RATING

* IBC 702 - FIRE SEPARATION DISTANCE = DISTANCE FROM BUILDING'S FACE TO CLOSEST INTERIOR LOT LINE, CENTERLINE OF A STREET ALLEY OR PUBLIC WAY, OR IMAGINARY LINE BETWEEN TWO BUILDINGS.

11. OPENING PROTECTION FOR FIRE AND SMOKE RESISTIVE CONSTRUCTION

COMPONENT	FIRE DOOR / SHUTTER ASSEMBLIES	DUCT PENETRATIONS	OTHER PENETRATIONS	IBC
2 HR FIRE BARRIER	1-1/2 HR	1-1/2 HR DAMPER	2 HR	715.4, 716.5.2

12. OCCUPANT LOAD CALCULATIONS (IBC 1004.1.1)

FLOOR	AREA	FUNCTION OF SPACE	AREA (SF)	OCCUPANT LOAD FACTOR (SF/PERSON)	OCCUPANTS
1	HANGAR BAY, TUG POCKET	AIRCRAFT HANGAR	27,335	500	55
1	OFFICES, BATHROOMS	BUSINESS AREAS	643	100	7
1	TRAINING ROOM	ASSEMBLY WITHOUT FIXED SEATING	228	15	16
1	PAINT SHOP	MANUFACTURING	944	200	5
1	MECH ROOM, ELEC ROOM, STORAGE, TOOL	ACCESSORY STORAGE	2,101	300	7

13. OCCUPANT LOAD SUMMARY AND MINIMUM EXITS FROM FLOOR

FLOOR	GROSS AREA (SF)	OCCUPANTS	REQUIRED EXITS (IBC 1021.1)	REQUIRED EXIT SEPARATION (IBC 1015.2)
1	33,675	90	2	1/3 DIAGONAL

14. MINIMUM EXITS OR EXIT ACCESSES FROM A SPACE OR AREA (IBC 1021.2)

FLOOR / OCCUPANCY	OCCUPANT LOAD PERMITTING ONE EXIT	OCCUPANT LOAD REQUIRING TWO EXITS
LEVEL 1 / B	49 OR LESS	50 OR GREATER
LEVEL 1 / S-1	29 OR LESS	30 OR GREATER
LEVEL 1 / H-2	3 OR LESS	30 OR GREATER

15. COMMON PATH, DEAD-END, AND TRAVEL DISTANCE LIMITS

OCCUPANCY	COMMON PATH LIMIT* (IBC 1014.3) (FT)	DEAD END LIMIT* (IBC 1018.4) (FT)	TRAVEL DISTANCE LIMIT* (IBC 1016.2) (FT)
B	100	50	300
S-1	100	50	250
H-2	25	20	100

16. MINIMUM EGRESS WIDTHS

COMPONENT	REQUIREMENT	WIDTH (IN)	IBC
DOORS IN EGRESS ACCESS	PER COMPONENT	32	1008.1.1
CORRIDOR SERVING LESS THAN 50 OCCUPANTS	PER COMPONENT	36	1018.2
CORRIDOR FOR ACCESS TO ELECTRICAL/MECHANICAL SYSTEMS	PER COMPONENT	24	1018.2
OTHER EGRESS COMPONENTS	PER PERSON	0.2	1005.1

18. MINIMUM INTERIOR FINISH RATINGS (IBC TABLE 803.9)

OCCUPANCY	EXIT ENCLOSURE AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES
B, S-1	CLASS C	CLASS C	CLASS C
H-2	CLASS B	CLASS B	CLASS C

19. FIRE SUPPRESSION REQUIREMENTS

SPRINKLERS (IBC 903)	STANDPIPE (IBC 905)	FIRE EXTINGUISHERS (IBC 906)
SPRINKLERS PROVIDED THROUGHOUT THE BUILDING	NOT REQUIRED	FIRE EXTINGUISHERS PROVIDED THROUGHOUT THE BUILDING

20. FIRE ALARM REQUIREMENTS (IBC 907)

MANUAL INITIATION	AUTOMATIC INITIATION	OCCUPANT NOTIFICATION
MANUAL PULL STATIONS PROVIDED AT MAINS EXITS FROM THE BUILDING AND MANUAL FOAM RELEASING STATION ARE PRESENT	FLOW AND TAMPER SWITCHES, SPOT SMOKE DETECTORS, DUCT SMOKE DETECTORS AND HEAT DETECTORS PROVIDED	AUDIBLE AND VISUAL NOTIFICATION PROVIDED. VISUAL ONLY IN PUBLIC AND COMMON AREAS

21. FIRE EXTINGUISHER DISTRIBUTION (IBC 906.3)

OCCUPANCY	PRIMARY CLASSIFICATION OF FIRE AND HAZARD	MINIMUM RATING	MINIMUM FLOOR AREA PER A (SF)	MAX TRAVEL DISTANCE (FT)
B	CLASS A:B:C - ORDINARY	2-A	1,500	75
S-1, H-2	CLASS A:B:C - EXTRA HAZARD	4-A	1,000	75

22. SMOKE MANAGEMENT SYSTEMS

SMOKE CONTROL SYSTEM (IBC 909)	SMOKE AND HEAT VENTS (IBC 910)	PASSIVE SMOKE MANAGEMENT
NOT REQUIRED	NOT REQUIRED	NOT REQUIRED

23. REQUIRED PLUMBING FIXTURES* (IBC 2902)

FLOOR / OCCUPANCY	OCCUPANT LOAD	WATER CLOSETS	LAVATORIES	DRINKING FOUNTAINS
LEVEL 1 / B	34	1 M 1 F	1 M 1 F	1
LEVEL 1 / S-1	55	1 M 1 F	1 M 1 F	1
LEVEL 1 / H-2	5	1 M 1 F	1 M 1 F	1
PROVIDED ON LEVEL 1		2 M 1 F	1 M 1 F	1

* NOT ADOPTED BY STATE OF OREGON

no.	date	by	ckd	description

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
140 S. STATE STREET SUITE 100
BREA, CA
92821
BMCD LICENSE NO

date	detailed
6/26/15	-
designed	checked
-	-

7759 NE Mary Olson Way, Portland, OR 97218

PDX - UNITED HANGAR MODIFICATION
EXISTING LIFE SAFETY NARRATIVE AND BUILDING CODE ANALYSIS

project	contract
110438	CONTRACT

drawing rev.

F-000 —

sheet of - sheets

file

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PORTLAND, OREGON 97205 226-1260

HVAC / PLUMBING / ELECTRICAL
MFIA INC.
2007 S.E. ASH STREET
PORTLAND, OREGON 97214 234-0548

LANDSCAPE
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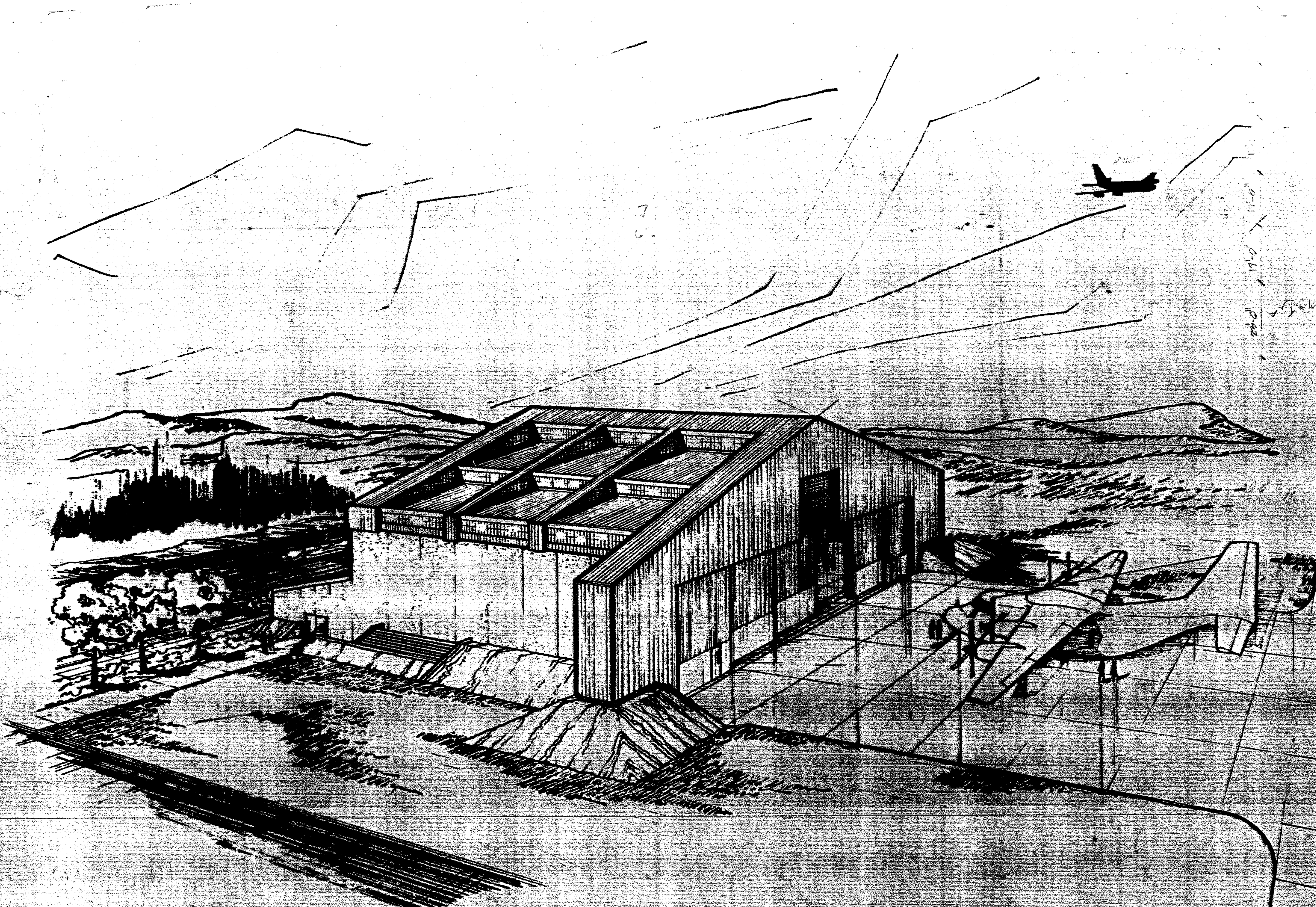
PORTLAND, OREGON 97204 227-5849

ACOUSTICAL
CLIFF SROKA
213 S.W. ASH STREET
PORTLAND, OREGON 97208 227-6233



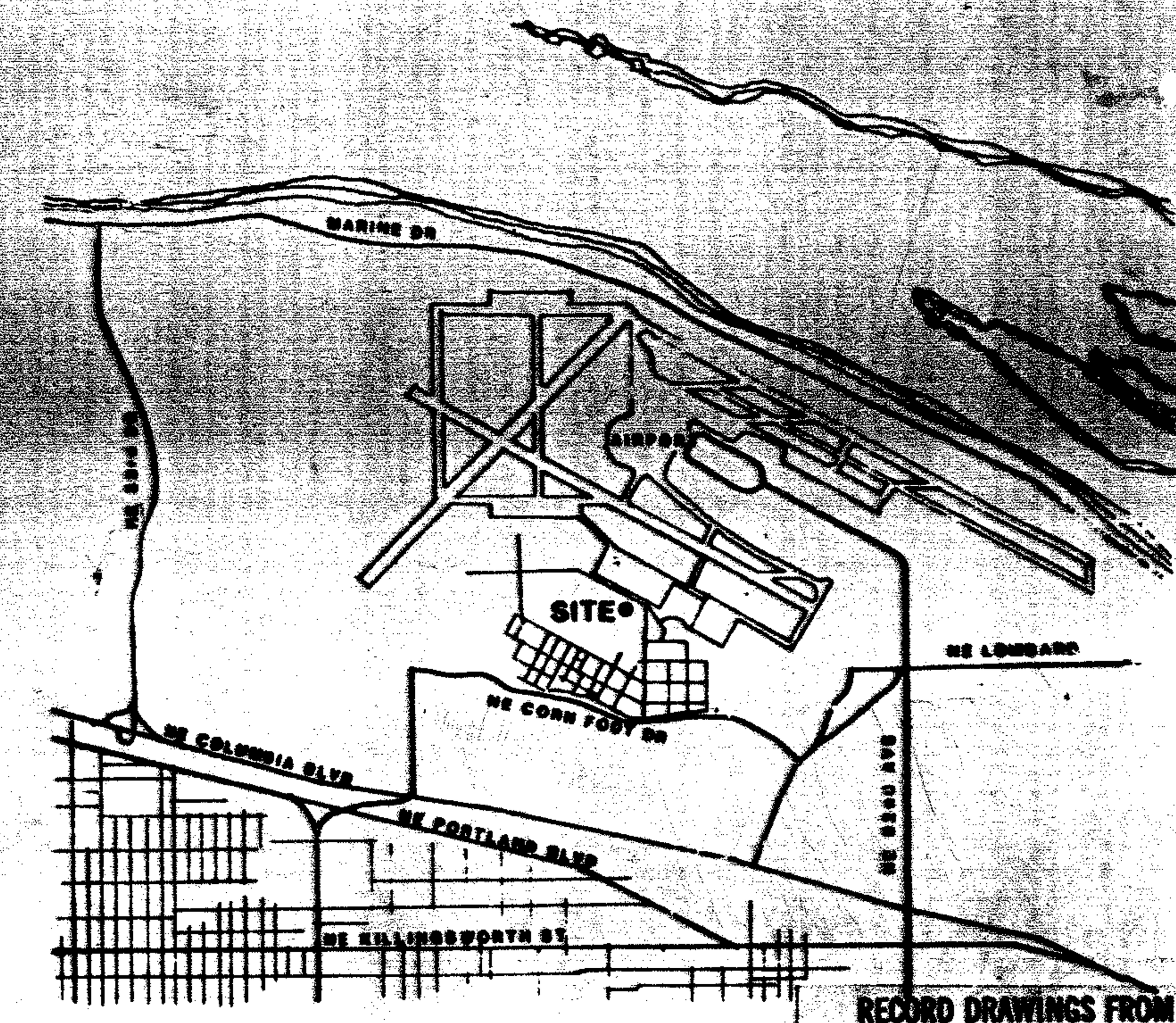
SCHEDULE OF DRAWINGS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

304 AIR RESCUE RECOVERY SQUADRON
AIR NATIONAL GUARD BASE
PORTLAND OREGON

ABBREVIATIONS:

&	and
∠	angle
@	at
℄	centerline
⌀	diameter or round
⊥	perpendicular
#	pound or number
/	per or over
±	plus or minus
[	channel
A.B.	Anchor Bolt
A.C.	Asphaltic Concrete
ACOUS.	Acoustical
A.D.	Area Drain
ADJ.	Adjustable
A.F.F.	Above Finish Floor
AGGR.	Aggregate
AL.	Aluminum
ALT.	Alternate
APPROX.	Approximate
ARCH.	Architectural
ASB.	Asbestos
ASPH.	Asphalt
BD.	Board
BET.	Between
BITUM.	Bituminous
BLDG.	Building
BLK.	Block
BLKG.	Blocking
BM.	Beam
B.O.	Bottom of
BOT.	Bottom
CAB.	Cabinet
C.B.	Catch Basin
CEM.	Cement
CER.	Ceramic
C.F.M.	Cubic Feet per Minute
C.I.	Cast Iron
C.I.P.	Cast-in-Place
C.J.	Control Joint/ Construction Joint
CLO.	Closet
CLG.	Ceiling
CLKG.	Caulking
C.W.	Cold Water
CLR.	Clear
CMU.	Concrete Masonry Unit
COL.	Column
CORR.	Corridor
CONC.	Concrete
CONN.	Connection
CONSTR.	Construction
CONT.	Continuous
CNTR.	Counter
CPT.	Carpet
C.S.P.	Concrete Storm Pipe
C.T.	Ceramic Tile
CTR.	Center
CTSK.	Countersunk
DBL.	Double
DEPT.	Department
DTL.	Detail
D.F.	Drinking Fountain
DIA.	Diameter
DIM.	Dimension
DISP.	Dispenser
DN.	Down
DR.	Door
D.O.	Door Opening
DS.	Downspout
D.SP.	Dry Standpipe
DWG.	Drawing
DWL.	Dowel
DWR.	Drawer
E.	East
EA.	Each
E.S.	Each Side
E.J.	Expansion Joint
EL.	Elevation
ELEC.	Electrical
ELEV.	Elevator
E.M.	Entry Mat
EMER.	Emergency
ENCL.	Enclosure
E.P.	Electrical Panelboard
EQ.	Equal
EQPT.	Equipment
E.W.	Each Way
EXP.	Expansion
EXPO.	Exposed
EXST.	Existing
EXT.	Exterior
F.A.	Fire Alarm
F.B.	Flat Bar
F.D.	Floor Drain
FDN.	Foundation
F.E.	Fire Extinguisher
F.E.C.	Fire Extinguisher Cabinet
F.F.	Factory Finish
FIN.	Finish
FL.	Floor
FLASH.	Flashing
FLUOR.	Fluorescent
F.O.	Face of
F.O.C.	Face of Concrete
F.O.S.	Face of Studs
F.PRF.	Fire Proof
FR.	Frame
FT.	Foot or Feet
FTG.	Footing
FURR.	Furring
FUT.	Future
GA.	Gauge
GALV.	Galvanized
G.B.	Grab Bar
GF/CI	Government Furnished, Contractor Installed
GL.	Glass
GND.	Ground
GR.	Grade
G.WB.	Gypsum Wallboard
GYP.	Gypsum
H.B.	Hose Bib
H.C.	Hollow Core
HDWD.	Hardwood
HDWR.	Hardware
HGT.	Height
H.M.	Hollow Metal
HORIZ.	Horizontal
HR.	Hour
H.W.	Hot Water
I.D.	Inside Diameter (Dim)
INS.	Insulation
INT.	Interior
INV.	Invert
JAN.	Janitor
JT.	Joint
KIT.	Kitchen
LAB.	Laboratory
LAM.	Laminate
LAV.	Lavatory
LKR.	Locker
LT.	Light
MAX.	Maximum
M.B.	Machine Bolt
M.C.	Medicine Cabinet
MECH.	Mechanical
MEMB.	Membrane
MFR.	Manufacturer
MH.	Manhole
MIN.	Minimum
MIR.	Mirror
MISC.	Miscellaneous
M.O.	Masonry Opening
MTD.	Mounted
MTL.	Metal
MUL.	Mullion
N.	North
N.I.C.	Not in Contract
NO. or #	Number
NOM.	Nominal
N.T.S.	Not to Scale
OA.	Overall
OBS.	Obscure
O.C.	On Center
O.D.	Outside Diameter (Dim)
OFF.	Office
OPNG.	Opening
OPP.	Opposite
OWSJ	Open Web Steel Joist
PL.	Plate
P.LAM.	Plastic Laminate
PLAS.	Plaster
PLYWD.	Plywood
PR.	Pair
PRCST.	Precast
PRE-FIN	Prefinished
P.S.F.	Per Square Foot
P.S.I.	Per Square Inch
PT.	Point
P.T.D./R	Combination Paper Towel Dispenser and Receptacle
PTN.	Partition
P.T.D.	Paper Towel Dispenser
Q.T.	Quarry Tile
R.	Riser
RAD.	Radius
RBR.	Rubber
R.D.	Roof Drain
REF.	Reference
REINF.	Reinforced
REQ.	Required
RESIL.	Resilient
REV.	Reverse
RGTR.	Register
RM.	Room
R.O.	Rough Opening
S.	South
S.A.	Suspended Acoustical Ceiling
S.C.	Solid Core
S.C.D.	Seat Cover Dispenser
SCHED.	Schedule
S.D.	Soap Dispenser
SECT.	Section
S.F.	Square Foot
SG.	Subgrade
SH.	Shelf
SHR.	Shower
SHT.	Sheet
SIM.	Similar
S.M.S.	Sheet Metal Screws
S.N.D.	Sanitary Napkin Dispenser
S.N.R.	Sanitary Napkin Receptacle
SPEC.	Specifications
SQ.	Square
S.S.	Stainless Steel
S.SK.	Service Sink
ST.	Stainless
STA.	Station
STD.	Standard
STL.	Steel
STOR.	Storage
STRUCT.	Structural
SUSP.	Suspended
SYM.	Symbol
T.B.	Towel Bar
T&B	Top and Bottom
T.C.	Top of Curb
TEL.	Telephone
TEMP.	Temperature
T&G	Tongue and Groove
THK.	Thick
THRESH.	Threshold
T.O.W.	Top of Wall
T.P.	Top of Pavement
T.P.D.	Toilet Paper Dispenser
TR.	Tread
T.S.	Tube Steel
T.V.	Television
TYP.	Typical
U.L.	Underwriters' Laboratories
UNF.	Unfinished
U.O.N.	Unless Otherwise Noted
UR.	Urinal
V.B.	Vapor Barrier
V.C.T.	Vinyl Composition Tile
VEN.	Veneer
VERT.	Vertical
VEST.	Vestibule
V.P.	Veneer Plaster
W.	West
W/	With
W.C.	Water Closet
W.CLR.	Water Cooler
WD.	Wood
W.H.	Water Heater
W/O	Without
W.P.	Water Proof
WSCT.	Wainscot
WT.	Weight



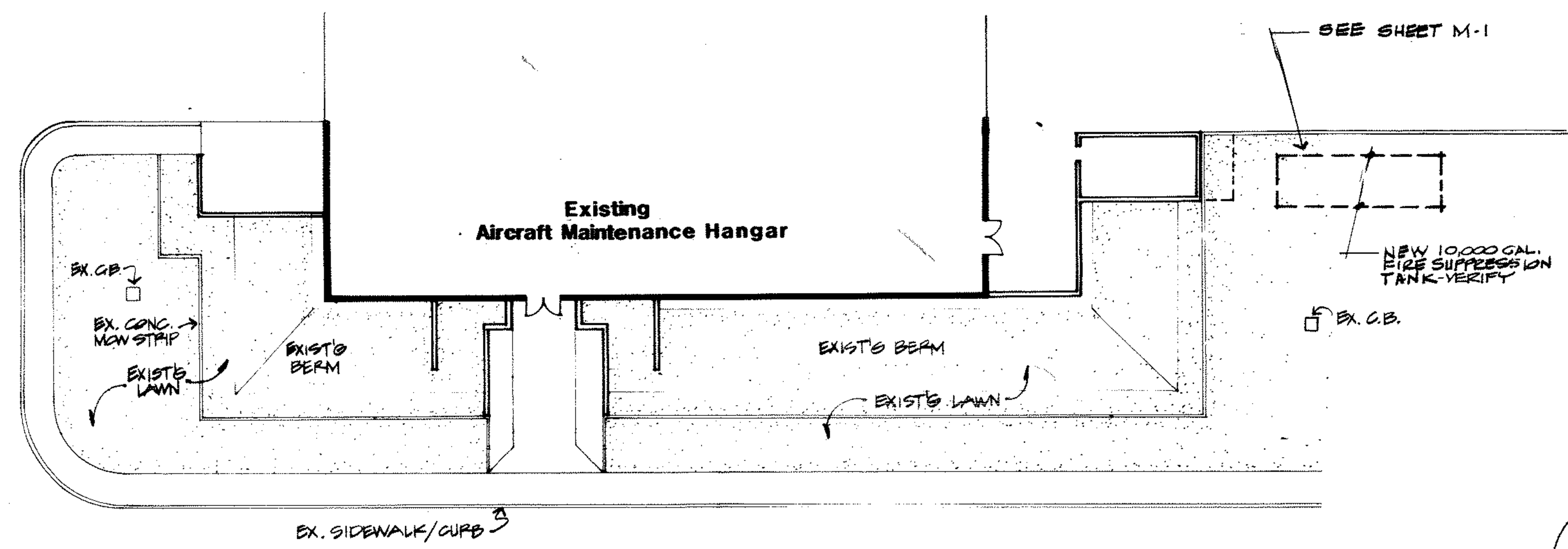
VICINITY MAP

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

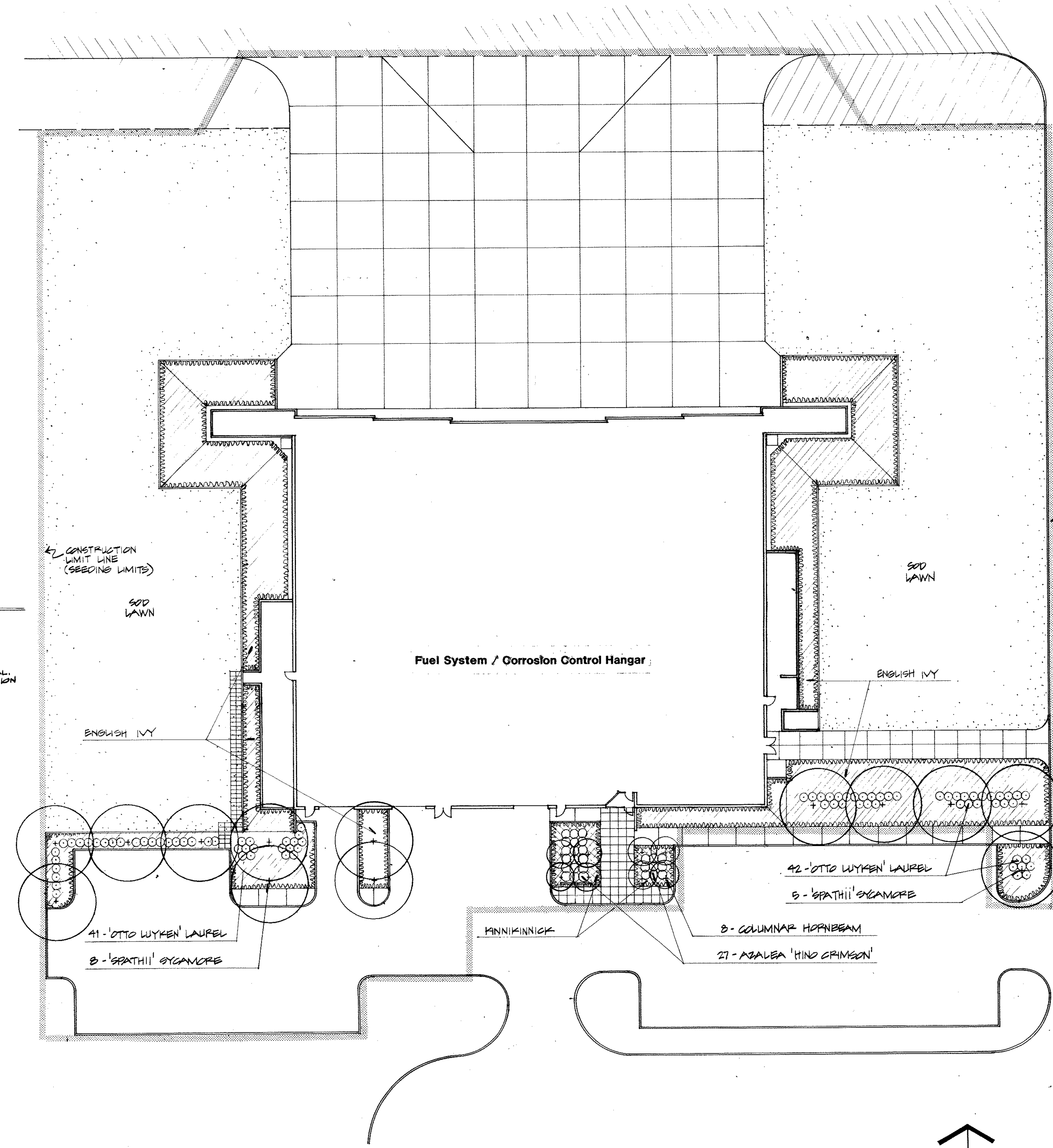
SHEET TITLE: C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

CR

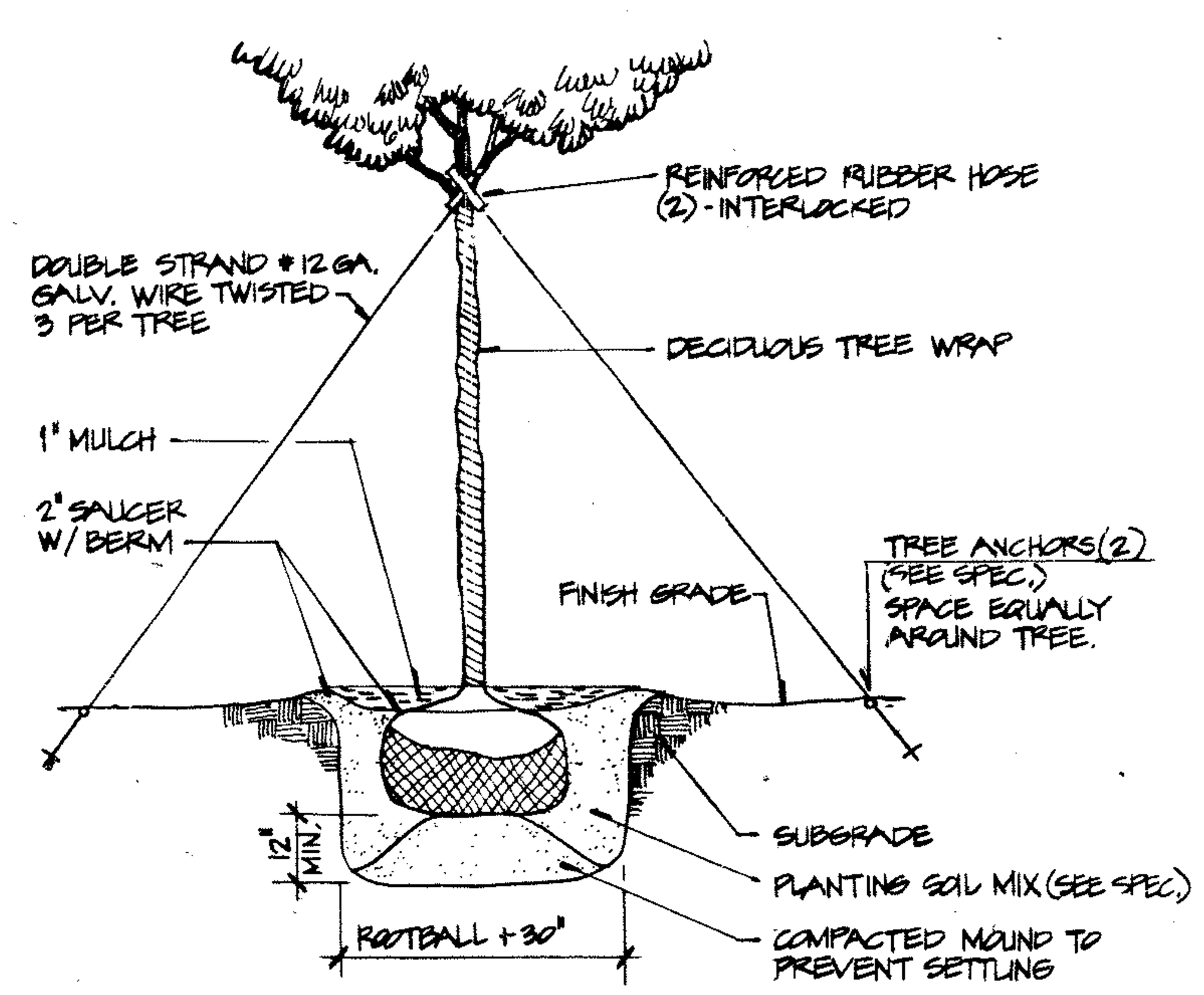
BLDG 375



2/L1 **Fire Line Extension**
1"= 20'-0"



1/L1 **PLANTING PLAN**
1"= 20'-0"



3/L1 **Tree Staking Detail**
NS

Plant List

SYMBOL	QUAN.	COMMON NAME / BOTANICAL NAME	SIZE	CONDITION
(large circle)	13	SYCAMORE MAPLE 'SPAETHII' / ACER PSEUDOPLATANUS 'SPAETHII'	3" CAL.	B&B; WELL BRANCHED GUYED 2 DIRECTIONS
(small circle)	8	PYRAMIDAL HORNBEAM / CARPINUS BETULUS 'FASTIGIATA'	3" CAL.	B&B; WELL BRANCHED GUYED 2 DIRECTIONS
(four circles)	27	'HINO CRIMSON' AZALEA / AZALEA 'HINO CRIMSON'	18" SPD.	B&B; WELL BRANCHED W/ BUDS - 3'-0 O.C.
(three circles)	83	'OTTO LUYKEN' LAUREL / PRUNUS LAUROCERASUS 'OTTO LUYKEN'	18" SPD.	B&B; WELL BRANCHED 3'-0" O.C.
(hatch)	SEE NOTE 4.	KINNIKINNICK / ARCTOSTAPHYLOS UVA URSA	1 GAL.	4 RUNNERS 8" LENGTH MIN. - 3'-0" O.C.
(hatch)	SEE NOTE 4	ENGLISH IVY / HEDERA HELIX	2¼" POTS	2 RUNNERS 8" LENGTH 12" O.C. TRIANGLE SPACING.

Notes

1. FIELD STAKE FOR APPROVAL SHRUBS & TREES SHOWN ON PLAN.
2. COORDINATE SITE ACCESS & AREAS FOR MATERIAL STOCK-PILE W/ CONTRACTING OFFICER.
3. OBTAIN APPROVAL OF FINISH GRADES PRIOR TO PLANTING MATERIALS OR SEEDING LAWN.
4. CONTRACTOR IS RESPONSIBLE FOR COMPUTING QUANTITIES OF GROUNDCOVER TO BE USED.

miller · cook architects a.i.a.
30 N.W. 1st AVE.
PORTLAND, OREGON
(503) 226-0622
97209

DATE JAN. 9, 1986
JOB No 84-125
REVISIONS

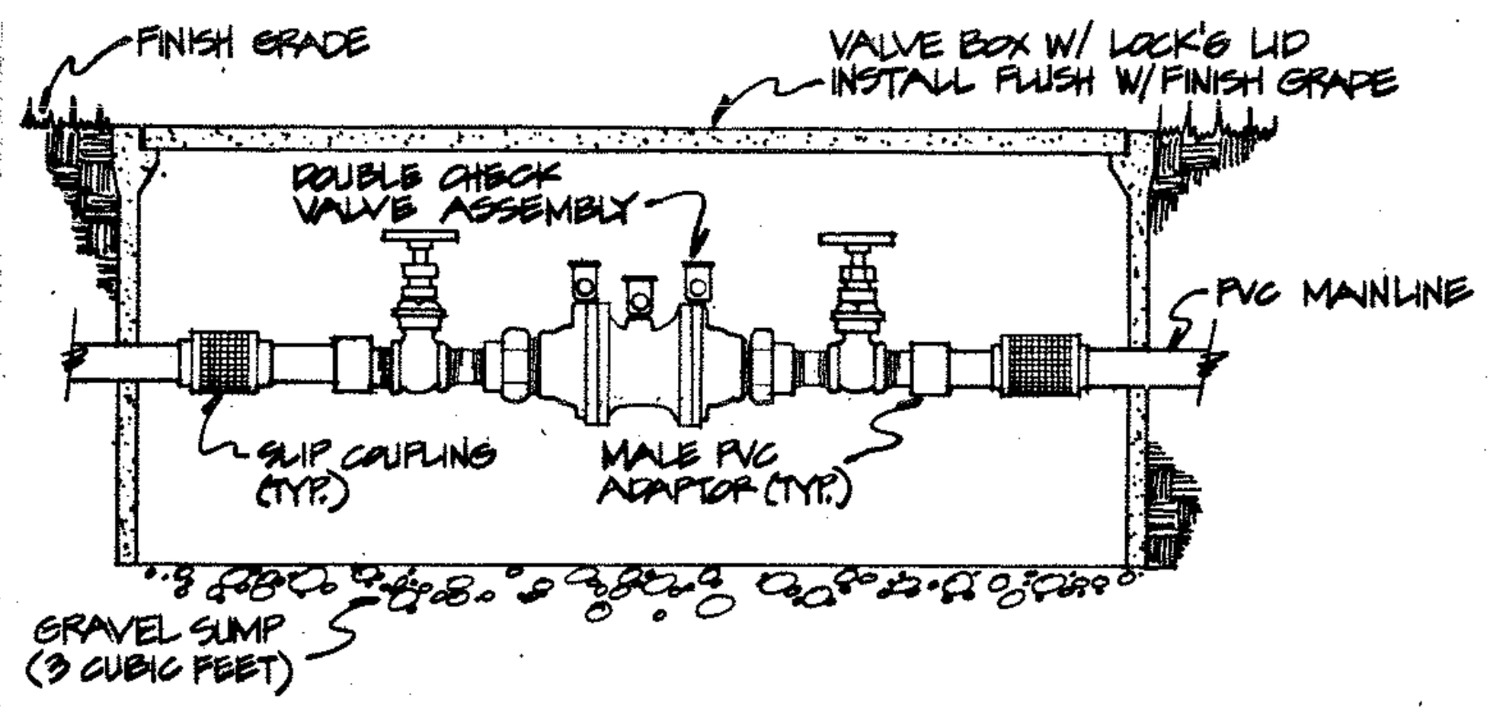
REGISTERED ARCHITECT — JACK C. MILLER — PORTLAND, OREGON — 1464 — STATE OF OREGON

SHEET TITLE: PLANTING PLAN
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

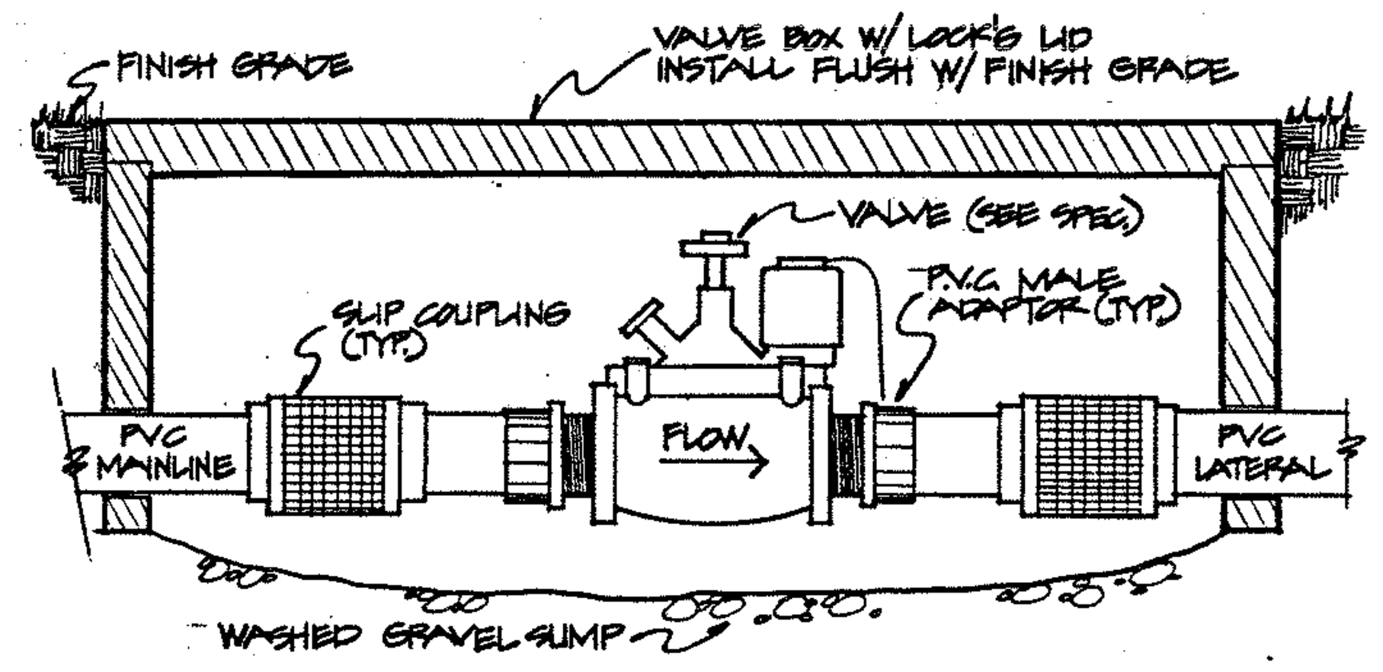
REGISTERED LANDSCAPE ARCHITECT — OREGON — 16

L-1

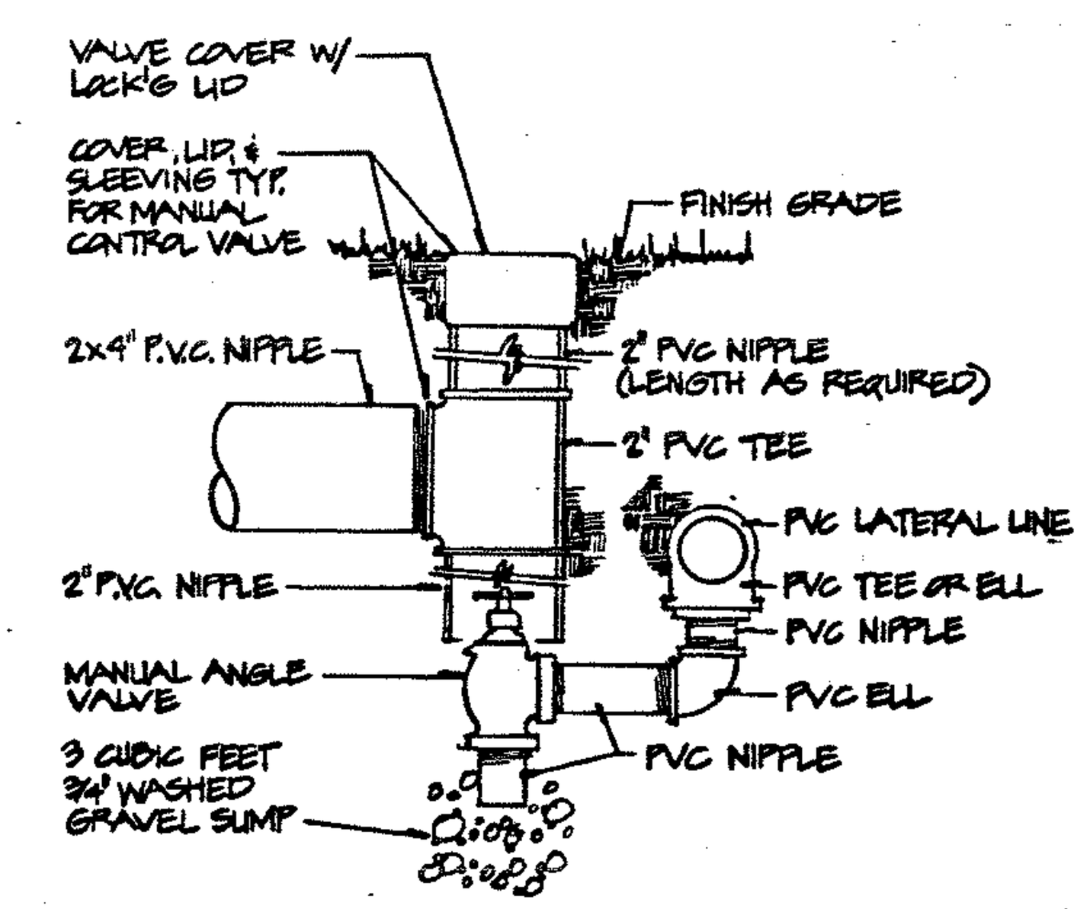
100% REVIEW



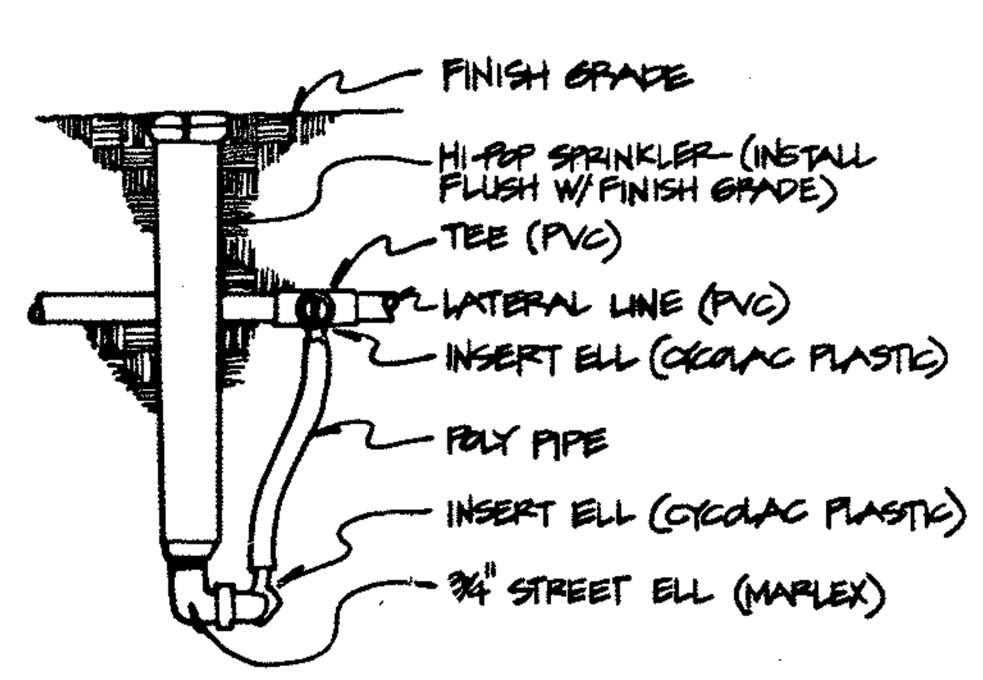
2/L2 **Double Check Valve**
NS



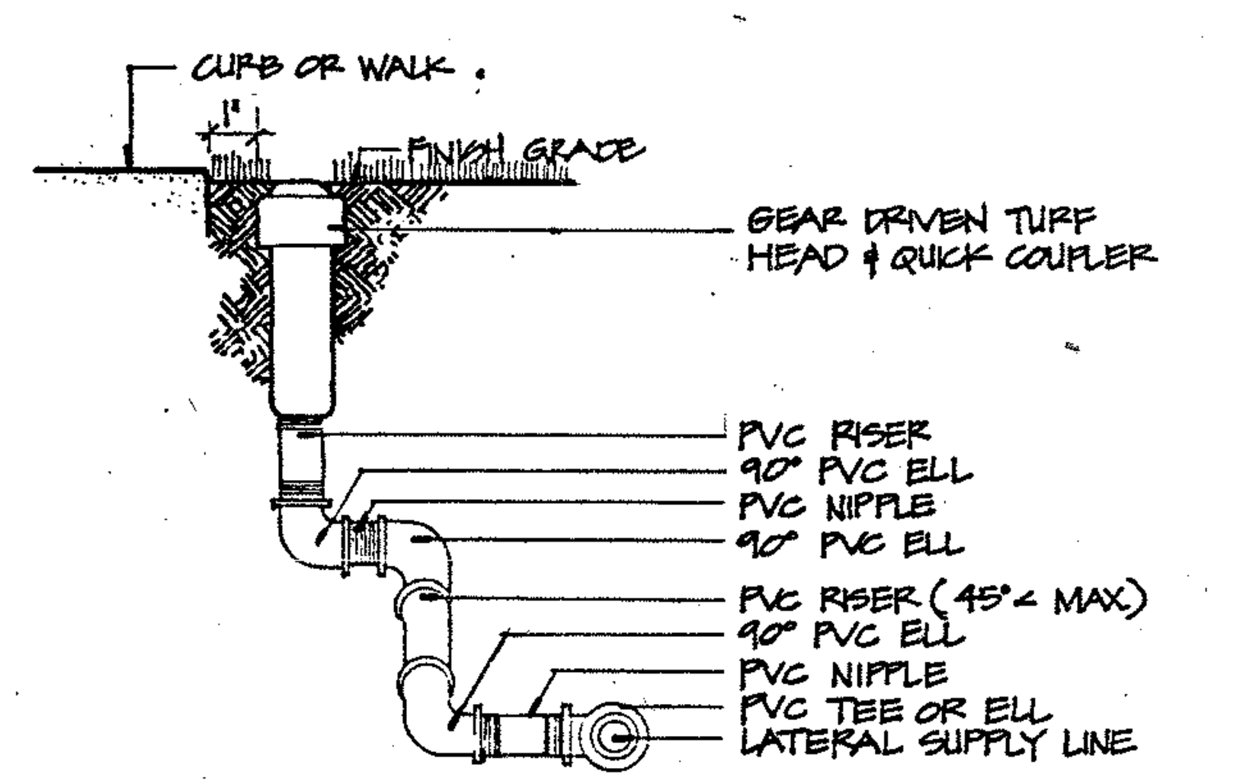
3/L2 **Automatic Control Valve**
NS



6/L2 **Manual Drain Valve**
NS



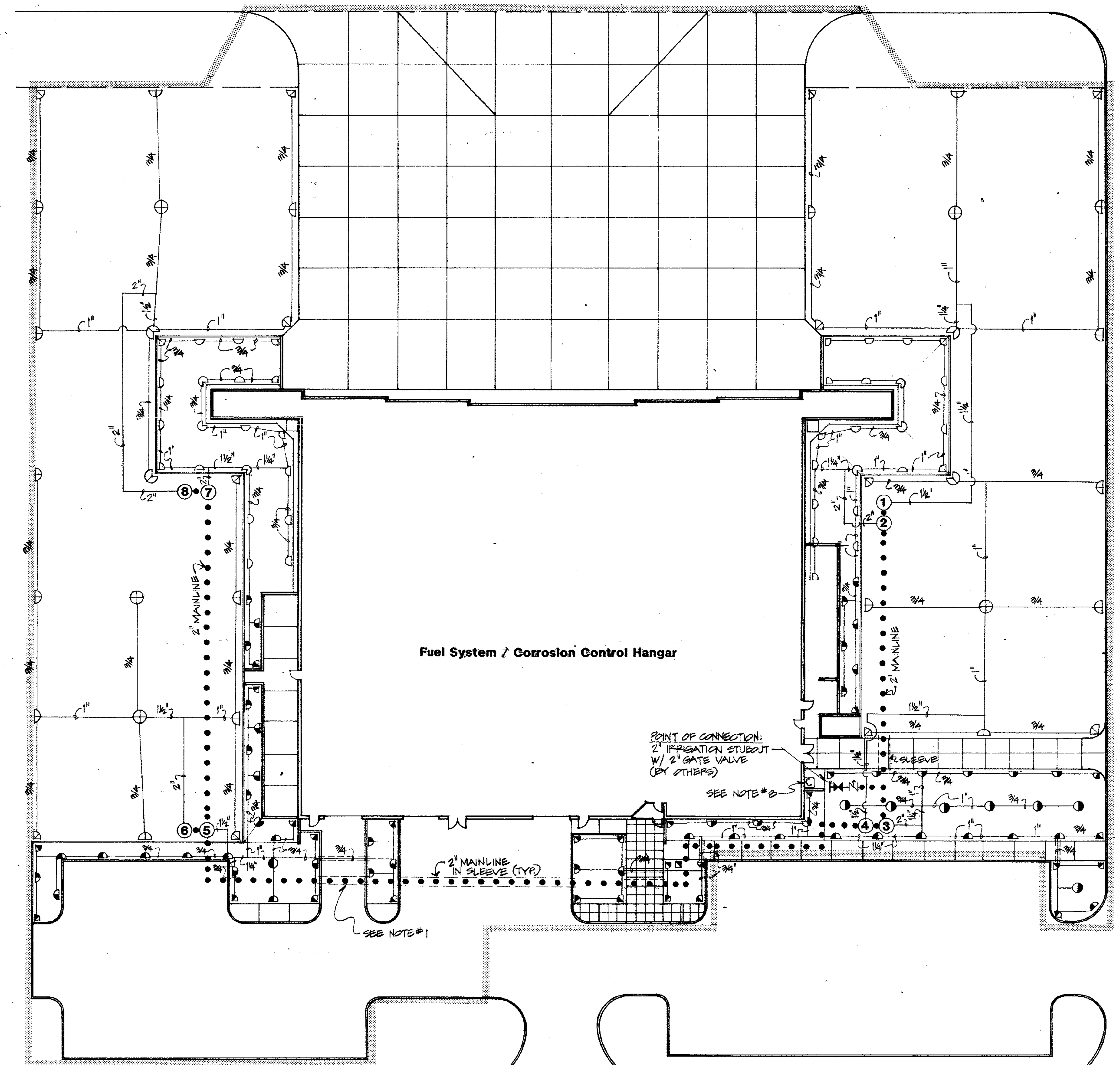
4/L2 **Pop-up Sprinkler Head**
NS



5/L2 **Swing Joint Assembly**
NS

Valve Key

VALVE NO.	VALVE SIZE	GPM
1	1½"	30.6
2	1½"	46.5
3	1½"	43.5
4	1½"	30.6
5	1½"	27.5
6	1½"	39.1
7	1½"	41.5
8	1½"	35.7



Irrigation Legend

- 2" GATE VALVE (BY OTHER)
- 2" DOUBLE CHECK VALVE IN VALVE BOX. SEE NOTE #2.
- AUTOMATIC CONTROL VALVE IN VALVE BOX. SEE VALVE KEY FOR SIZE. SEE NOTE #2.
- 2" MAINLINE - CLASS 200 PVC.
- LATERAL LINE - CLASS 200 PVC; SIZE AS SHOWN ON PLAN; SEE NOTE #4 THIS SHEET.
- QUICK COUPLER - 3/4" SINGLE LUG TYPE; CONNECT TO MAINLINE
- C: IRRIGATION CONTROLLER - 11 OR 12 STATION ELECTRO-MECHANICAL CONTROLLER; WALL MOUNT IN RAIN-TIGHT HOUSING.
- ===== SLEEVES - SCHEDULE 40 PVC; SIZE 4"φ.

Head Schedule

SYMBOL	HEAD DESCRIPTION	RADIUS	PSI	GPM
⊕	GEAR DRIVEN TURF HEAD	45'	35	6.8
	" " " "	45'	35	5.1
	" " " "	45'	35	3.4
	" " " "	45'	35	1.7
○	POP-UP SPRAY HEAD (6") STANDARD	15'	30	4.0
	" " " " "	15'	30	3.0
	" " " " "	15'	30	2.0
	" " " " "	15'	30	1.0
◐	POP-UP SPRAY HEAD (6") LOW GALLONAGE	12'	30	2.0
	" " " " " "	12'	30	1.5
	" " " " " "	12'	30	1.0
	" " " " " "	12'	30	.5

1/L2 **IRRIGATION PLAN**
1" = 20'-0"

NORTH

Notes

1. THIS PLAN IS SCHEMATIC. PLACE LINES IN COMMON TRENCH WHEREVER POSSIBLE. FIELD ADJUST LINES TO AVOID CONFLICT W/ EX. STRUCTURES, PAVEMENT & UTILITIES. FIELD ADJUST HEADS TO INSURE PROPER COVERAGE.
2. PLACE VALVES IN VALVE BOXES IN A MANNER WHICH FACILITATES ACCESS FOR MAINTENANCE.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPLETE IRRIGATION SYSTEM INCLUDING HYDRAULICS & RELATED ELECTRIC EQUIPMENT.
4. USE 3/4" PVC PIPE WHEREVER LATERAL LINES ARE SHOWN WITH NO SIZE INDICATED.
5. USE SPRINKLER HEADS WITH MATCHED PRECIPITATION RATE.
6. SPRINKLER HEAD LAYOUT IS BASED ON DATA SHOWN IN HEAD SCHEDULE. VARIATION FROM THIS DATA WILL NECESSITATE REDESIGN OF SYSTEM.
7. SPRINKLER HEAD DATA IS BASED ON HUNTER S 75 GEAR DRIVEN HEADS USING NOZZLE #'S 4, 7, 9 & 10; RAINBIRD 1806 SPRAY HEADS (BOTH STANDARD & LOW GALLONAGE).
8. ELECTRICAL STUBOUT TO BE PROVIDED BY OTHERS. COORDINATE CONTROLLER LOCATION W/ CONTRACTING OFFICER.

100% REVIEW

REGISTERED LANDSCAPE ARCHITECT — OREGON

REGISTERED ARCHITECT — JACK C. MILLER — PORTLAND, OREGON — 1464 — STATE OF OREGON

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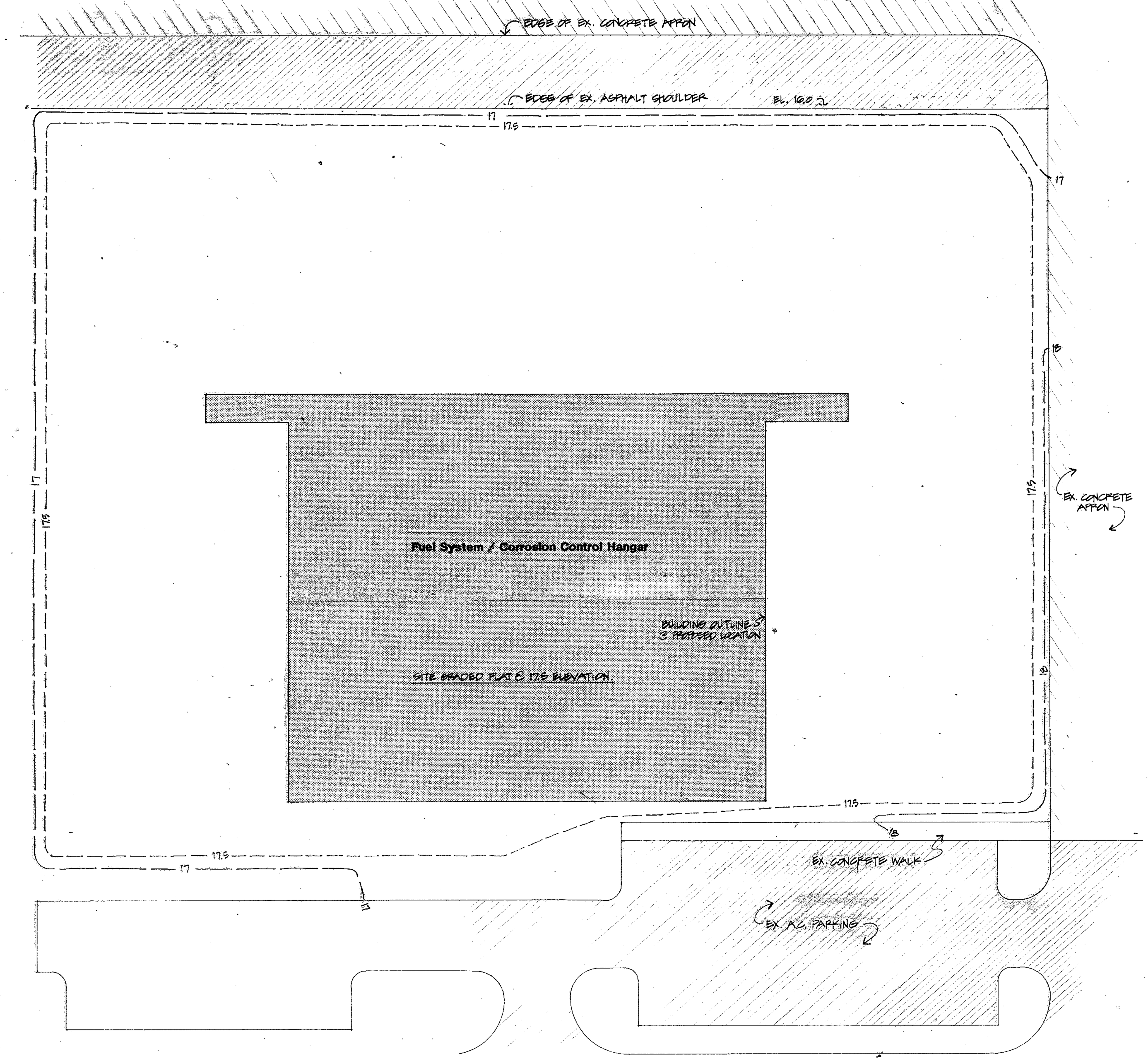
DATE JAN. 9, 1986
JOB NO 84.125
REVISIONS

SHEET TITLE: IRRIGATION PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

L-2



SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel - sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel - sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines)	GM	Silty gravels, gravel - sand - silt mixtures.
			GC	Clayey gravels, gravel - sand - clay mixtures
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amt. of fines)	SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

PARTICLE SIZE LIMITS

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
No. 200	No. 40	No. 10	No. 4	¾ in.	3 in.	(12 in.)	

U.S. STANDARD SIEVE SIZE

RELATIVE DENSITY (sand-silt)

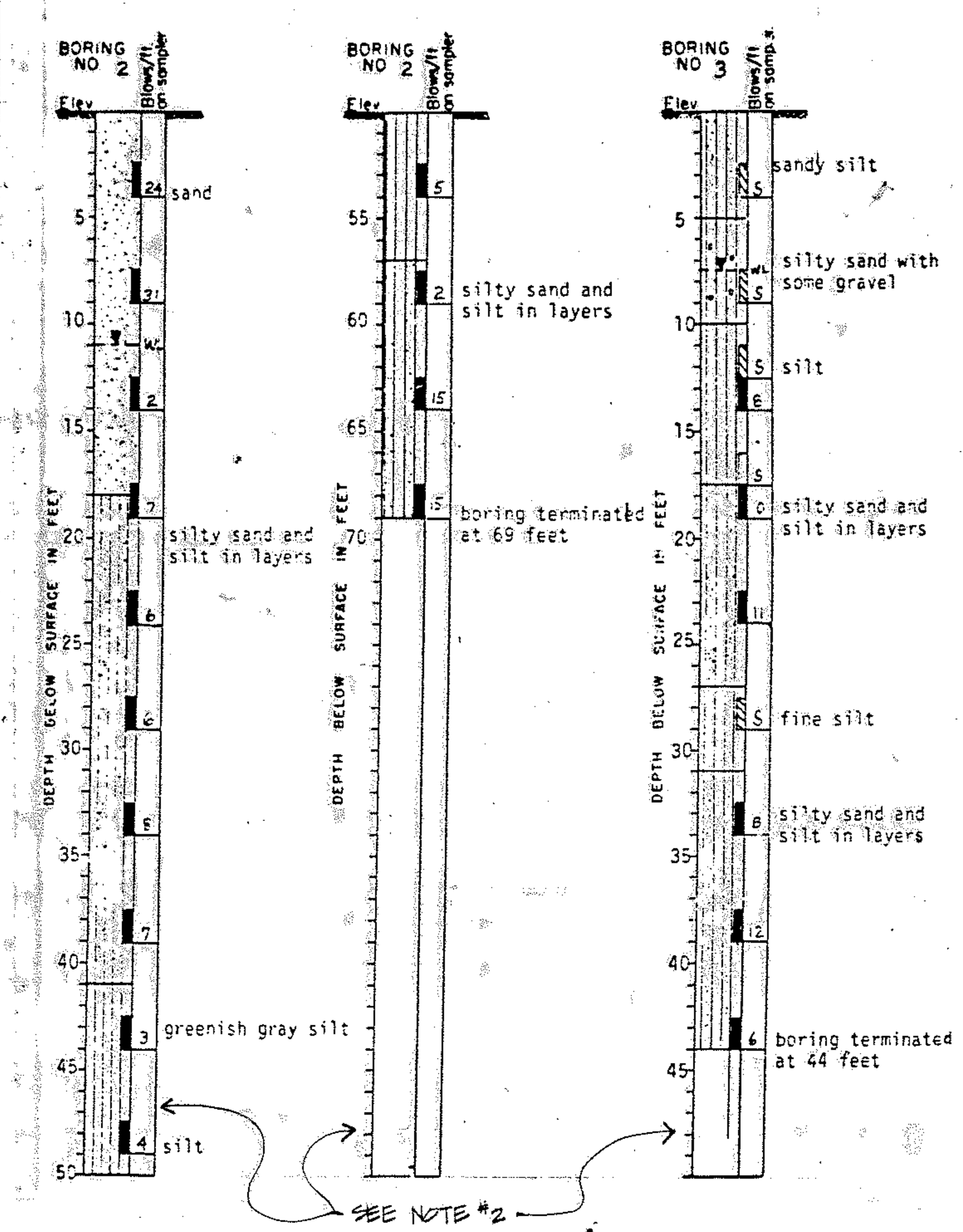
Very Loose – Less than 4 blows per foot
Loose – 4 to 10 blows/ft.
Medium – 10 to 30 blows/ft.
Dense – 30 to 50 blows/ft.
Very Dense – More than 50 blows/ft.

CONSISTENCY (clay)

Very Soft – Less than 2 blows per foot
Soft – 2 to 4 blows/ft.
Medium – 4 to 8 blows/ft.
Stiff – 8 to 15 blows/ft.
Very Stiff – 15 to 30 blows/ft.
Hard – More than 30 blows/ft.

KEY TO BORING LOGS

- Number of blows of a 140-lb. weight falling 30 in. is req'd. to drive st'd. spoon one foot.
- Thin-wall Shelby tube undisturbed sampler used
- Free ground water level
- Percent core recovery from rock core-drilling operations
- Sample not recovered
- Fill
- Limestone
- Sandstone
- Igneous Rock
- Shale



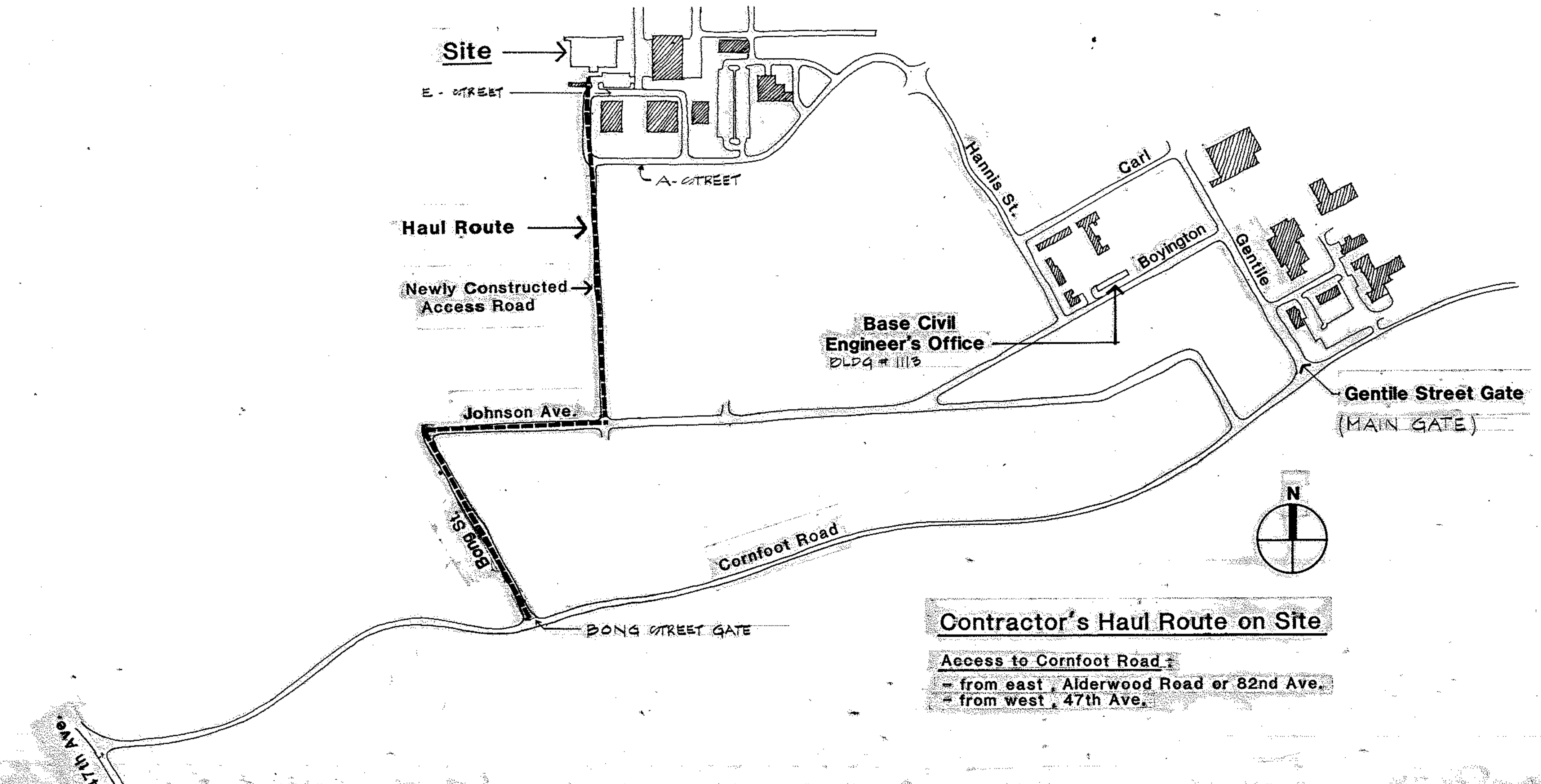
1/C1 Existing Grades @ Site

1" = 20'-0"

Note

1. THIS PLAN IS AN APPROXIMATION OF EX. GRADE.
2. TEST BORINGS SHOWN WERE TAKEN AT SITE IMMEDIATLY TO THE EAST OF PROJECT SITE.

NORTH



Contractor's Haul Route on Site

Access to Cornfoot Road:
- from east, Alderwood Road or 82nd Ave.
- from west, 47th Ave.

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DATE JAN. 9, 1986
JOB No 84-125
REVISIONS

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1464
STATE OF OREGON

SHEET TITLE: PRELOAD PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

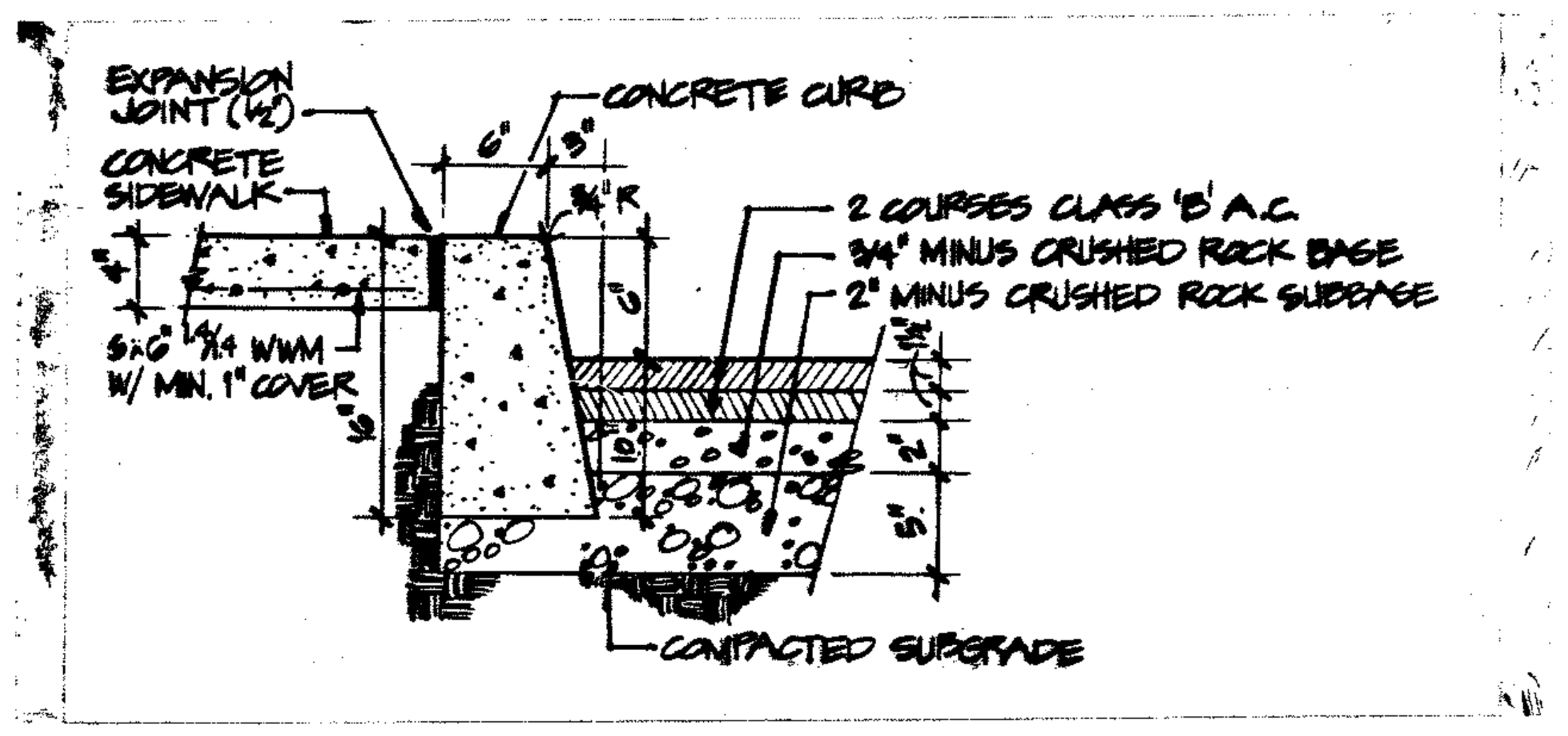
304th AIR RESCUE SQUADRON
PORTLAND INTERNATIONAL AIRPORT

PORTLAND OREGON

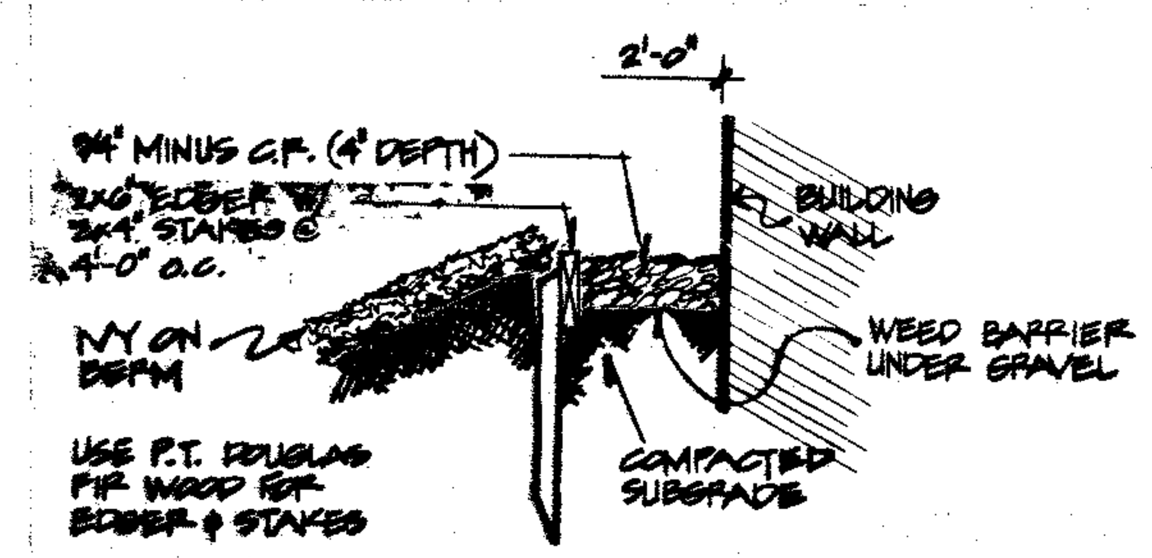
REGISTERED LANDSCAPE ARCHITECT OREGON 16

100% REVIEW

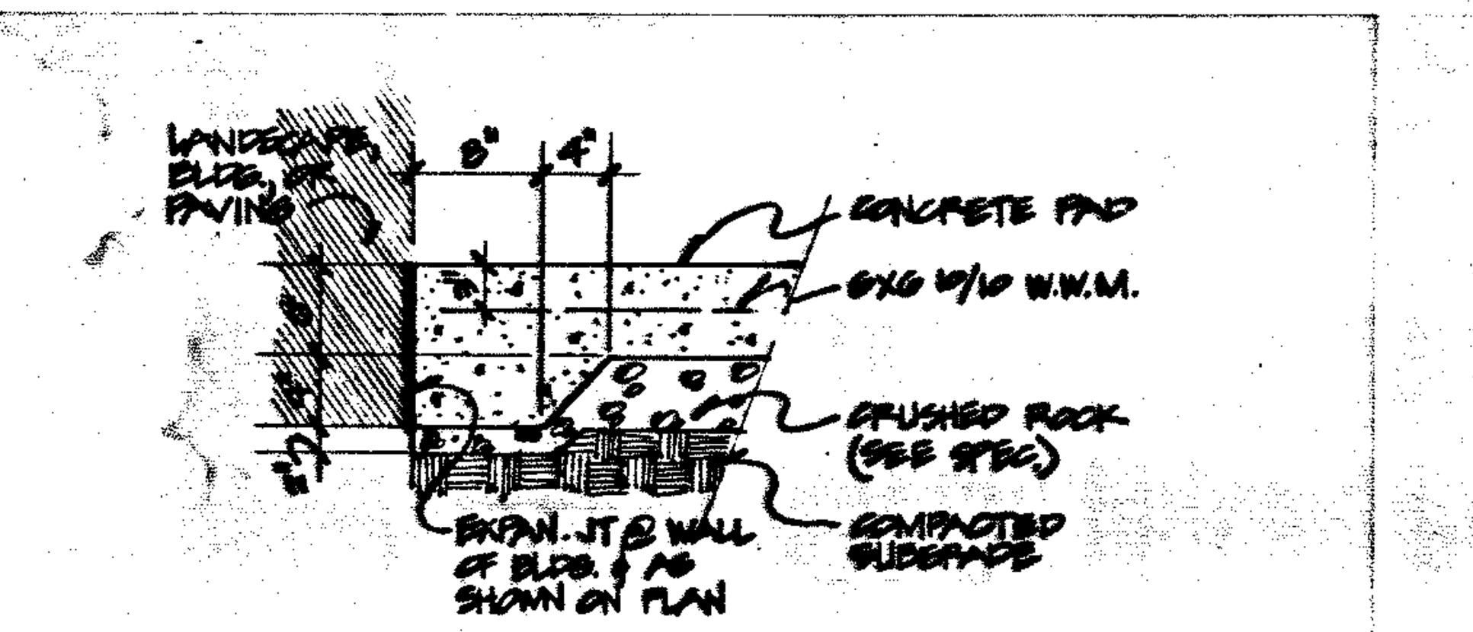
C-1



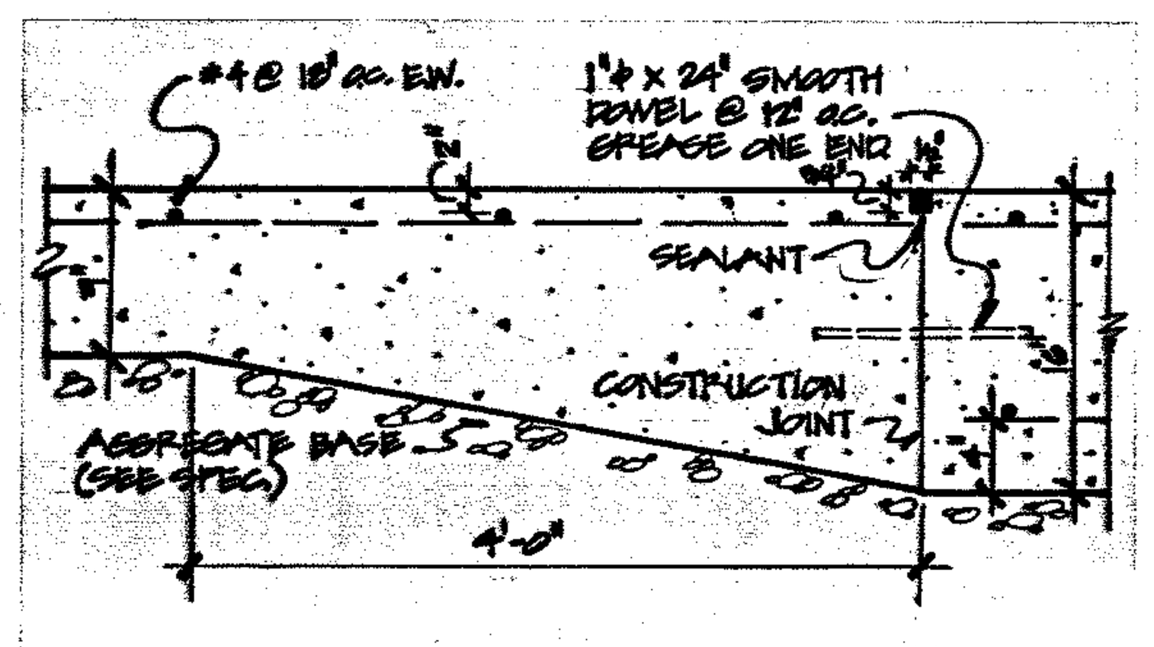
2 C2 A. C. Paving, Conc. Walk, Conc. Curb



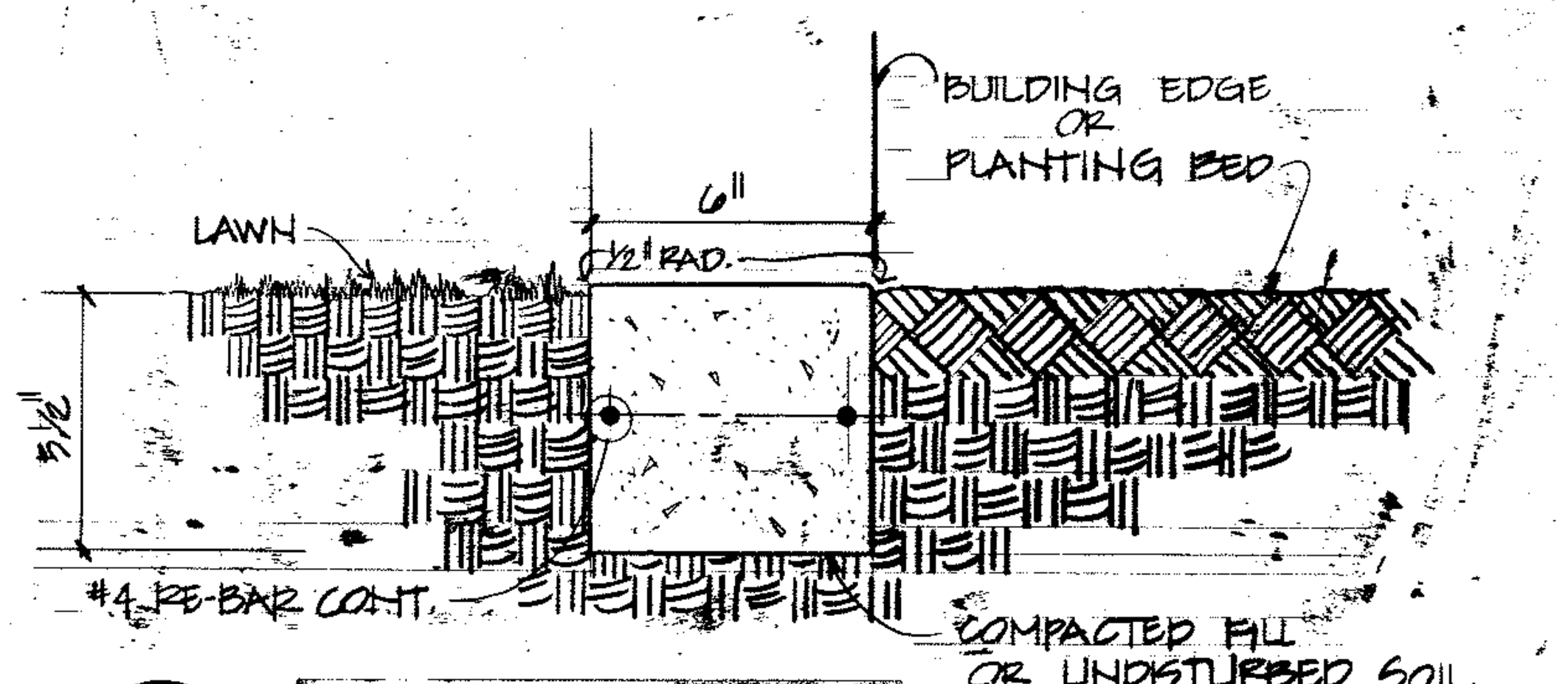
7 C2 Gravel Strip



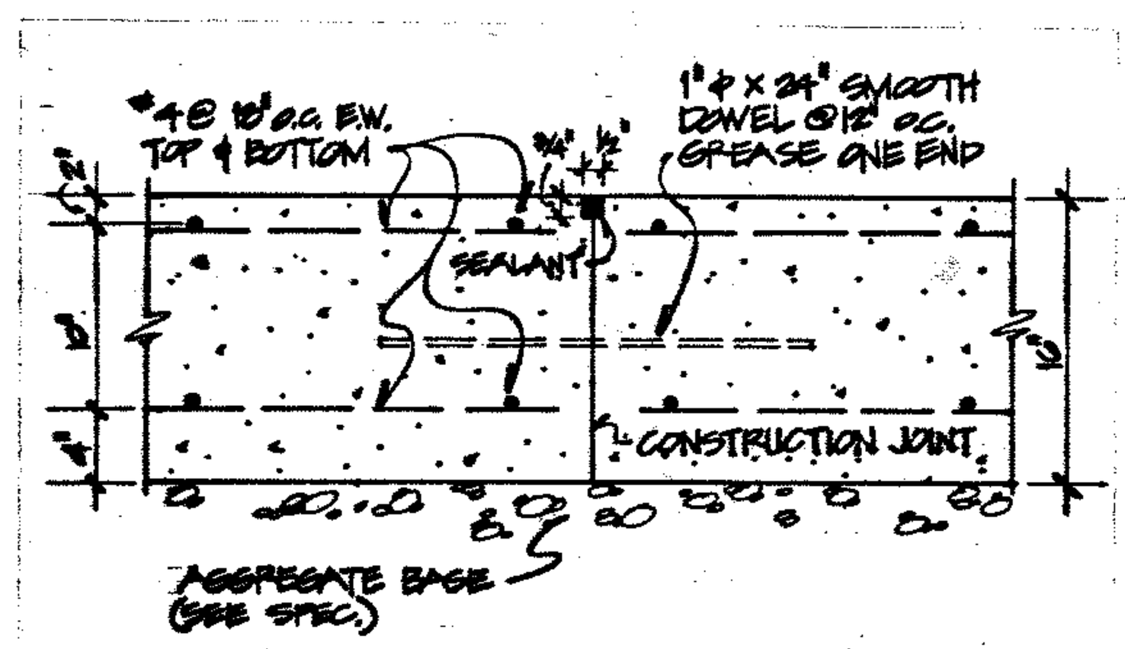
3 C2 Concrete Paving



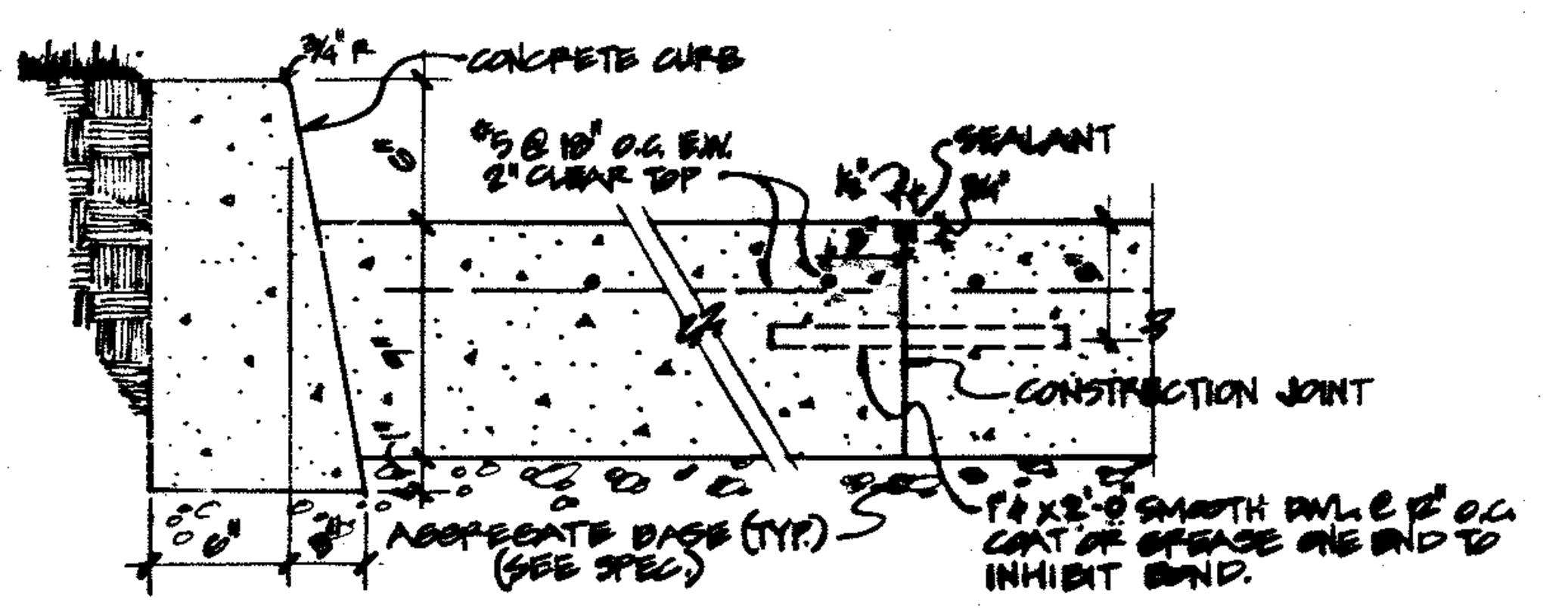
8 C2 Transition Between Apron Pavements



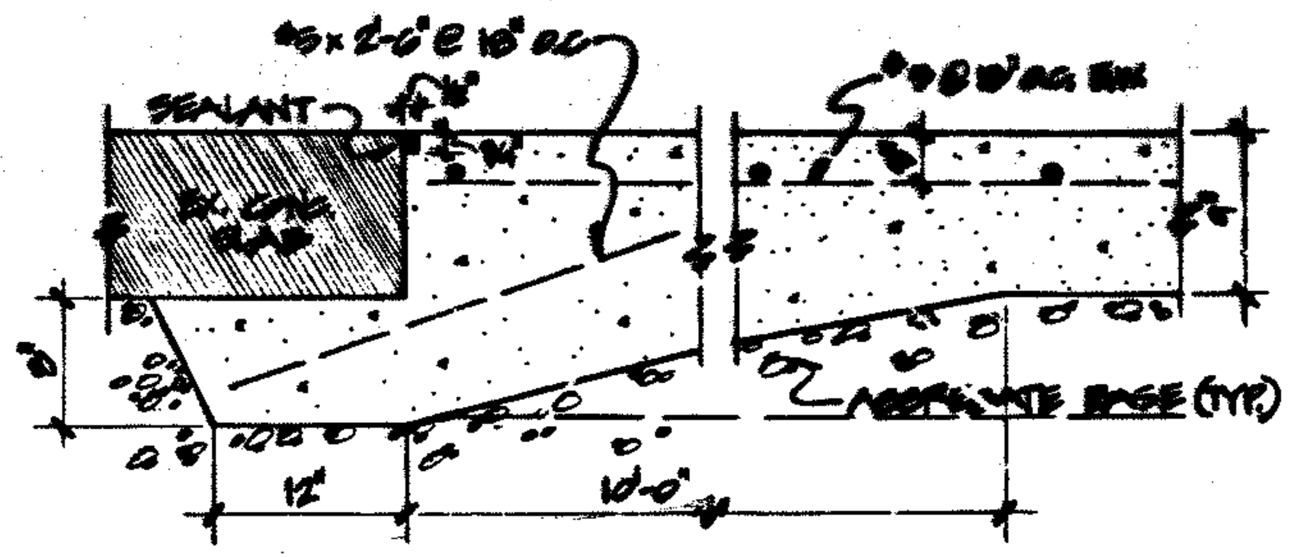
4 C2 Concrete Mow Strip



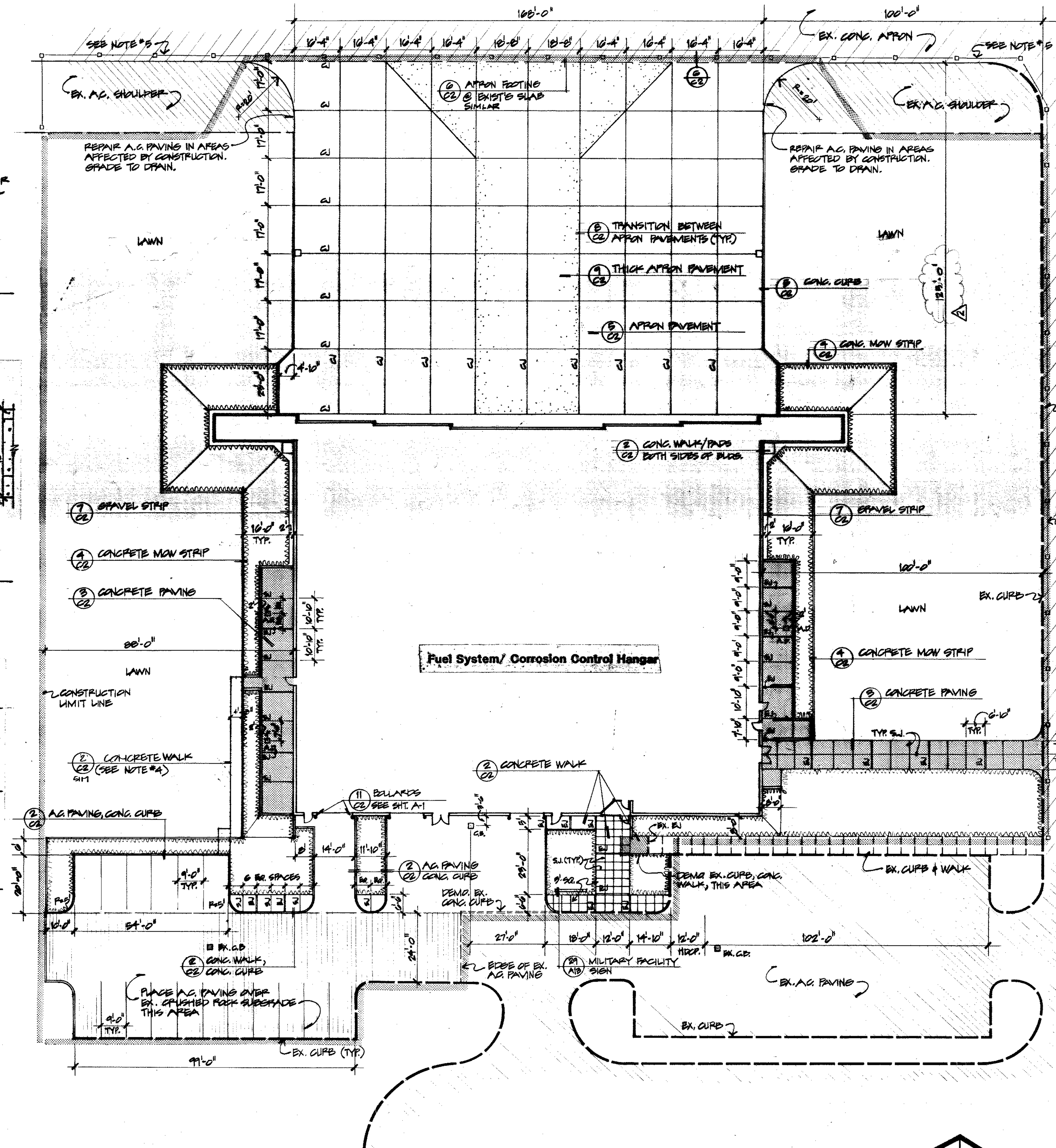
9 C2 Thick Apron Pavement



5 C2 Apron Pavement Detail

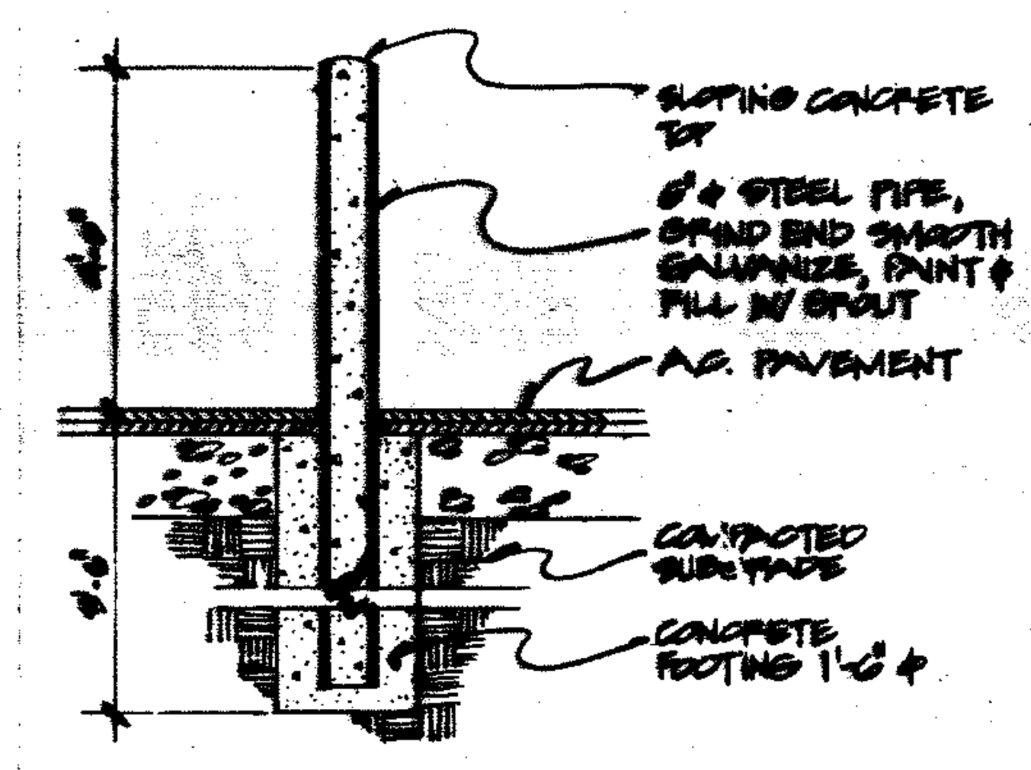


6 C2 Apron Footing @ Existing Slab



1 C2 SITE PLAN
1" = 20'-0"

NORTH



11 C2 Bollard

Notes

1. DISCREPANCIES BETWEEN DWGS. & EX SITE CONDITIONS SHALL BE BROUGHT TO THE CONTRACTING OFFICER'S ATTENTION PRIOR TO PROCEEDING.
2. DIMENSIONS ARE TAKEN @ 90° & FROM FACE OF CURB OR BUILDING UNLESS NOTED OTHERWISE.
3. COORDINATE SITE ACCESS, JOB SHACK LOCATION & AREAS FOR MATERIALS STOCKPILE W/ CONTRACTING OFFICER.
4. APPROXIMATE NUMBER OF BLOCKS SHOWN, CONTRACTOR TO DETERMINE EXACT QUANTITY.
5. PROVIDE TEMPORARY 8' HIGH CHAINLINK FENCING AROUND EAST & NORTH PERIPHERY AS SHOWN

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

REGISTERED LANDSCAPE ARCHITECT OREGON

REGISTERED ARCHITECT STATE OF OREGON

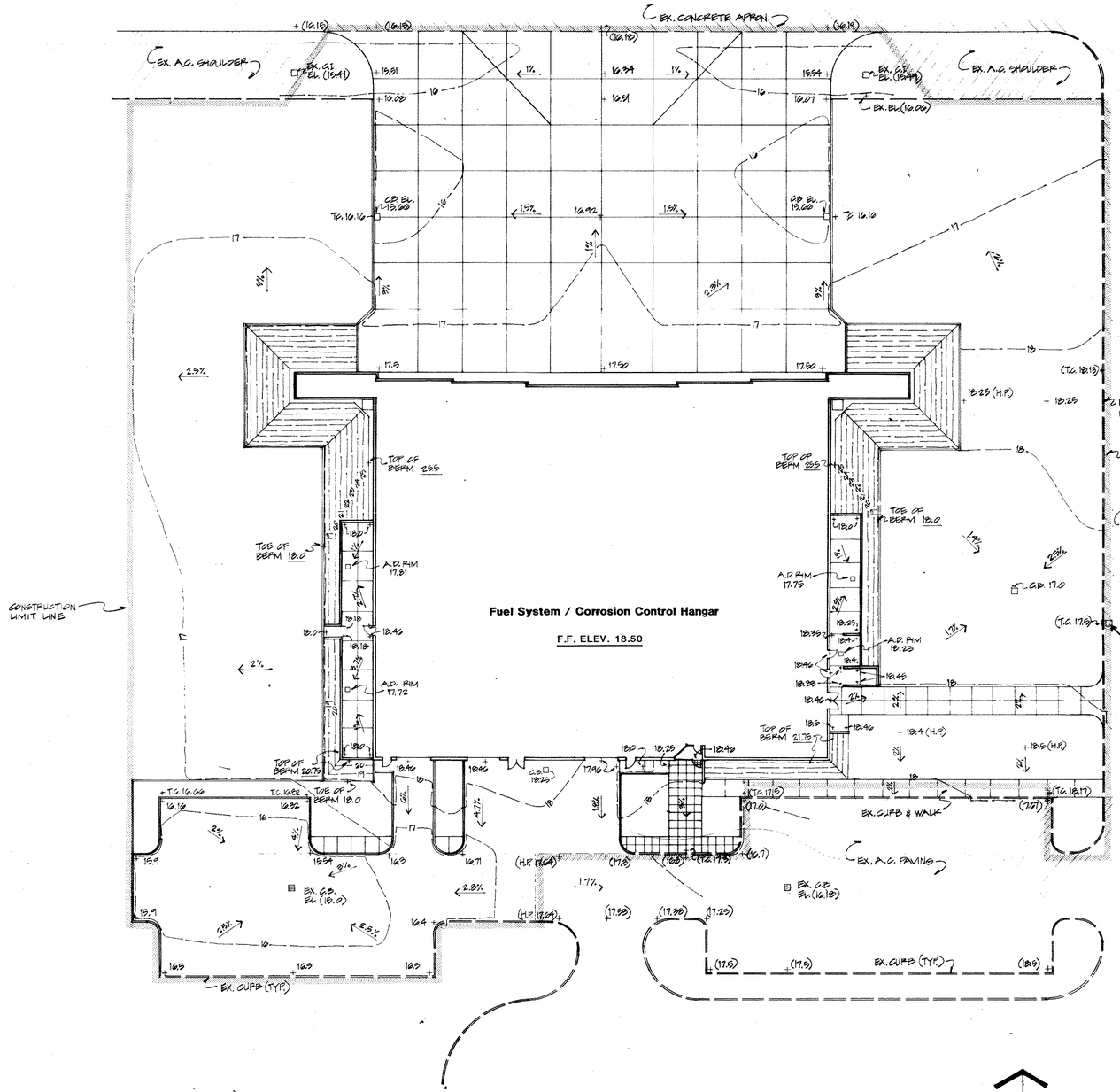
miller · cook architects a.i.a.

SHEET TITLE: SITE PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

C-2

BLDG 375



CONSTRUCTION LIMIT LINE

GRADING PLAN

C3 — 1" = 20'-0"

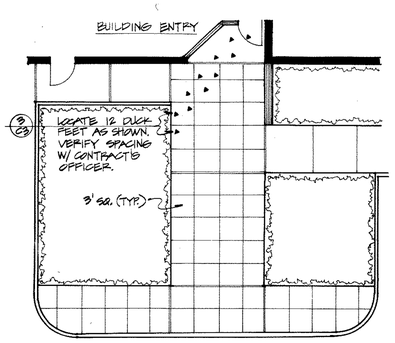
NORTH

Legend

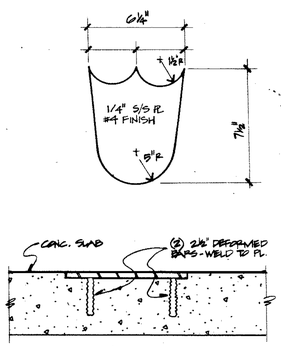
+ 17.32	SPOT ELEVATION (FINISH GRADES)
(19.6)	EXISTING GRADES
1.5% →	DIRECTION & PERCENTAGE OF SLOPE
H.P.	HIGH POINT
A.D.	AREA DRAIN
————	GRADE LINES
T.C.	TOP OF CURB
EL.	ELEVATION
EX.	EXISTING
TYP.	TYPICAL

Notes

1. GRADE SMOOTH TRANSITIONS BETWEEN SPOT ELEVATIONS SHOWN & BETWEEN NEW & EXISTING GRADES.
2. WHERE APRON PAVEMENT BISECTS EX. ASPHALT SHOULDER, REGRADE ASPHALT TO DRAIN AWAY FROM APRON PAVEMENT.
3. SUBGRADES FOR LAWN AREAS SHOULD BE 4" BELOW GRADES SHOWN TO ALLOW FOR SOIL PREPARATION. SUBGRADES FOR GROUNDCOVER AREAS SHOULD BE 6" BELOW GRADES SHOWN TO ALLOW FOR SOIL PREPARATION & BARK MULCH.
4. SEE SHEET C-1 FOR EXISTING PRELOAD TO BE REMOVED.
5. TOP OF CURB (T.C.) WILL BE ASSUMED 6" (8") ABOVE ADJACENT PAVED AREAS UNLESS NOTED OTHERWISE.
6.



C3/9 — Duck Feet Placement



C3/3 — Duck Feet Detail

REGISTERED LANDSCAPE ARCHITECT — JACK C. MILLER — PORTLAND, OREGON — 1464 — STATE OF OREGON

100% REVIEW

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DATE JAN. 1, 1986
JOB NO 84-125
REVISIONS

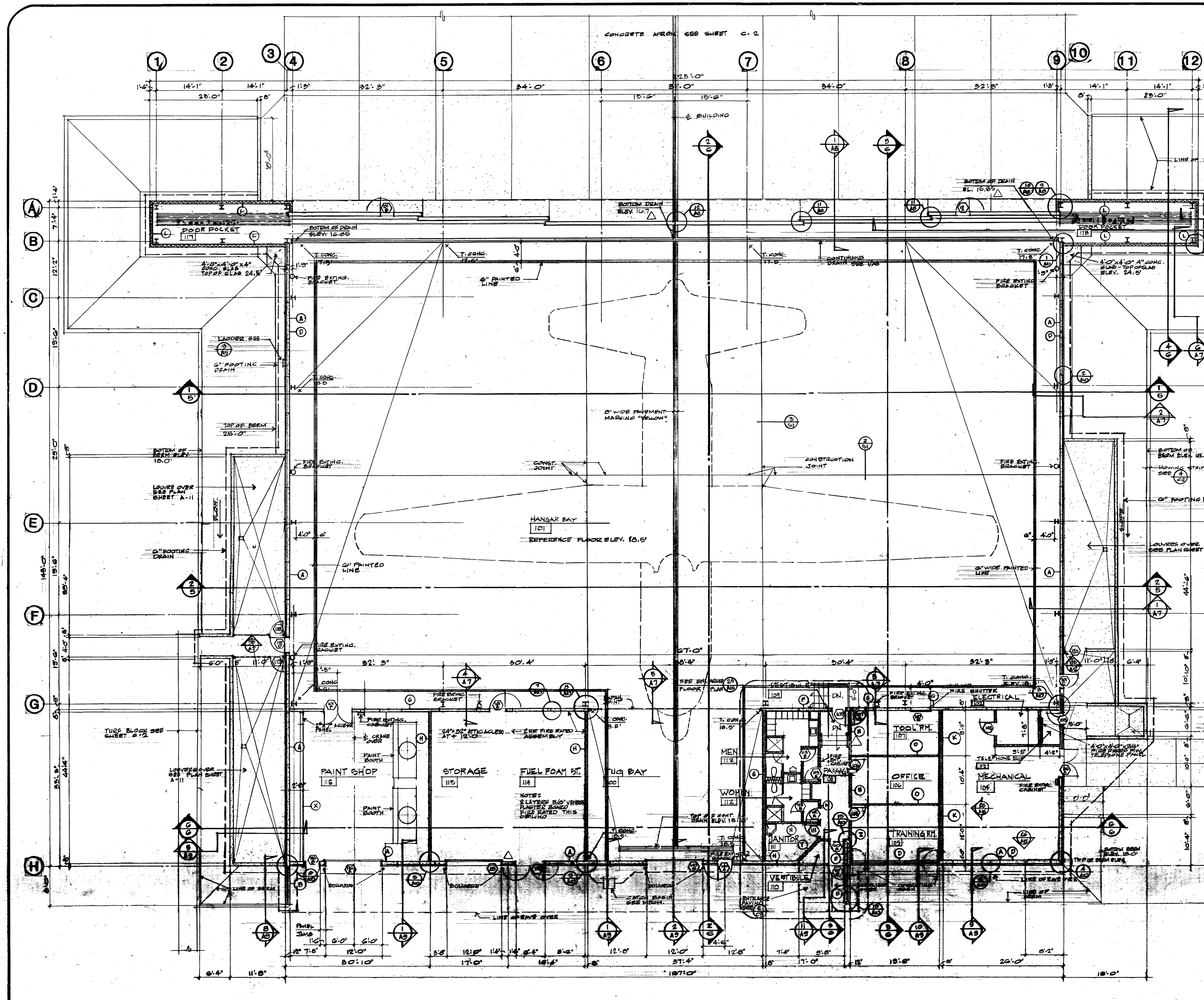
SHEET TITLE: GRADING PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

C-3

REGISTERED LANDSCAPE ARCHITECT — JACK C. MILLER — PORTLAND, OREGON — 1464 — STATE OF OREGON

FORD GRAPHICS 08/18



1 / A-1 FLOOR PLAN

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

GRAPHIC SCALE

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

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DATE FEB. 26, 1986
JOB NO 84-129
REVISIONS △ ASBUILT 11-16-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

SHEET TITLE: FLOOR PLAN

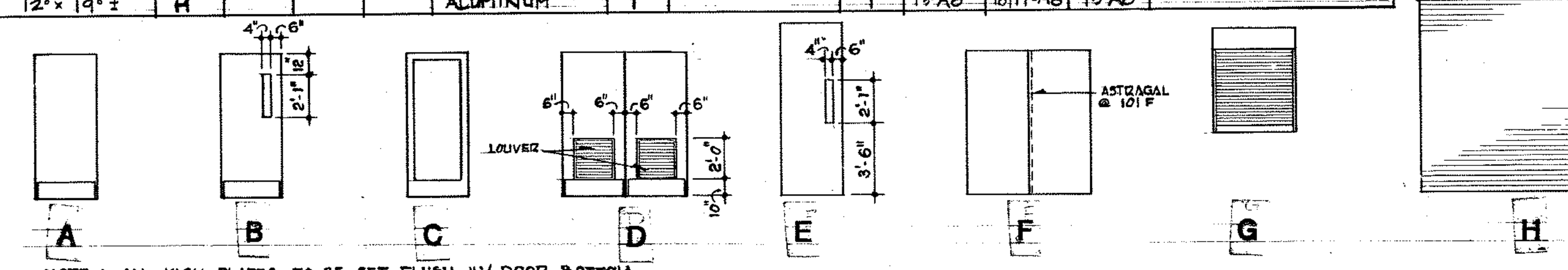
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-1

BLDG 375

DOOR SCHEDULE

NO.	SIZE	TYPE	HOUR RATE	HARDWARE	LITE	DOOR SUBSTRATE	DOOR COLOR	FRAME TYPE	FRAME COLOR	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	REMARKS
100 A	3⁰x7⁰x 1¾	A		3		H.M.	14	H.M.	13	14	14	26	
100B	12⁰ x 12⁰	H		11		STEEL TUBE	14	STEEL TUBE	13	16	22	28	ROLLING DOOR
101A	3⁰x8⁰x 1¾	E		2	4"x25"	H.M.	14	H.M.	13	15	21	27	
101B	3⁰x8⁰x 1¾	E		2	4"x25"	H.M.	14	H.M.	13	15	21	27	
101C	3⁰x7⁰x 1¾	A		3		H.M.	14	H.M.	13	14	14	26	
101D	3⁰x7⁰x 1¾	A		3		H.M.	14	H.M.	13	14	14	26	
101E	3⁰x7⁰x 1¾	A	1 HR	4		H.M.	14	H.M.	13	19	19	—	
101 F	PR 3⁰x7⁰x1¾	F	1 HR	5		H.M.	14	H.M.	13	19	19	—	
102	3⁰x7⁰x 1¾	A		8		H.M.	14	H.M.	13	13	13	—	
103	3⁰x7⁰x 1¾	A		6		H.M.	14	H.M.	13	14	14	26	
104	PR. 3⁰x7⁰x1¾	F		7		H.M.	14	H.M.	13	14	14	20	
105	3⁰x7⁰x 1¾	A	1 HR	9		H.M.	14	H.M.	13	13	13	—	
106	3⁰x7⁰x 1¾	A	1 HR	9		H.M.	14	H.M.	13	13	13	—	
107A	3⁰x7⁰ x 1¾	A	1 HR	9		H.M.	14	H.M.	13	19	19	—	
107B	4⁰x4⁰	G	1 HR	11		S.S.	-	S.S.	-	17	23	29	ROLLING FIRE SHUTTER
107C	3⁰x7⁰x 1¾	A	1 HR	9		H.M.	14	H.M.	13	13	13	—	
109	3⁰x7⁰x 1¾	A	1 HR	9		H.M.	14	H.M.	13	13	13	—	
110A	3⁰x7⁰x 1¾	C		11		ALUM.	-	ALUM.	-	21A-13	13A13	26A13	
110B	3⁰x7⁰x 1¾	C		10		ALUM.	-	ALUM.	-	21A13	9,21-A13	14 A-13	
110C	3⁰x7⁰x 1¾	A		12		H.M.	14	H.M.	13	13	13	—	
111	2⁸x7⁰x 1¾	A	1HR	9		H.M.	14	H.M.	13	13	13	—	
112A	2⁶x7⁰x 1¾	A	1HR	12		H.M.	14	H.M.	13	13	13	25	
112B	2⁶x7⁰x 1¾	A		13		H.M.	14	H.M.	13	13	13	25	
113A	2⁶x7⁰x 1¾	A.	1HR	12		H.M.	14	H.M.	13	13	13	25	
113B	2⁶x7⁰ x 1¾	A		13		H.M.	14	H.M.	13	13	13	25	
114	PR. 3⁰x7⁰x 1¾	F		7		H.M.	14	H.M.	13	14	14	20	
115	12⁰x12⁰	H		11		STEEL TUBE	14	STEEL TUBE	13	16	22	28	ROLLING DOOR
116A	12⁰x12⁰			11		"	14	"	13	16	22	28	ROLLING DOOR
116B	3⁰x7	A		3		H.M.	14	H.M.	13	14	14	26	
118	3⁰x7⁶	GATE				CHAIN LINK							WIRE MESH GATE
119	3⁰x7⁶	GATE				CHAIN LINK							WIRE MESH GATE
120	3⁰x7⁶	GATE				CHAIN LINK							WIRE MESH GATE
121	12⁰x19⁰±	H				ALUMINUM	1		1	13-A8	18,19-A8	13-A8	



NOTE : ALL KICK PLATES TO BE SET FLUSH W/ DOOR BOTTOM.

ROOM FINISH SCHEDULE

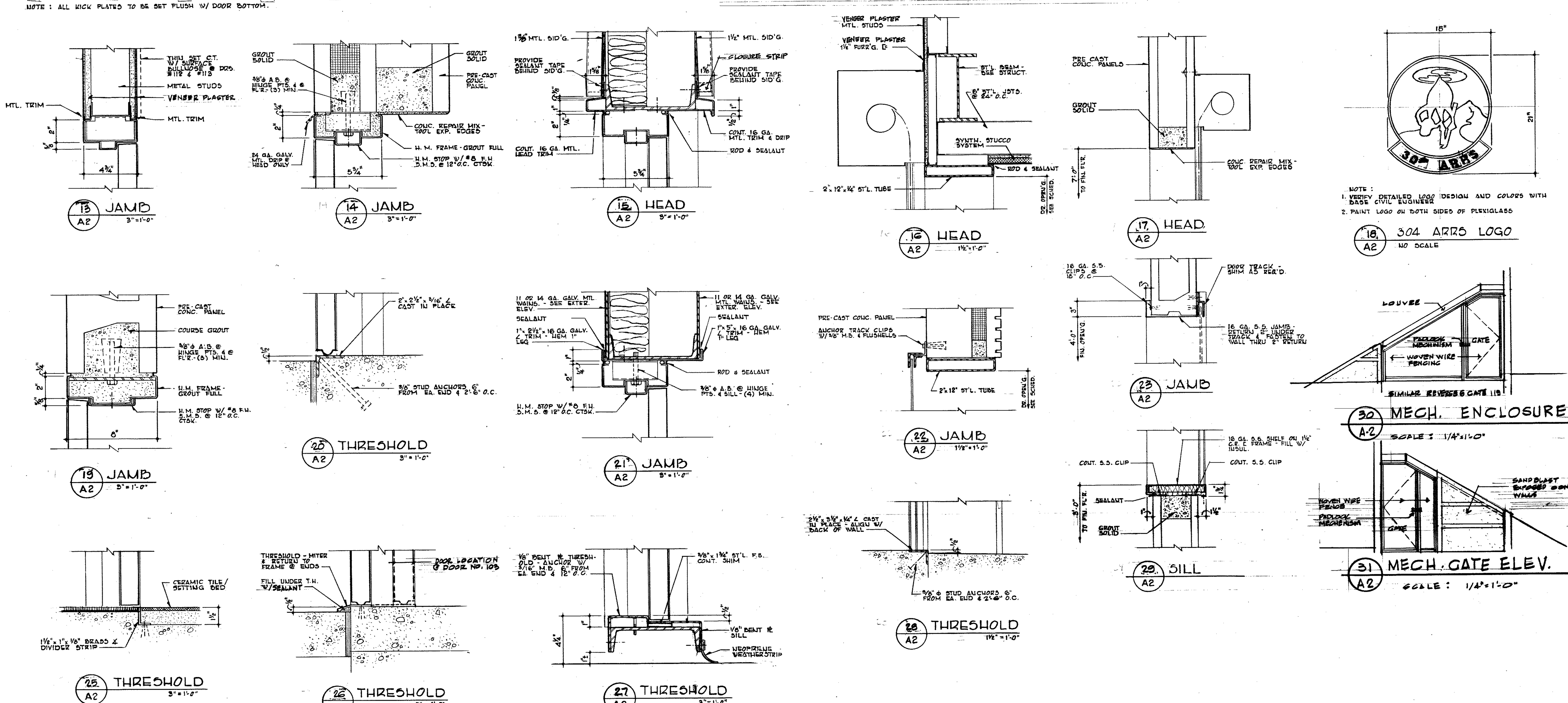
NO.	NAME	FLOOR SUBSTRATE/FIN.	FLOOR COLOR	BASE TYPE	BASE COLOR	NORTH WALL SUBSTRATE/FINISH	NORTH WALL COLOR	EAST WALL SUBSTRATE/FIN.	EAST WALL COLOR	SOUTH WALL SUBSTRATE/FIN.	SOUTH WALL COLOR	WEST WALL SUBSTRATE/FIN.	WEST WALL COLOR	CEILING SUBSTRATE/FIN.	CEILING COLOR	HEIGHT	REMARKS
100	TUG ACCESS BAY	CONC./HARDNER	NOTE 3	NONE	-	—	4,5	CONC. / PAINT	4,5	CONC. / PAINT	4,5	C M U / PAINT	4,5	STRUCTURE / PAINT	4	16' TO 24'	NOTE 3
101	HANGER BAY	CONC./HARDNER	NOTE 3	NONE	-	HANGER DOORS/PAINT	4,5	CMU / PAINT	4,5	CONC. / PAINT	4,5	CONC. / PAINT	4,5	STUCTURE / PAINT	4	38' TO 61'	NOTE: 1 NOTE 3
102	ELECTRICAL	CONC./HARDNER	—	6" RESILIANT	7	VEN.PLAST. / PAINT	4	CONC. / PAINT	4	VEN. PLAST/PAINT	4	VEN. PLAST. / PAINT	4	STRUCTURE / PAINT	4	17' TO 15'	
103	TELEPHONE	CONC./HARDNER	—	6" RESILIANT	7	VEN. PLAST / PAINT	4	CONC. / PAINT	4	CONC. / PAINT	4	VEN. PLAST. / PAINT	4	STRUCTURE / PAINT	4	17' TO 19'	—
104	MECHANICAL	CONC./HARDNER	—	—	—	CONC. / PAINT	4	CONC. / PAINT	4	CONC. / PAINT	4	VEN. PLAST. / PAINT	4	STRUCTURE / PAINT	4	10' TO 20'	
105	TRAINING ROOM	CONC./CARPET	12	6" RESILIANT	7	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	6	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	ACOUST. TILE	—	9'-0"	
106	OFFICE	CONC/CARPET	12	6" RESILIANT	7	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	6	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	ACOUST. TILE	—	9'-0"	
107	TOOL ROOM	CONC./HARDNER	—	6" RESILIANT	7	CONC. / PAINT	4	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	STUCTURE	4	16' TO 20'	
108	PASSAGE	CONC./CARPET		6" RESILIANT	7	VENEER PLAST./PAINT	4	VEN. PLAST. / PAINT	4	ALUM. ENT.	-	VEN. PLAST. / PAINT	4	ACOUST. TILE	—	12'-0"	CEILING & WALLS 1 HOUR
109	VESTIBULE	CONC./CER.TILE	9	6" RESILIANT	7	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	VEN. PLAST. / PAINT	4	ACOUST. TILE	-	9'-0"	CEILING & WALLS 1 HOUR
110	VESTIBULE	CONC. /SISAL MAT	—	6" RESILIANT	7	VEN. PLAST. /PAINT	4	VEN. PLAST./PAINT	4	ALUM. ENTRANCE	-	VEN. PLAST/ PAINT	4	SKYLIGHT	-		WALLS 1 HOUR
111	JANITOR	CONC/ HARDNER	—	6" RESILIANT	7	VEN. PLAST./PAINT	4	VEN. PLAST./ PAINT	4	CONC. / PAINT	4	C.M.U. / PAINT	4	VEN. PLAST./PAINT	4	8'-6"	
112	WOMEN	CONC./CER. TILE	9	5" TILE	9	VEN. PLAST./C. TILE	10,4	VEN. PLAST./C. TILE	10,4	VEN. PLAST./C. TILE	10,4	PLAST. / CER. TILE	10,4	VEN. PLAST. / PAINT	4	8'-6"	NOTE: 2,5
113	MEN	CONC./CER. TILE	9	5" TILE	9	VEN. PLAST./C. TILE	10,4	VEN. PLAST./C. TILE	10,4	VEN. PLAST./C. TILE	10,4	PLAST. / CER. TILE	10,4	VEN. PLAST. / PAINT	4	8'-6"	NOTE: 2,5
114	FUEL FOAM STORAGE	CONC./CONDUCTIVE	—	—	—	CONC./ V.P. PAINT	4	C.M.U./V.P. PAINT	4	CONC./ V.P. PAINT	4	C.M.U./V.P. PAINT	4	VEN. PLAST/PAINT	4	10'-0"	NOTE 4 / 2HR WALLS & CEILING
115	STORAGE	CONC./ HARDNER	—	—	—	CONC./ PAINT	4	C.M.U. / PAINT	4	CONC./ PAINT	4	C.M.U. / PAINT	4	STRUCT./PAINT	4	16' TO 24'	
116	PAINT SHOP	CONC./ HARDNER	—	—	—	CONC./ PAINT	4	METAL / PAINT	4	CONC./ PAINT	4	METAL / PREFIN.	4	METAL / PREFIN.	1	14'	
117	DOOR POCKET	CONC./ HARDNER	NOTE 3	-	-	CONC. / PAINT	4,5	—		CONC./ PAINT	4,5	CONC./ PAINT	4,5	STRUCTURE/ PAINT	4	33' TO 42'	NOTE : 1
118	DOOR POCKET	CONC./ HARDNER	NOTE 3	-	-	CONC./ PAINT	4,5	CONC. / PAINT	4,5	CONC./ PAINT		—		STRUCTURE/PAINT	4	33' TO 42'	NOTE : 1

COLOR SELECTION ☐ SYMBOL ON DRAWINGS

1. 304TH WHITE OR PAINT TO MATCH
2. PREFINISHED METAL MOCHA
3. RODDA 82 A-1 GRAY DRIFT
4. RODDA 70 A-3 VANILLA
5. RODDA 103 B TOMATO SPICE
6. RODDA 101 B-2 MUTED MESA
7. BASE FLEXCO NO. 12 SANDLEWOOD
8. PLASTIC LAMINATE WILSONART TERRA COTTA D-65-6
9. U. S. CERAMIC 8036 INDIAN RED
10. U. S. CERAMIC 3029 MUSHROOM
11. TOILET PARTITIONS LIST NO 220 COPPERTONE
12. CARPET CULISTAN # 1125-300 ANTIQUE COPPER
13. RODDA 118 B-1 BEAVER
14. PRATT AND LAMBERT 0222A BITTERSWEET

NOTES:

1. INSTALL PREFINISHED ACCOUSTICAL PANELS ON WALL SURFACES ABOVE CONCRETE WALLS IN HANGER BAY AND DOOR POCKET AREAS
2. CERAMIC TILE ON WALL SURFACES TO 7'-2" HEIGHT
3. TROWELED SHAKE, LIGHT REFLECTIVE FLOOR HARDNER
4. FLOOR TO BE SPARKPROOF CONDUCTIVE FLOOR
5. CABINETS COLOR NO 8 TOILET PARTITIONS NO. 11
6. BOLLARD PAINT COLOR NO. 14



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miller · cook architects a.i.a.
30 N.W. 1st AVE. PORTLAND, OREGON
(503) 226-0622 97209

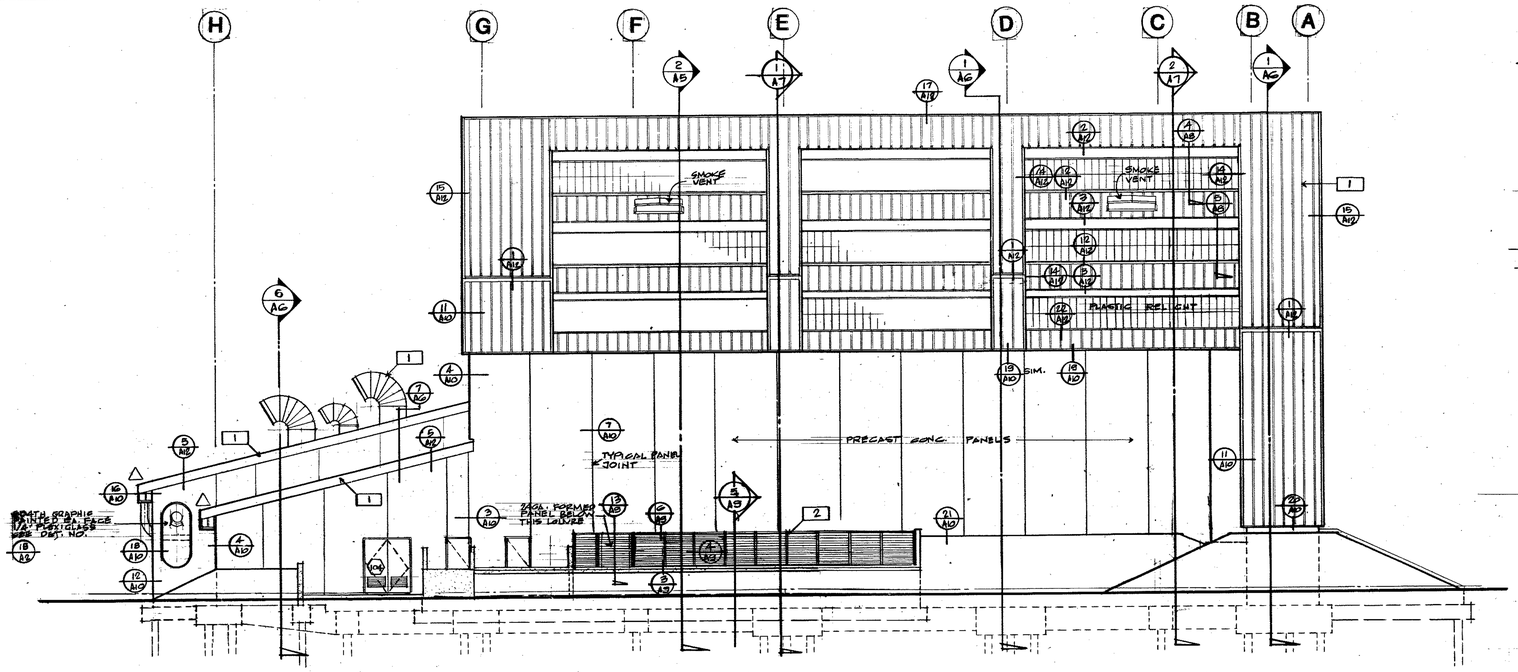
DATE FEB. 26, 1986
JOB No 84-125
REVISIONS AS BUILT 11-6-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

SHEET TITLE DOOR SCHEDULE AND FINISH SCHEDULE
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

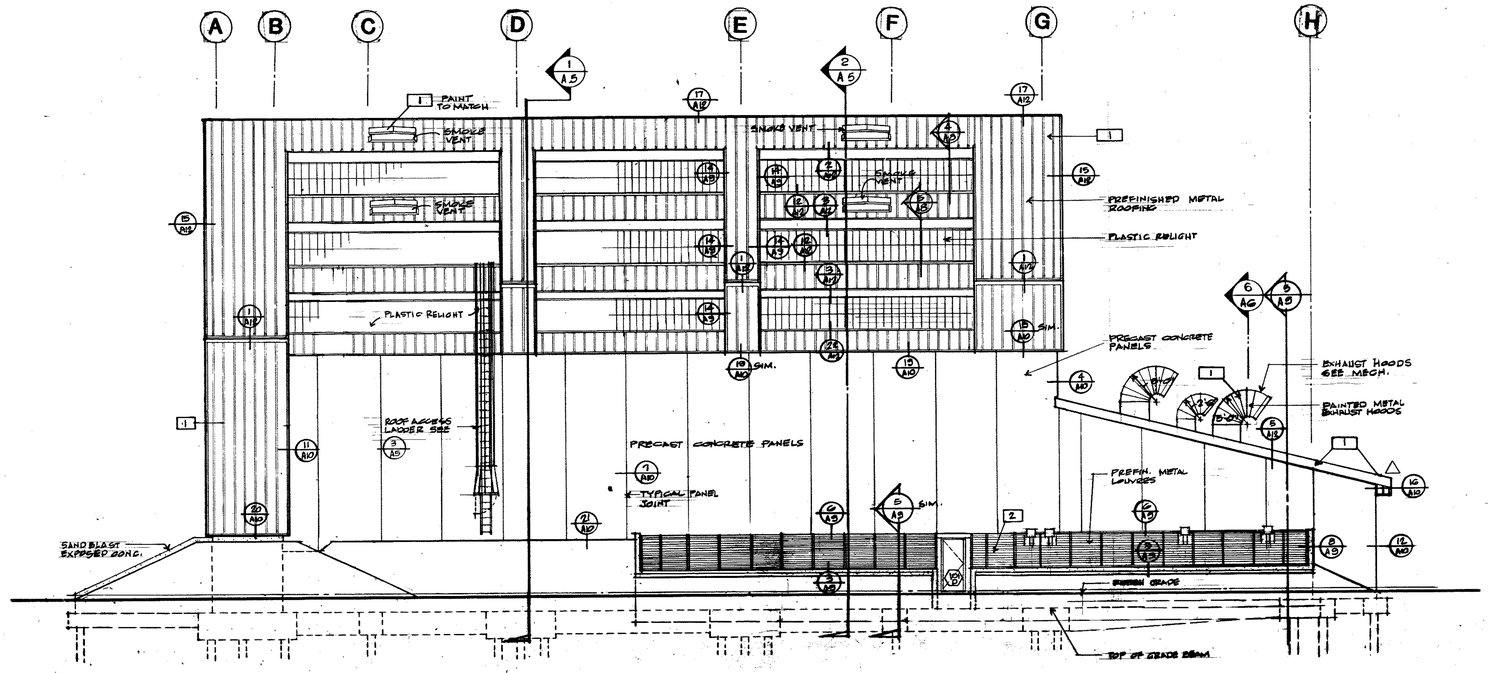
A-2

BLDG 375



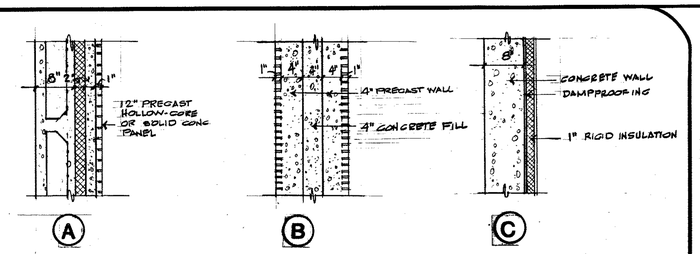
1 / A-3 EAST ELEVATION

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



2 / A-3 WEST ELEVATION

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



WALL TYPES SCALE: 1"=1'-0"

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97209

DATE FEB. 14, 1986
JOB NO 84-123
REVISIONS AS BUILT 11-16-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
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STATE OF OREGON

SHEET TITLE: EAST & WEST ELEVATIONS & WALL TYPES

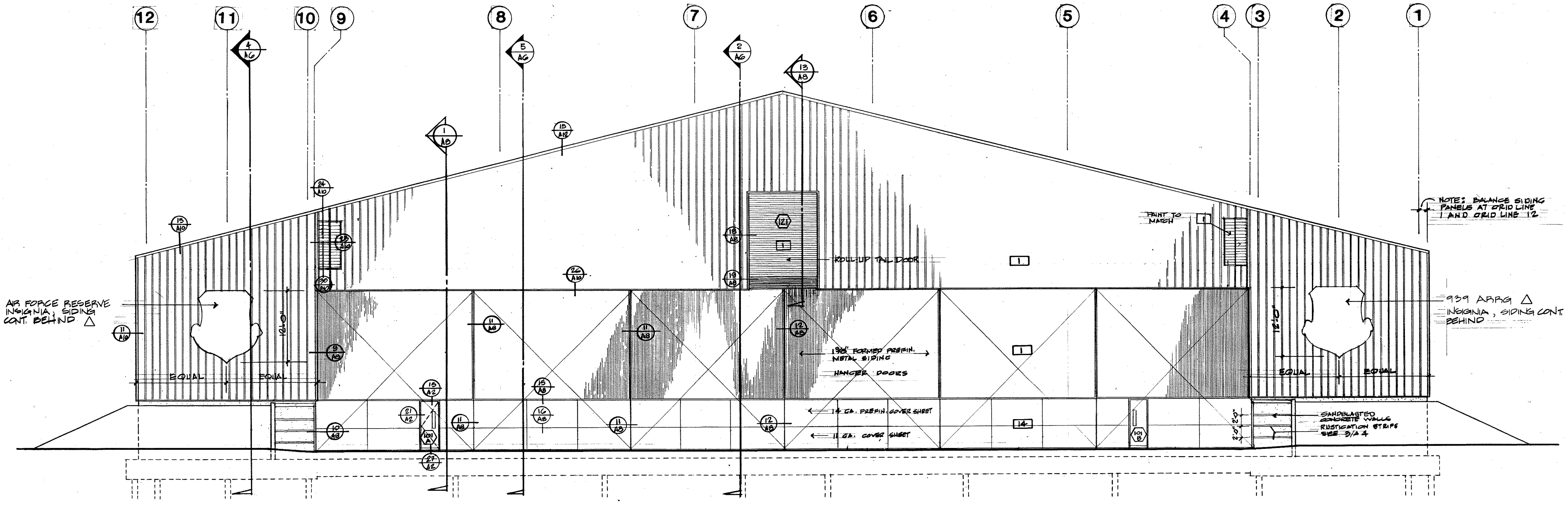
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-3

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

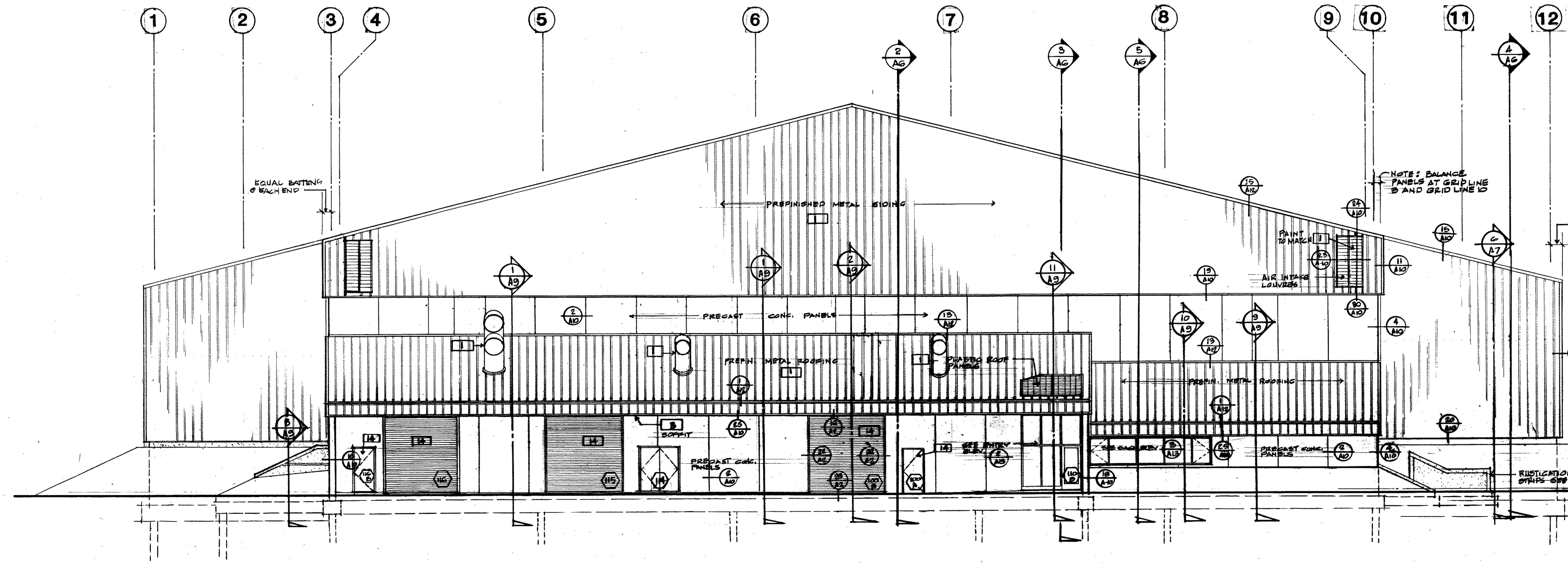
BLDG 375

FOR DRAWINGS 00163



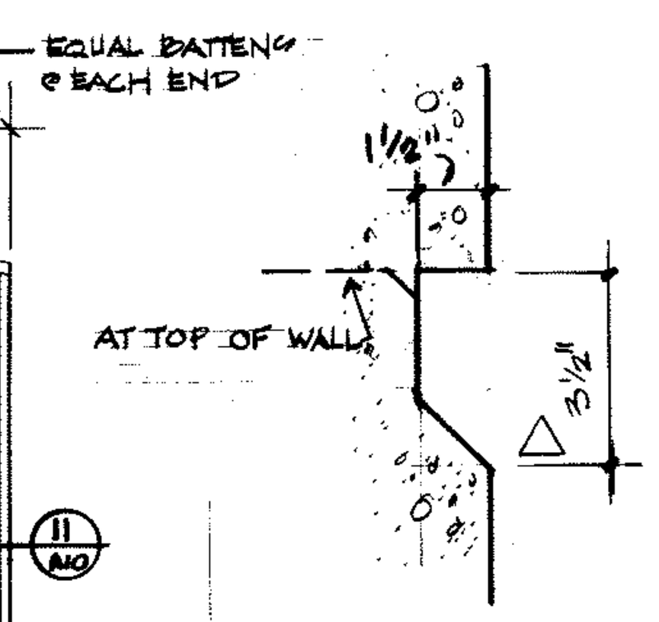
1/A4 NORTH ELEVATION

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



2/A4 SOUTH ELEVATION

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



3/A-4 RUSTICATION STRIP SCALE: 3" = 1'-0"

FORD GRAPHICS 060163

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REVISIONS △ AS BUILT 11-16-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1464
STATE OF OREGON

SHEET TITLE: NORTH AND SOUTH ELEVATIONS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

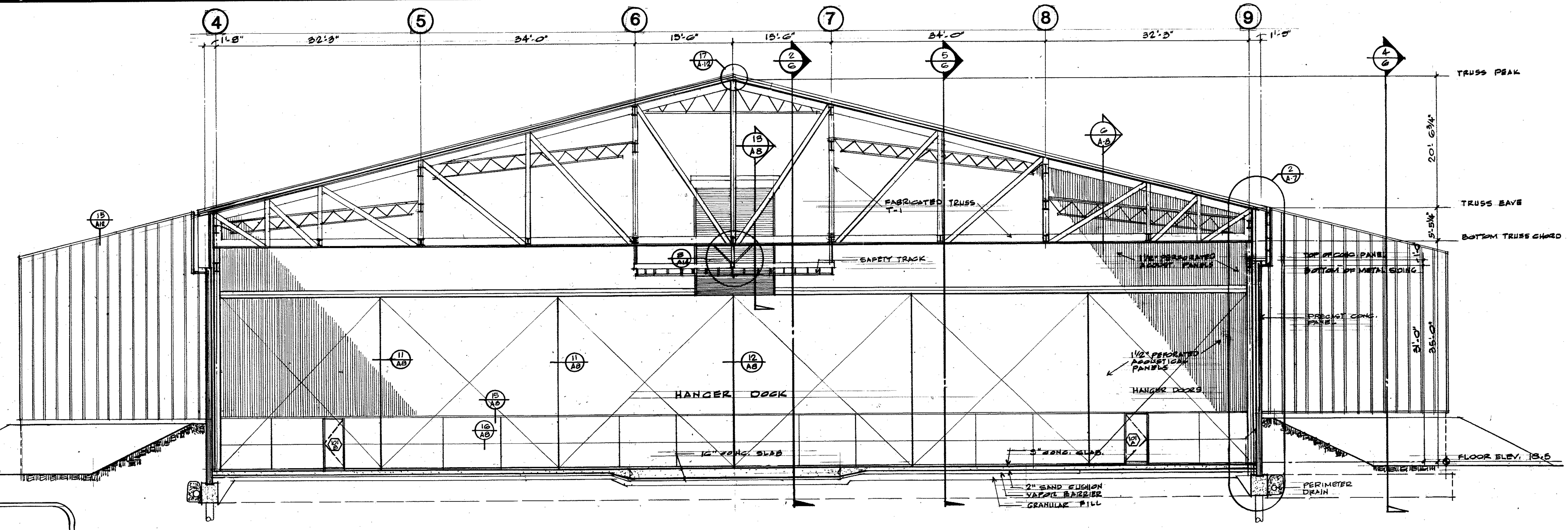
304th AIR RESCUE RECOVERY SQUADRON

PORTLAND INTERNATIONAL AIRPORT

PORTLAND OREGON

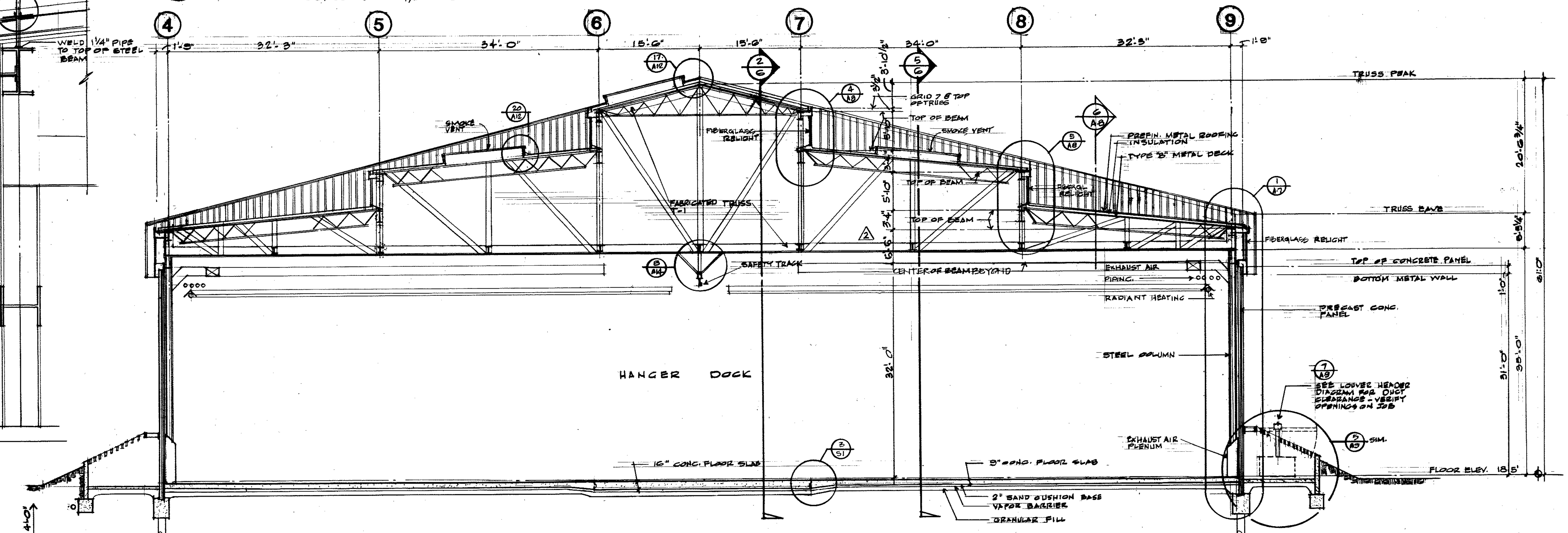
A-4

BLDG 375



1 A5 CROSS SECTION

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



2 A5 CROSS SECTION

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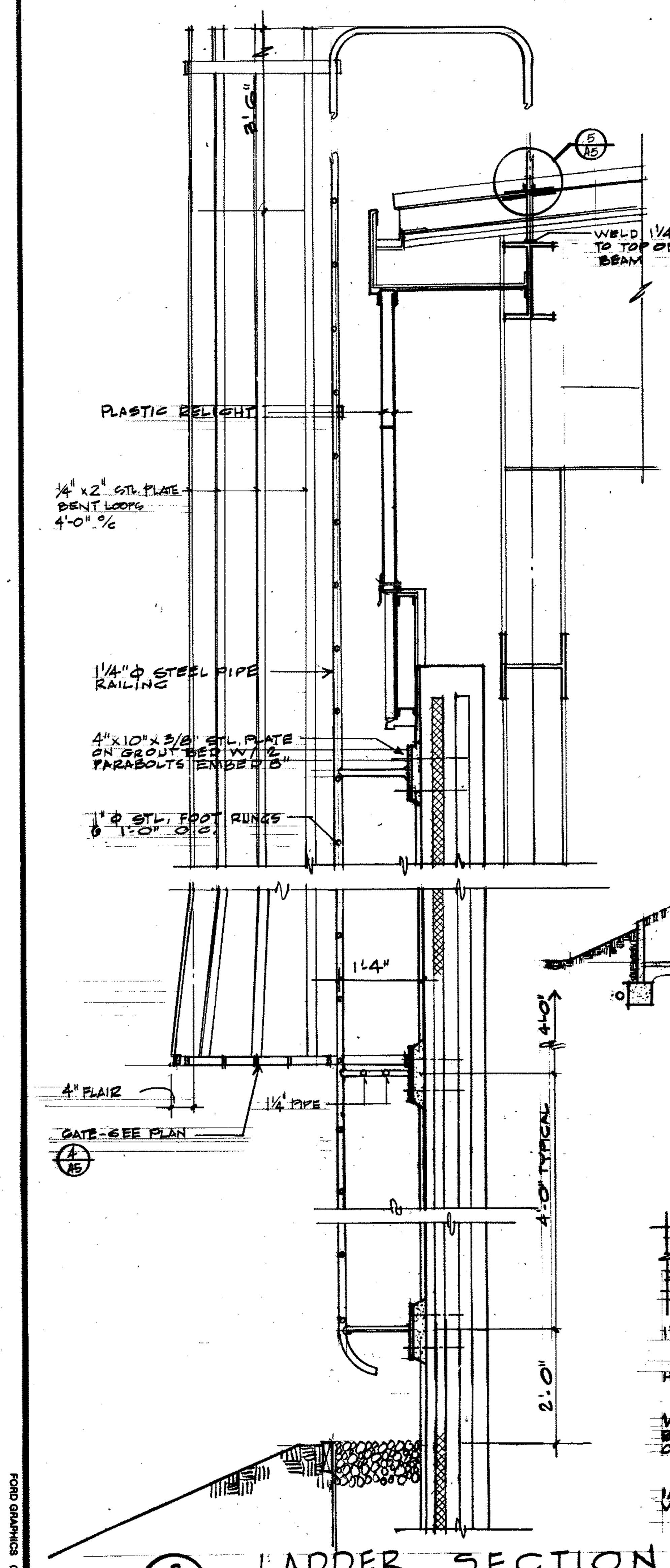
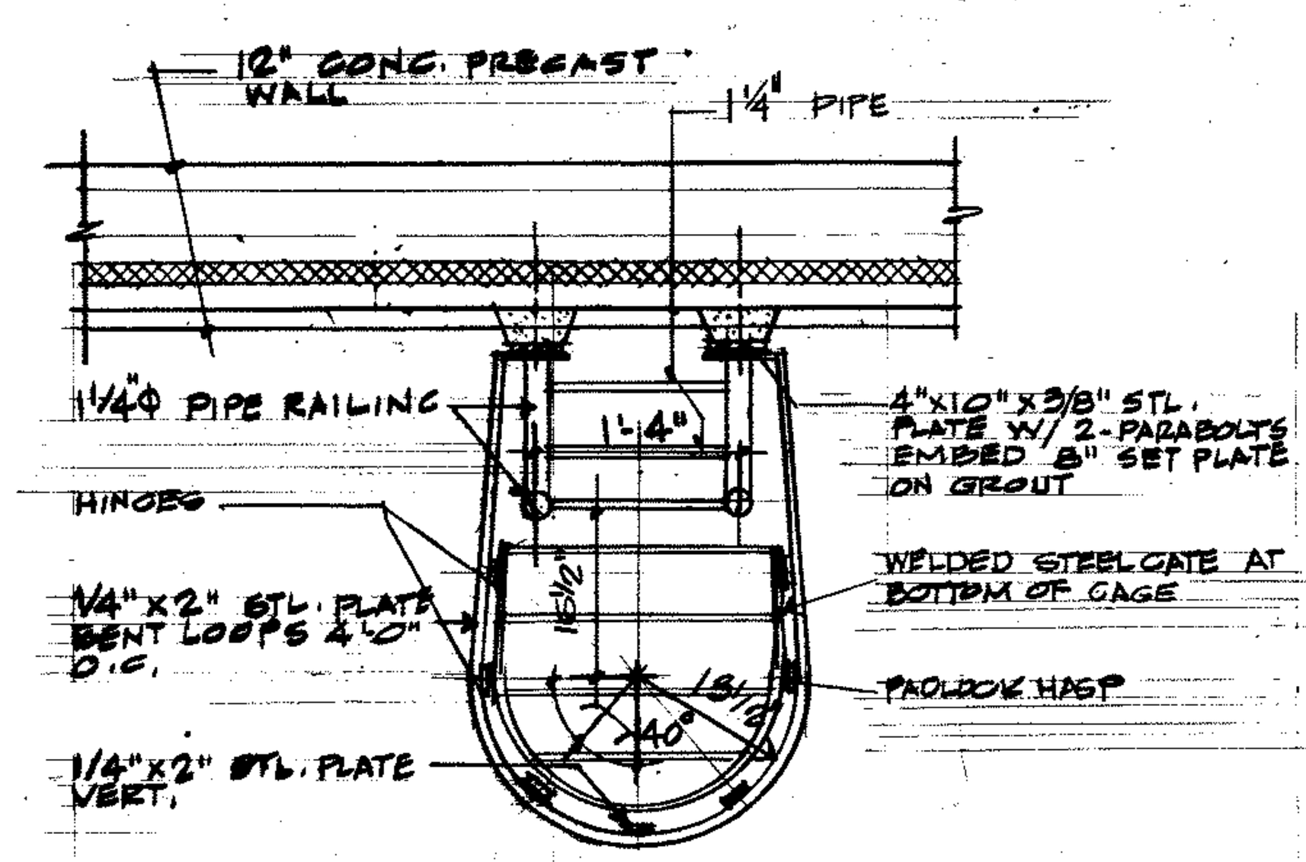


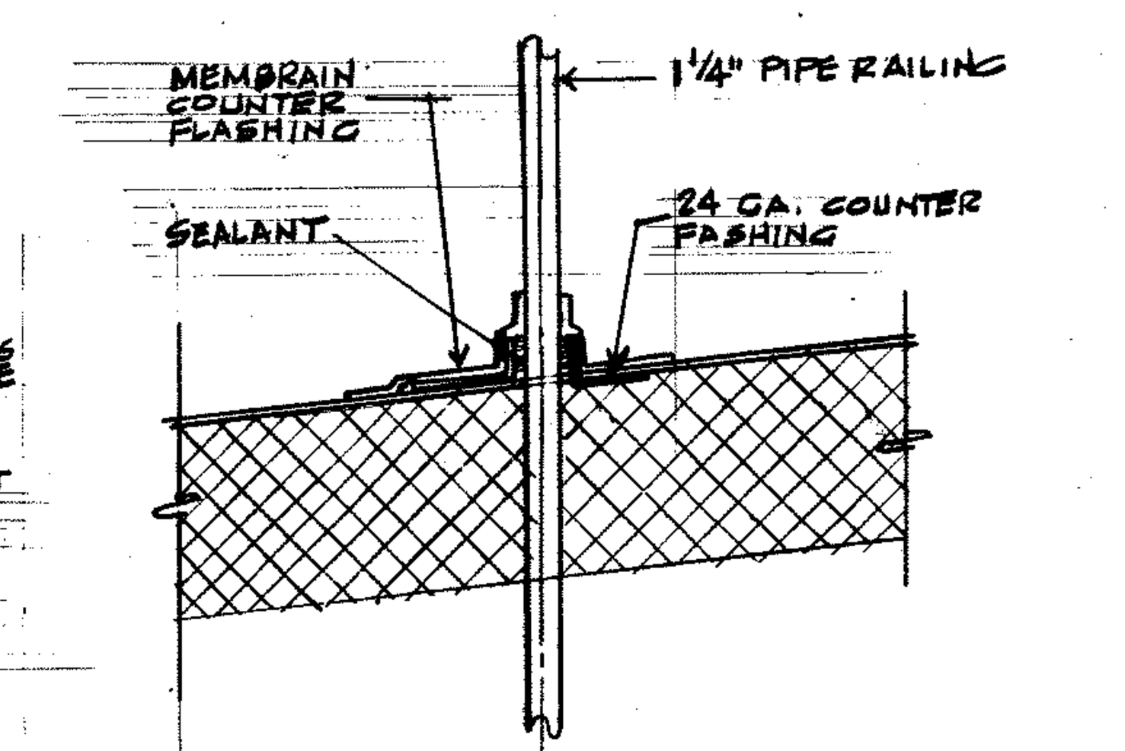
3 A5 LADDER SECTION

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



4 A5 LADDER SECTION

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



5 A5 PIPE FLASHING

SCALE: 3" = 1'-0"

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JOB NO 84-125

REVISIONS △ 3.19.86

AS BUILT 11-10-87

REGISTERED ARCHITECT — JACK C. MILLER — PORTLAND, OREGON — 1464 — STATE OF OREGON

SHEET TITLE CROSS SECTIONS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

304th AIR RESCUE SQUADRON

PORTLAND INTERNATIONAL AIRPORT

PORTLAND OREGON

A-5

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

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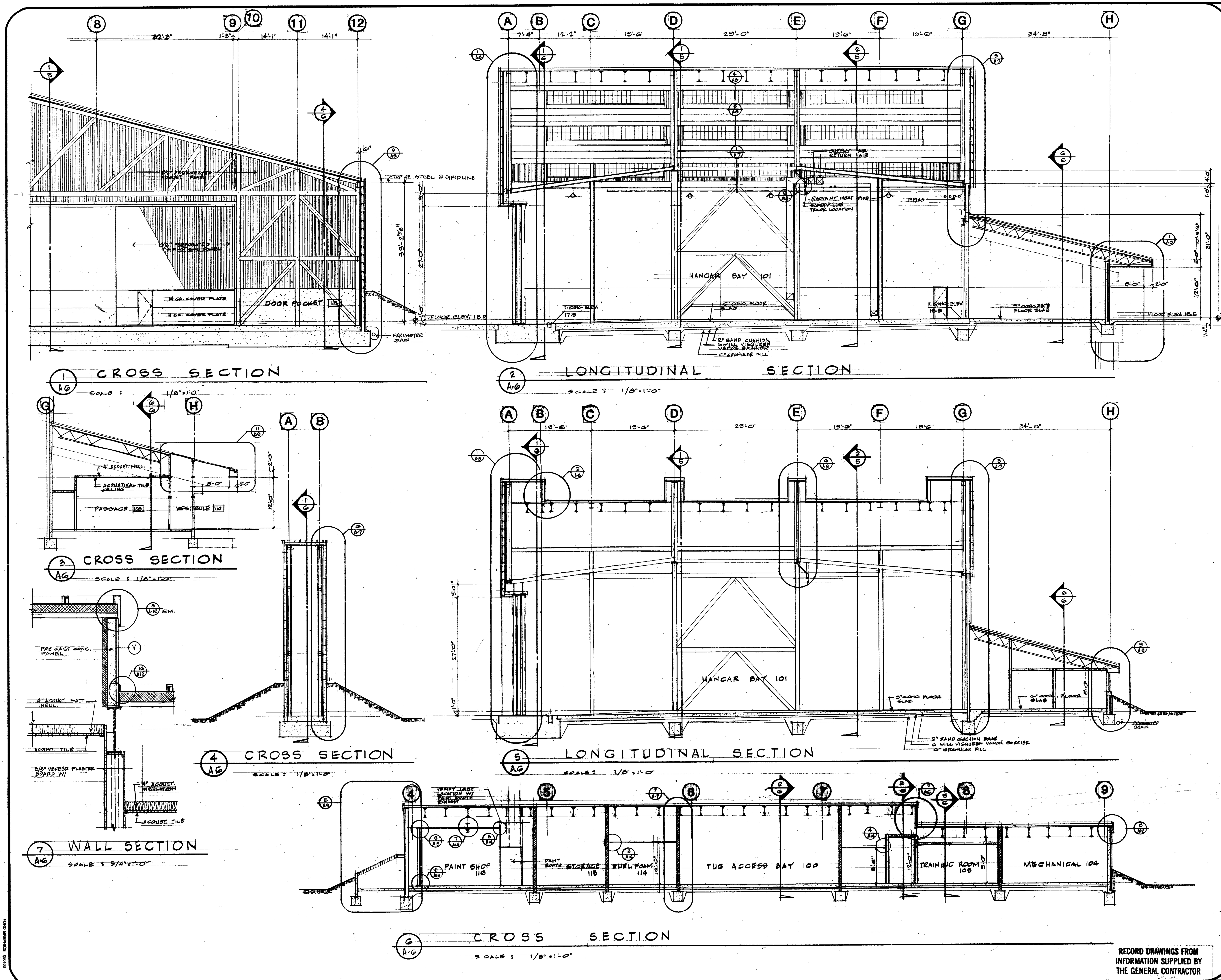

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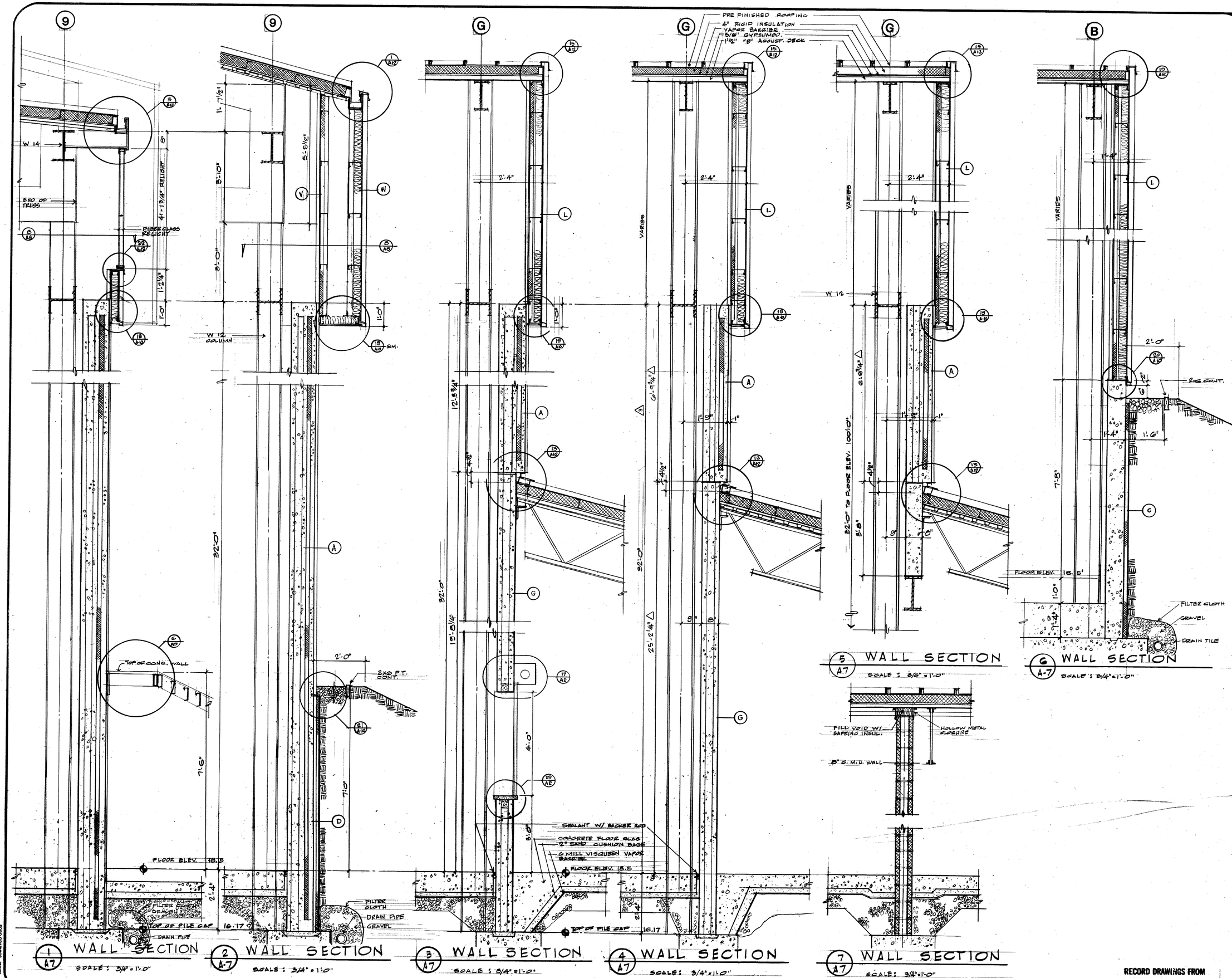
DATE Feb '86
JOB NO 84-125
REVISIONS AS BUILT 11-16-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
STATE OF OREGON

SHEET TITLE : SECTIONS
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-6

BLDG 375



1 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

2 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

3 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

4 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

5 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

6 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

7 A7 WALL SECTION
SCALE: 3/4" = 1'-0"

FORD DRAWING 00100

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PORTLAND, OREGON

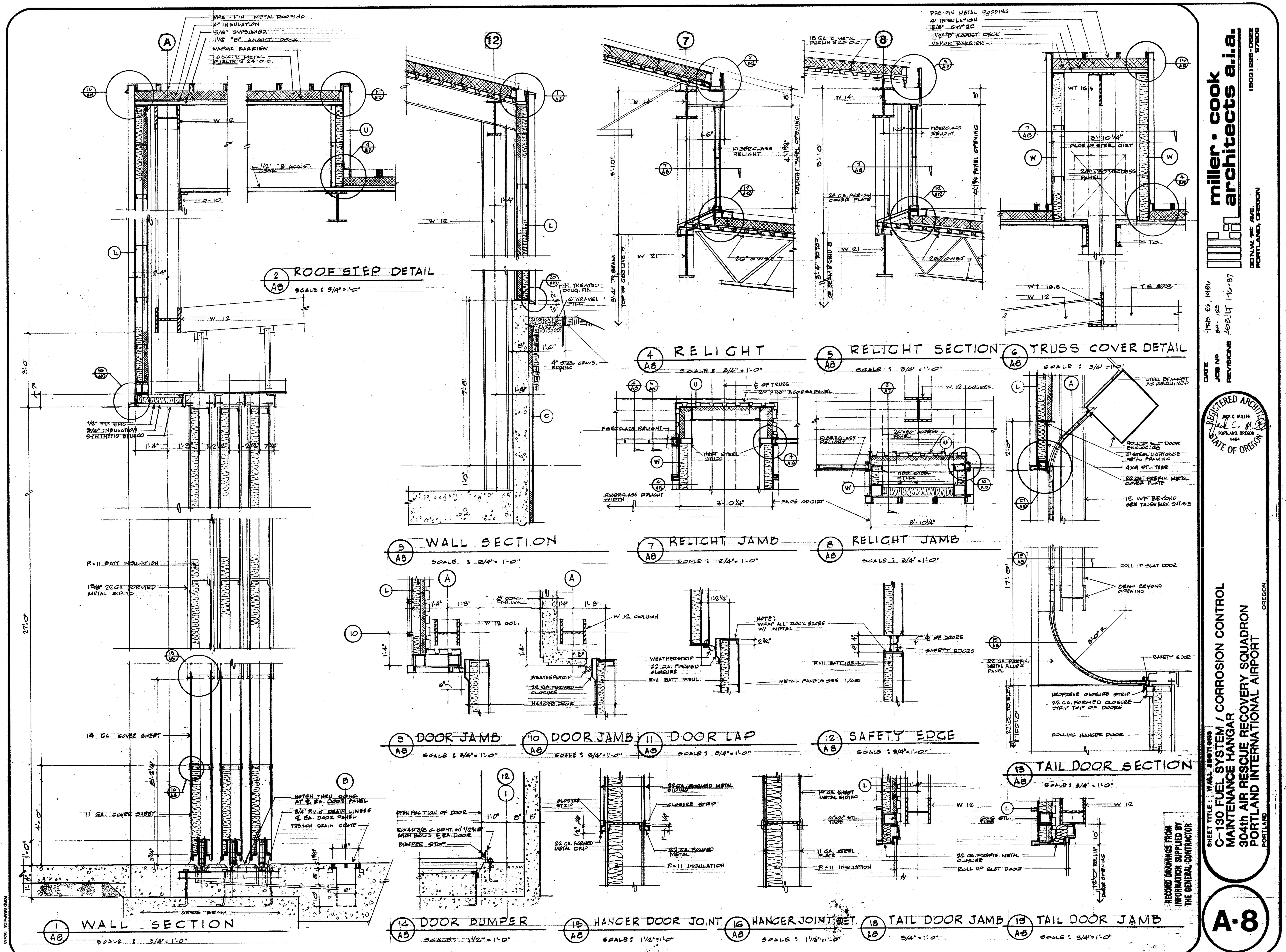
DATE FEB. 20, 1986
JOB NO 84-125
REVISIONS 3-25-86
AS BUILT 11-20-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1484
STATE OF OREGON

SHEET TITLE: WALL SECTIONS
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-7

BLDG 375



ROOF STEP DETAIL
SCALE: 3/4" = 1'-0"
WALL SECTION
SCALE: 3/4" = 1'-0"
RELIGHT
SCALE: 3/4" = 1'-0"
RELIGHT SECTION
SCALE: 3/4" = 1'-0"
TRUSS COVER DETAIL
SCALE: 3/4" = 1'-0"
RELIGHT JAMB
SCALE: 3/4" = 1'-0"
RELIGHT JAMB
SCALE: 3/4" = 1'-0"
DOOR JAMB
SCALE: 3/4" = 1'-0"
DOOR JAMB
SCALE: 3/4" = 1'-0"
DOOR LAP
SCALE: 3/4" = 1'-0"
SAFETY EDGE
SCALE: 3/4" = 1'-0"
TAIL DOOR SECTION
SCALE: 3/4" = 1'-0"
WALL SECTION
SCALE: 3/4" = 1'-0"
DOOR BUMPER
SCALE: 1 1/2" = 1'-0"
HANGER DOOR JOINT
SCALE: 1 1/2" = 1'-0"
HANGER JOINT DET.
SCALE: 1 1/2" = 1'-0"
TAIL DOOR JAMB
3/4" = 1'-0"
TAIL DOOR JAMB
SCALE: 3/4" = 1'-0"
PRE-FIN METAL ROOFING
4" INSULATION
5/8" GYPSUMBD.
1 1/2" "B" ACOUST. DECK
VAPOR BARRIER
18 GA. Z METAL PURLIN @ 24" O.C.
R-11 BATT INSULATION
1 3/8" 22 GA. FORMED METAL SIDING
14 GA. COVER SHEET
11 GA. COVER SHEET
GRADE BEAM
FIBERGLASS RELIGHT
26" OWSJ
22"x30" ACCESS PANEL
ROLL UP SLAT DOOR
ROLLING HANGER DOOR
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DATE FEB. 21, 1986
JOB NO 84-125
REVISIONS ASBUILT 11-16-87
REGISTERED ARCHITECT
JACK C. MILLER
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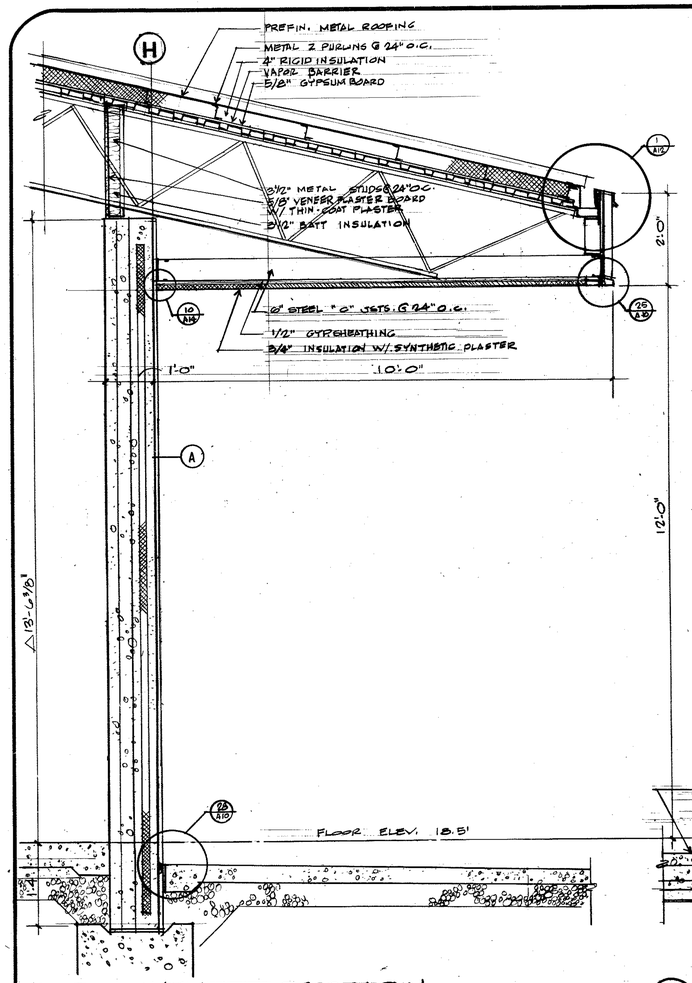
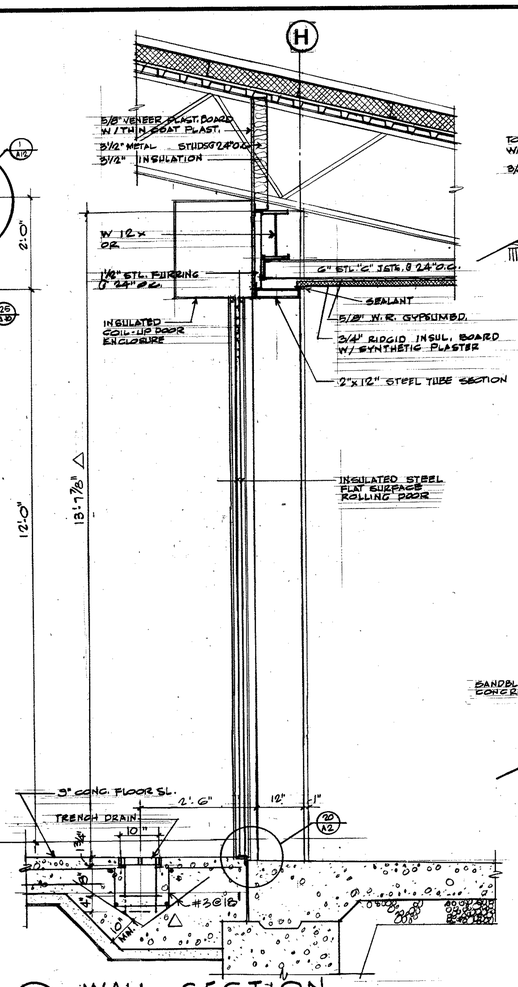
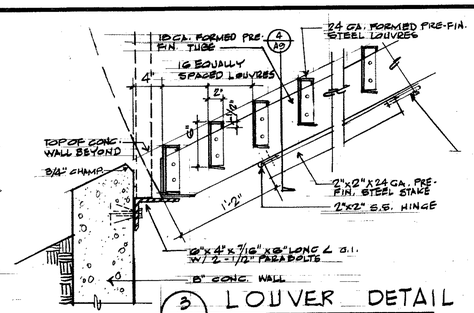
1464
STATE OF OREGON
SHEET TITLE: WALL SECTIONS
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON
RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR
A-8
BLDG 375



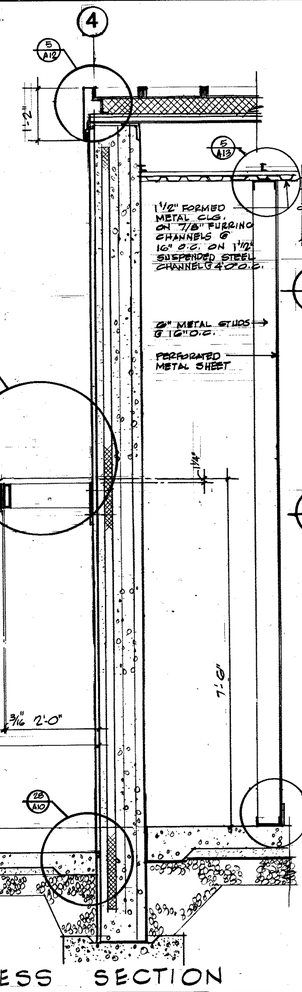
1 WALL SECTION
A9
SCALE: 3/4"=1'-0"



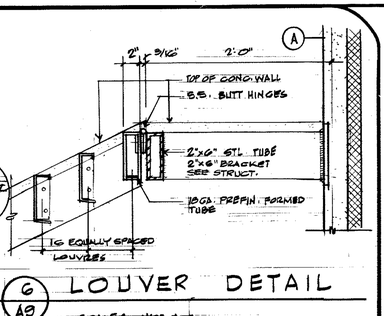
2 WALL SECTION
A9
SCALE: 3/4"=1'-0"



3 LOUVER DETAIL
A9
SCALE: 1½"=1'-0"

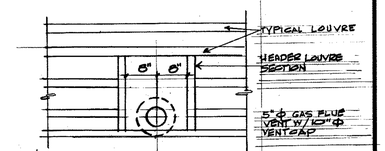


4 MECHANICAL RECESS SECTION
A9
SCALE: 3/4"=1'-0"



5 LOUVER DETAIL
A9
SCALE: 1½"=1'-0"

6 LOUVER DETAIL
A9
SCALE: 1½"=1'-0"



7 VENT OPENING
A9
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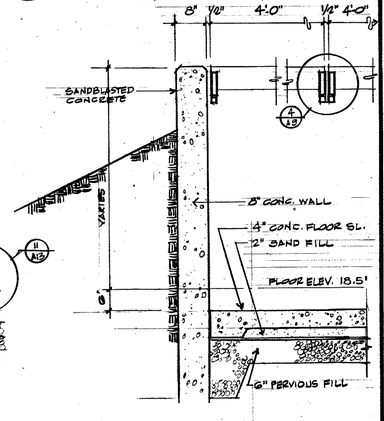
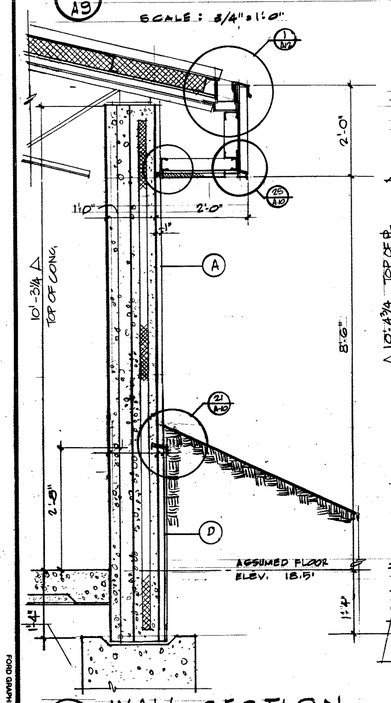
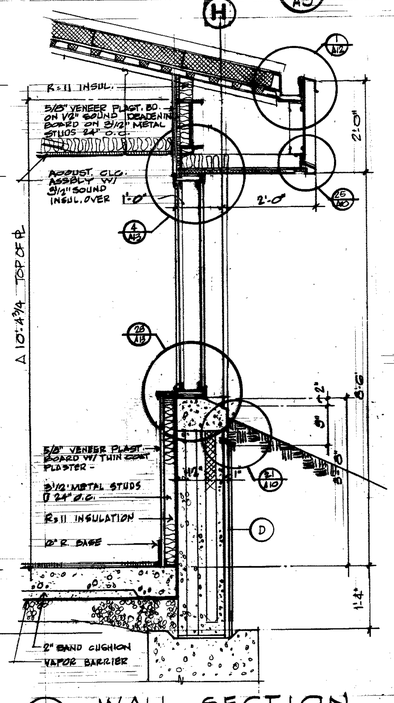


8 LOUVER END WALL
A9
SCALE: 3/4"=1'-0"



9 WALL SECTION
A9
SCALE: 3/4"=1'-0"



10 WALL SECTION
A9
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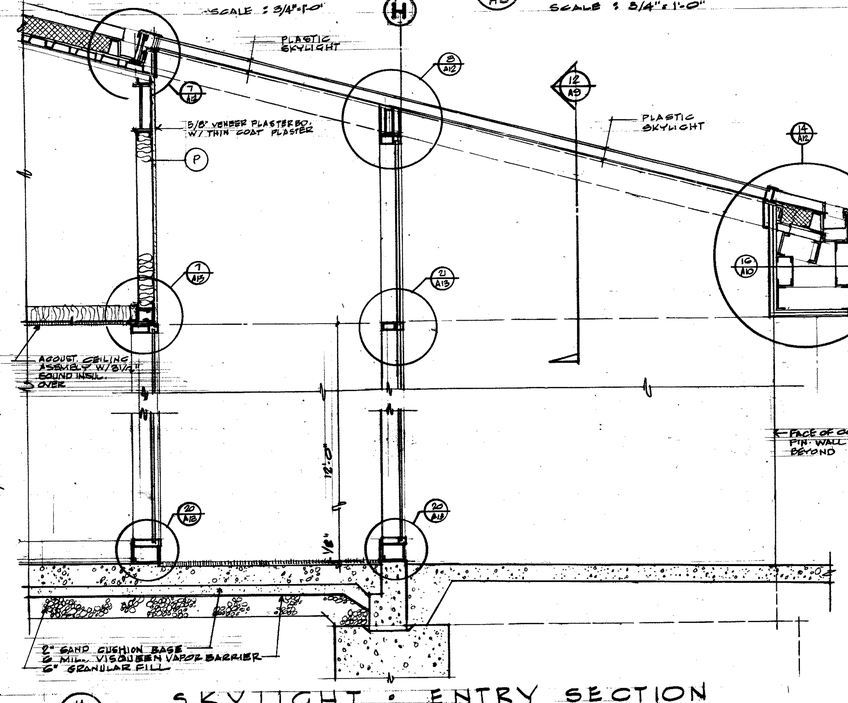
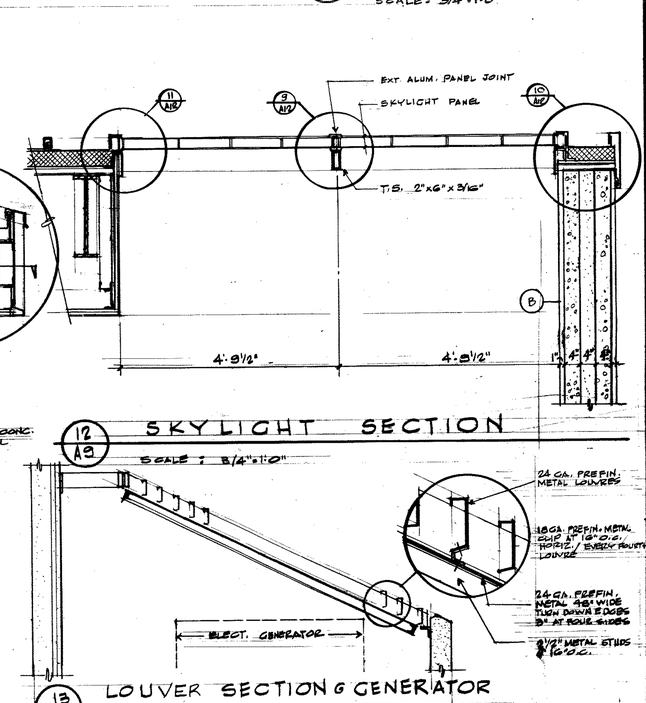


11 SKYLIGHT • ENTRY SECTION
A9
SCALE: 3/4"=1'-0"



12 SKYLIGHT SECTION
A9
SCALE: 3/4"=1'-0"

13 LOUVER SECTION & GENERATOR
A9
SCALE: 1/2"=1'-0"

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FORD GRAPHICS 5003

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DATE Feb. 20, 1990
JOB NO 84-125
REVISIONS △ AS BUILT 11-16-87

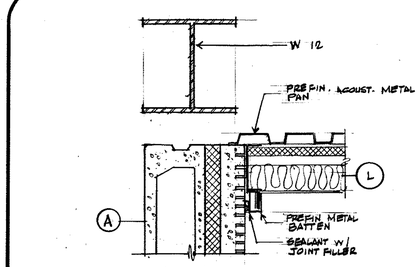
REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1434
STATE OF OREGON

SHEET TITLE: WALL SECTIONS

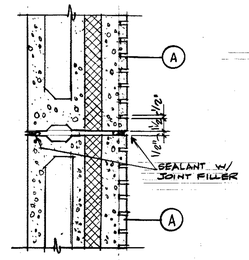
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-9

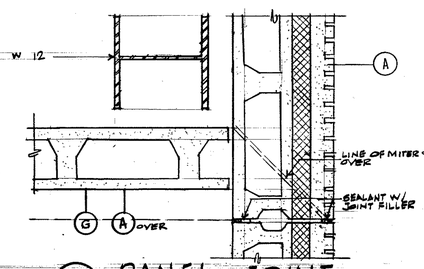
BLDG 375



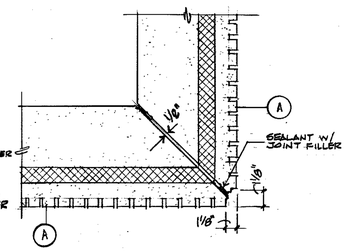
1 A10 CONC. & METAL PANEL
SCALE : 1½"=1'-0"



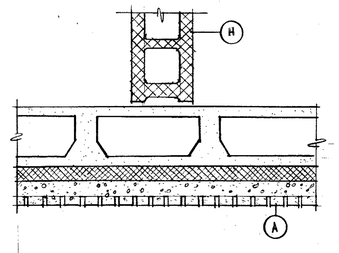
2 A10 PANEL JOINT
SCALE : 1½"=1'-0"



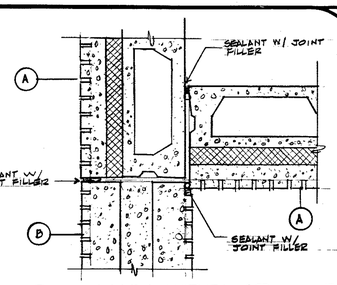
3 A10 PANEL JOINT
SCALE : 1½"=1'-0"



4 A10 PANEL CORNER
SCALE : 1½"=1'-0"



5 A10 PANEL JOINT
SCALE : 1½"=1'-0"



6 A10 PANEL JOINT
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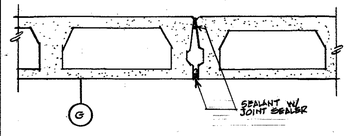
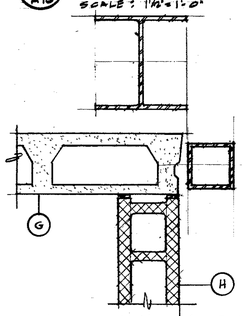
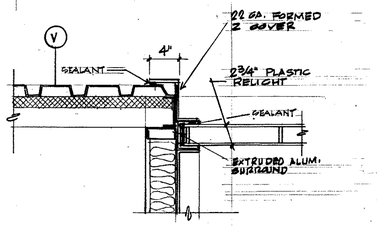


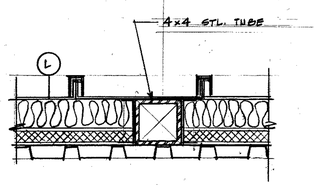
7 A10 PANEL JOINT
SCALE : 1½"=1'-0"



8 A10 C.M.U. / PANEL
SCALE : 1½"=1'-0"



9 A10 RELIGHT JAMB
SCALE : 1½"=1'-0"



10 A10 WALL COLUMN
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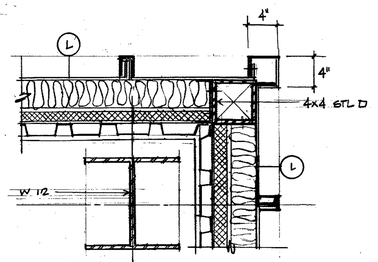
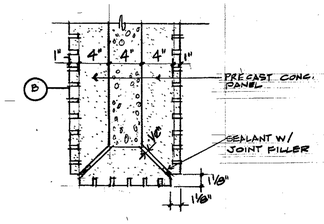
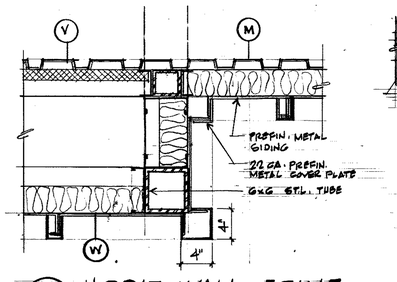


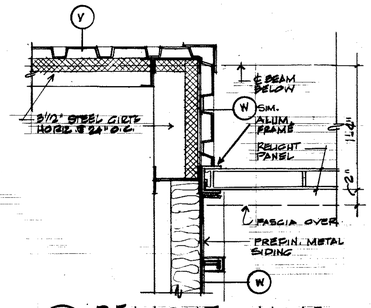
11 A10 WALL CORNER
SCALE : 1½"=1'-0"



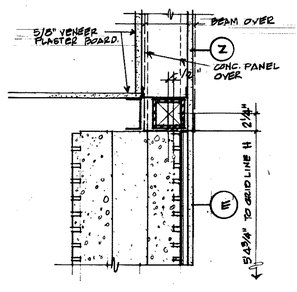
12 A10 END PANEL
SCALE : 1½"=1'-0"



13 A10 HORIZ. WALL JOINT
SCALE : 1½"=1'-0"



14 A10 RELIGHT JAMB
SCALE : 1½"=1'-0"



15 A10 PANEL & COLUMN
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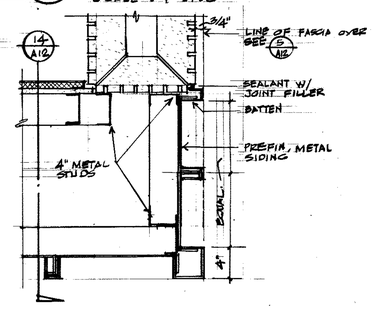
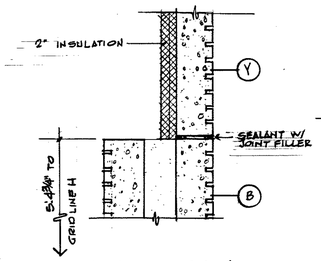


16 A10 SOFFIT CORNER
SCALE : 1½"=1'-0"



17 A10 PANEL CHANGE
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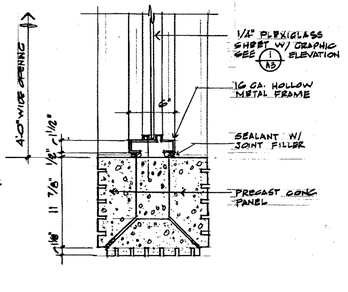
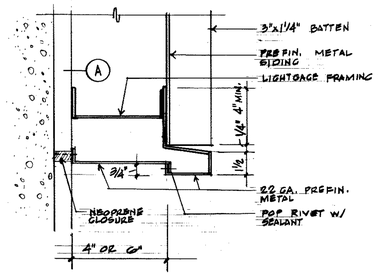
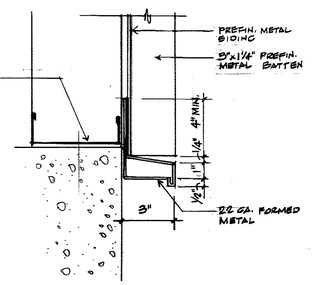


18 A10 GRAPHIC DETAIL
SCALE : 1½"=1'-0"



19 A10 SIDING DRIP
SCALE : 3"=1'-0"



20 A10 SIDING DRIP
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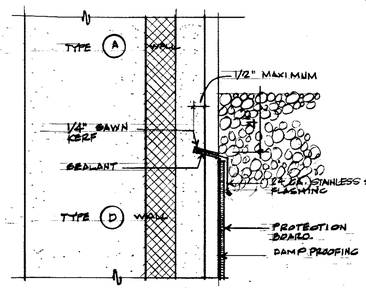

21 A10 FLASHING
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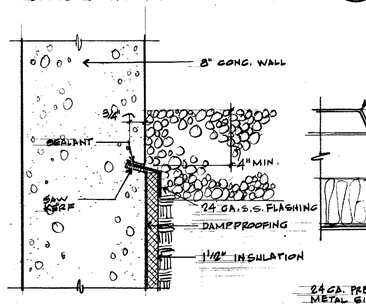

22 A10 FLASHING
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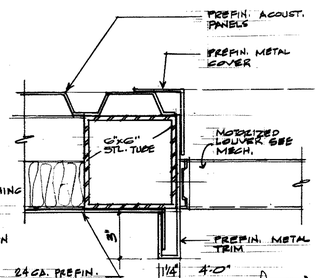
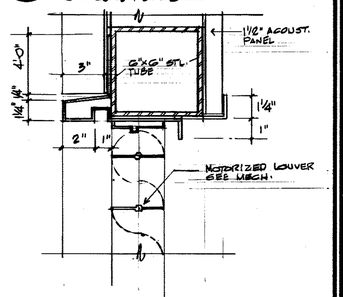
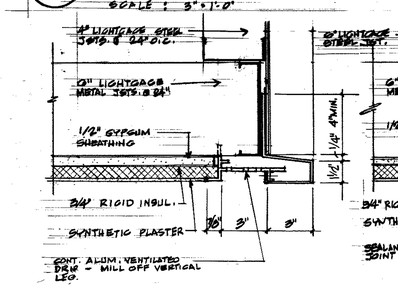


23 A10 LOUVRE JAMB
SCALE : 3"=1'-0"



24 A10 LOUVRE HEAD
SCALE : 3"=1'-0"



25 A10 SOFFIT VENT
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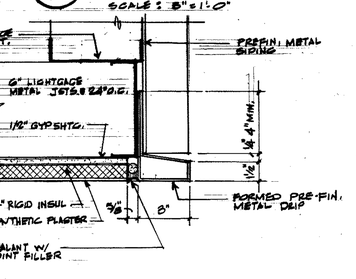
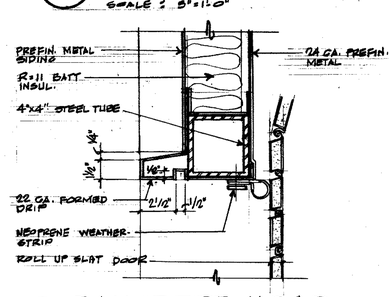


26 A10 SOFFIT
SCALE : 3"=1'-0"



27 A10 TAIL DOOR HEAD
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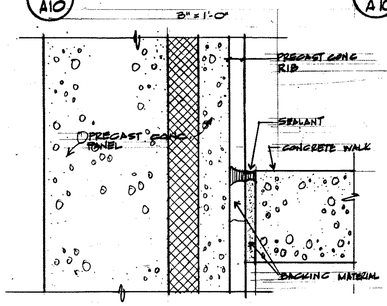

28 A10 WALK CAULKING
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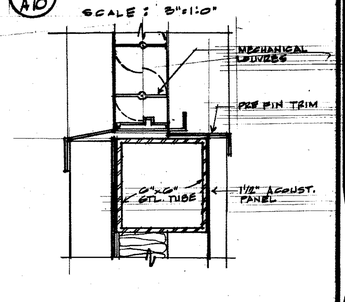

30 A-10 LOUVRE SILL
SCALE : 3"=1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

miller · cook architects a.i.a.
30 N.W. 1st AVE.
PORTLAND, OREGON
(503) 228-0822
97209

DATE FEB. 24, 1988
JOB NO 84-125
REVISIONS AS BUILT 11-16-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1484
STATE OF OREGON

SHEET TITLE : HORIZONTAL JOINTS
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-10

BLDG 375

BLDG 375

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architects a.i.a.
30 N.W. 1st AVE.
PORTLAND, OREGON
(503) 228-0822
97209

REVISIONS As Built 11-10-87

JOB No 84-126

DATE FEB. 24, 1986

REGISTERED ARCHITECT PAUL C. MILLER 1464 PORTLAND, OREGON STATE OF OREGON

PORTLAND OREGON

SHEET TITLE : ROOF PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND

A-11

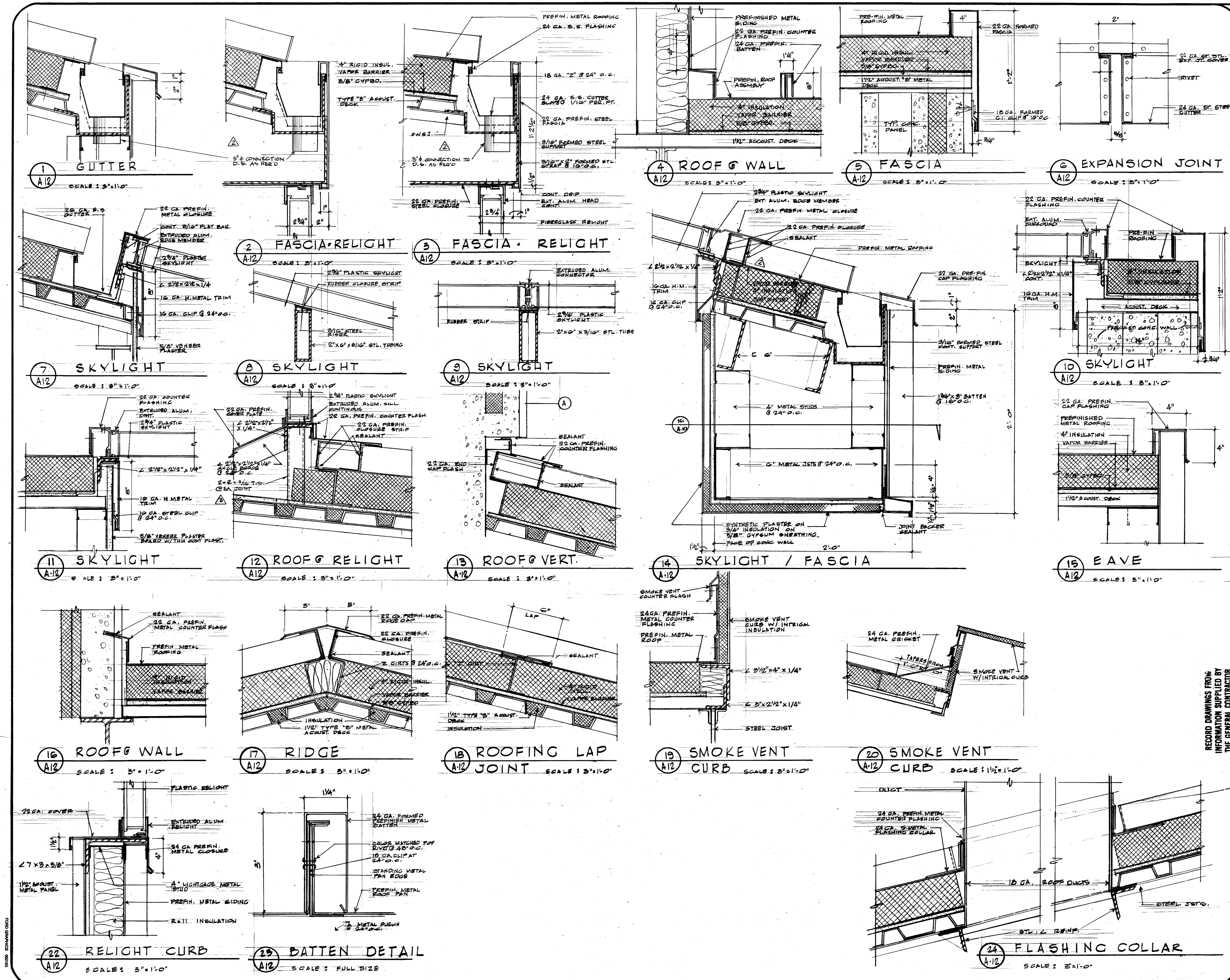
RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

NORTH

ROOF PLAN

1/A11 SCALE

FORD GRAPHICS 050183



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(503) 226-0622 97209

30 N.W. 1st AVE. PORTLAND, OREGON

DATE FEB. 20, 1984

JOB No 84.125

REVISIONS 3.19.86 3.25.86

AS BUILT 11-16-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON STATE OF OREGON

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

SHEET TITLE: ROOF DETAILS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

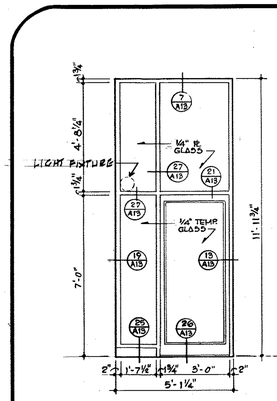
304th AIR RESCUE RECOVERY SQUADRON PORTLAND INTERNATIONAL AIRPORT

PORTLAND OREGON

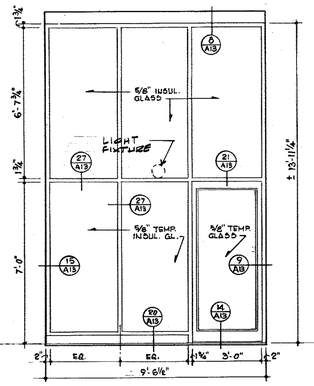
A-12

FORD GRAPHICS

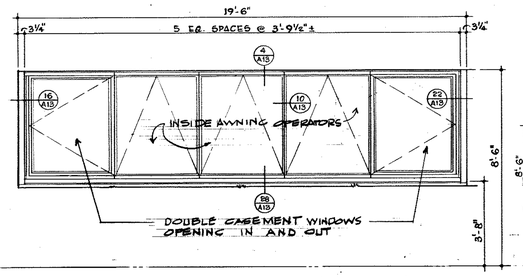
BLDG 375



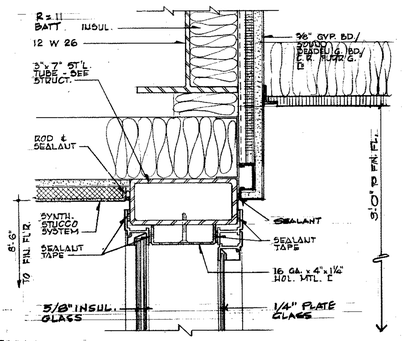
1 A13 ENTRY ELEV. 3/8" = 1'-0"



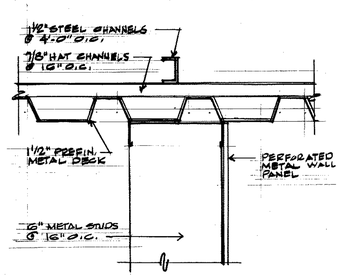
2 A13 ENTRY ELEVATION 3/8" = 1'-0"



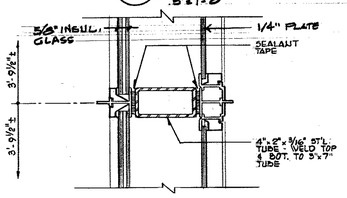
3 A13 WINDOW ELEVATION 3/8" = 1'-0"



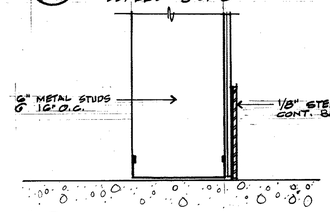
4 A13 WINDOW 3" = 1'-0"



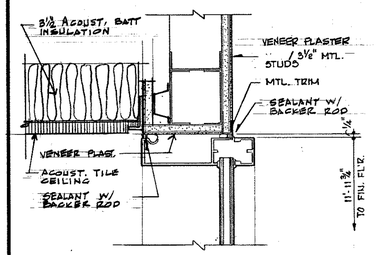
5 A13 PLENUM HEAD SCALE: 3" = 1'-0"



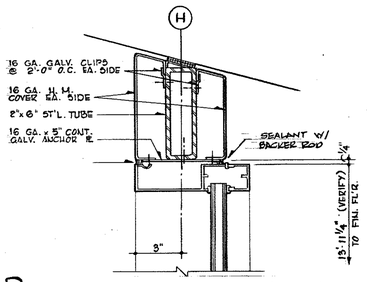
10 A13 MULLION 3" = 1'-0"



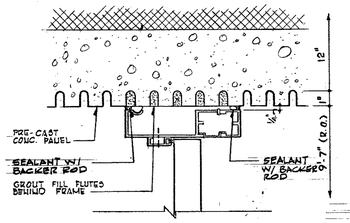
11 A13 PLENUM SILL SCALE: 3" = 1'-0"



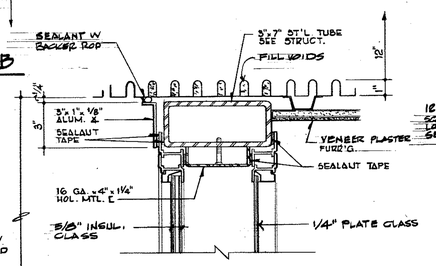
7 A13 RELIGHT HEAD SCALE: 3"=1'-0"



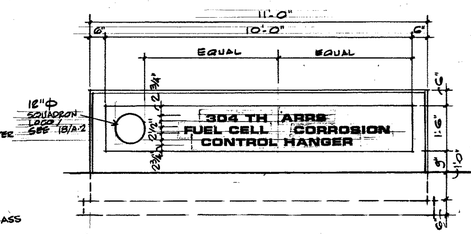
8 A13 RELIGHT HEAD SCALE: 3"=1'-0"



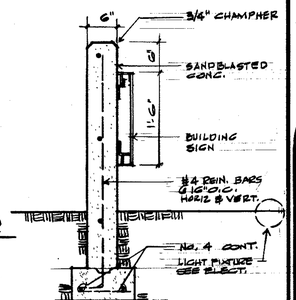
9 A13 DOOR JAMB



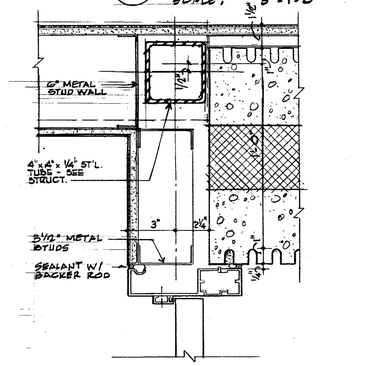
16 A13 JAMB SCALE: 3"=1'-0"



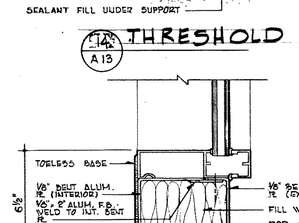
29 A-13 BUILDING SIGNAGE SCALE: 1/2" = 1'-0"



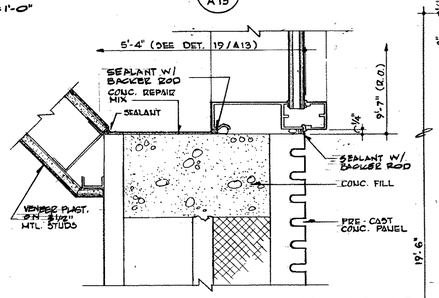
30 A13 SIGN SECTION SCALE: 1"=1'-0"



12 A13 DOOR JAMB

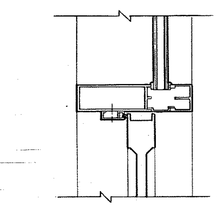


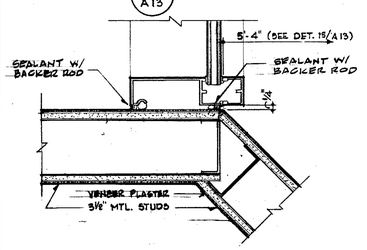
14 A13 THRESHOLD



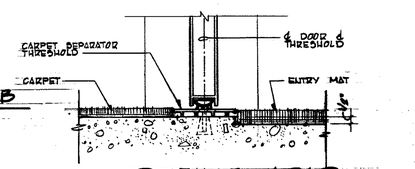
15 A13 RELIGHT JAMB SCALE: 3"=1'-0"

20 A13 RELIGHT SILL SCALE: 3"=1'-0"

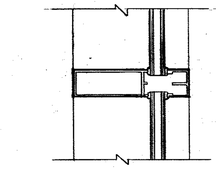


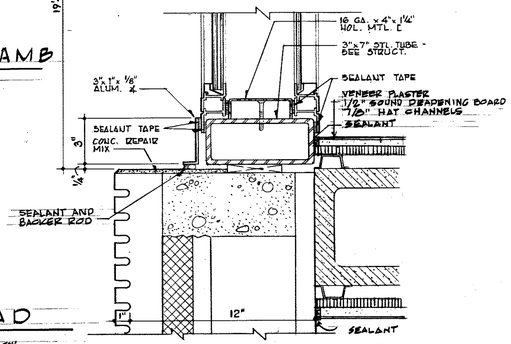


19 A13 RELIGHT JAMB SCALE: 3"=1'-0"

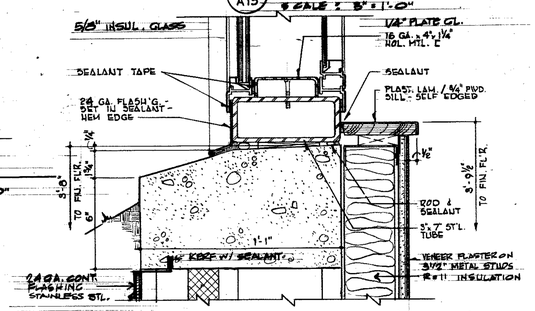


26 A13 THRESHOLD SCALE: 3"=1'-0"

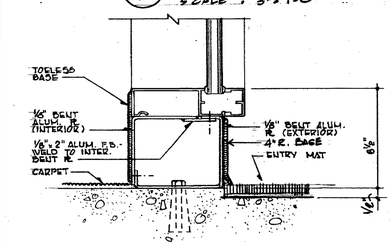




22 A13 WINDOW JAMB SCALE: 3"=1'-0"



23 A13 WINDOW SILL SCALE: 3"=1'-0"



25 A13 RELIGHT SILL SCALE: 3"=1'-0"

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DATE FEB. 21, 1986
JOB NO 84-128
REVISIONS AS BUILT 11-14-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1464
STATE OF OREGON

SHEET TITLE: ENTRANCE & WINDOW DETAILS

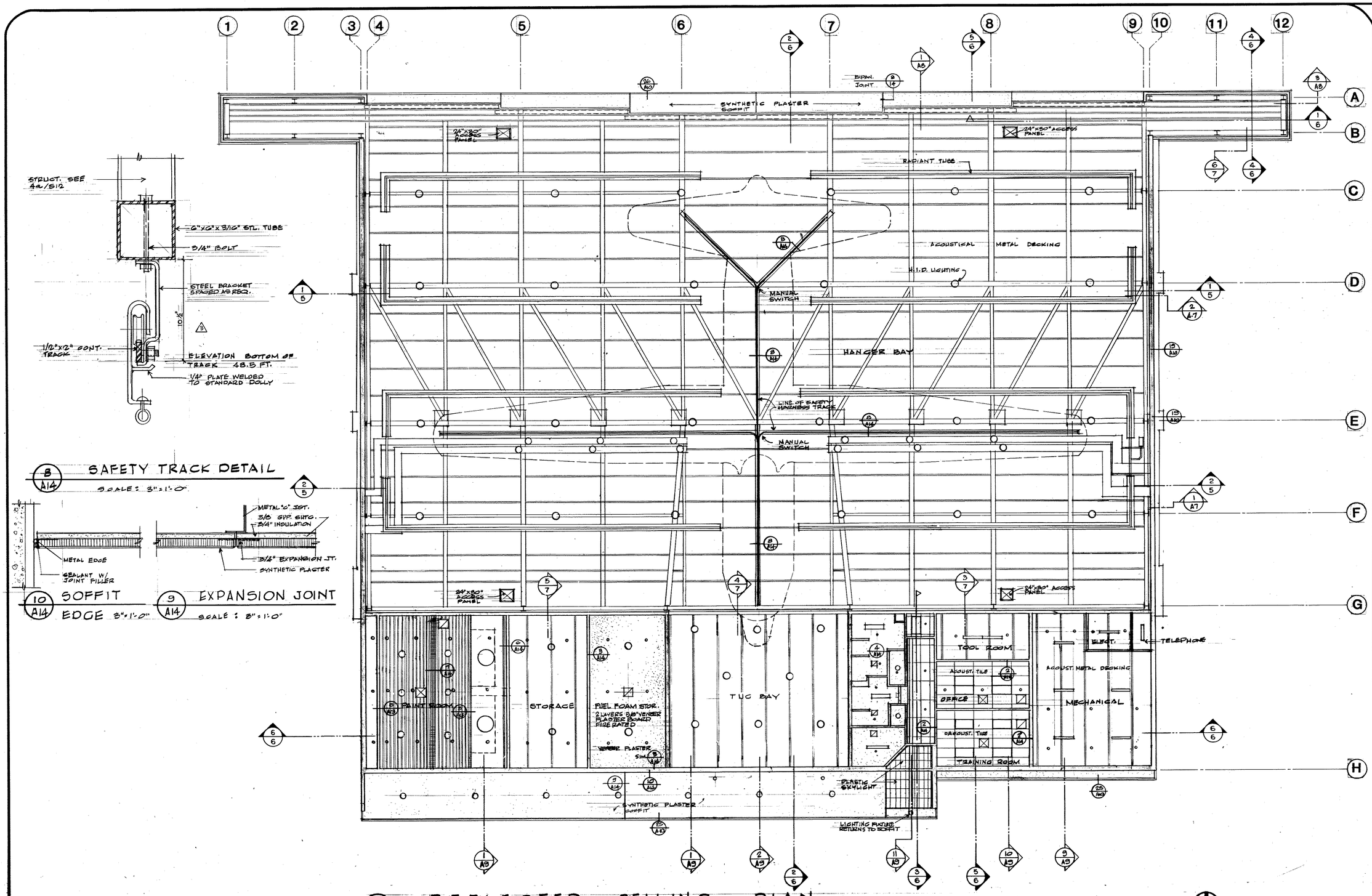
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A13

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

BLDG 375

FORD GRAPHICS



REFLECTED CEILING PLAN

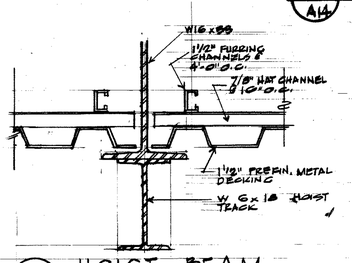
1 / A14 — SCALE: 1/8"=1'-0"

SAFETY TRACK DETAIL

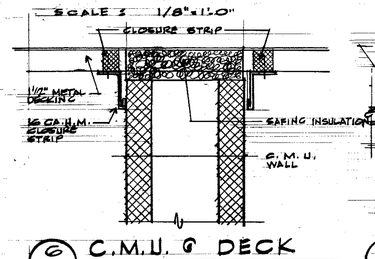
B / A14 — SCALE: 3"=1'-0"

10 / A14 — SOFFIT EDGE 3"=1'-0"

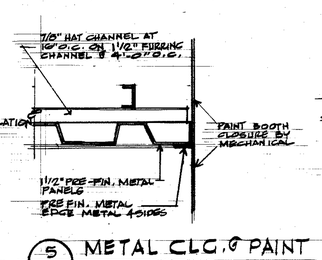
9 / A14 — EXPANSION JOINT SCALE: 3"=1'-0"



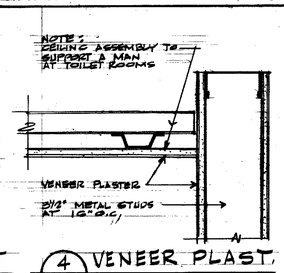
7 / A14 — HOIST BEAM SCALE: 3"=1'-0"



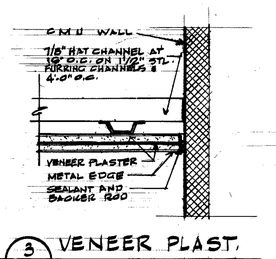
6 / A14 — C.M.U. & DECK SCALE: 3"=1'-0"



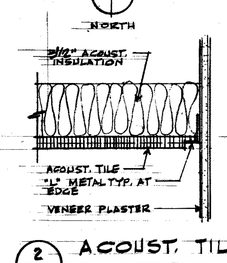
5 / A14 — METAL CLG. & PAINT BOOTH SCALE: 3"=1'-0"



4 / A14 — VENEER PLAST. SCALE: 3"=1'-0"



3 / A14 — VENEER PLAST. SCALE: 3"=1'-0"



2 / A14 — ACOUST. TILE SCALE: 3"=1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

SHEET TITLE: REFLECTED CEILING PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A-14

miller · cook architects a.i.a.
30 N.W. 1st AVE.
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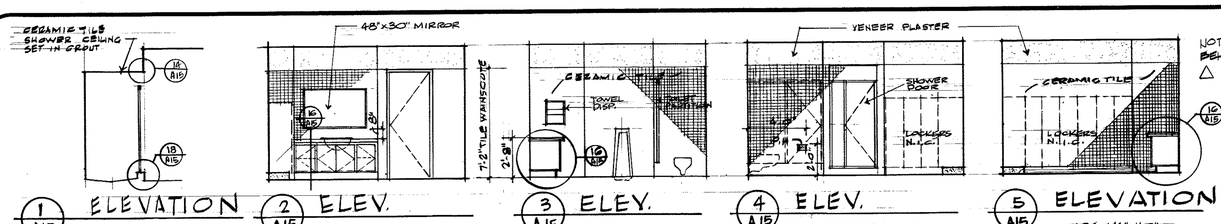
DATE: FEB. 10, 1988
JOB NO: 84-125
REVISIONS: 3 3-25-86 As BUILT 11-10-87

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1454
STATE OF OREGON

FORD GRAPHICS 00163

BLDG 375



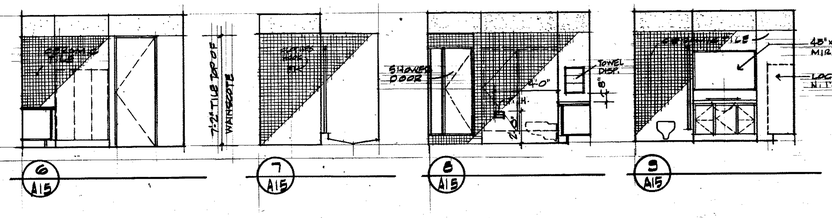
1 A15 ELEVATION — SCALE: 1/4"=1'-0"

2 A15 ELEV. — SCALE: 1/4"=1'-0"

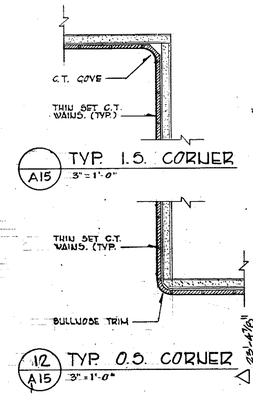
3 A15 ELEV. — SCALE: 1/4"=1'-0"

4 A15 ELEV. — SCALE: 1/4"=1'-0"

5 A15 ELEVATION — SCALE: 1/4"=1'-0"

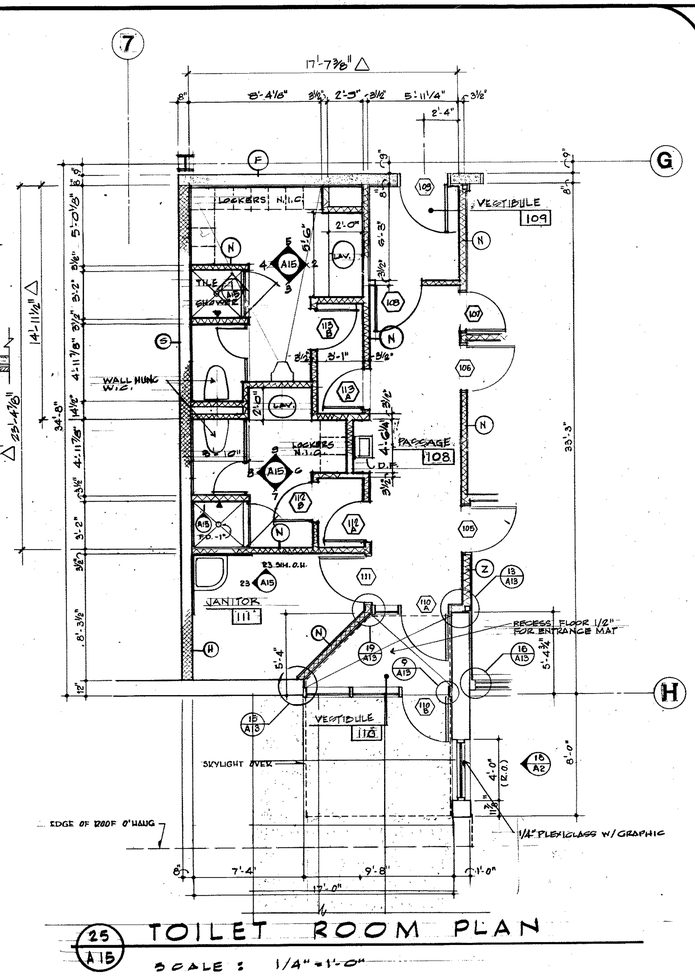


6 A15 · 7 A15 · 8 A15 · 9 A15

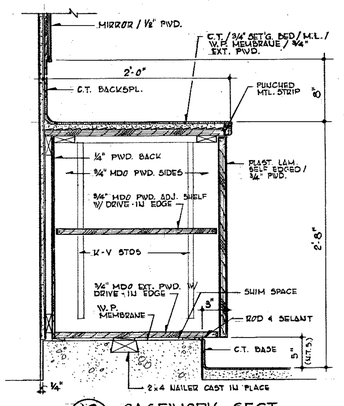


10 A15 TYP. I.S. CORNER — 3"=1'-0"

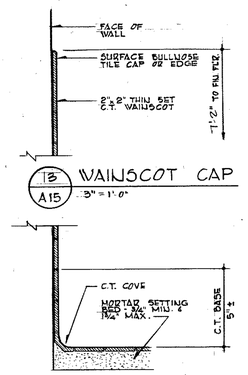
12 A15 TYP. O.S. CORNER — 3"=1'-0"



25 A15 TOILET ROOM PLAN — SCALE: 1/4"=1'-0"

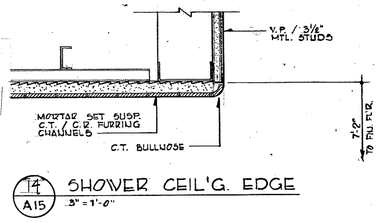


16 A15 CASEWORK SECT. — 3"=1'-0"

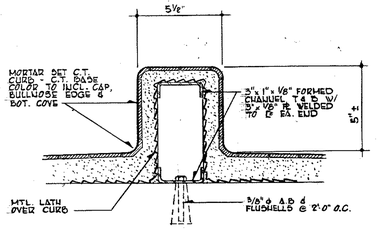


13 A15 WAINSCOT CAP — 3"=1'-0"

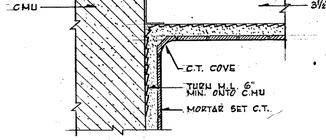
17 A15 BASE DET. — 3"=1'-0"



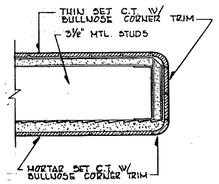
14 A15 SHOWER CEIL'G. EDGE — 3"=1'-0"



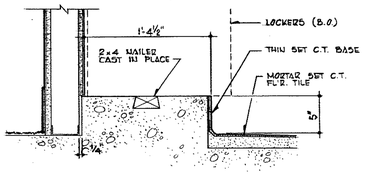
18 A15 CURB DETAIL — 3"=1'-0"



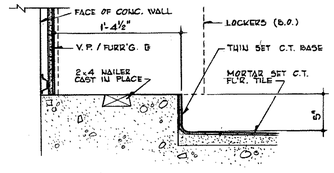
15 A15 INSIDE CORNER — 3"=1'-0"



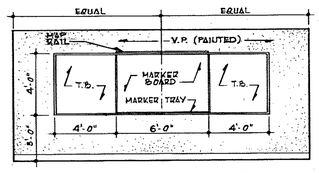
19 A15 OUTSIDE CORNER — 3"=1'-0"



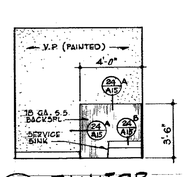
20 A15 LOCKER BASE — 1½"=1'-0"



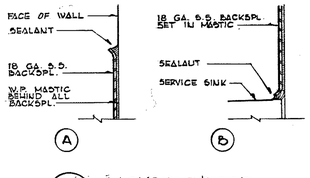
21 A15 LOCKER BASE — 3"=1'-0"



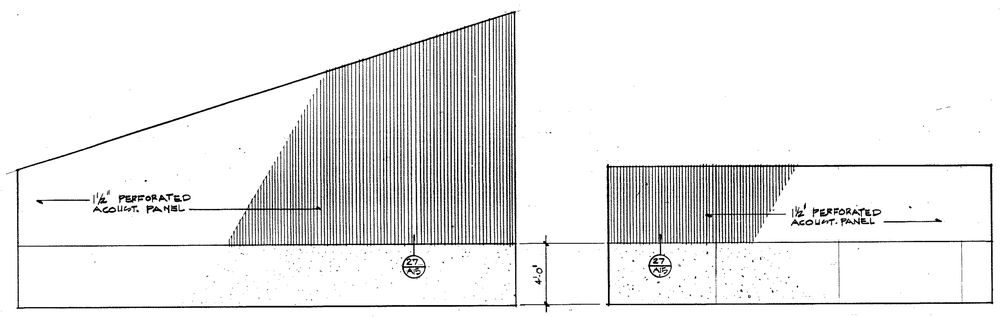
22 A15 TRAINING ROOM — 1/4"=1'-0"



23 A15 JANITOR — 1/4"=1'-0"

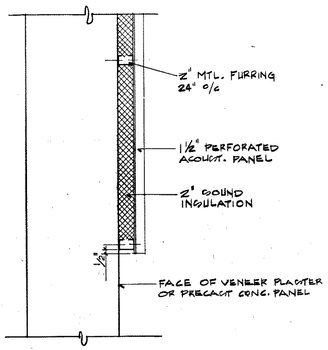


24 A15 BACKSPL. EDGE



25 A15 ELEVATION — 1/4"=1'-0"

26 A15 ELEVATION — 1/4"=1'-0"



27 A15 WALL DETAIL — 1½"=1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

FORD GRAPHICS 00013

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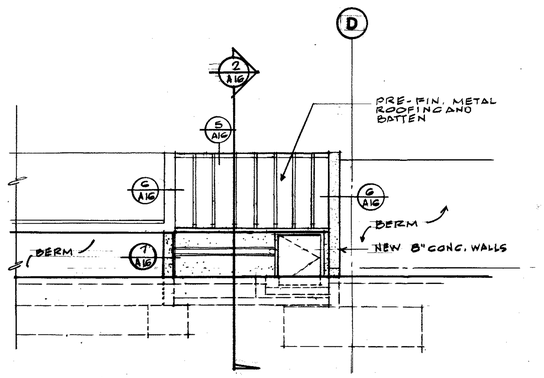
DATE Feb. 01, 1980
JOB NO 84-125
REVISIONS △ As BUILT 11-10-81

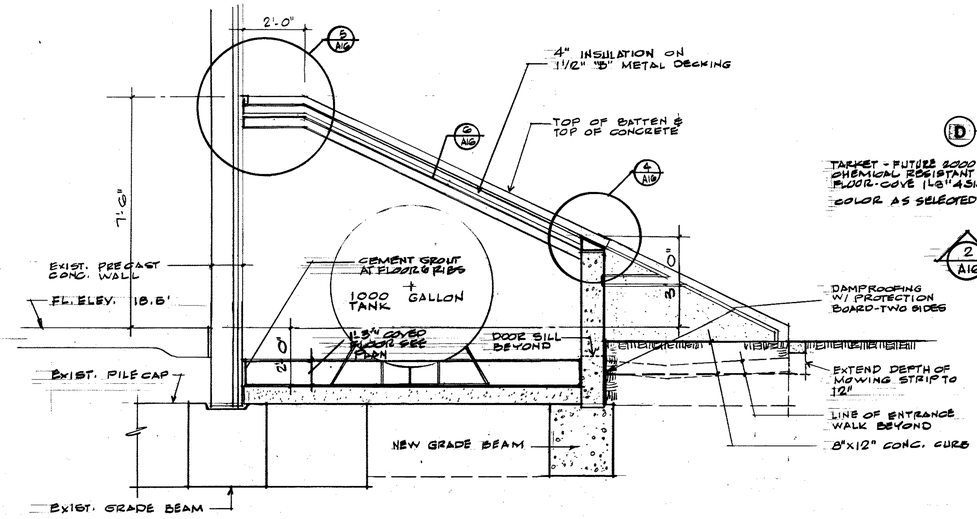
REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1484
STATE OF OREGON

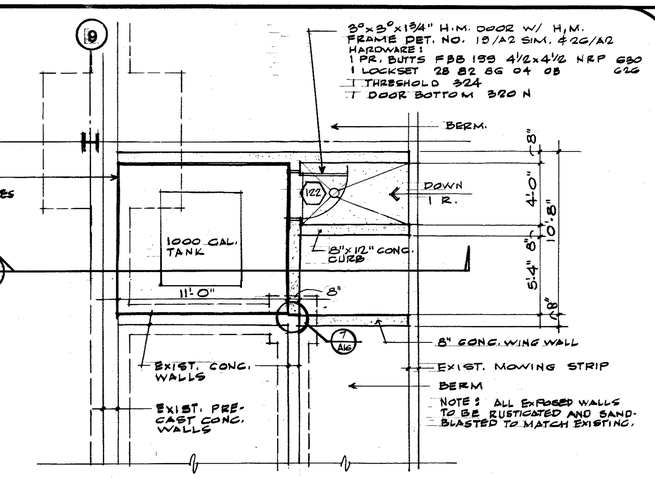
SHEET TITLE: TOILET ROOM PLAN AND ELEVATIONS
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

A15

BLDG 375





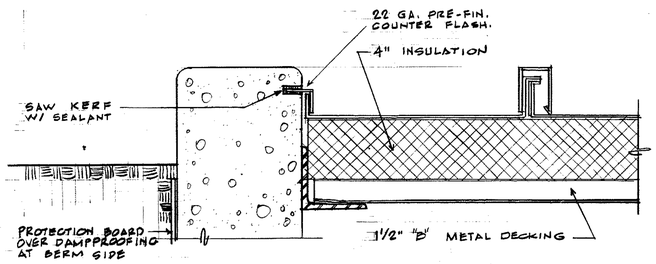


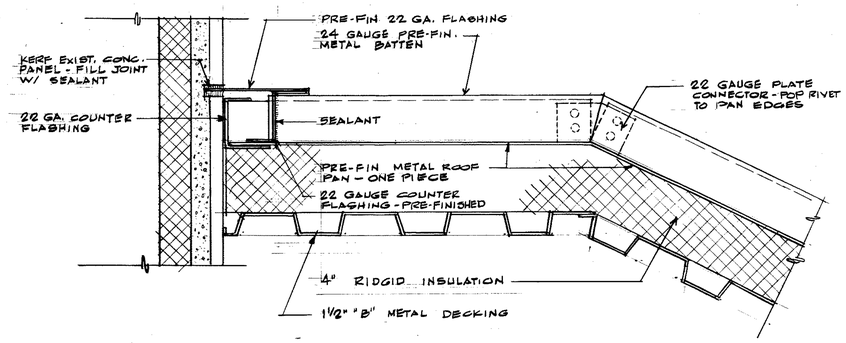
3 A1G EAST ELEVATION
SCALE: 1/4"=1'-0"

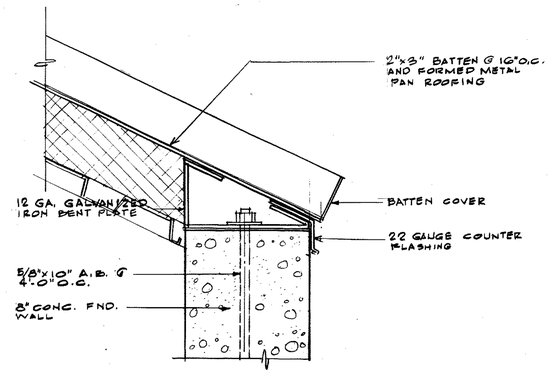
2 A1G CROSS SECTION
SCALE: 1/2" = 1'-0"

1 A1G FLOOR PLAN
SCALE: 1/4"=1'-0"

NORTH



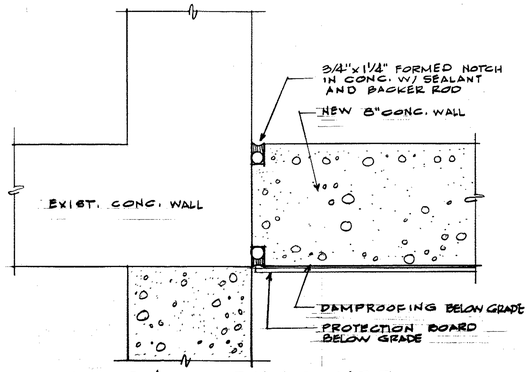




6 A16 RAKE DETAIL
SCALE: 3"=1'-0"

5 A16 ROOF @ EXISTING WALL
SCALE: 3"=1'-0"

4 A1C EAVE
SCALE: 3"=1'-0"



7 A1G CONC. JUNCTURE
SCALE: 3"=1'-0"

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PORTLAND, OREGON

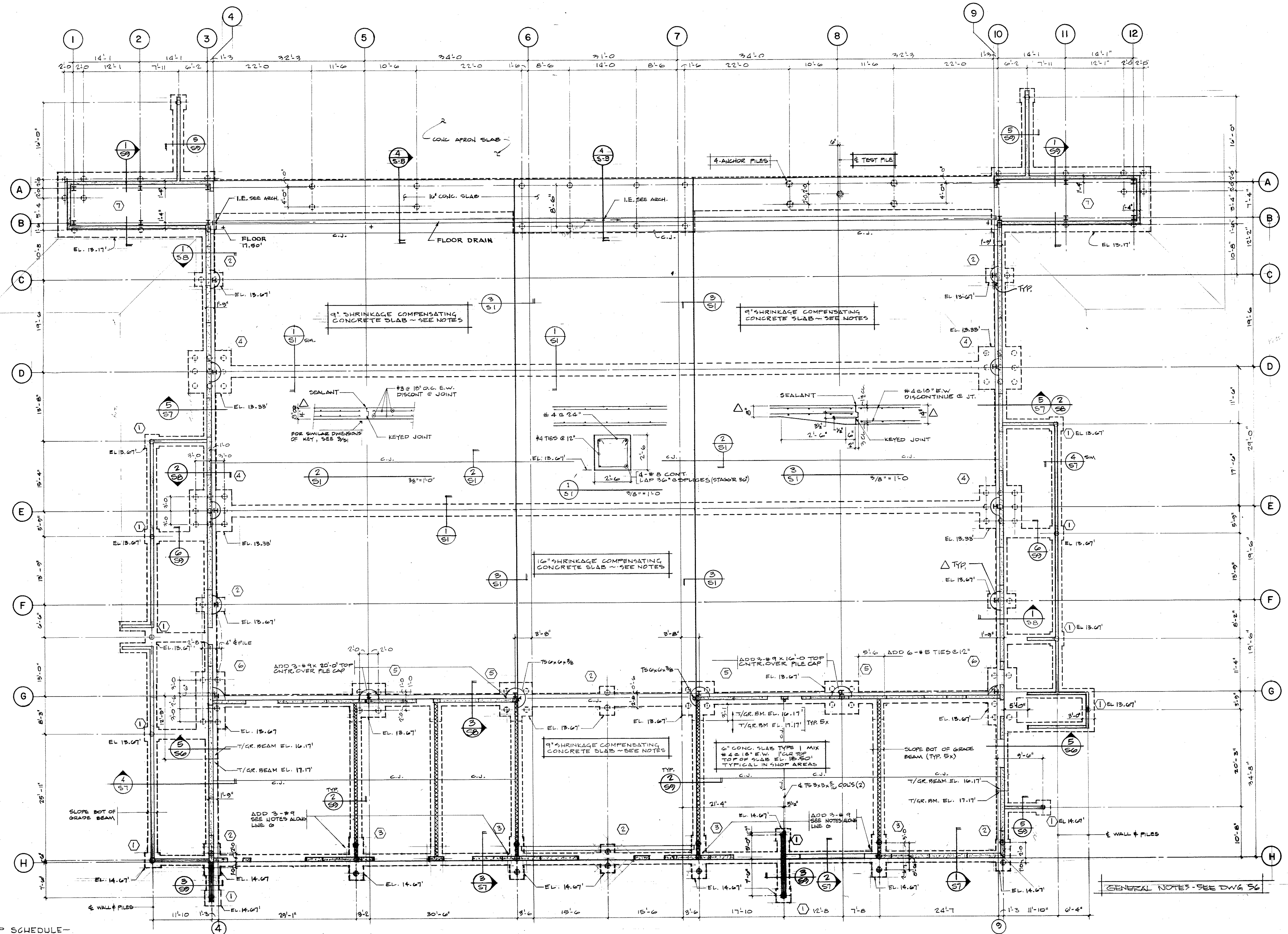
DATE MARCH 11, 1987
JOB NO 84-125.04
REVISIONS △ AS BUILT 11-16-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

SHEET TITLE:
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT

A16

BLDG 375



FOUNDATION — FLOOR PLAN

PILE CAP SCHEDULE—

TYPE	SIZE: LxWxD	REINFORCING BOTTOM U.N.O.	PILE ANCHORAGE	COL. BASE DET.	REMARKS
1	3'-0 x 3'-0 x 2'-6	4-#6 x 2'-8 E.W.	SEE 7/S4	–	
2	6'-0 x 3'-0 x 2'-6	4-#8 x 5'-8 LONG. 4-#4 x 2'-8 TRANS	SEE 7/S4	SEE 1/S8	
3	9'-0 x 4'-0 x 2'-6	5-#8 x 8'-8 LONG. 8-#4 x 2'-8 TRANS	SEE 7/S4	–	
4	9'-0 x 9'-0 x 2'-9"	11-#8 x 8'-8 E.W. BOT 11-#6 x 8'-8 E.W. TOP	SEE 6/S4	SEE 5/S4	
5	7'-0 x 7'-0 x 2'-6	9-#8 x 6'-8" E.W. BOT 9-#5 x 6'-8" E.W. TOP	SEE 6/S4	SEE 2/S11	
6	12'-0 x 6'-0 x 2'-6	6-#6 x 11'-8 LONG. 11-#6 x 5'-8 TRANS	SEE 7/S4	SEE 1/S8	
7	33'-2 x 13'-10 x 3'-0	SEE SECTION 1/S9	SEE 6/S4	4 COLS - 2/S11 @ A1, A2, A3, B1, A10, A11, A12, B12 2 COLS - 1/S9 @ B2, B3, B10, B11	

PLAN NOTES:

1. ELEVATIONS SHOWN ARE BOTTOM OF FOOTING, PILE CAP OR GRADE BEAM UNLESS NOTED OTHERWISE
2. 16" SLABS SHALL BE REINFORCED W/ #4 @ 18" E.W. 1½" CLR TOP & #4 @ 18" E.W. 3" CLR BOT. SEE SPECS FOR MIX TYPE.
3. 9" SLABS SHALL BE REINFORCED W/ #3 @ 18" E.W. 1½" CLR TOP & #3 @ 18" E.W. 3" CLR BOT. SEE SPECS FOR MIX TYPE.
4. ALL 9" & 16" APRON SLABS TO BE TYPE I CONCRETE MIX. SEE SPECS.
5. SEE ARCHITECTURAL DRAWINGS FOR FLOOR SLOPES.

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

REGISTERED PROFESSIONAL ENGINEER 4326 OREGON HOLMES
1-2-86

FORD GRAPHICS 050163

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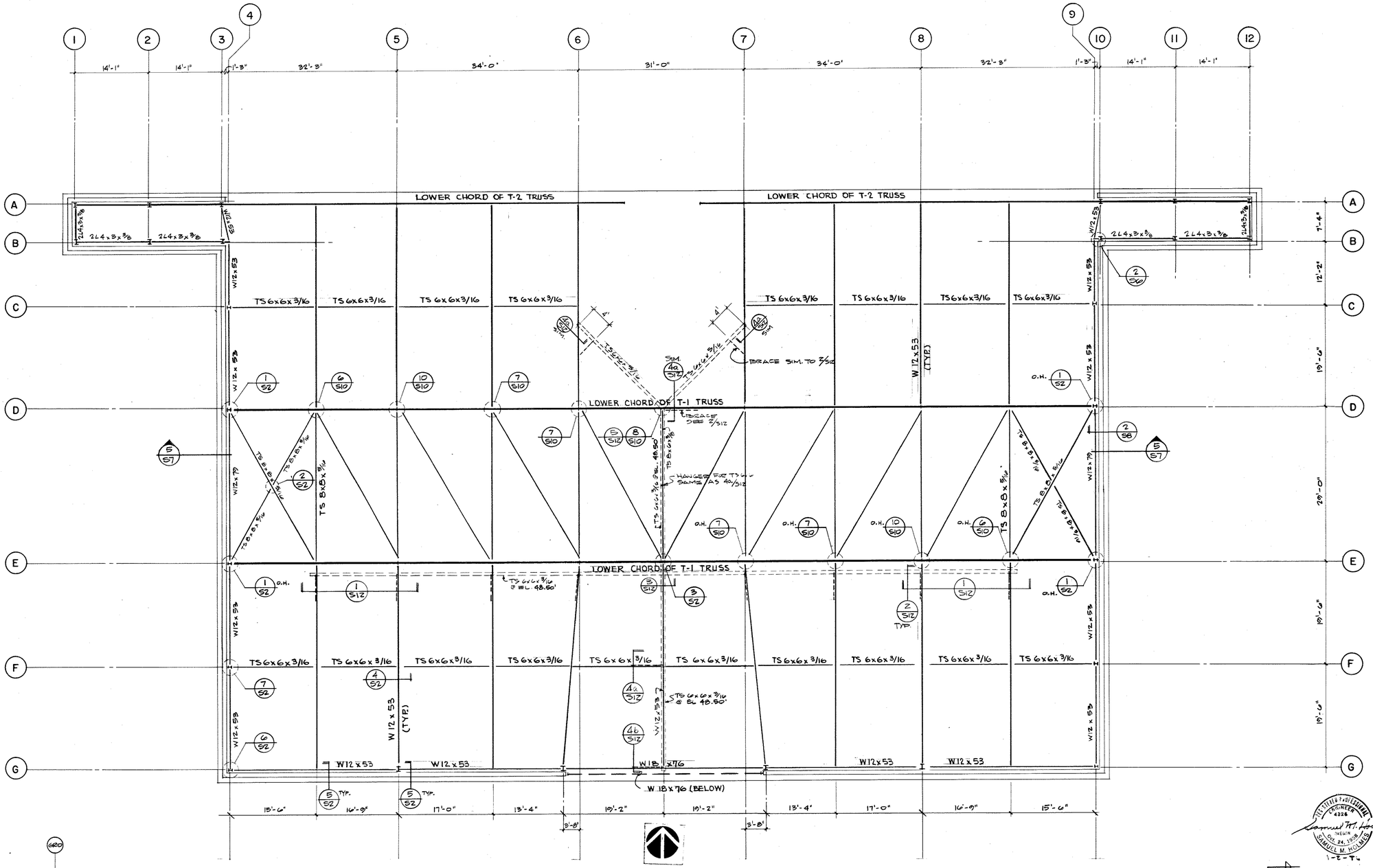
DATE FEB. 26, 1986
JOB NO 84-126
REVISIONS △ AS BUILT 11-16-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

SHEET TITLE: FOUNDATION PLAN
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

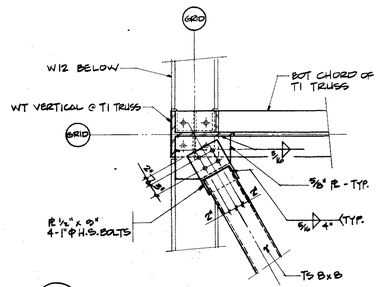
S-1

BLDG 375

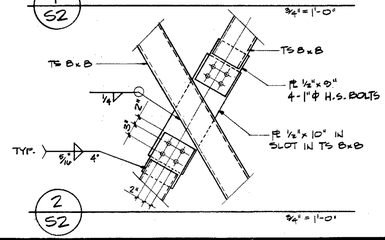


LOWER CHORD BRACING

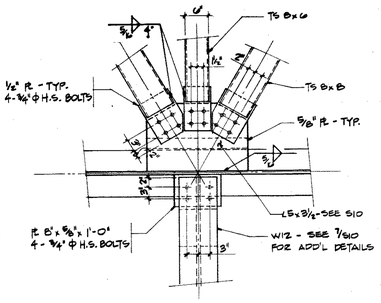
1/8" = 1'-0"



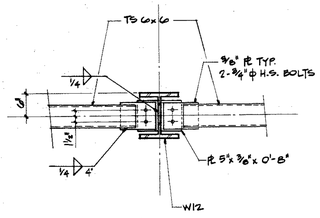
1/52



2/52



3/52



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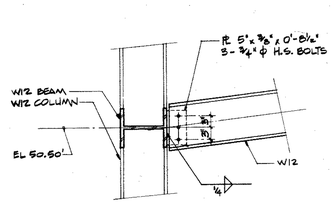
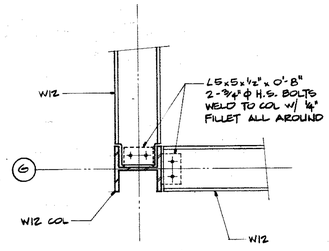


5/52



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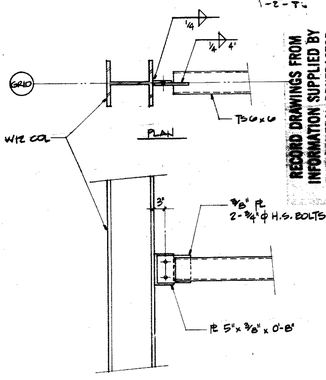

7/52

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PORTLAND, OREGON

DATE FEB. 24, 1984
JOB NO 84-125
REVISIONS

REGISTERED ARCHITECT
JACK C. MILLER
PORTLAND, OREGON
1464
STATE OF OREGON

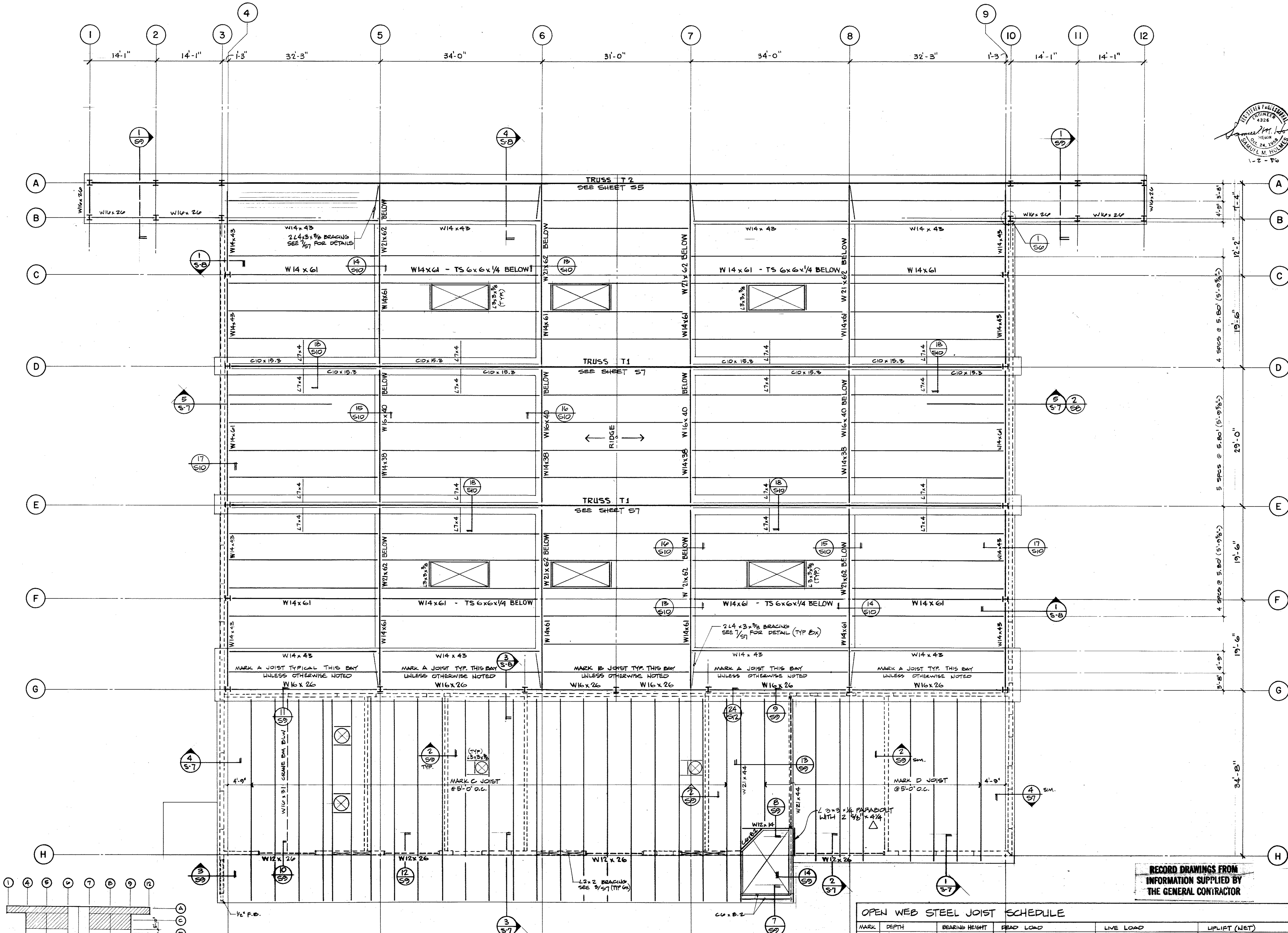
REGISTERED PROFESSIONAL ENGINEER
4326
OREGON
OCT. 24, 1978
SAMUEL M. HOLMES

SHEET TITLE: LOWER CHORD BRACING PLAN
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

S-2

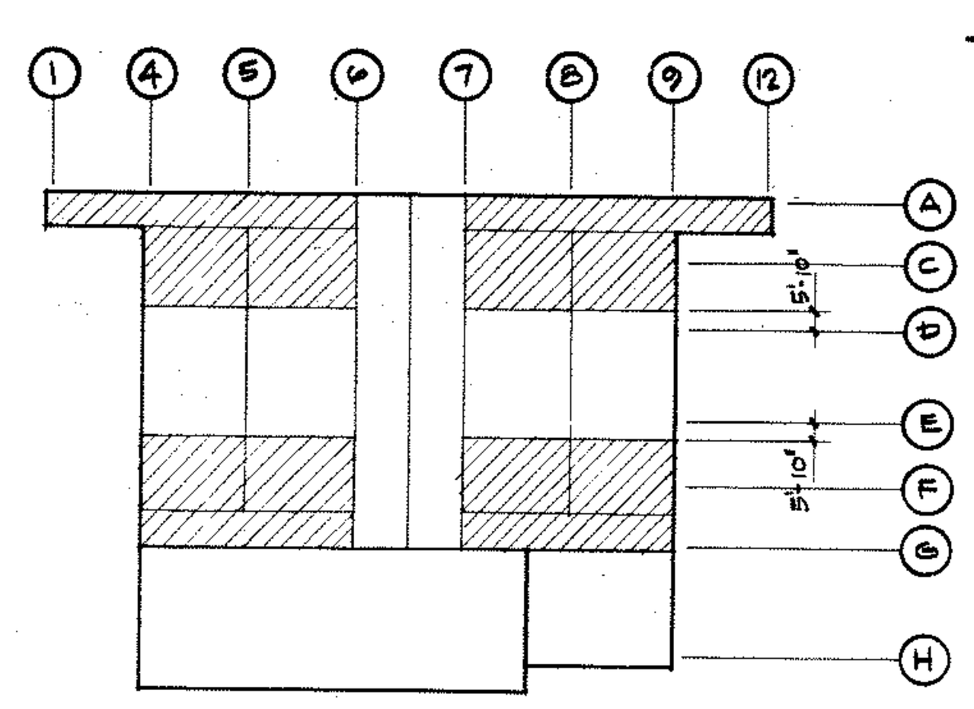
FORD GRAPHICS 0903

BLDG 375



20 GA HSB-36 ACCOUSTICAL DECKING SEE NOTES FOR WELDING

18 GA HSB-36 ACCOUSTICAL DECKING SEE NOTES FOR WELDING



ROOF DECK SCHEDULE

NORTH

ROOF FRAMING PLAN

1/8" = 1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

OPEN WEB STEEL JOIST SCHEDULE

MARK	DEPTH	BEARING HEIGHT	DEAD LOAD	LIVE LOAD	UPLIFT (NET)
A (56x)	26" PARALLEL CHORD W/ MIN. MOM. CAP'Y = 39.3K' AND MIN END SHEAR = 5.9K	3" AT UPPER END @ ℄ BEARING 5" AT LOWER END @ ℄ BEARING	88 PLF	146 PLF, 12', 438 PLF, UPPER END	233 PLF
B (16x)	12" MIN DEPTH TOP CHORD DBL-PITCHED W/ MIN MOM. CAP'Y = 28.2K' AND MIN END SHEAR = 4.4K	3 9/16" AT EACH END	88 PLF	146 PLF	233 PLF
C (22x)	26" PARALLEL CHORD W/ MIN MOM CAP'Y = 56.4K' AND MIN END SHEAR = 6.8K	3" AT UPPER END BOT CHORD BEAR'G @ LOWER END (3")	75 PLF	125 PLF, 30', 375 PLF, UPPER END	310 PLF, 195 PLF
D (8x)	26" PARALLEL CHORD W/ MIN MOM CAP'Y = 56.4K' AND MIN END SHEAR = 6.8K	3" AT EACH END	75 PLF	125 PLF, 30', 375 PLF, UPPER END	195 PLF

Bid Documents

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DATE FEB. 20, 1986

JOB NO 84-125

REVISIONS △ AS BUILT 11-16-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

SHEET TITLE: ROOF FRAMING PLAN

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

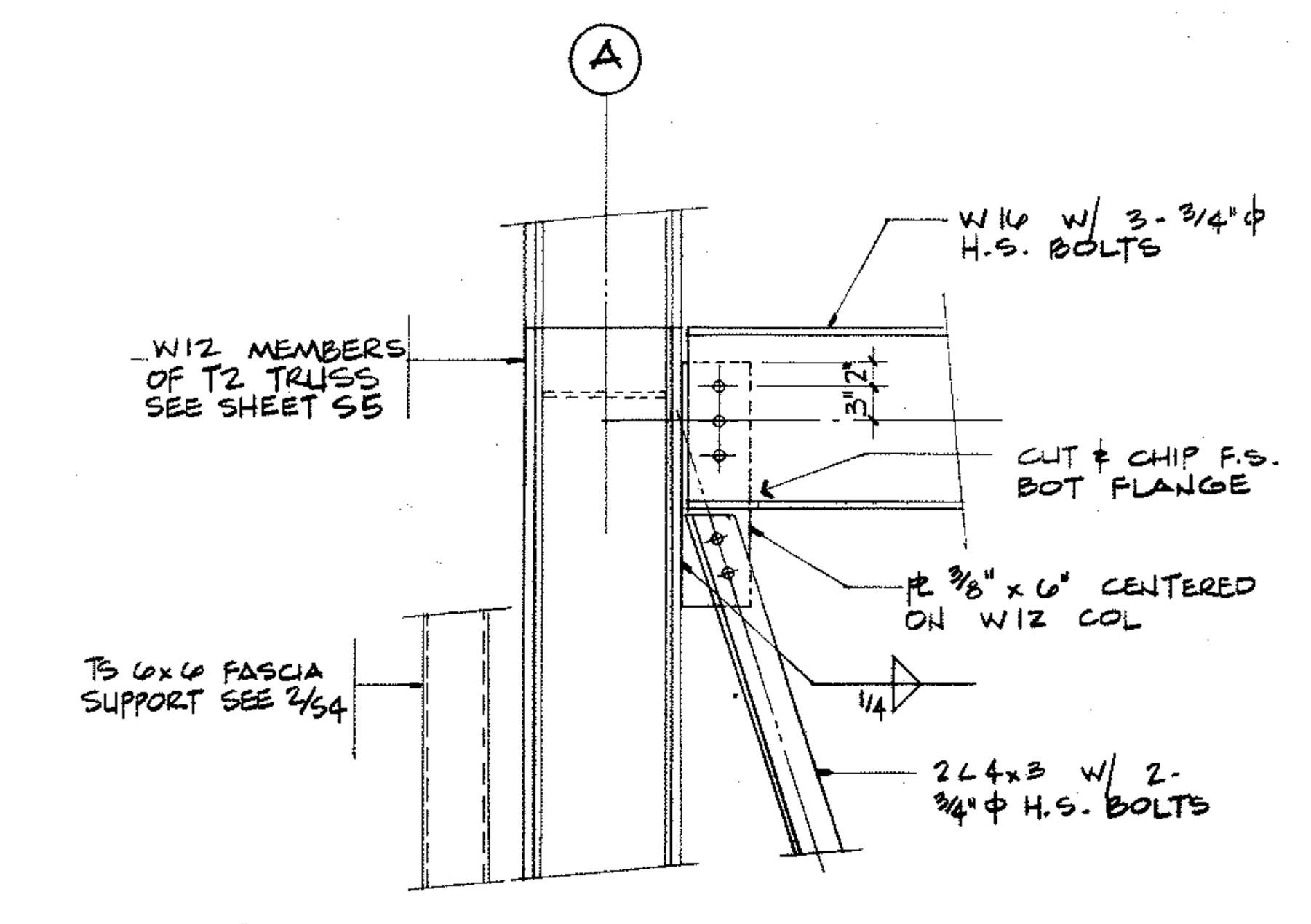
304th AIR RESCUE RECOVERY SQUADRON

PORTLAND INTERNATIONAL AIRPORT

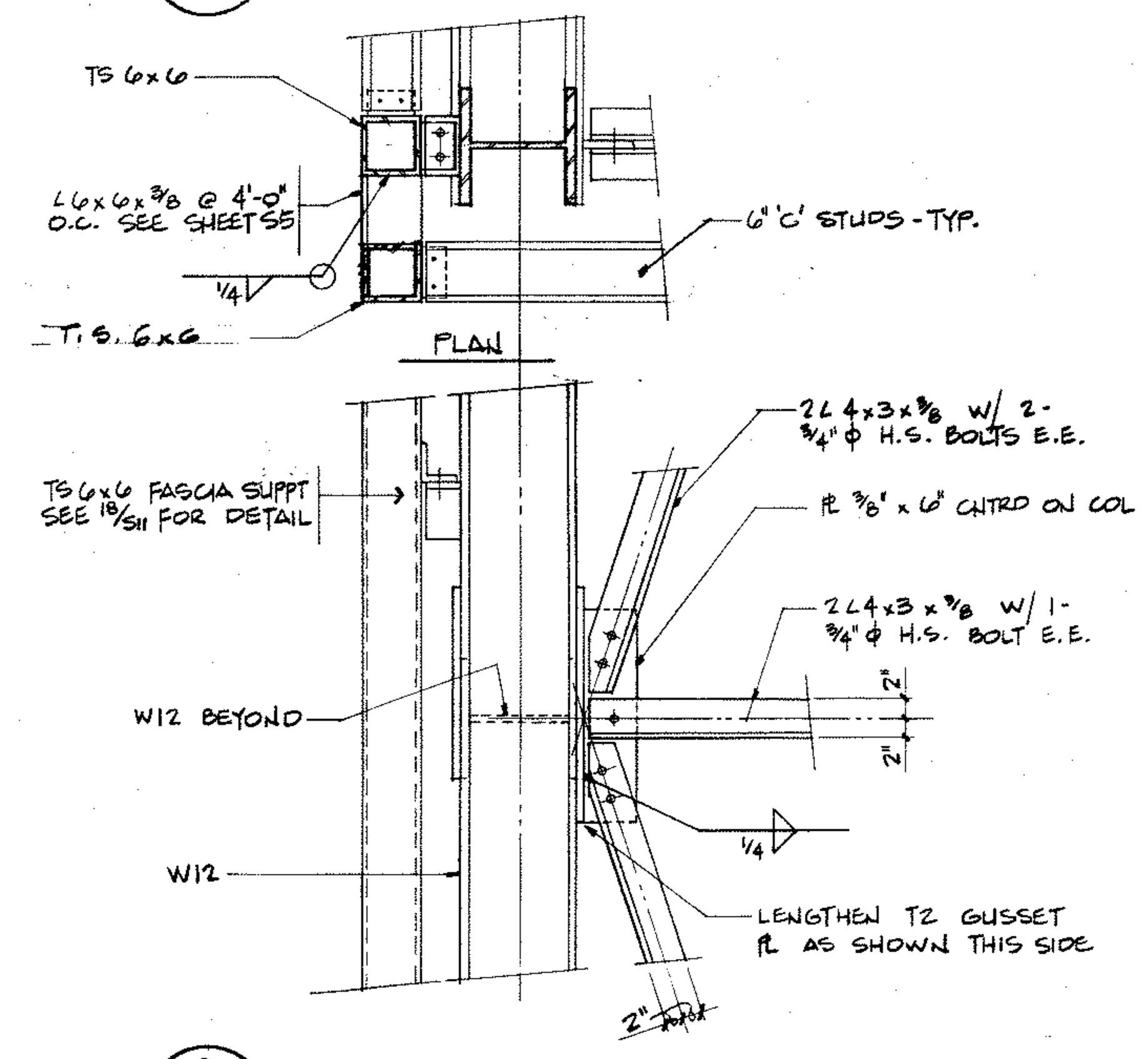
PORTLAND OREGON

S-3

BLDG 375



1/S4 3/4" = 1'-0"



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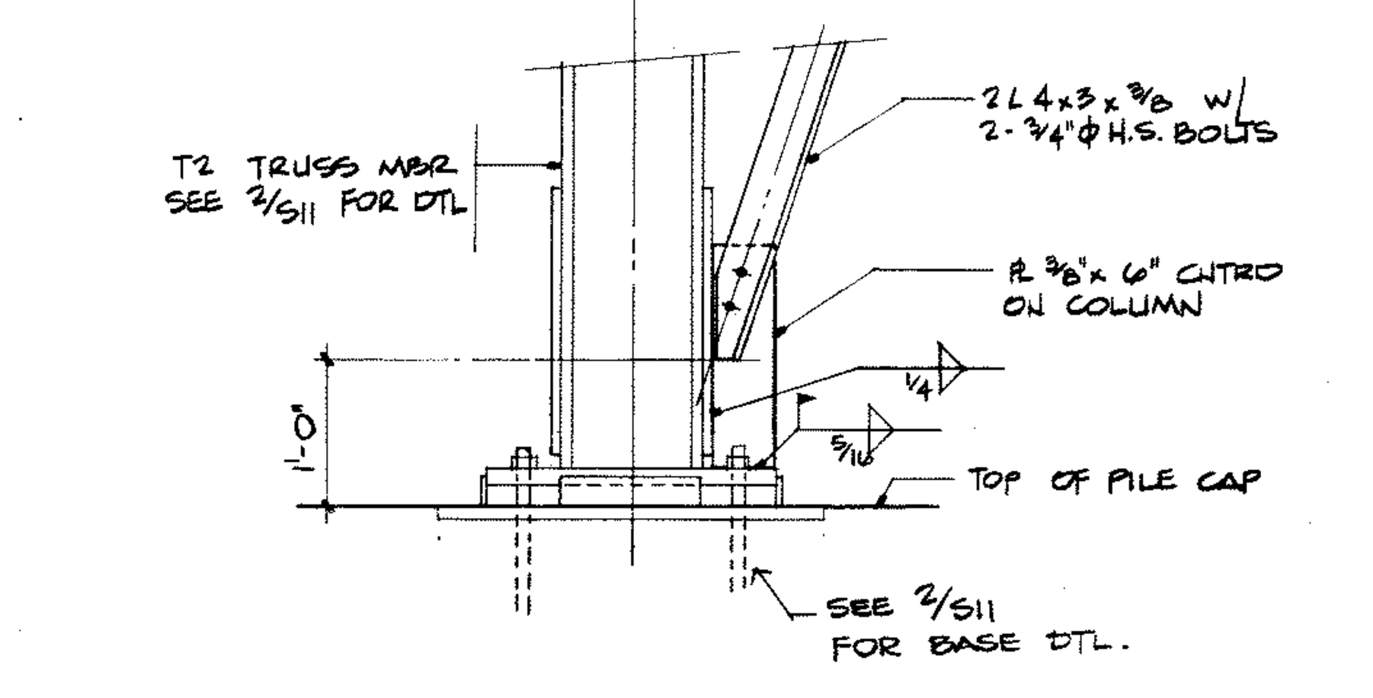

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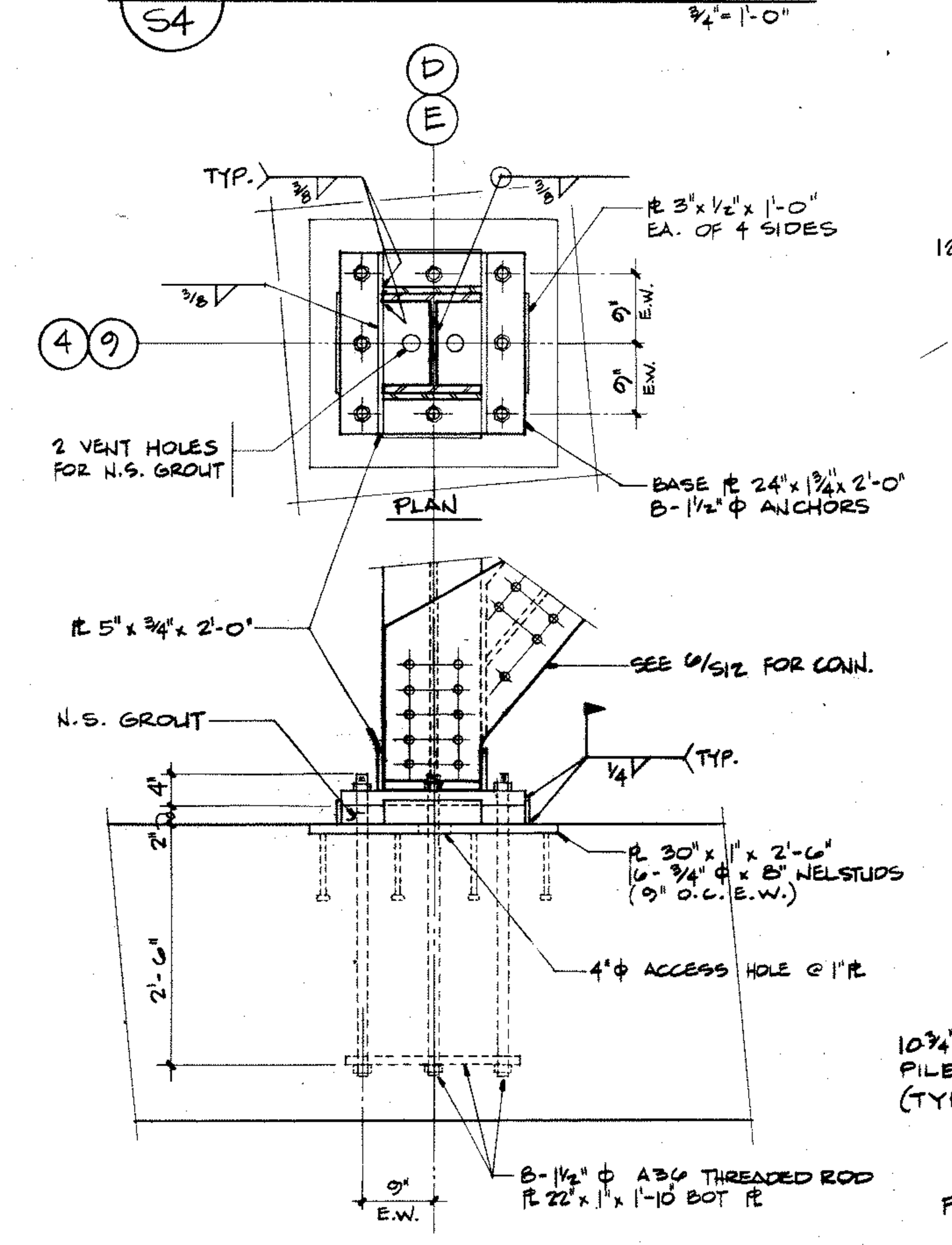

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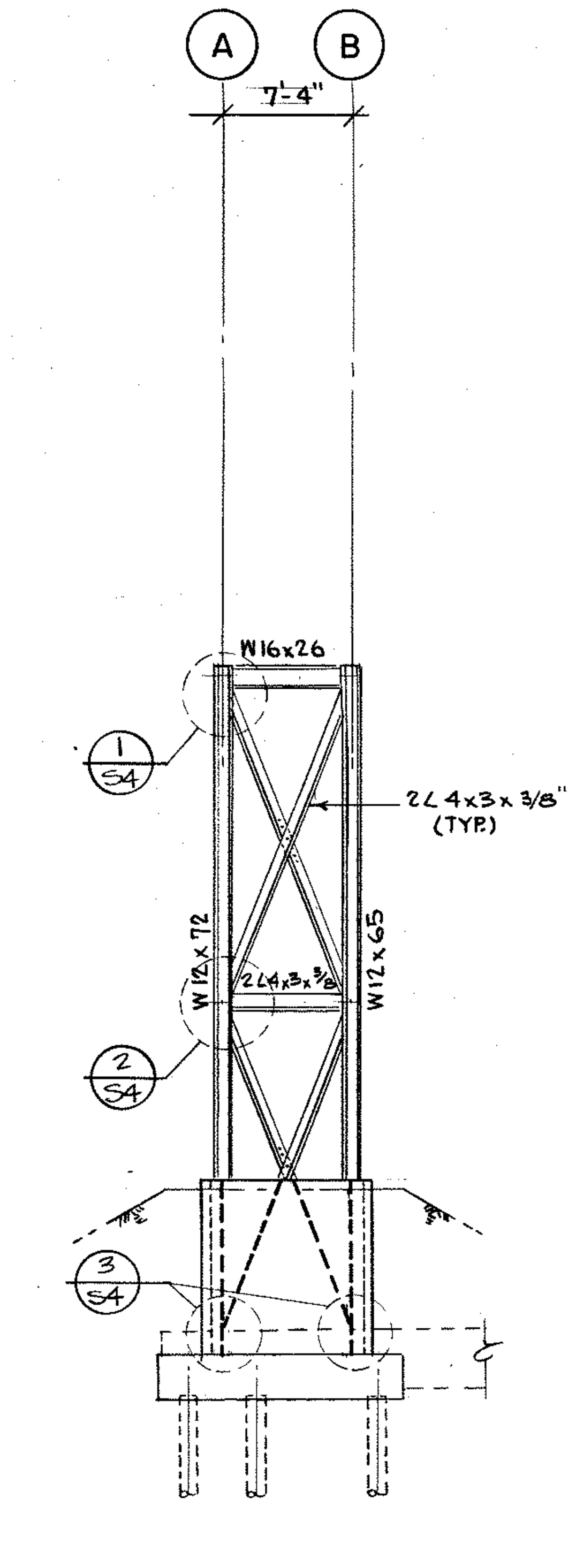
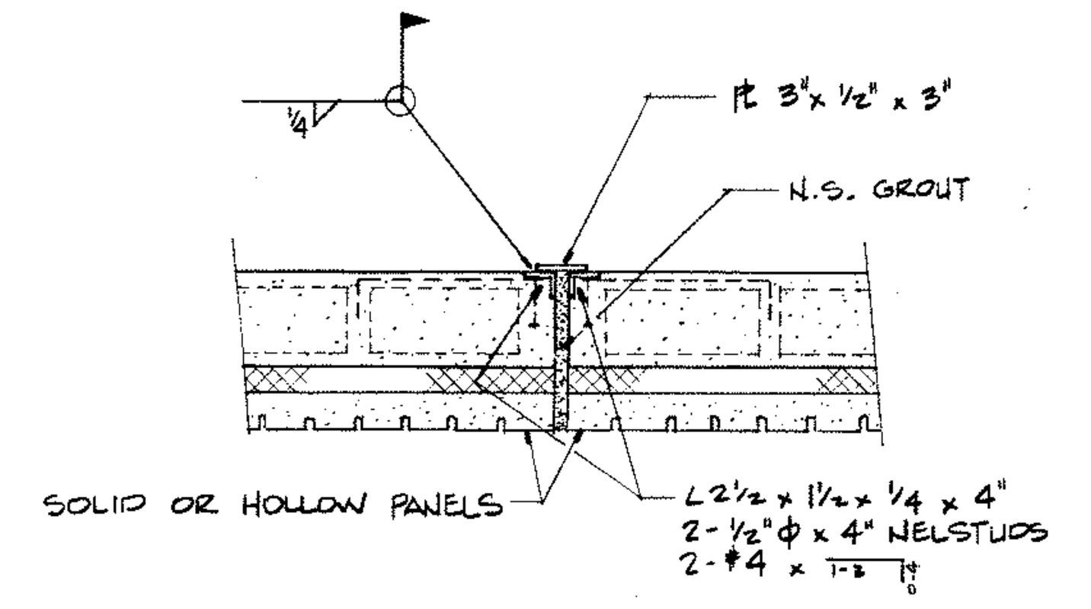


WEST ELEV. ALONG GRID (1)

EAST ELEV. SIMILAR

1/8" = 1'-0"



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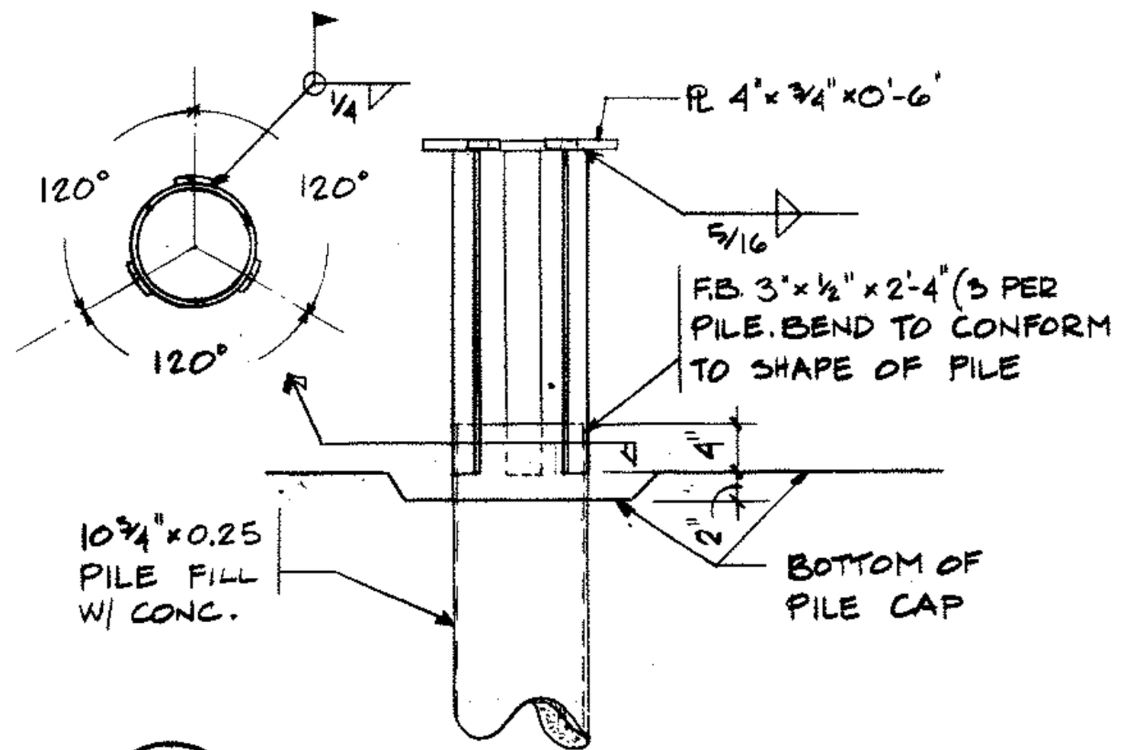
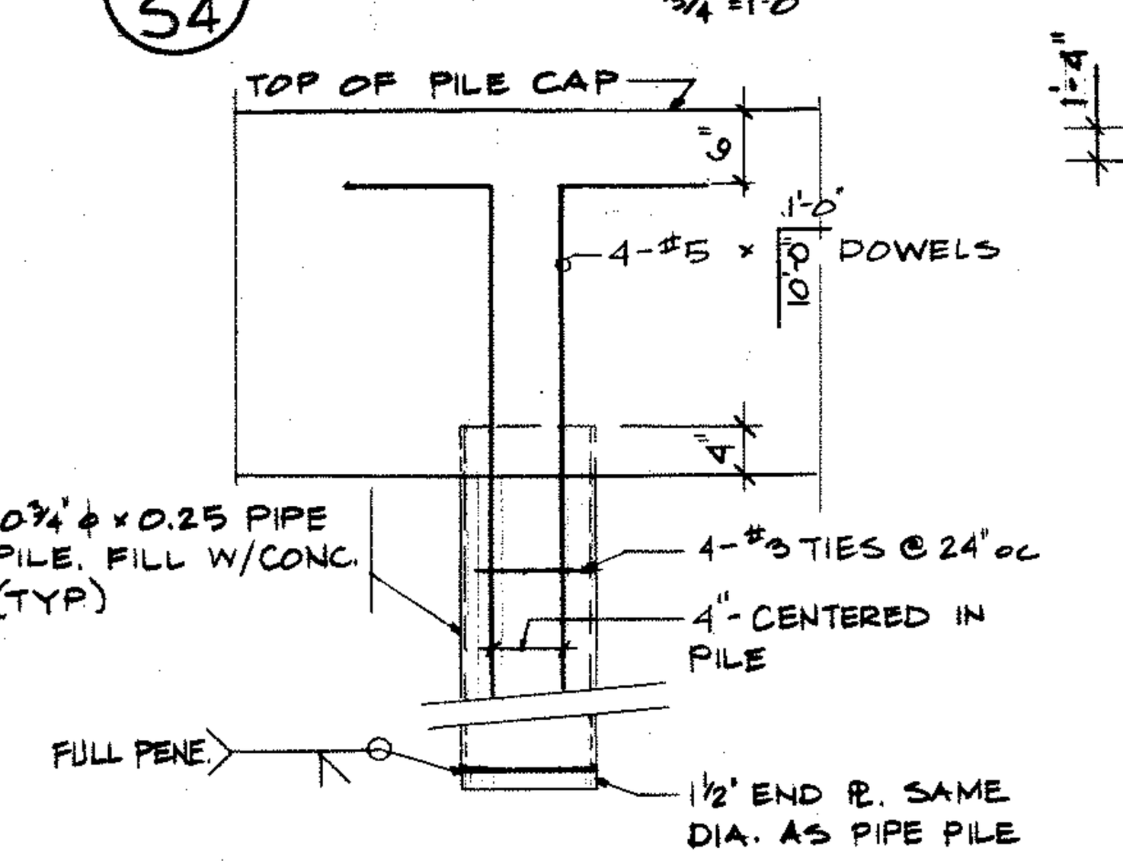
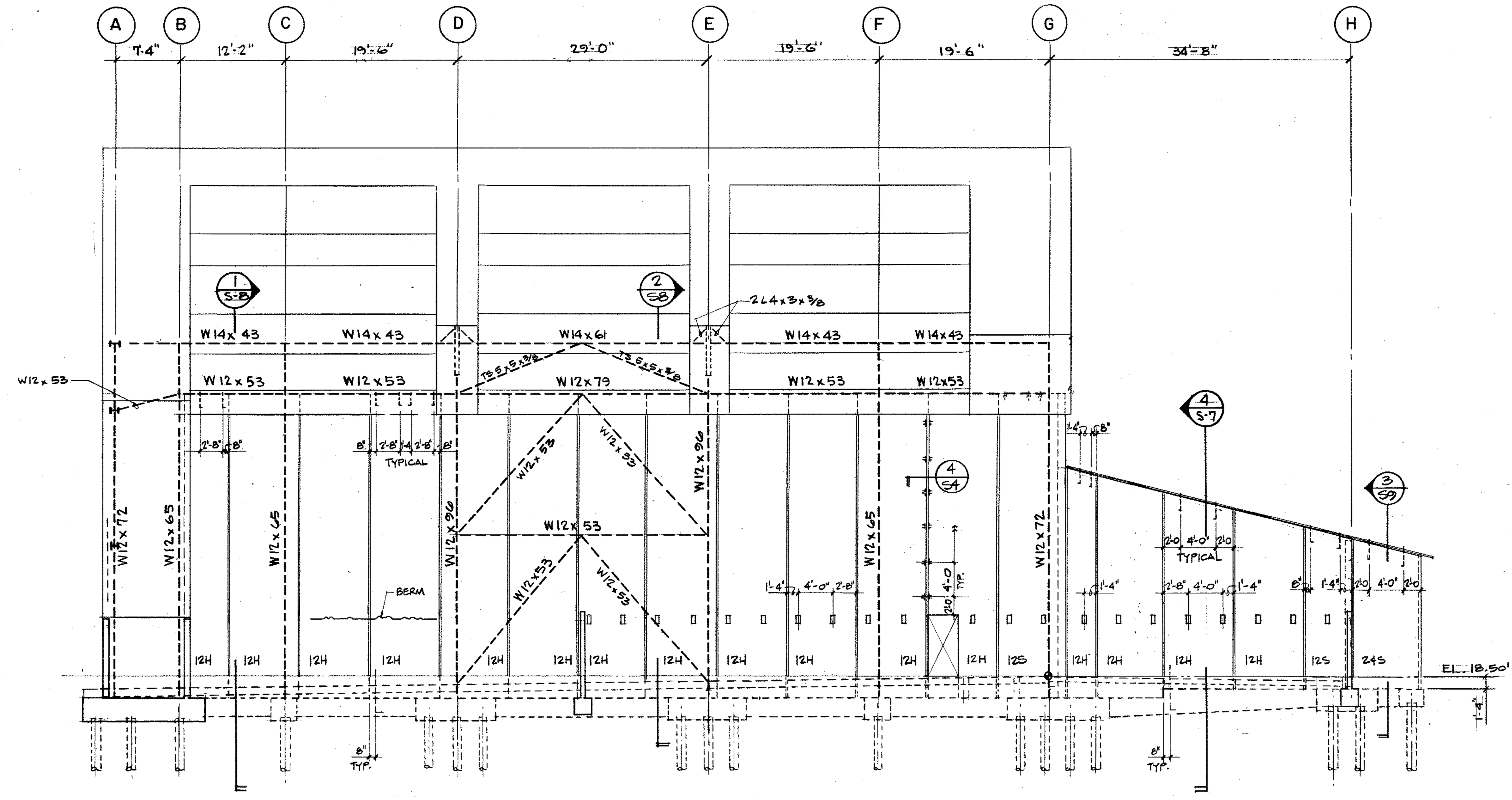


6/S4 3/4" = 1'-0"

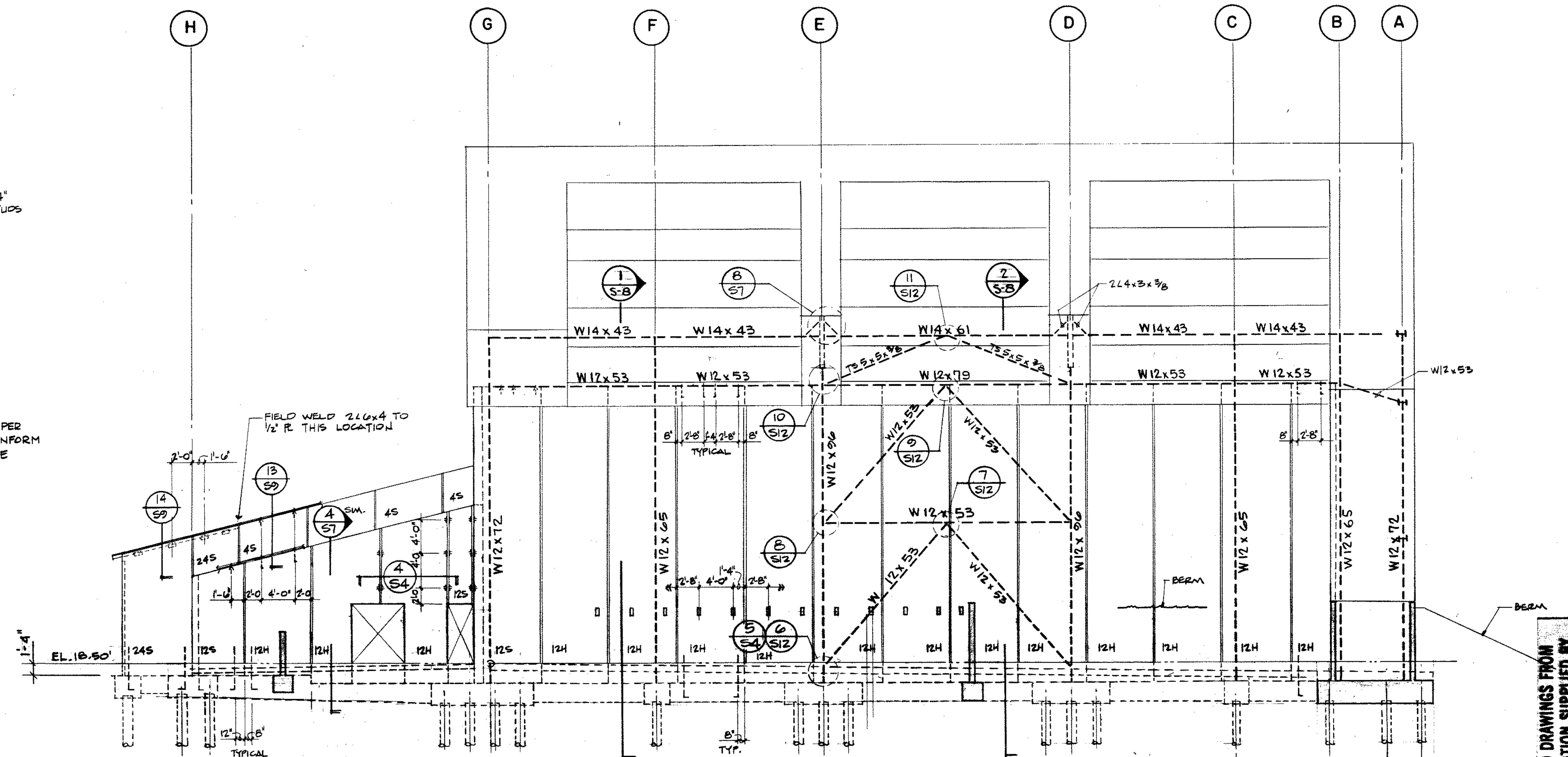


7/S4 3/4" = 1'-0"



WEST SIDE ELEVATION

1/8" = 1'-0"



EAST SIDE ELEVATION

1/8" = 1'-0"

PRECAST WALL PANEL SCHEDULE			
MARK	DESCRIPTION	BASE DTL (U.N.O.)	TOP DTL. (U.N.O.)
12H	8" HOLLOW-CORE + 2" INSULATION + 2" FACE + RIBS (SANDWICH)	2/S8	2/S8
12S	8" SOLID + 2" INSULATION + 2" FACE + RIBS (SANDWICH)		2/S8
8H	8" HOLLOW-CORE	3/S8	3/S8
8S	8" SOLID		3/S8
4S	4" SOLID + RIBS	13/S9	13/S9
24S	2 - 4" SOLID + RIBS BACK TO BACK	3/S9	3/S9

Bid Documents

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

SHEET TITLE: EAST AND WEST ELEVATIONS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR

304th AIR RESCUE RECOVERY SQUADRON

PORTLAND INTERNATIONAL AIRPORT

PORTLAND OREGON

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

DATE FEB. 24, 1984

JOB No 84-125

REVISIONS △ ASBUILT 11-16-87

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S-4

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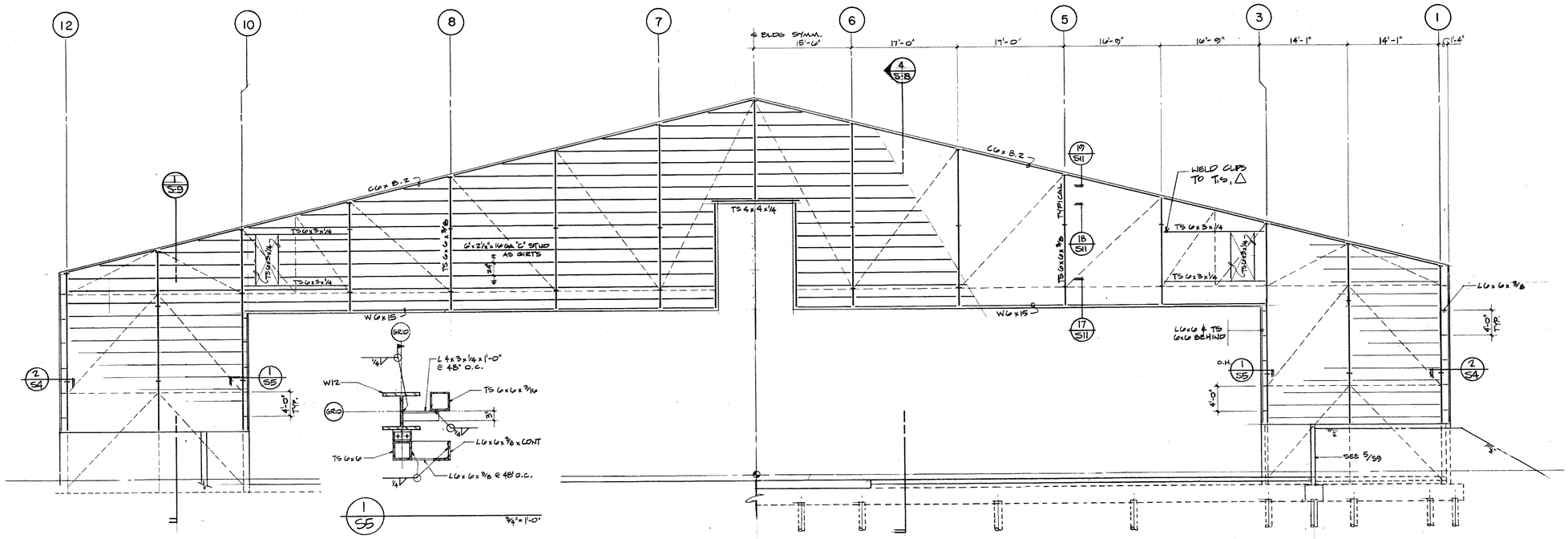
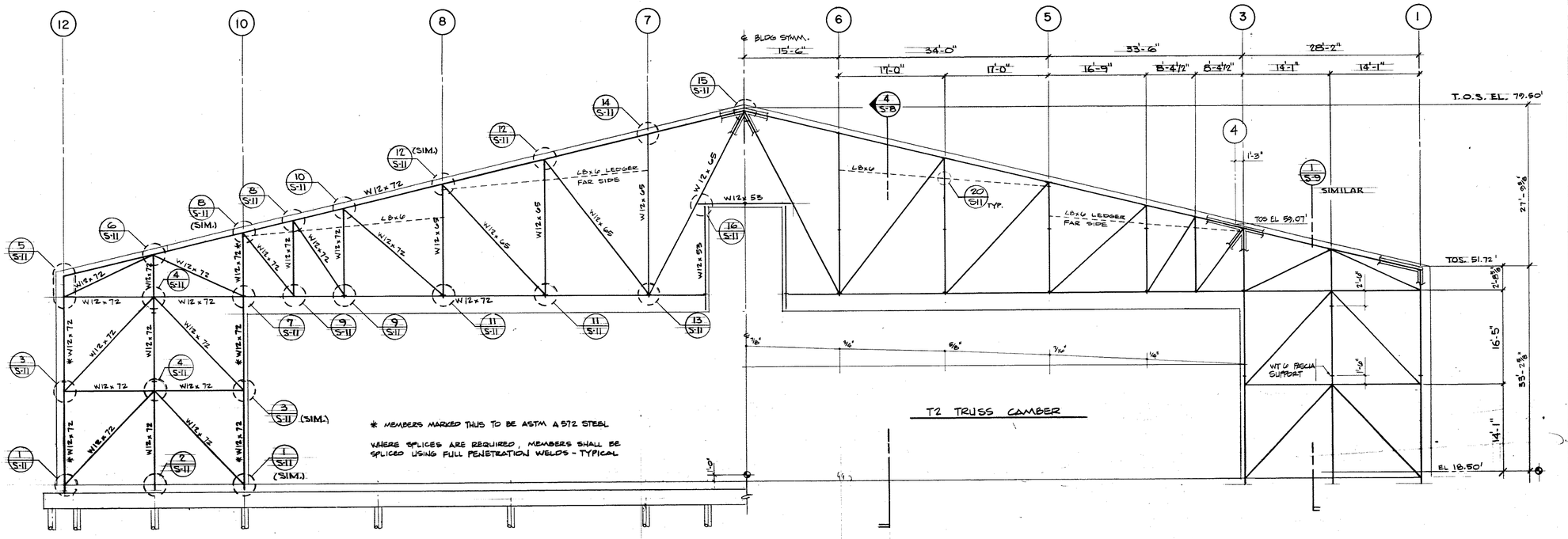


NORTH ELEVATION FASCIA FRAMING

1/8" = 1'-0"



END FRAME at HANGAR DOORS

1/8" = 1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

REGISTERED PROFESSIONAL ENGINEER 9326 OREGON NOV. 24, 1959 JAMES M. HOLMES 1-2-84

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PORTLAND, OREGON

DATE FEB. 20, 1980
JOB NO 84-126
REVISIONS △ AS BUILT 11-16-84

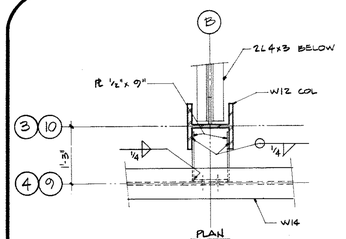
SHEET TITLE PLANNING ELEVATIONS

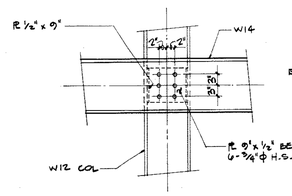
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

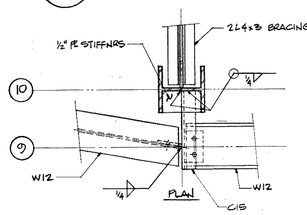
S-5

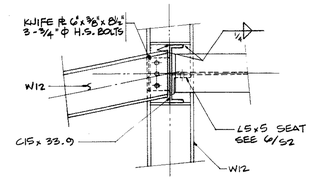
BLDG 375





1 S6 — 3/4" = 1'-0"





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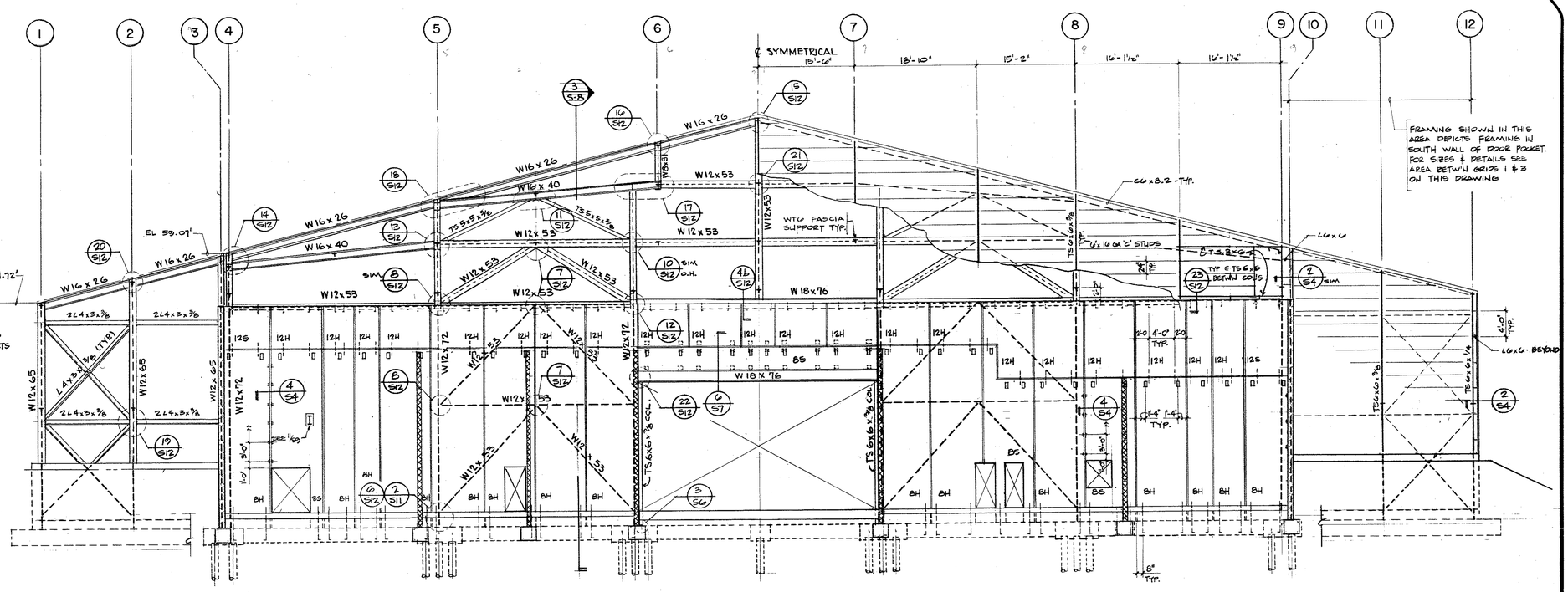
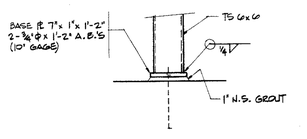
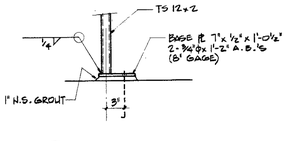


5 S6 **ELEVATION of SOUTH DOCK WALL LOOKING NORTH**
1/8" = 1'-0"

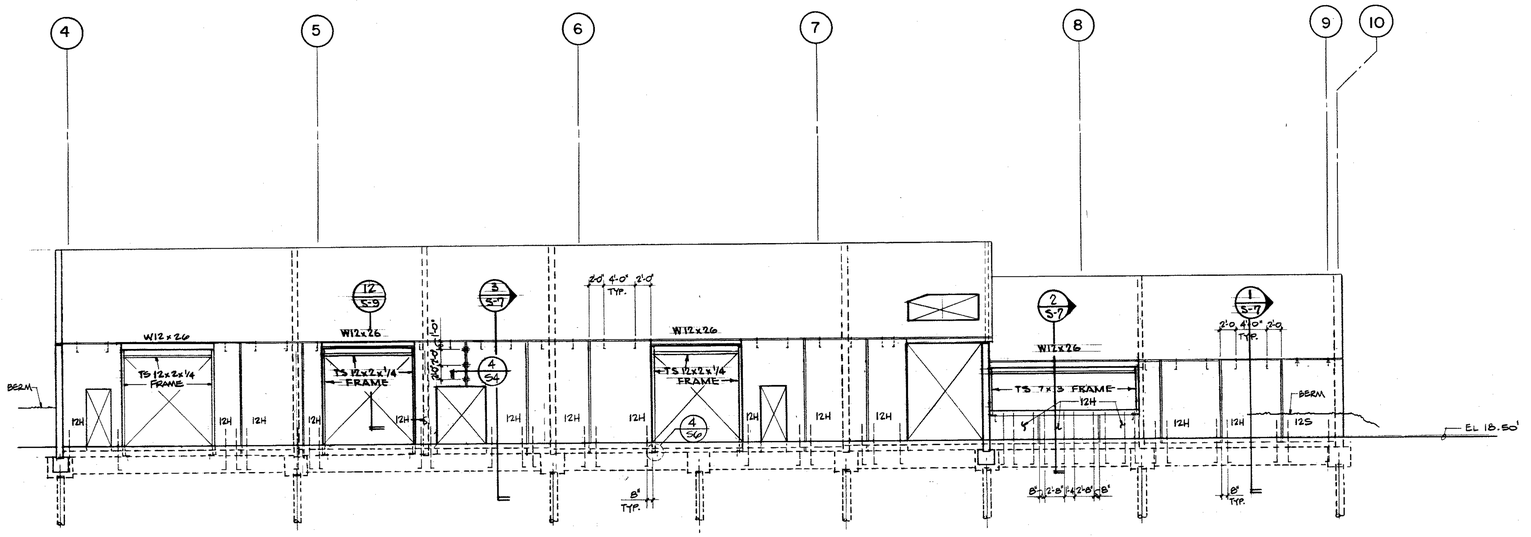
NOTE
HOLLOW P.C. PANELS MAY BE SOLID PROVIDED VOIDS ARE CAST TO ACCOMMODATE DOWEL CONNECTIONS.





3 S6 — 1"=1'-0"

4 S6 — 1"=1'-0"



6 S6 **ELEVATION of SOUTH WALL**

GENERAL NOTES

1. DESIGN LOADS:
   - ROOF: 25 PSF PLUS INCREASE FOR AREAS SUBJECT TO DRIFTING
   - WIND: ANSI A58.1-1982, 90 MPH, EXPOSURE C, IMPORTANCE CLASS III, GPi = ± 0.25
   - SEISMIC: AFM 88-3 CHAPTER 13
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND DETAILS.
3. FOUNDATION DESIGN BASED ON A SUBSURFACE SOIL INVESTIGATION DATED MAY 12, 1983 AND ADDENDUM DATED JUNE 1, 1983 PREPARED BY PITTSBURGH TESTING LABORATORY.
4. ELEVATIONS SHOWN ON PLAN ARE TO BOTTOM OF FOOTING, GRADE BEAM OR PILE CAP UNLESS OTHERWISE NOTED.
5. PILING SHALL BE CONCRETE FILLED PIPE (10 3/4" O.D. X 0.250", ASTM A252, GR. 2) CAPACITY OF PILING SHALL BE 35 TONS PLUS THE DOWNDRAG FORCE FROM SURROUNDING SOIL. DEPTH OF PILE TO ACHIEVE CAPACITY SHALL BE DETERMINED BY A LOAD TEST.
6. MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000 PSI.
7. REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
8. STRUCTURAL STEEL PLATE, BARS AND SHAPES SHALL CONFORM TO ASTM A36 AND ASTM A572, GRADE 50. TUBING SHALL CONFORM TO ASTM A500, GRADE B. BOLTS SHALL CONFORM TO ASTM A307 (DESIGNATED "M.B.") OR ASTM A325 (DESIGNATED "H.S."). USE LOAD INDICATOR WASHERS FOR ALL H.S. BOLTS.
9. STRUCTURAL STEEL MEMBERS AND CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC SPECIFICATIONS, 8TH EDITION.
10. OPEN WEB STEEL JOISTS SHALL BE DESIGNED DETAILED AND BRACED FOR LOADS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE.
11. STEEL ROOF DECK SHALL BE 1 1/2" TYPE "B" GALV. (ACOUSTICAL DECK FOR MOST OF THE BUILDING) AND SHALL HAVE MINIMUM DIAPHRAGM SHEAR CAPACITY AS FOLLOWS: 18 GAUGE, 1000#/LF; 20 GAUGE, 700 #/LF.
12. STEEL ROOF DECK LAYOUT SHALL BE SUCH THAT EACH SHEET SHALL COVER A MINIMUM OF 3 SPANS. WHERE DECK IS PARALLEL TO SUPPORT A LOW CORRUGATION SHALL BE CONTINUOUSLY IN CONTACT WITH THE SUPPORT.
13. STEEL ROOF DECK SHALL BE FASTENED TO EACH PERPENDICULAR SUPPORT WITH 7 PUDDLE WELDS PER SHEET AND TO PARALLEL SUPPORTS WITH PUDDLE WELDS AT 12" O.C. MINIMUM EFFECTIVE DIAMETER OF PUDDLE WELDS SHALL BE 1/2". LONGITUDINAL EDGES SHALL BE INTERLOCKING TYPE AND SHALL BE BUTTON PUNCHED AT 12" O.C.
14. PRECAST WALL PANELS SHALL BE DESIGNED TO SUPPORT ROOF DEAD AND SNOW LOAD TRIBUTARY TO THEM AND WIND OR SEISMIC LOAD IN ACCORDANCE WITH ITEM 1 ABOVE.
15. METAL SIDING AND ROOFING (INCLUDING GIRTS, STUDS AND FASTENERS) AND HANGAR DOORS SHALL BE DESIGNED FOR WIND LOAD AND SNOW LOAD IN ACCORDANCE WITH ITEM 1 ABOVE. MAXIMUM DEFLECTION 1/180 OF SPAN.
16. SLABS ON GRADE IN THE DOCK AND APRON AREAS HAVE BEEN DESIGNED FOR A MINIMUM SUB-GRADE MODULUS (K) OF 100 WHICH SHALL BE VERIFIED, AFTER PLACEMENT OF LEVELING COURSE, BY A PLATE BEARING TEST.
17. SHRINKAGE COMPENSATING CONCRETE SLABS (CHEM-COMP) SHALL BE USED WHERE NOTED AND SHALL BE PLACED PRIOR TO ADJACENT SLABS. CONCRETE FOR THESE SLABS SHALL BE TYPE 2 MIX DESIGN (SEE SPECS.). TYPE 1 MIX DESIGN SHALL BE USED FOR ALL OTHER SLABS. TYPE 3 MIX DESIGN SHALL BE USED FOR ALL OTHER CAST-IN-PLACE CONCRETE.

REGISTERED PROFESSIONAL ENGINEER — JACK C. MILLER — PORTLAND, OREGON — 1464 — STATE OF OREGON

REGISTERED PROFESSIONAL ENGINEER — 4326 — Samuel M. Holmes — SAMUEL M. HOLMES — 1-2-86

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PORTLAND, OREGON

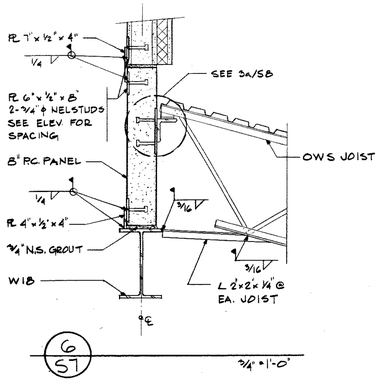
DATE FEB. 20, 1986
JOB NO 84-125
REVISIONS AS BUILT 11-20-87

SHEET TITLE FRAMING ELEVATIONS

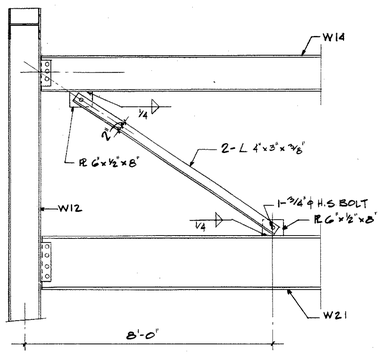
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

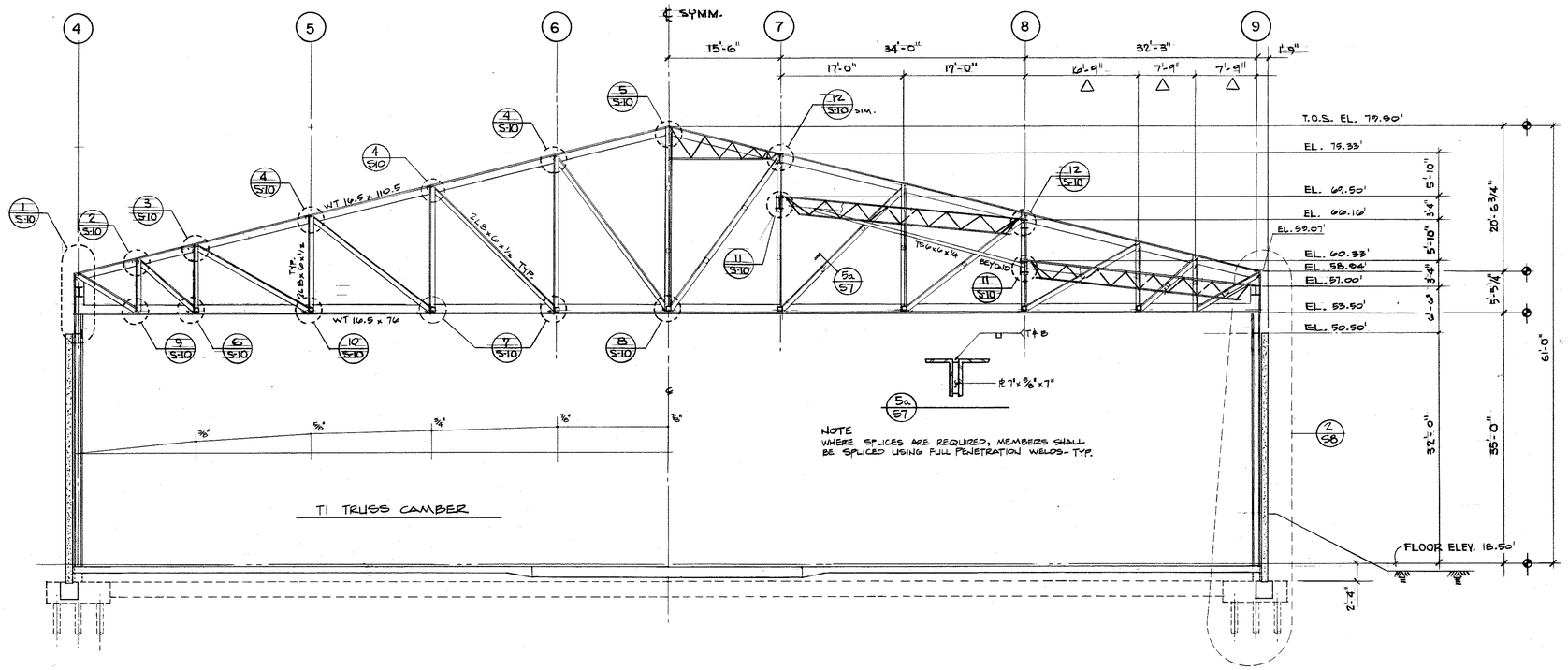
S-6

BLDG 375



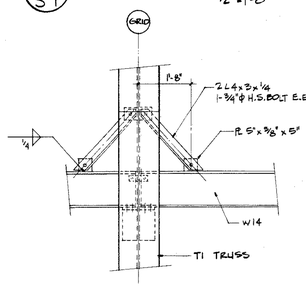
6/S7 — ¾" = 1'-0"





5/S7 — BUILDING CROSS SECTION and T1 TRUSS ELEVATIONS — ⅛" = 1'-0"

7/S7 — ½" = 1'-0"



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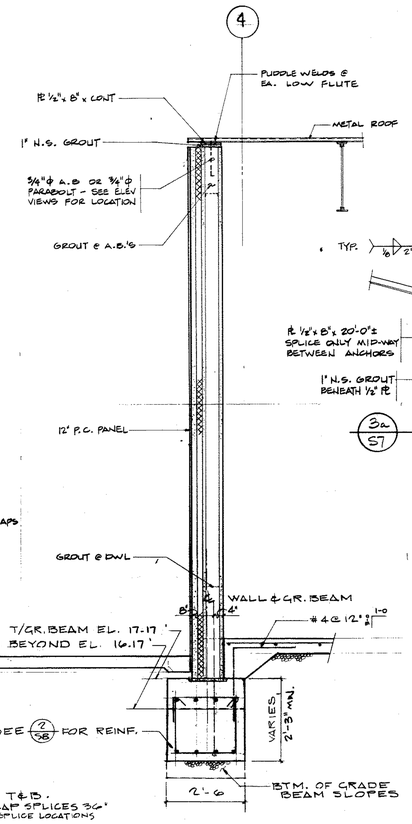

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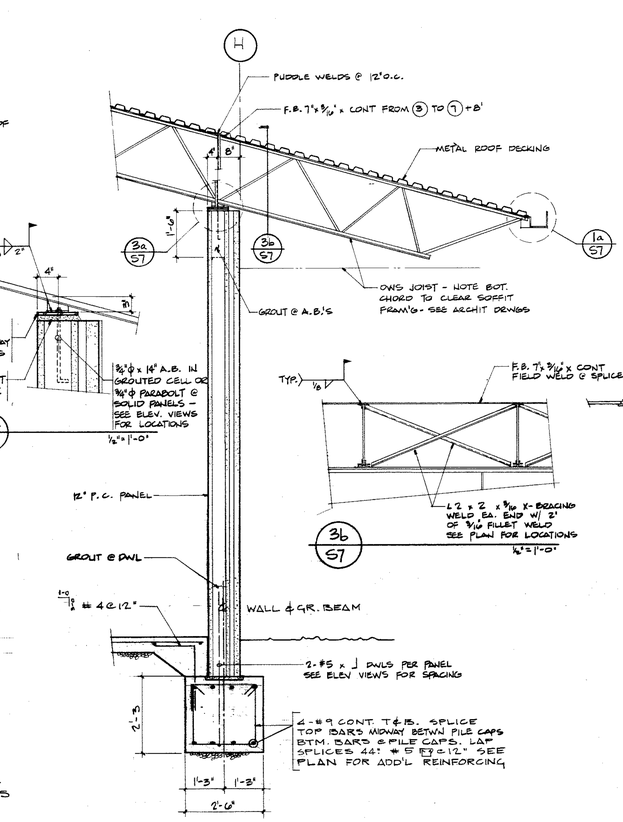

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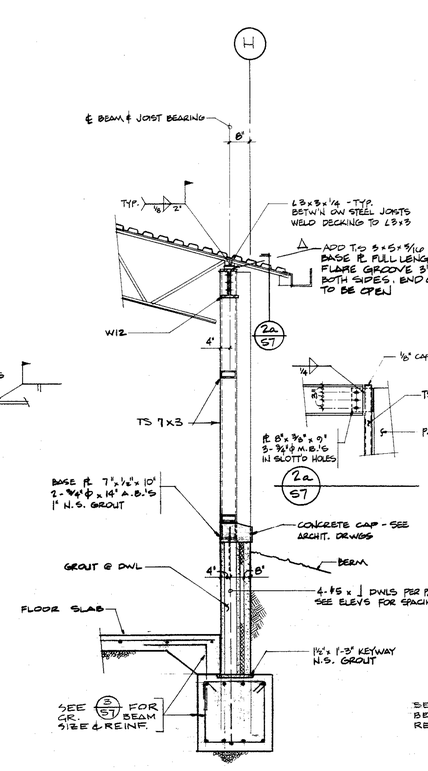

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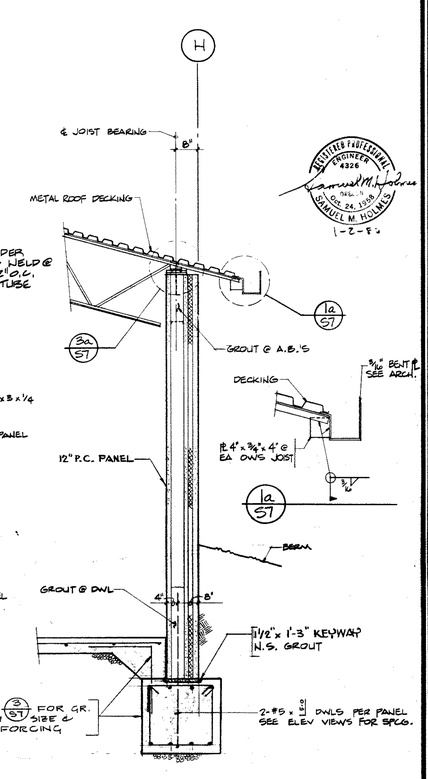

1/S7 — ½" = 1'-0"

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DATE FEB 20, 1980
JOB NO 84.125
REVISIONS △ AS BUILT 11-16-81

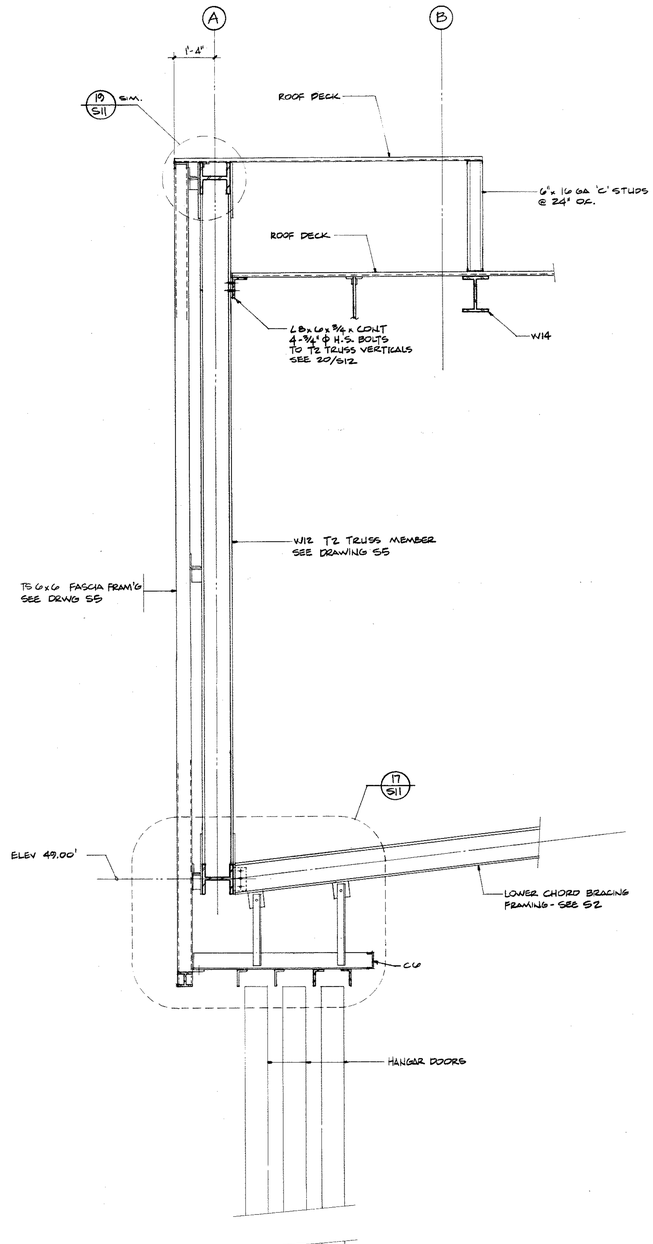
REGISTERED ARCHITECT JACK C. MILLER PORTLAND OREGON 1464 STATE OF OREGON

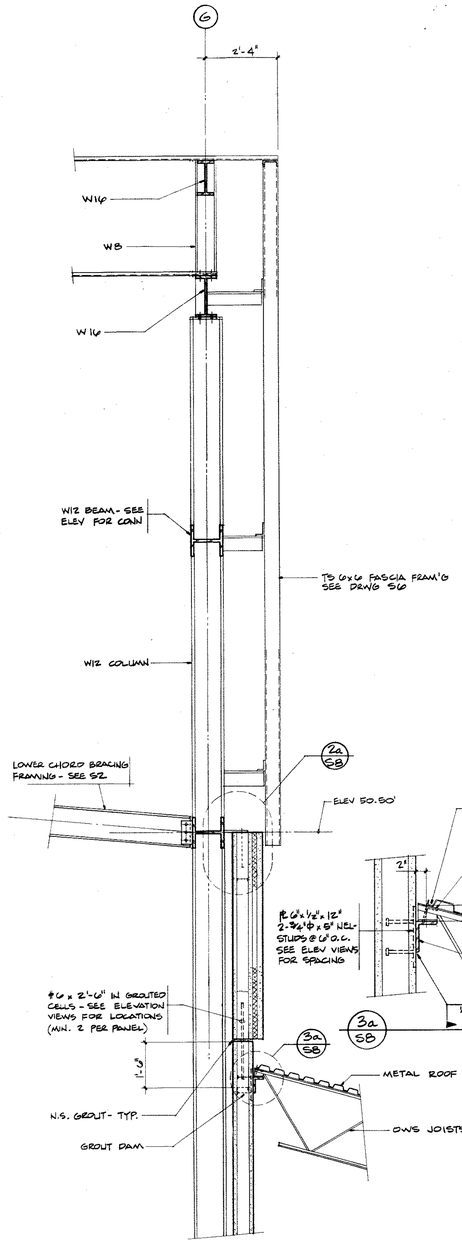
SHEET TITLE: FUEL SYSTEM & WALL SECTIONS

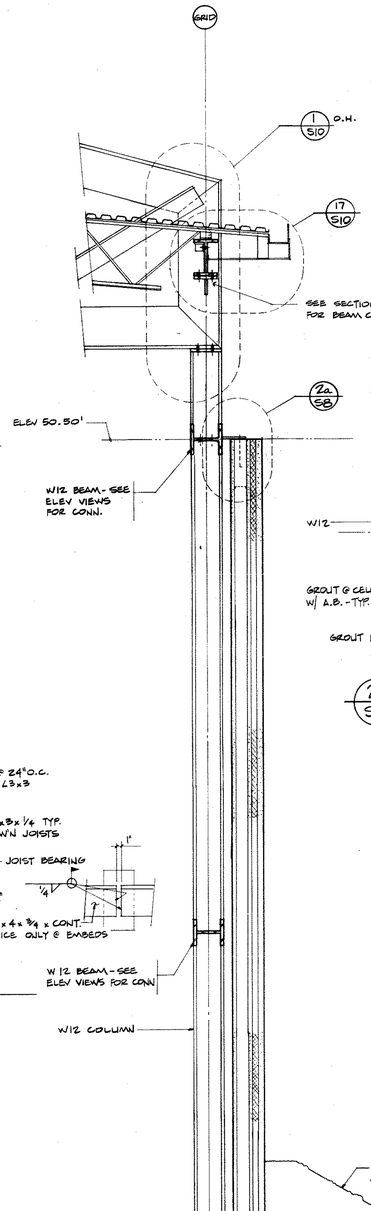
C-130 FUEL SYSTEM / CORROSION CONTROL
MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

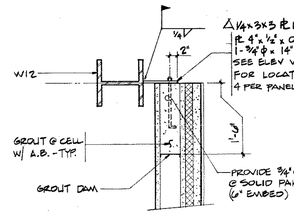
S-7

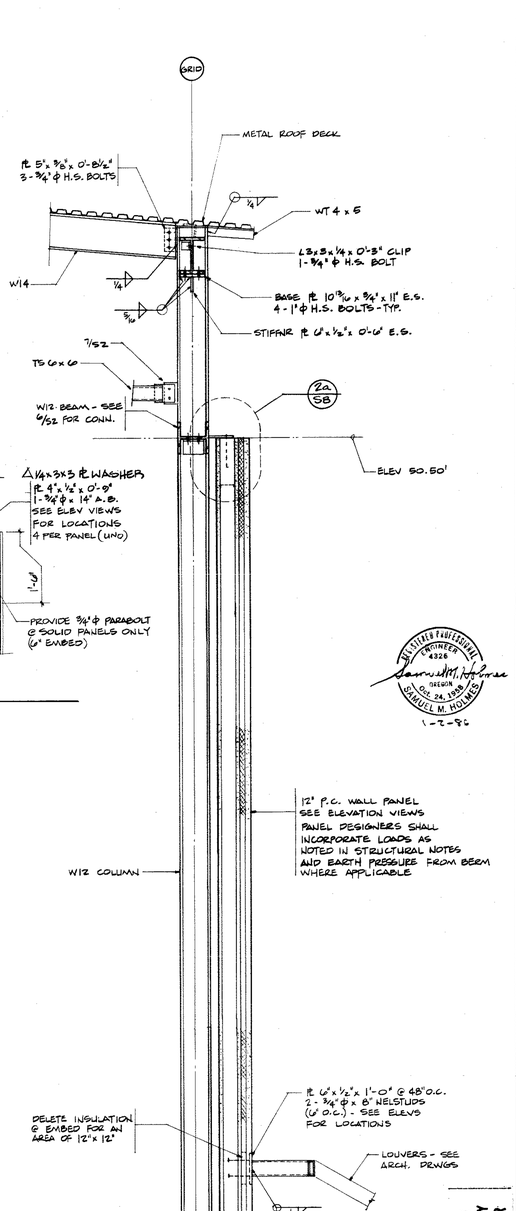
BLDG 375

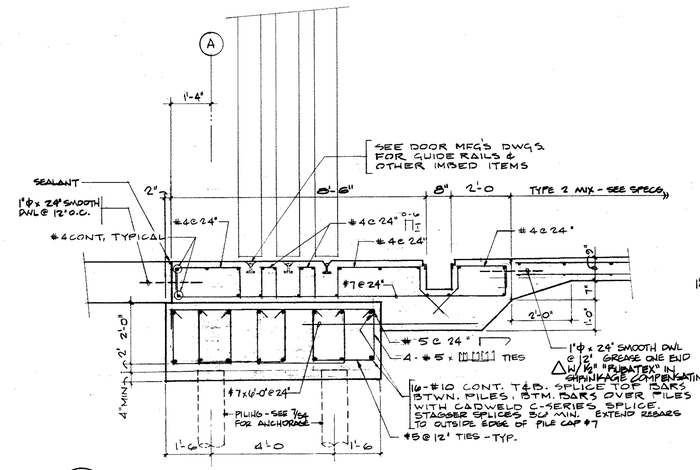


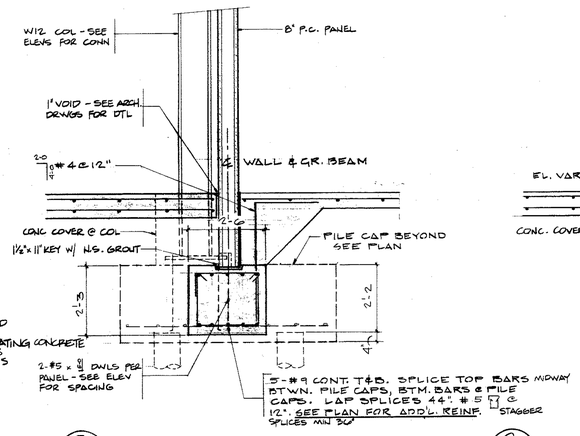


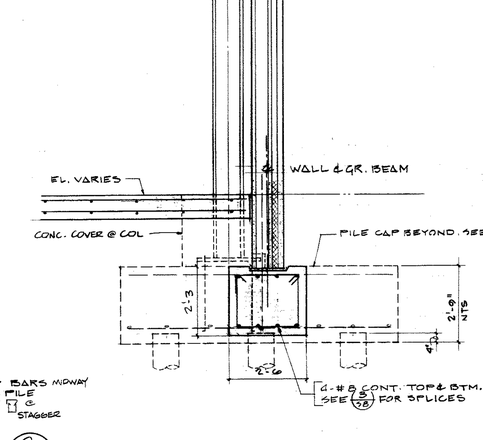












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REGISTERED PROFESSIONAL ENGINEER 4326 OREGON JULY 24, 1985 SAMUEL M. HOLMES
1-7-86

REGISTERED ARCHITECT JACK C. MILLER PORTLAND, OREGON 1464 STATE OF OREGON

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DATE FEB. 6, 1986
JOB NO 84-126
REVISIONS △ AS BUILT 11-4-87

SHEET TITLE : WALL SECTIONS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

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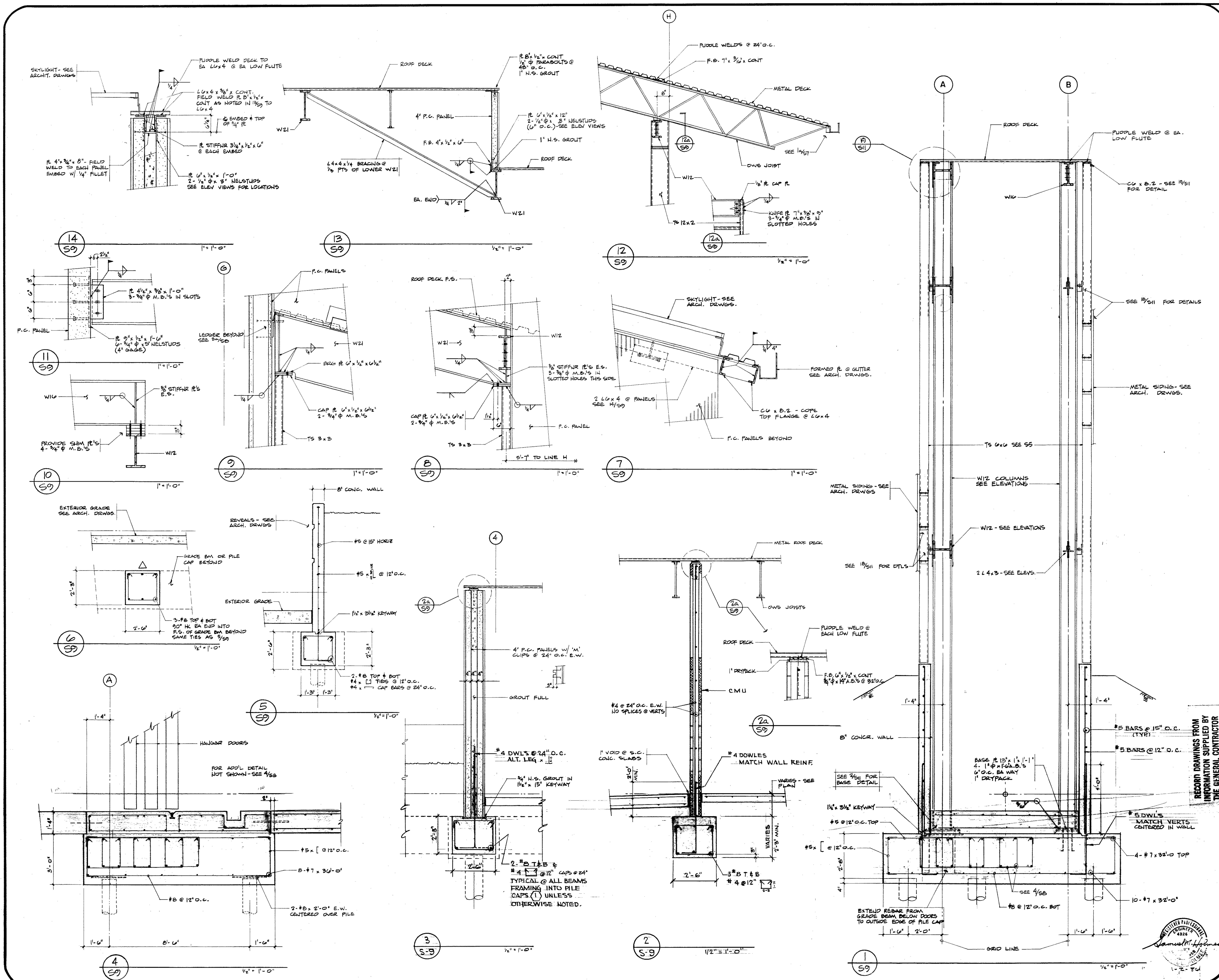
PRINT GRAPHICS



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SHEET TITLE: WALL SECTIONS

C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

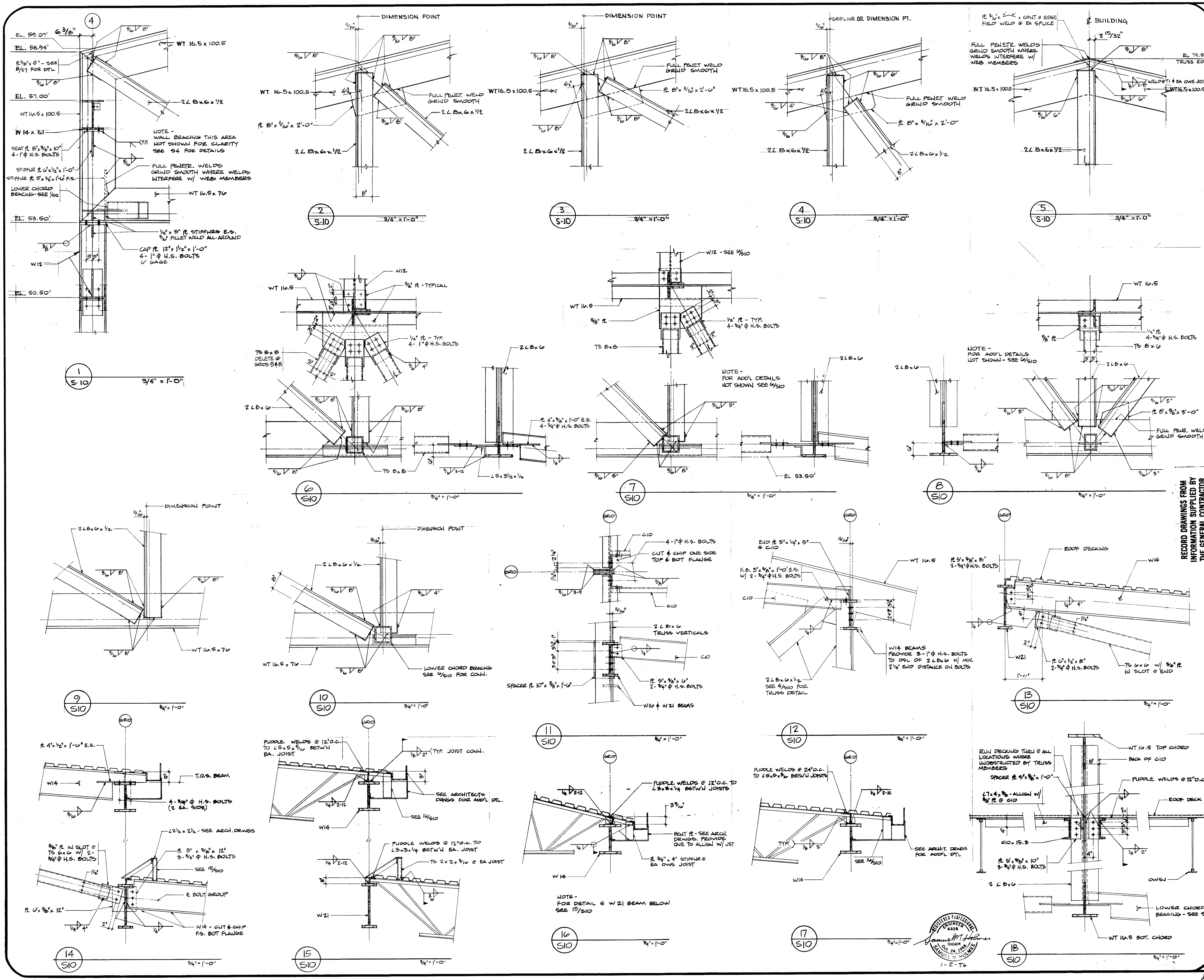
REGISTERED ARCHITECT — JACK C. MILLER — PORTLAND, OREGON — STATE OF OREGON

DATE FEB. 24, 1986
JOB NO 84-125
REVISIONS △ AS BUILT 11-10-87

miller · cook architects a.i.a.
30 N.W. 1st AVE.
PORTLAND, OREGON 97209
(503) 226-0882

S-9

BLDG 375



RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

miller · cook architects a.i.a.
30 N.W. 1st AVE. PORTLAND, OREGON
(503) 226-0682 97209

DATE FEB 24, 1986
JOB No 84.125
REVISIONS AS BUILT 11-16-87

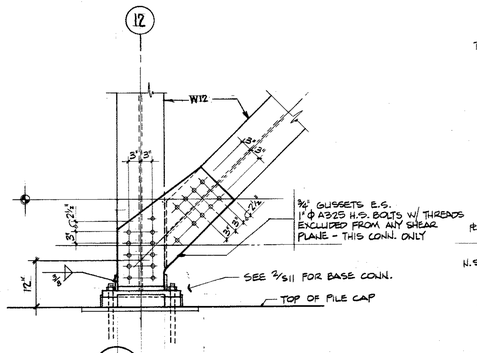
REGISTERED ARCHITECT JACK C. MILLER PORTLAND OREGON 1464 STATE OF OREGON

SHEET TITLE: [redacted]
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

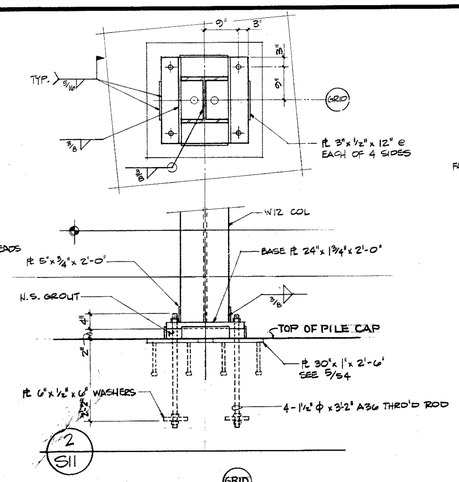
S-10

FORD GRAPHICS

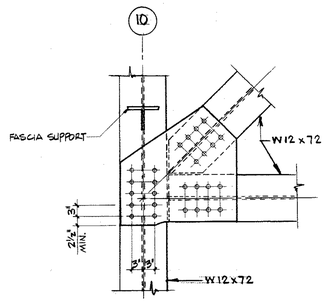
BLDG 375



1 / S-11 — 3/4" = 1'-0"



2 / S11



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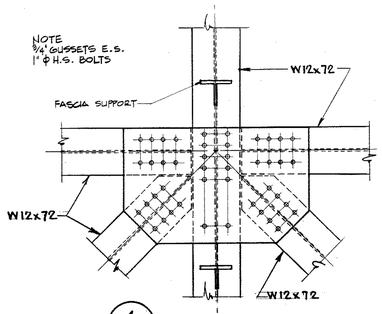

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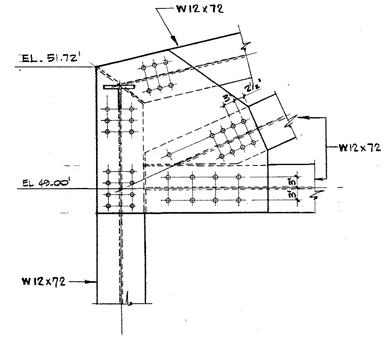

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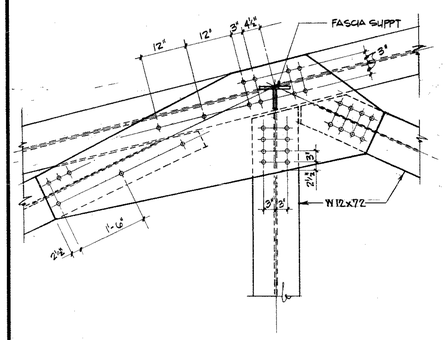

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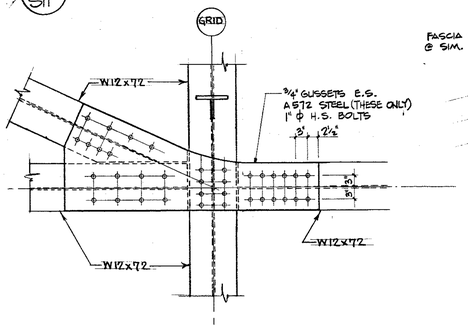

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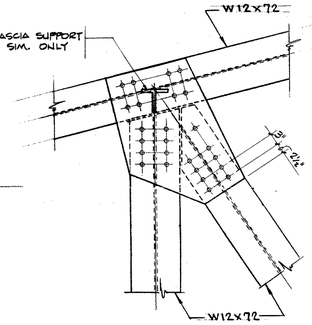

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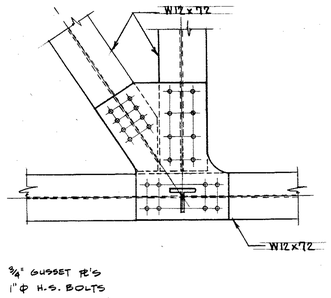

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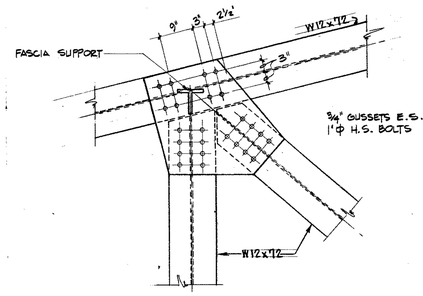

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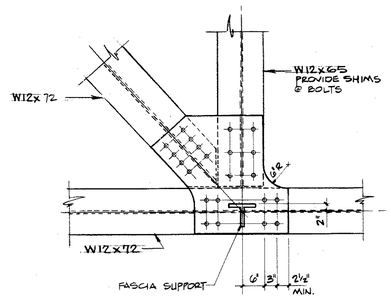

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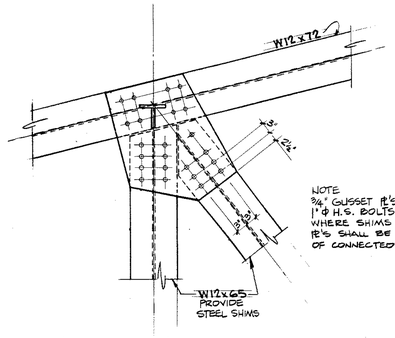

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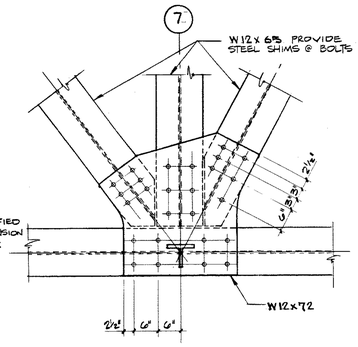

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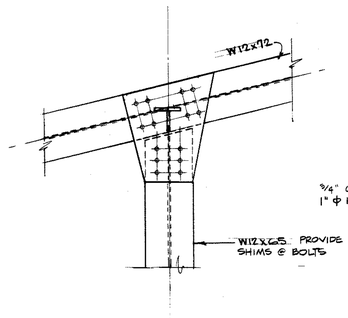

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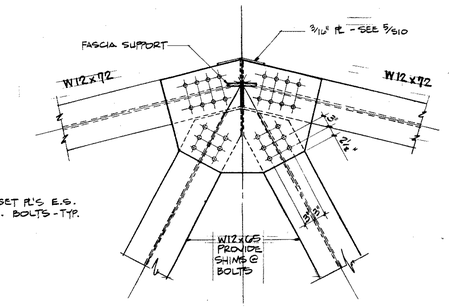

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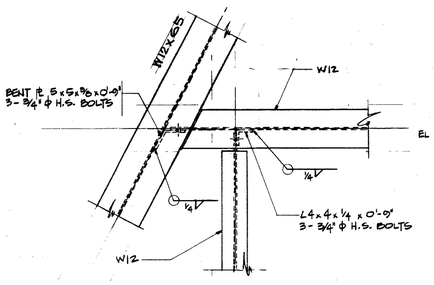

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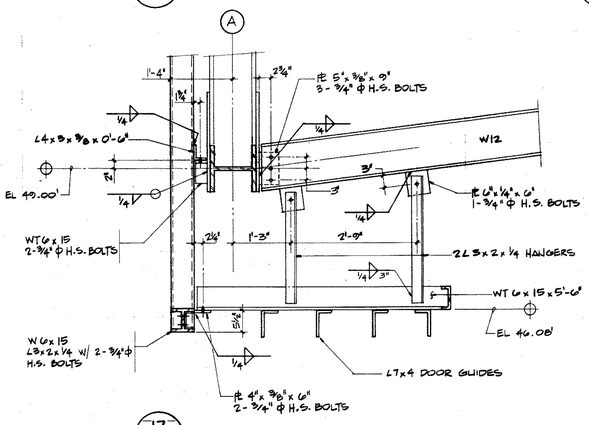

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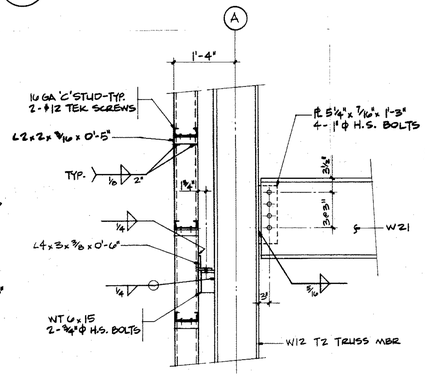

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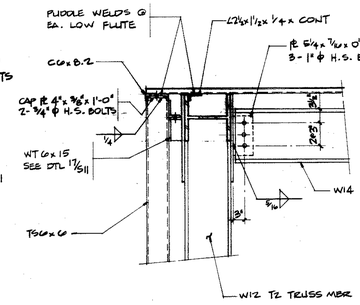

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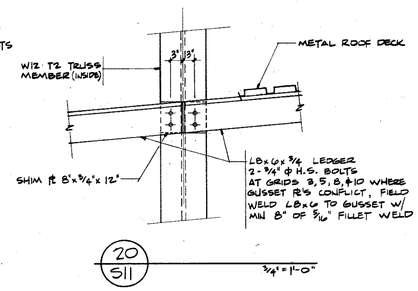

20 / S11 — 3/4" = 1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

REGISTERED PROFESSIONAL ENGINEER 4326 OREGON DEC 31, 1988 SAMUEL M. HOLMES 1-2-88

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97208
30 N.W. 9TH AVE.
PORTLAND, OREGON

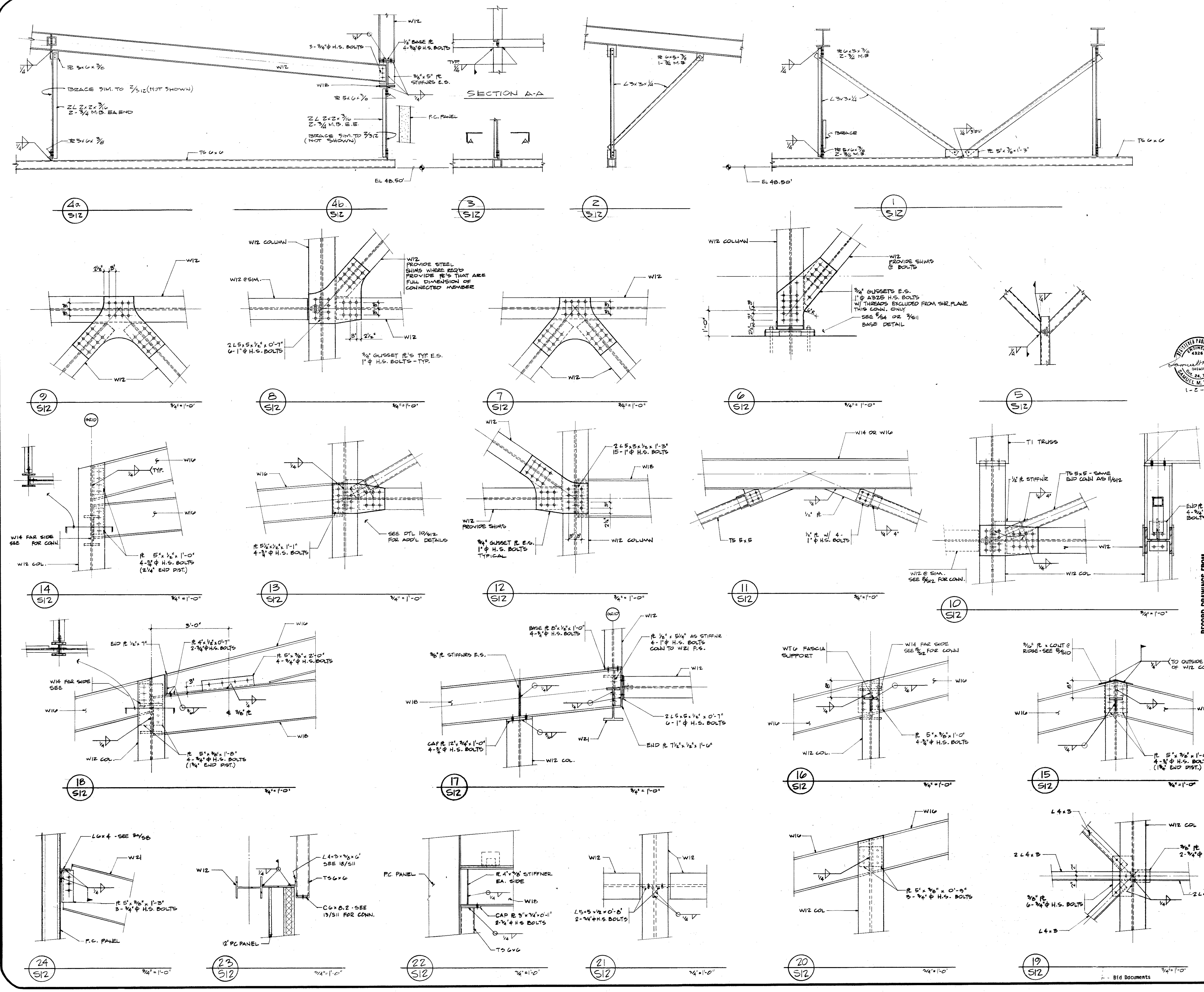
DATE FEB 10, 1988
JOB NO 04 125
REVISIONS AS BUILT 11-10-87

REGISTERED ARCHITECT JACK C. MILLER PORTLAND OREGON 1464 STATE OF OREGON

SHEET TITLE: STRUCTURAL
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

S-11

BLDG 375



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PORTLAND, OREGON 97209
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DATE FEB. 26, 1986
JOB NO 84.125
REVISIONS AS-BUILT 11-10-87

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

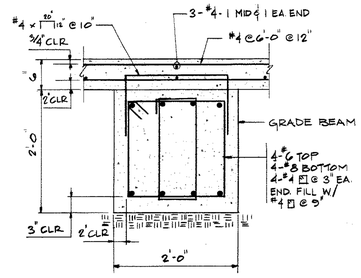
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

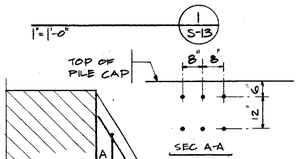
S-12

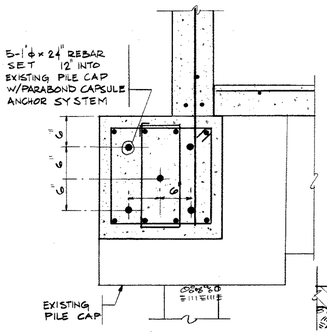
Bid Documents

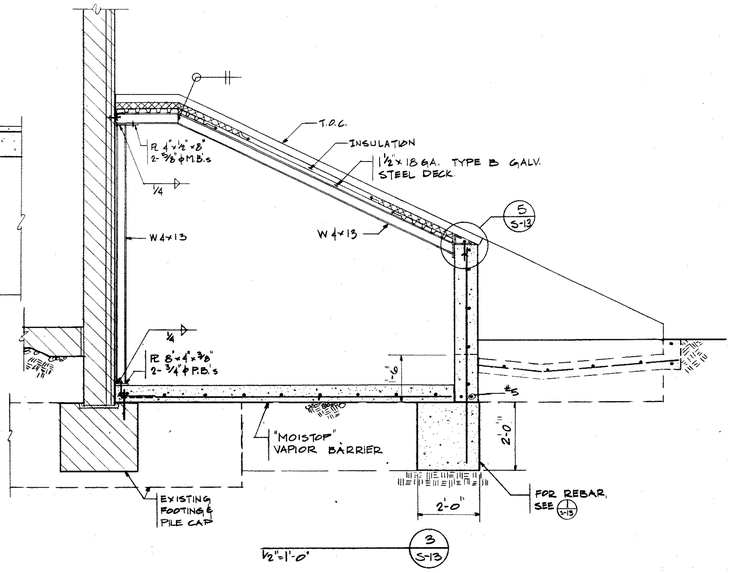
FORD GRAPHICS

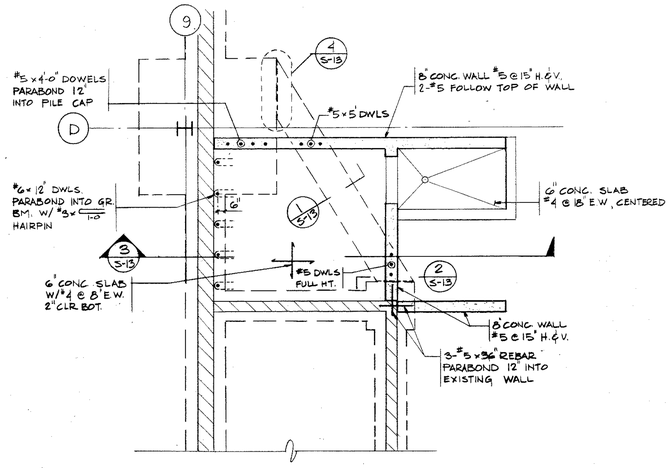
BLDG 375

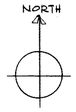




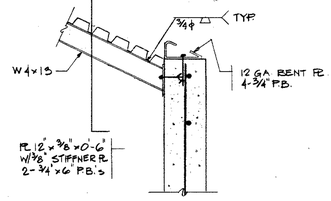


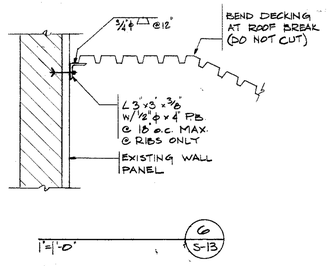


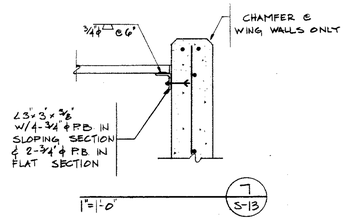


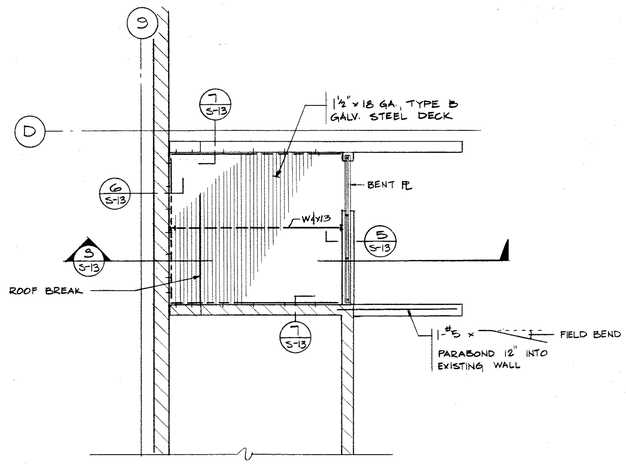


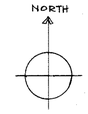
FOUNDATION-FLOOR PLAN (A S-13)
1/4"=1'-0"











ROOF PLAN (B S-13)
1/4"=1'-0"

RECORD DRAWINGS FROM INFORMATION SUPPLIED BY THE GENERAL CONTRACTOR

REGISTERED PROFESSIONAL ENGINEER 4326 OREGON DEC. 24, 1958 SAMUEL M. HOLMES
3-9-87

SAMUEL HOLMES ASSOCIATES
Structural Engineers
1410 S.W. Morrison
PORTLAND, OR 97205
(503) 226-1260

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30 N.W. 9th AVE.
PORTLAND, OREGON

DATE MARCH 11, 1987
JOB NO 85-126-04
REVISIONS AS BUILT 11-16-87

REGISTERED ARCHITECT JACK C. MILLER Jack C. Miller PORTLAND, OREGON 1464 STATE OF OREGON

SHEET TITLE:
C-130 FUEL SYSTEM / CORROSION CONTROL MAINTENANCE HANGAR
304th AIR RESCUE RECOVERY SQUADRON
PORTLAND INTERNATIONAL AIRPORT
PORTLAND OREGON

S13

BLDG 375

GENERAL NOTES

CODES AND STANDARDS

1. TI800-01 CORPS OF ENGINEERS DESIGN CRITERIA
   UFC 3-310-01 LOAD ASSUMPTIONS FOR BUILDINGS
   TI809-02 STRUCTURAL DESIGN CRITERIA FOR BUILDINGS
   TI809-04 SEISMIC DESIGN FOR BUILDINGS
   TI809-07 DESIGN OF COLD-FORMED LOAD BEARING STEEL SYSTEMS AND MASONRY VENEER/STEEL STUD WALLS
   TI809-26 WELDING - DESIGN PROCEDURES AND INSPECTIONS
   TI809-27 CONCRETE FLOOR SLAB ON GRADE SUBJECTED TO HEAVY LOADS
   TI809-29 STRUCTURAL CONSIDERATIONS FOR METAL ROOFING
   TI809-30 METAL BUILDING SYSTEMS
   TI809-52 COMMENTARY ON SNOW LOADS
   TI809-53 SELECTIONS CONSIDERATION FOR ROOFING SYSTEMS
   AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
   ASCE 7-98 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
2. INTERNATIONAL BUILDING CODE (IBC) 2000 EDITION.
3. STRUCTURAL AND MISCELLANEOUS STEEL FABRICATION AND ERECTION THEREOF SHALL CONFORM TO THE "SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" (AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION).
4. WELDING OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO THE LATEST EDITION OF "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1).
5. AMERICAN CONCRETE INSTITUTE (ACI). BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
6. STEEL DECK INSTITUTE (SDI). DESIGN MANUAL AND DIAPHRAGM DESIGN MANUAL.
7. AMERICAN SOCIETY FOR CIVIL ENGINEERS STANDARD ASCE 7-98 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

DESIGN LOADS

1. LIVE LOADS: IBC 2000
   ROOF (SNOW) 25 PSF
2. DEAD LOADS
   ACTUAL WEIGHT OF ELEMENTS (ASSUMED 43 PSF FOR ROOF)
3. WIND LOAD: ASCE 7-98

$P = q_h[(GCpf)-(GCpi)]$
$q_h = 0.00256\,(K_z)(K_{zt})V^2\,I$
h = 50ft
EXPOSURE "C"
K_z = 1.09
K_{zt} = 1.00 FLAT TERRAIN
V = BASIC WIND SPEED = 90 mph
I =1.00
Gcpi = +/- 0.55 (PARTIALLY ENCLOSED)

4. SEISMIC LOAD (TI809-04 AND IBC 2000)

V (BASE SHEAR) = $Cs\ W = 0.123\ W$
$Cs = \frac{Sds}{R} \le \frac{Sd1}{TR}$

T = 0.36 SEC SEISMIC USE GROUP = I
R = 5.0
Ω_o = 2.0 SITE CLASSIFICATION = E
Cd = 4.5 SEISMIC DESIGN CATEGORY = D
S_{DS} = 0.62 PERFORMANCE LEVEL = LSI
S_{D1} = 0.58 PERFORMANCE OBJECTIVE = IA
ρ = 1.2 N-S, 1.0 E-W

W = TOTAL DEAD LOAD

DESIGN CRITERIA

STRUCTURAL CONCEPT

1. VERTICAL LOADS ARE CARRIED BY ROOF TRUSSES AND BEAMS TO STEEL COLUMNS AND PILE FOUNDATIONS.
2. LATERAL LOADS ARE CARRIED BY ROOF DIAPHRAGM TO THE STEEL BRACED FRAMES IN N-S DIRECTIONS. IN E-W DIRECTION THE LATERAL LOAD IS CARRIED TO BRACED FRAME THROUGH BRACED TRUSS AT FRONT OF BUILDING AND ROOF DIAPHRAGM. IN BOTH DIRECTIONS, CATERAL LOADS ARE TRANSFERED FROM BRACED FRAMES TO FOUNDATIONS (PILES & GRADE BEAMS)

GENERAL

1. THESE NOTES CONTAIN GENERAL INFORMATION CONTRACTOR SHALL VERIFY INFORMATION GIVEN HERE WITH SPECIFICATIONS AND OTHER DOCUMENTS AND BRING ANY CONFLICTS TO THE ATTENTION OF THE CONTRACTING OFFICER BEFORE BEGINNING AFFECTED WORK. THE CONTRACTING OFFICER WILL RESOLVE ANY SUCH CONFLICT.
2. ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND CONSTRUCTION. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED.
3. THE CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL OPENINGS AND INSERTS IN CONCRETE AND IN MASONRY, INCLUDING NECESSARY COORDINATION BETWEEN THE VARIOUS TRADES (ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL, AND MECHANICAL.)
4. THE BUILDING FRAME (FOUNDATION, WALLS, COLUMNS, FLOORS, AND ROOF SYSTEM) HAS BEEN DESIGNED TO WITHSTAND THE DESIGN LOADS IN ITS FINAL CONFIGURATION. CONTRACTOR SHALL TEMPORARILY BRACE INCOMPLETE PARTS OF STRUCTURE UNTIL SUCH TIME AS BUILDING FRAME AS A WHOLE IS COMPLETE PER PLANS.
5. SHOP DRAWINGS
   A. SHOP DRAWINGS SHALL BE SUBMITTED PER THE SPECIFICATIONS. IF THE SHOP DRAWINGS ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN.
   B. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD; THEREFORE THEY MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND TWO COPIES; REPRODUCIBLE WILL BE MARKED AND RETURNED. SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.
   C. EACH SHOP DRAWING SHALL INCLUDE THE CONTRACT DETAIL AND SECTION NUMBER/DRAWING NUMBER FOR REFERENCE.
6. INSPECTION SHALL BE PERFORMED PER THE SPECIFICATIONS.
7. EARTHWORK MATERIAL, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. UNSATISFACTORY MATERIALS UNDER BUILDINGS AND STRUCTURES SHALL BE REMOVED PER THE SPECIFICATIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM HIS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
9. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE CONTRACTING OFFICER AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
10. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE CONTRACTING OFFICER.
11. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.
12. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY SHORING AND SUPPORTS. CONTRACTOR ERECTOR SHALL PROVIDE PLANS FOR CONTRACTING OFFICER REVIEW. THE ERECTION PLAN SHALL BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

DEMOLITION

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. EXISTING REINFORCING SHALL BE SAVED WHERE AND AS NOTED ON THE PLANS. SAW CUTTING, IF AND WHERE USED, SHALL NOT CUT EXISTING REINFORCING THAT IS TO BE SAVED. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING ROOF SYSTEM TO 25 PSF.
   A. ALL NEW OPENINGS THROUGH EXISTING WALLS, SLABS AND BEAMS SHALL BE ACCOMPLISHED BY SAW CUTTING WHEREVER POSSIBLE.
   B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATION OF MEMBERS PRIOR TO CUTTING ANY OPENINGS.
   C. SMALL ROUND OPENINGS SHALL BE ACCOMPLISHED BY CORE DRILLING, IF POSSIBLE.
   D. WHERE NEW REINFORCING TERMINATES AT EXISTING CONCRETE, THREADED BARS INTO THREADED EXPANSION INSERTS IN EXISTING CONCRETE SHALL BE PROVIDED TO MATCH HORIZONTAL REINFORCING, UNLESS OTHERWISE NOTED ON PLANS.
2. DEMOLITION MAY IMPACT HAZARDOUS BUILDING MATERIALS SUCH AS ASBESTOS, LEAD AND SILICA. A HAZARDOUS BUILDING MATERIAL SURVEY HAS BEEN PERFORMED AND INCLUDES A GOOD FAITH INSPECTION FOR ASBESTOS.

FOUNDATIONS

FOUNDATION DESIGN IS BASED ON "GEOTECHNICAL REPORT BY GRI DATED APRIL 11, 2003.

AUGER CAST PILES (16"ø)

1. ALLOWABLE PILE CAPACITIES:
   A. DOWNWARD CAPACITY: 70 TONS EACH.
   B. UPLIFT CAPACITY: 35 TONS EACH.
   C. LATERAL SINGLE PILE CAPACITY: 7 KIPS (SEISMIC) 12 KIPS (NON-SEISMIC)
2. SEE CONCRETE CAST-IN-PLACE NOTES FOR CONCRETE REQUIREMENTS. SEE DETAILS FOR REINFORCING REQUIREMENTS.
3. ALL DRILLING OPERATIONS ARE TO BE MONITORED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER.
4. INSTALL EACH PILE A MINIMUM OF 30'-0" INTO THE LOWER SAND. IDENTIFICATION OF THE APPROPRIATE SOIL STRATA FOR PILE TERMINATION SHALL BE DETERMINED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER.
5. SEE DRAWINGS FOR TOP OF PILE ELEVATIONS.
6. EXCAVATE, REINFORCE AND PLACE CONCRETE FOR INDIVIDUAL PILES IN ONE CONTINUOUS OPERATION.
7. EXCAVATE AND PLACE CONCRETE FOR PILES WITH LESS THAN 6'-6" CLEAR BETWEEN SHAFTS A MINIMUM OF 24 HOURS APART.
8. IMMEDIATELY BRING ANY FIELD VARIANCES WITH THE FOUNDATION REQUIREMENTS KNOWN IN THESE DRAWINGS TO THE ATTENTION OF THE CONTRACTING OFFICER.
9. PASSIVE SOIL RESISTANCE EQUIVALENT FLUID PRESSURE: 250 LBS/FT

NONSHRINK GROUT

1. BASE PLATE GROUT SHALL BE NON-SHRINK NON-METALIC WITH MINIMUM f'c = 8000 PSI ALL OTHER NON-SHRINK GROUT SHALL HAVE MINIMUM f'c = 5000 PSI.
2. PREGROUTING OF BASE PLATES WILL NOT BE PERMITTED.

REINFORCED CONCRETE

1. REINFORCING STEEL
   A. DEFORMED BARS - ASTM A615, GRADE 60
      SMOOTH WELDED WIRE FABRIC (WWF) - ASTM A185 fy=65 ksi)
      DEFORMED BAR ANCHORS (DBA) - ASTM A496
      DEFORMED BARS TO BE WELDED - ASTM A706 GRADE 420 LOW ALLOY
      WELDING ELECTRODES FOR DEFORMED BARS TO STRUCTURAL STEEL, USE 70 KSI FILLER MATERIAL.
   B. SPLICING OF LONGITUDINAL REINFORCEMENT OVER IN LENGTH, EXCEPT AS SPECIFICALLY NOTED ON THE DRAWINGS, SHALL BE PERMITTED. SPLICES SHALL BE STAGGERED WITH NO MORE THAN 50% OF THE BARS BEING SPLICED AT ANY ONE LOCATION.
   C. REINFORCING LAP SPLICES: CONFORM TO ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AS SHOWN BELOW, UNLESS NOTED OTHERWISE ON DRAWINGS:

BAR SIZE	4000 PSI TOP BARS	4000 PSI OTHER BARS	5000 PSI TOP BARS	5000 PSI OTHER BARS
#3	18	16	16	16
#4	24	19	22	17
#5	30	23	27	21
#6	40	31	36	27
#7	54	42	48	37
#8	71	55	64	49
#9	90	69	81	62
#10	114	88	102	79
#11	140	108	126	97

LAP SPLICE NOTES:
i. "TOP BARS" ARE DEFINED AS HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF CONCRETE IS PLACED BELOW THE BARS.
ii. SPLICE LENGTH BASIS: CLASS B SPLICE, WITH CENTER TO CENTER BAR SPACING OF GREATER THAN (3) BAR DIAMETERS.

   D. PROVIDE CORNER BARS IN BOTH FACES OF ALL CONTINUOUS SPREAD FOOTINGS. NUMBER, SIZE AND SPACING OF CORNER BARS SHALL BE EQUAL TO NUMBER, SIZE AND SPACING OF HORIZONTAL REINFORCING WITH WHICH THEY LAP AND SHALL EXTEND 30 BAR DIAMETERS IN EACH DIRECTION. IF REINFORCING MEETING AT THE CORNER IS OF DIFFERENT SIZE. CORNER BAR SHALL MATCH THE LARGER OF THE BARS.
   E. AT INTERSECTING CONTINUOUS SPREAD FOOTINGS EXTEND ALL HORIZONTAL REINFORCING OF THE INTERSECTING CONTINUOUS SPREAD FOOTINGS, BEYOND THE POINT OF INTERSECTION TO THE OPPOSITE FACE AND BEND TO A STANDARD 90° HOOK, OR PROVIDE BENT DOWELS OF EQUAL SIZE AND SPACING AND LAP AS REQUIRED BY NOTE D (BUT NOT LESS THAN 12") IN EACH DIRECTION.
2. MINIMUM COVER FROM CONCRETE SURFACES TO REINFORCING:
   3" ± 1/2" TO BOTTOM OF FOOTING
   2" ± 1/4" TO EARTH FACE OF WALL
   1" ± 1/4" TO INSIDE FACE OF WALL
   2" ± 1/4" MAIN STEEL BEAMS AND COLUMNS
   3/4" ± SLAB TO TOP AND BOTTOM SURFACES AT CENTER OF SLABS-ON-GRADE
3. CAST-IN-PLACE CONCRETE
   A. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 4000 PSI.
   B. MINIMUM ULTIMATE FLEXURAL STRENGTH AT 90 DAYS SHALL BE 750 PSI FOR ALL FLAT CONCRETE WORK.
   C. COVER ON REINFORCEMENT, THE CLEAR DISTANCE FROM EXPOSED SURFACE TO THE REBAR, SHALL CONFORM TO ACI 318-99.
   D. CONSTRUCTION JOINTS SHALL BE PROVIDED ONLY AS NOTED ON THE DRAWINGS AND AS SPECIFICALLY PERMITTED BY THE CONTRACTING OFFICER.
   E. REFER TO CIVIL, ARCHITECTURAL, ELECTRICAL, MECHANICAL, AND STRUCTURAL DRAWINGS FOR ALL INSERTS TO BE CAST IN CONCRETE AND FOR LOCATION OF PIPES, DUCTS, AND CONDUITS.
   F. ALL ANGLE FRAMES AND PLATES CAST INTO CONCRETE SLABS ON GRADE, PITS AND TRENCHES SHALL BE GALVANIZED.
   G. THE NORMAL AISC TOLERANCE FOR STRUCTURAL STEEL WILL NOT BE ALLOWED. THE BOTTOM DOOR GUIDES SHALL BE ERECTED, BY THE STRUCTURAL STEEL ERECTOR, AS DIMENSIONED ON THE DRAWINGS, PARALLEL AND PLUMB TO THE TOP DOOR GUIDES. THE BOTTOM RAILS SHALL HAVE A HORIZONTAL TOLERANCE OF 1/4"± IN ANY 20 FOOT INCREMENT. THE BOTTOM RAIL JOINTS SHALL BE IN LINE AND FLUSH TO EACH OTHER AT THE TOP AND SIDE OF THE RAIL HEAD. SPLICES IN BOTTOM RAILS AND ENDS OF BOTTOM RAILS SHALL BE CENTERED OVER THE HORIZONTAL LEG OF SUPPORT ANGLES.
   H. THE SIZE AND LOCATION OF ALL EQUIPMENT PADS, TRENCH DRAINS AND OPENINGS FOR ALL DUCTS AND PIPES THROUGH FLOOR SLABS AND GRADE BEAMS SHALL BE VERIFIED WITH THE MECHANICAL AND ELECTRICAL CONTRACTOR'S REQUIREMENTS, PRIOR TO PLACEMENT.
   I. ALL JOINTS IN PITS AND TRENCHES SHALL BE KEYED. WATERSTOPS SHALL BE INSTALLED IN ALL CONSTRUCTION JOINTS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Seattle District

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Designed by: AEW
Drawn by: MJB
Checked by: JJF
Submitted by: _____ Section Chief
Date: 1/30/04
Design file no. 3135/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

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BERGER/ABAM ENGINEERS, INC
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_____ Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012299

STRUCTURAL NOTES
SHEET 1 OF 2

PLATE NUMBER:
G-S001

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GENERAL NOTES

STRUCTURAL STEEL

1. ALL STEEL CONSTRUCTION SHALL COMPLY WITH THE CODES AND STANDARDS CONTAINED IN THE AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION AND CONFORM TO THE FOLLOWING:

   STEEL MATERIALS:

W SHAPE	– ASTM A992, GRADE 50
PLATES & FLAT BAR	– ASTM 572, GRADE 50
EMBEDDED ITEMS, CHANNELS, ANGLES, AND MISC. STEEL	– ASTM 572, GRADE 50
STRUCTURAL TUBES	– ASTM A500, GRADE B (Fy = 46KSI)
STEEL PIPE	– ASTM A53, GRADE B
STRUCTURAL BOLTS	– ASTM A325–X
ANCHOR BOLTS	– ASTM A325
ANCHOR RODS	– F1554 GRADE 55
WELDING ELECTRODES	– 70 KSI FILLER MATERIAL
HEADED STUDS	– ASTM A108

2. BOLTED CONNECTIONS ARE TO BE OF HIGH STRENGTH ASTM A325 BOLTS WITH WASHERS AS SHOWN. A MINIMUM OF TWO BOLTS IS REQUIRED FOR ALL BEAM CONNECTIONS. BOLTS TO BE IN STANDARD ROUND HOLES.

3. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1–00 USING CERTIFIED WELDERS AND QUALIFIED JOINT WELDING PROCEDURES. USING ONLY E70 LOW HYDROGEN ELECTRODES, THE MINIMUM WELD SIZE SHALL BE 3/16", UNLESS NOTED OTHERWISE. CONNECTIONS ARE TO BE AS SHOWN ON THESE DRAWINGS.

4. WELDERS SHALL BE CURRENTLY CERTIFIED BY THE WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO). SUBMIT EVIDENCE OF CERTIFICATION.

5. BOLTS SET IN CONCRETE OR MASONRY SHALL TYPICALLY CONFORM TO ASTM A325 UNLESS OTHERWISE NOTED.

6. TRUSSES SHOWN AS CAMBERED SHALL BE FABRICATED WITH CAMBERS UP. CAMBERS RELATE TO CENTER LINE OF TRUSS.

7. CONTRACTOR SHALL SUBMIT ERECTION PLANS AND SEQUENCE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

METAL ROOF DECKING

1. ALL METAL DECKING SHALL CONFORM TO THE PROVISION OF THE AMERICAN IRON AND STEEL DECK INSTITUTE'S "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS."

2. ALL METAL DECKING AND CONNECTIONS SHALL BE DESIGNED FOR UPLIFT FORCES ACCORDING TO FIGURE A, 375–S2.

3. METAL ROOF DECKING SHALL BE 1 1/2" DEEP x 18 GA TYPE HSB, GALVANIZED HAVING MINIMUM (SECTION PROPERTIES PER FT OF WIDTH)

   $S+ = 0.322\ IN^3$
   $S- = 0.335\ IN^3$
   $I = 0.302\ IN^4$

4. FASTENING OF 1 1/2" TYPE HSB DECK TO BE:

   A. STEEL ROOF DECK SHALL BE FASTENED TO EACH PERPENDICULAR SUPPORT WITH 7 PUDDLE WELDS PER SHEET AND TO PARALLEL SUPPORTS WITH PUDDLE WELDS AT 12" ON CENTER. MINIMUM EFFECTIVE DIAMETER OF PUDDLE WEDLS SHALL BE 5/8". LONGITUDINAL EDGES SHALL BE HAVE SIDE SEAM WELDS AT 12" OC.

   B. ALTERNATE FASTENERS MAY BE DESIGNED FOR A WORKING DIAPHRAGM SHEAR FORCE OF 1100 LB/FT.

LIGHT GAGE STEEL FRAMING

1. STEEL IS TO BE:

   A. ASTM A 653, GRADE 50, CLASS 1, FOR 16 GAUGE AND HEAVIER.

   B. ASTM A 653, GRADE 33, FOR 18 GAUGE AND LIGHTER.

   C. GALVANIZED WITH G–60 COATING.

2. ALL COMPONENTS AND CONNECTIONS SHALL BE DESIGNED FOR WIND PRESSURE AS SHOWN IN FIGURES A AND B THIS PLATE.

3. DRAFT CURTAIN SHALL BE DESIGN FOR A LATERAL LOAD OF 5 PSF. SEE DETAIL ON ARCHITECTURAL DRAWINGS.

4. ALL FABRICATION, ERECTION AND IDENTIFICATION OF LIGHT GAUGE STEEL FRAMING SHALL CONFORM TO AISI SPECIFICATIONS.

5. FASTENING OF COMPONENTS SHALL BE WITH WELDING.

   A. ALL WELDS SHALL BE OF SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION.

   B. ALL WELDING SHALL CONFORM TO AWS SPECIFICATIONS.

   C. ALL WELDERS SHALL BE CERTIFIED FOR LIGHT GAUGE STEEL AWS SPECIFICATIONS.

6. STEEL STUDS OR JOISTS SHALL BE "C" STUDS OR JOISTS WITH STIFFENED LIPS. ALL LIGHT GAGE STUDS, PURLINS AND THEIR CONNECTION, CALCULATION AND DETAILS SHALL BE STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF WASHINGTON.

7. PROVIDE ALL ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION.

8. END BLOCKING SHALL BE PROVIDED WHERE JOIST ENDS ARE NOT OTHERWISE RESTRAINED FROM ROTATION.

ABBREVIATIONS

AB	ANCHOR BOLT
ABT	ABOUT
AFFF	AQUEOUS FOAM FORMING FILM
ALT	ALTERNATE
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BAL	BALANCE
BC	BOTTOM CHORD
BLDG	BUILDING
BM	BEAM
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
C	CHANNEL
CGS	CENTER OF GRAVITY OF STEEL
℄	CENTERLINE
CIP	CAST–IN–PLACE
CJ	CONSTRUCTION JOINT
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CP	COMPLETE PENETRATION
CTR	CENTER
DIA	DIAMETER
DIAG	DIAGONAL
DIR	DIRECTION
DWG	DRAWING
EA	EACH
EF	EACH FACE
EL	ELEVATION
ELEV	ELEVATION
EMBD	EMBEDMENT OR EMBEDDED
EXP	EXPANSION
EXT	EXTERIOR
FIN	FINISH
FTG	FOOTING
GA	GAGE
GAL	GALVANIZE
HCA	HEAD CONCRETE ANCHOR
HDW	HARDWARE
HORIZ	HORIZONTAL
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP(S)
L	ANGLE
LB	POUND(S)
LL	DOUBLE ANGLE
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OPNG	OPENING
OPH	OPPOSITE HAND
OWSJ	OPEN WEB STEEL JOIST
PL	PLATE
P/C	PRECAST
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
R	RADIUS
REF	REFERENCE
REINF	REINFORCE
REQ'D	REQUIRED
SCHED	SCHEDULE
SECT	SECTION
SIM	SIMILAR
SPA	SPACE(S)
SPECS	SPECIFICATIONS
SQ	SQUARE
STD	STANDARD
STIFF	STIFFENER
STIR	STIRRUP
STL	STEEL
SYMM	SYMMETRICAL
T/	TOP OF
T & B	TOP & BOTTOM
TBF	TRUSS BRACED FRAME
TC	TOP CHORD
THK	THICK
TOPG	TOPPING
TOS	TOP OF STEEL
tp	THICKNESS GUSSET PLATE
TRANSV	TRANSVERSE
TS	STRUCTURAL TUBE
T/S	TOP SIDE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
U/S	UNDER SIDE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WP	WORK POINT
&	AND
@	AT
ø	DIAMETER
#	NUMBER

MARK	PRESSURE
1	27 PSF
2	50 PSF
3	50 PSF
4	31 PSF
5	37 PSF

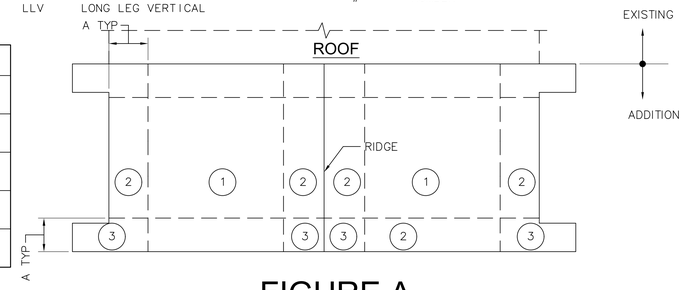
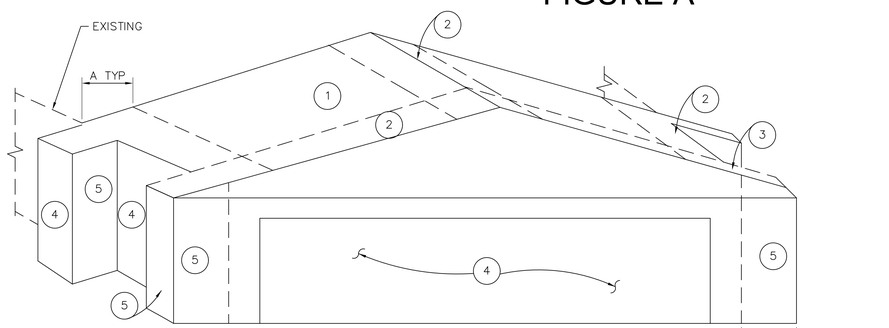


FIGURE A



WALLS

NOTES: DIMENSION A=17'–0' FROM EDGES AND CORNERS

FIGURE B

A TYPICAL FROM EACH CORNER

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CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
BERGER/ABAM
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(206) 374–9795 FAX(206) 374–9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN 1QKD 012259

STRUCTURAL NOTES
SHEET 2 OF 2

PLATE NUMBER:
G-S002

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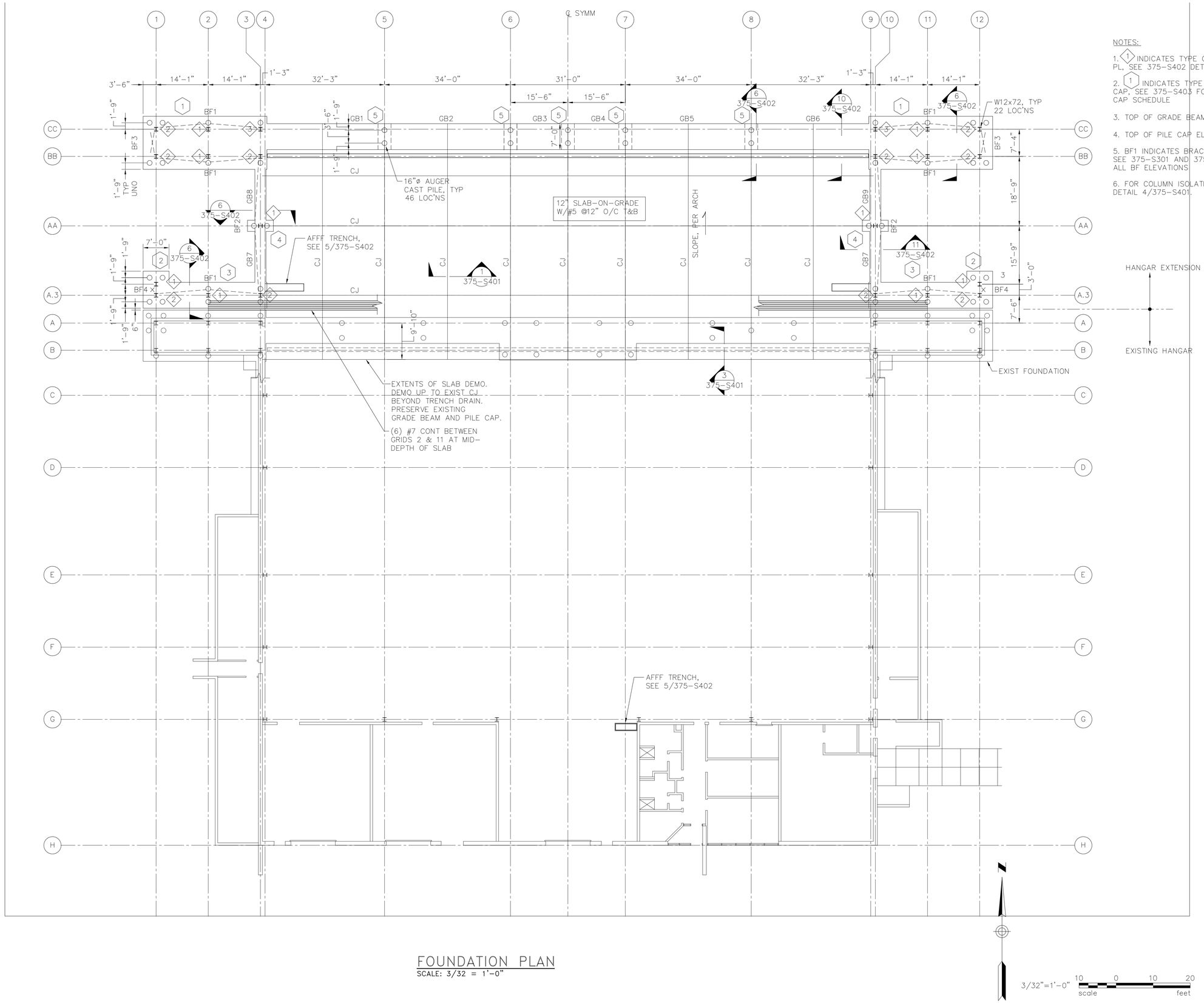

NOTES:

1. ⟨1⟩ INDICATES TYPE OF COL BASE PL, SEE 375-S402 DETAILS.
2. ⟨1⟩ INDICATES TYPE OF PILE CAP, SEE 375-S403 FOR PILE CAP SCHEDULE
3. TOP OF GRADE BEAM ELEV=16'-0"
4. TOP OF PILE CAP ELEV= 16'-0"
5. BF1 INDICATES BRACE FRAME, SEE 375-S301 AND 375-S302 FOR ALL BF ELEVATIONS
6. FOR COLUMN ISOLATION JOINT, SEE DETAIL 4/375-S401.

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

3/32"=1'-0" scale 10 0 10 20 feet

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FOUNDATION PLAN

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375-S101

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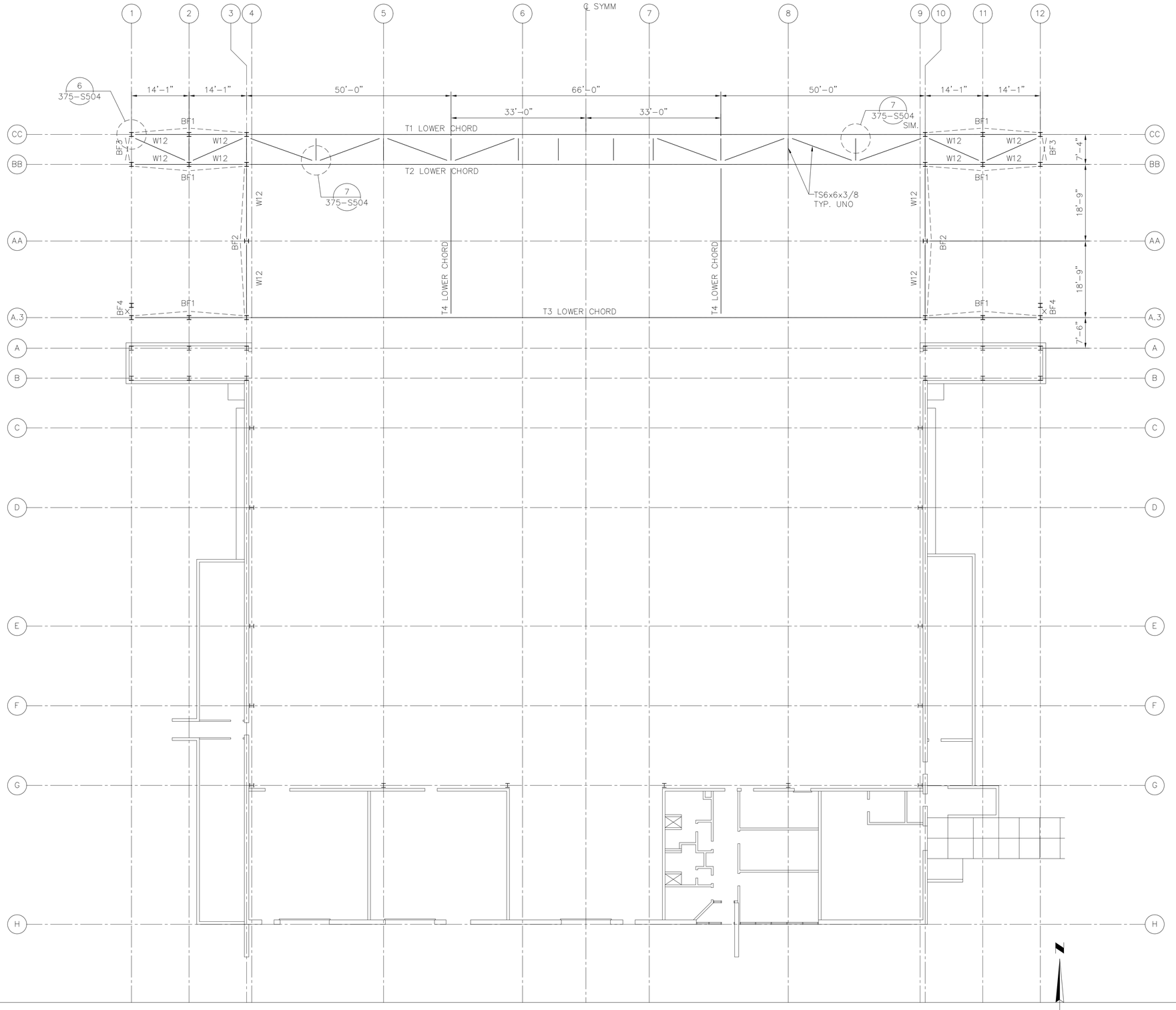

LOWER CHORD FRAMING PLAN
SCALE: 3/32 = 1'-0"

3/32"=1'-0"

10 0 10 20
scale feet

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LOWER CHORD FRAMING PLAN

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375-S201

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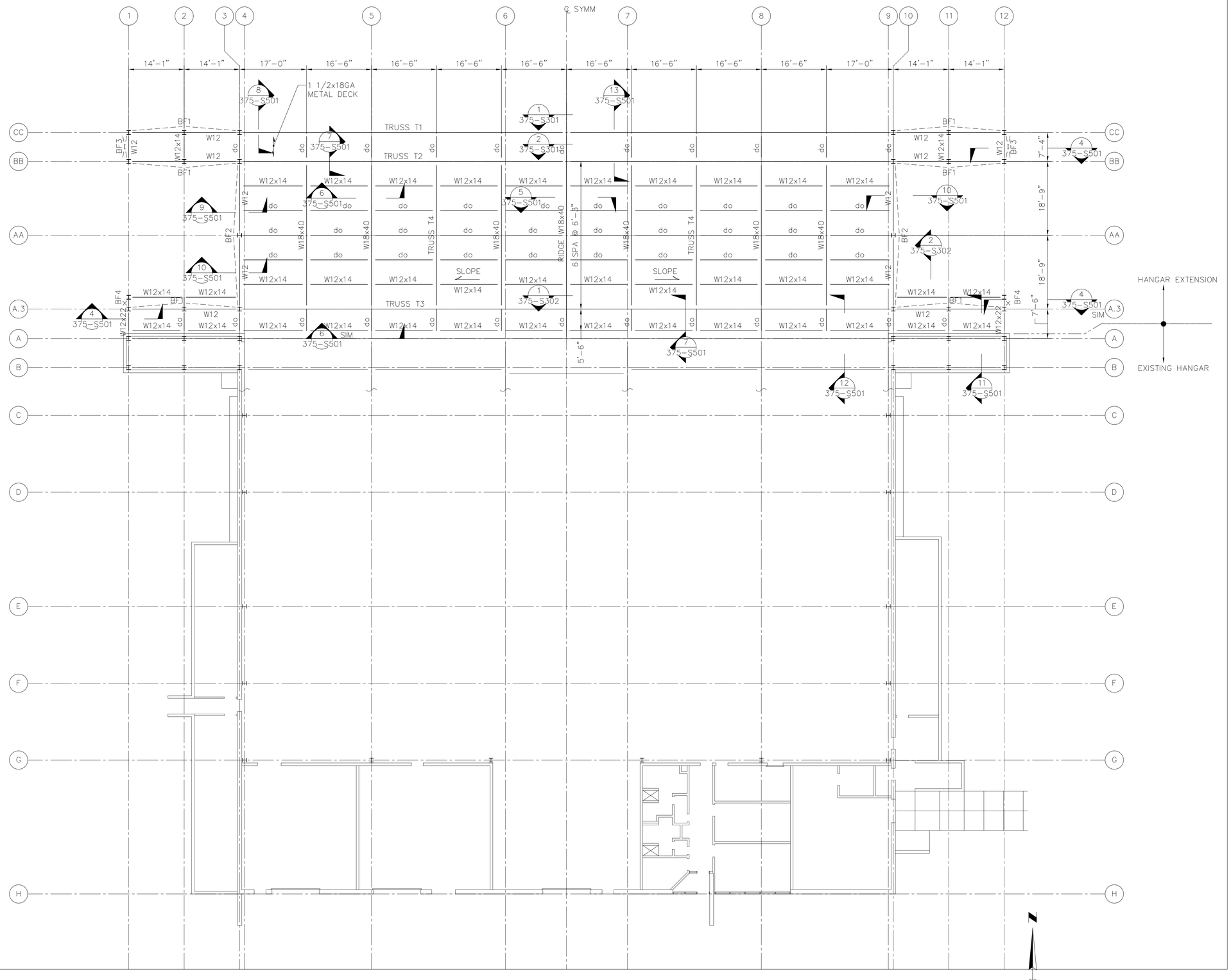

ROOF FRAMING PLAN
SCALE: 3/32 = 1'-0"

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ROOF FRAMING PLAN

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375-S202

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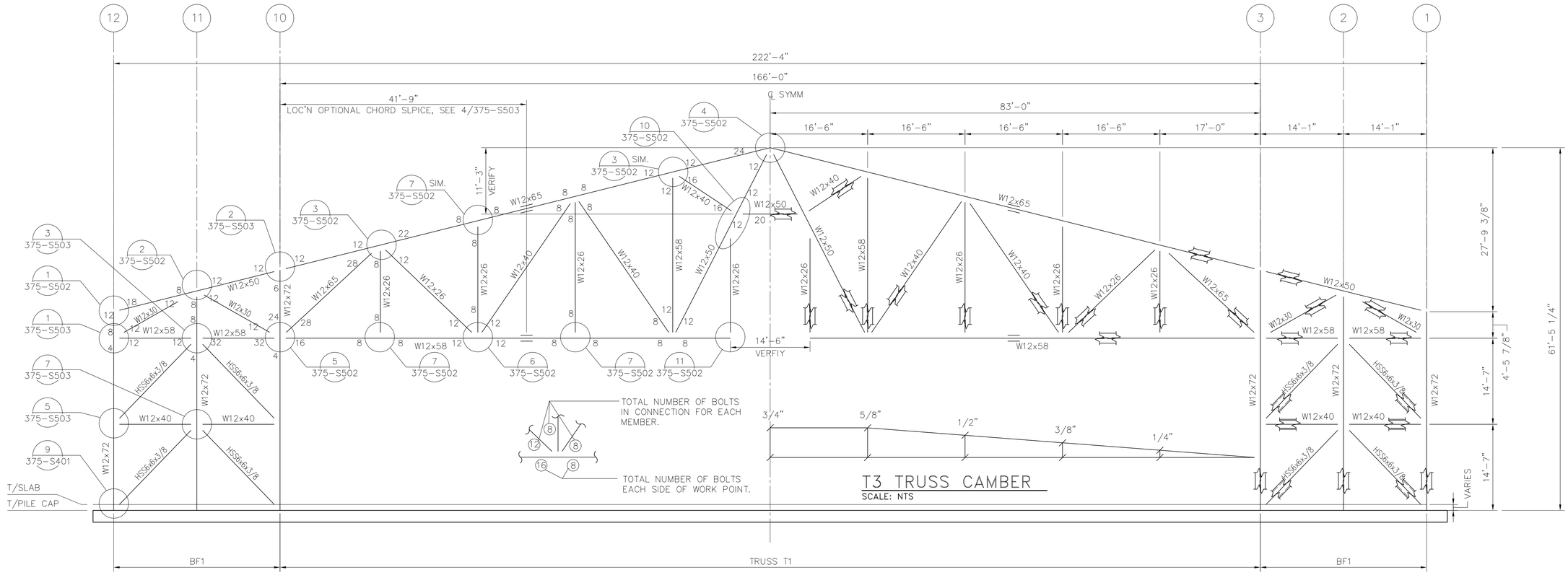
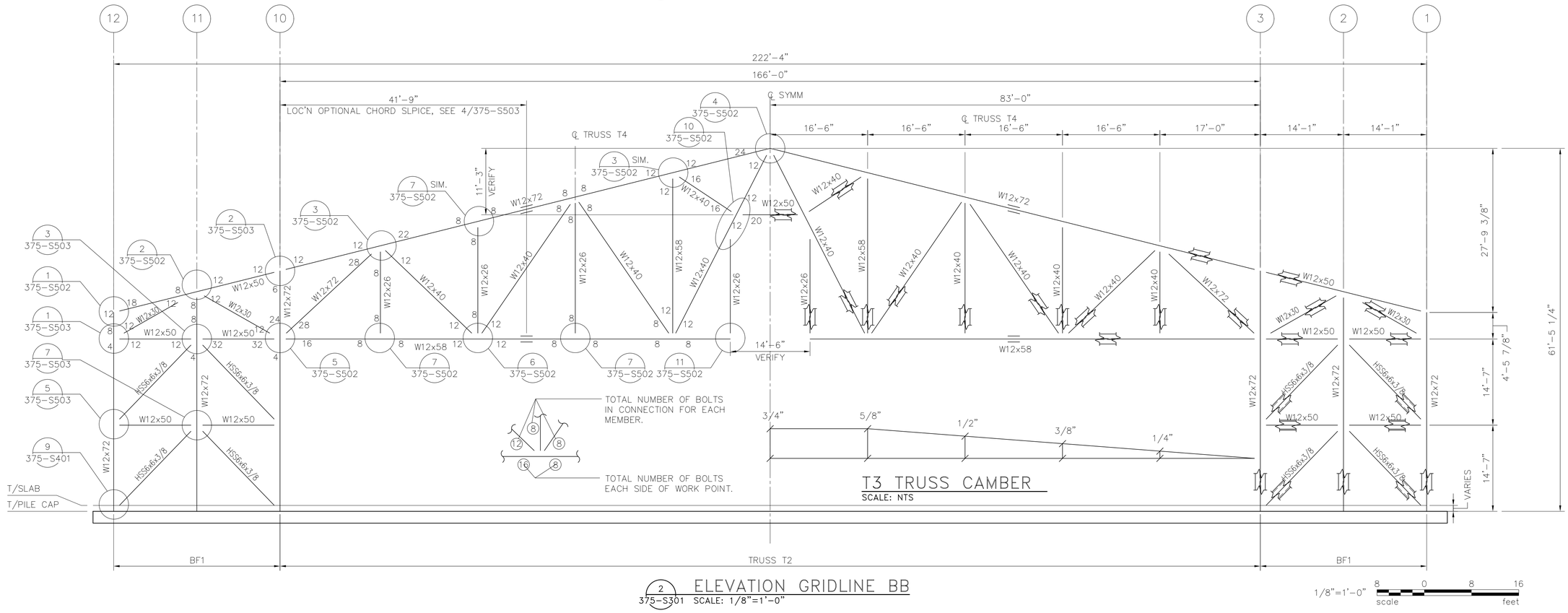


T3 TRUSS CAMBER
SCALE: NTS

1 / 375-S301 ELEVATION GRIDLINE CC
SCALE: 1/8"=1'-0"



T3 TRUSS CAMBER
SCALE: NTS

2 / 375-S301 ELEVATION GRIDLINE BB
SCALE: 1/8"=1'-0"

1/8"=1'-0" scale 8 0 8 16 feet

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TRUSS ELEVATIONS

PLATE NUMBER:
375-S301

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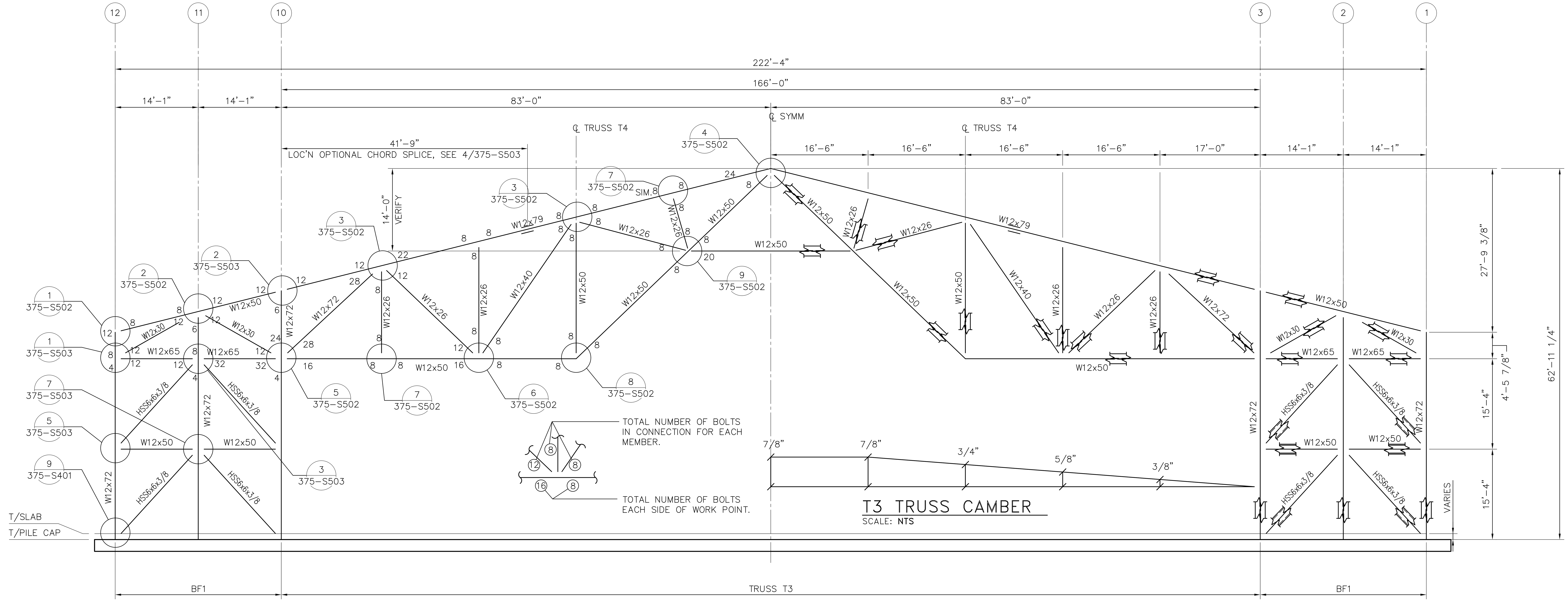
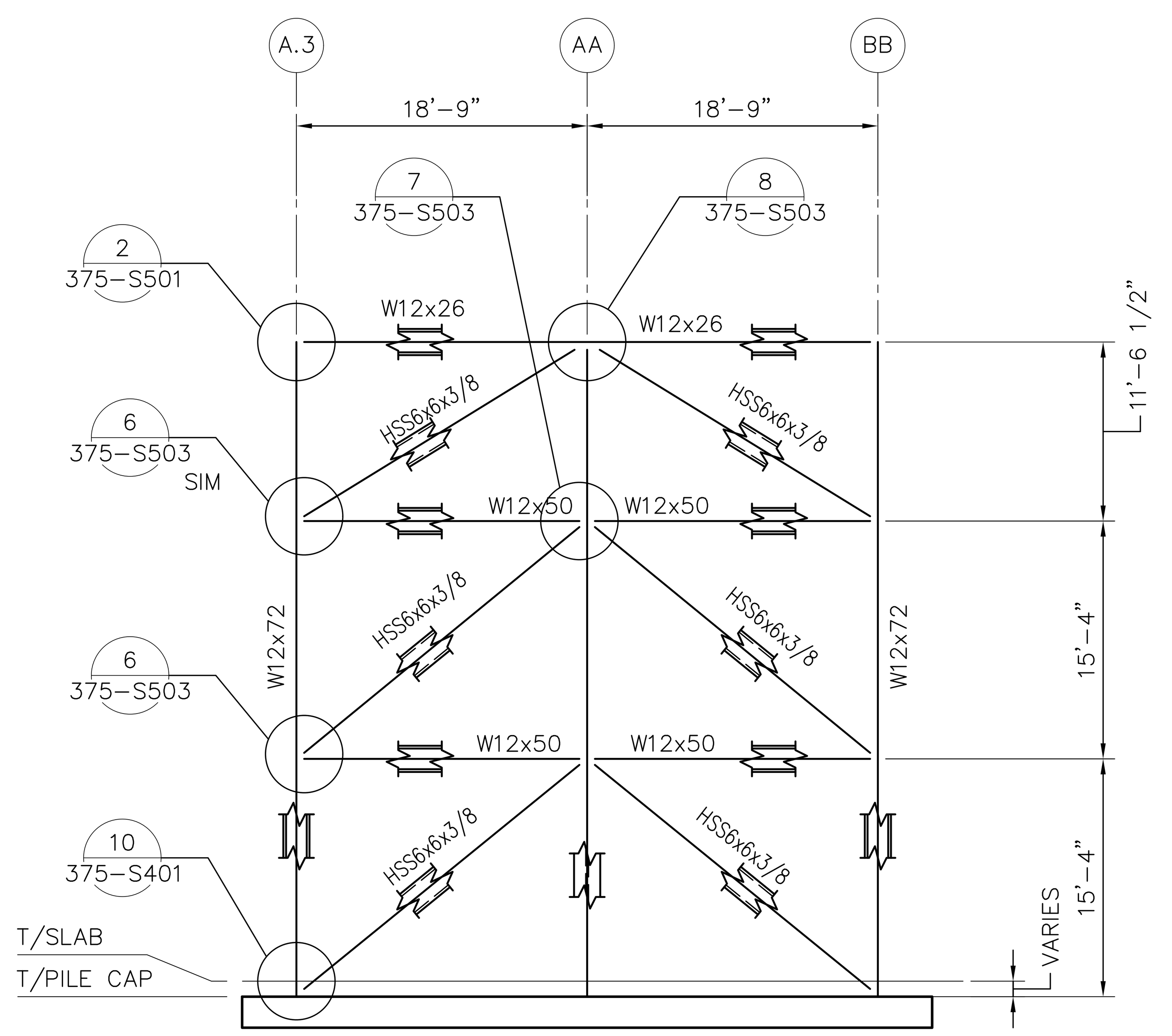
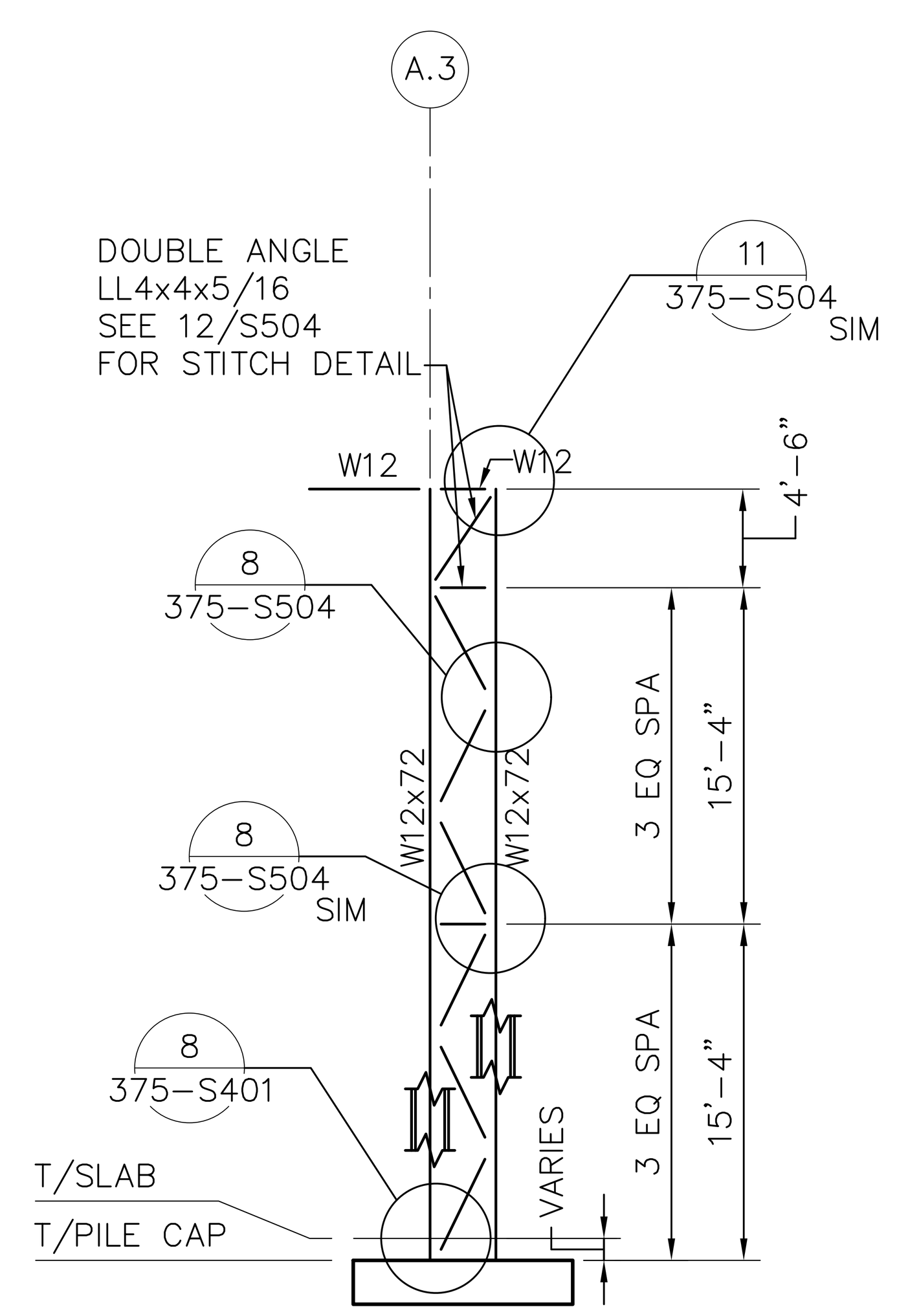


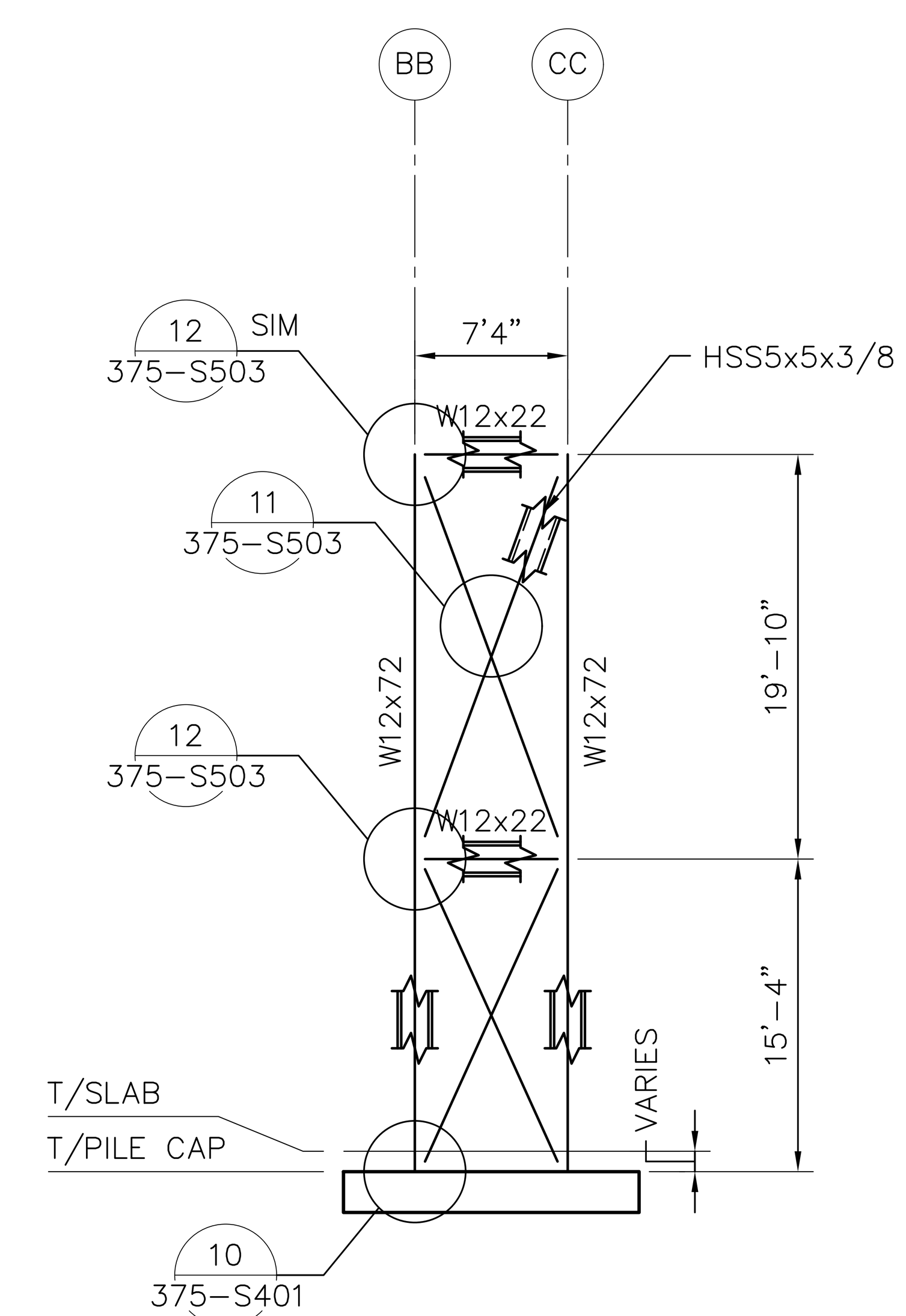
1 ELEVATION GRIDLINE A.3
375-S302 SCALE: 1/8" = 1'-0"



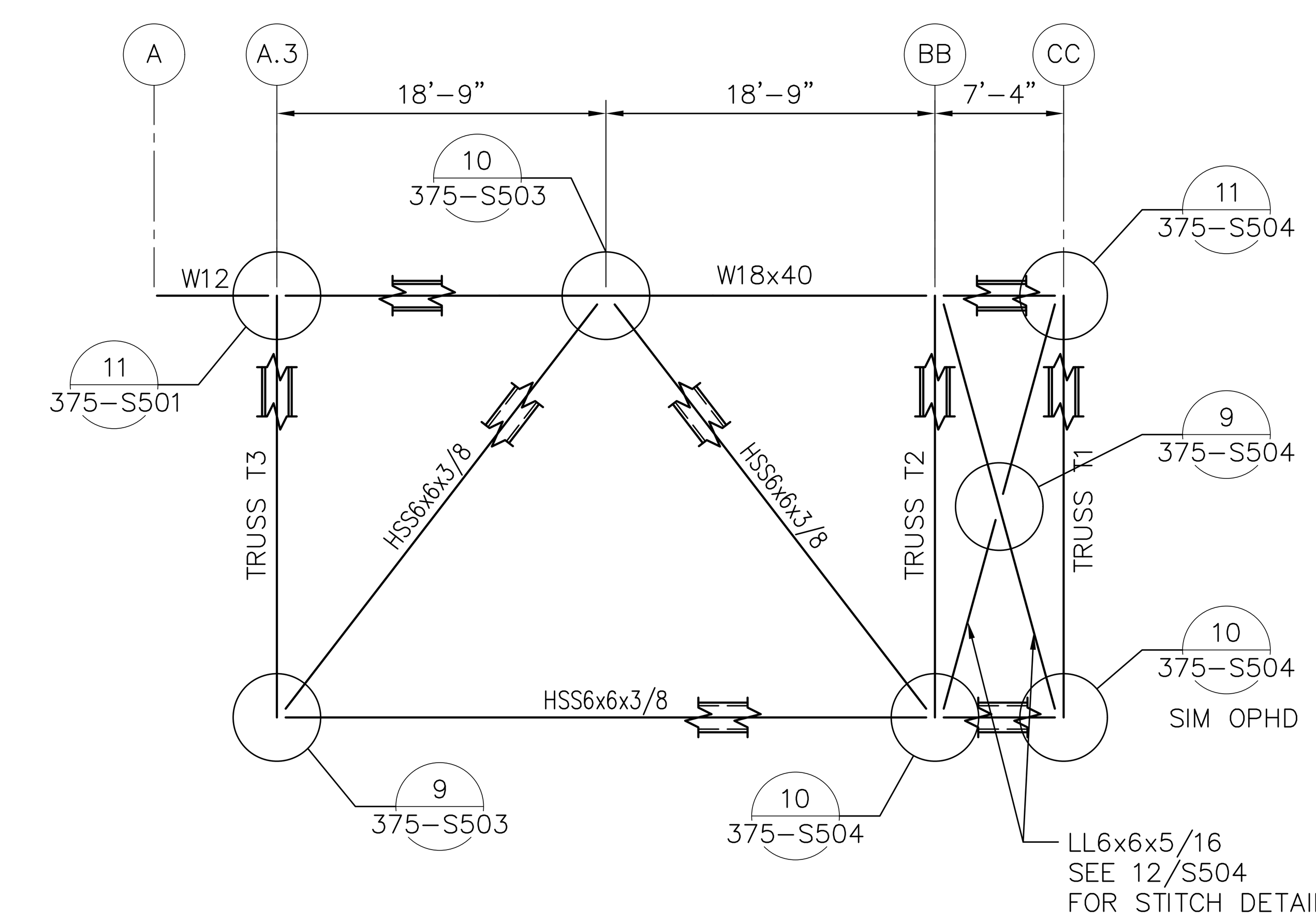
2 ELEVATION BRACED FRAME BF2
375-S302 SCALE: 1/8" = 1'-0" GRID 3 & 10



3 ELEVATION BRACED FRAME BF4
375-S302 SCALE: 1/8" = 1'-0" GRID 1 & 12



4 ELEVATION BRACED FRAME BF3
375-S302 SCALE: 1/8" = 1'-0" GRID 1 & 12



5 ELEVATION TRUSS T4
375-S302 SCALE: 1/8" = 1'-0"

1/8"=1'-0" 8 0 8 16 scale feet

US Army Corps of Engineers
Seattle District

Symbol | Description | Date | Appr.

Date: 1/30/04
Design file no. 312S/211-10-02
Designed by: AEW
Drawn by: VIP
Checked by: JJF
Submitted by: Chief, ______ Section

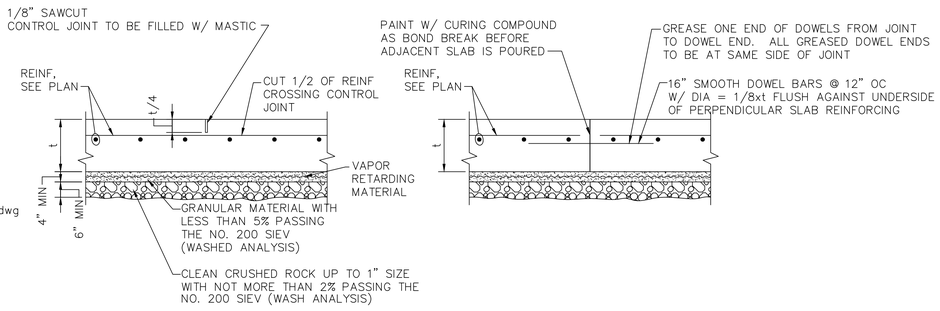
U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Submitted by: BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

TRUSS/BRACE ELEVATIONS

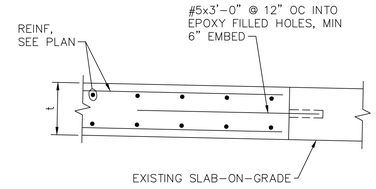
PLATE NUMBER:
375-S302

Sheet 59 of 76



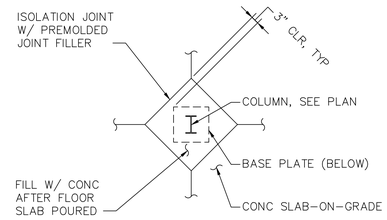
TYPICAL SLAB–ON–GRADE CONTROL & CONSTRUCTION JOINT DETAILS

1 / 375–S401 SCALE: NTS



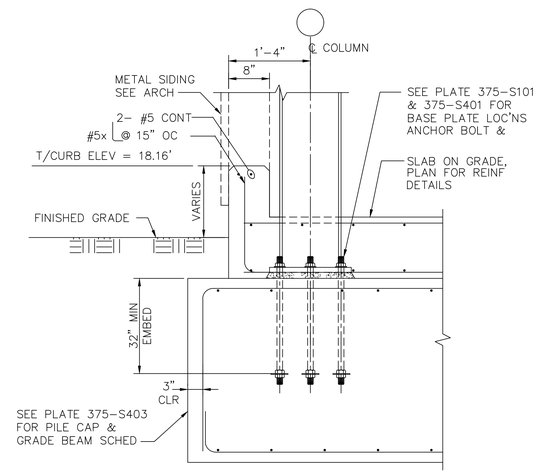
SLAB–ON–GRADE TO EXIST

3 / 375–S401 SCALE: NTS



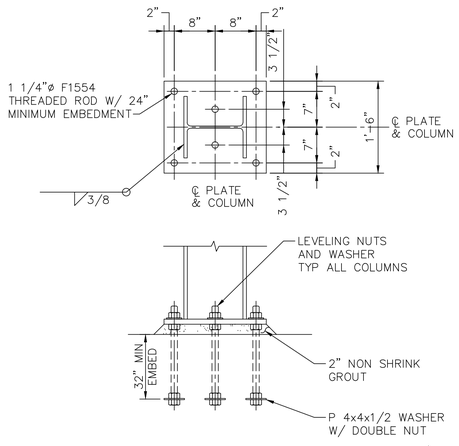
DETAIL – ISOLATION JOINT @ COLUMNS

4 / 375–S401 SCALE: NTS



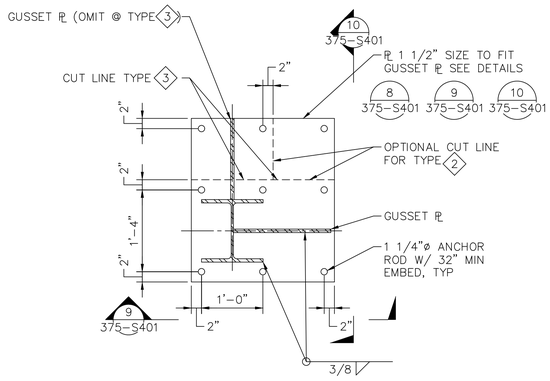
DETAIL – TYP EXTERIOR COL DETAIL

5 / 375–S401 SCALE: 1" = 1'–0"



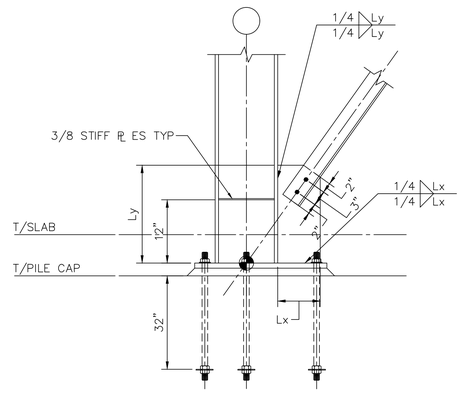
DETAIL–BASE PLATE TYPE ◇1

6 / 375–S401 SCALE: 1" = 1'–0"



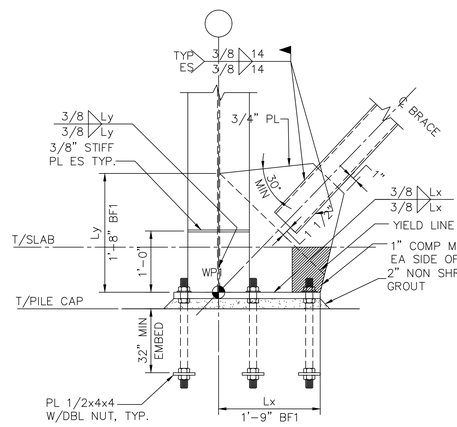
DETAIL–BASE PLATE TYPE ◇2 AND ◇3

7 / 375–S401 SCALE: 1" = 1'–0"



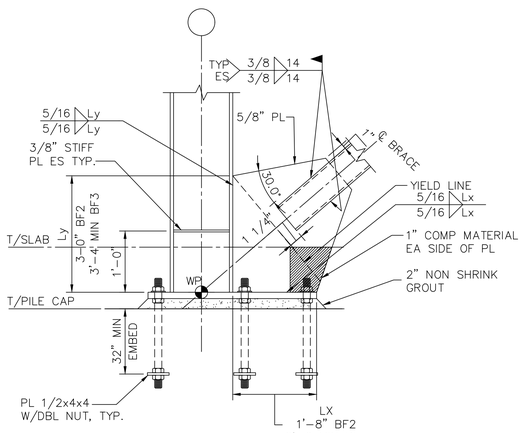
GUSSET PLATE DETAIL

8 / 375–S401 SCALE: 1"=1'–0"



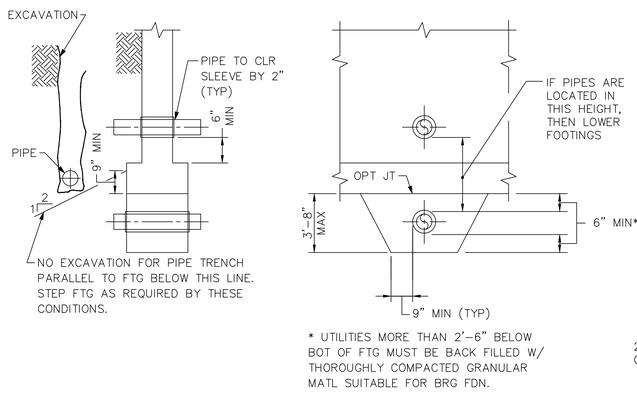
GUSSET PLATE DETAIL

9 / 375–S401 SCALE: 1" = 1'–0"



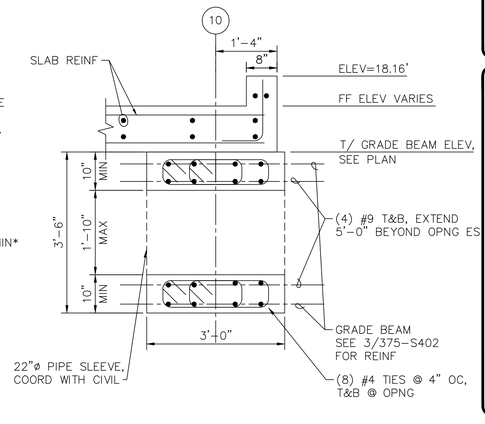
GUSSET PLATE DETAIL

10 / 375–S401 SCALE: 1" = 1'–0"



PIPE THROUGH CONCRETE

11 / 375–S401 SCALE: NTS



GRADE BEAM SECTION @ PIPE SLEEVE

12 / 375–S401 SCALE: 3/4" = 1'–0"

US Army Corps of Engineers
Seattle District

Symbol	Appr.	Date	Description

Designed by: AEW
Drawn by: MP
Checked by: LJF
Submitted by: Chief, _____ Section
Date: 1/30/04
Design file no. 3125/211–10–02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by: BERGER/ABAM ENGINEERS, INC
(206) 374–9790 FAX:(206) 374–9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

FOUNDATION DETAILS

PLATE NUMBER:
375-S401

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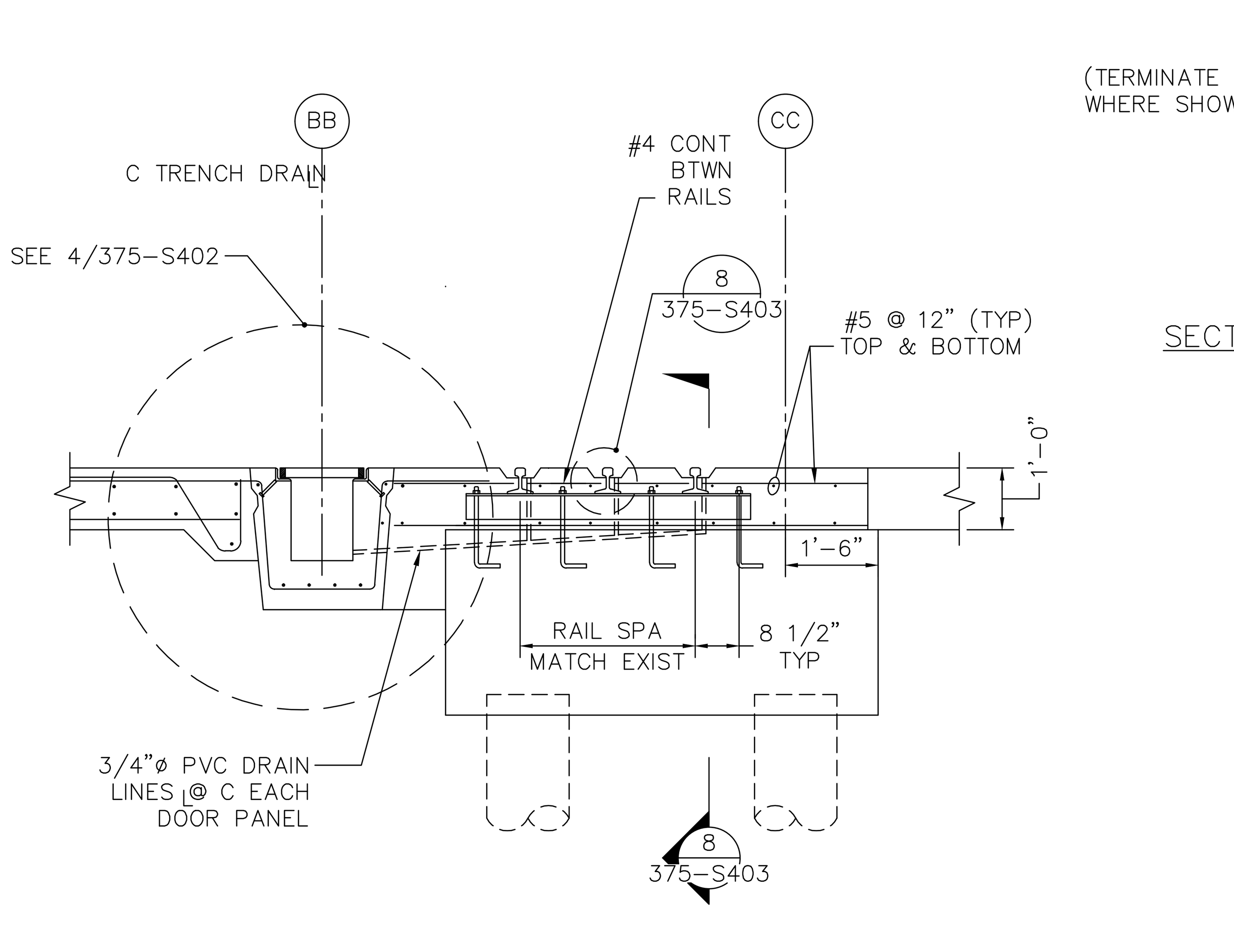
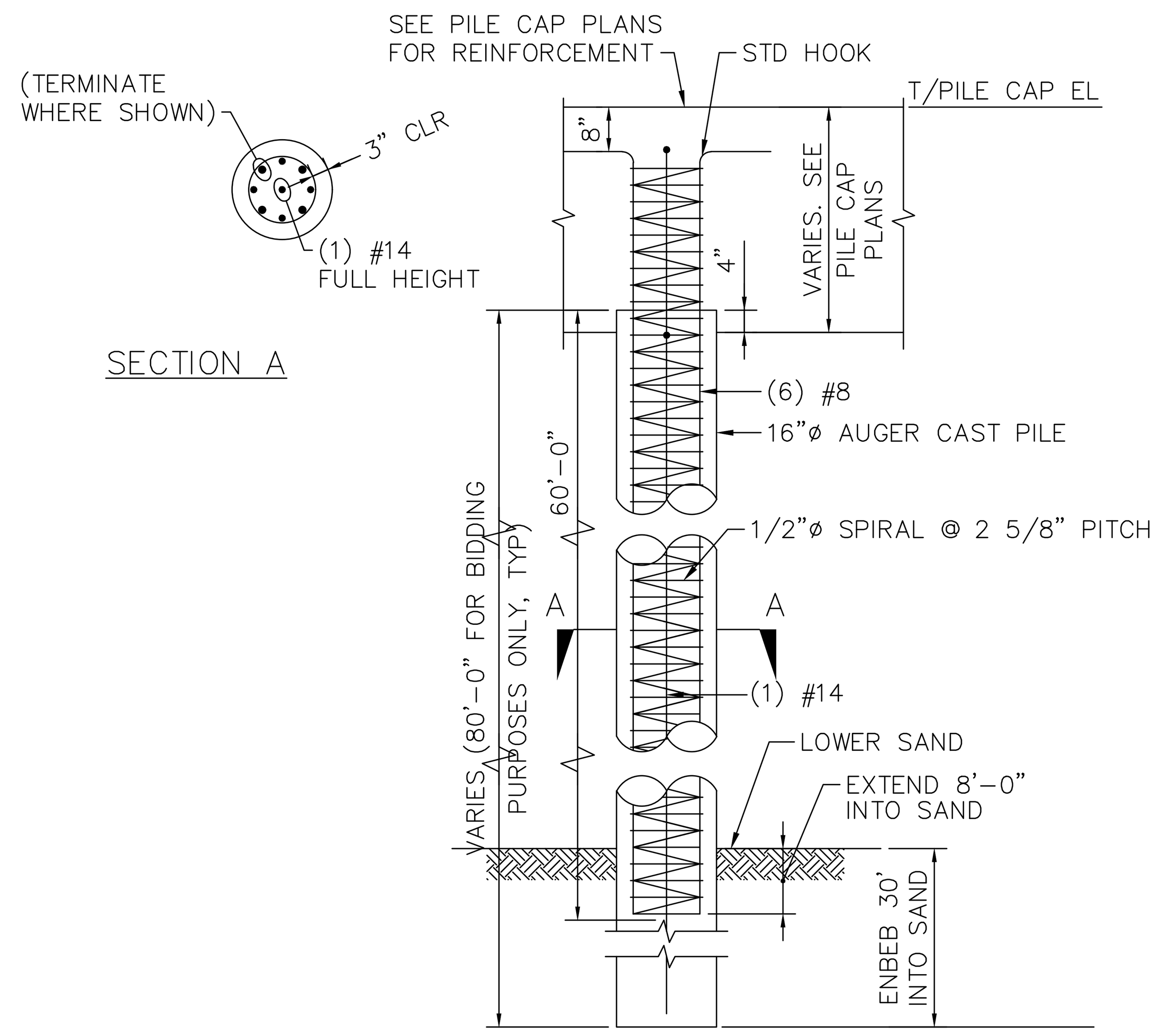
Xref xTB_SABLD–03–607_001.dwg



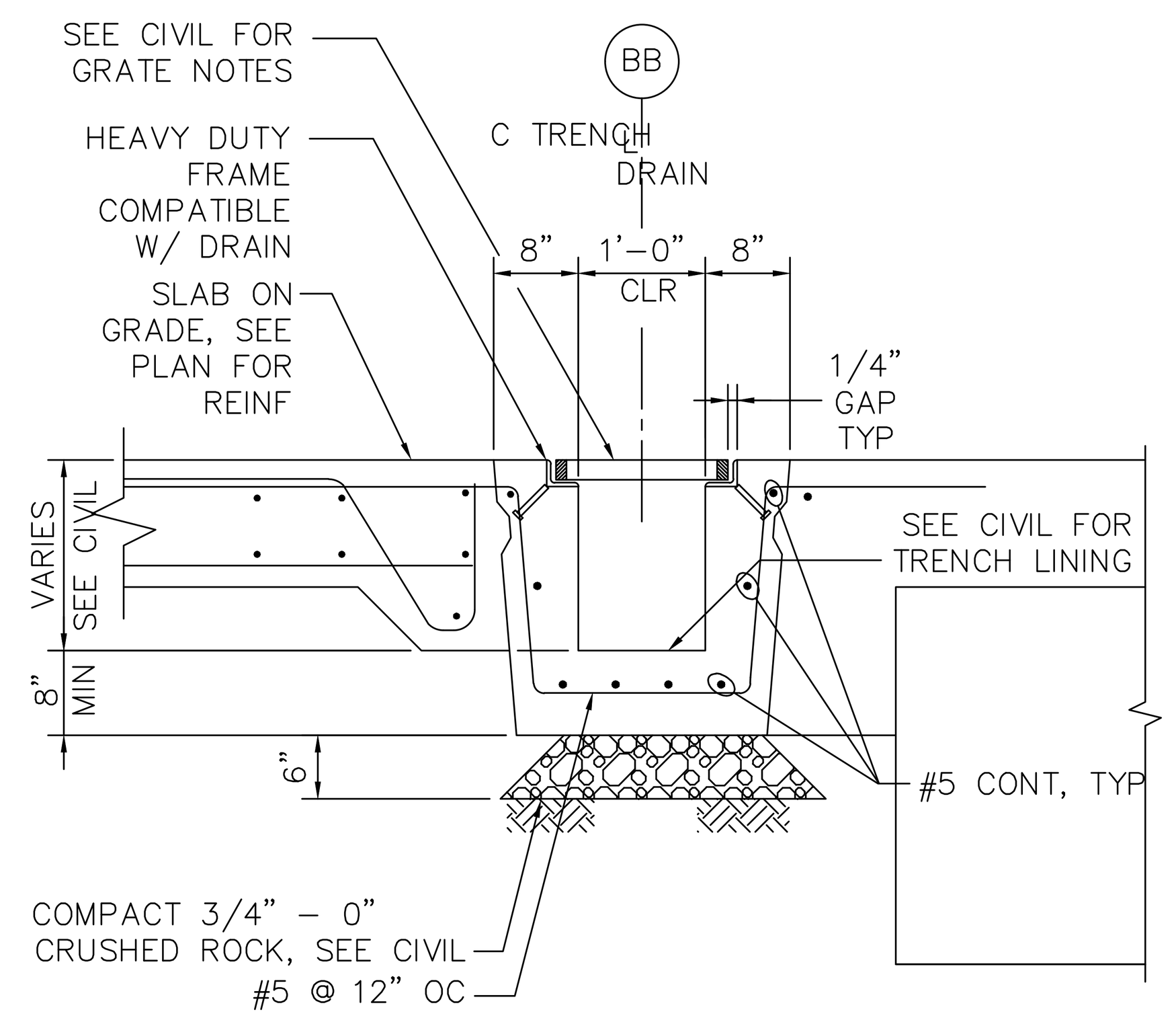
1 GRADE BEAM & TRENCH DRAIN @ GRID CC
375-S402 SCALE: 1/2"=1'-0"



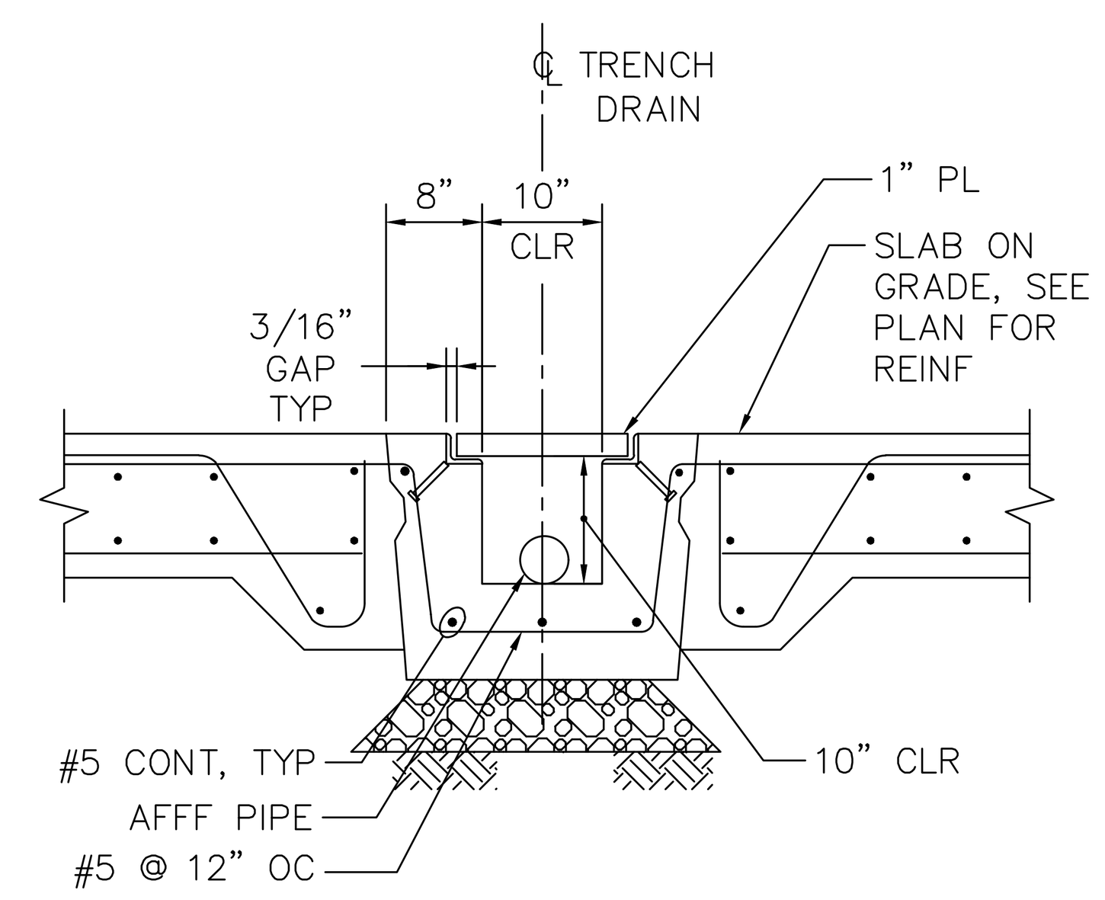
2 PILE ELEVATION (TYPICAL)
375-S402 SCALE: NONE

BEAM MARK	SIZE		REINFORCING			STIRRUPS			REMARKS
	W	D	NO.	SIZE	C LEFT SUPPORT / LOCATION / C RIGHT SUPPORT	SIZE	TYPE	SPACING	
GB1	7'-0"	36"	8 8	#10 #10	T B	#4		12" THROUGHOUT	EXTEND ALL LONG BARS TO GRID 2.
GB2	7'-0"	36"	8 8	#10 #10	T B	#4		12" THROUGHOUT	
GB3	7'-0"	36"	8 8	#10 #10	T B	#4		12" THROUGHOUT	
GB4	7'-0"	36"	– –	SEE GB3	T B	#4		12" THROUGHOUT	
GB5	7'-0"	36"	8 8	#10 #10	T B	#4		12" THROUGHOUT	
GB6	7'-0"	36"	8 8	#10 #10	T B	#4		12" THROUGHOUT	EXTEND ALL LONG BARS TO GRID 11.
GB7	3'-0"	36"	4 4	#9 #9	T B	#4		6" THROUGHOUT	EXTEND ALL LONG BARS TO FAR SIDE OF PILE CAP 3.
GB8	3'-0"	36"	4 4	#9 #9	T B	#4		6" THROUGHOUT	EXTEND ALL LONG BARS TO FAR SIDE OF PILE CAP 1.
GB9	3'-0"	42"	4 4	#9 #9	T	#4		6" THROUGHOUT, EXCEPT AT PIPE SLEEVE	EXTEND ALL LONG BARS TO FAR SIDE OF PILE CAP 1. SEE 12/S401 FOR SECTION AT PIPE SLEEVE

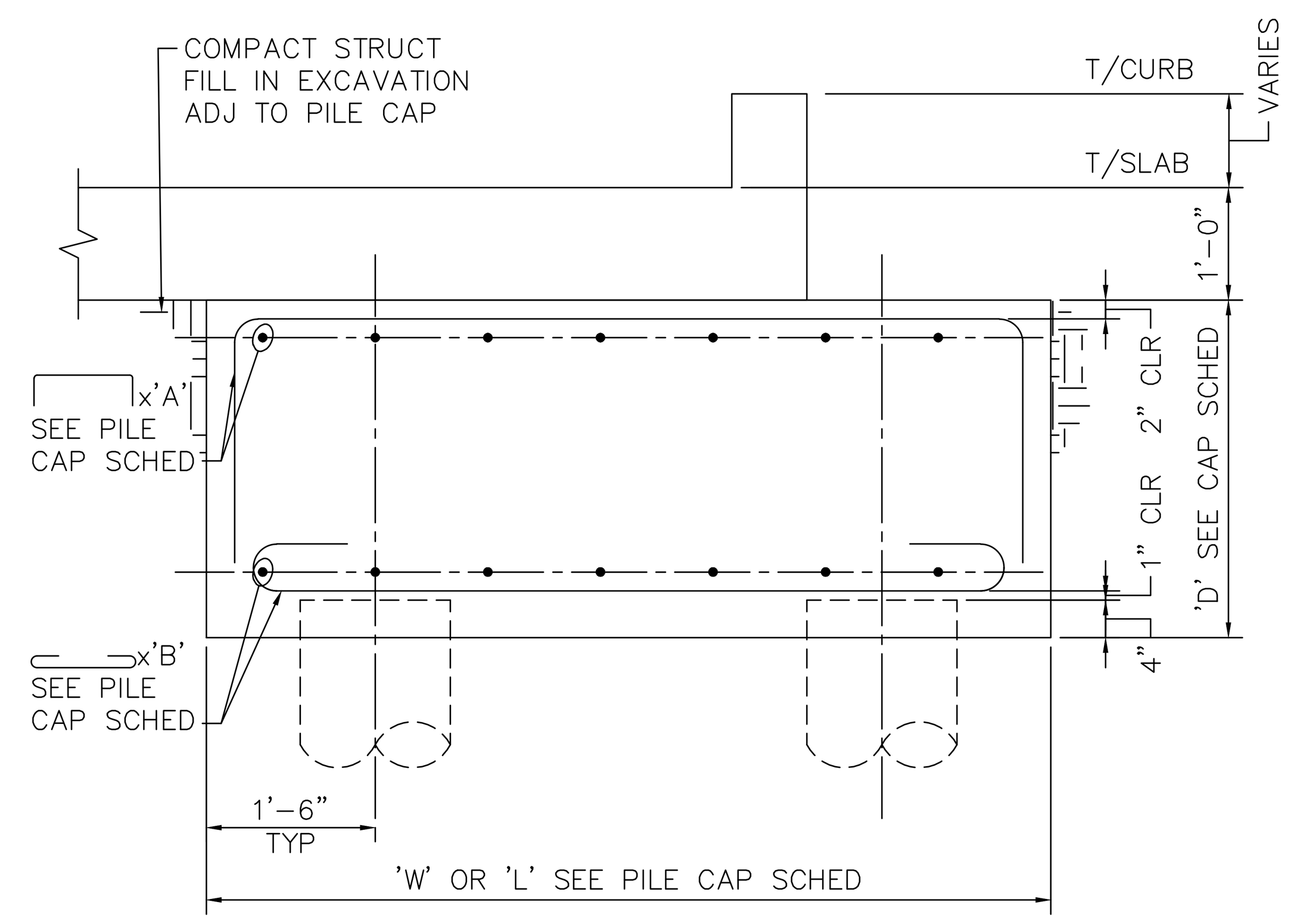
3 GRADE BEAM SCHEDULE
375-S402 SCALE: NONE



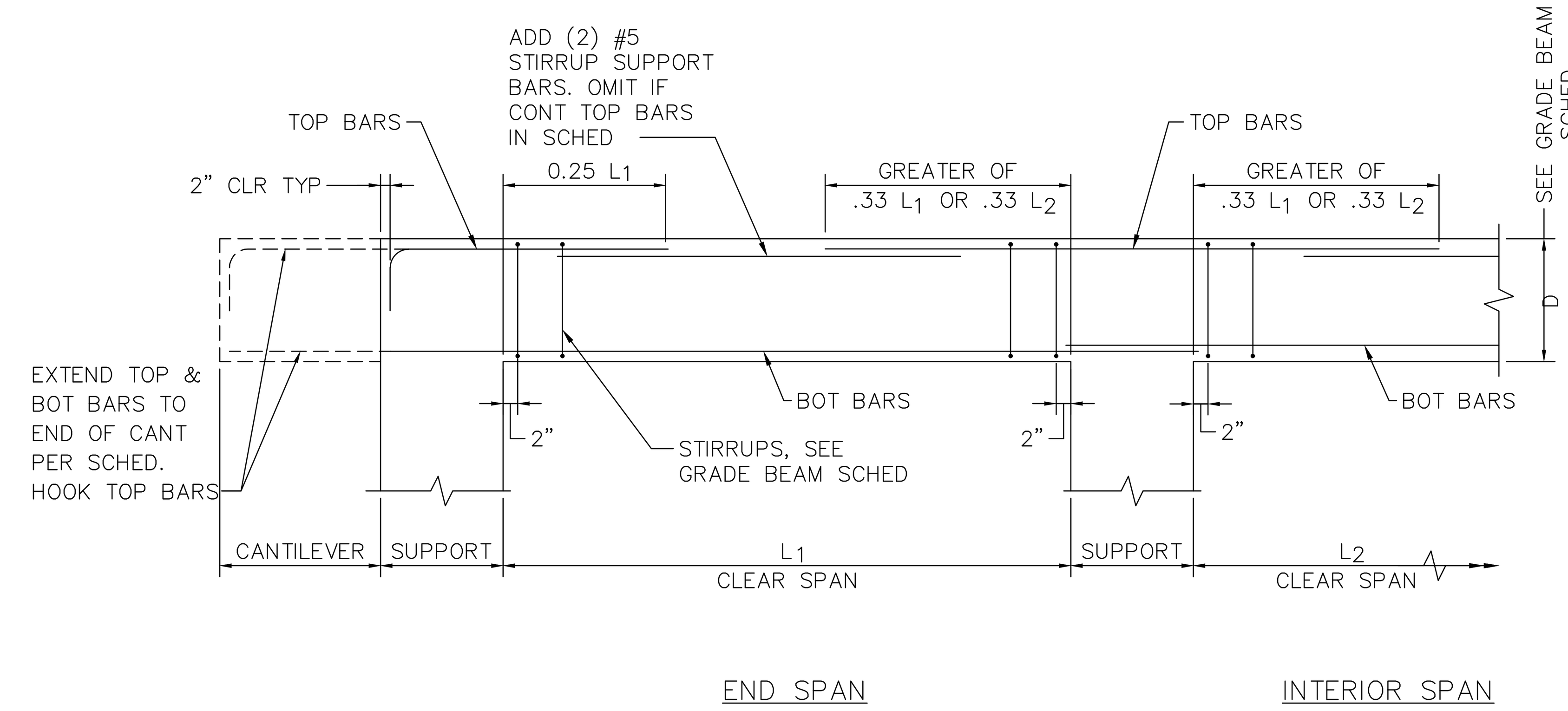
4 TRENCH DRAIN DETAIL
375-S402 SCALE: 3/4" = 1'-0"



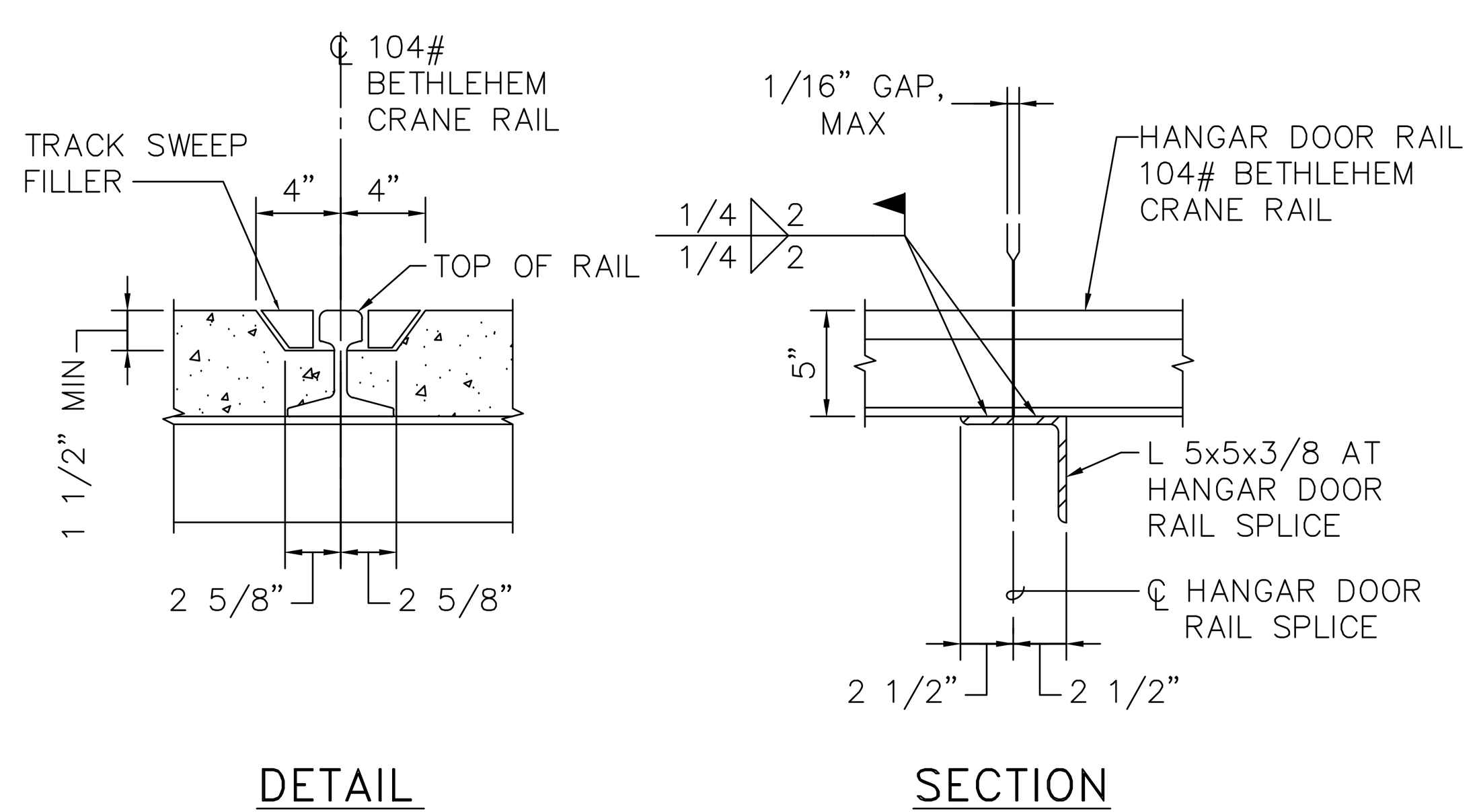
5 AFFF TRENCH DETAIL
375-S402 SCALE: 3/4" = 1'-0"



6 PILE CAP DETAIL
375-S402 SCALE: 3/4" = 1'-0"



7 GRADE BEAM REINFORCING DIAGRAM
375-S402 SCALE: NONE



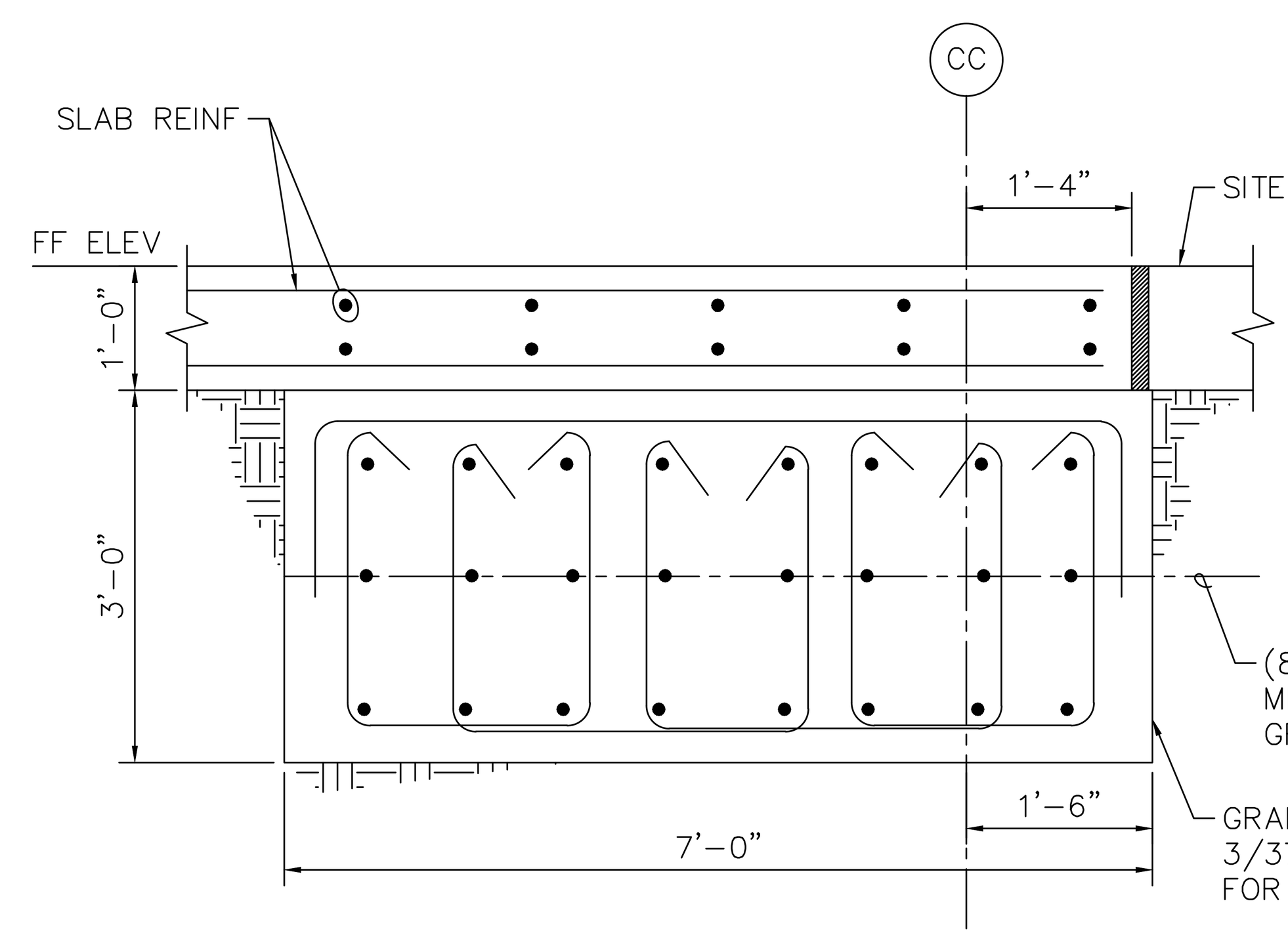
NOTES:
1. PROVIDE RAIL SPLICE BARS @ ALL DOOR RAIL SPLICES.
2. SPLICE BAR NOT SHOWN FOR CLARITY.
3. ANCHOR BOLTS NOT SHOWN FOR CLARITY.
4. COORDINATE ALL DIMENSIONS WITH HANGAR DOOR MANUFACTURER AND EQUIPMENT SUPPLIED.

8 DOOR TRACK DETAILS
375-S402 SCALE: 1 1/2" =- 1'-0"

MARK	WxL	D	'A' TOP BARS	'B' BOTTOM BARS	REMARKS
1	14'-4"x33'-5"	3'-0"	(15) #9 LONG (34) #9 TRANS	(15) #9 LONG (34) #9 TRANS	FULL HEIGHT HOOK TOP 180° HOOK BOT
2	7'-0"x10'-0"	3'-0"	(8) #9 LONG (11) #6 TRANS	(8) #9 LONG (11) #6 TRANS	FULL HEIGHT HOOK TOP 180° HOOK BOT SEE NOTE 2
3	7'-0"x26'-5"	3'-0"	(8) #9 LONG (27) #6 TRANS	(8) #9 LONG (27) #6 TRANS	FULL HEIGHT HOOK TOP 180° HOOK BOT SEE NOTE 1, 2
4	3'-6"x7'-0"	3'-0"	(4) #9 LONG (8) #5 TRANS	(4) #9 LONG (8) #5 TRANS	FULL HEIGHT HOOK TOP 180° HOOK BOT
5	3'-6"x7'-0"	3'-0"	(4) #9 LONG (8) #5 TRANS	(4) #9 LONG (8) #5 TRANS	FULL HEIGHT HOOK TOP 180° HOOK BOT

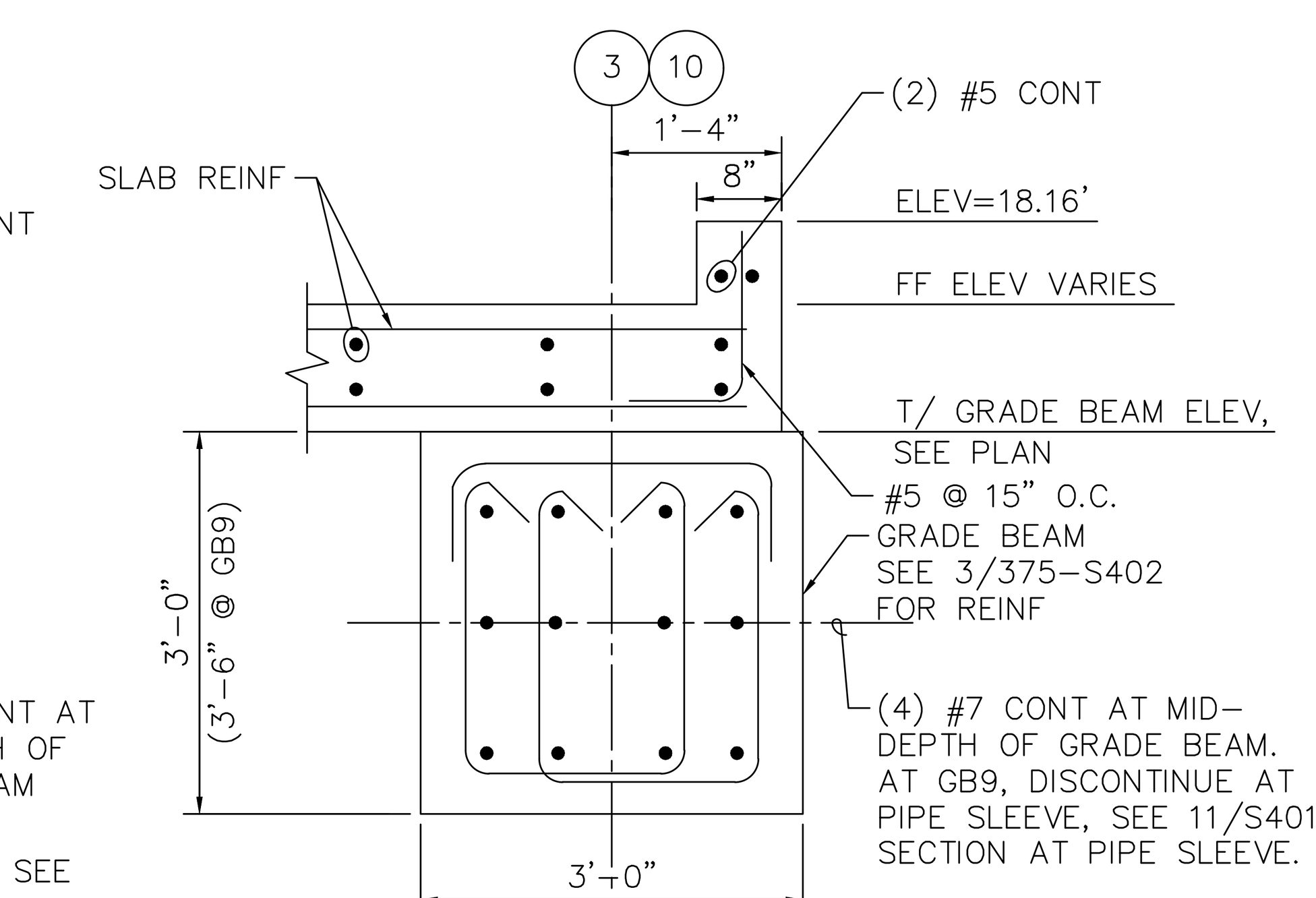
NOTES:
1. EXTEND TOP & BOT LONG BARS TO FAR SIDE OF PILE CAP (2)
2. NO COLD JOINT AT INTERFACE BETWEEN PILE CAP (2) & (3)

9 PILE CAP SCHEDULE
375-S402 SCALE: 3/4" = 1'-0"



NOTE:
1. FOR DOOR TRACKS SEE 1/375-S402 & 7/375-S402
2. FOR TRENCH DRAIN SEE 4/375-S402

10 GRADE BEAM SECTION
375-S402 SCALE: 3/4" = 1'-0"



11 GRADE BEAM SECTION
375-S402 SCALE: 3/4" = 1'-0"

US Army Corps of Engineers
Seattle District

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by: BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX(206) 374-9795

Designed by: ADW
Drawn by: WP
Checked by: JJF
Date: 1/30/04
Design file no. 3125/211-10-02

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

FOUNDATION DETAILS

PLATE NUMBER:
375-S402

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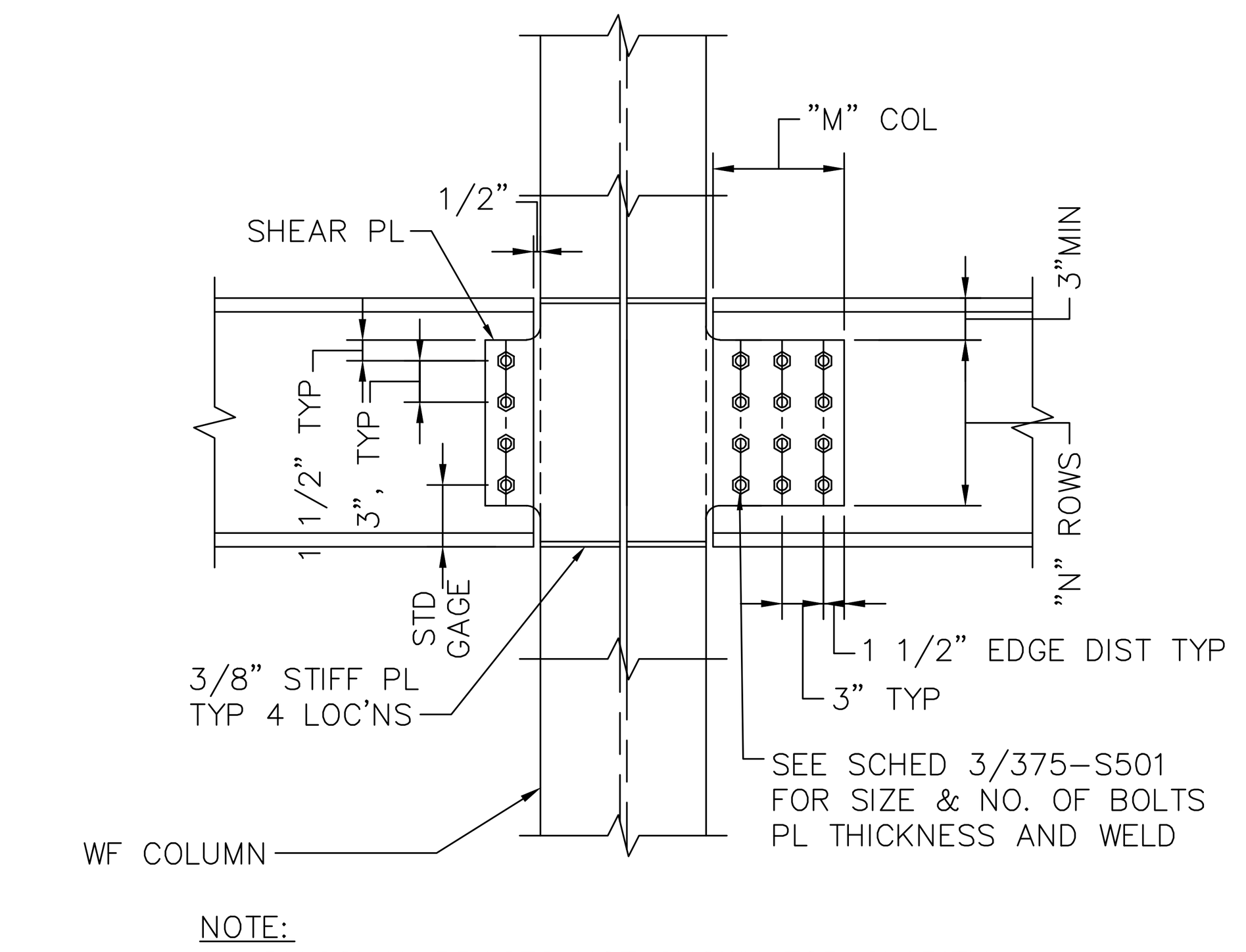
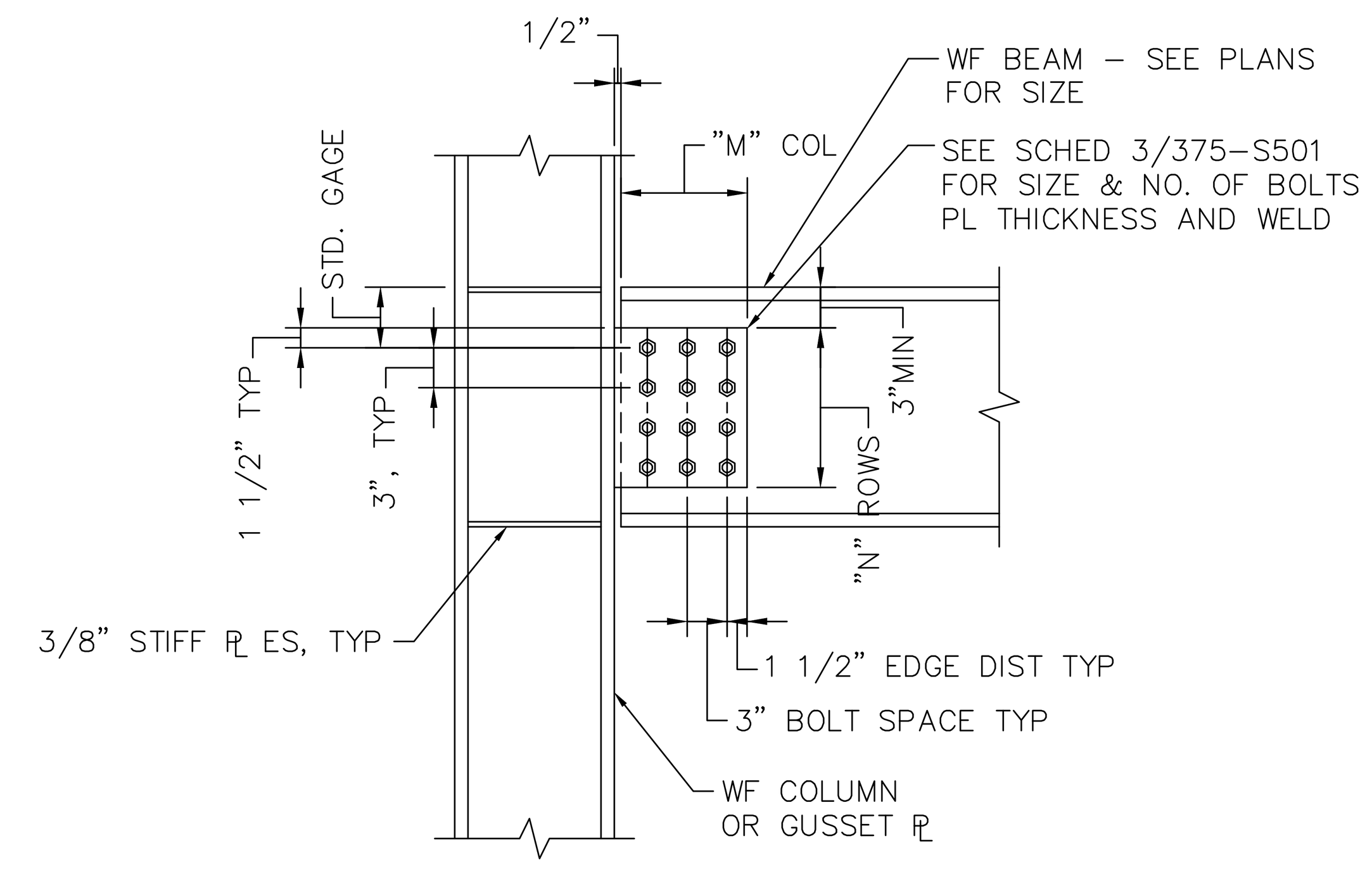
Last Saved on Wed Jan 28 2004 at 02:39PM by Walton File Name: F:\2003\SABLD-03-607\001\CADD\dwgs\bldg375\375_S402.dwg Scale: 1
Xref xTB_SABLD-03-607_001.dwg



NOTE:
1. DIAGONAL BRACES NOT SHOWN FOR CLARITY.

1 TYP BEAM COL WEB CONN
375-S501 SCALE: 1" = 1'-0"



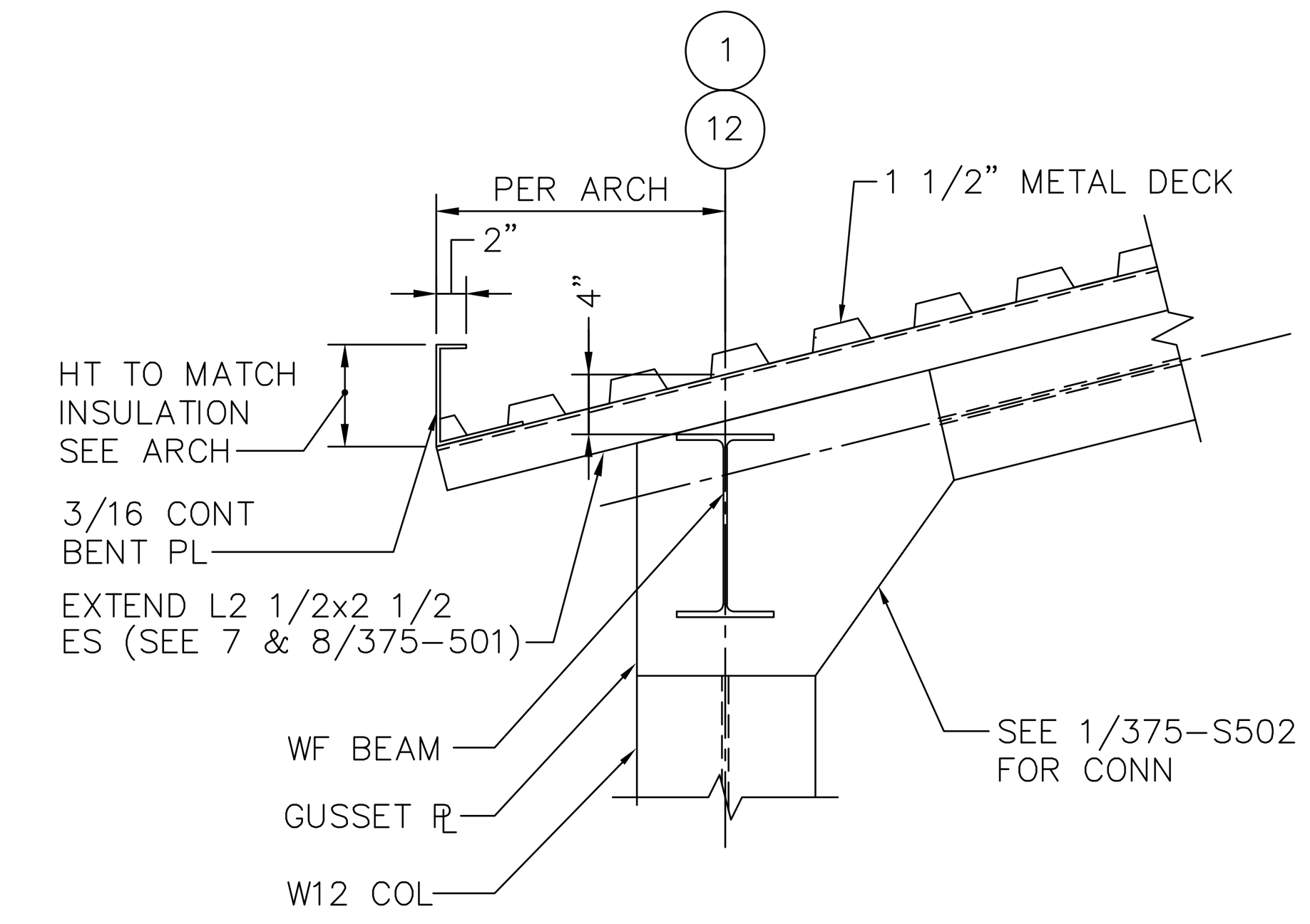
NOTE:
1. DIAGONAL BRACES NOT SHOWN FOR CLARITY.

2 TYP BEAM COL FLANGE CONN
375-S501 SCALE: 1" = 1'-0"

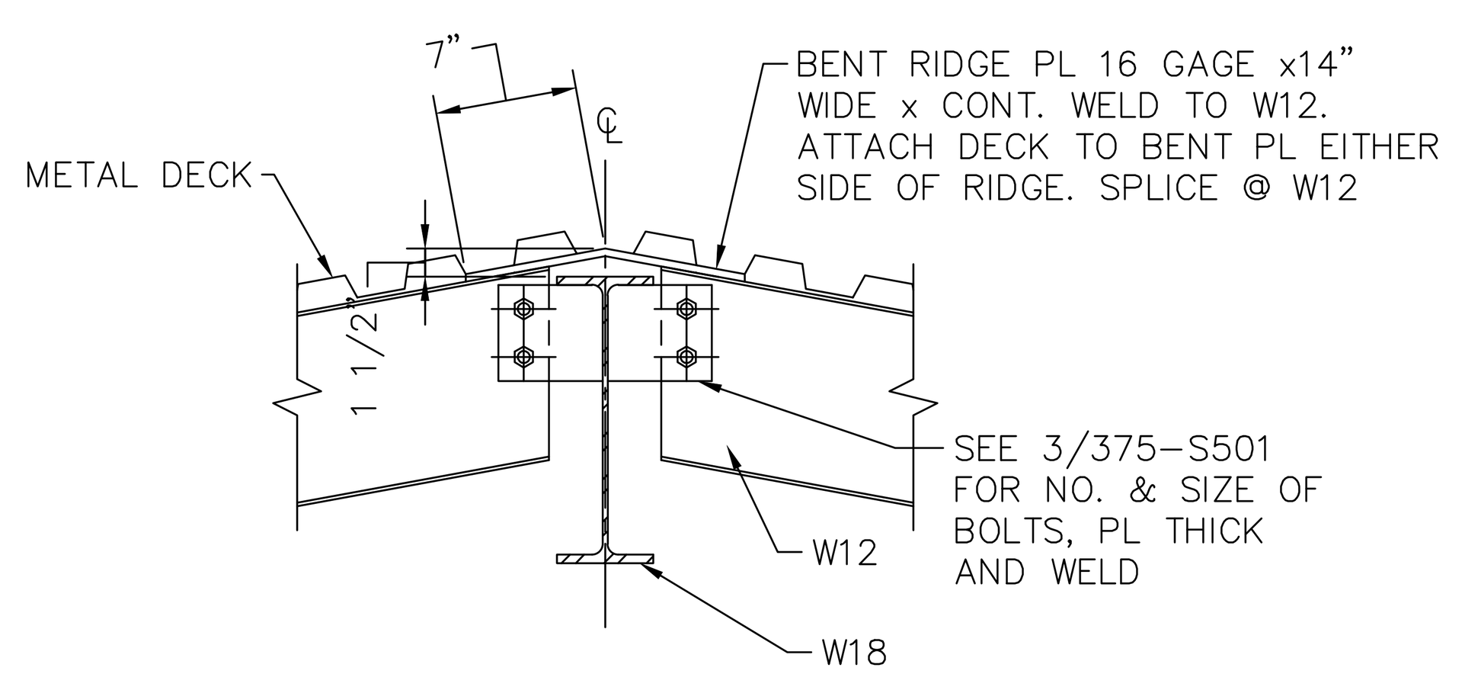
BOLTED CONNECTION SCHEDULE			
BEAM SIZE	BOLTS MxN	SHEAR PL THICK.	WELD SIZE (A)
W10x22	1x3	3/8	5/16
W12x14	1x2	3/8	5/16
W12x22	1x3	3/8	5/16
W12x26	1x3	3/8	5/16
W12x40 & LARGER	3x3	3/8	5/16
W18x40	1x4	3/8	5/16

NOTES:
1. ALL BOLTS TO BE FULLY TIGHTENED 3/4"ø A325 TYPE X BEARING TYP.
2. N INDICATED NUMBER OF BOLTS IN A ROW AND M INDICATES THE NUMBER OF ROWS OF BOLTS.
3. VERT OR HORIZ HOLE SPACING 3" MIN. EDGE DIST 1 1/2" MIN.

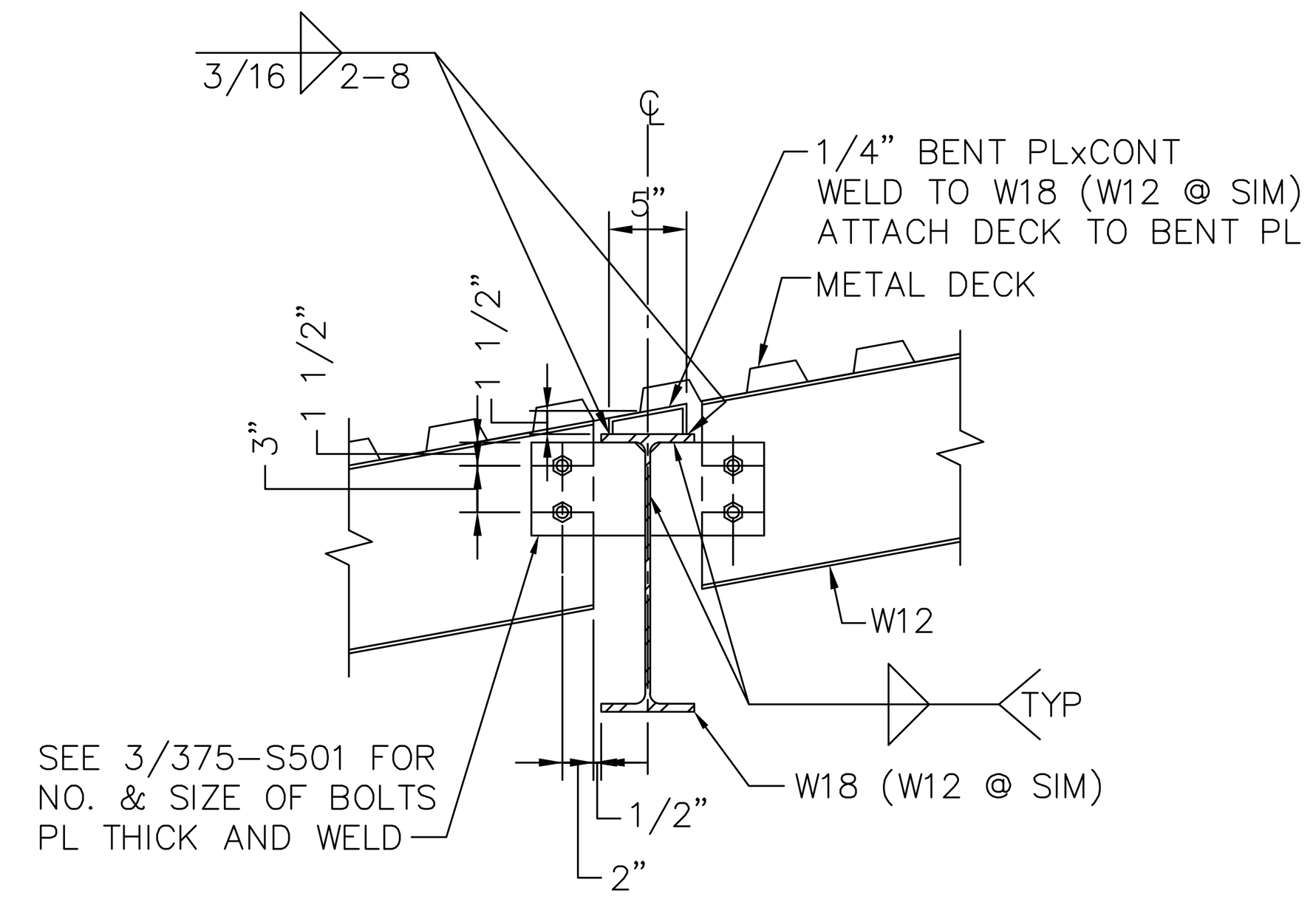
3 BEAM CONNECTION
375-S501 SCALE: 1" = 1'-0"



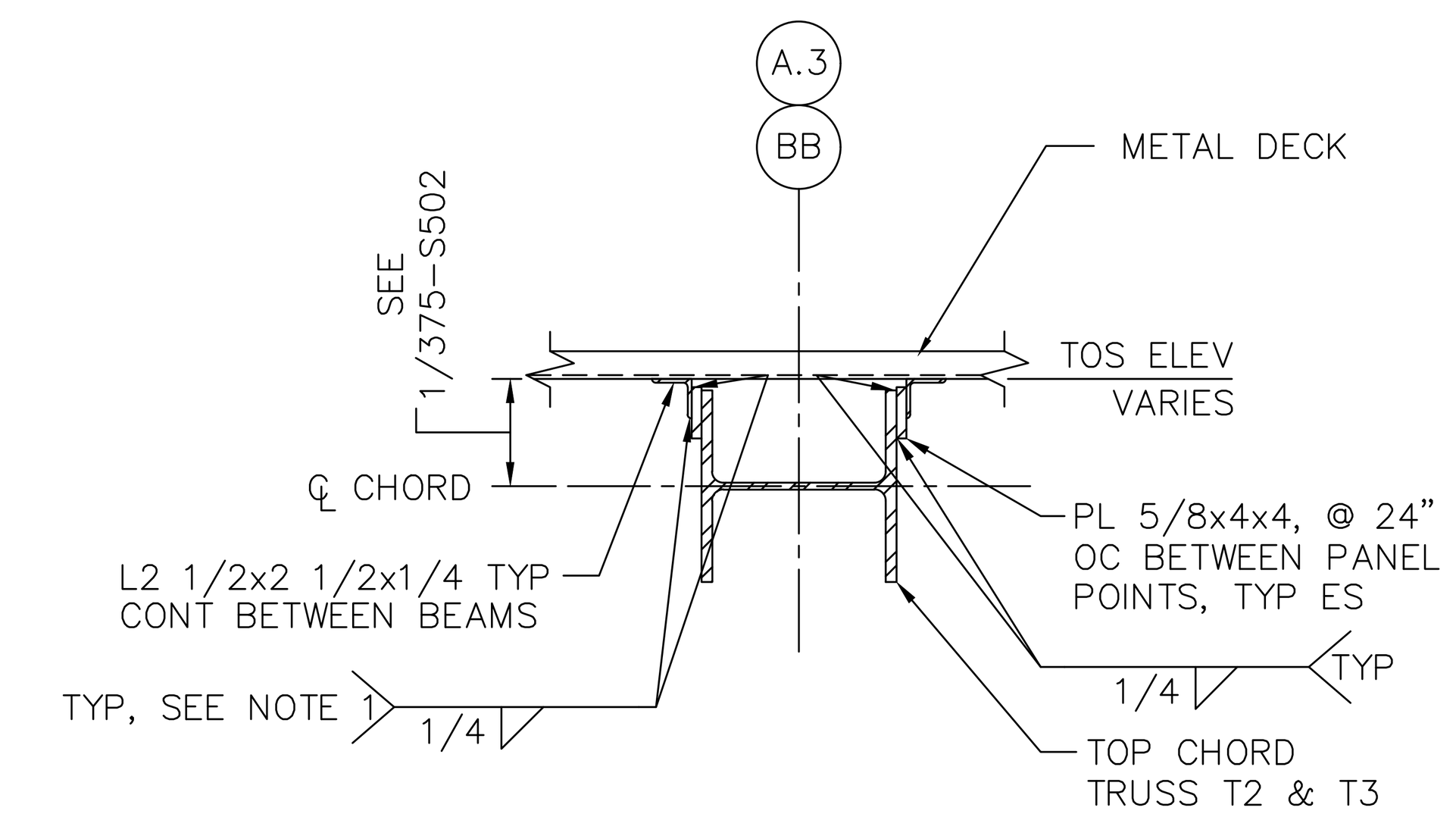
4 ROOF FRAMING DETAIL
375-S501 SCALE: 1" = 1'-0"



5 RIDGE DETAIL
375-S501 SCALE: 1"=1'-0"

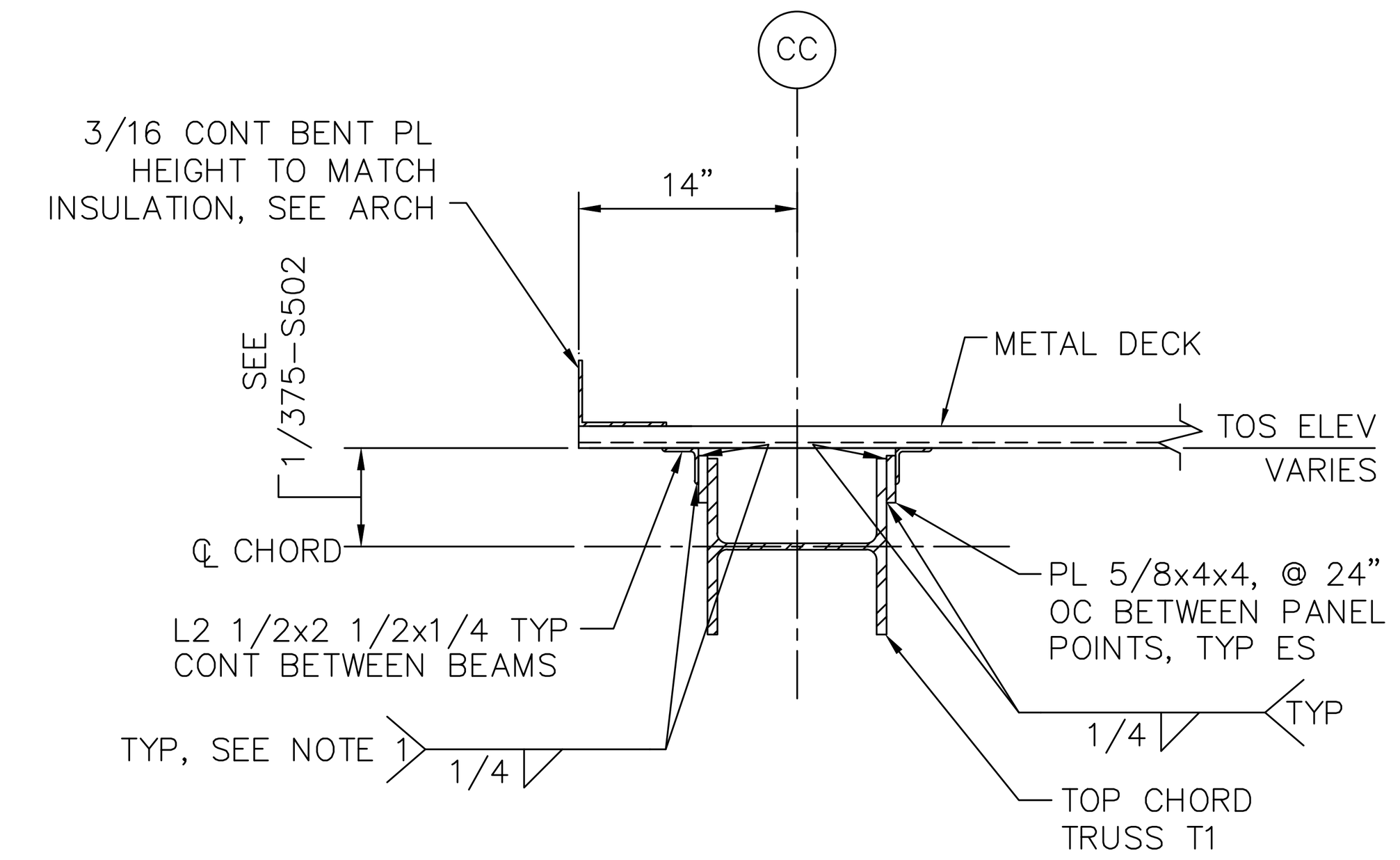


6 ROOF FRAMING DETAIL
375-S501 SCALE: 1"=1'-0"



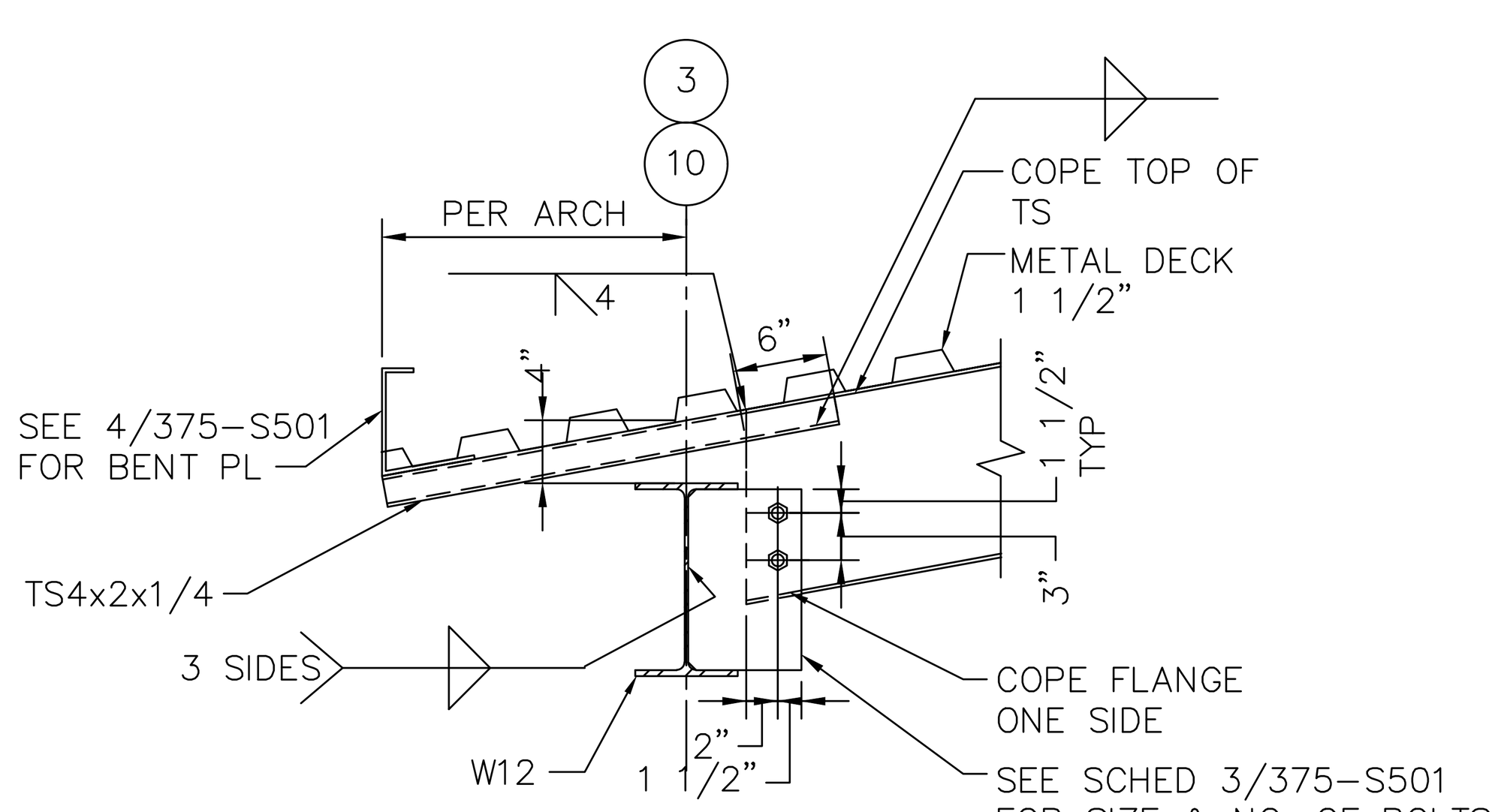
NOTES
1. AT PANEL POINTS, WELD TO FACE OF GUSSET PL, 1/4 FILLET WELD 2" LONG @ 8" OC.

7 DECK SUPPORT AT TRUSS T2 & T3 TOP CHORD
375-S501 SCALE: 1" = 1'-0"

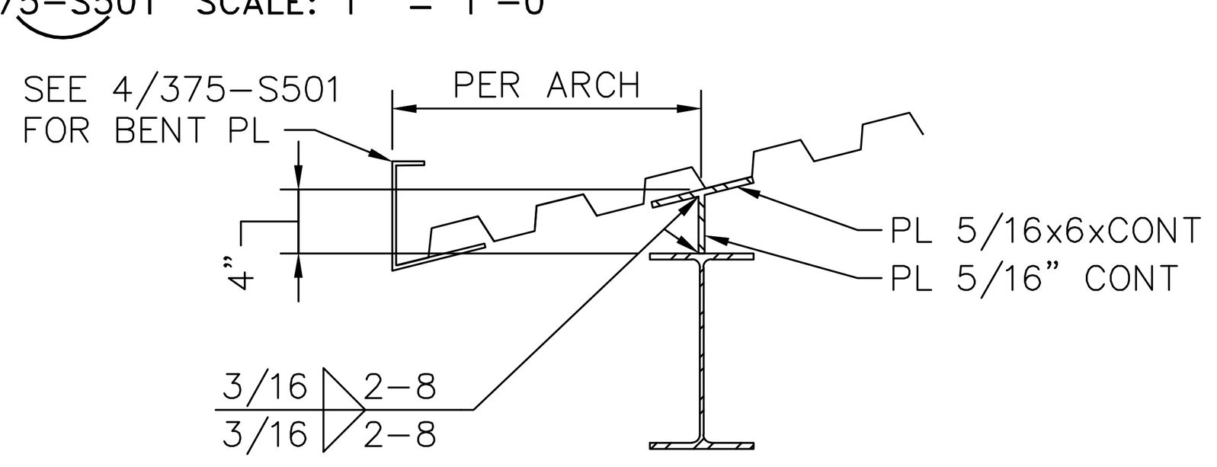


NOTES
1. AT PANEL POINTS, WELD TO FACE OF GUSSET PL, 1/4 FILLET WELD 2" LONG @ 8" OC.

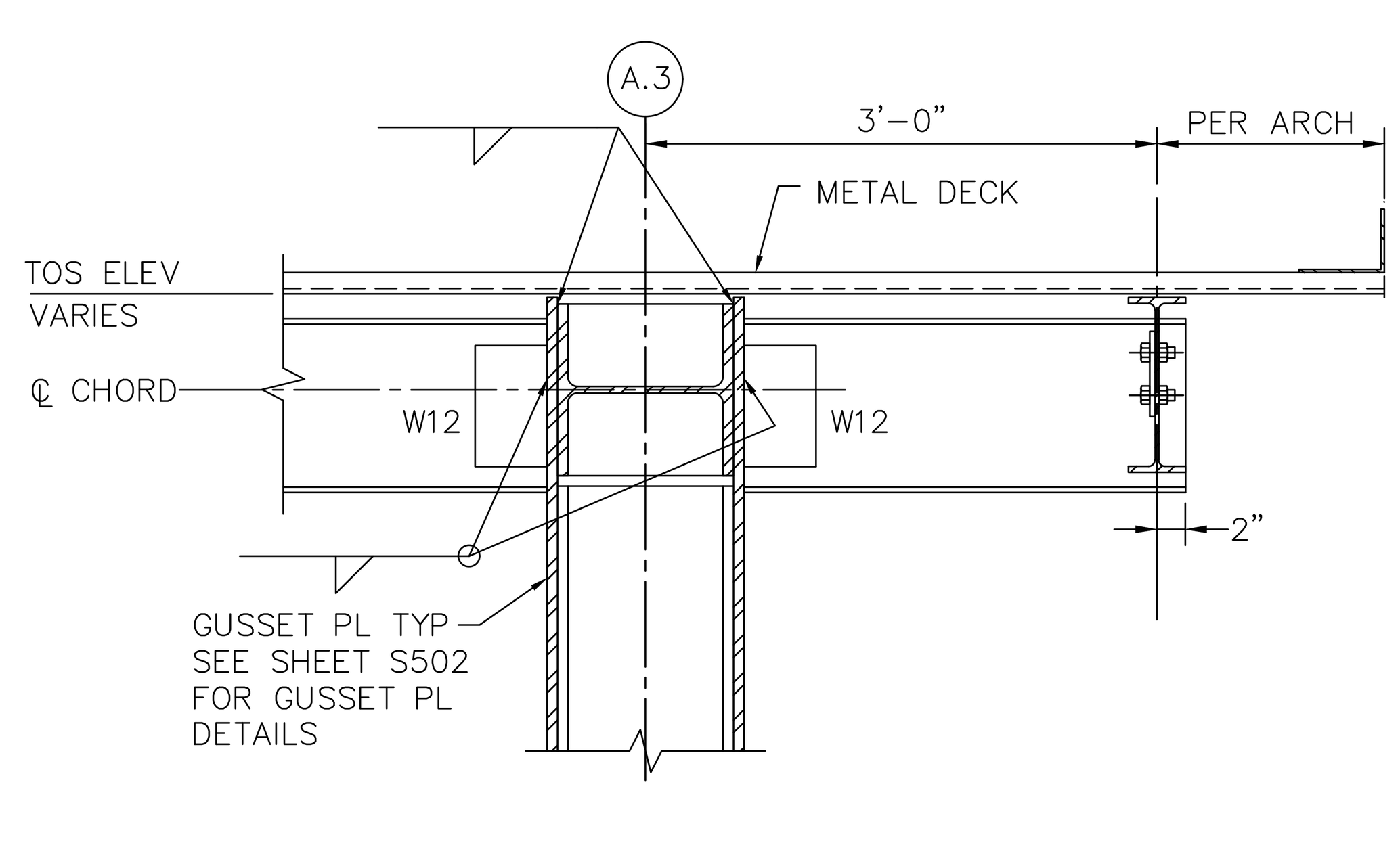
8 DECK SUPPORT AT TRUSS T1 TOP CHORD
375-S501 SCALE: 1"=1'-0"



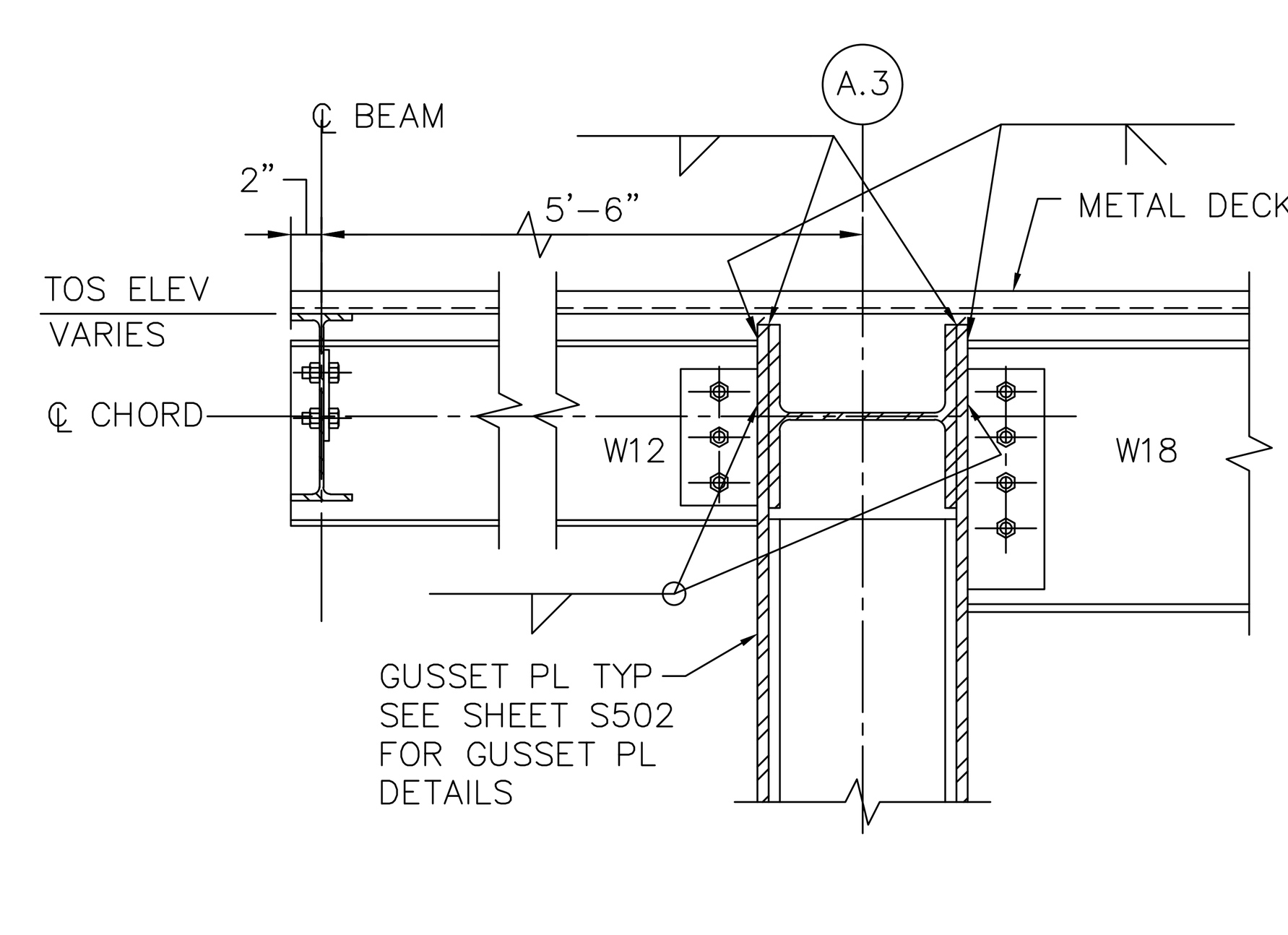
9 ROOF FRMG DETAIL GRID 3 & 10
375-S501 SCALE: 1" = 1'-0"



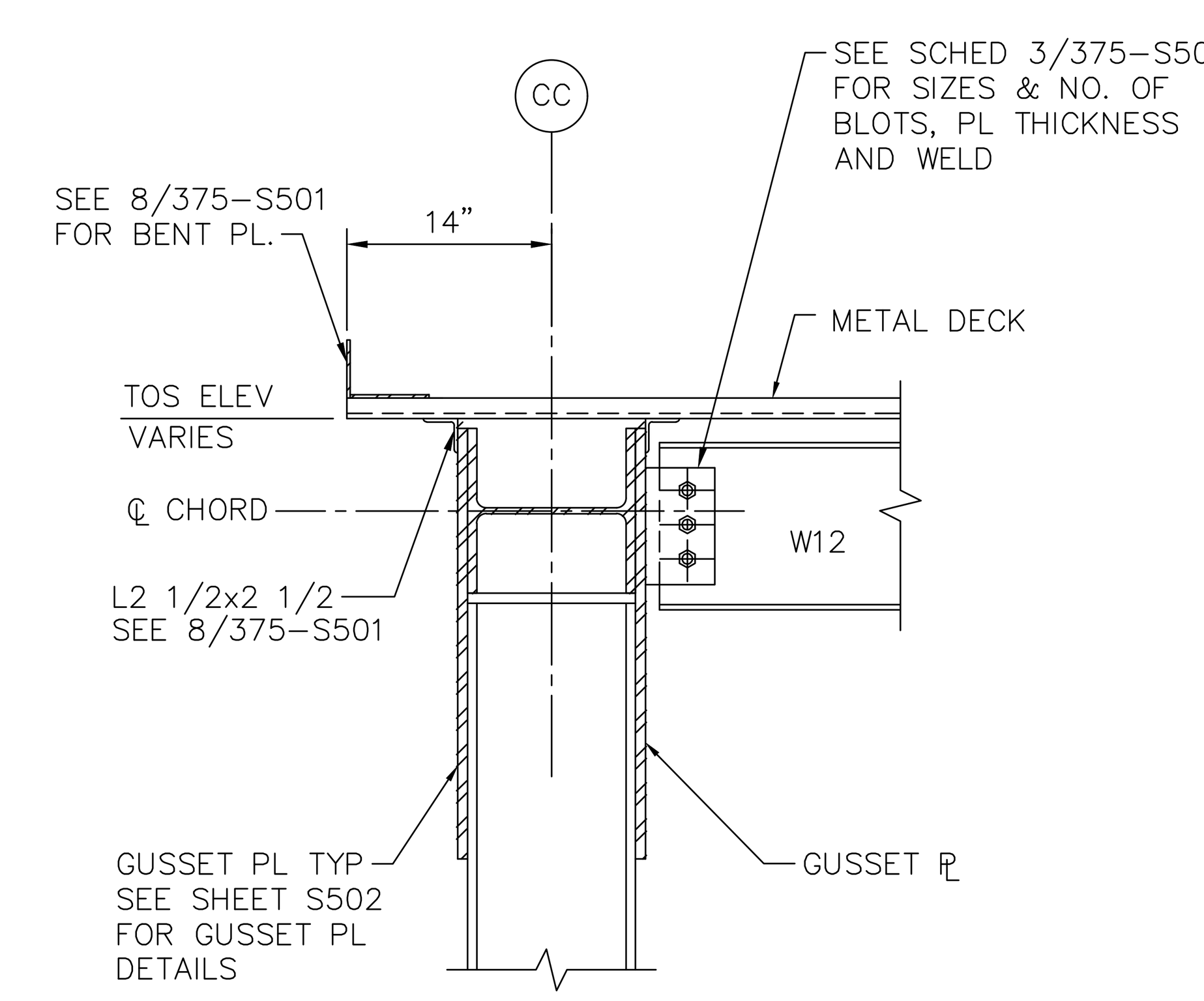
10 ROOF DECK DETAIL GRID 3 & 10
375-S501 SCALE: 1" = 1'-0"



11 CANTILEVER BEAM GRID 2 & 11
375-S501 SCALE: 1" = 1'-0"



12 CANTILEVER BEAM CONNECTION
375-S501 SCALE: 1"=1'-0"



13 ROOF FRAMING DETAIL
375-S501 SCALE: 1"=1'-0"

US Army Corps of Engineers
Seattle District

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-9795
Principal

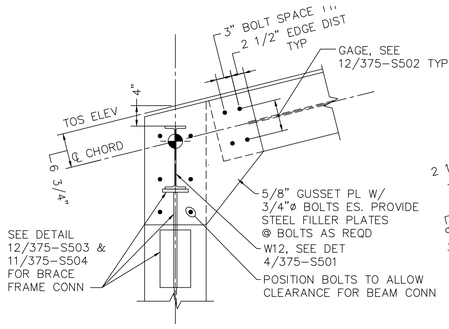
Designed by: AEW
Date: 1/30/04
Drawn by: VIP
Design file no. 312S/211-10-02
Checked by: JJF
Submitted by:
Chief, ______ Section

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

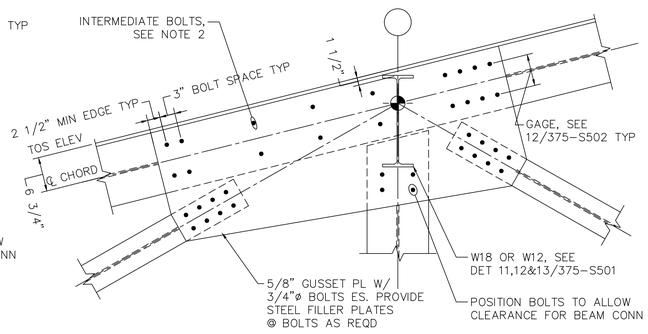
FOUNDATION DETAILS

PLATE NUMBER:
375-S501

Sheet 62 of 76

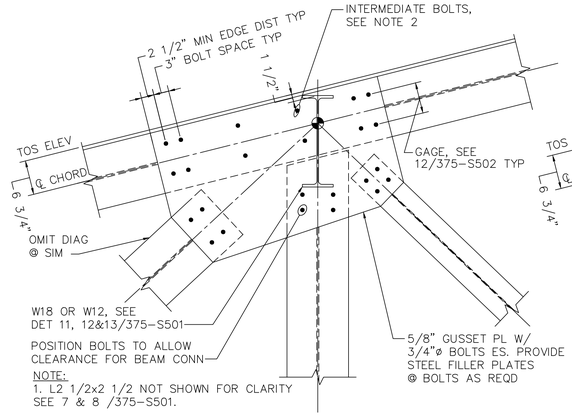


NOTE:
1. L2 1/2x2 1/2 NOT SHOWN FOR CLARITY SEE 7 & 8 /375-S501.



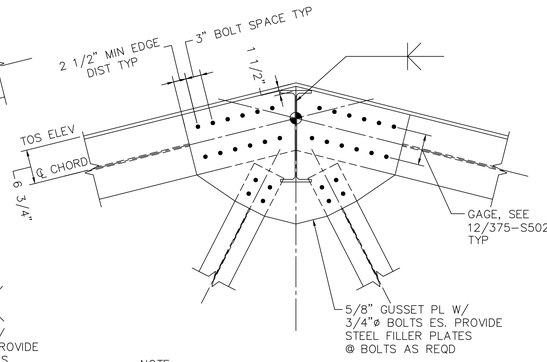
NOTE:
1. L2 1/2x2 1/2 NOT SHOWN FOR CLARITY SEE 7 & 8 /375-S501.

2. SPACE ADDITIONAL INTERMEDIATE BOLTS @ 12 OC MAX



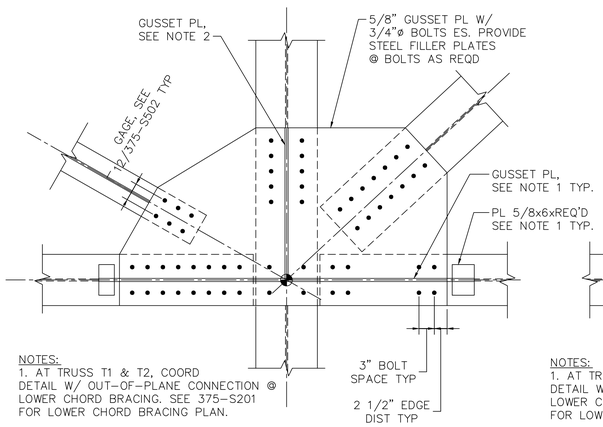
NOTE:
1. L2 1/2x2 1/2 NOT SHOWN FOR CLARITY SEE 7 & 8 /375-S501.

2. SPACE ADDITIONAL INTERMEDIATE BOLTS @ 12 OC MAX



NOTE:
1. L2 1/2x2 1/2 NOT SHOWN FOR CLARITY SEE 7 & 8 /375-S501.

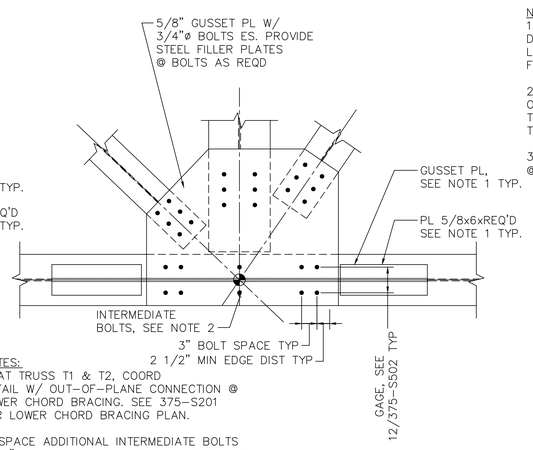
1 GUSSET PLATE CONNECTION
375-S502 SCALE: 1" = 1'-0"



NOTES:
1. AT TRUSS T1 & T2, COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ LOWER CHORD BRACING. SEE 375-S201 FOR LOWER CHORD BRACING PLAN.

2. AT TRUSS T2 & T3 COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ BF2. SEE 2/375-S302 FOR BF2 ELEV.

2 GUSSET PLATE DETAIL
375-S502 SCALE: 1" = 1'-0"



NOTES:
1. AT TRUSS T1 & T2, COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ LOWER CHORD BRACING. SEE 375-S201 FOR LOWER CHORD BRACING PLAN.

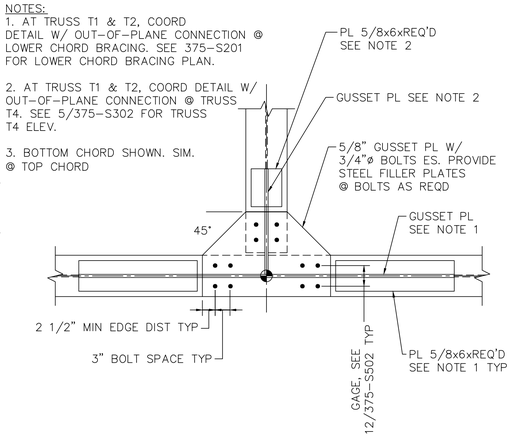
2. SPACE ADDITIONAL INTERMEDIATE BOLTS @ 12" OC MAX WHERE THERE IS NO OUT-OF-PLANE GUSSET ASSOCIATED WITH LOWER CHORD BRACING.

3 GUSSET PLATE CONNECTION
375-S502 SCALE: 1" = 1'-0"

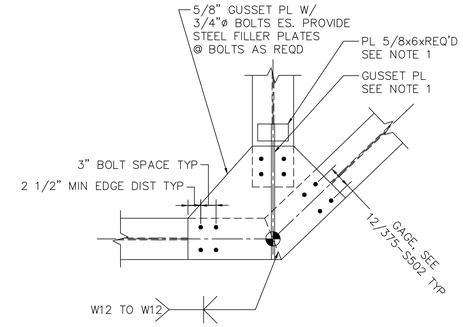
NOTES:
1. AT TRUSS T1 & T2, COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ LOWER CHORD BRACING. SEE 375-S201 FOR LOWER CHORD BRACING PLAN.

2. AT TRUSS T1 & T2, COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ TRUSS T4. SEE 5/375-S302 FOR TRUSS T4 ELEV.

3. BOTTOM CHORD SHOWN. SIM. @ TOP CHORD

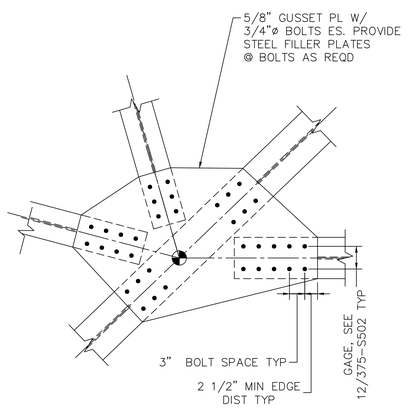


4 GUSSET PLATE CONNECTION
375-S502 SCALE: 1" = 1'-0"

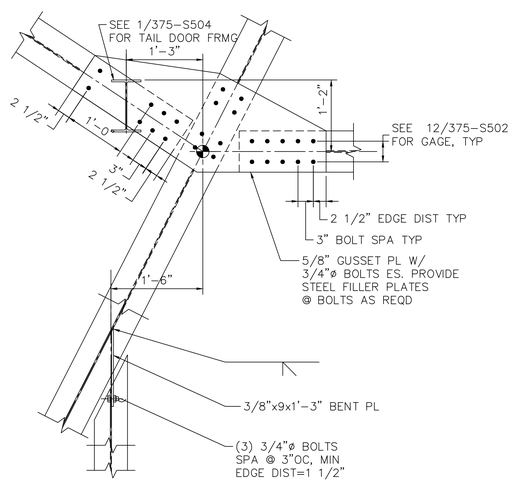


NOTE:
1. AT TRUSS T3, COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ LOWER CHORD BRACING. SEE 375-S201 FOR LOWER CHORD BRACING PLAN.

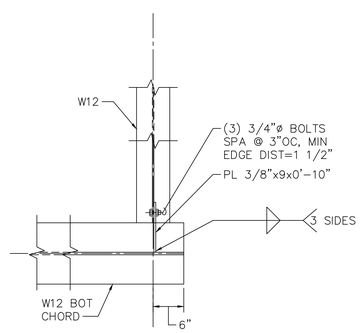
5 GUSSET PLATE CONNECTION
375-S502 SCALE: 1" = 1'-0"



6 GUSSET PLATE CONNECTION
375-S502 SCALE: 1" = 1'-0"



7 GUSSET PLATE CONNECTION
375-S502 SCALE: 1" = 1'-0"



8 GUSSET PLATE CONN TRUSS T3
375-S502 SCALE: 1" = 1'-0"

NOTES:
A. THESE NOTES PERTAIN TO TRUSSES T1, T2 & T2 AND THE BOLTED DOUBLE GUSSET PL CONNECTIONS IN BF1.

B. THE CENTER OF GRAVITY OF CONNECTED MEMBERS SHALL INTERSECT AT ONE COMMON WORK POINT UNLESS OTHERWISE NOTED.

C. ALL BOLTS SHALL BE 3/4"ø A325X. MIN. SPACING SHALL BE 3" AND MIN EDGE DISTANCE SHALL BE 2 1/2" UNO.

D. BOLT GAGE SHALL BE 5 1/2" FOR W12x79, W12x72, W12x65, W12x58, W12x53, W12x50, W12x40 AND SHALL BE 3 1/2" FOR W12x30, W12x26.

E. WHERE TRUSS MEMBERS DO NOT HAVE EQUAL DEPTH, PROVIDE STEEL FILLER PLATE SUCH THAT THE GUSSET PLATES BEAR ON FLAT SURFACE.

F. GUSSET PLATES SHALL BE ASTM A 572 GRADE 50.

G. MINIMUM NUMBER OF BOLTS PROVIDED AT EACH CONNECTION IS SHOWN ON ELEVATIONS SHEET 375-S301 & 375-S302.

9 GUSSET PLATE CONN TRUSS T3
375-S502 SCALE: 1" = 1'-0"

10 GUSSET PL CONN TRUSS T1 & T2
375-S502 SCALE: 1" = 1'-0"

11 GUSSET PL CONN TRUSS T1 & T2
375-S502 SCALE: 1"=1'-0"

12 TRUSS NOTES.
375-S502 SCALE: N.T.S.

US Army Corps of Engineers
Seattle District

Symbol	Date	Description	Appr.

Designed by: AEW
Drawn by: VJP
Checked by: LJF
Submitted by: Chief, _____ Section

Date: 1/30/04
Design file no. 3125/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

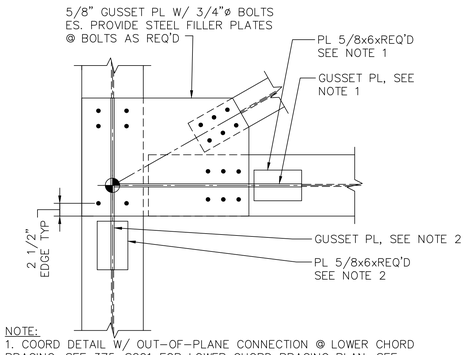
Submitted by: BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-8795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND AVIC, OREGON
FY04 PN TQKD 012259

FRAMING DETAILS

PLATE NUMBER:
375-S502

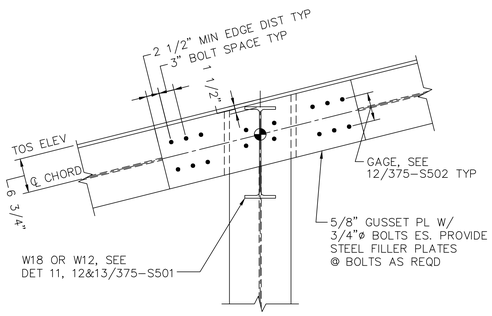
Sheet 63 of 76



NOTE:
1. COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ LOWER CHORD BRACING. SEE 375-S201 FOR LOWER CHORD BRACING PLAN. SEE 6/375-S504 FOR DET. IF FILLER PLATE IS USED, ADJUST THICKNESS OF 5/8" PL TO MATCH TOTAL THICKNESS OF FILLER PL + 5/8"

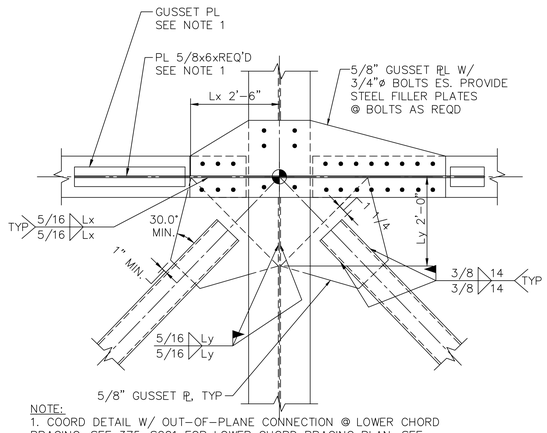
2. COORD DETAIL W/ OUT-OF-PLAN CONNECTION @ BF4. SEE 3/375-S302 FOR BF4 ELEV. SEE 8/375-S504 FOR DET. IF FILLER PLATE IS USED, ADJUST THICKNESS OF 5/8" PL TO MATCH TOTAL THICKNESS OF FILLER PL + 5/8"

1 GUSSET PLATE CONN
375-S503 SCALE: 1"=1'-0"



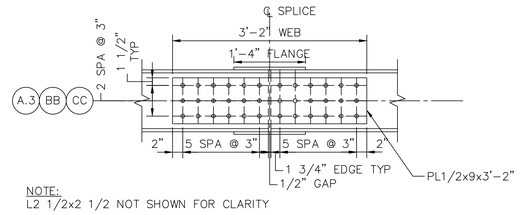
NOTE:
1. L2 1/2x2 1/2 NOT SHOWN FOR CLARITY. SEE 7 & 8/375-S501.

2 GUSSET PLATE CONN
375-S503 SCALE: 1"=1'-0"



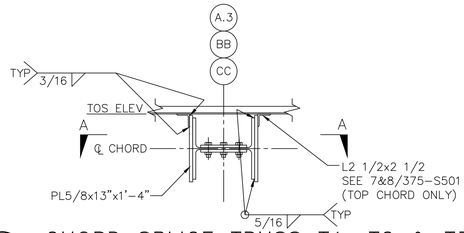
NOTE:
1. COORD DETAIL W/ OUT-OF-PLANE CONNECTION @ LOWER CHORD BRACING. SEE 375-S201 FOR LOWER CHORD BRACING PLAN. SEE 6/375-S504 FOR DET. IF FILLER PLATE IS USED, ADJUST THICKNESS OF 5/8" PL TO MATCH TOTAL THICKNESS OF FILLER PL + 5/8"

3 BRACE CONN BF1
375-S503 SCALE: 1"=1'-0"

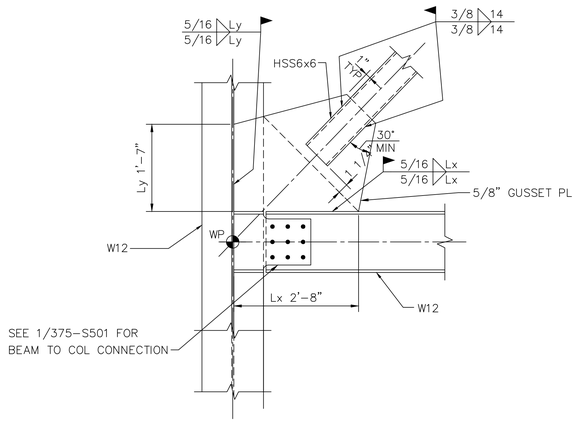


NOTE:
L2 1/2x2 1/2 NOT SHOWN FOR CLARITY

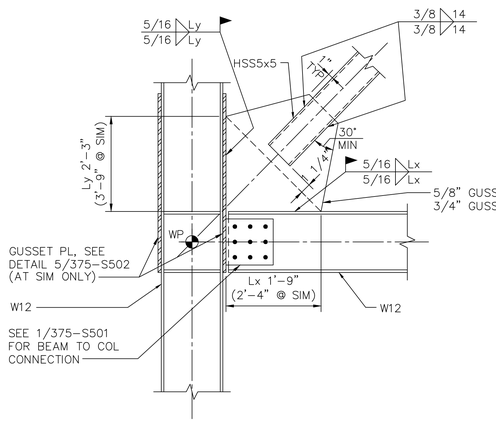
SECTION A-A



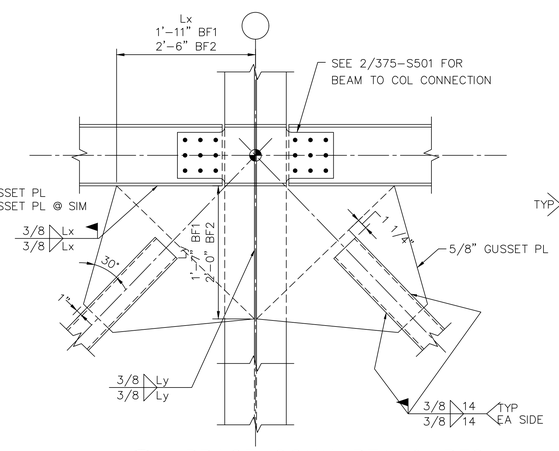
4 CHORD SPLICE TRUSS T1, T2 & T3
375-S503 SCALE: 1"=1'-0"



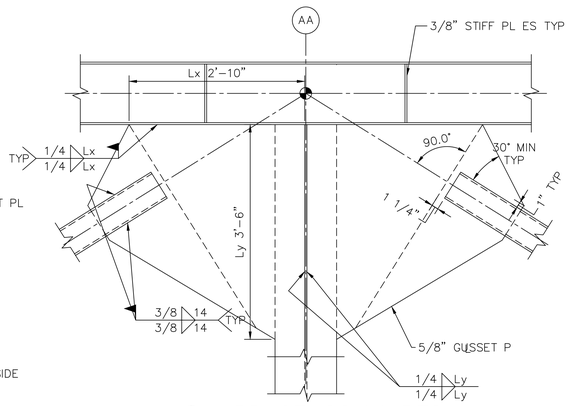
5 BRACE CONN BF1
375-S503 SCALE: 1" = 1'-0"



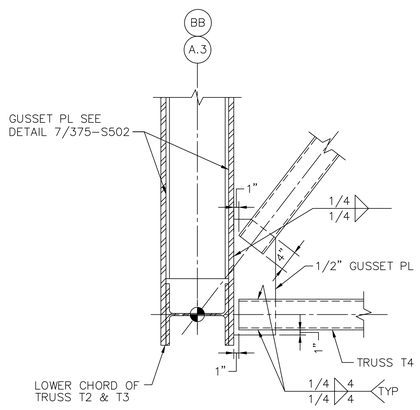
6 BRACE CONN BF2
375-S503 SCALE: 1" = 1'-0"



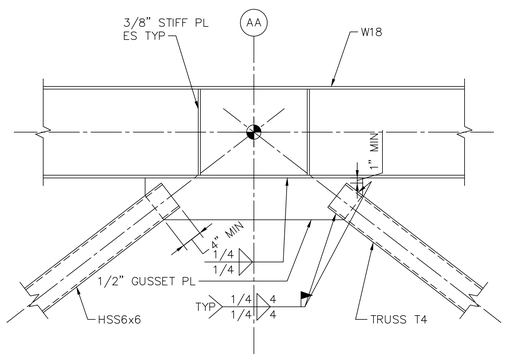
7 BRACE CONN BF1 & BF2
375-S503 SCALE: 1" = 1'-0"



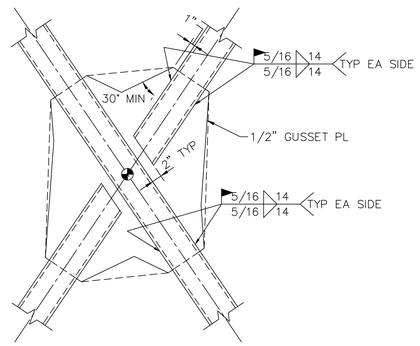
8 BRACE CONN BF2
375-S503 SCALE: 1"=1'-0"



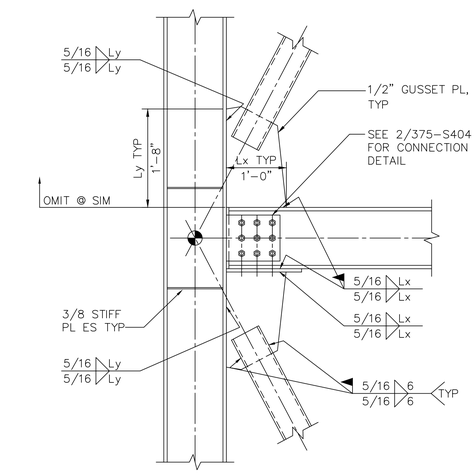
9 TRUSS T4 TO T2 & T3
375-S503 SCALE: 1"=1'-0"



10 TRUSS T4 CONN
375-S503 SCALE: 1"=1'-0"



11 BRACE CONN BF3
375-S503 SCALE: 1" = 1'-0"



12 CONNECTION DETAIL AT BF3
375-S503 SCALE: 1"=1'-0"

US Army Corps of Engineers
Seattle District

Symbol	Date	Description
Appr.		
Symbol	Date	Description
Appr.		

Designed by: AEW
Drawn by: WB
Checked by: JJF
Submitted by: Chief, ____ Section
Date: 1/30/04
Design file no. 3135/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

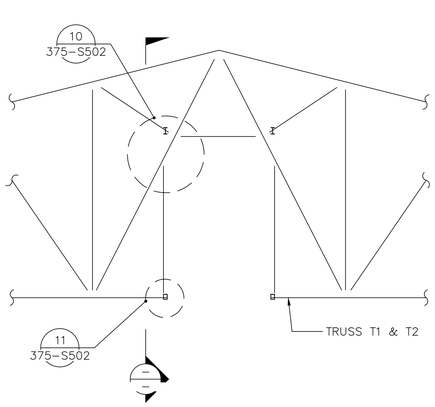
Submitted by:
BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX(206) 374-9795
Principal

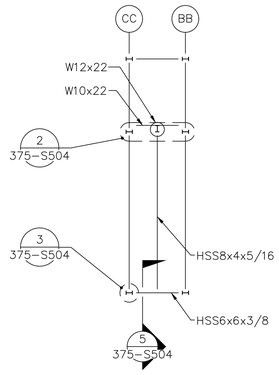
ADD/ALTER FLIGHTLINE FACILITIES, BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

FRAMING DETAILS

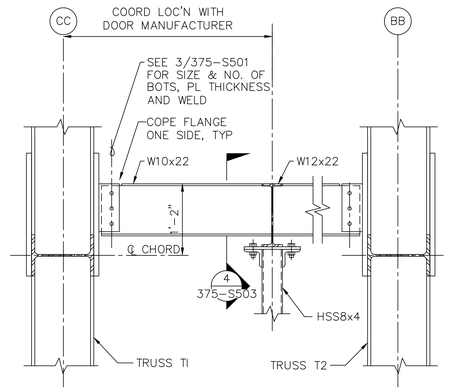
PLATE NUMBER:
375-S503

Sheet 64 of 76

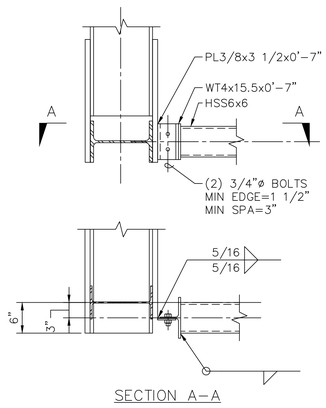




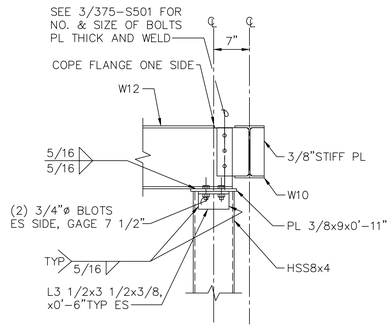
1 ELEVATION @ TAIL DOOR
375–S504 SCALE: 1"=1'–0"



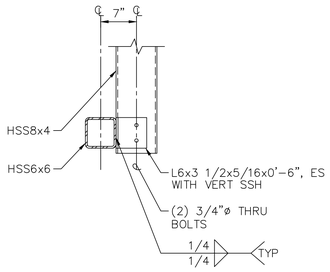
2 TAIL DOOR FRMG TO TRUSS T1& T2
375–S503 SCALE: 1"=1'–0"

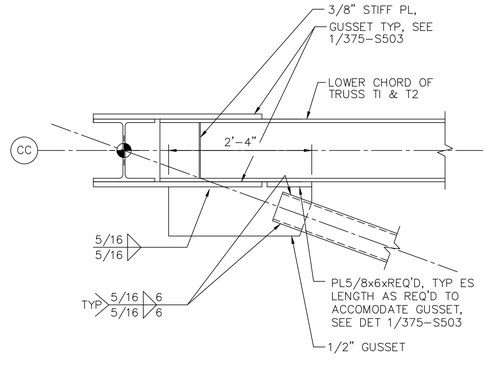


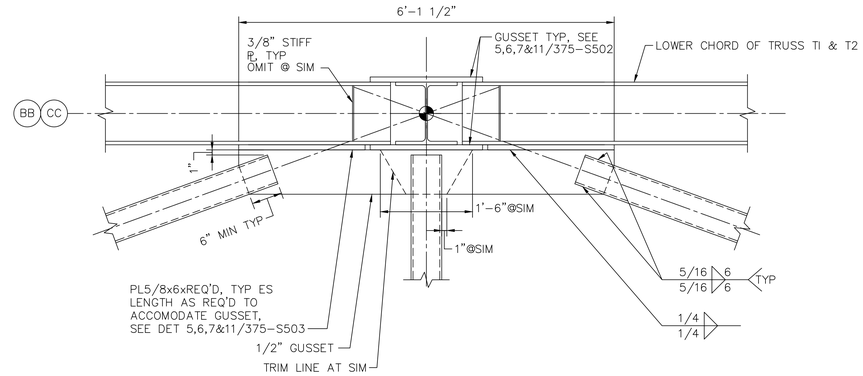
3 TAIL DOOR FRAMING
375–S503 SCALE: 1"=1'–0"



4 TAIL DOOR FRAMING
375–S503 SCALE: 1"=1'–0"





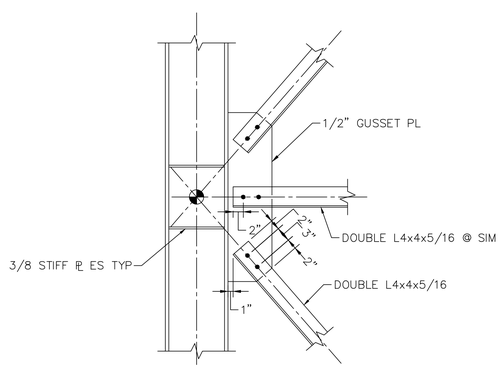


NOTES:
1. COORD THIS DETAIL WITH TRUSS FRAMING DETAILS.

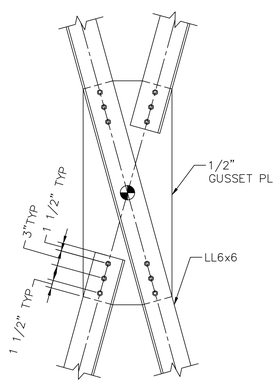
5 TAIL DOOR FRAMING
375–S504 SCALE: 1"=1'–0"

6 PLAN – LOWER CHORD BRACING TRUSS T1& T2
375–S504 SCALE: 1"=1'–0"

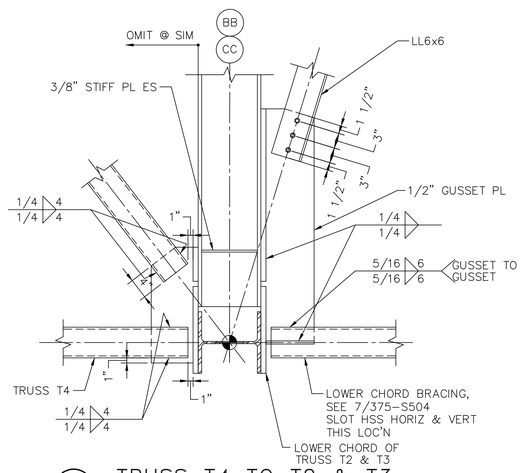
7 PLAN – LOWER CHORD BRACING TRUSS T1& T2
375–S504 SCALE: 1"=1'–0"



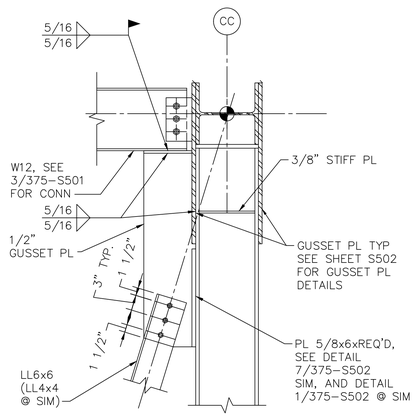
8 CONNECTION DETAIL AT BF4
375–S504 SCALE: 1"=1'–0"



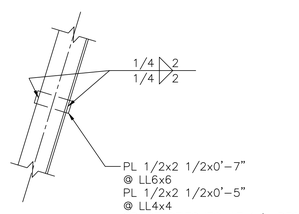
9 CONN @ LL TRUSS
375–S504 SCALE: 1"=1'–0"



10 TRUSS T4 TO T2 & T3
375–S504 SCALE: 1"=1'–0"



11 TRUSS T4 TO T1
375–S504 SCALE: 1"=1'–0"



12 LL STITCHES
375–S504 SCALE: 1"=1'–0"

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

Designed by: AEW
Drawn by: VJP
Checked by: LJF
Submitted by: Chief, ____ Section

Date: 1/30/04
Design file no. 3125/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by: BERGER/ABAM ENGINEERS, INC
(206) 374-8990 FAX:(206) 374-8795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND AVIC, OREGON
FY04 PN TQKD 012259

FRAMING DETAILS

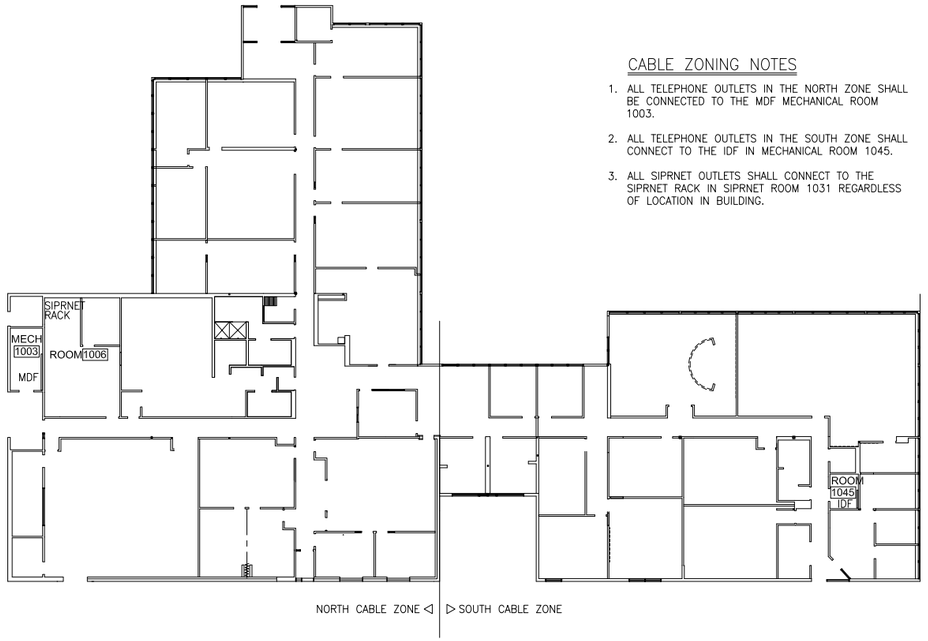
PLATE NUMBER:
375-S504

Sheet 65 of 76

AFFF/FIRE ALARM SYSTEMS SEQUENCE OF OPERATIONS

SYSTEM OUTPUT	SYSTEM INPUT: MANUAL PULL STATIONS	OFFICE AREA SMOKE DETECTORS	OFFICE AREA HEAT DETECTORS	TEMPERATURE MONITOR	LOW BATTERY	AC POWER FAILURE	CIRCUIT FAULT	SUPERVISED COMPONENT FAILURE	SPRINKLER SYSTEM TAMPER SWITCH	SPRINKLER SYSTEM FLOW SWITCH	AFFF SYSTEM TAMPER SWITCH	AFFF SYSTEM FLOW SWITCH	HANGER EAST ZONE HEAT DETECTOR	HANGER WEST ZONE HEAT DETECTOR	AFFF LOW LEVEL MANUAL STATIONS	GAS DETECTOR	FLAME DETECTOR
AFFF PUMP START													X	X			
ACTIVATE AFFF EAST ZONE ROOF													X				
ACTIVATE AFFF WEST ZONE ROOF														X			
ACTIVATE AFFF LOW LEVEL													X	X	X		
ALARM @ FCP	X	X	X							X		X	X	X	X		X
TRANSMIT ALARM TO D700 STATION	X	X	X							X		X	X	X	X		X
TROUBLE @ FCP					X	X	X	X								X	
TRANSMIT TROUBLE TO D700 STATION					X	X	X	X								X	
SUPERVISORY @ FCP				X					X		X						
TRANSMIT SUPERVISORY TO D700 STATION				X					X		X						
ACTIVATE FCP NOTIFICATION DEVICES	X	X	X							X		X	X	X	X		X
ACTIVATE ACP NOTIFICATION DEVICES												X	X	X	X		X
FAN SHUTDOWN	X	X	X							X		X	X	X	X		X

1 G-E004 **AFFF/FIRE ALARM SYSTEMS SEQUENCE OF OPERATIONS**
SCALE: NO SCALE (DETAIL TYPICAL OF BLDG 375)

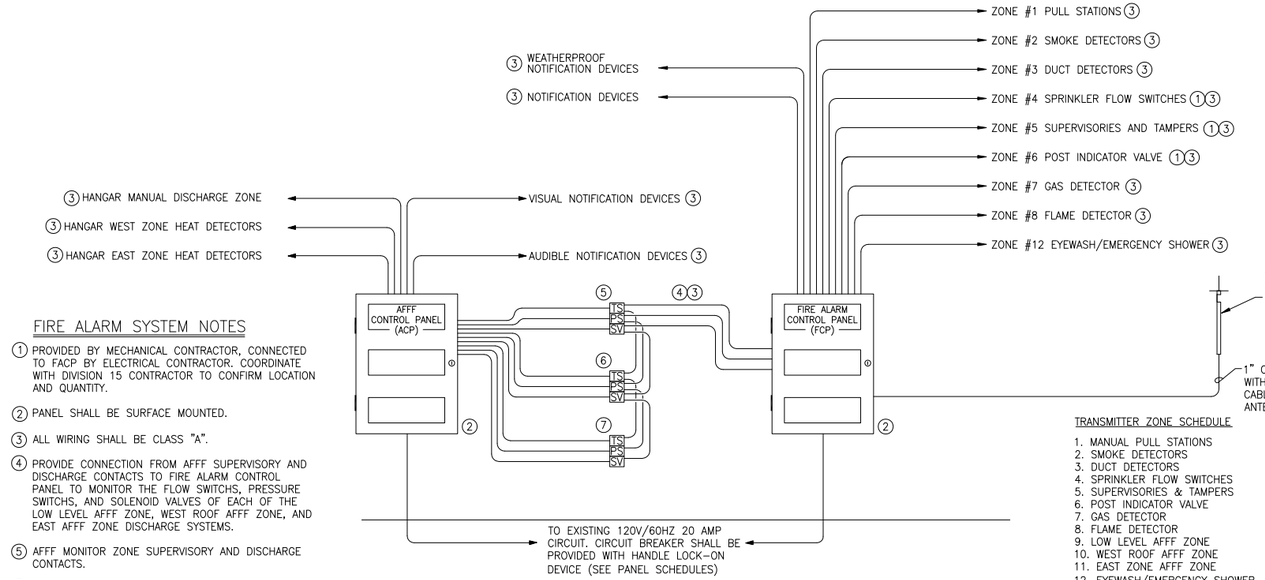


CABLE ZONING NOTES

1. ALL TELEPHONE OUTLETS IN THE NORTH ZONE SHALL BE CONNECTED TO THE MDF MECHANICAL ROOM 1003.
2. ALL TELEPHONE OUTLETS IN THE SOUTH ZONE SHALL CONNECT TO THE IDF IN MECHANICAL ROOM 1045.
3. ALL SIPRNET OUTLETS SHALL CONNECT TO THE SIPRNET RACK IN SIPRNET ROOM 1031 REGARDLESS OF LOCATION IN BUILDING.

2 G-E004 **CABLE ZONING**
SCALE: NO SCALE (DETAIL TYPICAL OF BLDG 304)

PROJECT NORTH



FIRE ALARM SYSTEM NOTES

① PROVIDED BY MECHANICAL CONTRACTOR, CONNECTED TO FACP BY ELECTRICAL CONTRACTOR. COORDINATE WITH DIVISION 15 CONTRACTOR TO CONFIRM LOCATION AND QUANTITY.

② PANEL SHALL BE SURFACE MOUNTED.

③ ALL WIRING SHALL BE CLASS "A".

④ PROVIDE CONNECTION FROM AFFF SUPERVISORY AND DISCHARGE CONTACTS TO FIRE ALARM CONTROL PANEL TO MONITOR THE FLOW SWITCHS, PRESSURE SWITCHS, AND SOLENOID VALVES OF EACH OF THE LOW LEVEL AFFF ZONE, WEST ROOF AFFF ZONE, AND EAST AFFF ZONE DISCHARGE SYSTEMS.

⑤ AFFF MONITOR ZONE SUPERVISORY AND DISCHARGE CONTACTS.

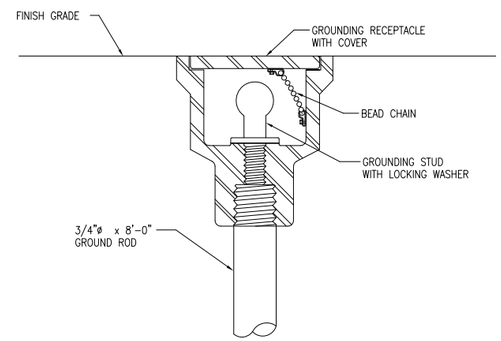
⑥ AFFF WEST ZONE SUPERVISORY AND DISCHARGE CONTACTS.

⑦ AFFF EAST ZONE SUPERVISORY AND DISCHARGE CONTACTS.

TRANSMITTER ZONE SCHEDULE

1. MANUAL PULL STATIONS
2. SMOKE DETECTORS
3. DUCT DETECTORS
4. SPRINKLER FLOW SWITCHES
5. SUPERVISORIES & TAMPERS
6. POST INDICATOR VALVE
7. GAS DETECTOR
8. FLAME DETECTOR
9. LOW LEVEL AFFF ZONE
10. WEST ROOF AFFF ZONE
11. EAST ZONE AFFF ZONE
12. EYEWASH/EMERGENCY SHOWER
13–16 SPARES

3 G-E004 **AFFF/FIRE ALARM SYSTEMS RISER DIAGRAM**
SCALE: NO SCALE (DETAIL TYPICAL OF BLDG 375)



4 G-E004 **GROUNDING RECEPTACLE DETAIL**
SCALE: NO SCALE (DETAIL TYPICAL OF BLDG 375)

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

Designed by: RAA	Date: 01/30/04
Drawn by: BRH	Design file no. 3125/211-10-02
Checked by: DMB	
Submitted by: Chief, ____ Section	

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

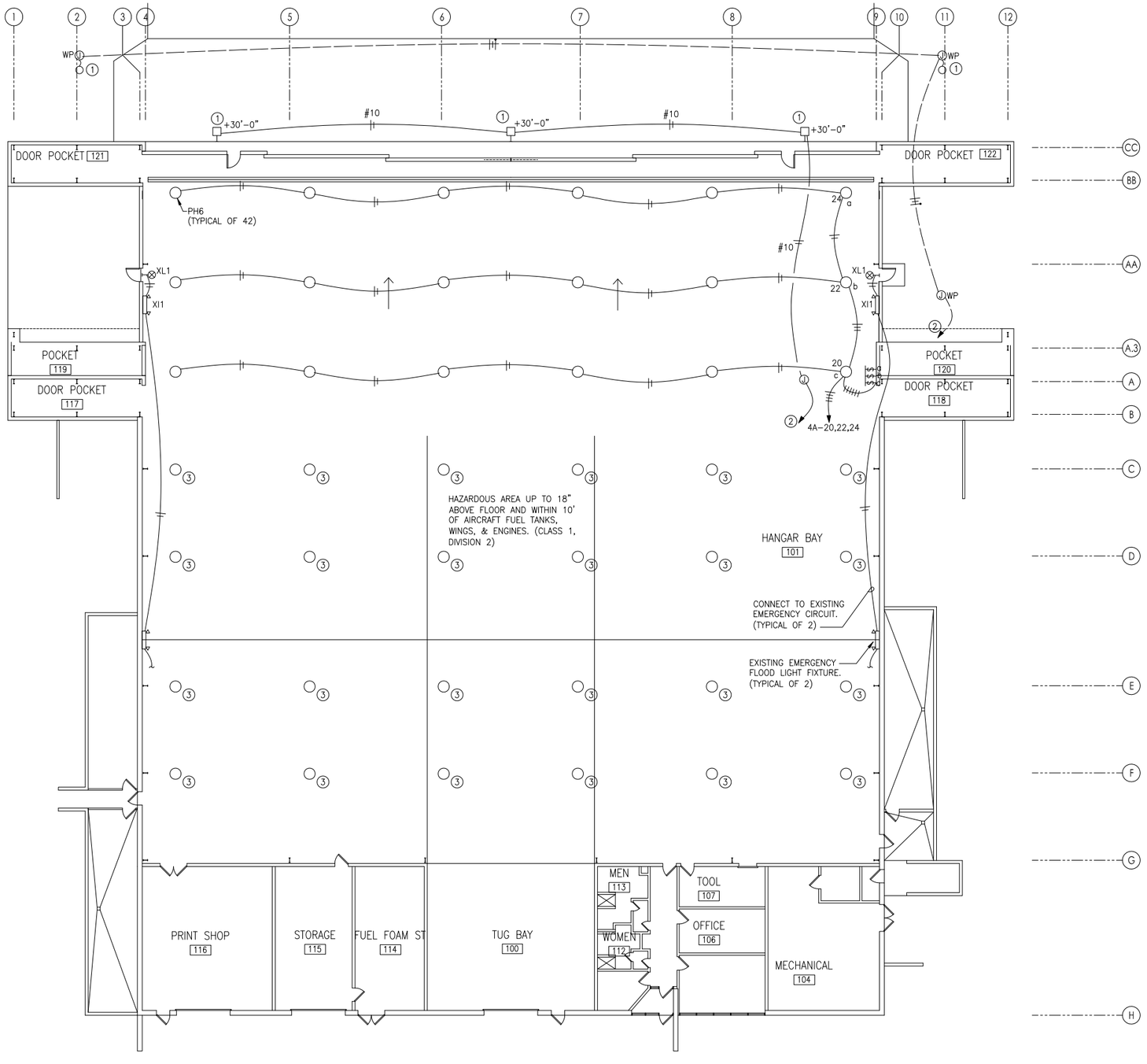
Submitted by:
BERGER/ABAM ENGINEERS INC.
(206) 374-9790 FAX(206) 374-9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

ELECTRICAL DETAILS AND DIAGRAMS

PLATE NUMBER:
G-E004

Sheet 13 of 76



GENERAL NOTES

1. PROVIDE GROUND WIRE IN ALL CONDUITS PER DETAIL 3 PLATE G-E003.

CONSTRUCTION NOTES

1. REINSTALL EXISTING FIXTURES TO NEW ADDITION, CONNECT TO EXISTING CIRCUITS, AND PROVIDE NEW LAMPS.
2. PROVIDE JUNCTION BOX AND INTERCEPT EXISTING HOMERUN. RETAIN EXISTING HOMERUN AND LIGHTING CONTROL.
3. REPLACE EXISTING LIGHT FIXTURES. REUSE EXISTING CONDUIT, CONDUCTORS AND SWITCHING.

1 LIGHTING FLOOR PLAN
375-E102 SCALE: 3/32" = 1'-0"

3/32"=1'-0" 10 0 10 20 scale feet

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

Designed by: RAA
Drawn by: JBH
Checked by: JMB
Submitted by: Chief, Section
Date: 01/30/04
Design file no. 3125/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

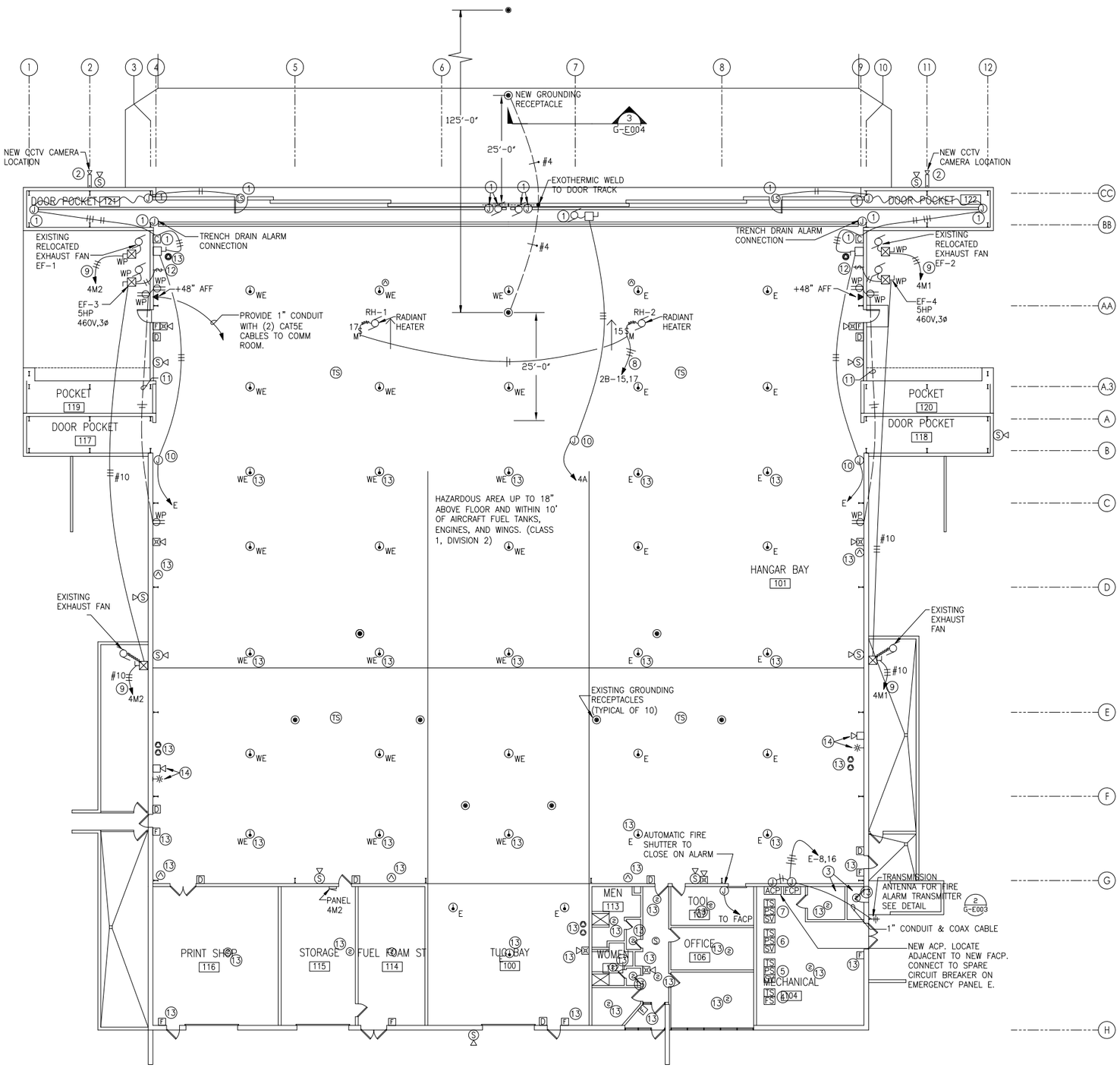
Submitted by:
BERGER/ABAM ENGINEERS INC.
(206) 374-9790 FAX:(206) 374-9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

LIGHTING FLOOR PLAN

PLATE NUMBER:
375-E102

Sheet 74 of 76



1 POWER & SYSTEMS FLOOR PLAN
375-E103 SCALE: 3/32" = 1'-0"

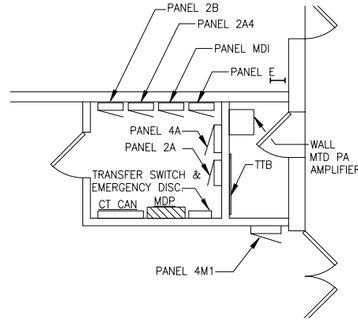
3/32"=1'-0" 10 0 10 20 scale feet

GENERAL NOTES

1. PROVIDE GROUND WIRE IN ALL CONDUITS PER DETAIL 3 PLATE G-E003.

CONSTRUCTION NOTES

1. REINSTALL AND REWIRE MOTORS AND CONTROLS AT NEW HANGAR DOOR LOCATION TO EXISTING CIRCUITING. PROVIDE CONDUIT AND WIRING AS REQUIRED.
2. REINSTALL EXISTING CAMERA IN NEW LOCATION TO EXISTING CIRCUITING. PROVIDE CONDUIT AND WIRING AS REQUIRED.
3. EXISTING ELECTRICAL AND COMMUNICATION ROOMS. SEE PARTIAL PLOOR PLAN THIS SHEET FOR DETAIL.
4. MONITORING DEVICES FOR OFFICE AREA SPINKLER SYSTEM.
5. MONITORING DEVICES FOR LOW LEVEL AFFF ZONE.
6. MONITORING DEVICES FOR WEST ROOF AFFF ZONE.
7. MONITORING DEVICES FOR EAST ROOF AFFF ZONE.
8. ROUTE TO EXISTING PANEL 2B. PROVIDE 1P-20A CIRCUIT BREAKER TO MACTH EXISTING.
9. CONNECT TO EXISTING CIRCUIT BREAKER IN PANELS.
10. INTERCEPT EXISTING CIRCUITING FOR HANGAR DOOR MOTOR AND EXTEND TO NEW DOOR LOCATION. RETAIN EXISTING HOMERUN TO PANELS.
11. INTERCEPT & EXTEND EXISTING CIRCUIT TO NEW RECEPTACLES.
12. EXHAUST FAN OVERRIDE SWITCH ON WALL AT +48".
13. REPLACE EXISTING FIRE ALARM/AFFF DEVICE AND CONNECT TO FIRE ALARM CONTROL PANEL OR AFFF CONTROL PANEL AS REQUIRED.
14. RETAIN EXISTING AFFF HORN AND INSTALL A NEW BLUE STROBE. CONNECT TO AFFF CONTROL PANEL.



2 PARTIAL FLOOR PLAN
375-E103 SCALE: 1/4" = 1'-0"

1/4"=1'-0" 4 0 4 8 scale feet

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

Designed by: RAA
Drawn by: JRH
Checked by: DMB
Submitted by: Chief, _____ Section
Date: 01/30/04
Design file no.: 3125/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
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Submitted by:
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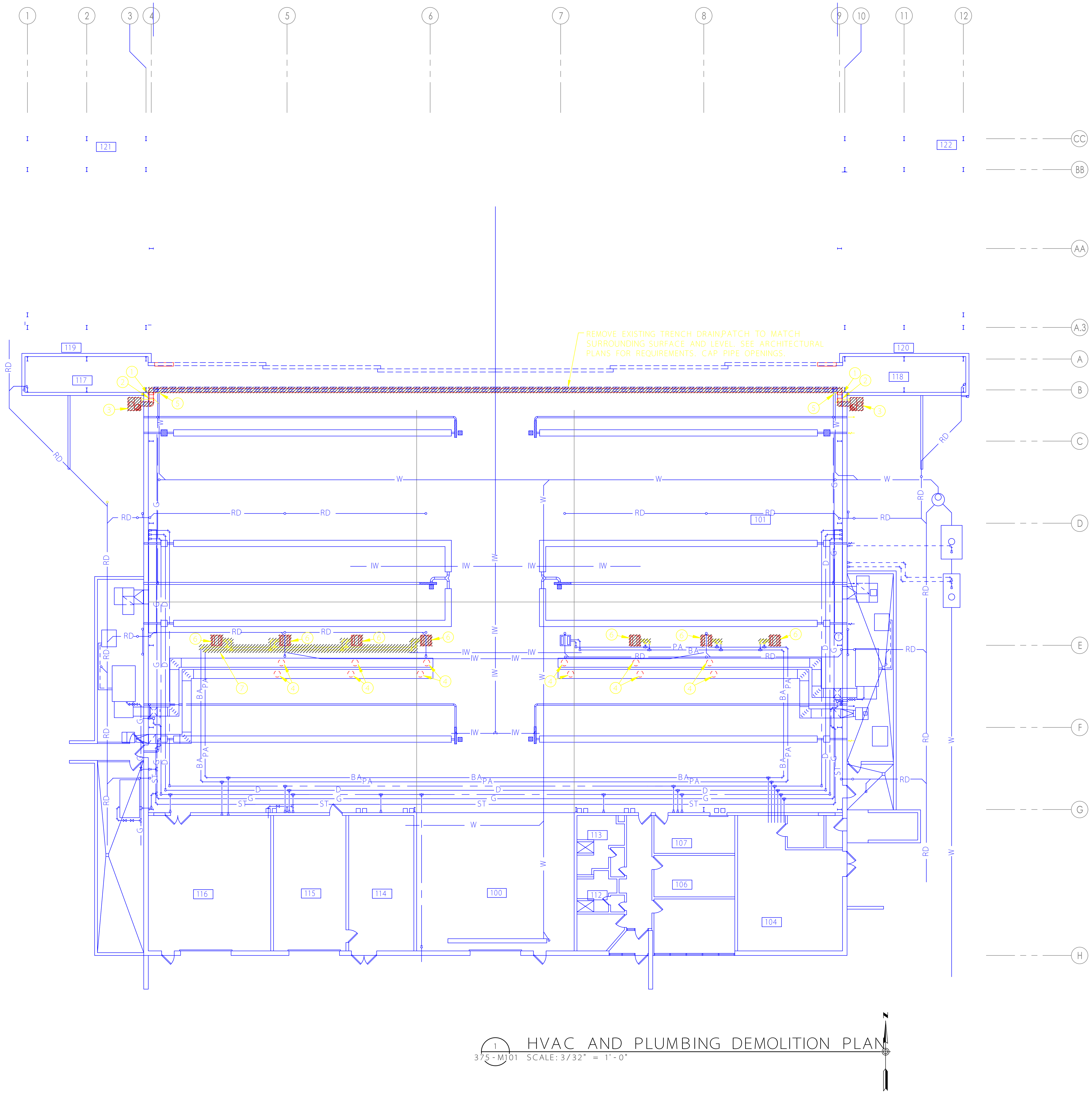
ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TOKD 012259

POWER & SYSTEMS FLOOR PLAN

PLATE NUMBER:
375-E103

Sheet 75 of 76



1 / 375-M101 HVAC AND PLUMBING DEMOLITION PLAN
SCALE: 3/32" = 1'-0"

DEMOLITION NOTES

1. DISCONNECT EXISTING EXHAUST DUCT FROM TRENCH DRAIN TO BE REMOVED. CAP OPENING WITH A MINIMUM 20 GAUGE SHEETMETAL CAP, FILL DUCT OPENING WITH CONCRETE.
2. REMOVE EXISTING TRENCH DRAIN VENTILATION DUCT DOWN TO FLOOR CAP MINIMUM 2" BELOW FLOOR WITH A 20 GAUGE SHEETMETAL CAP.
3. REMOVE AND RELOCATE EXISTING EXHAUST FANS.
4. REMOVE EXISTING 16"Ø FLEX. DUCT DROPS AND CAP AIR TIGHT.
5. CAP EXISTING 10" WASTE FROM TRENCH DRAIN TO BE REMOVED.
6. REMOVE EXISTING HOSE REELS, VALVE AND CAP OPENINGS, RETAIN REELS FOR REINSTALLATION.
7. REMOVE ALL PIPING WITHIN HATCHED AREA.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

Designed by: DEG
Drawn by: MCE
Checked by: JSC
Date: 01/30/04
Design file no. 3125/211-10-02
Submitted by: Chief, ____ Section

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
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Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

HVAC AND PLUMBING DEMOLITION PLAN

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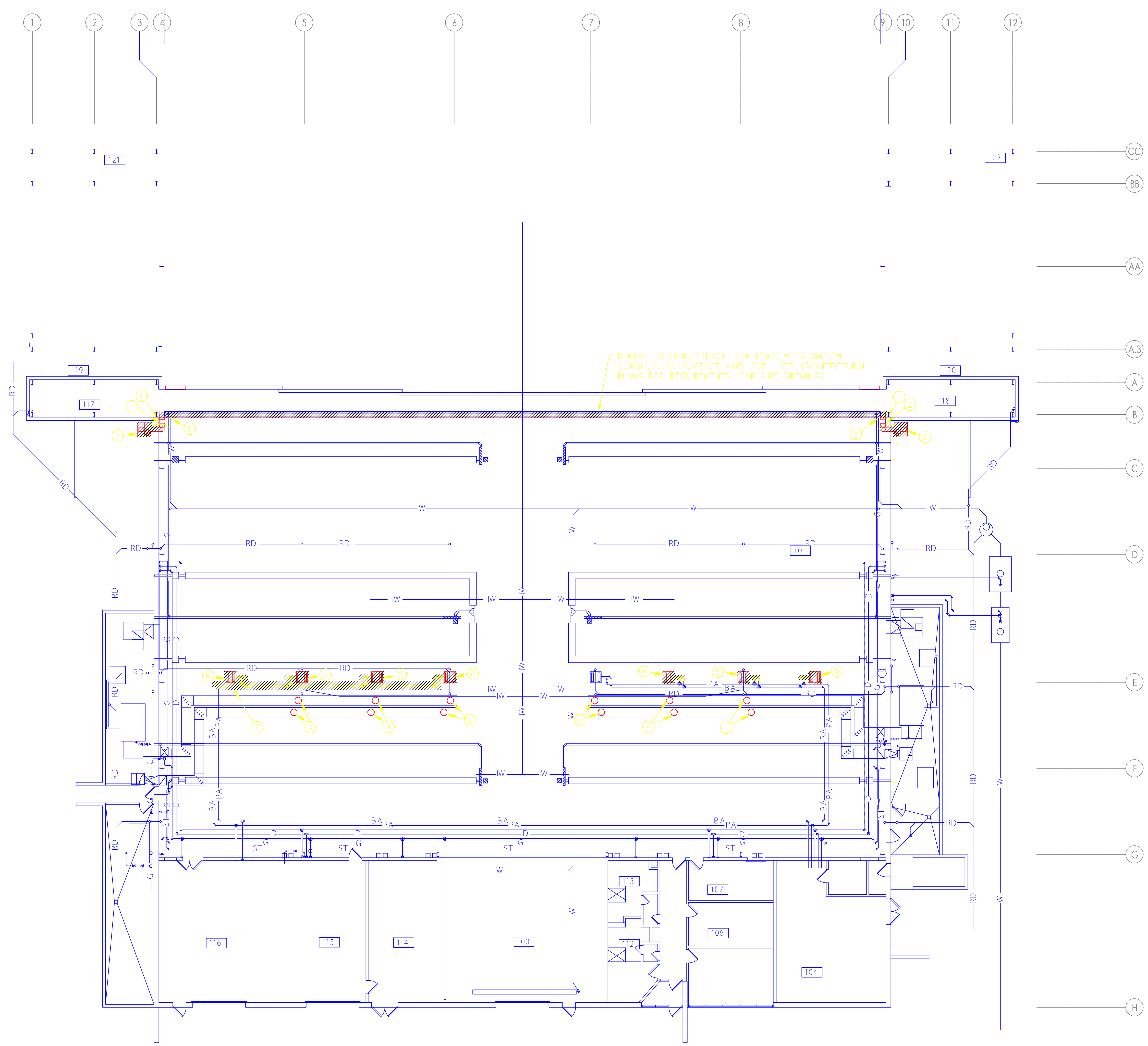
PLATE NUMBER:
375-M101

3/32"=1'-0" 10 0 10 20 scale feet

Sheet 66 of 76



DEMOLITION NOTES

1. DISCONNECT EXISTING EXHAUST DUCT FROM TO BE REMOVED. CAP OPENING WITH A MINIM SHEETMETAL CAP, FILL DUCT OPENING WITH
2. REMOVE EXISTING TRENCH DRAIN VENTILATION TO FLOOR CAP MINIMUM 2" BELOW FLOOR WI GAUGE SHEETMETAL CAP.
3. REMOVE AND RELOCATE EXISTING EXHAUST F
4. REMOVE EXISTING 16"Ø FLEX. DUCT DROPS AN TIGHT.
5. CAP EXISTING 10" WASTE FROM TRENCH DRA REMOVED.
6. REMOVE EXISTING HOSE REELS, VALVE AND C RETAIN REELS FOR REINSTALLATION.
7. REMOVE ALL PIPING WITHIN HATCHED AREA.

HVAC AND PLUMBING DEMOLITION PLAN - BLDG 375

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

PROJECT NORTH

US Army Corps of Engineers
Seattle District

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Symbol	Description	Date	Appr.

Designed by: | Date: 01/30/04
Drawn by: | Design file no. 3125/211-10-02
Checked by:
Submitted by:
Chief, ______ Section

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
BERGER/ABAM
ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-9795
Principal

ADD/ALTER HANGAR BLDG 304 & 375
AND PLUMBING DEMOLITION PLAN
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

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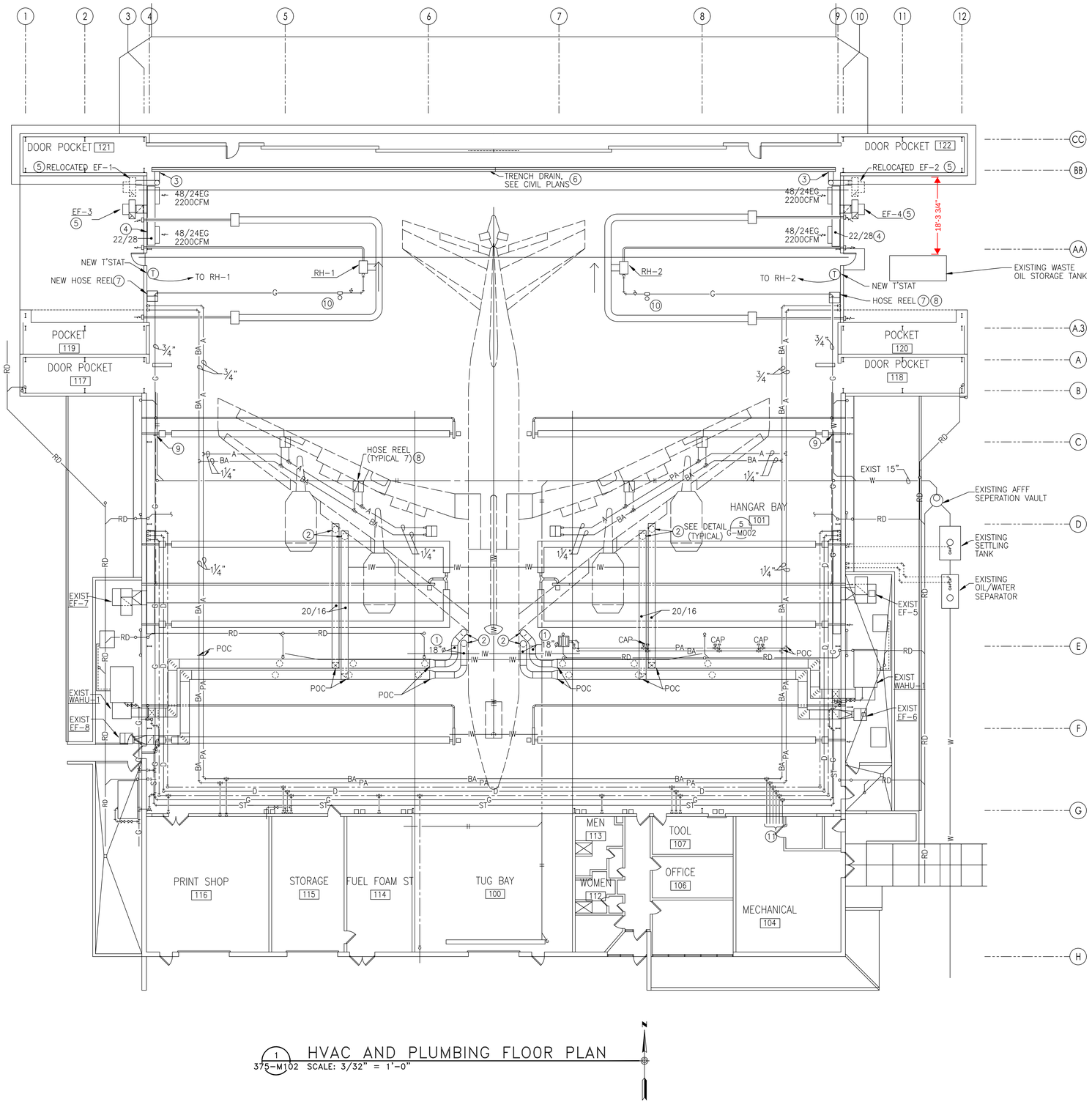
PLATE NUMBER:
M2

Sheet ____ of ____



CONSTRUCTION NOTES

1. PROVIDE MIN. 20 GAUGE DUCT.
2. EXTEND 18"ø SHEETMETAL DUCT 60" BELOW EXISTING RADIANT HEATER, CONTINUE WITH 18"ø FLEXIBLE DUCT FROM THIS POINT. SUPPORT FLEXIBLE DUCT WITH CABLE AND PULLEY SYSTEM, TO BE MANUALLY RAISED/LOWERED WITH RELOCATED HAND DRAWN WINCH.
3. 10"ø EXHAUST DUCT CONNECT TO TRENCH DRAIN.
4. COORDINATE INSTALLATION OF DUCT WITH COLUMN, ATTACH TO WALL W/BRACKET SUPPORTS AT 10'-0".
5. BRACE EXHAUST FAN TO CONCRETE PAD ON GROUND.
6. SEE CIVIL PLANS FOR WASTE PIPING FROM TRENCH.
7. BRACE HOSE REEL TO WALL.
8. RELOCATED HOSE REEL. INSTALL $\frac{3}{4}$" SUPPLY DROP TO EACH REEL.
9. CONNECT NEW $\frac{3}{4}$" GAS PIPE TO EXISTING $\frac{3}{4}$" GAS PIPE.
10. GAS REGULATOR, REDUCE DELIVERY PRESSURE FROM 2 PSI TO 10" W.C. VENT TO ATMOSPHERE.
11. EXISTING PIPE TO MECHANICAL ROOM TO REMAIN.

1 HVAC AND PLUMBING FLOOR PLAN
375-M102 SCALE: 3/32" = 1'-0"

3/32"=1'-0" scale 10 0 10 20 feet

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

Designed by: DEG
Drawn by: MCE
Checked by: JSC
Submitted by: Chief, ____ Section
Date: 01/30/04
Design file no. 3125/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
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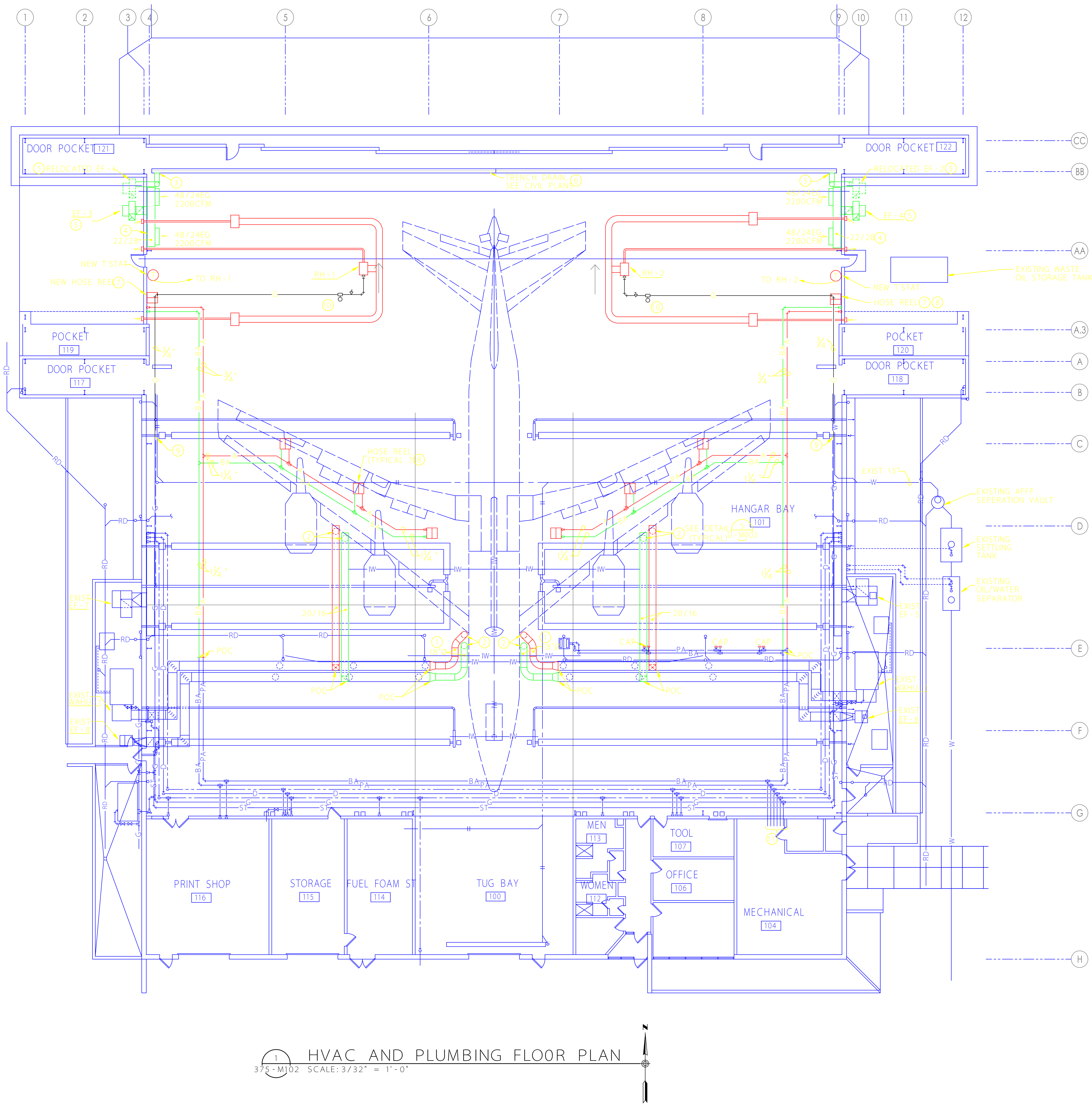
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

HVAC AND PLUMBING FLOOR PLAN

PLATE NUMBER:
375-M102

Sheet 67 of 76



1 HVAC AND PLUMBING FLOOR PLAN
375-M102 SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. PROVIDE MIN. 20 GAUGE DUCT.
2. EXTEND 18"Ø SHEETMETAL DUCT 60" BELOW EXISTING RADIANT HEATER, CONTINUE WITH 18"Ø FLEXIBLE DUCT FROM THIS POINT. SUPPORT FLEXIBLE DUCT WITH CABLE AND PULLEY SYSTEM, TO BE MANUALLY RAISED/LOWERED WITH RELOCATED HAND DRAWN WINCH.
3. 10"Ø EXHAUST DUCT CONNECT TO TRENCH DRAIN.
4. COORDINATE INSTALLATION OF DUCT WITH COLUMN, ATTACH TO WALL W/BRACKET SUPPORTS AT 10'-0".
5. BRACE EXHAUST FAN TO CONCRETE PAD ON GROUND.
6. SEE CIVIL PLANS FOR WASTE PIPING FROM TRENCH.
7. BRACE HOSE REEL TO WALL.
8. RELOCATED HOSE REEL. INSTALL $\frac{3}{4}$" SUPPLY DROP TO EACH REEL.
9. CONNECT NEW $\frac{3}{4}$" GAS PIPE TO EXISTING $\frac{3}{4}$" GAS PIPE.
10. GAS REGULATOR, REDUCE DELIVERY PRESSURE FROM 2 PSI TO 10" W.C. VENT TO ATMOSPHERE.
11. EXISTING PIPE TO MECHANICAL ROOM TO REMAIN.

US Army Corps of Engineers
Seattle District

Designed by: DEG	Date: 01/30/04
Drawn by: MCE	Design file no. 312S/211-10-02
Checked by: JSC	
Submitted by: Chief, ____ Section	

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

HVAC AND PLUMBING FLOOR PLAN

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PLATE NUMBER:
375-M102

3/32"=1'-0" 10 0 10 20 scale feet

Sheet 67 of 76

FLOW TEST INFORMATION

FLOW TEST INFORMATION PROVIDED BY BCE ENGINEERS AND PORTLAND AIR NATIONAL GUARD
FLOW TEST PERFORMED ON MARCH 11, 2003.

STATIC PRESSURE: 689.48 kPa (100 P.S.I.)
RESIDUAL PRESSURE: 551.59 kPa (80 P.S.I.)

FLOWING:
HYDRANT #370 - PORT #1 PITOT: 234.4 kPa (34 P.S.I.) FLOW: 3,703.7 L/min (978.4 G.P.M.)
HYDRANT #370 - PORT #2 PITOT: 234.4 kPa (34P.S.I.) FLOW: 3,703.7 L/min (978.4 G.P.M.)
TOTAL FLOW: 7,407.3 L/min (1,956.8 G.P.M.)

AVAILABLE AT 137.9 kPa (20 P.S.I.): 15,670.9 L/min (4,139.8 G.P.M.)

NO STREAM STRAIGHTNERS WERE USED. FLOW WAS DIRECTLY OUT OF SMOOTH AND WELL ROUNDED HYDRANT PORTS WITH AN INTERNAL DIAMETER OF 2.5" AND A CO-EFFICIENT OF 0.90.

TEST WAS CONDUCTED ON HYDRANT # 365 LOCATED AT THE NORTH EAST CORNER OF BUIILDING #360 AND FLOW HYDRANT #370 IS LOCTED AT THE NORTH WEST CORNER OF BUILDING #365.

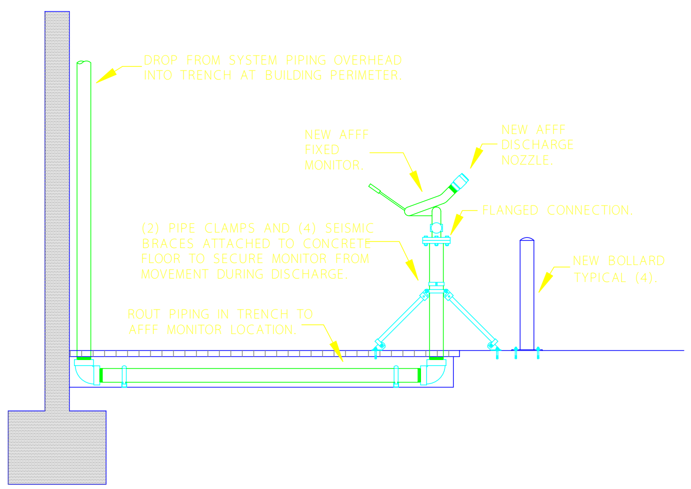
TEST WAS PERFORMED BY: FRED BLANCHARD OF BCE ENGINEERS
DOUG BOGGS OF THE PORTLAND AIR NATIONAL GUARD FIRE DEPARTMENT

FIRE PROTECTION LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PIPE DOWN	P.O.C.	POINT OF CONNECTION
	PIPE UP	A.F.F.	ABOVE FINISHED FLOOR
	BRANCH-TOP CONNECTION	B.F.F.	BELOW FINISHED FLOOR
	BRANCH-BOTTOM CONNECTION	B.O.R.	BASE OF RISER
	BRANCH-SIDE CONNECTION	E.C.	ELECTRICAL CONTRACTOR
	CAP ON END OF PIPE	G.C.	GENERAL CONTRACTOR
	GROOVED COUPLING	M.C.	MECHANICAL CONTRACTOR
	HEAVY LINE INDICATES NEW WORK ON SHEET (NEW PIPING ON DRAWINGS OR REMOVAL OF PIPING ON DEMOLITION PLAN)		
	DASHED LINE INDICATES EXISTING PIPING (NO WORK REQUIRED)		

GENERAL NOTES

1. EXISTING FIRE PROTECTION SPRINKLER SYSTEMS ARE SERVED BY A PEERLESS VERTICAL TURBINE FIRE PUMP MODEL # 16HXBF-3 WITH AN ELECTRIC DRIVER (250 H.P. 460V A.C., 3 PHASE, 1,750 RPM) WITH A BACKUP PEERLESS VERTICAL TURBINE PUMP MODEL # 16HXBF-3 WITH A CUMMINGS DIESEL DRIVER MODEL # NT855F3. BOTH OF THESE PUMPS ARE RATED AT 9,463.5 L/min (2,500 G.P.M.) @ 861.8 kPa (125 P.S.I.) AND HAVE A CHURN PRESSURE OF 1,034.2 kPa (150 P.S.I.).
2. THE ORIGINAL FIRE PROTECTION SYSTEM INSTALLATION REQUIRES AROUND 14,384.6 L/min (3,800 G.P.M.) @ 510.2 kPa (74 P.S.I.) AND CANNOT BE MET BY THE EXISTING SITE WATER SYSTEM AND MUST BE SUPPLIED FROM THE EXISTING FIRE PUMP INSTALLATION.



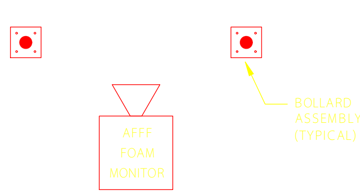
4 MONITOR DETAIL - TYPICAL
375-M201 SCALE: 1/2" = 1'-0"

FOAM MONITOR NOZZLE SCHEDULE

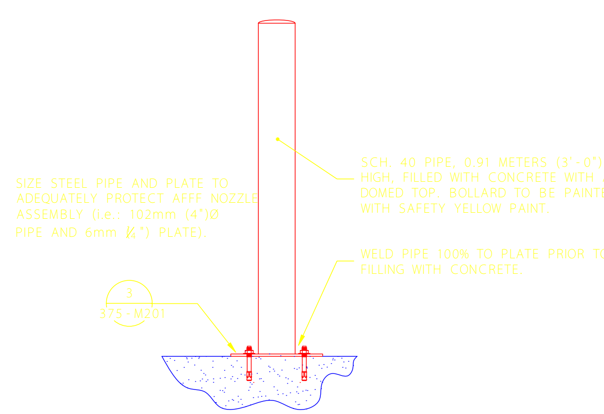
LOCATION	DENSITY L/min PER SQ. M	DENSITY G.P.M. / SQ. FT.	AREA SQ. M	AREA SQ. FT.	MINIMUM FLOW (L/min)	MINIMUM FLOW (G.P.M.)	MINIMUM DISCHARGE kPa	MINIMUM DISCHARGE P.S.I.	ANGLE OF COVERAGE (DEGREES)	EFFECTIVE REACH (METERS)	EFFECTIVE REACH (FEET)
UNDER WING EAST SIDE	4.07	0.10	277.2	2,983.6	1,132	299	413.7	60	45°	14.9	49
UNDER WING WEST SIDE	4.07	0.10	277.2	2,983.6	1,132	299	413.7	60	45°	14.9	49
NOSE AREA	4.07	0.10	464.5	5,000	1,893	500	482.6	70	35°	23.5	77

STORAGE TANK SCHEDULE

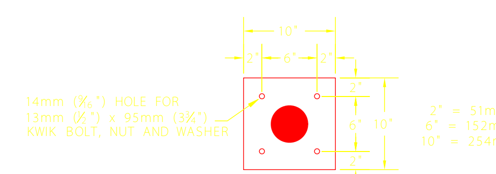
AFFF CONCENTRATE STORAGE TANK	LITERS	GALLONS	STATUS
WEST ROOF SYSTEM	3,028.3	800	EXISTING
EAST ROOF SYSTEM	3,028.3 (2,271.3 EX)	800 (600 EX)	REPLACE WITH NEW
MONITOR SYSTEM	2,271.3 (1,135.6 EX)	600 (300 EX)	USE EXISTING EAST ROOF AFFF STORAGE TANK. REMOVE EXISTING 300 GALLON AFFF STORAGE TANK.
HOSE STATION SYSTEM	567.8	150	TO BE REMOVED



1 ENLARGED BOLLARD PLAN - TYPICAL
375-M201 SCALE: 3/8" = 1'-0"



2 BOLLARD ELEVATION - TYPICAL
375-M201 SCALE: NONE



3 BOLLARD PLATE PLAN - TYPICAL
375-M201 SCALE: NONE

US Army Corps of Engineers
Seattle District

Designed by: FRED B.
Drawn by: FRED B.
Checked by:
Submitted by: Chief, Section
Date: 01/30/04
Design file no. 3125/211-10-02

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Submitted by:
BERGER/ABAM ENGINEERS, INC
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Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

FIRE PROTECTION PLAN LEGENDS AND SCHEDULES

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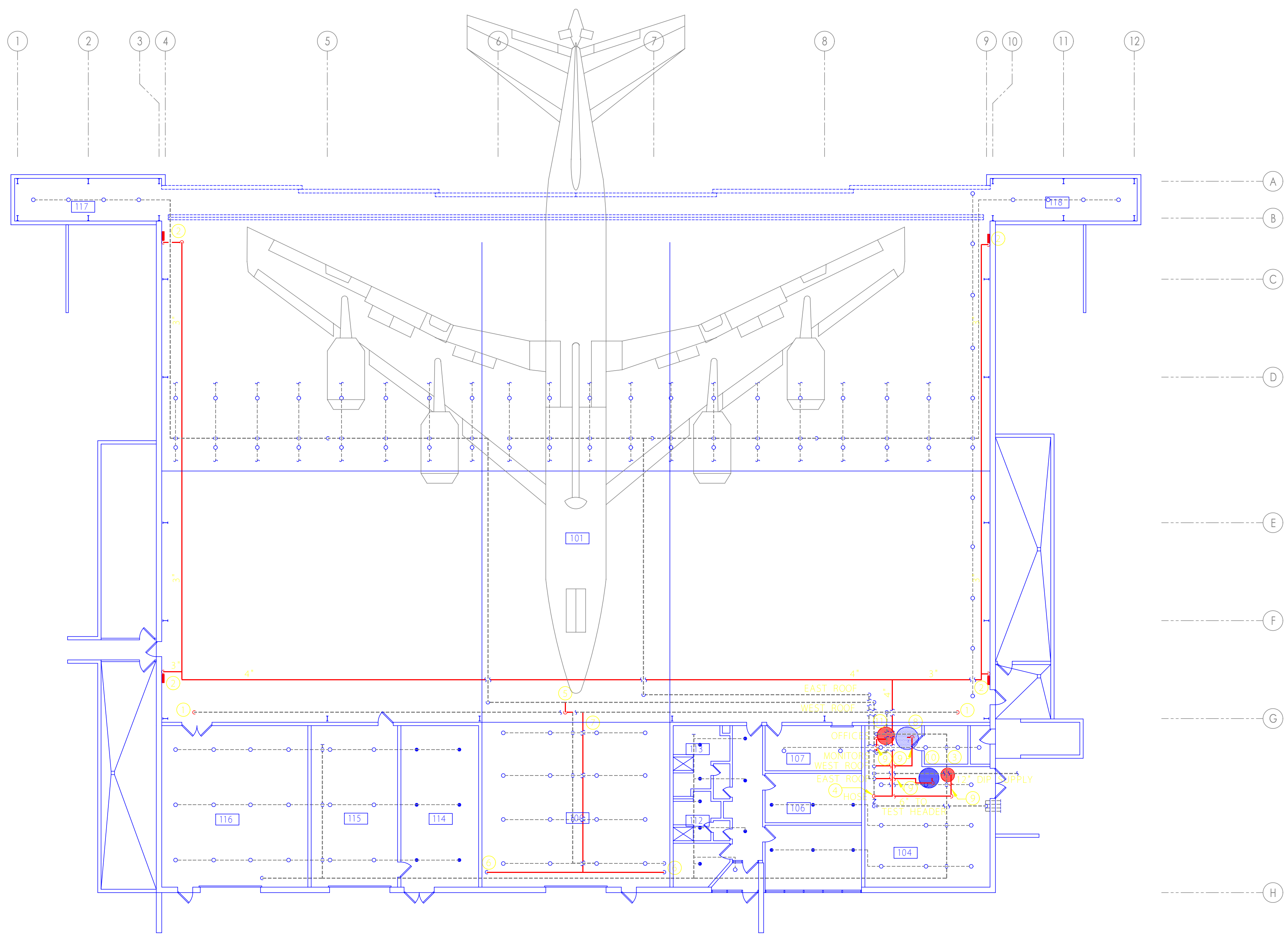
PLATE NUMBER:
375-M201

Sheet 68 of 76



1 FIRE PROTECTION DEMOLITION PLAN

375-M202 SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. REMOVE EXISTING OSCILLATING MONITOR STATION AND MONITOR PIPING BACK TO THE 90° ELBOW AND MODIFY PIPING AS SHOWN ON SHEET 375-M203.
2. REMOVE EXISTING AFFF HOSE VALVE AND ALL PIPING ASSOCIATED WITH THIS SYSTEM.
3. REMOVE EXISTING AFFF HOSE STATION CONCENTRATE STORAGE TANK AND ALL PIPING ASSOCIATED WITH AFFF CONCENTRATE.
4. REMOVE EXISTING AFFF HOSE STATION SYSTEM RISER AND ALL COMPONENTS ASSOCIATED WITH THE SYSTEM RISER. PROVIDE A CAP FOR OUTLET OFF EXISTING MANIFOLD.
5. DISCONNECT NOSE AREA PROTECTION FROM THE WEST ROOF SYSTEM AND PROVIDE A CAP TO CAP OFF WEST ROOF SYSTEM OUTLET. SEE SHEET 375-M204 FOR MODIFICATION.
6. REMOVE EXISTING AFFF DISCHARGE NOZZLE AND PIPING BACK TO THE MAIN OUTLET.
7. DISCONNECT EXISTING NOSE AREA AFFF MONITOR SUPPLY AND PROVIDE A CAP.
8. EXISTING AFFF CONCENTRATE STORAGE TANK TO REMAIN.
9. ALL BLACK STEEL PIPING CONTAINING AFFF CONCENTRATE TO BE REMOVED.
10. EXISTING 2,271.2 LITER (600 GALLON) AFFF CONCENTRATE STORAGE TANK TO BE REUSED FOR NEW AFFF MONITOR SYSTEM.
11. REMOVE EXISTING AFFF STORAGE TANK THAT IS CURRNETLY SERVING THE AFFF MONITOR SYSTEM.

GENERAL NOTES

1. ALL SOLID HEAVY LINE PIPING ON THIS SHEET IS TO BE REMOVED.

US Army Corps of Engineers
Seattle District

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Submitted by:
BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-9795
Principal

Designed by: FRED B.
Date: 01/30/04
Drawn by: FRED B.
Design file no. 3125/211-10-02
Checked by:
Submitted by:
Chief______ Section

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

FIRE PROTECTION PLAN
DEMOLITION PLAN

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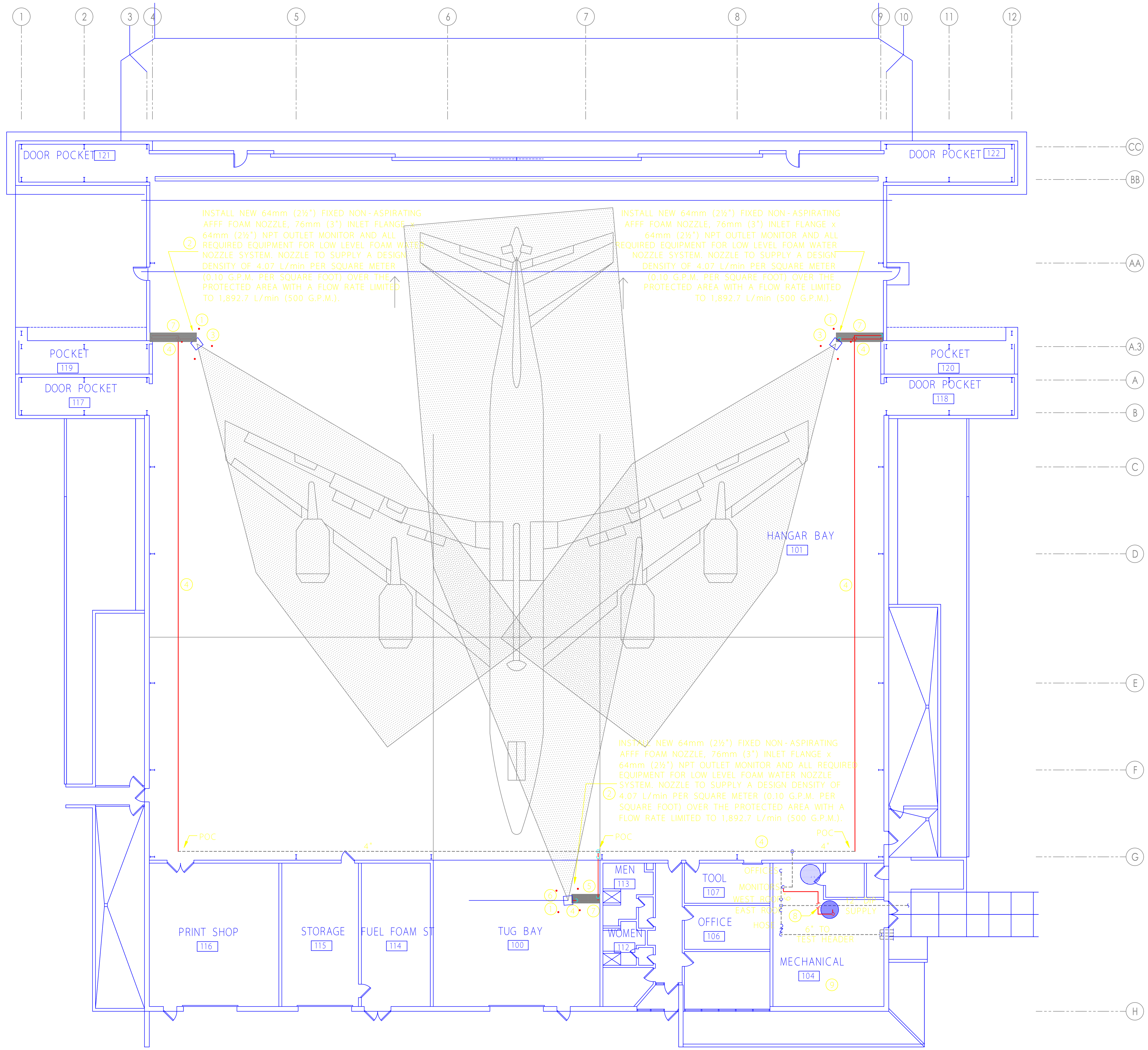
PLATE NUMBER:
375-M202



FIRE PROTECTION AFFF MONITOR PLAN

1 / 375-M203 SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. NEW BOLLARD LOCATION TYPICAL (4) PLACES PER MONITOR STATION. (1/375-201, 2/375-201, 3/375-201)
2. ALL NEW NOZZLES TO BE NON ASPIRATING FIXED (NON-OSCILLATING) TYPE.
3. INSTALL WING NOZZLES A MINIMUM OF 3 METERS (10 FEET) AWAY FROM THE EXTERIOR WALL TO ALLOW FOR STORAGE OF AEROSPACE GROUND EQUIPMENT, TOOLS AND AIRCRAFT COMPONENTS AND 4.5 METERS (15 FEET) AWAY FROM THE AIRCRAFT TO ALLOW MAINTENANCE VEHICLES TO TRAVEL BETWEEN THE AFFF MONITORS AND THE AIRCRAFT.
4. NEW PIPING SHOWN IS FOR ROUTING LOCATIONS ONLY, FIELD VERIFY CONFIGURATIONS.
5. CREATE AN OUTLET ON THE EXISTING MAIN FOR NEW NOSE AREA MONITOR.
6. INSTALL NOSE NOZZLE A MINIMUM OF 4.5 METERS (15 FEET) AWAY FROM AIR CRAFT AND CLOSER THAN 3 METERS (10 FOOT) FROM THE EXTERIOR WALL TO ALLOW FOR THE VEHICLE THAT TOWS THE AIRCRAFT TO PASS THROUGH THE HANGER WITHOUT INTERFERENCE FROM THE NEW MONITOR LOCATION. COORDINATE EXACT LOCATION WITH THE OWNER.
7. PIPING THAT RUNS FROM THE EXTERIOR WALL TO THE AFFF LOW LEVEL MONITOR TO BE RAN BELOW THE FLOOR SLAB IN A TRENCH WITH A METAL GRATING COVER.
8. NEW STAINLESS STEEL PIPE AND FITTINGS REQUIRED FOR PIPING CONTAINING AFFF CONCENTRATE.

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US Army Corps of Engineers
Seattle District

Designed by: FRED B.	Date: 01/30/04
Drawn by: FRED B.	Design file no. 3125/211-10-02
Checked by:	
Submitted by: Chief, ____ Section	

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

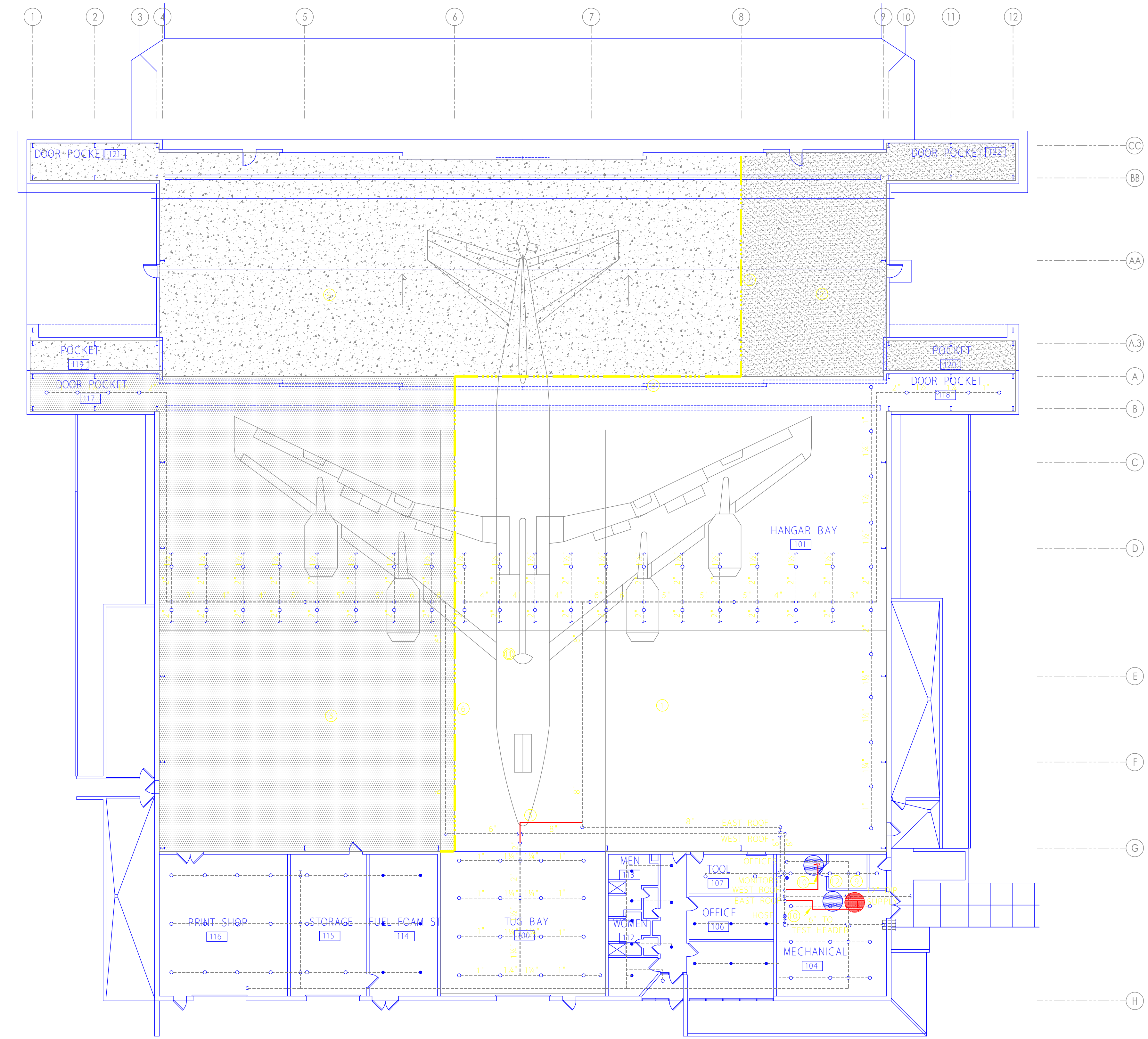
Submitted by:
BERGER/ABAM ENGINEERS, INC
(206) 374-9790 FAX:(206) 374-9795
Principal

ADD/ALTER FLIGHTLINE FACILITIES BLDG 304 & 375
PORTLAND ANG, OREGON
FY04 PN TQKD 012259

FIRE PROTECTION PLAN
AFFF MONITOR PLAN

PLATE NUMBER:
375-M203

Sheet 70 of 76



1 / 375-M204 FIRE PROTECTION SPRINKLER PLAN
SCALE: 3/32" = 1'-0"

CONSTRUCTION NOTES

1. EXISTING EAST ROOF SYSTEM (AREA 1) TO BE EXTENDED INTO HANGAR ADDITION INDICATED WITH NO HATCHING.
2. ADDITION AREA (AREA 2) TO BE PROTECTED FROM THE EXISTING EAST ROOF SYSTEM INDICATED WITH HATCH PATTEN SHOWN.
3. EXISTING WEST ROOF SYSTEM (AREA 3) TO BE EXTENDED INTO HANGAR ADDITION INDICATED WITH HATCH PATTEN SHOWN.
4. ADDITION AREA (AREA 4) TO BE PROTECTED FROM THE EXISTING WEST ROOF SYSTEM INDICATED WITH HATCH PATTEN SHOWN.
5. NEW MAIN PIPING TO BE ADDED TO CONVERT NOSE AREA COVERAGE FROM THE EXISTING WEST ROOF SYSTEM TO THE EXISTING EAST ROOF SYSTEM.
6. NEW DRAFTSTOP TO BE CREATED ALONG GRIDLINE "6".
7. NEW DRAFTSTOP TO BE CREATED ALONG GRIDLINE "8".
8. EXISTING EXTERIOR WALL TO BE USED AS DRAFTSTOP.
9. PROVIDE A NEW 800 GALLON AFFF CONCENTRATE STORAGE TANK FOR THE EAST ROOF SYSTEM.
10. NEW STAINLESS STEEL PIPE AND FITTINGS REQUIRED FOR PIPING CONTAINING AFFF CONCENTRATE.
11. REPLACE ALL EXISTING STANDARD RESPONSE SPRINKLER HEADS IN THE AIRCRAFT SERVICE AREA WITH QUICK RESPONSE 79.4°C (175°F) SPRINKLER HEADS.
12. EXISTING EAST ROOF SYSTEM AFFF STORAGE TANK TO BE USED FOR NEW AFFF MONITOR SYSTEM.

GENERAL NOTES

1. EXISTING ROOF SYSTEM TO BE CALCULATED AT A DESIGN DENSITY OF 6.52 L/min PER SQUARE METER (0.16 G.P.M. PER SQUARE FOOT) OVER THE ENTIRE AREA OF PROTECTION.
2. EXISTING OVERHEAD SPRINKLER SYSTEM IS A CLOSED HEAD PRE-ACTION SYSTEM.
3. AREA "1" AND "2" IS 1,314.6 SQUARE METERS (14,150 SQUARE FEET).
4. AREA "3" AND "4" IS 1,349.0 SQUARE METERS (14,520 SQUARE FEET).
5. EXISTING PRE-ACTION ROOF SYSTEMS TO REMAIN UNLESS NEW HYDRAULIC CALCULATIONS REQUIRE MODIFICATIONS TO THE EXISTING INSTALLATION.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.

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FIRE PROTECTION PLAN
SPRINKLER PLAN

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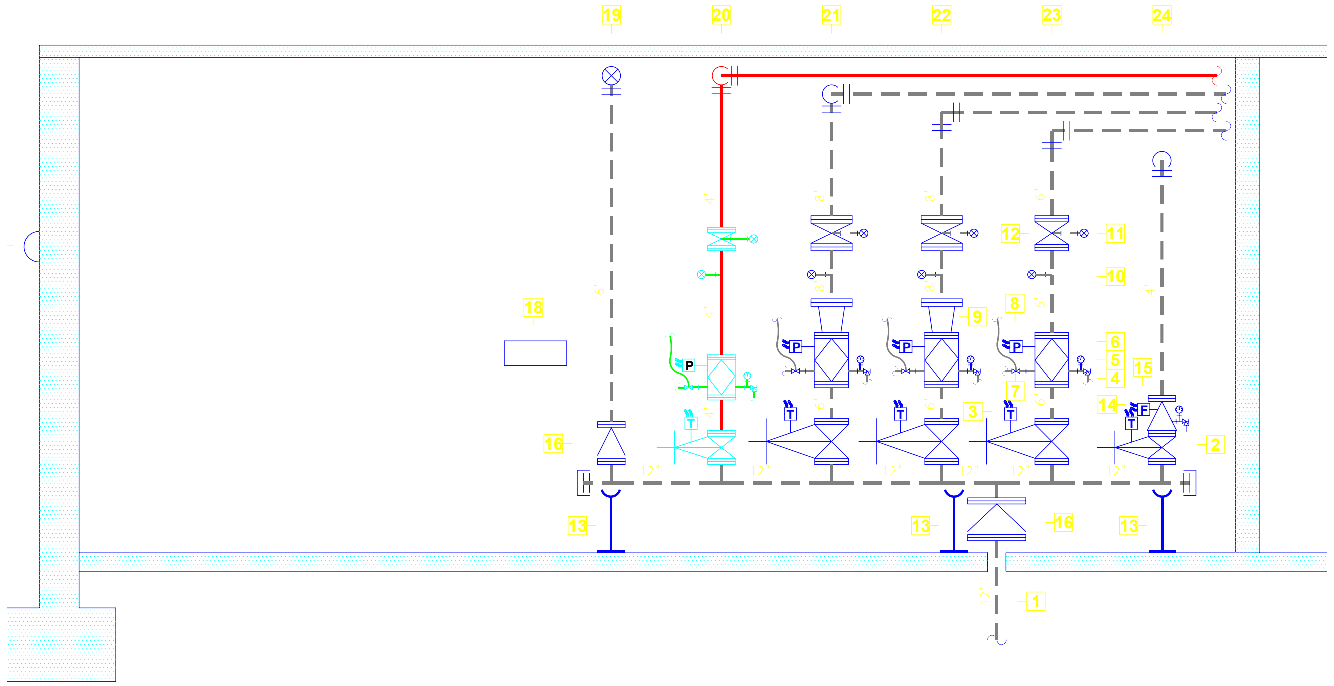
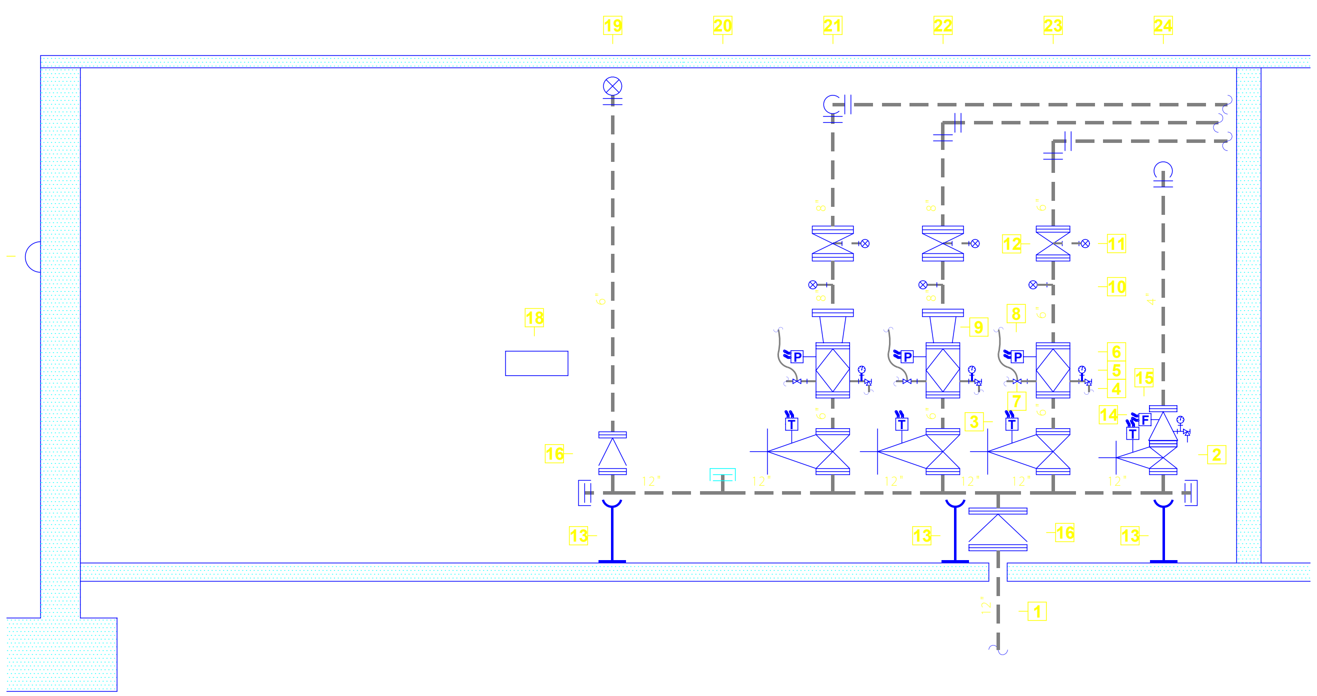
PLATE NUMBER:
375-M204



1 EXISTING RISER DETAIL
375-M205 SCALE: 1/2" = 1'-0"

EXISTING RISER EQUIPMENT LIST

ITEM	QTY.	SIZE	DESCRIPTION
1	1	12"	UNDERGROUND FIRE PROTECTION SUPPLY
2	5	- -	OS&Y GATE VALVE
3	5	- -	VALVE SUPERVISORY SWITCH
4	5	2"	MAIN DRAIN VALVE
5	5	¼"	PRESSURE GAUGE
6	4	- -	DELUGE/PRE-ACTION VALVE
7	4	- -	SELENOID CONTROLED RELEASE VALVE
8	4	½"	PRESSURE SWITCH - ALARM
9	2	- -	FLANGED REDUCER
10	4	- -	WATER PRESSURE SUPPLY LINE TO AFFF CONCENTRATE BLADDER TANK
11	4	- -	WATER PRESSURE RETURN LINE TO AFFF CONCENTRATE BLADDER TANK
12	4	- -	AFFF CONCENTRATE PROPORTIONER FOR 3% AFFF SOLUTION
13	3	- -	PIPE STAND
14	1	- -	ALARM VALVE
15	1	- -	WATER FLOW INDICATOR
16	2	- -	SWING CHECK VALVE
17	1	10"	MECHANICAL SPRINKER ALARM (WATER MOTOR GONG)
18	1	12 HEAD	SPARE HEAD CABINET
19	1	- -	FIRE DEPARTMENT CONNCTION PIPING
20	1	- -	HAND HELD HOSE LINE FIRE PROTECTION SYSTEM RISER (AFFF SYSTEM)
21	1	- -	EAST ROOF FIRE PROTECTION SPRINKLER SYSTEM RISER (AFFF SYSTEM)
22	1	- -	WEST ROOF FIRE PROTECTION SPRINKLER SYSTEM RISER (AFFF SYSTEM)
23	1	- -	LOW LEVEL MONITOR FIRE PROTECTION SYSTEM RISER (AFFF SYSTEM)
24	1	- -	OFFICE FIRE PROTECTION SPRINKLER SYSTEM RISER (WET SYSTEM)



2 REVISED RISER DETAIL
375-M205 SCALE: 1/2" = 1'-0"

REVISED RISER EQUIPMENT LIST

ITEM	QTY.	SIZE	DESCRIPTION
1	1	12"	UNDERGROUND FIRE PROTECTION SUPPLY
2	4	- -	OS&Y GATE VALVE
3	4	- -	VALVE SUPERVISORY SWITCH
4	4	2"	MAIN DRAIN VALVE
5	4	¼"	PRESSURE GAUGE
6	3	- -	DELUGE/PRE-ACTION VALVE
7	3	- -	SELENOID CONTROLED RELEASE VALVE
8	3	½"	PRESSURE SWITCH - ALARM
9	2	- -	FLANGED REDUCER
10	3	- -	WATER PRESSURE SUPPLY LINE TO AFFF CONCENTRATE BLADDER TANK
11	3	- -	WATER PRESSURE RETURN LINE TO AFFF CONCENTRATE BLADDER TANK
12	3	- -	AFFF CONCENTRATE PROPORTIONER FOR 3% AFFF SOLUTION
13	3	- -	PIPE STAND
14	1	- -	ALARM VALVE
15	1	- -	WATER FLOW INDICATOR
16	2	- -	SWING CHECK VALVE
17	1	10"	MECHANICAL SPRINKER ALARM (WATER MOTOR GONG)
18	1	12 HEAD	SPARE HEAD CABINET
19	1	- -	FIRE DEPARTMENT CONNCTION PIPING
20	1	- -	NEW CAPPED OUTLET ON SYSTEM MANIFOLD
21	1	- -	EAST ROOF FIRE PROTECTION SPRINKLER SYSTEM RISER (AFFF SYSTEM)
22	1	- -	WEST ROOF FIRE PROTECTION SPRINKLER SYSTEM RISER (AFFF SYSTEM)
23	1	- -	LOW LEVEL MONITOR FIRE PROTECTION SYSTEM RISER (AFFF SYSTEM)
24	1	- -	OFFICE FIRE PROTECTION SPRINKLER SYSTEM RISER (WET SYSTEM)

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FIRE PROTECTION DETAILS

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