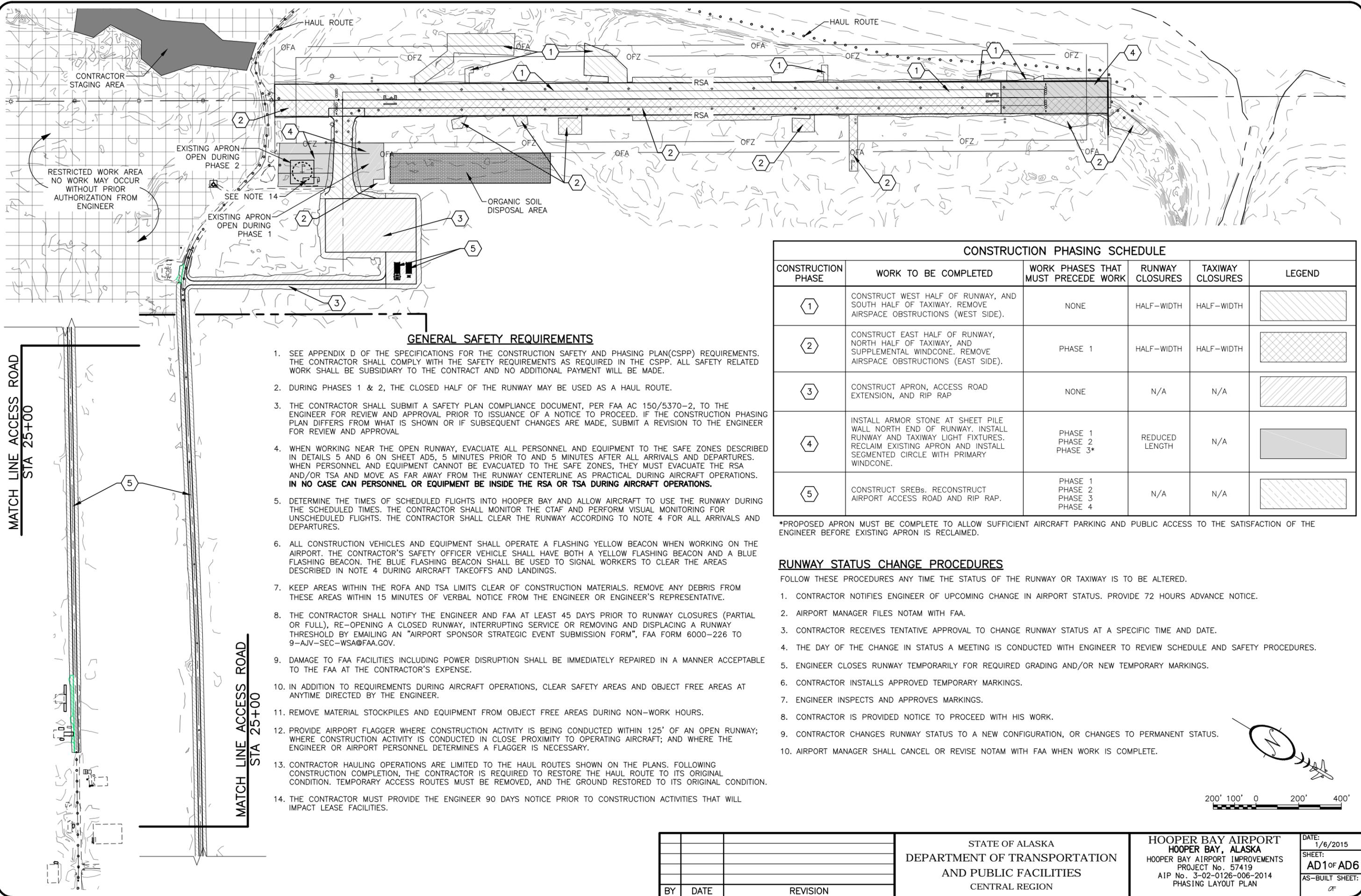


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 Designed By: JLM  
 Drawn By: RJP  
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**GENERAL SAFETY REQUIREMENTS**

- SEE APPENDIX D OF THE SPECIFICATIONS FOR THE CONSTRUCTION SAFETY AND PHASING PLAN(CSPP) REQUIREMENTS. THE CONTRACTOR SHALL COMPLY WITH THE SAFETY REQUIREMENTS AS REQUIRED IN THE CSPP. ALL SAFETY RELATED WORK SHALL BE SUBSIDIARY TO THE CONTRACT AND NO ADDITIONAL PAYMENT WILL BE MADE.
- DURING PHASES 1 & 2, THE CLOSED HALF OF THE RUNWAY MAY BE USED AS A HAUL ROUTE.
- THE CONTRACTOR SHALL SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT, PER FAA AC 150/5370-2, TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A NOTICE TO PROCEED. IF THE CONSTRUCTION PHASING PLAN DIFFERS FROM WHAT IS SHOWN OR IF SUBSEQUENT CHANGES ARE MADE, SUBMIT A REVISION TO THE ENGINEER FOR REVIEW AND APPROVAL
- WHEN WORKING NEAR THE OPEN RUNWAY, EVACUATE ALL PERSONNEL AND EQUIPMENT TO THE SAFE ZONES DESCRIBED IN DETAILS 5 AND 6 ON SHEET AD5, 5 MINUTES PRIOR TO AND 5 MINUTES AFTER ALL ARRIVALS AND DEPARTURES. WHEN PERSONNEL AND EQUIPMENT CANNOT BE EVACUATED TO THE SAFE ZONES, THEY MUST EVACUATE THE RSA AND/OR TSA AND MOVE AS FAR AWAY FROM THE RUNWAY CENTERLINE AS PRACTICAL DURING AIRCRAFT OPERATIONS. **IN NO CASE CAN PERSONNEL OR EQUIPMENT BE INSIDE THE RSA OR TSA DURING AIRCRAFT OPERATIONS.**
- DETERMINE THE TIMES OF SCHEDULED FLIGHTS INTO HOOPER BAY AND ALLOW AIRCRAFT TO USE THE RUNWAY DURING THE SCHEDULED TIMES. THE CONTRACTOR SHALL MONITOR THE CTAF AND PERFORM VISUAL MONITORING FOR UNSCHEDULED FLIGHTS. THE CONTRACTOR SHALL CLEAR THE RUNWAY ACCORDING TO NOTE 4 FOR ALL ARRIVALS AND DEPARTURES.
- ALL CONSTRUCTION VEHICLES AND EQUIPMENT SHALL OPERATE A FLASHING YELLOW BEACON WHEN WORKING ON THE AIRPORT. THE CONTRACTOR'S SAFETY OFFICER VEHICLE SHALL HAVE BOTH A YELLOW FLASHING BEACON AND A BLUE FLASHING BEACON. THE BLUE FLASHING BEACON SHALL BE USED TO SIGNAL WORKERS TO CLEAR THE AREAS DESCRIBED IN NOTE 4 DURING AIRCRAFT TAKEOFFS AND LANDINGS.
- KEEP AREAS WITHIN THE ROFA AND TSA LIMITS CLEAR OF CONSTRUCTION MATERIALS. REMOVE ANY DEBRIS FROM THESE AREAS WITHIN 15 MINUTES OF VERBAL NOTICE FROM THE ENGINEER OR ENGINEER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND FAA AT LEAST 45 DAYS PRIOR TO RUNWAY CLOSURES (PARTIAL OR FULL), RE-OPENING A CLOSED RUNWAY, INTERRUPTING SERVICE OR REMOVING AND DISPLACING A RUNWAY THRESHOLD BY EMAILING AN "AIRPORT SPONSOR STRATEGIC EVENT SUBMISSION FORM", FAA FORM 6000-226 TO 9-AJV-SEC-WSA@FAA.GOV.
- DAMAGE TO FAA FACILITIES INCLUDING POWER DISRUPTION SHALL BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE FAA AT THE CONTRACTOR'S EXPENSE.
- IN ADDITION TO REQUIREMENTS DURING AIRCRAFT OPERATIONS, CLEAR SAFETY AREAS AND OBJECT FREE AREAS AT ANYTIME DIRECTED BY THE ENGINEER.
- REMOVE MATERIAL STOCKPILES AND EQUIPMENT FROM OBJECT FREE AREAS DURING NON-WORK HOURS.
- PROVIDE AIRPORT FLAGGER WHERE CONSTRUCTION ACTIVITY IS BEING CONDUCTED WITHIN 125' OF AN OPEN RUNWAY; WHERE CONSTRUCTION ACTIVITY IS CONDUCTED IN CLOSE PROXIMITY TO OPERATING AIRCRAFT; AND WHERE THE ENGINEER OR AIRPORT PERSONNEL DETERMINES A FLAGGER IS NECESSARY.
- CONTRACTOR HAULING OPERATIONS ARE LIMITED TO THE HAUL ROUTES SHOWN ON THE PLANS. FOLLOWING CONSTRUCTION COMPLETION, THE CONTRACTOR IS REQUIRED TO RESTORE THE HAUL ROUTE TO ITS ORIGINAL CONDITION. TEMPORARY ACCESS ROUTES MUST BE REMOVED, AND THE GROUND RESTORED TO ITS ORIGINAL CONDITION.
- THE CONTRACTOR MUST PROVIDE THE ENGINEER 90 DAYS NOTICE PRIOR TO CONSTRUCTION ACTIVITIES THAT WILL IMPACT LEASE FACILITIES.

**CONSTRUCTION PHASING SCHEDULE**

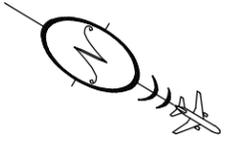
CONSTRUCTION PHASE	WORK TO BE COMPLETED	WORK PHASES THAT MUST PRECEDE WORK	RUNWAY CLOSURES	TAXIWAY CLOSURES	LEGEND
1	CONSTRUCT WEST HALF OF RUNWAY, AND SOUTH HALF OF TAXIWAY. REMOVE AIRSPACE OBSTRUCTIONS (WEST SIDE).	NONE	HALF-WIDTH	HALF-WIDTH	
2	CONSTRUCT EAST HALF OF RUNWAY, NORTH HALF OF TAXIWAY, AND SUPPLEMENTAL WINDCONE. REMOVE AIRSPACE OBSTRUCTIONS (EAST SIDE).	PHASE 1	HALF-WIDTH	HALF-WIDTH	
3	CONSTRUCT APRON, ACCESS ROAD EXTENSION, AND RIP RAP	NONE	N/A	N/A	
4	INSTALL ARMOR STONE AT SHEET PILE WALL NORTH END OF RUNWAY. INSTALL RUNWAY AND TAXIWAY LIGHT FIXTURES. RECLAIM EXISTING APRON AND INSTALL SEGMENTED CIRCLE WITH PRIMARY WINDCONE.	PHASE 1 PHASE 2 PHASE 3*	REDUCED LENGTH	N/A	
5	CONSTRUCT SREBS. RECONSTRUCT AIRPORT ACCESS ROAD AND RIP RAP.	PHASE 1 PHASE 2 PHASE 3 PHASE 4	N/A	N/A	

\*PROPOSED APRON MUST BE COMPLETE TO ALLOW SUFFICIENT AIRCRAFT PARKING AND PUBLIC ACCESS TO THE SATISFACTION OF THE ENGINEER BEFORE EXISTING APRON IS RECLAIMED.

**RUNWAY STATUS CHANGE PROCEDURES**

FOLLOW THESE PROCEDURES ANY TIME THE STATUS OF THE RUNWAY OR TAXIWAY IS TO BE ALTERED.

- CONTRACTOR NOTIFIES ENGINEER OF UPCOMING CHANGE IN AIRPORT STATUS. PROVIDE 72 HOURS ADVANCE NOTICE.
- AIRPORT MANAGER FILES NOTAM WITH FAA.
- CONTRACTOR RECEIVES TENTATIVE APPROVAL TO CHANGE RUNWAY STATUS AT A SPECIFIC TIME AND DATE.
- THE DAY OF THE CHANGE IN STATUS A MEETING IS CONDUCTED WITH ENGINEER TO REVIEW SCHEDULE AND SAFETY PROCEDURES.
- ENGINEER CLOSES RUNWAY TEMPORARILY FOR REQUIRED GRADING AND/OR NEW TEMPORARY MARKINGS.
- CONTRACTOR INSTALLS APPROVED TEMPORARY MARKINGS.
- ENGINEER INSPECTS AND APPROVES MARKINGS.
- CONTRACTOR IS PROVIDED NOTICE TO PROCEED WITH HIS WORK.
- CONTRACTOR CHANGES RUNWAY STATUS TO A NEW CONFIGURATION, OR CHANGES TO PERMANENT STATUS.
- AIRPORT MANAGER SHALL CANCEL OR REVISE NOTAM WITH FAA WHEN WORK IS COMPLETE.



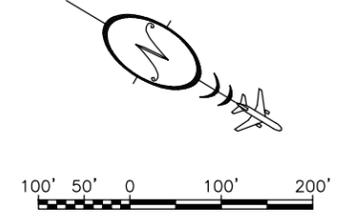
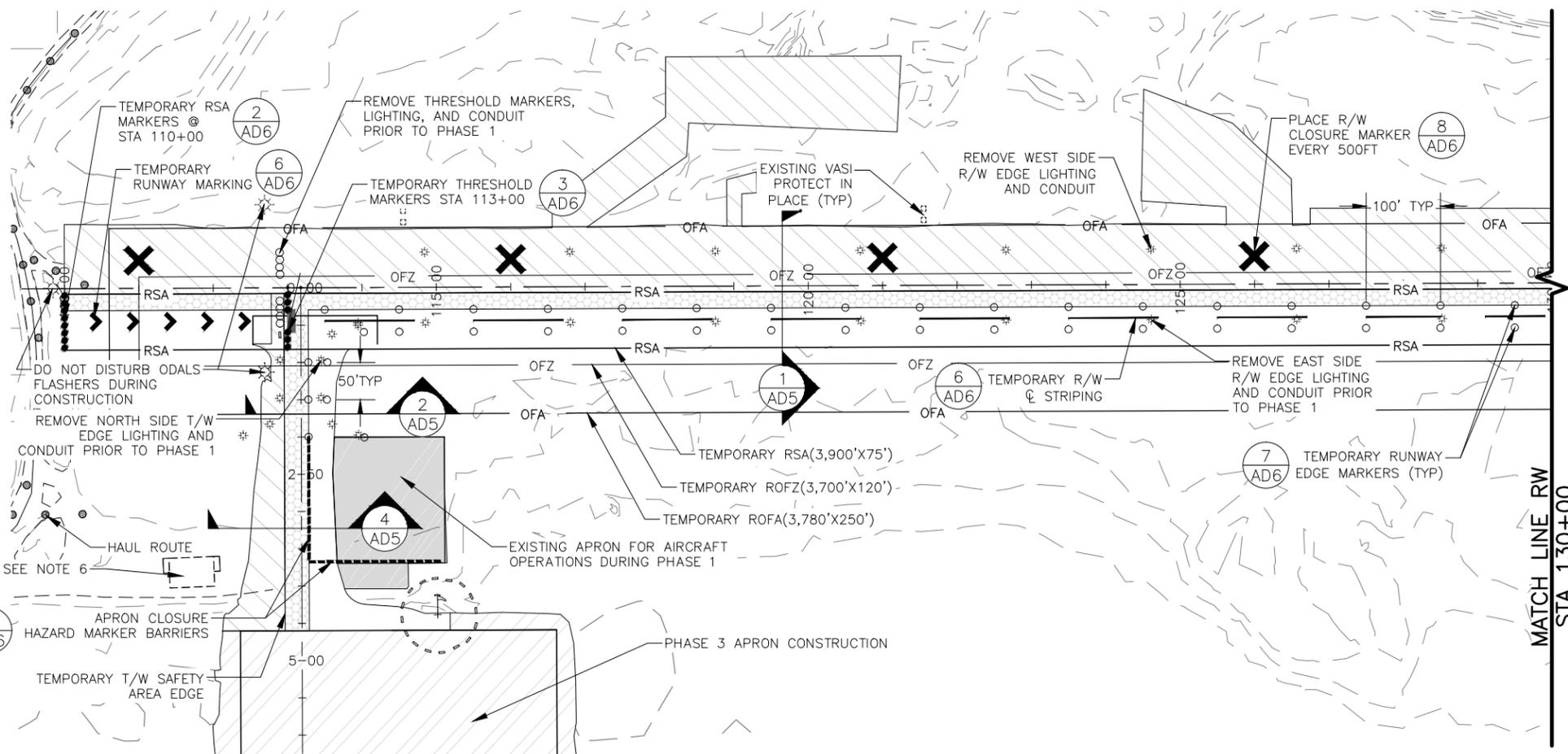
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HOOPER BAY AIRPORT  
 HOOPER BAY, ALASKA  
 HOOPER BAY AIRPORT IMPROVEMENTS  
 PROJECT No. 57419  
 AIP No. 3-02-0126-006-2014  
 PHASING LAYOUT PLAN

DATE: 1/6/2015  
 SHEET: AD1 of AD6  
 AS-BUILT SHEET: OF

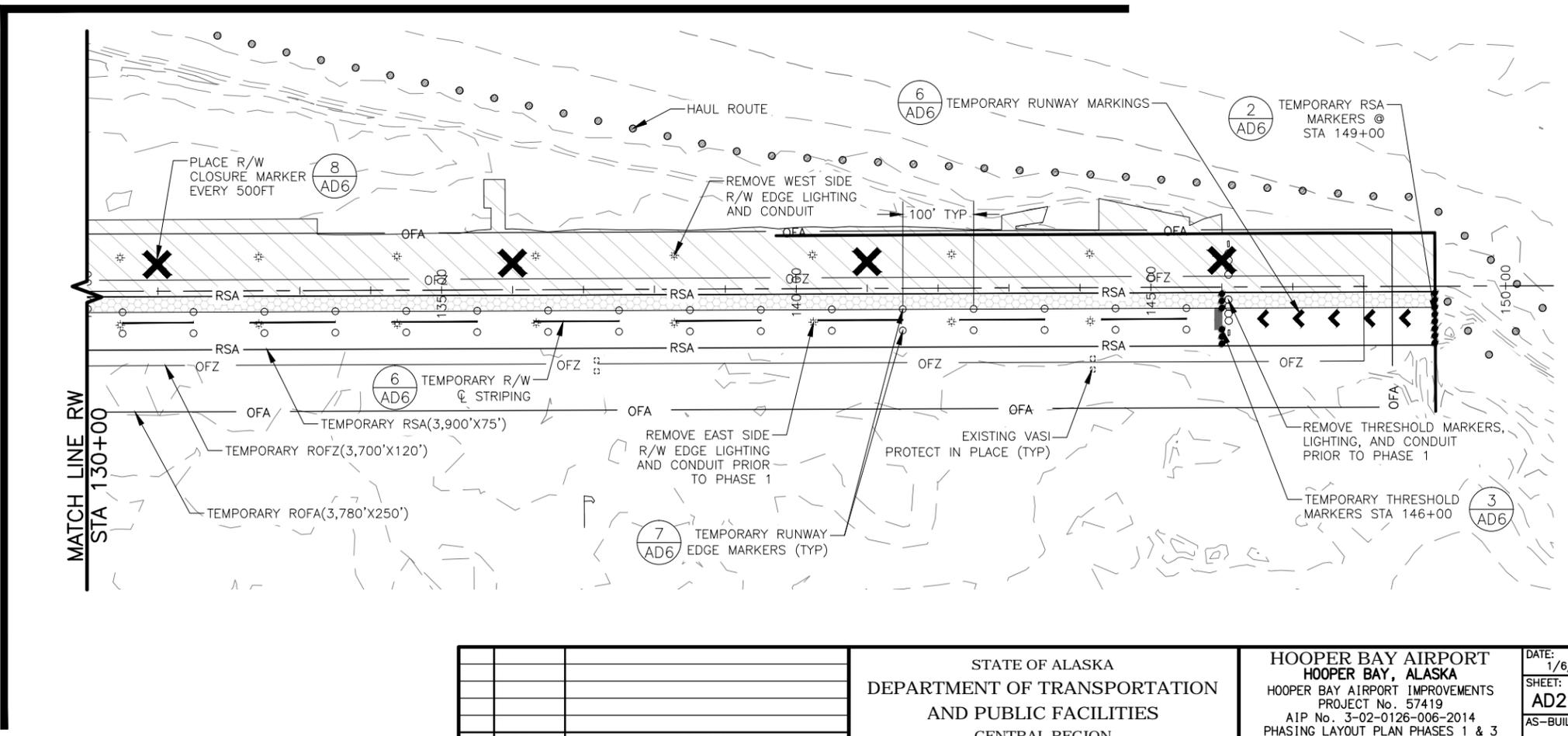
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**LEGEND**

- TEMPORARY THRESHOLD OR RSA MARKER (2 AD6) (3 AD6)
- TEMPORARY R/W OR T/W EDGE MARKER (7 AD6)
- ✕ RUNWAY CLOSURE MARKER (8 AD6)
- HAZARD MARKER BARRIERS (4 AD6) (5 AD6)
- [Hatched Box] PHASE 1 CONSTRUCTION
- [Dotted Box] CONSTRUCTION PROHIBITED DURING AIRCRAFT OPERATIONS (SEE NOTE 3)
- [Solid Grey Box] EXISTING APRON FOR AIRCRAFT OPERATIONS DURING PHASE 1
- [Diagonal Hatched Box] PHASE 3 CONSTRUCTION

- NOTES:**
1. COMPLETE THE FOLLOWING PRIOR TO PHASE I CONSTRUCTION CLOSURE:
    - A. ACQUIRE APPROPRIATE NOTAM AND PLACE THE AIRPORT LIGHTING AND VASI(VASI) OUT OF SERVICE FOR THE DURATION OF CONSTRUCTION.
    - B. REMOVE LIGHTING AND CONDUIT ON THE EAST SIDE OF THE R/W, NORTH SIDE OF T/W, AND THE R/W 13 AND R/W 31 THRESHOLD LIGHTS.
    - C. GRADE THE TEMPORARY R/W ACCORDING TO DETAIL 1 SHEET AD6.
    - D. MARK THE TEMPORARY R/W ACCORDING TO DETAIL 6 SHEET AD6.
  2. HAZARD MARKER BARRIERS SHOWN AT APPROXIMATE LOCATIONS. ADDITIONAL LOCATIONS, OR ADJUSTMENTS MAY BE REQUIRED. RELOCATE BARRIERS AS DIRECTED BY THE ENGINEER.
  3. EVACUATE PERSONNEL AND EQUIPMENT FROM AREAS DESCRIBED IN NOTE 4 ON SHEET AD1 DURING AIRCRAFT OPERATIONS.
  4. INSTALL LIGHTING CONDUIT AND LIGHT BASES WITH BLIND FLANGES IN PHASE 1 AREA PRIOR TO MOVING TO PHASE 2.
  5. COORDINATE AND MAINTAIN ACCESS TO THE ACTIVE APRON DURING CONSTRUCTION.
  6. THE CONTRACTOR MUST PROVIDE THE ENGINEER 90 DAYS NOTICE PRIOR TO CONSTRUCTION ACTIVITIES THAT WILL IMPACT LEASE FACILITIES.



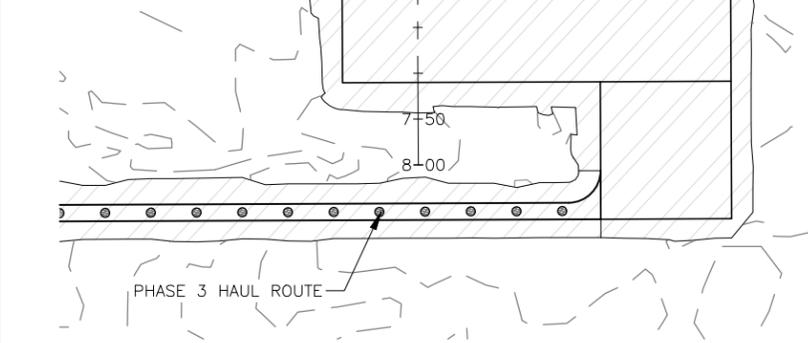
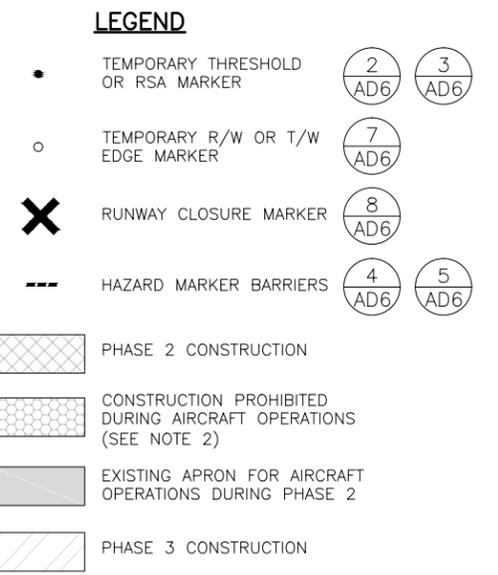
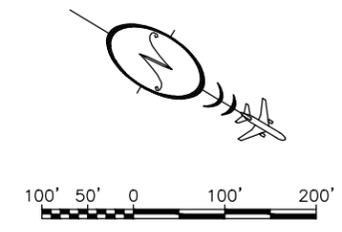
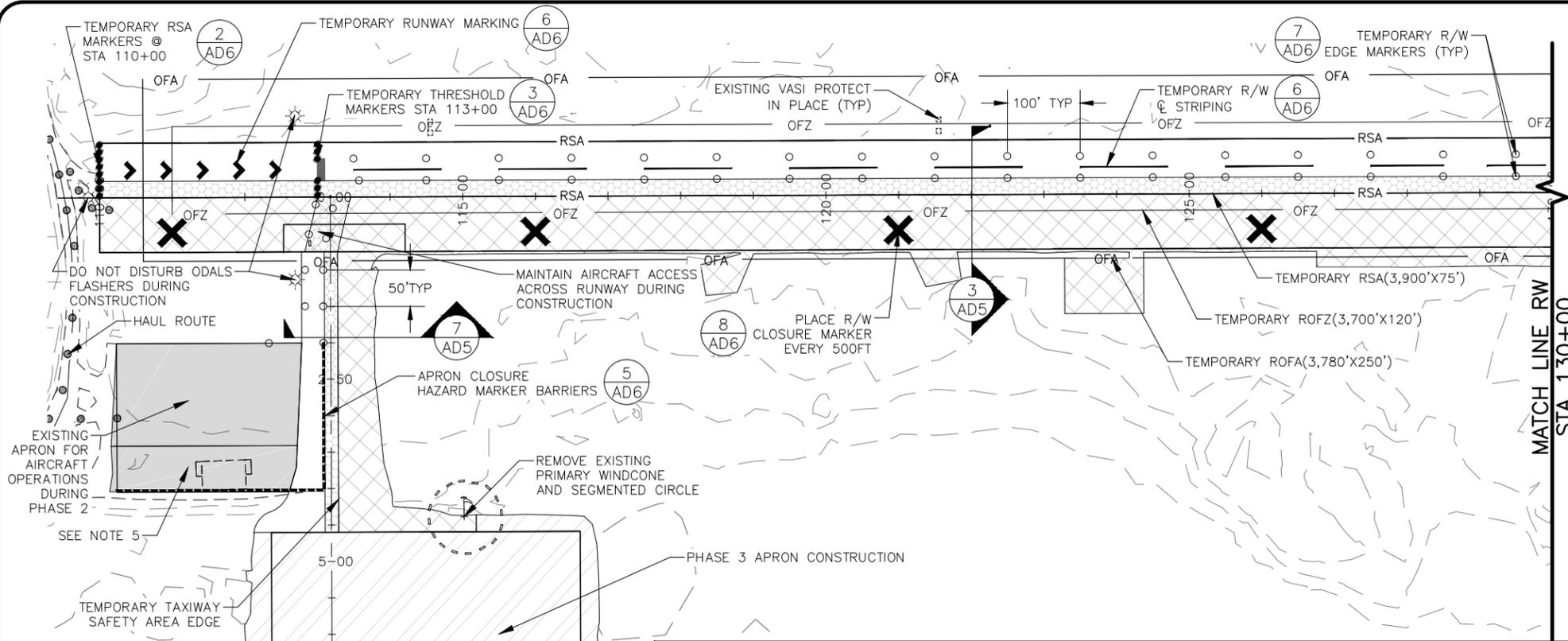
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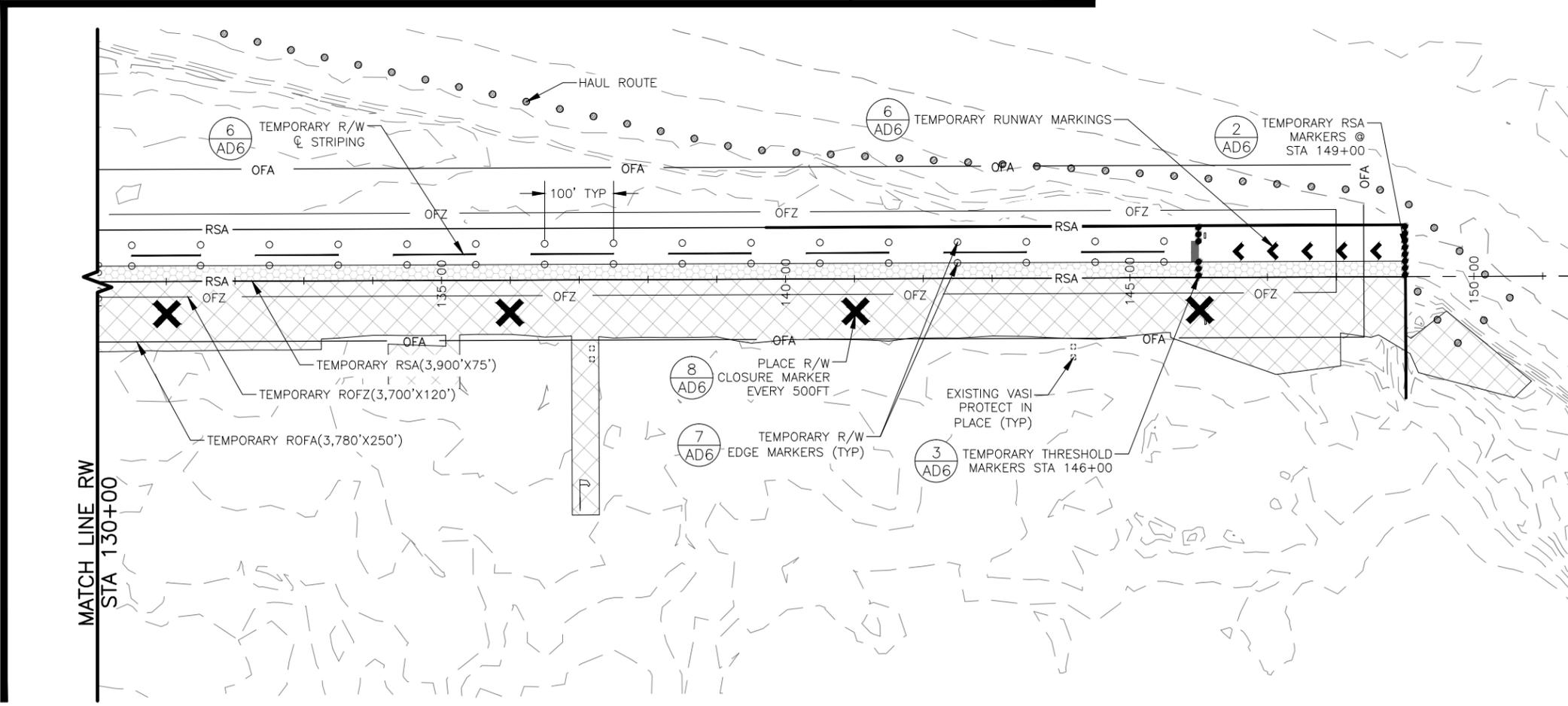
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 Designed By: JLM  
 Drawn By: RLB  
 Checked By: MHH



- NOTES:**
- HAZARD MARKER BARRIERS SHOWN AT APPROXIMATE LOCATIONS. ADDITIONAL LOCATIONS, OR ADJUSTMENTS MAY BE REQUIRED. RELOCATE BARRIERS AS DIRECTED BY THE ENGINEER.
  - EVACUATE PERSONNEL AND EQUIPMENT FROM AREAS DESCRIBED IN NOTE 4 ON SHEET AD1 DURING AIRCRAFT OPERATIONS.
  - INSTALL LIGHTING CONDUIT AND LIGHT BASES WITH BLIND FLANGES IN PHASE 2 AREA PRIOR TO MOVING TO PHASE 4.
  - COORDINATE AND MAINTAIN ACCESS TO LEASE HOLDER FACILITIES AND THE ACTIVE APRON DURING CONSTRUCTION.
  - THE CONTRACTOR MUST PROVIDE THE ENGINEER 90 DAYS NOTICE PRIOR TO CONSTRUCTION ACTIVITIES THAT WILL IMPACT LEASE FACILITIES.



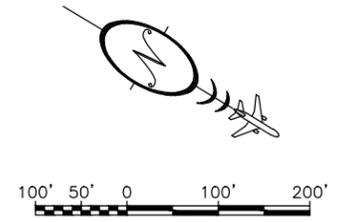
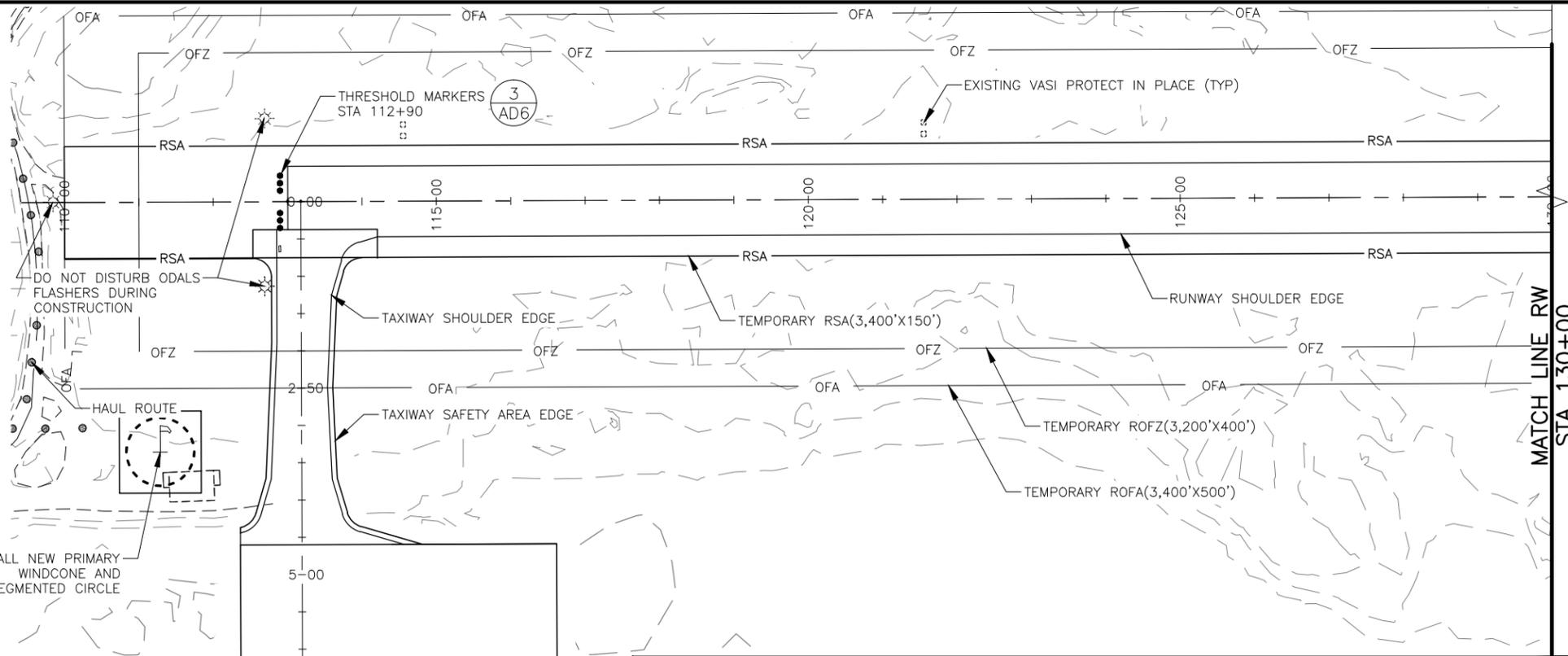
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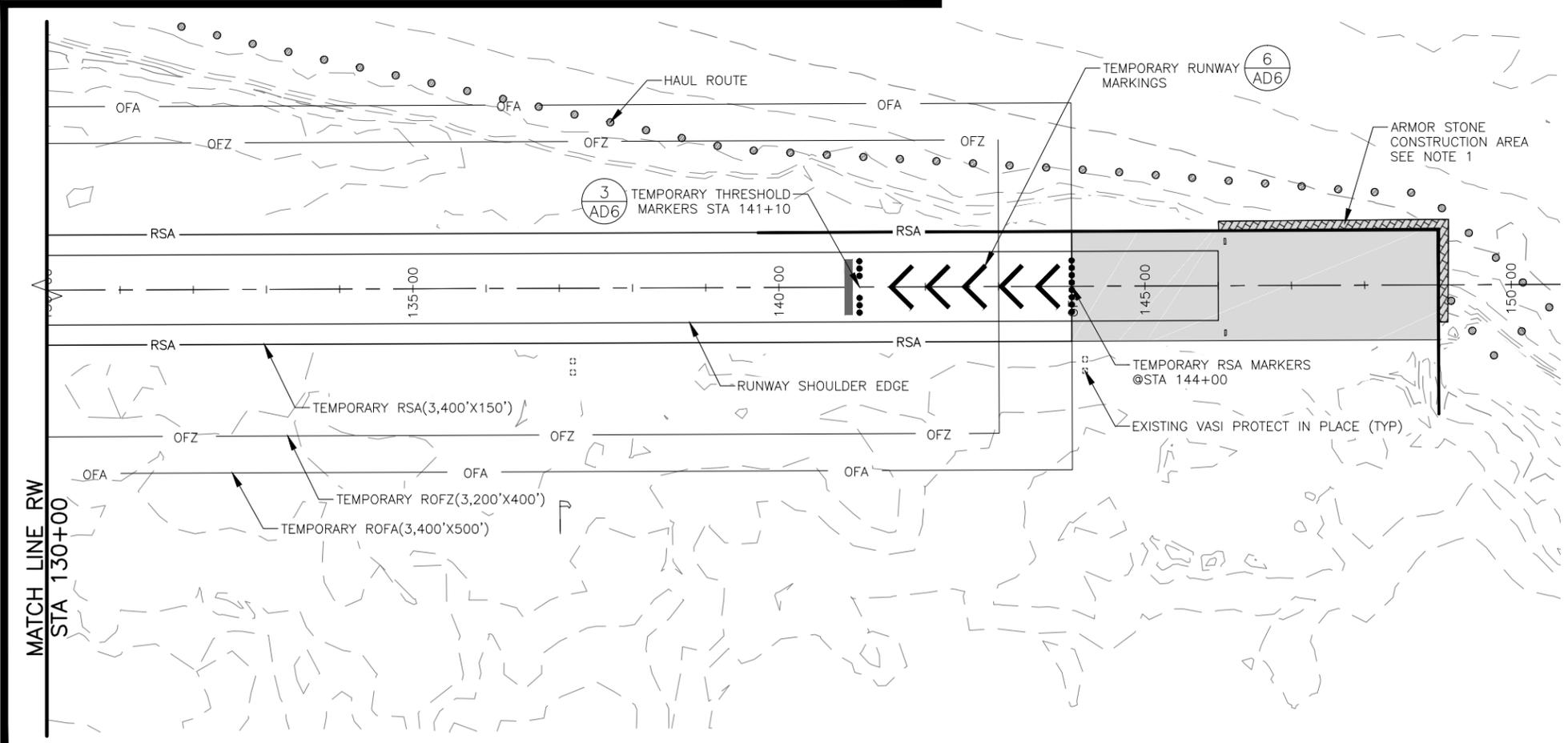
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 Designed By: JLM  
 Drawn By: RIB  
 Checked By: WHH



**LEGEND**

- TEMPORARY THRESHOLD OR RSA MARKER
- PHASE 4 CONSTRUCTION AREA CLOSED TO AIRCRAFT OPERATIONS

2  
AD6
3  
AD6



- NOTES:**
- CONSTRUCTION EQUIPMENT AND PERSONNEL MUST BE WITHIN THE SAFE ZONE DURING AIRCRAFT OPERATIONS. SEE DETAILS 5 AND 6 ON SHEET AD5.

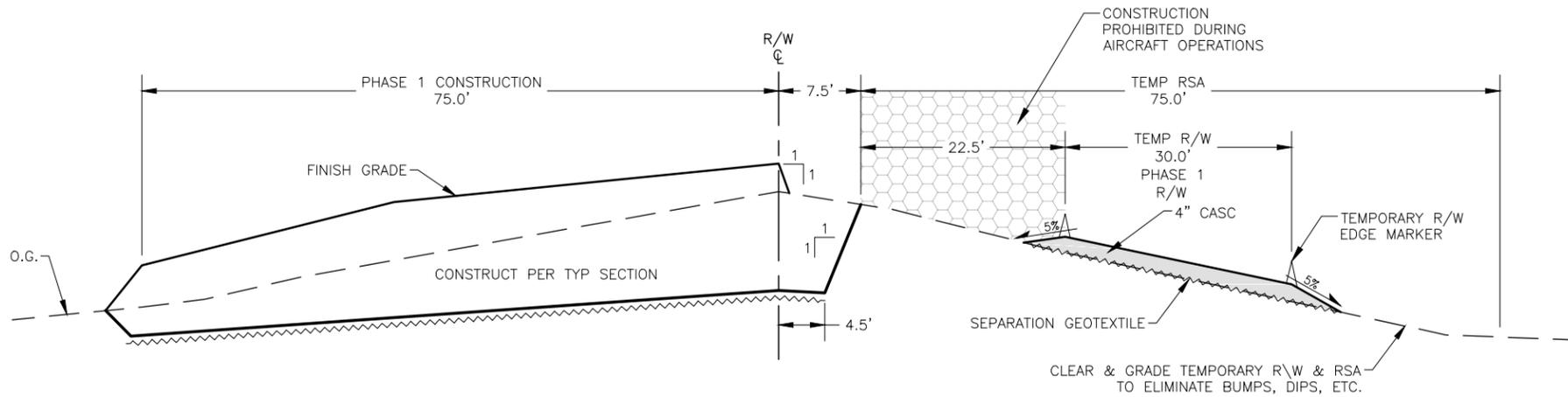
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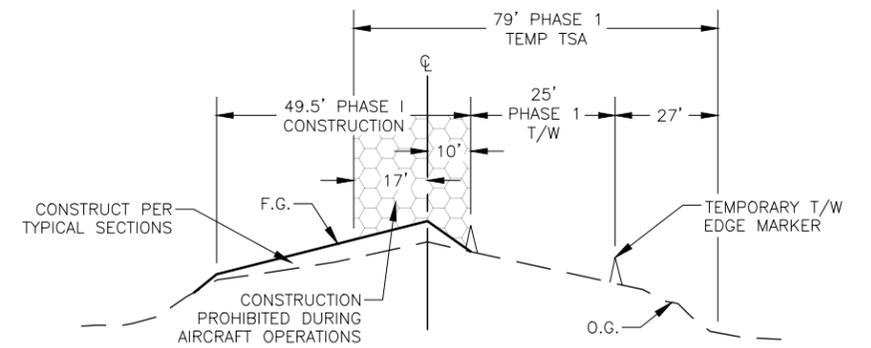
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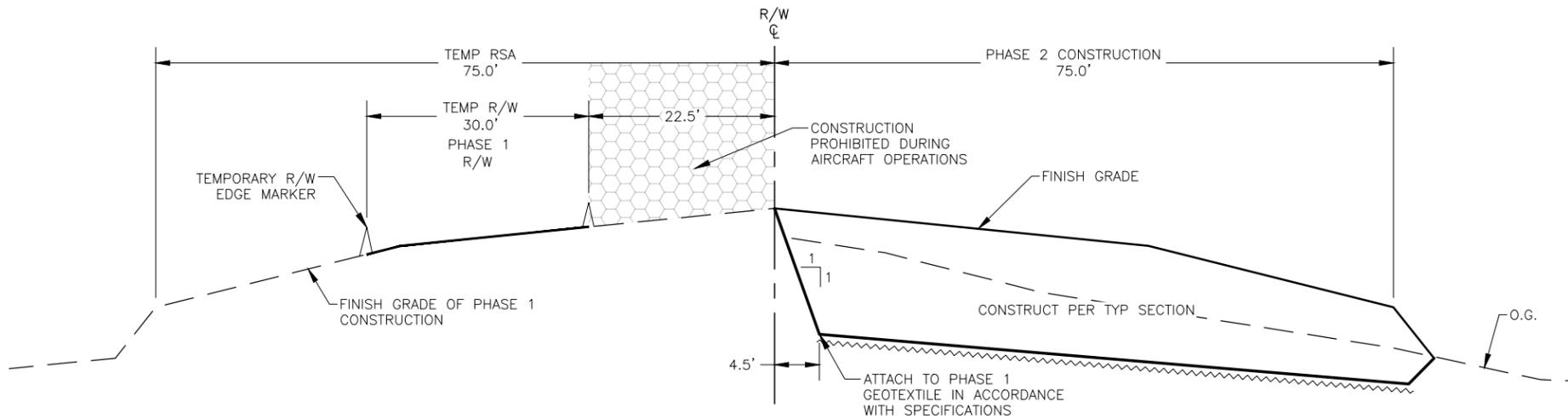
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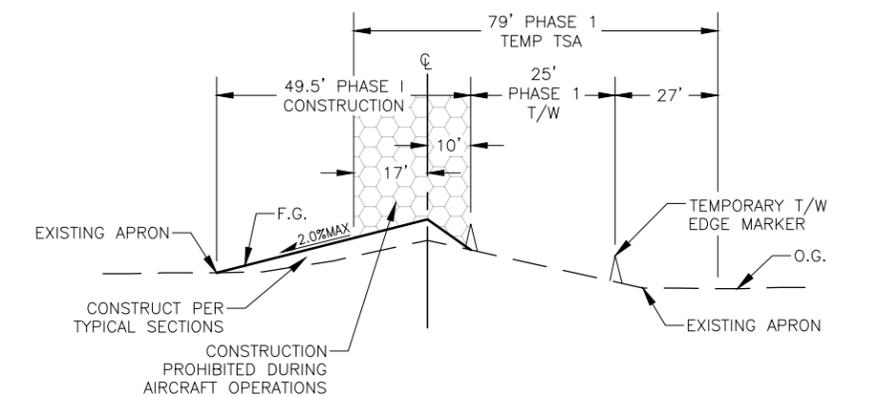
**1** PHASE 1 RUNWAY CONSTRUCTION  
AD5 NOT TO SCALE



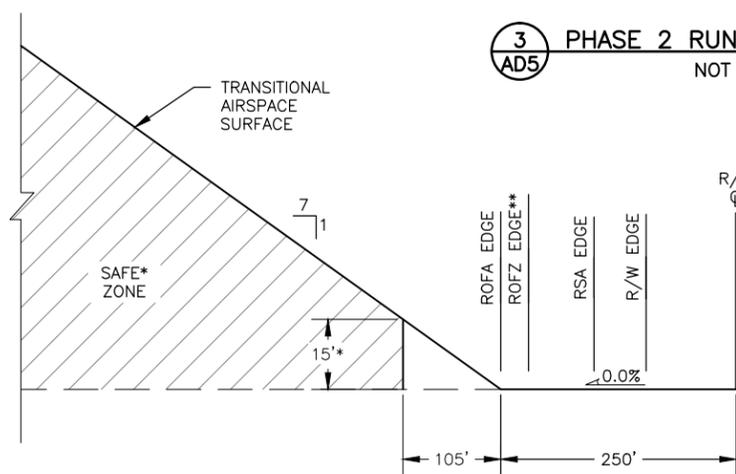
**2** PHASE 1 TAXIWAY CROSS SECTION  
AD5 NOT TO SCALE  
TW STA 0+75 TO STA 2+00



**3** PHASE 2 RUNWAY CONSTRUCTION  
AD5 NOT TO SCALE

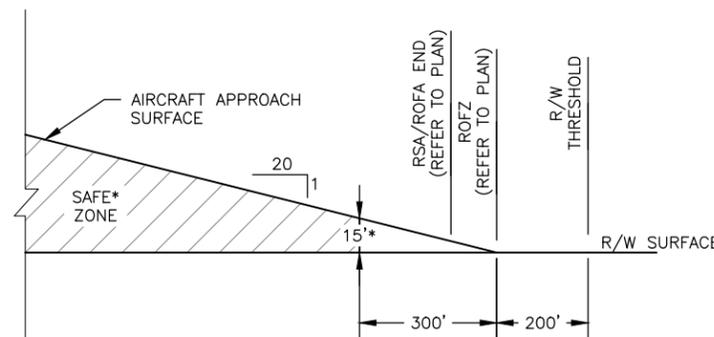


**4** PHASE 1 TAXIWAY CROSS SECTION  
AD5 NOT TO SCALE  
TW STA 2+00 TO STA 4+00



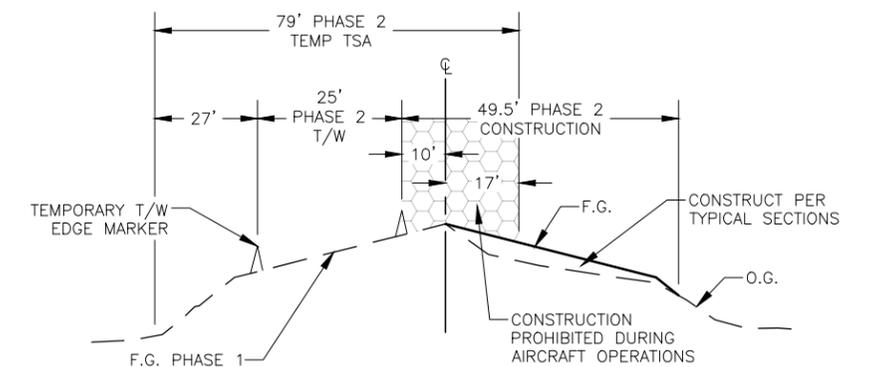
**5** SAFE ZONES ADJACENT TO RUNWAY EDGES  
AD5 NOT TO SCALE

\*VEHICLES TALLER THAN 15 FEET (INCLUDING ALL PARTS OF THE EQUIPMENT, E.G. AN EXCAVATOR) MUST REMAIN FARTHER AWAY FROM THE RUNWAY CENTERLINE. WHEN THIS IS THE CASE, NOTIFY AND COORDINATE SAFE ZONE LIMITS WITH THE ENGINEER.  
 \*\*ROFZ EDGE AND ROFA EDGE COINCIDE IN HALF WIDTH CONFIGURATIONS.



**6** SAFE ZONES ALONG EXTENDED RUNWAY OR TEMP RUNWAY CL  
AD5 NOT TO SCALE

\*VEHICLES TALLER THAN 15 FEET (INCLUDING ALL PARTS OF THE EQUIPMENT, E.G. AN EXCAVATOR) MUST REMAIN FARTHER AWAY FROM THE RUNWAY THRESHOLD. WHEN THIS IS THE CASE, NOTIFY AND COORDINATE SAFE ZONE LIMITS WITH THE ENGINEER.  
 THE 20:1 APPROACH SURFACE IS BASED ON THE THRESHOLD ELEVATION, THE ALLOWABLE VEHICLE HEIGHT MAY NEED TO BE REDUCED IF THE GROUND ELEVATION RISES BEYOND THE THRESHOLD.



**7** PHASE 2 TAXIWAY CROSS SECTION  
AD5 NOT TO SCALE

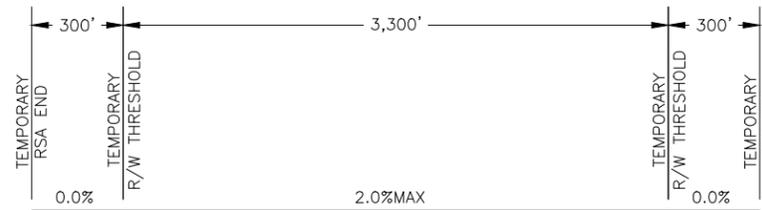
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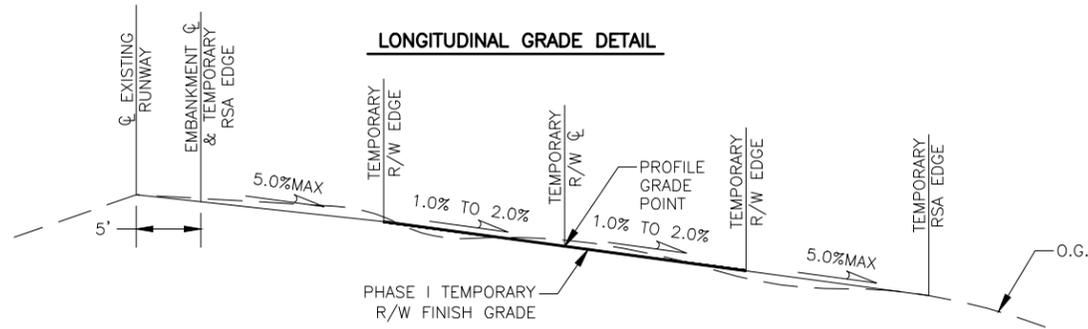
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**LONGITUDINAL GRADE DETAIL**

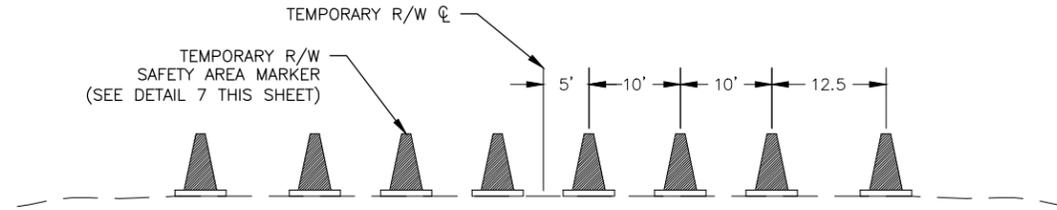


**TRANSVERSE GRADE DETAIL**

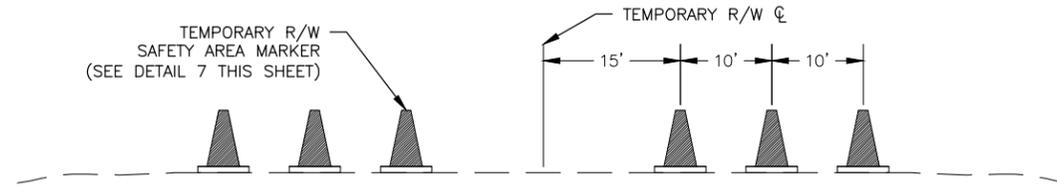
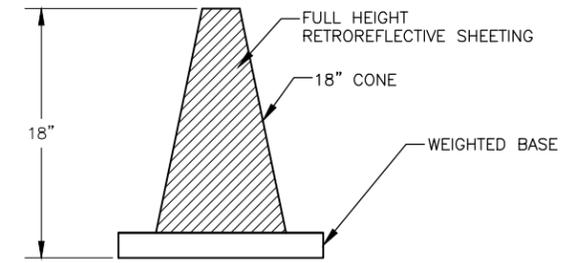
**NOTES:**

1. LONGITUDINAL GRADE BREAKS NO CLOSER THAN 250FT APART.
2. MAXIMUM GRADE CHANGE AT LONGITUDINAL GRADE BREAKS IS 0.40%.
3. NO LONGITUDINAL GRADE BREAKS MAY OCCUR WITHIN THE TEMPORARY RSA BEYOND THE TEMPORARY THRESHOLD.
4. AREA GRADING TO OCCUR PRIOR TO PHASE 1. GRADE SMOOTH WITHIN TEMPORARY RUNWAY AND TAXIWAY SAFETY AREAS TO ALLOW FOR AIRCRAFT OPERATIONS.

**1 PHASE 1 RUNWAY AREA GRADING**  
AD6 NOT TO SCALE



**2 TEMPORARY RUNWAY SAFETY AREA MARKER DETAIL**  
AD6 NOT TO SCALE

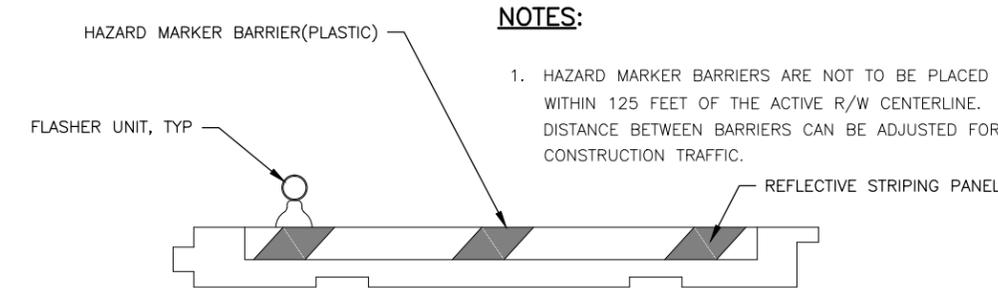


**3 TEMPORARY RUNWAY THRESHOLD MARKER DETAIL**  
AD6 NOT TO SCALE

**NOTES:**

1. TEMPORARY R/W EDGE MARKERS SHALL HAVE A WHITE RETRO REFLECTIVE SHEETING.
2. TEMPORARY SAFETY AREA MARKERS SHALL HAVE A RED RETRO REFLECTIVE SHEETING.
3. TEMPORARY THRESHOLD MARKERS SHALL HAVE A RED AND GREEN RETRO REFLECTIVE SHEETING. THE GREEN SIDE OF THE SHEETING SHALL FACE THE APPROACH OF THE RUNWAY, AND THE RED SIDE OF THE SHEETING SHALL FACE THE RUNWAY.
4. TEMPORARY TAXIWAY EDGE MARKERS SHALL HAVE A BLUE RETRO REFLECTIVE SHEETING.

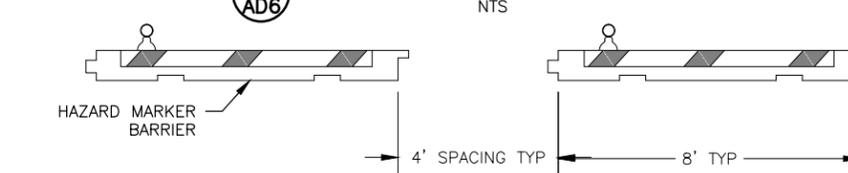
**7 TEMPORARY RUNWAY EDGE, TAXIWAY EDGE, AND RSA MARKERS**  
AD6 NOT TO SCALE



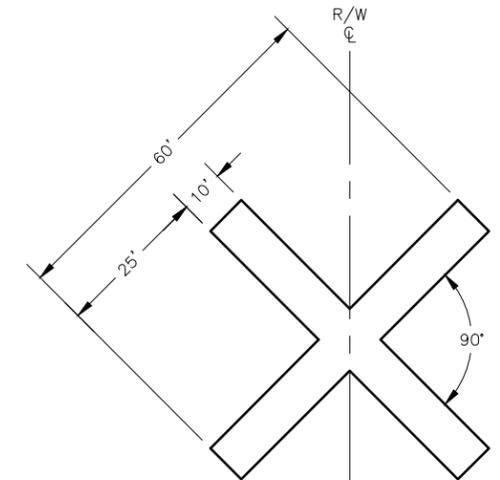
**NOTES:**

1. HAZARD MARKER BARRIERS ARE NOT TO BE PLACED WITHIN 125 FEET OF THE ACTIVE R/W CENTERLINE. DISTANCE BETWEEN BARRIERS CAN BE ADJUSTED FOR CONSTRUCTION TRAFFIC.

**4 HAZARD MARKER BARRIER DETAIL**  
AD6 NTS



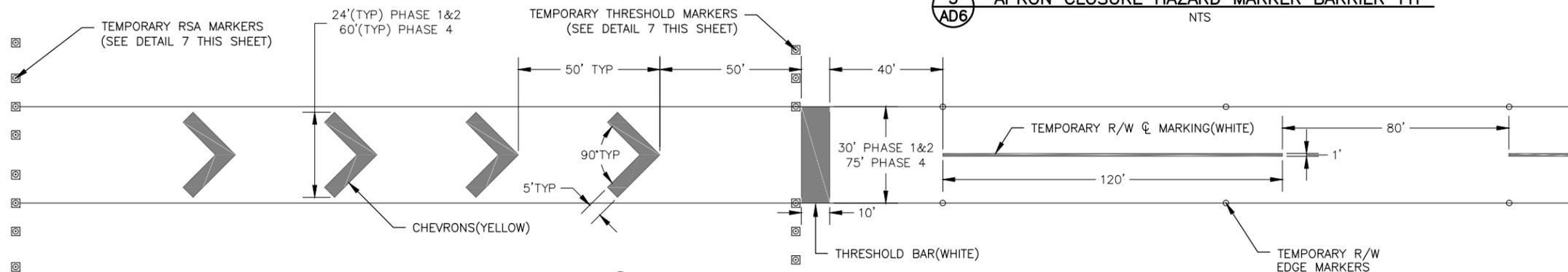
**5 APRON CLOSURE HAZARD MARKER BARRIER TYP**  
AD6 NTS



**NOTES:**

1. R/W CLOSURE MARKERS WILL BE YELLOW.
2. INSTALL R/W CLOSURE MARKERS AS SHOWN IN THE PHASING PLANS.

**8 RUNWAY CLOSURE MARKER DETAIL**  
AD6 NOT TO SCALE



**6 TEMPORARY RUNWAY MARKING DETAIL**  
AD6 NOT TO SCALE

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 Drawn By: WJZ  
 Checked By: DGS

**NOTE;**

**CONSTRUCTION SREB:**

**SREB #1 SHALL BE A HEATED SREB WITH BEACON PLATFORM AND LADDER**

**SREB #2 SHALL BE AN UNHEATED SREB WITHOUT BEACON PLATFORM AND LADDER**

**CODE SYNOPSIS**

2009 IBC AS AMENDED BY ALASKA DEPT. OF PUBLIC SAFETY

OCCUPANCY S-1 PARKING GARAGE (IBC 311.3)

CONSTRUCTION TYPE V-B COMBUSTIBLE WITH NO FIRE RESISTANCE  
 MINIMUM FIRE SEPARATION = 10' CLEAR OR GREATER (IBC 602)

FIRE SEPARATION DISTANCE (702); 10'  
 BUILDING FACE TO  
 1) CLOSEST INTERIOR LOT LINE  
 2) CENTER OF PUBLIC WAY  
 3) IMAGINARY LINE BETWEEN 2 BUILDINGS = 20'

ACTUAL AREA: 26' x 50' = 1,300 S.F.

S-1 OF V-B ALLOWABLE AREA = 13,500SF (IBC 503) = OK

FIRE SEPARATION NOT REQUIRED FOR FUEL - HEATING EQUIPMENT UNDER 400,000 BTU INPUT (IBC 508.2)

OCCUPANT EXIT LOAD (IBC 1004.1): 1,300SF/200 = 6.5 = SINGLE 36" HINGED EXIT DOOR ok (1015)

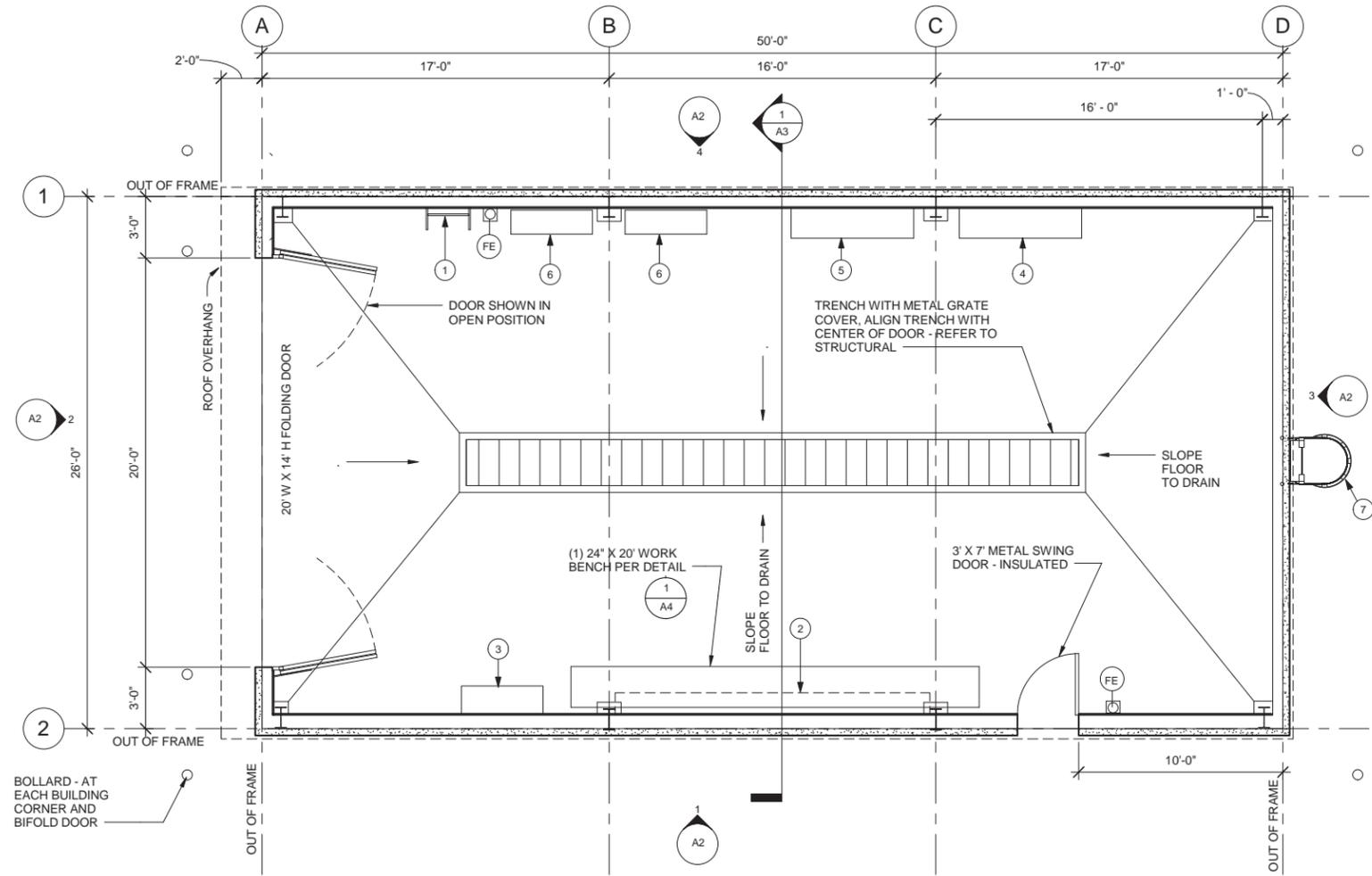
FOAM PLASTIC INSULATED WALL & ROOF PANELS SHALL COMPLY WITH IBC 2603 FOR NON-SPRINKLERED BUILDINGS

(FE) PROVIDE TWO EXTINGUISHERS: DRY CHEMICAL 2-A: 10-B;C MINIMUM WITH ALASKA FIRE MARSHAL - APPROVED SIGNS

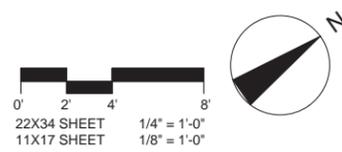
**SHEET NOTES**

PROVIDE EQUIPMENT UNPACKED, ASSEMBLED AND READY TO USE; LOCATE WHERE DIRECTED BY OWNER

- (1) PORTABLE LADDER FURNISH ONE PORTABLE ALUMINUM ADJUSTABLE FREE STANDING A-FRAME LADDER 6 TO 11 FOOT A-FRAME HEIGHT RECOMMENDED BY MANUFACTURER FOR INDUSTRIAL HEAVY DUTY 300 POUND RATING. CERTIFIED ANSI A14 COMPLIANCE [little.giant.com](http://little.giant.com) - MODEL 26 OR EQUAL  
 INSTALL WITH STORAGE 1/8" X 3/4" GALVANIZED CHAIN AGAINST ON INSIDE WALL OF BUILDING WHERE DIRECTED BY OWNER.
- (2) TWO 16" WIDE X 3/4" PLYWOOD SHELVES - BETWEEN FRAMING - 12" X 12" STEEL SHELF BRACKETS EVENLY SPACED AT 24" O.C. - 55" AND 68" FROM TOP TO FLOOR - PAINT SAME AS PLYWOOD WAINSCOT
- (3) SPILL CONTAINMENT CABINET  
 14 GAGE STEEL 48" WIDE X 24" DEEP X 78" HIGH WITH 2 PAD LOCKABLE DOORS. CENTER PARTITION, COAT ROD, FIXED TOP SHELF, 4 ADJUSTABLE SHELVES. YELLOW ENAMEL PAINT FINISH WITH "SPILL CONTAINMENT CABINET" IN 2" HIGH LETTERS. [WWW.LKGOODWIN.COM](http://WWW.LKGOODWIN.COM) MODEL ML248 OR EQUAL  
 INSTALL WHERE DIRECTED
- (4) 5000 LB CAPACITY FLOOR MOUNT SINGLE SIDE CANTILEVER RACK:  
 (2) 8' HIGH UPRIGHTS  
 (1) BRACE SET BETWEEN UPRIGHTS; 6'  
 (10) 24" STRAIGHT ARMS WITH LIPS  
 ENAMEL PAINT FINISH  
[WWW.LKGOODWIN.COM](http://WWW.LKGOODWIN.COM) SERIES 1000 OR EQUAL  
 INSTALL WHERE DIRECTED
- (5) 10,000 LB CAPACITY FLOOR MOUNT DOUBLE SIDE CANTILEVER RACK:  
 (2) 8' HIGH UPRIGHTS  
 (1) BRACE SET; 6'  
 (10) 24" STRAIGHT ARMS WITH LIPS  
 ENAMEL PAINT FINISH  
[WWW.LKGOODWIN.COM](http://WWW.LKGOODWIN.COM) SERIES 100 OR EQUAL  
 INSTALL WHERE DIRECTED
- (6) (2 EACH) CLOSED SHELF UNITS: 18 GAGE STEEL 48" WIDE X 24" DEEP 39" HIGH WITH CLOSED SIDES & BACK.  
 (3) INTERMEDIATE ADJUSTABLE SHELVES  
 GRAY ENAMEL PAINT FINISH  
[WWW.LKGOODWIN.COM](http://WWW.LKGOODWIN.COM) IRONMAN OR EQUAL  
 INSTALL WHERE DIRECTED
- (7) FIXED GALVANIZED STEEL LADDER WITH SAFETY CAGES, MEET IBC AND OSHA REQUIREMENTS, REFER TO STRUCTURAL



**1 FLOOR PLAN**  
 A1 1/4" = 1'-0"



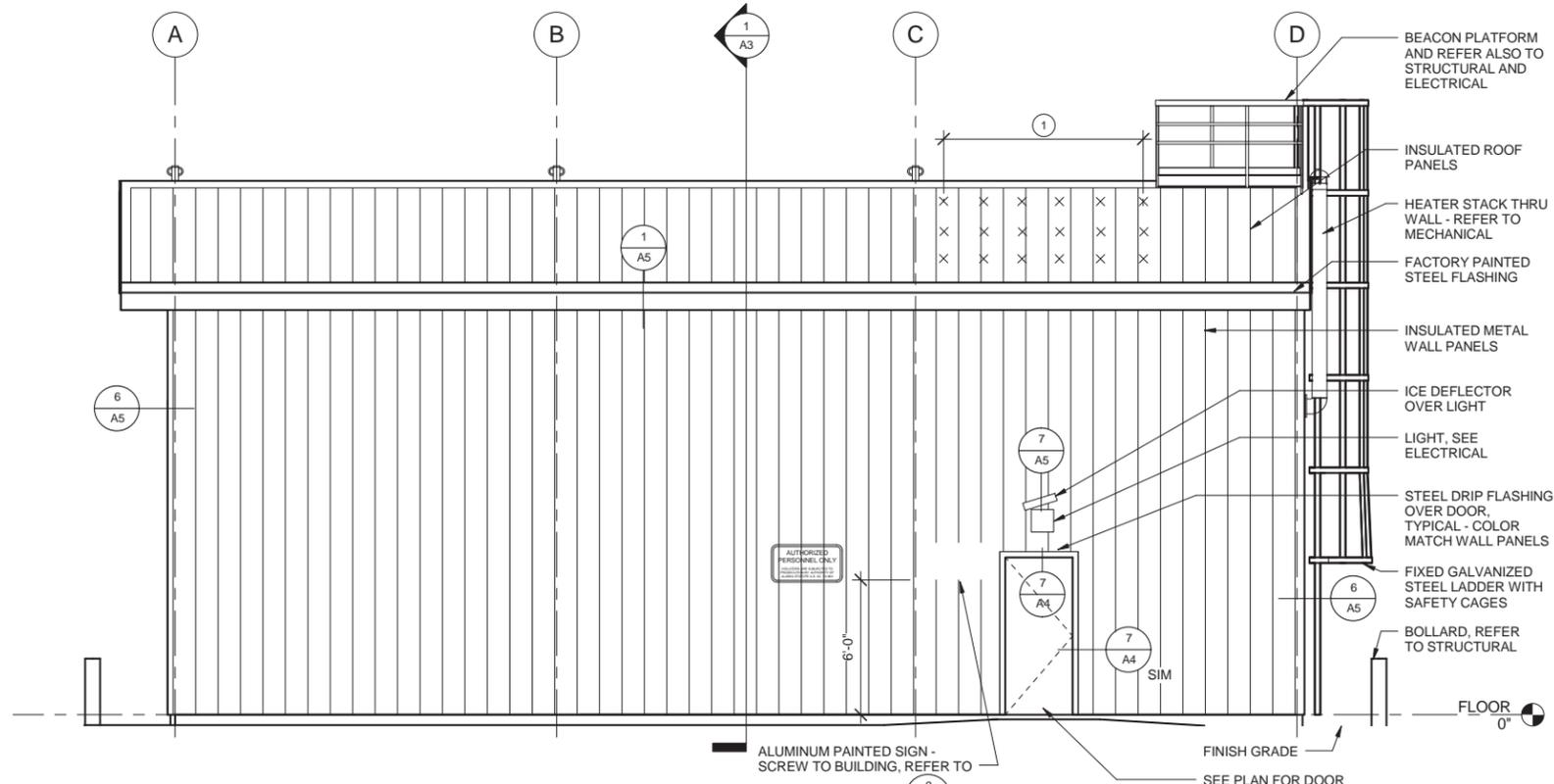
BY	DATE	REVISION

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 CENTRAL REGION

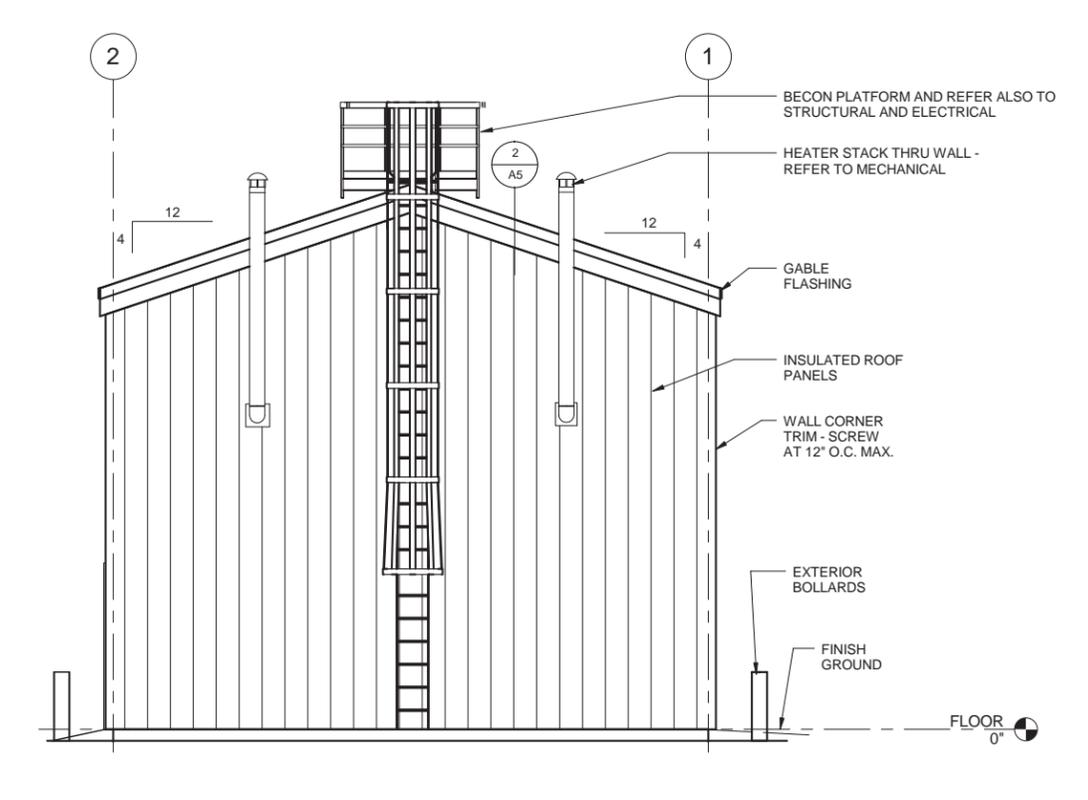
HOOPER BAY, AIRPORT  
 HOOPER BAY, ALASKA  
 SNOW REMOVAL EQUIPMENT BUILDING  
 PROJECT No. 57419  
 AIP 3-02-0126-00X-20XX  
 FLOOR PLAN

DATE:  
 06-05-2014  
 SHEET:  
 A1 of A5  
 AS-BUILT SHEET:

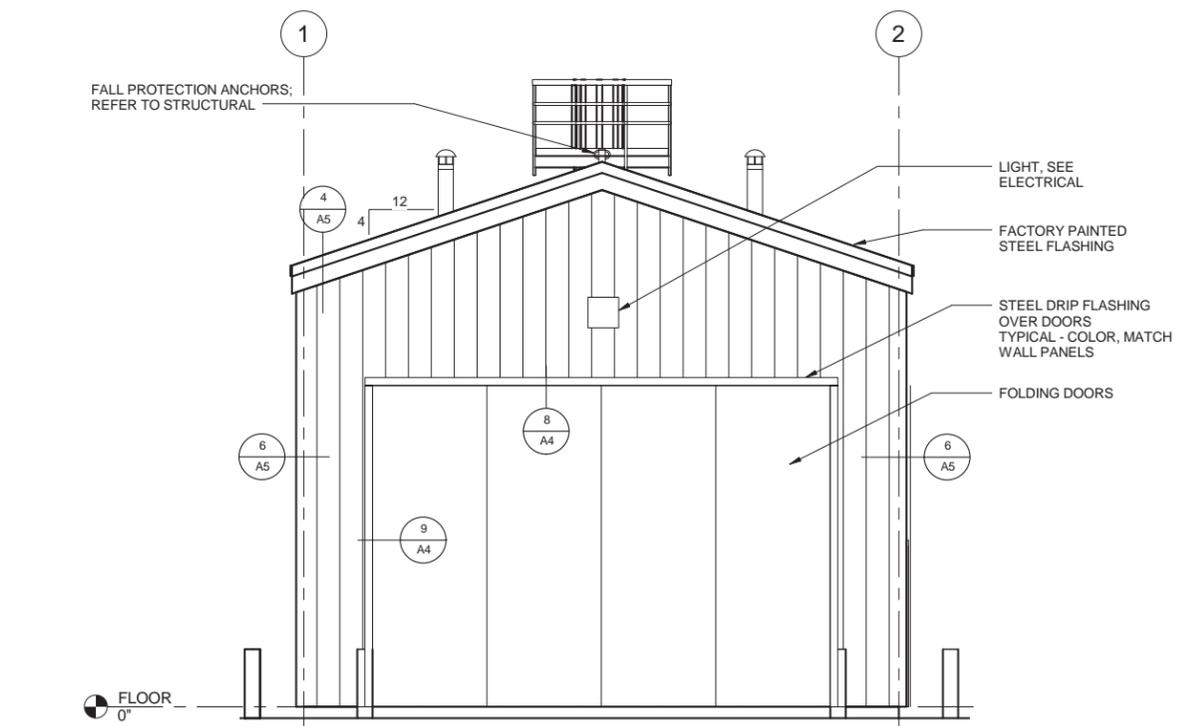
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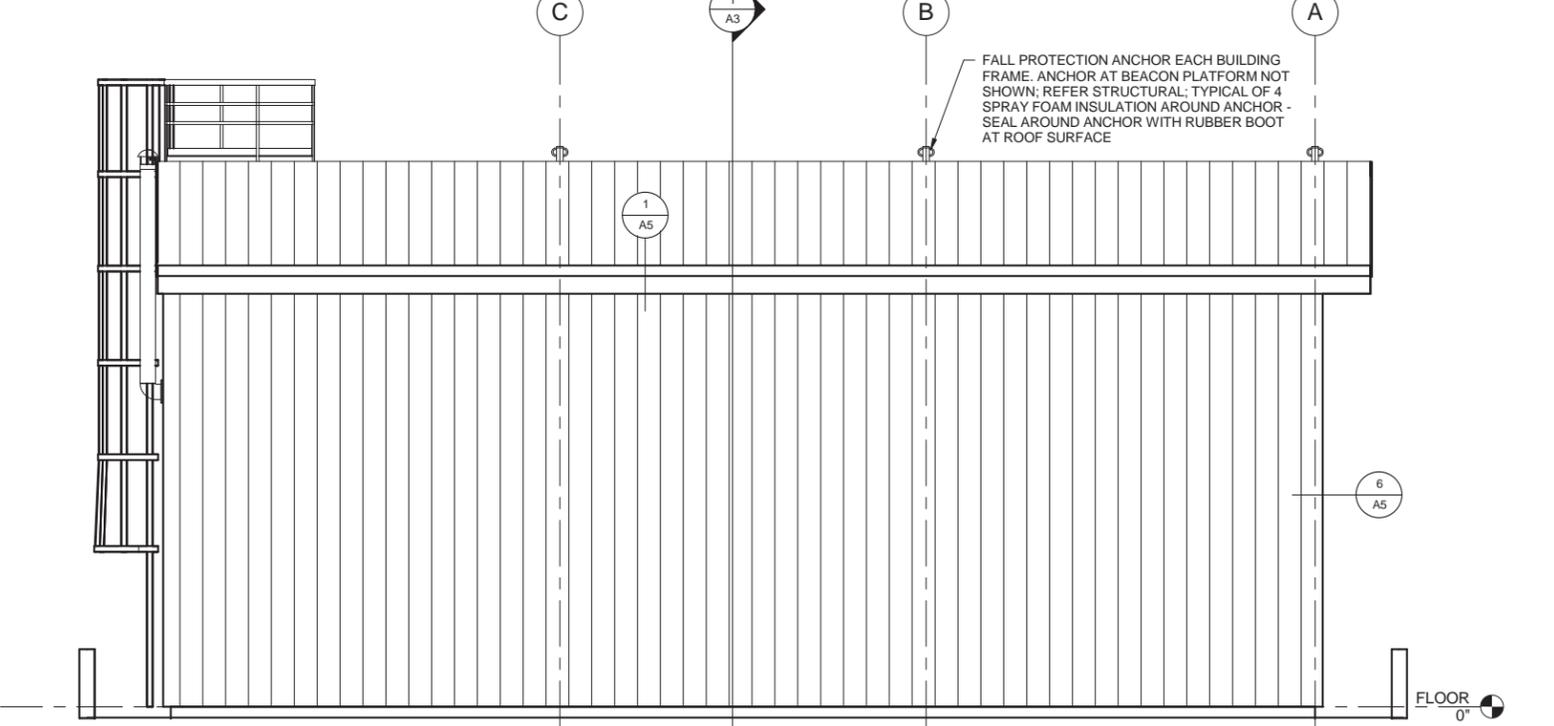
**1 BUILDING SIDE ELEVATION - SOUTH**  
 1/4" = 1'-0"  
 22X34 SHEET 1/4" = 1'-0"  
 11X17 SHEET 1/8" = 1'-0"



**3 BUILDING REAR ELEVATION - EAST**  
 1/4" = 1'-0"  
 REFER TO 1/A2 FOR NOTES  
 22X34 SHEET 1/4" = 1'-0"  
 11X17 SHEET 1/8" = 1'-0"



**2 BUILDING FRONT ELEVATION - WEST**  
 1/4" = 1'-0"  
 REFER TO 1/A2 FOR NOTES  
 22X34 SHEET 1/4" = 1'-0"  
 11X17 SHEET 1/8" = 1'-0"



**4 BUILDING SIDE-ELEVATION - NORTH**  
 1/4" = 1'-0"  
 REFER TO 1/A2 FOR NOTES  
 22X34 SHEET 1/4" = 1'-0"  
 11X17 SHEET 1/8" = 1'-0"

**SHEET NOTES**

- 1 INSTALL ON ROOF CENTERED ABOVE MAN DOOR 4' UP FROM EAVE - SPACE 4' UP ROOF SLOPE  
 2" TO 3" PROJECTION POLYCARBONATE PLASTIC RECOMMENDED BY MANUFACTURER TO HOLD SNOW ONTO SLOPING ROOFS ATTACH WITH MANUFACTURER APPROVED ADHESIVE  
 POLAR BLOX, SNOWJAX, SNO GEM EQUAL



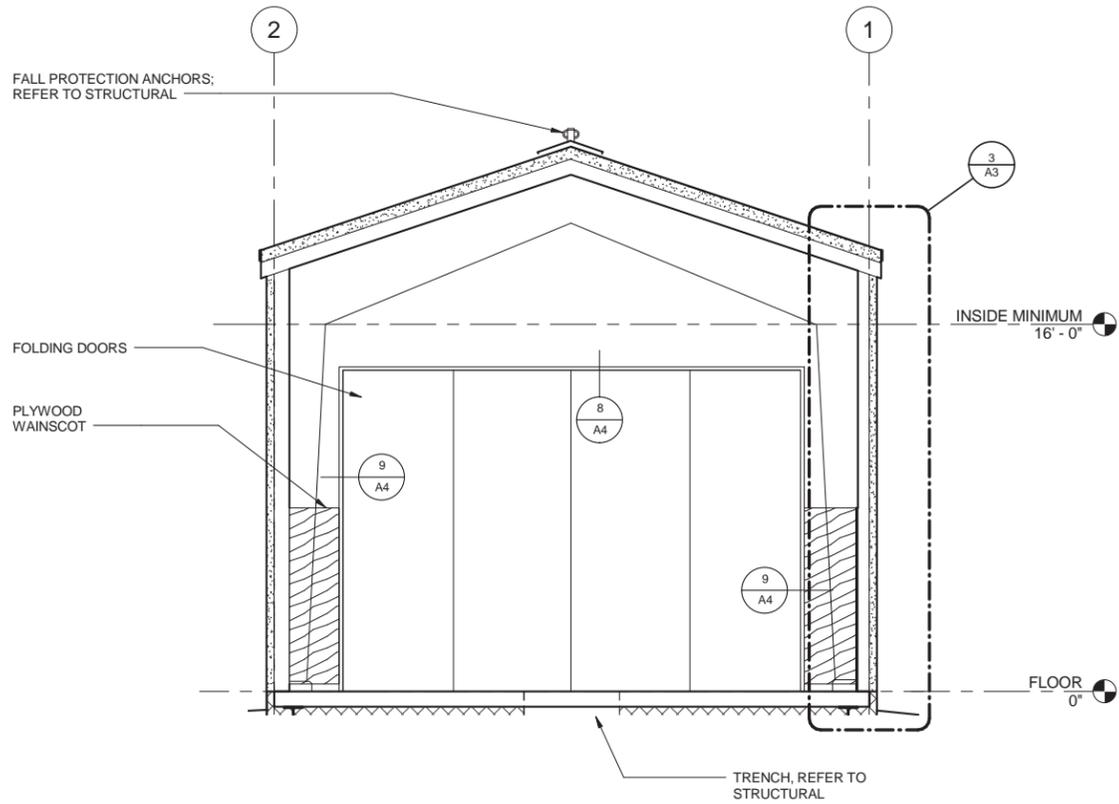
BY	DATE	REVISION

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HOOPER BAY, AIRPORT  
 HOOPER BAY, ALASKA  
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 EXTERIOR ELEVATIONS

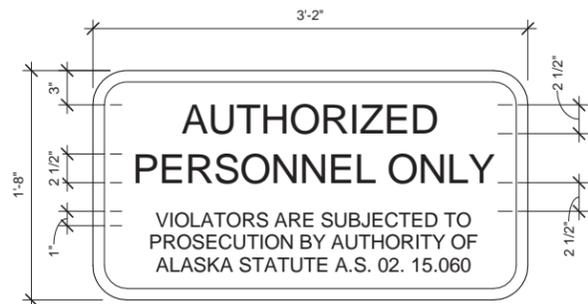
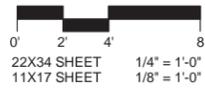
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 A2 of A5  
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 Designed By: JEM  
 Drawn By: WYZ  
 Checked By: DDG



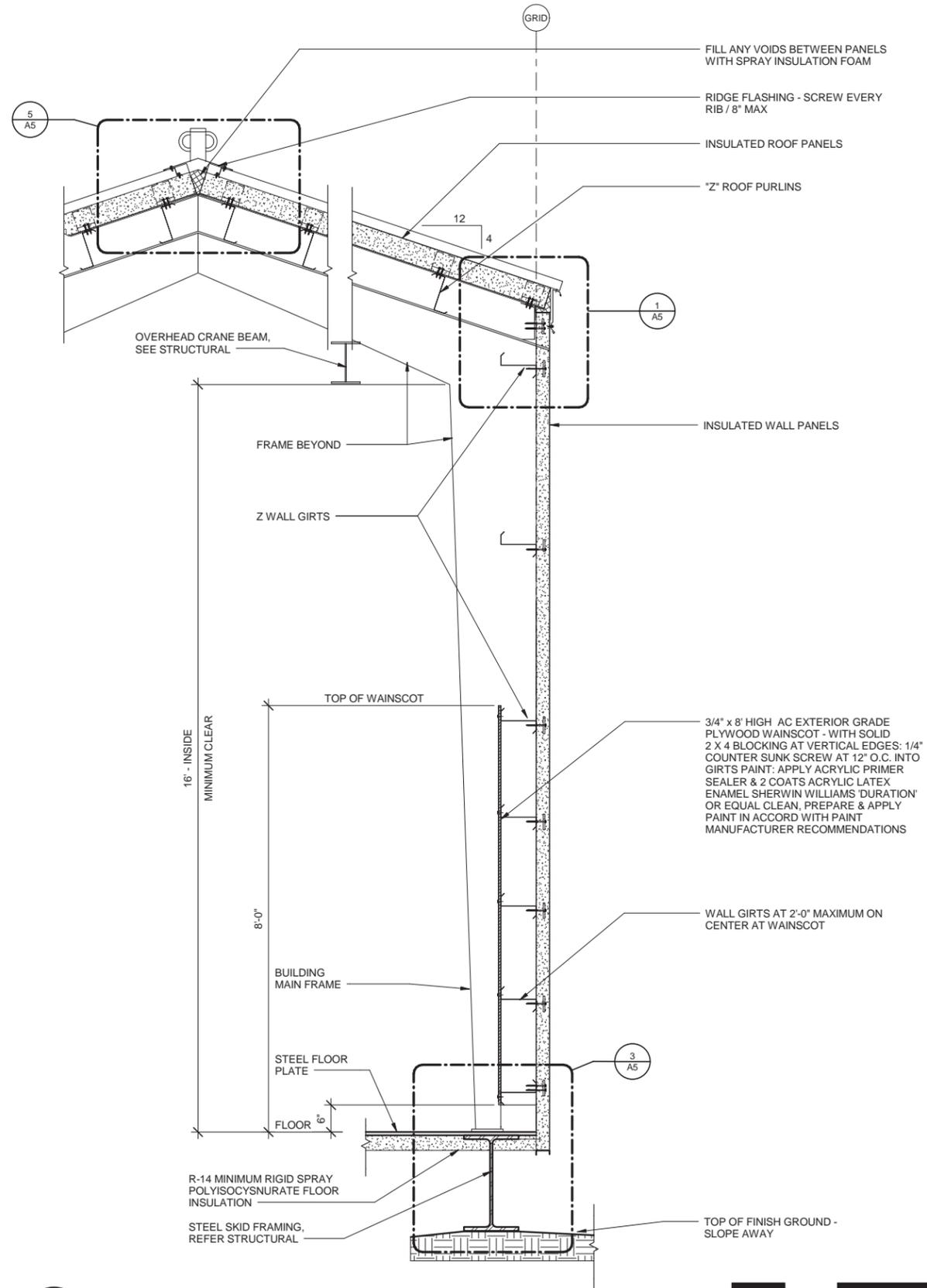
**1 CROSS SECTION**

A3 1/4" = 1'-0"



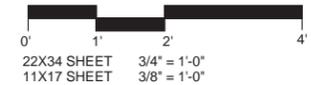
**2 SIGN MESSAGE**

A3 1 1/2" = 1'-0"



**3 TYPICAL WALL SECTION**

A3 3/4" = 1'-0"



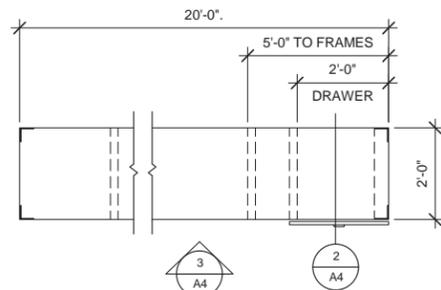
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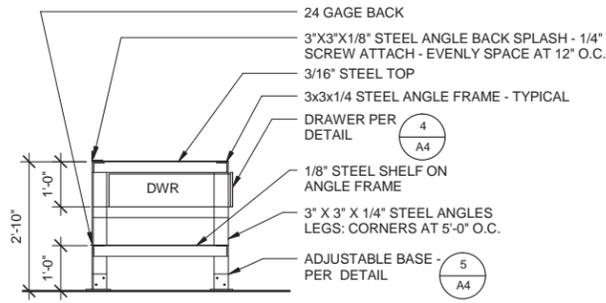
HOOPER BAY, AIRPORT  
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DATE:  
06-05-2014  
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A3 of A5  
 AS-BUILT SHEET:

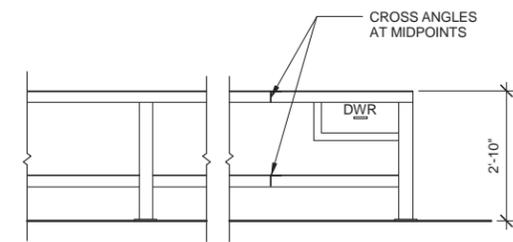
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 File Path and Name: C:\Users\wzomora\Documents\Hooper\_Bay\_WZomora.rvt  
 Designer: WZ  
 Drawn By: WZ  
 Checked By: DGS



**1 WORK BENCH PLAN**  
A4 1/2" = 1'-0"



**2 WORK BENCH SECTION**  
A4 1/2" = 1'-0"

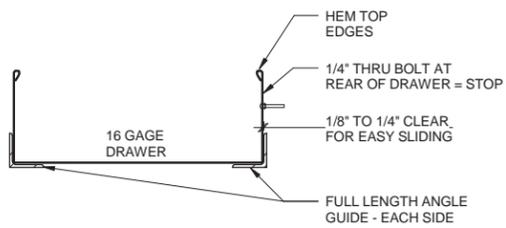


**3 WORK BENCH FRONT**  
A4 1/2" = 1'-0"

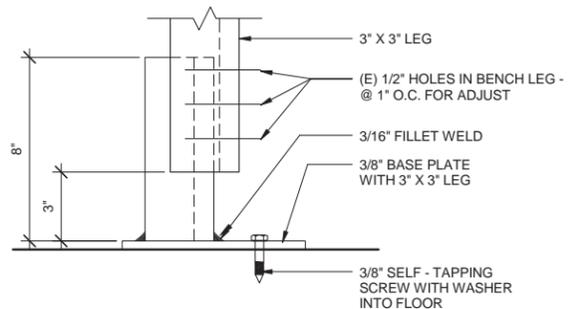
**WORK BENCH SPECIFICATIONS**

INSTALL WHERE INDICATED ON FLOOR PLAN

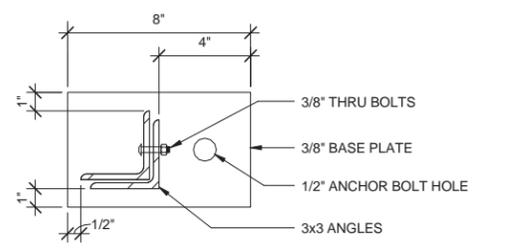
- FRAME:** 3 x 3 x 1/4" STEEL ANGLES - WELD 3/16" FILLET AT CONNECTIONS
- TOP:** 3/16" STEEL PLATE
- SHELF:** 1/8" STEEL PLATE
- BACK:** 24 GAGE STEEL SHEET
- DRAWER:** BOTTOM AND SIDES: 16 GAGE GALVANIZE SHEET STEEL BEND OR WELDED - HEM TOP EDGES  
PULL: 6x5/16" WIRE: STANLEY 4486 OR EQUAL
- EDGES:** SMOOTH EDGES BY GRINDING - FREE FROM SHARP SURFACES
- FINISH:** SHOP APPLY: SOLVENT CLEAN POWER GRIND OR GRIT BLAST CLEAN, PRIME AND EPOXY ENAMEL PAINT



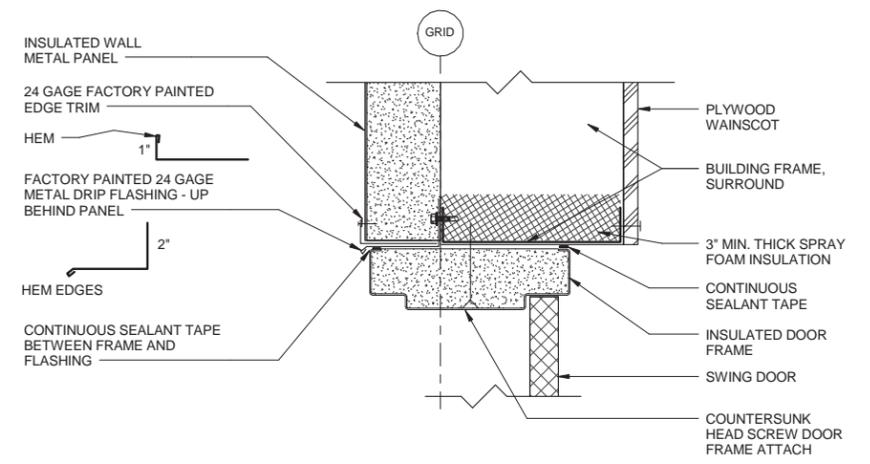
**4 WORK BENCH DRAWER**  
A4 1 1/2" = 1'-0"



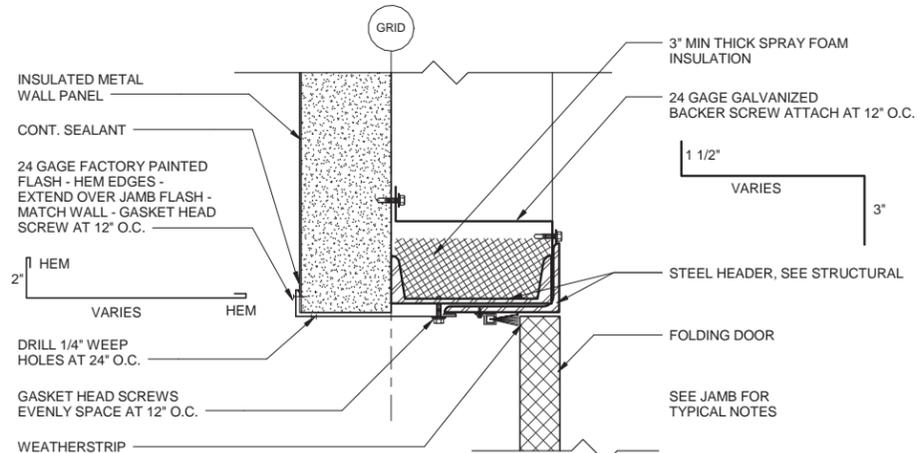
**5 WORK BENCH LEG**  
A4 3" = 1'-0"



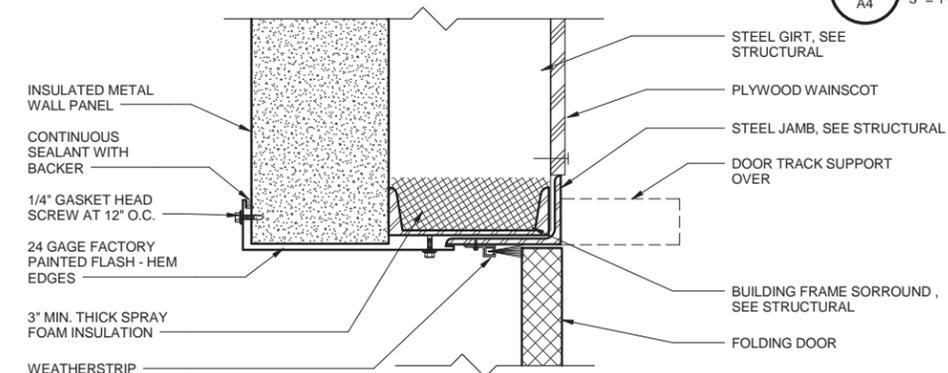
**6 WORK BENCH LEGS BASE PLATE**  
A4 3" = 1'-0"



**7 HINGED DOOR HEAD - JAMB SIMILAR**  
A4 3" = 1'-0"



**8 FOLDING DOOR HEAD**  
A4 3" = 1'-0"



**9 FOLDING DOOR JAMB**  
A4 3" = 1'-0"



PLANS DEVELOPED BY:  
MCG ARCHITECTS  
PROJ. NO. 2010039.09

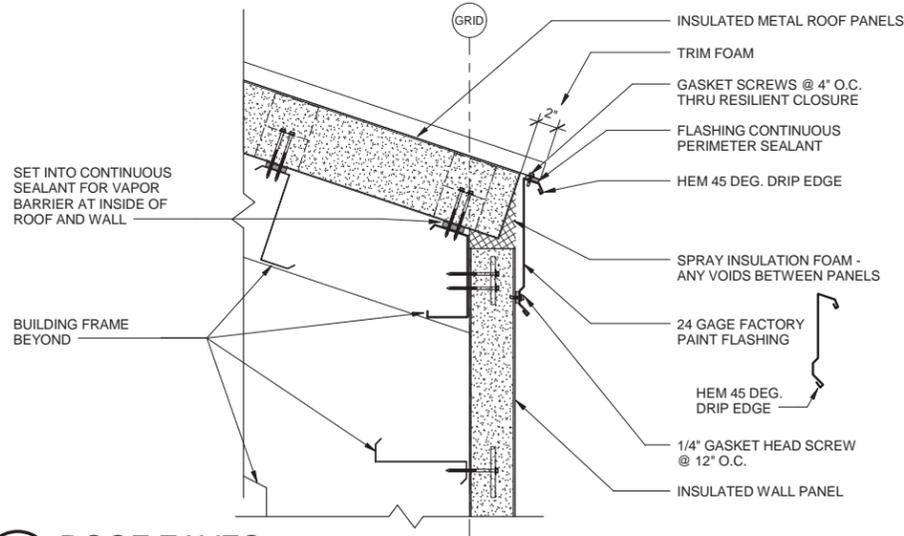
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HOOPER BAY, AIRPORT  
HOOPER BAY, ALASKA  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
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DETAILS

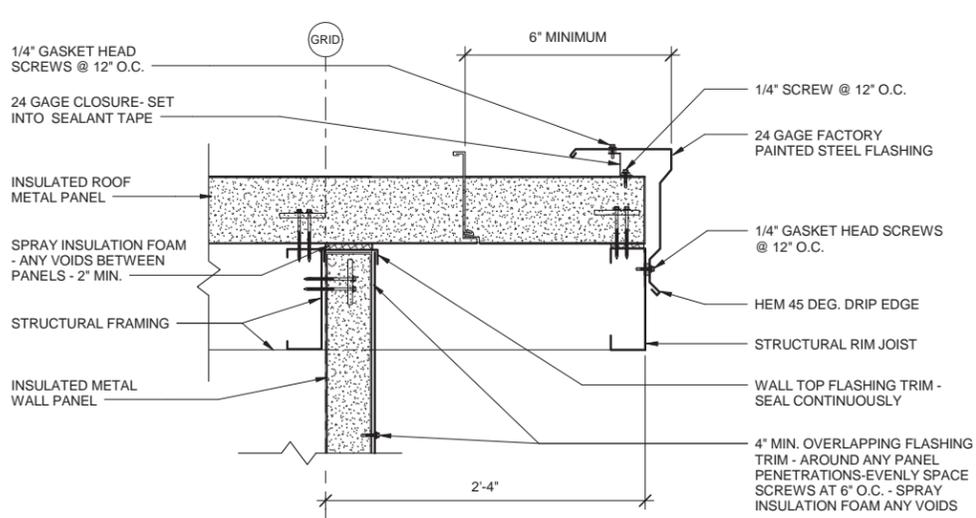
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SHEET:  
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 Drawn By: WJZ  
 Checked By: DGG



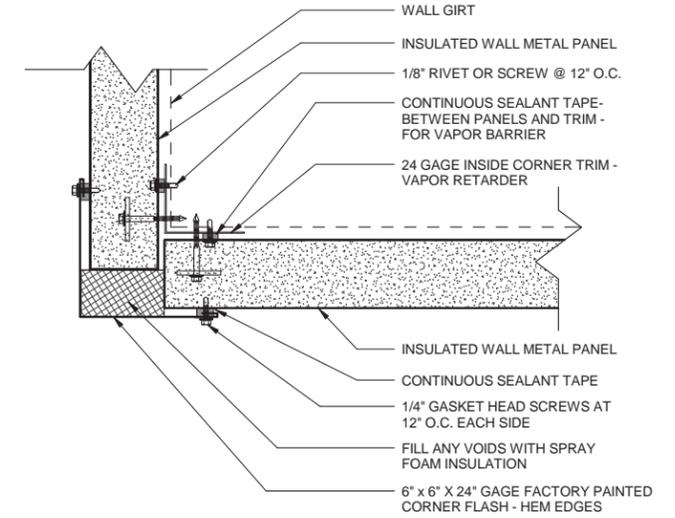
**1 ROOF EAVES**

A5 1 1/2" = 1'-0"



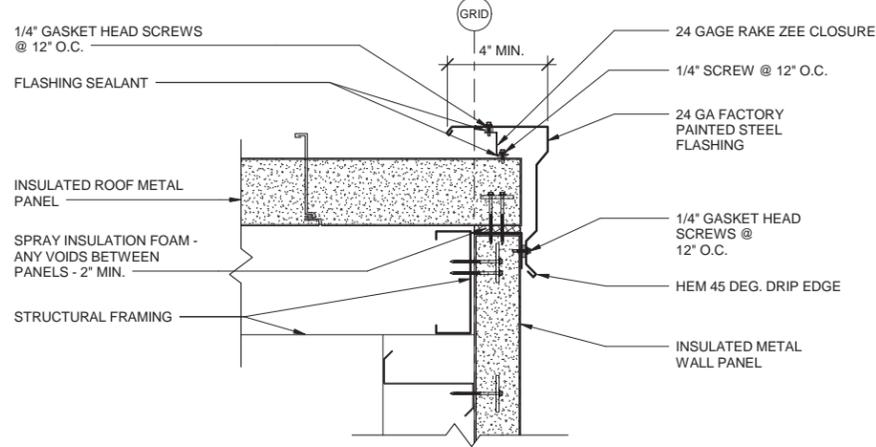
**4 ROOF OVER AT OVERHEAD DOOR**

A5 1 1/2" = 1'-0"



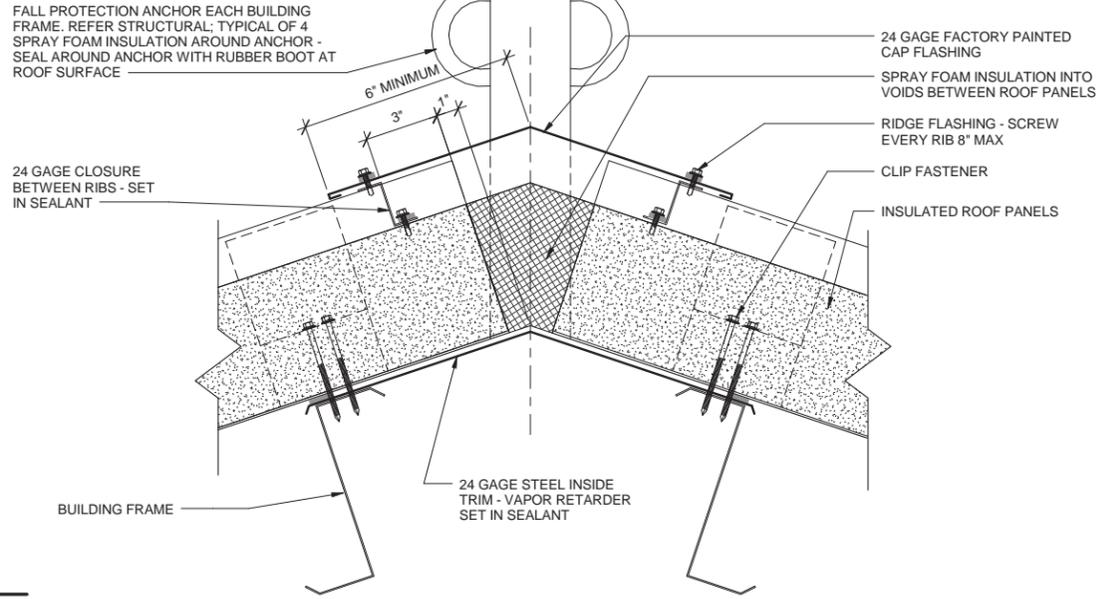
**6 CORNER AT WALL PANEL**

A5 3" = 1'-0"



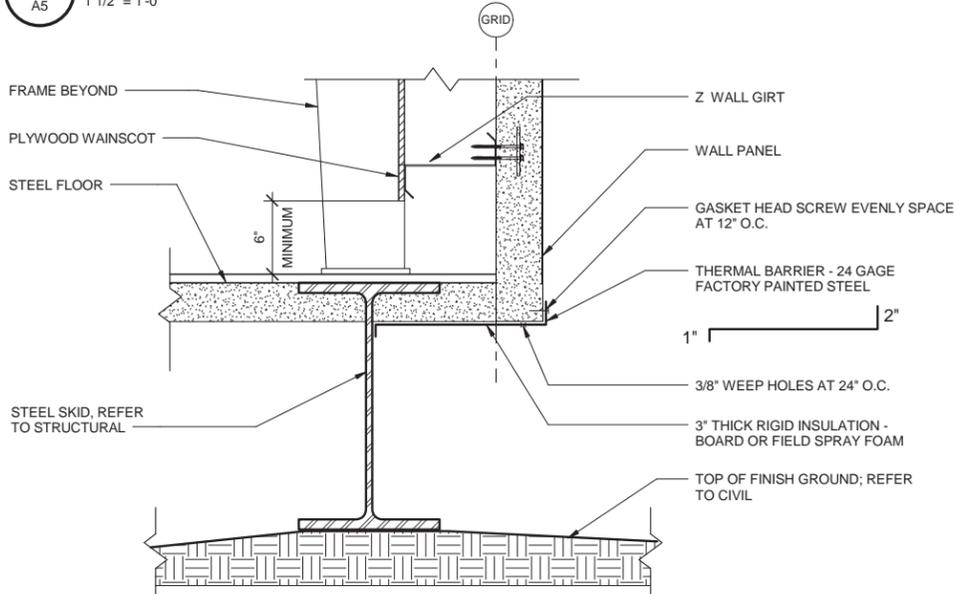
**2 ROOF RAKE**

A5 1 1/2" = 1'-0"



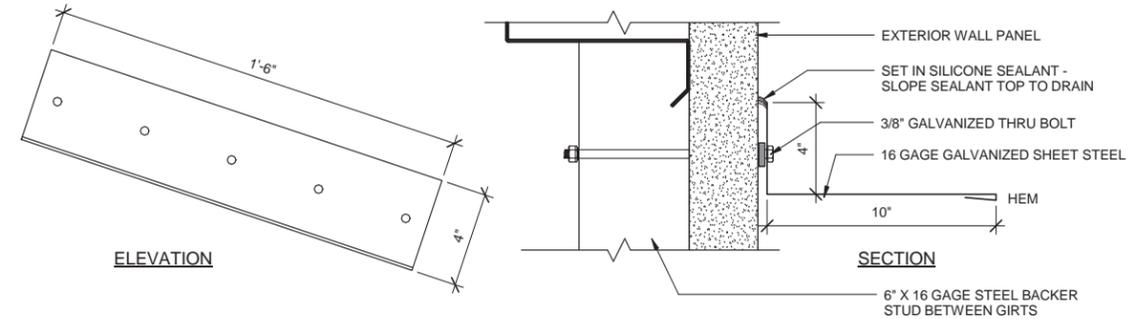
**5 RIDGE**

A5 3" = 1'-0"



**3 BASE DETAIL**

A5 1 1/2" = 1'-0"



**7 LIGHT ICE DEFLECTOR DETAIL**

A5 3" = 1'-0"



PLANS DEVELOPED BY:  
MCG ARCHITECTS  
PROJ. NO. 2010039.09

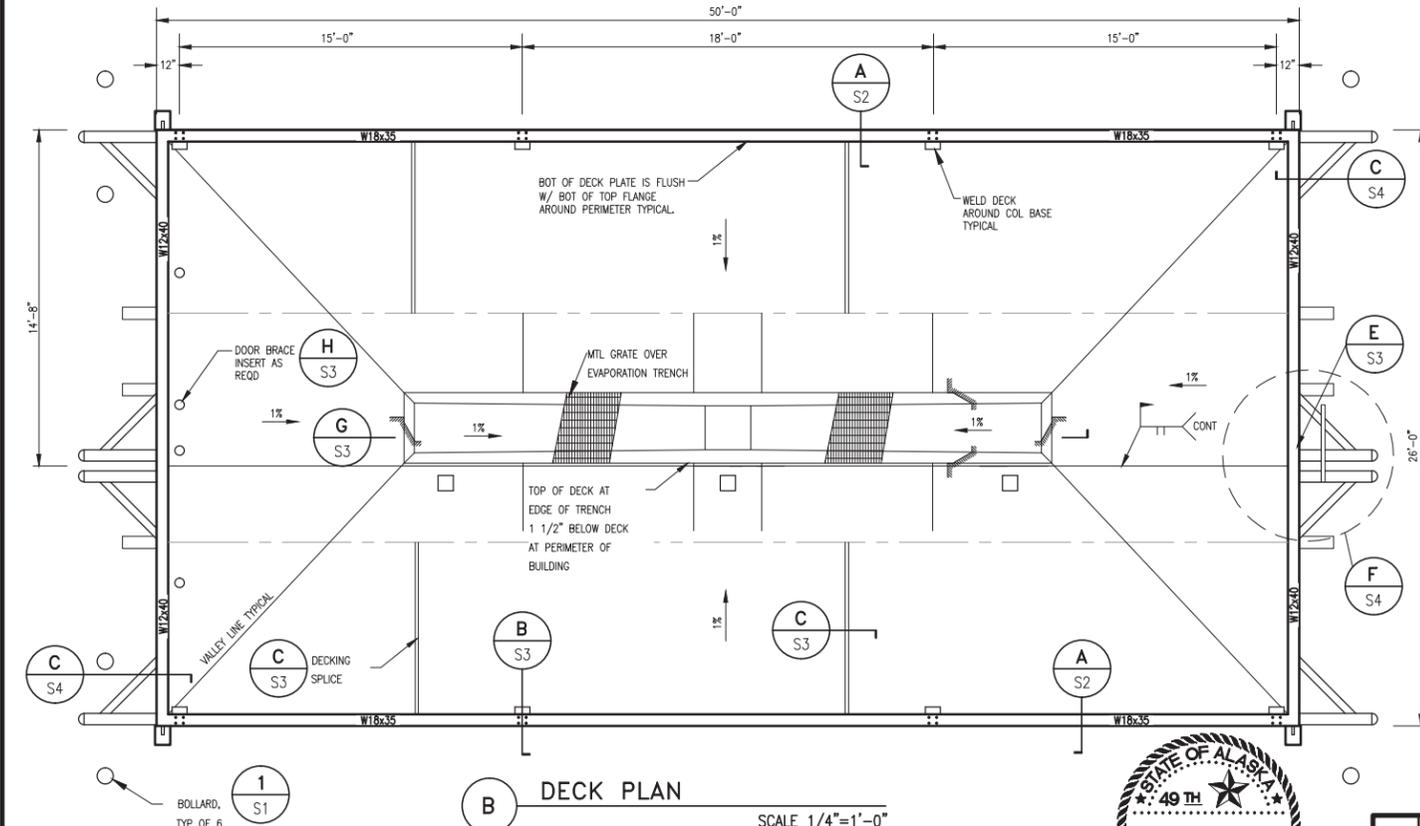
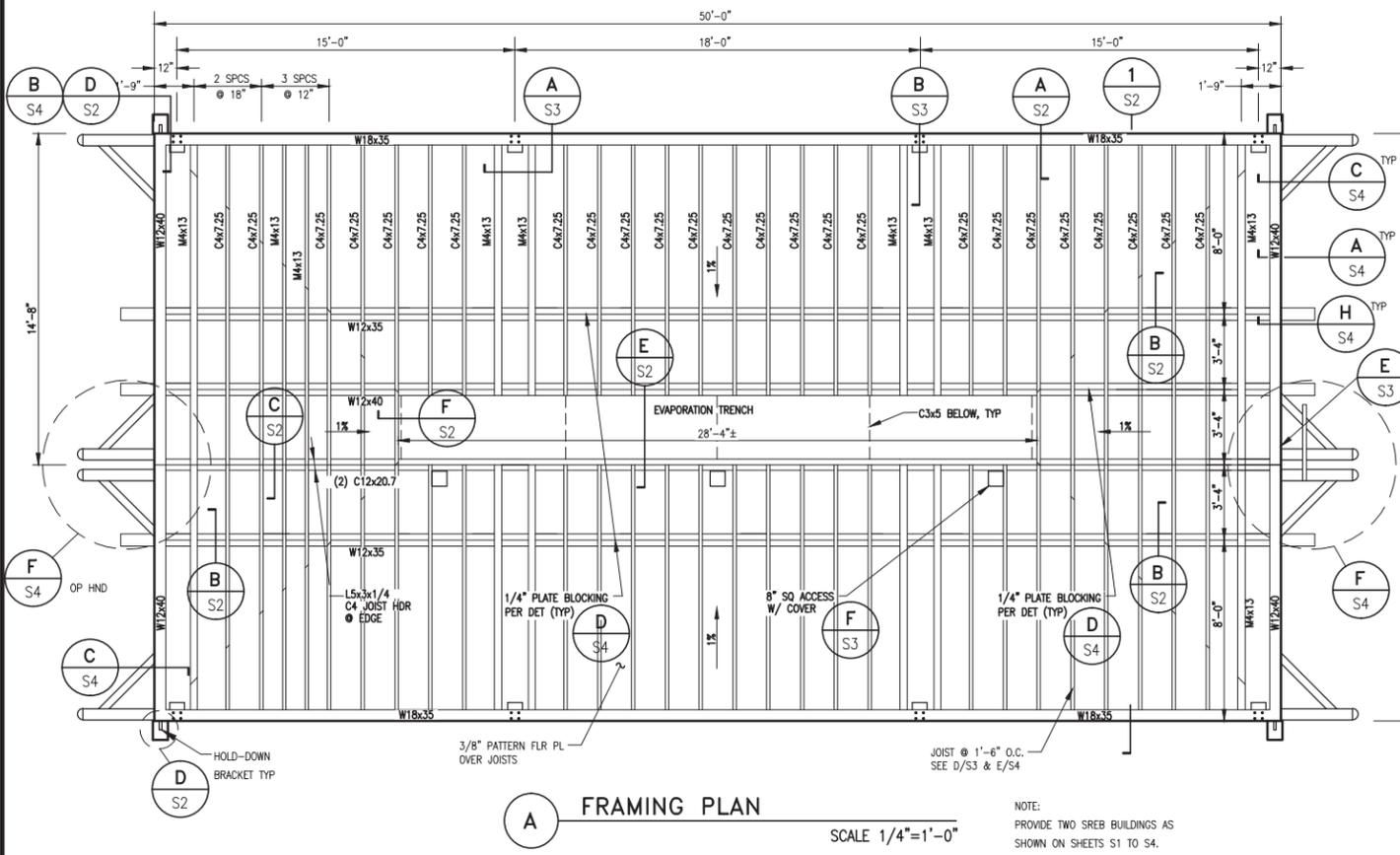
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HOOPER BAY, AIRPORT  
HOOPER BAY, ALASKA  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP 3-02-0126-00X-20XX  
DATE:  
06-05-2014  
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A5 of A5  
AS-BUILT SHEET:

DETAILS

Date Revised: 6/04/2014, 4:51 PM  
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 Designed By: MGY  
 Drawn By: BMD  
 Checked By: RLC



**COSE:**  
2009 IBC

**DESIGN LOADS:**

FLOOR: 200 PSF  
 ROOF LIVE LOAD: 20 PSF  
 ROOF SNOW LOAD:  $P_g = 50$  PSF  
 $P_f = 35$  PSF  
 $C_e = .8$   
 $I = 1.0$   
 $C_t = 1.0$   
 SNOW DRIFT PER ASCE 7

WIND LOADS: WIND SPEED: 130 MPH (3-SECOND GUST)  
 $I = 1.0$   
 EXPOSURE D  
 $C_{pe} = +0.18 / -0.18$   
 $a = 3'$

C&C: ZONE PER IBC (WIND PRESSURE IN PSF BASED ON 10 SF AREA)  
 ZONE 1 ZONE 2 ZONE 3 ZONE 4 ZONE 5  
 27/-43 27/-75 27/-110 47/-51 47/-63

EARTHQUAKE DESIGN:  
 $I = 1.0$   
 RISK CATEGORY: I  
 SITE CLASS: D  
 $S_s = .13g$   $S_1 = .06g$   
 $S_{ps} = .14g$   $S_{p1} = .09g$   
 SEISMIC DESIGN CATEGORY = B  
 OMEGA = 3.0  
 SEISMIC FORCE RESISTING SYSTEM: STEEL ORDINARY MOMENT FRAME  
 $V = 2$  KIPS  
 $C_s = .05*W$  (STRENGTH DESIGN)  
 $R = 3.5$   
 ANALYSIS PROCEDURE: EQUIV LATERAL FORCE  
 FLOOD DESIGN: N/A (ON AIRPORT APRON - HIGHEST GROUND AVAILABLE)  
 SPECIAL LOADS: MINIMUM COLATERAL LOAD = 5 PSF  
 AT MONORAIL HOIST: 2 TONS

**MATERIALS**

COMPLY WITH BUY AMERICAN ACT.

**STRUCTURAL STEEL AND CONNECTORS:**

- STRUCTURAL STEEL SHALL CONFORM TO IBC CHAPTER 22, FOR ASTM SPECIFICATION A-36,  $F_y = 36$  ksi EXCEPT WHERE NOTED OTHERWISE. ROLLED SHAPES SHALL BE ASTM A992, 50 ksi YIELD.
- STEEL TUBING (TS) SHALL CONFORM TO ASTM A500, GRADE B,  $F_y = 46$  ksi.
- DESIGN FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE IBC CHAPTER 22, DIVISION IX, ALLOWABLE STRESS DESIGN.
- ALL BOLTS (UON) SHALL BE A325 HIGH STRENGTH BOLTS IN CONFORMANCE WITH AISC STANDARD "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
- MACHINE BOLTS SHALL CONFORM TO ASTM 307, UNLESS NOTED OTHERWISE AND SHALL BE PROVIDED STANDARD HEX HEAD NUTS CONFORMING TO ASTM A563, GRADE A AND CIRCULAR STEEL WASHERS CONFORMING TO ASTM F436.
- WELDING PER AWS 01.1 WITH E70 ELECTRODES.
- METAL GRATE: 2"x5/16" BRG BARS @ 1 3/8" C/C, w/ WELDED CROSS BARS 3/4"x3/16" @ 4" C/C, ENDS BANDED w/ 1/8" FLAT BAR, HOT DIP GALVANIZED, FABRICATE IN 2' MAX LENGTHS.
- PROVIDE ADEQUATE LATERAL BRACING FOR STRUCTURE DURING FABRICATION. PLAN WELDING SEQUENCE TO ELIMINATE WARPAGE OF SKID.

**INSULATION:**

- AT UNDERSIDE OF FLOOR PLATE & ON JOIST FRAMING: SPRAY APPLY "URETHANE" FOAM INSULATION TO "R-14" CAPACITY AFTER FABRICATION PER SPEC 07201.

**PAINTING:**

- PAINT ALL COMPONENTS PER SPEC SECTION 05121. FLOOR COLOR SHALL BE GRAY.

**SKID ACCEPTANCE:**

- PRIOR TO ACCEPTANCE OF THE SREB SKIDS FOR SHIPPING FROM THE POINT OF FABRICATION, THE PERIMETER MEMBERS OF THE SKID FRAMEWORK SHALL BE CHECKED FOR STRAIGHTNESS BY THE ENGINEER. WARPAGE OF THE SKID FRAME EXCEEDING 1/2" (ASSUMING THE BASE LINE IS A STRAIGHT LINE BETWEEN THE ENDS OF THE SKID DECK) SHALL BE CAUSE FOR REJECTION OR SHALL REQUIRE REPAIRS BY THE FABRICATOR TO MEET SUCH TOLERANCE.
- PRIOR TO ACCEPTANCE OF THE SREB SKIDS FOR ASSEMBLY OF THE BUILDING STRUCTURAL FRAMEWORK, THE PERIMETER MEMBERS OF THE SKID FRAMEWORK SHALL BE CHECKED FOR STRAIGHTNESS BY THE ENGINEER. WARPAGE OF THE SKID FRAME EXCEEDING 1/2" (ASSUMING THE BASE LINE IS A STRAIGHT LINE BETWEEN THE ENDS OF THE SKID DECK) SHALL BE CAUSE FOR REJECTION OR SHALL REQUIRE REPAIRS BY THE FABRICATOR TO MEET SUCH TOLERANCE.

**SPECIAL INSPECTION**

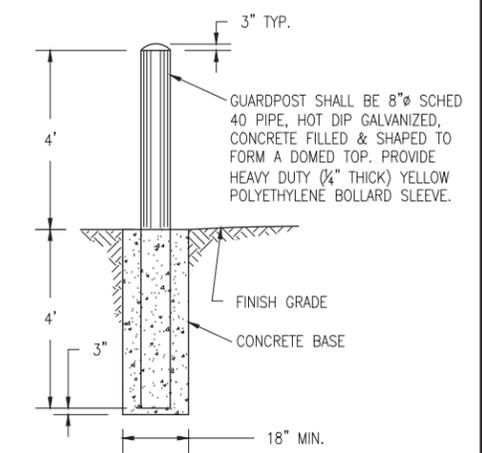
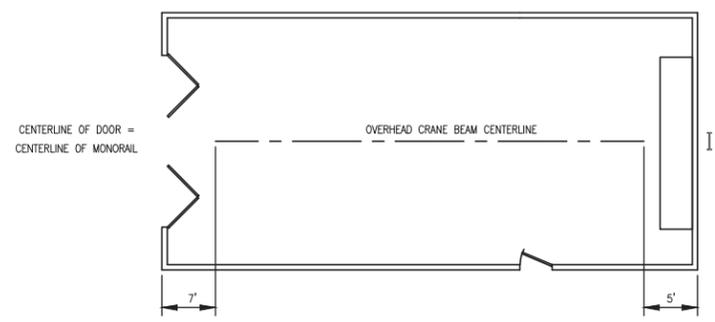
- THE FOLLOWING SPECIAL INSPECTIONS SHALL BE PERFORMED BY QUALIFIED PERSONNEL EMPLOYED BY THE STATE OR ITS AGENT. THE CONTRACTOR SHALL COORDINATE WORK WITH THE SPECIAL INSPECTORS.
- SPECIAL INSPECTORS SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. INSPECTION REPORTS SHALL BE FURNISHED TO THE OWNER AND THE ENGINEER OF RECORD. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND TO THE ATTENTION OF THE ENGINEER OF RECORD.
- THE SPECIAL INSPECTORS SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISION OF THE APPLICABLE CODES.
- PROVIDE THE FOLLOWING SPECIAL INSPECTIONS PER SECTION 1704 OF THE INTERNATIONAL BUILDING CODE. ITEMS MARKED BY AN ASTERISK (\*) MAY BE INSPECTED BY THE RESIDENT PROJECT ENGINEER IF SPECIAL INSPECTOR IS NOT AVAILABLE.

**BUILDING FRAME:**

- ANCHOR BOLTS: VERIFY SNUG TIGHT OR AS OTHERWISE SPECIFIED BY THE BUILDING DESIGNER (PERIODIC)\*.
- HIGH STRENGTH BOLTS: VERIFY MARKINGS INDICATING TYPE OF BOLT MEETS THOSE REQUIRED BY CONSTRUCTION DOCUMENTS. FOR BOLTS TIGHTENED BY TURN-OF-THE-NUT METHOD, VERIFY CONNECTION PLYS HAVE BEEN DRAWN TOGETHER AND PROPERLY SNUGGED AND MONITOR INSTALLATION OF BOLTS TO VERIFY PROPER PROCEDURES (CONTINUOUS). FOR LOAD INDICATING WASHERS OR TWIST-OFF BOLTS, VERIFY UPON COMPLETION (PERIODIC).
- INSPECT STEEL FRAME JOINT DETAILS INCLUDING MOMENT FRAME CONNS, FRAME BRACING AND FLANGE BRACING OF PRIMARY BUILDING FRAMES (PERIODIC)\*.
- BUILDING IS PRE-ENGINEERED METAL BUILDING, PROVIDE ANY SPECIAL INSPECTIONS REQUIRED BY THE BUILDING DESIGNER.

**SKID:**

- VISUAL INSPECTION OF WELDS
- VERIFY WELDER QUALIFICATIONS
- REVIEW WELDING PROCEDURES
- VERIFY MATERIALS CERTIFICATIONS



PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.

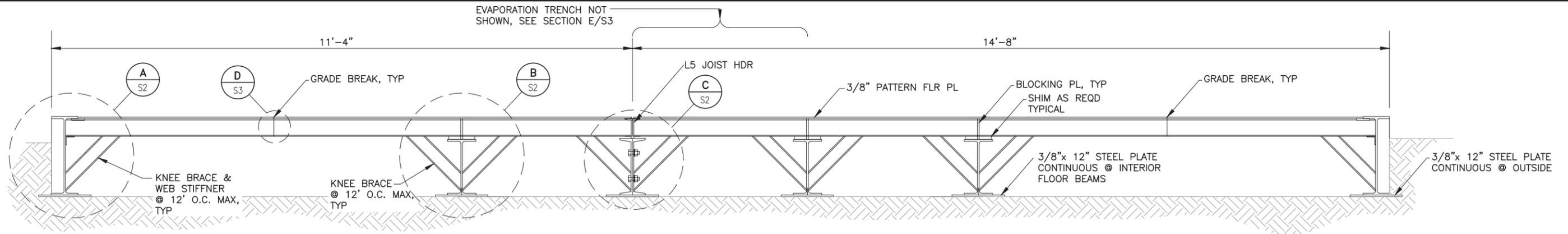
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HOOPER BAY AIRPORT  
 SNOW REMOVAL EQUIPMENT BUILDING  
 PROJECT No. 57419  
 AIP No. 3-02-0126-00X-20XX  
 FRAMING AND DECK PLANS

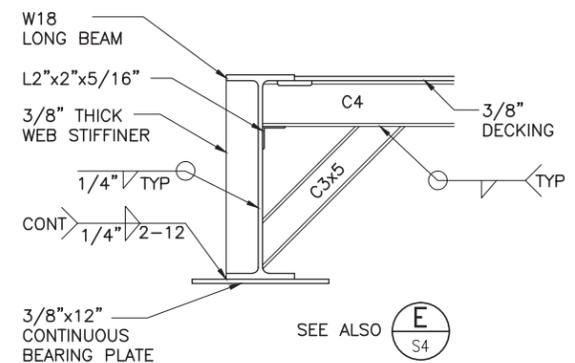
DATE:  
06/05/2014  
 SHEET:  
S1  
 OF  
S5

Date Revised: 6/04/2014, 4:52 PM  
 Layout Name: DETAIL S-2  
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 Designed By: MCY  
 Drawn By: BMD  
 Checked By: RLC

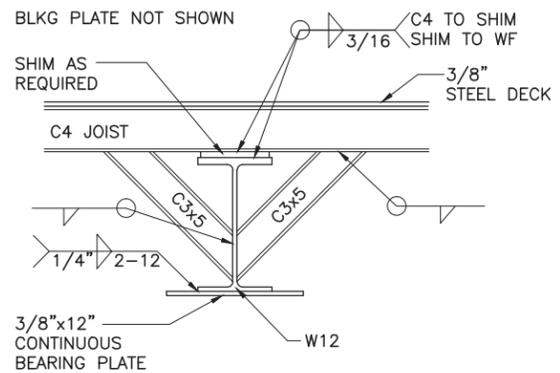


**1 TYPICAL SKID SECTION**  
SCALE 1"=1'-0"

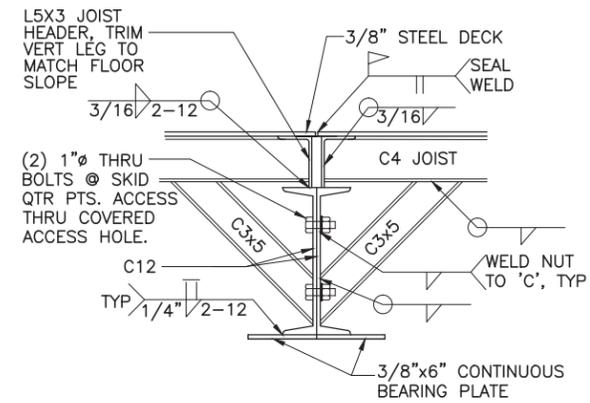
NOTE: BOTTOM OF FLOOR BEAMS AT SAME ELEVATION.



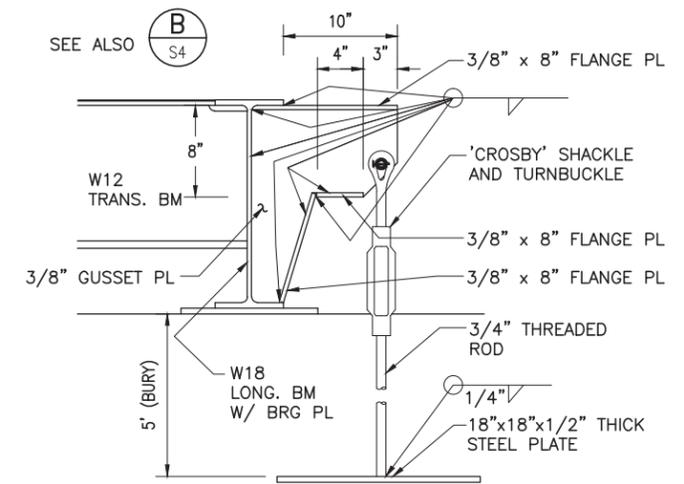
**A TYP BRACING DET @ EXTERIOR**  
SCALE 1-1/2"=1'-0"



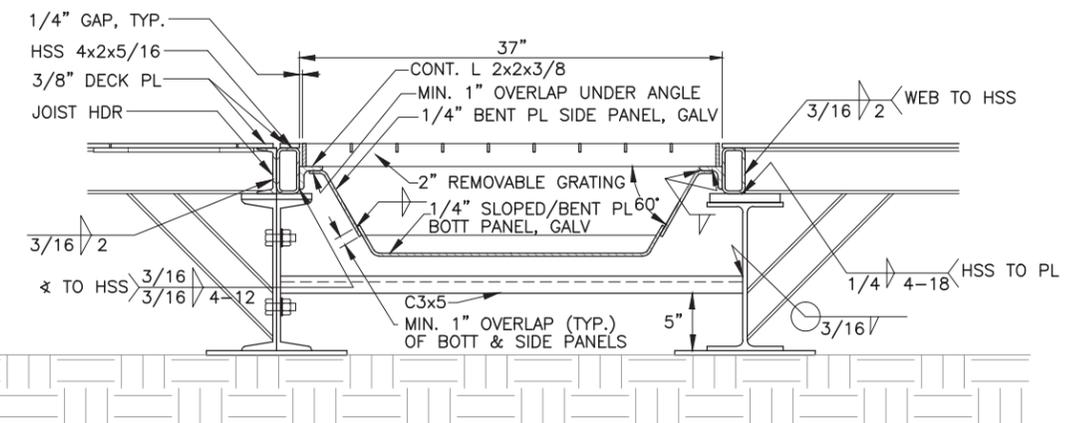
**B TYP BRACING DET @ INTERIOR**  
SCALE 1-1/2"=1'-0"



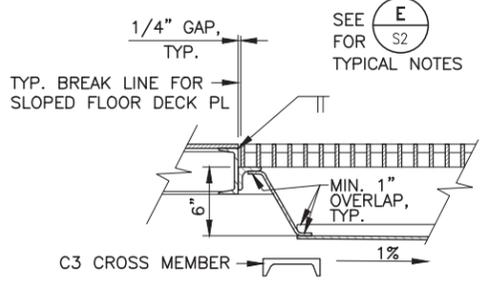
**C TYP SKID SPLICE DETAIL**  
SCALE 1-1/2"=1'-0"



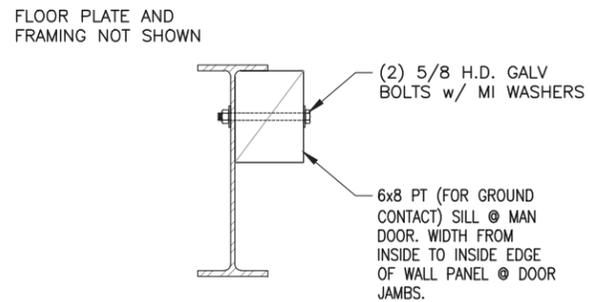
**D TYP JACKING POINT & HOLD-DOWN DET**  
SCALE 1-1/2"=1'-0"



**E EVAP. TRENCH CROSS-SECTION**  
SCALE 1 1/2"=1'-0"



**F EVAP. TRENCH SECTION**  
SCALE 1 1/2"=1'-0"



**G SKID SECTION @ MAN DOOR**  
SCALE 1 1/2"=1'-0"

- NOTES:**
1. CHANCE HELICAL WITH 2 7/8"Ø SHAFT, 10" HELIX WITH 8' BURY MAY BE USED IN LIEU OF TURNBUCKLE/SHACKLE DETAIL
  2. BELOW GRADE STEEL SHALL BE HOT DIP GALV AFTER FABRICATION



PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.

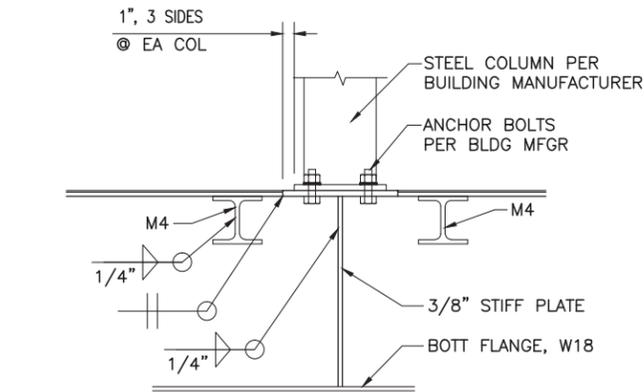
BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

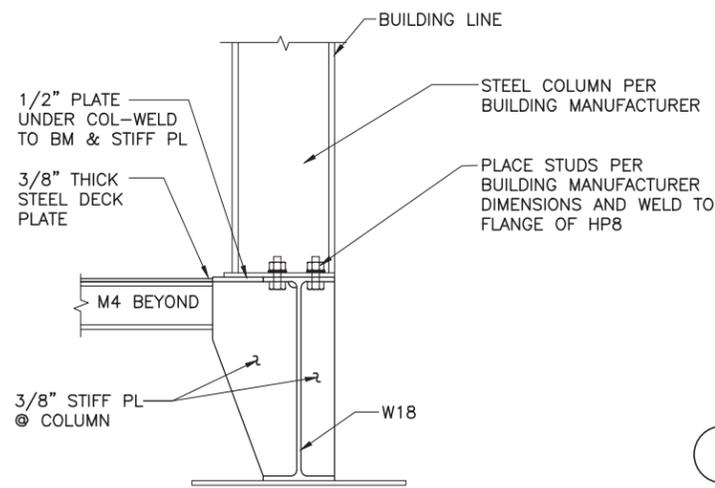
HOOPER BAY AIRPORT  
HOOPER BAY, ALASKA  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP No. 3-02-0126-00X-20XX  
STRUCTURAL DETAILS

DATE: 06/05/2014  
SHEET: S2 OF S5

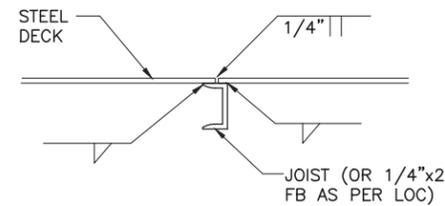
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 Drawn By: BMD  
 Checked By: RLC



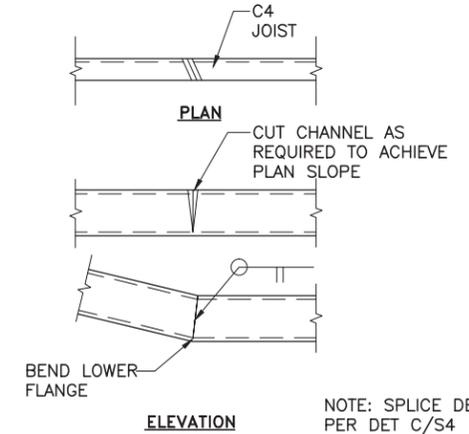
**A** COLUMN BEARING DETAIL  
SCALE 1-1/2"=1'-0"



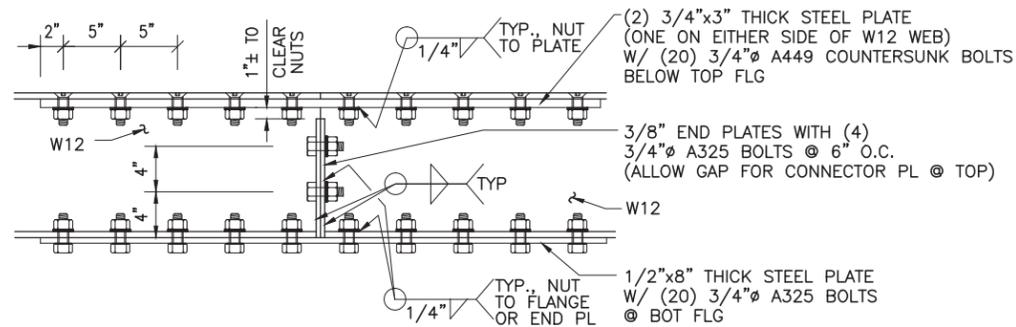
**B** COLUMN BEARING DETAIL  
SCALE 1-1/2"=1'-0"



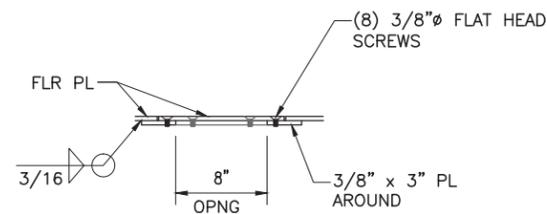
**C** SECTION @ DECK PLATE JOINT  
SCALE 1-1/2"=1'-0"



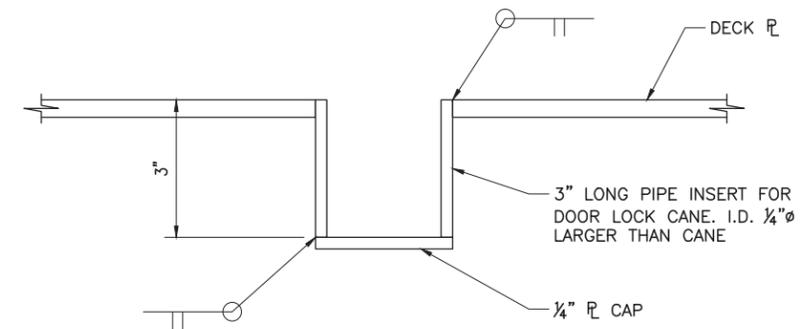
**D** JOIST CUT & WELD @ SLOPE CHANGES DET  
SCALE 1-1/2"=1'-0"



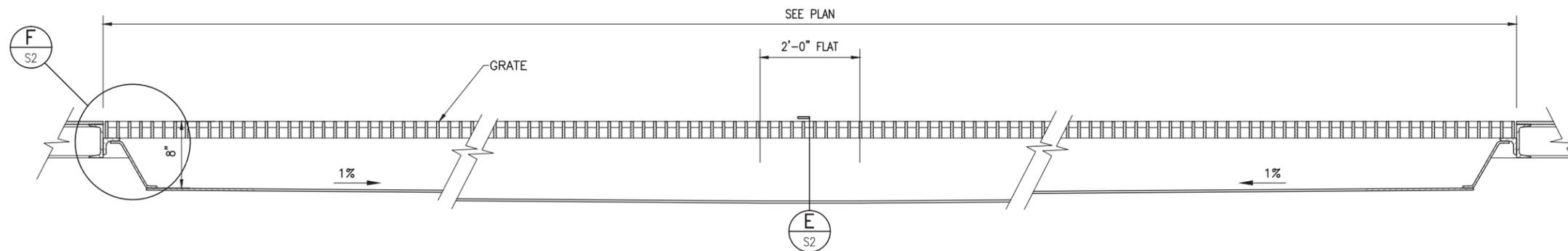
**E** TYPICAL SPLICE DETAIL  
SCALE 1-1/2"=1'-0"



**F** FLOOR ACCESS HOLE DETAIL  
SCALE 1-1/2"=1'-0"



**H** BIFOLD DOOR BRACE  
SCALE 6"=1'-0"



**G** LONGITUDINAL SECTION @ EVAPORATION TRENCH  
SCALE 1-1/2"=1'-0"



PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.

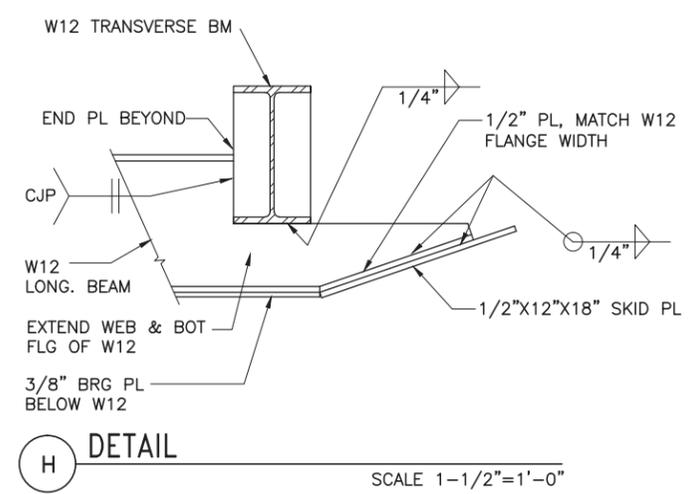
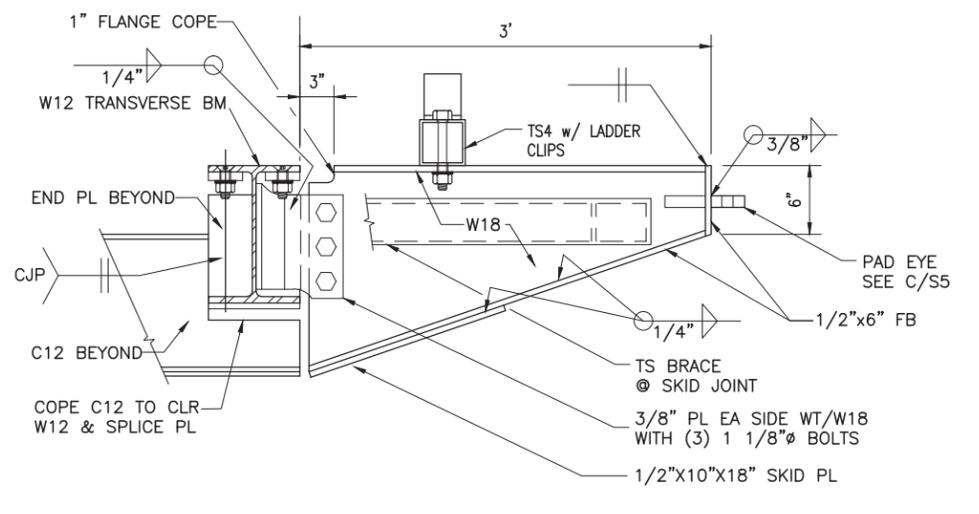
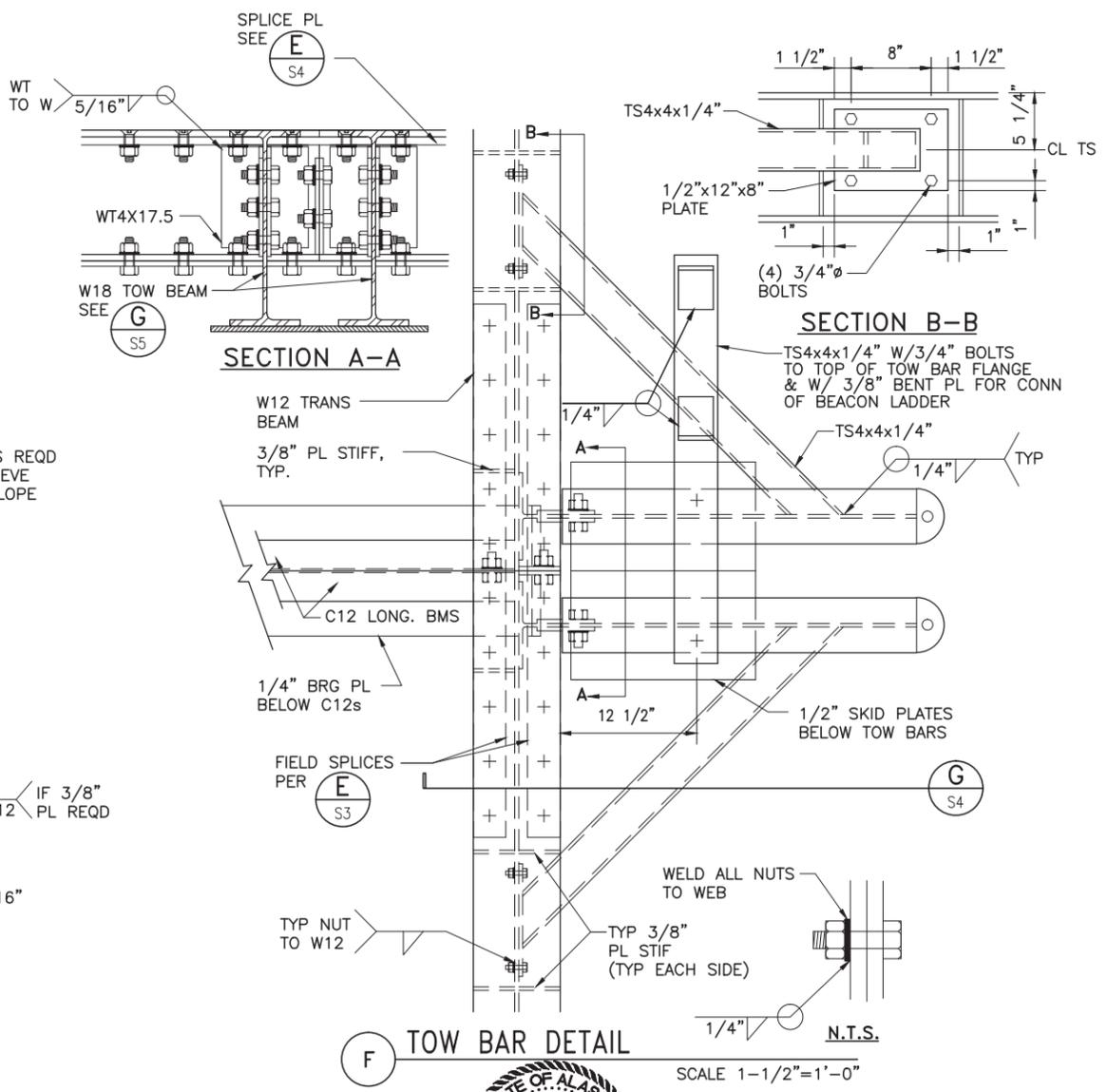
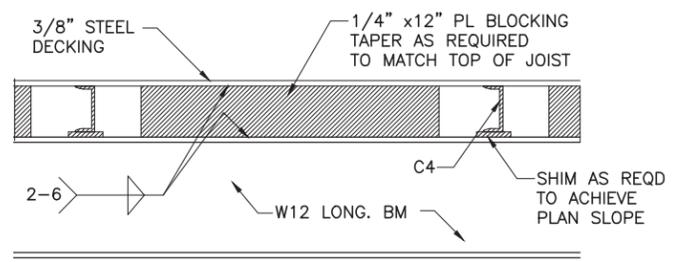
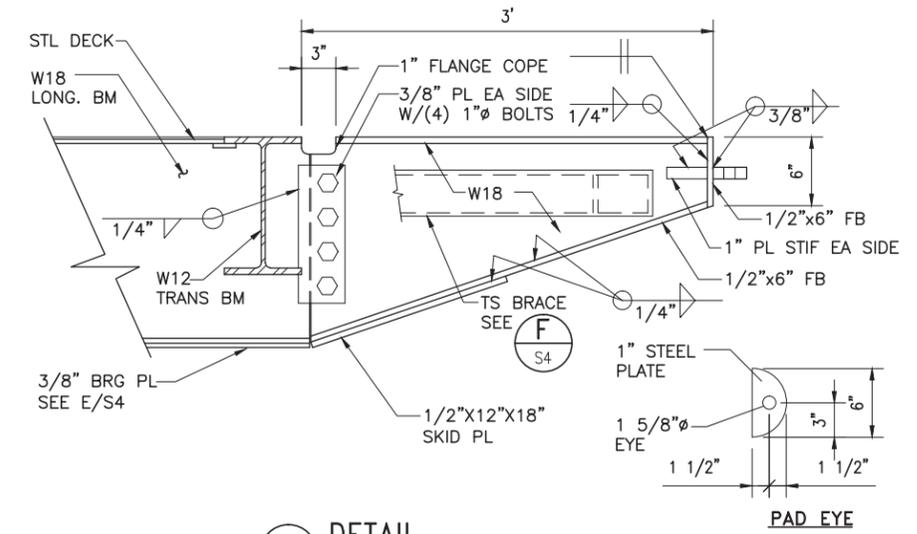
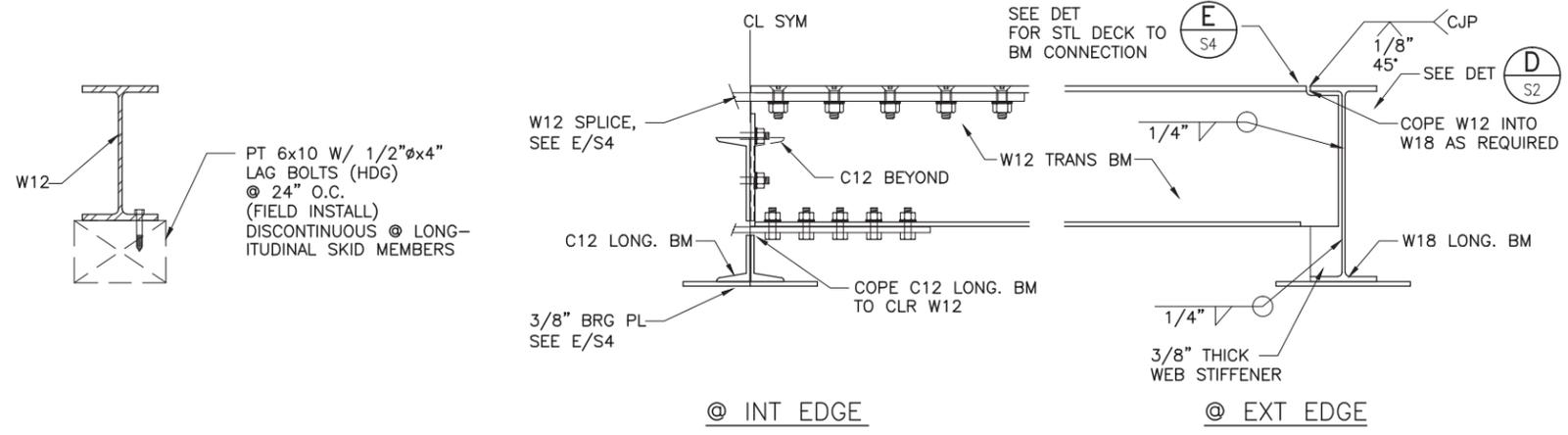
BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

HOOPER BAY AIRPORT  
HOOPER BAY, ALASKA  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP No. 3-02-0126-00X-20XX  
STRUCTURAL DETAILS

DATE: 06/05/2014  
SHEET: S3 OF S5

Date Revised: 6/04/2014, 4:53 PM  
 Layout Name: DETAIL S-4  
 File Path and Name: Z:\Project\1701.05 DOT\_SWPF SREB Term Hooper Bay Airport\Civil\ACAD\1701.05-SB-SKID-S4.dwg  
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 Drawn By: BMD  
 Checked By: RLC



PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.

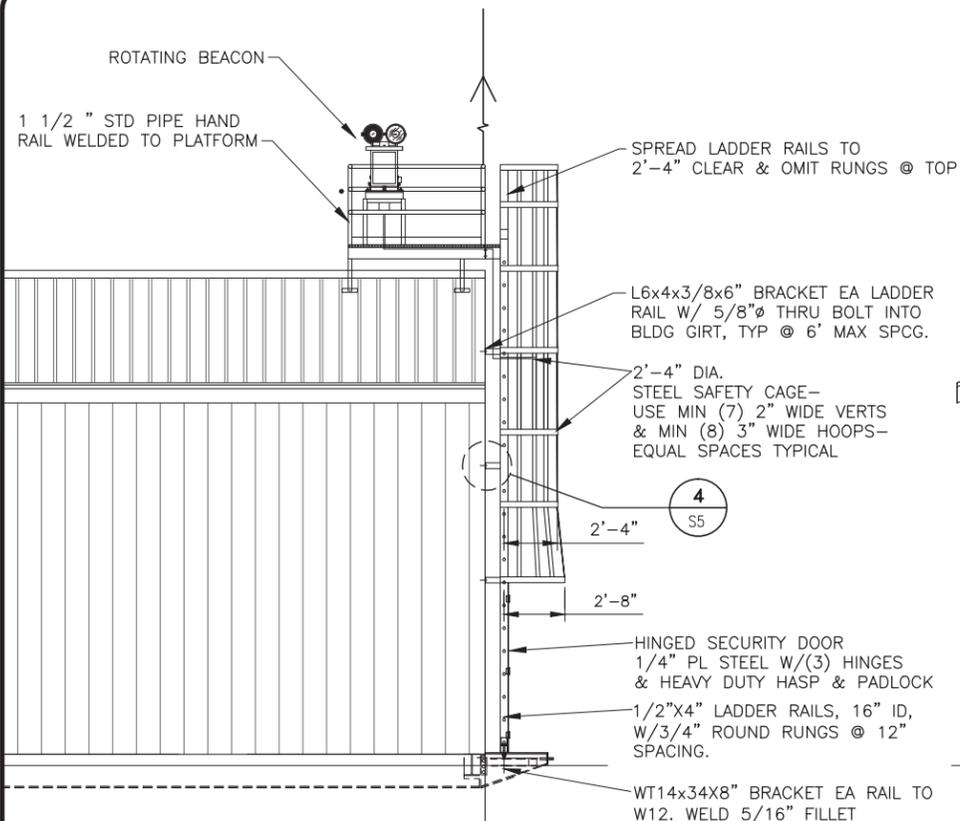
BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

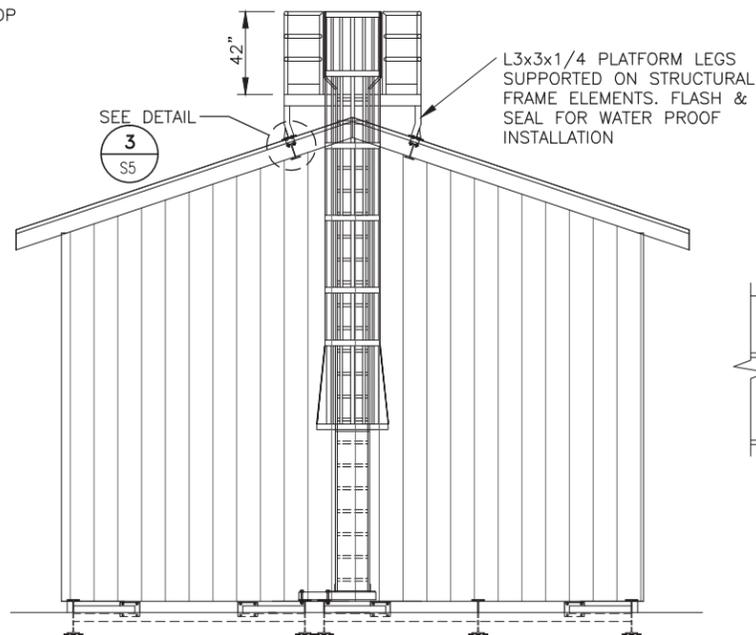
HOOPER BAY AIRPORT  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP No. 3-02-0126-00X-20XX  
STRUCTURAL DETAILS

DATE: 06/05/2014  
SHEET: S4 OF S5

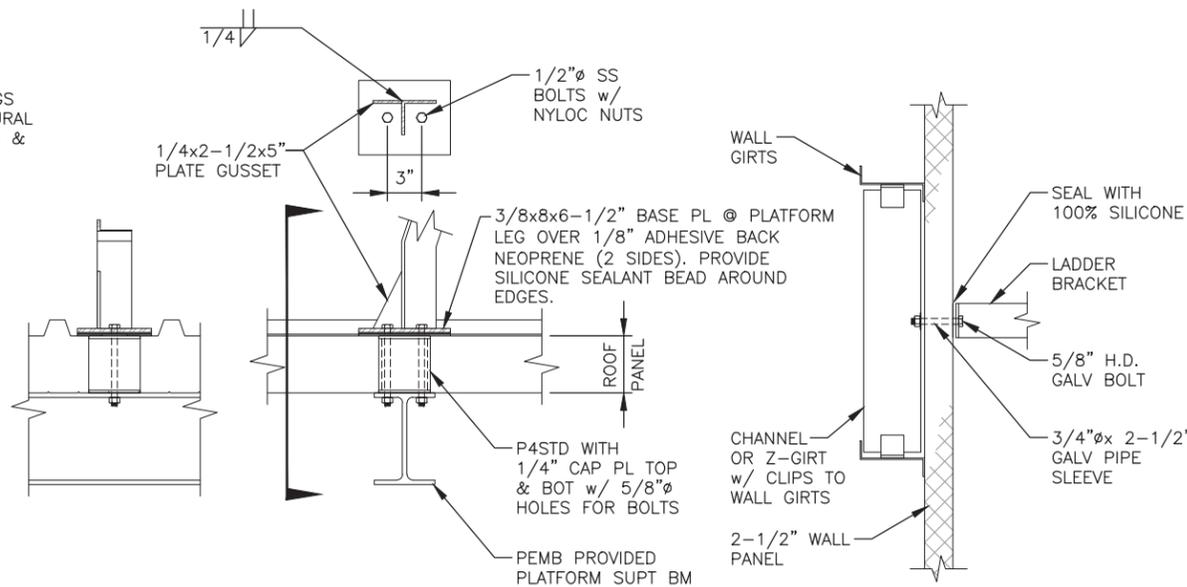
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 Designed By: MCY  
 Drawn By: BWD  
 Checked By: RLC



1 PARTIAL SIDE WALL ELEVATION  
SCALE 1/4"=1'-0"



2 END WALL ELEVATION  
SCALE 1/4"=1'-0"

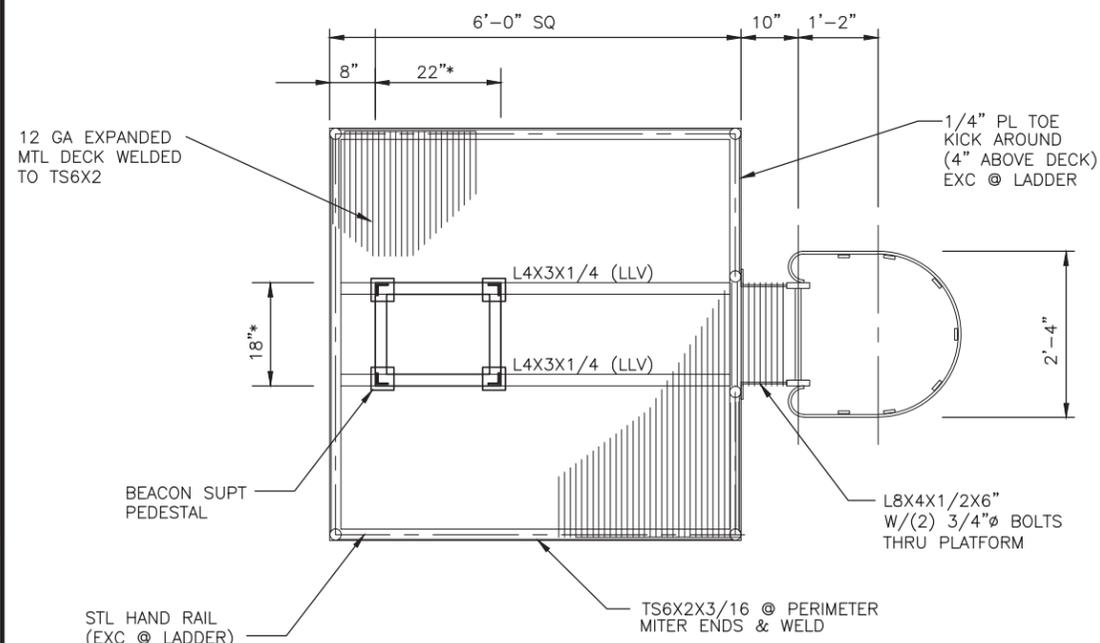


3 PLATFORM CONNECTION DETAIL  
SCALE 1-1/2"=1'-0"

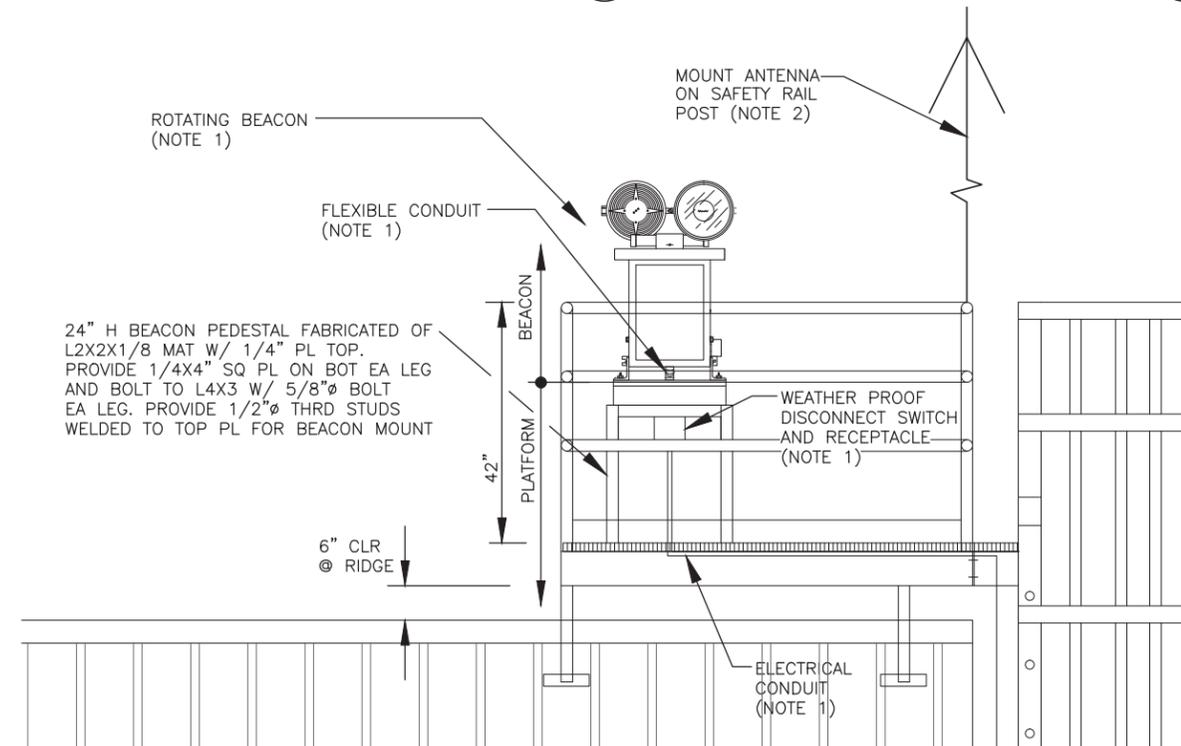
4 TYP LADDER & WALL MOUNT DETAIL  
SCALE 1-1/2"=1'-0"

GENERAL NOTES:

- CONDUIT FOR BEACON WILL BE FASTENED TO THE PLATFORM AND LADDER, AND WILL TERMINATE AT A HANDHOLE FIVE FEET FROM A REAR CORNER OF THE BUILDING. REFER TO AIRFIELD ELECTRICAL DOCUMENTS FOR THE HANDHOLE LOCATION AND FOR SPECIFICATIONS FOR THE BEACON, CONDUIT AND WIRING, AND WEATHERPROOF DISCONNECT SWITCH AND RECEPTACLE.
- CONDUIT FOR THE ANTENNA WILL BE FASTENED TO THE PLATFORM AND LADDER, AND WILL TERMINATE AT A HANDHOLE FIVE FEET FROM A REAR CORNER OF THE BUILDING. REFER TO AIRFIELD ELECTRICAL DOCUMENTS FOR SPECIFICATIONS FOR THE ANTENNA, CONDUIT AND COAXIAL CABLE.
- CODES: ALL WORK SHALL BE IN COMPLIANCE WITH THE 2006 INTERNATIONAL BUILDING CODE. STEEL SHAPES AND PLATES: SHAPES AND PLATES PER ASTM A36, 36KSI MIN YIELD STRENGTH. PIPE PER ASTM A-53 OR A500, 35 KSI MIN YIELD. WELDING: PER AWS D1.1. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS. BOLTS: ASTM A307, HOT DIP GALVANIZED. COATINGS: ALL STEEL COMPONENTS OF THE BEACON PLATFORM & LADDER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION PER ASTM A123 OR A153 AS APPLICABLE. SUBMITTALS: SUBMIT FABRICATION DRAWINGS, WELDER CERTIFICATES, AND MATERIAL CERTS FOR APPROVAL. SPECIAL INSPECTION: PERFORMED BY ENGINEER'S SPECIAL INSPECTOR - 1) ALL WELDS TO RECEIVE VISUAL INSPECTION, AND 2) OBSERVE INSTALLATION OF ADHESIVE ANCHORS.



5 BEACON PLATFORM PLAN  
SCALE 3/4"=1'-0"



6 BEACON PLATFORM VIEW  
SCALE 3/4"=1'-0"



PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.

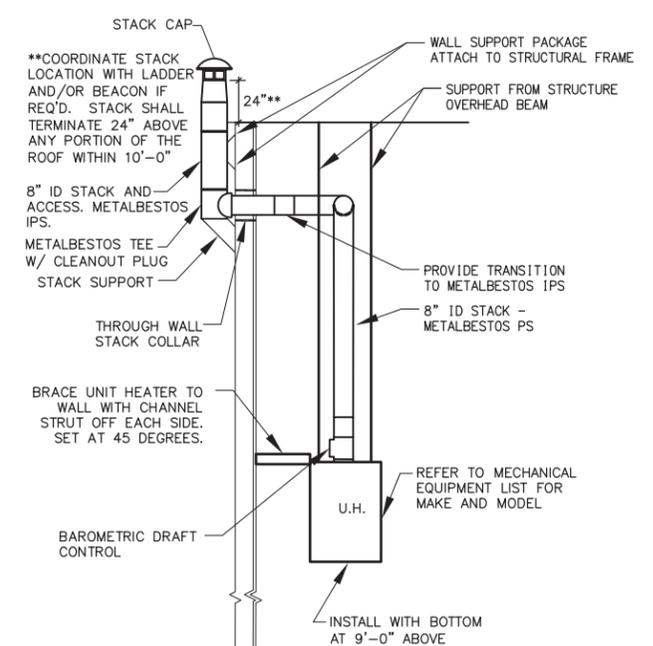
BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

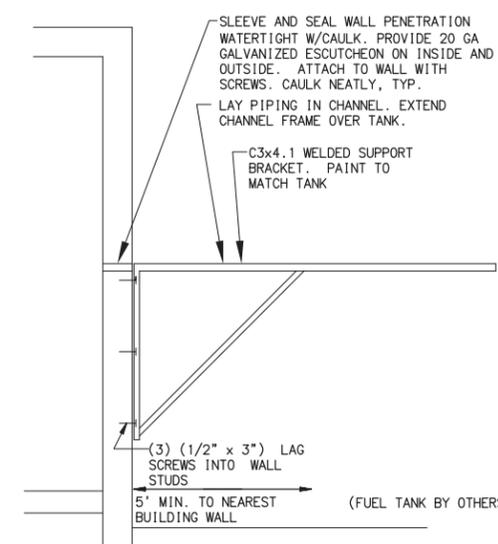
HOOPER BAY AIRPORT  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP No. 3-02-0126-00X-20XX  
STRUCTURAL DETAILS

DATE: 06/05/2014  
SHEET: S5 OF S5

Date Revised: 6/04/2014, 8:44 AM  
 Layout Name: Layout1  
 File Path and Name: Z:\14014HBS - Hooper Bay SREB\M-Working\Drawings\14014\_M1.dwg



**2 UNIT HEATER STACK INSTALLATION**  
NTS

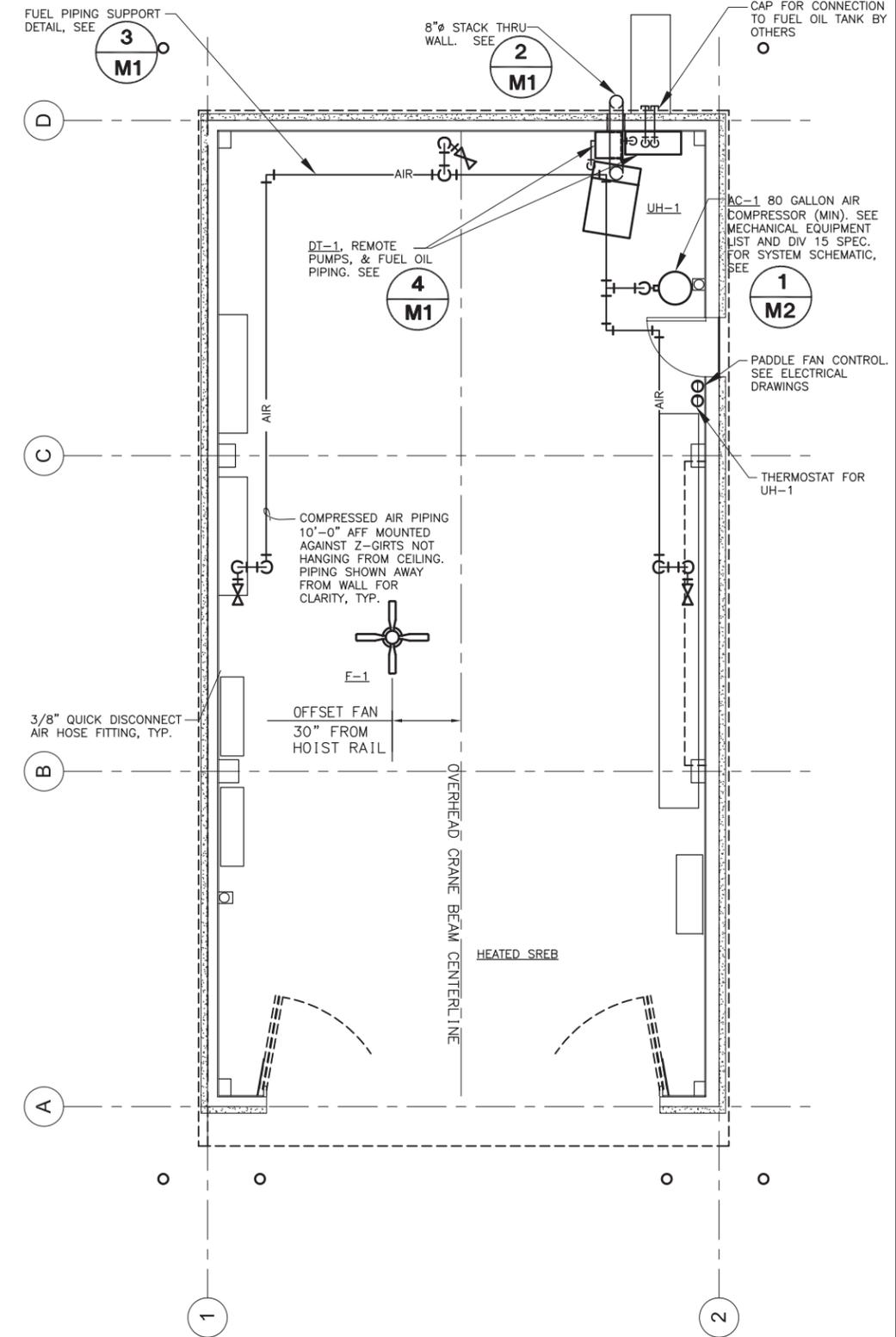


**3 FUEL PIPING SUPPORT BRACKET**  
NTS

MECHANICAL EQUIPMENT LIST	
TAG	DESIGN BASIS PRODUCT
AC-1	AIR COMPRESSOR: INGERSOLL RAND T30-2340-N3-1, 80 GALLON MINIMUM, 9.0 ACFM @ 175 PSI, 3 HP, 1.15 SF, 230V/1PH/60 HZ, CRANKCASE HEATER, LOW OIL LEVEL CUTOUT, AIR FILTER AND PRESSURE REGULATOR, AUTOMATIC CONDENSATE DRAIN W/ HIGH MOUNT ELECTRIC CONDENSATE DRAIN EDV-2000. HOSE REEL: AUTO RETRACTABLE REELCRAFT MODEL NO. 22862 LOW PRESSURE, 50 FOOT, 3/8"
UH-1	UNIT HEATER: MODINE POR185, #1 DIESEL/FUEL OIL, 1.65 GPH, 231 MBTUH INPUT/184 MBTUH OUTPUT, 3200 CFM @ 56 FOOT THROW, 1/4 HP, 1100 RPM, 115V/1PH/60 HZ, T-STAT: HONEYWELL T631C1103 W/ LOCKABLE COVER.
F-1	PADDLE FAN: GRAINGER/DAYTON MODEL #5NP22, 36 INCH, 12,500 CFM @ 395 RPM, 78VA, 120V/1PH/60 HZ, GRAINGER DAYTON MODEL #1AGU6 SPEED SWITCH
DT-1	DAY TANK: SIMPLEX SST SERIES W/ PCB 1 CONTROLS, WALL MOUNT, 10 GALLON CAPACITY, GRAVITY FEED TO UNIT HEATER, DUPLEX REMOTE FUEL PUMPS - 1/3 HP MOTOR, 115V/60HZ/1PH, 063 VENT CAP

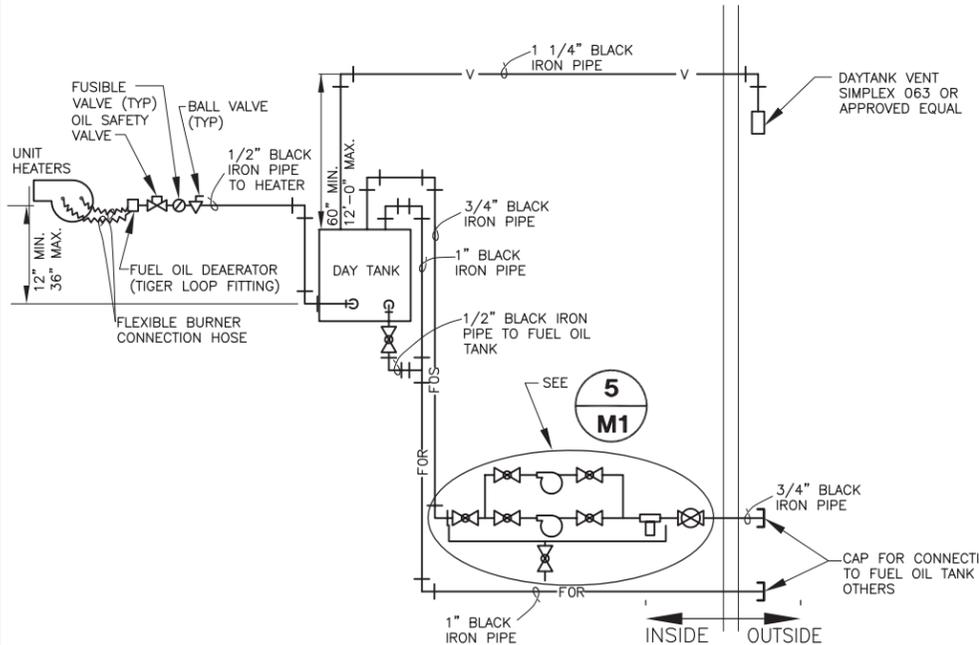
NOTE: FURNISH AND INSTALL MAKES AND MODELS CITED HERE OR IN THE SPECIFICATIONS OR APPROVED EQUALS

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
	QUICK DISCONNECT AIR VALVE
	ISOLATION VALVE
	FUSIBLE VALVE
	FUEL PIPING - SUPPLY & RETURN
	AIR COMPRESSOR LINE - BLACK IRON
	UNIT HEATER
	OIL SAFETY VALVE

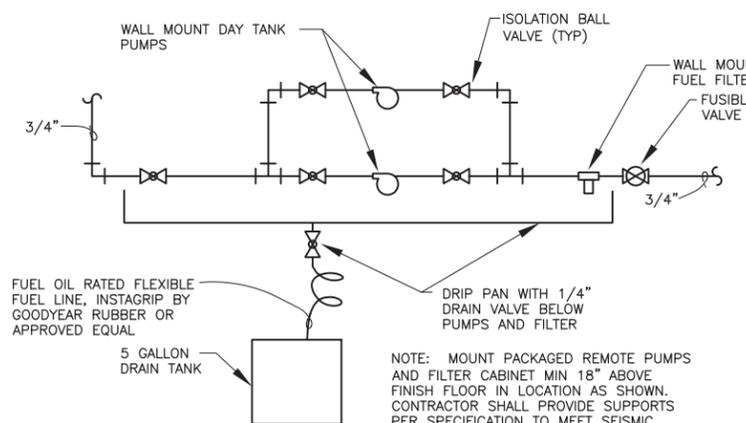


**1 FUEL PIPING AND HEATING FLOOR PLAN**  
1/8" = 1'-0"

NOTE: WORK SHOWN IS FOR HEATED SREB ONLY.

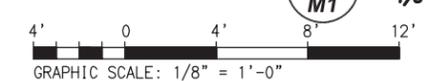


**4 UNIT HEATER FUEL OIL PIPE ONE-LINE**  
NTS



**5 DAY TANK PUMP ASSEMBLY DETAIL**  
NTS

NOTE: MOUNT PACKAGED REMOTE PUMPS AND FILTER CABINET MIN 18" ABOVE FINISH FLOOR IN LOCATION AS SHOWN. CONTRACTOR SHALL PROVIDE SUPPORTS PER SPECIFICATION TO MEET SEISMIC REQUIREMENTS.



PRE-PS&E

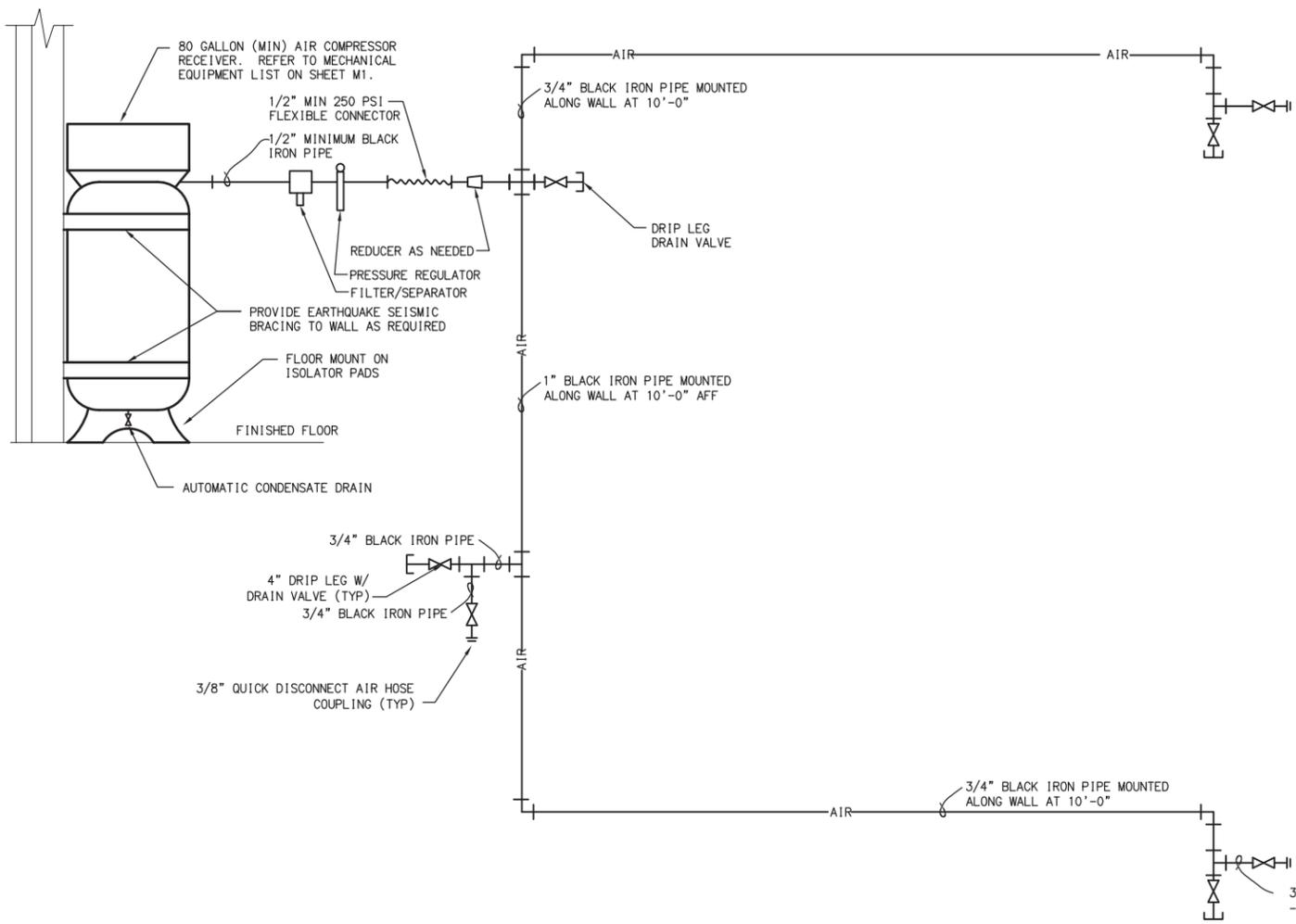
BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
CENTRAL REGION

HOOPER BAY AIRPORT  
HOOPER BAY, ALASKA  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP 3-02-0126-00X-20XX  
MECHANICAL PLAN AND DETAILS

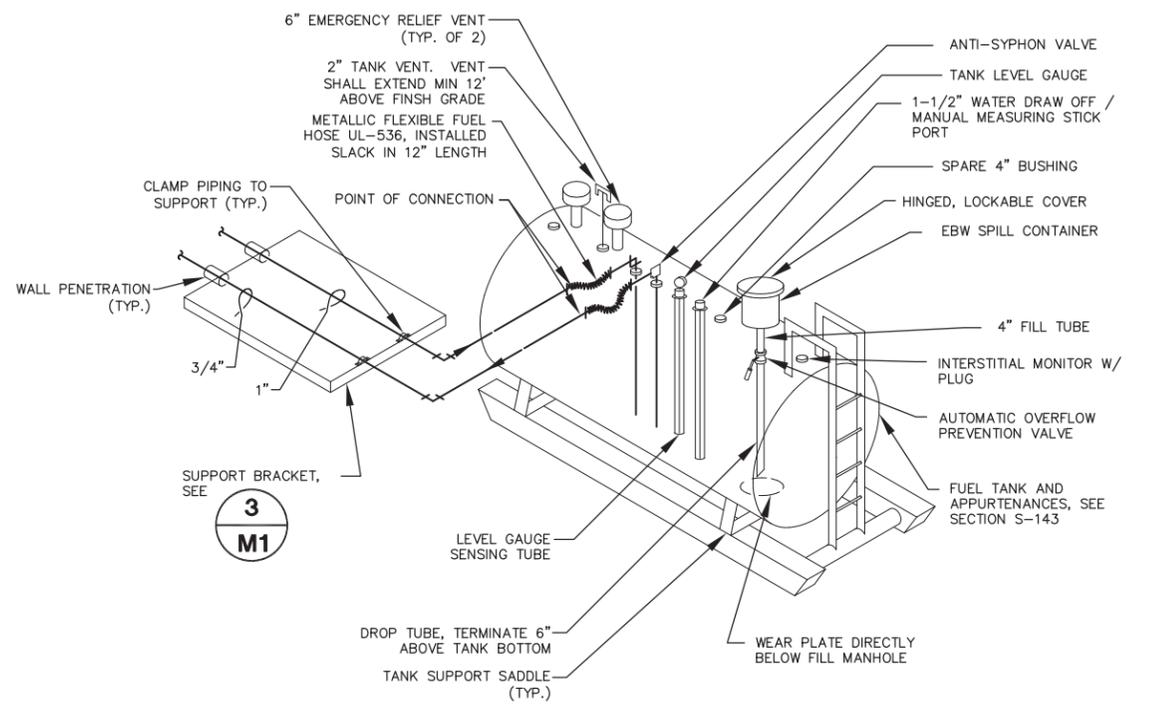
DATE: 6/5/2014  
SHEET: M1 OF X  
AS-BUILT SHEET:

Date Revised: 6/04/2014, 8:44 AM  
 Layout Name: Level1  
 File Path and Name: Z:\14014HBS - Hooper Bay SREBM-Working\Drawings\14014\_M2.dwg  
 Designed By:  
 Drawn By:  
 Checked By:



**1**  
**M2** **COMPRESSED AIR SYSTEM PIPING SCHEMATIC**  
 NTS

NOTE: DETACHABLE HOSE REEL (SEE MECHANICAL EQUIPMENT LIST ON SHEET M1) TO BE UTILIZED AT ANY OUTLET.



**2**  
**M2** **FUEL OIL TANK DETAIL**  
 NTS

PLAN PREPARED BY MBA CONSULTING ENGINEERS, INC.



PRE-PS&E

BY	DATE	REVISION

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC FACILITIES  
 CENTRAL REGION

HOOPER BAY AIRPORT  
 HOOPER BAY, ALASKA  
 SNOW REMOVAL EQUIPMENT BUILDING  
 PROJECT No. 57419  
 AIP 3-02-0126-00X-20XX  
 COMPRESSED AIR SCHEMATIC

DATE: 6/5/2014  
 SHEET: **M2** OF **X**  
 AS-BUILT SHEET:

Date Revised: 6/04/2014, 8:37 AM  
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 File Path and Name: Z:\14014HBS - Hooper Bay SREB\Drawings\14014\_E1.dwg

**PANEL: C**

PROJECT: SINGLE BAY SREB  
 LOCATION: LUGS  SURF  SHNT TRP  ISO GRND BAR   
 CB  FLSH  SBFD LGS  SOLID NEUTRAL

120/240 VOLTS		1 PH		3 WIRE		200 AMP		10,000 (1) AIC	
CIRCUIT DESCRIPTION	KVA	AMP	CKT	CKT	AMP	KVA	CIRCUIT DESCRIPTION		
PANEL G	4.83	50/	1	2	30/1	2.88	NEMA 5-30 RECEPTACLE		
50 AMP 240 VOLT RECEPTACLE	9.6	50/	5	6	/2		SPARE		
NEMA 6-50R		/2	7	8	30/		SPARE		
NEMA 5-20 RECEPTACLES	0.72	20/1	9	10	/2				
NEMA 5-20 RECEPTACLES	0.54	20/1	11	12	20/1	0.18	NEMA 5-20 RECEPT.- COMPRESSOR		
AIR COMPRESSOR - 3 HP	4.78	50/	13	14	20/1		SPARE		
SPARE		/2	15	16	20/1		SPARE		
SPARE		20/1	17	18	20/1		SPARE		
SPARE		20/1	19	20	20/1		SPARE		
SPACE			21	22	20/1		SPARE		
SPACE			23	24	20/		SPARE		
SPACE			25	26	/2				
SPACE			27	28	20/1		SPARE		
SPACE			29	30	20/1		SPARE		
CONNECTED LOAD:	23.53 KVA	98.0 A	REMARKS:						
DEMAND LOAD:	23.53 KVA	98.0 A	(1) FAULT CURRENT BASED ON 50 KVA 1.0% Z TRANSFORMER						
DEMAND + CONT.	23.92 KVA	99.7 A	2. PROVIDE SEPARATE NEUTRAL AND EQUIPMENT GROUND BARS						
DATE:			3. PROVIDE 200/2 MAIN CB						
REV:									

**PANEL: G**

PROJECT: SINGLE BAY SREB  
 LOCATION: LUGS  SURF  SHNT TRP  ISO GRND BAR   
 CB  FLSH  SBFD LGS  SOLID NEUTRAL

120/240 VOLTS		1 PH		3 WIRE		100 AMP		10,000 AIC	
CIRCUIT DESCRIPTION	KVA	AMP	CKT	CKT	AMP	KVA	CIRCUIT DESCRIPTION		
LIGHTING	1.26	20/1	1	2	30/		SPARE		
LIGHTING	0.29	20/1	3	4	/2				
SPARE		15/1	5	6	20/		SPARE		
PADDLE FAN & UNIT HEATER	0.75	15/1	7	8	/2				
1/3 HP FUEL PUMP AND DISPENSER	0.83	20/1	9	10	15/1	0.8	DAY TANK PUMP		
FUEL PUMP STOP/DISCONNECT	0.1	15/1	11	12	15/1	0.8	DAY TANK PUMP		
SPACE			13	14			SPACE		
SPACE			15	16			SPACE		
CONNECTED LOAD:	4.83 KVA	20.1 A	REMARKS:						
DEMAND LOAD:	4.83 KVA	20.1 A	1. PROVIDE SEPARATE NEUTRAL AND EQUIPMENT GROUND BARS						
DEMAND + CONT.	5.22 KVA	21.8 A	2. VERIFY CB REQUIREMENTS FOR FUEL DISPENSER						
DATE:									
REV:									

**NOTES:**

- (1) PROVIDE MULTIPOLE CIRCUIT BREAKERS OR CIRCUIT BREAKERS WITH HANDLE TIES, AS REQUIRED FOR COMPLIANCE WITH NEC 210.4(B), WHEREVER FIELD WIRING RESULTS IN MULTIWIRED BRANCH CIRCUITS.

LEGEND				
FIXTURE	DESCRIPTION	MOUNTING HEIGHT	LAMP SIZE/TYPE	REMARKS
A/150	CEILING MOUNT WITH POWER HOOK AND SAFETY CHAIN, 12,000 LUMENS, WIDE DISTRIBUTION, NO SHIELDING, 120 VOLT, 70 CRI, 4000K CCT. FIXTURE STANDARD FINISH TO MATCH BUILDING FINISH AS CLOSELY AS POSSIBLE. SUITABLE FOR -40F, DAMP LOCATION LISTED. LITHONIA IBL-12L-WD-LP7400LC OR APPROVED EQUAL.	16'-0"	LED	
B/75	WALL MOUNT AREA LIGHT, POLYCARBONATE REFRACTOR, 120-VOLT, 5100K CCT, 5337 LUMENS. PROVIDE INTEGRAL PHOTO-ELECTRIC CELL WHERE NOTED ON PLANS. FIXTURE STANDARD FINISH TO MATCH BUILDING FINISH AS CLOSELY AS POSSIBLE. UL LISTED FOR WET LOCATION. HUBBELL PVL3-30LU-5K-BZ OR APPROVED EQUAL.	2 FEET BELOW ROOF STRUCTURE	LED	
E/60	EMERGENCY EGRESS LIGHT, SEALED LEAD-CALCIUM BATTERY. 12V, -40°C RATING. INDUSTRIAL LIGHTING UNIT LITHONIA #INDX1236 W 120 H1212 ULT, OR SURVIVE-ALL SV SERIES CATALOG NO. W-12SV36M-2-MK-D-CW4, OR APPROVED EQUAL.	8'-0"	INCLUDED	
1	NOTE SYMBOL - NUMBER INDICATED			
\$	SINGLE POLE SWITCH, LIGHTED TOGGLE (LIGHT ON WITH LOAD OFF)	48"		
\$3	3-WAY SWITCH, LIGHTED TOGGLE (LIGHT ON WITH LOAD OFF)	48"		
\$T	SINGLE POLE MANUAL MOTOR STARTER SWITCH W/THERMAL OVERLOAD ELEMENT	48"		
\$WP	WEATHERPROOF SWITCH	48"		
\$HOA & SP	DOUBLE POLE HAND-OFF-AUTO SWITCH WITH SPEED CONTROL	48"		
WP	WEATHERPROOF JUNCTION BOX			
CB	CIRCUIT BREAKER PANEL, SEE PANEL SCHEDULE	6'-6" TO TOP		
CB	CIRCUIT BREAKER (CB)			
EC	ELECTRICAL CIRCUIT			
C-#	HOME RUN TO CIRCUIT PANEL WITH PANEL AND BREAKER NUMBER			
⊥	GROUND ELECTRODE SYSTEM CONNECTION			
⊕	DUPLEX OUTLET, GFCI, NEMA 5-20R	48"		
⊕A	RECEPTACLE, 30 AMP, 120V, NEMA 5-30R.	48"		PROVIDE MATCHING ANGLE PLUG
⊕B	RECEPTACLE, 50 AMP, 240V, NEMA 6-50R	48"		PROVIDE MATCHING ANGLE PLUG
⊕P	DISCONNECT SWITCH, 60A, 2P, S/N, 240V	5'-6"		
F	FAN JUNCTION BOX			
S	MOTOR WITH HORSEPOWER INDICATED			
G	GENERATOR INLET, NEMA L14-30 IN NEMA-3R ENCLOSURE	48"		
— UGE —	UNDERGROUND ELECTRICAL			
— — —	LOW VOLTAGE CKT.			
RSC	RIGID STEEL CONDUIT			
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT			
BCG	BARE COPPER GROUNDING CONDUCTOR			
AFF	ABOVE FINISHED FLOOR			

**SREB GENERAL NOTES:**

- THE WORK SHOWN ON THIS DRAWING IS APPLICABLE TO THE HEATED BUILDING, SREB #1.
- THE WORK SHOWN ON THIS DRAWING IS APPLICABLE TO THE UNHEATED BUILDING, SREB #2, EXCEPT FOR THE FOLLOWING:
  - THE FOLLOWING CIRCUIT BREAKERS ARE NOT REQUIRED IN PANEL C (CONVERT THEM TO "SPARE"):
    - AIR COMPRESSOR-3 HP (C-13,15).
    - NEMA 5-20 RECEPT. - COMPRESSOR (C-12)
    - PANEL DEMAND + CONT. = 15.7 KVA, 65 AMPS @ 120/240V.
  - THE FOLLOWING CIRCUIT BREAKERS ARE NOT REQUIRED IN PANEL G (CONVERT THEM TO "SPARE"):
    - PADDLE FAN & UNIT HEATER (G-7).
    - DAY TANK PUMP (G-10,12).
    - FUEL PUMP AND DISPENSER (G-9).
    - FUEL PUMP STOP/DISCONNECT (G-11).
    - PANEL DEMAND + CONT. = 1.9 KVA, 8.1 AMPS @ 120/240V.



**PRE-PS&E**

BY	DATE	REVISION

**STATE OF ALASKA**  
**DEPARTMENT OF TRANSPORTATION**  
**AND PUBLIC FACILITIES**  
**CENTRAL REGION**

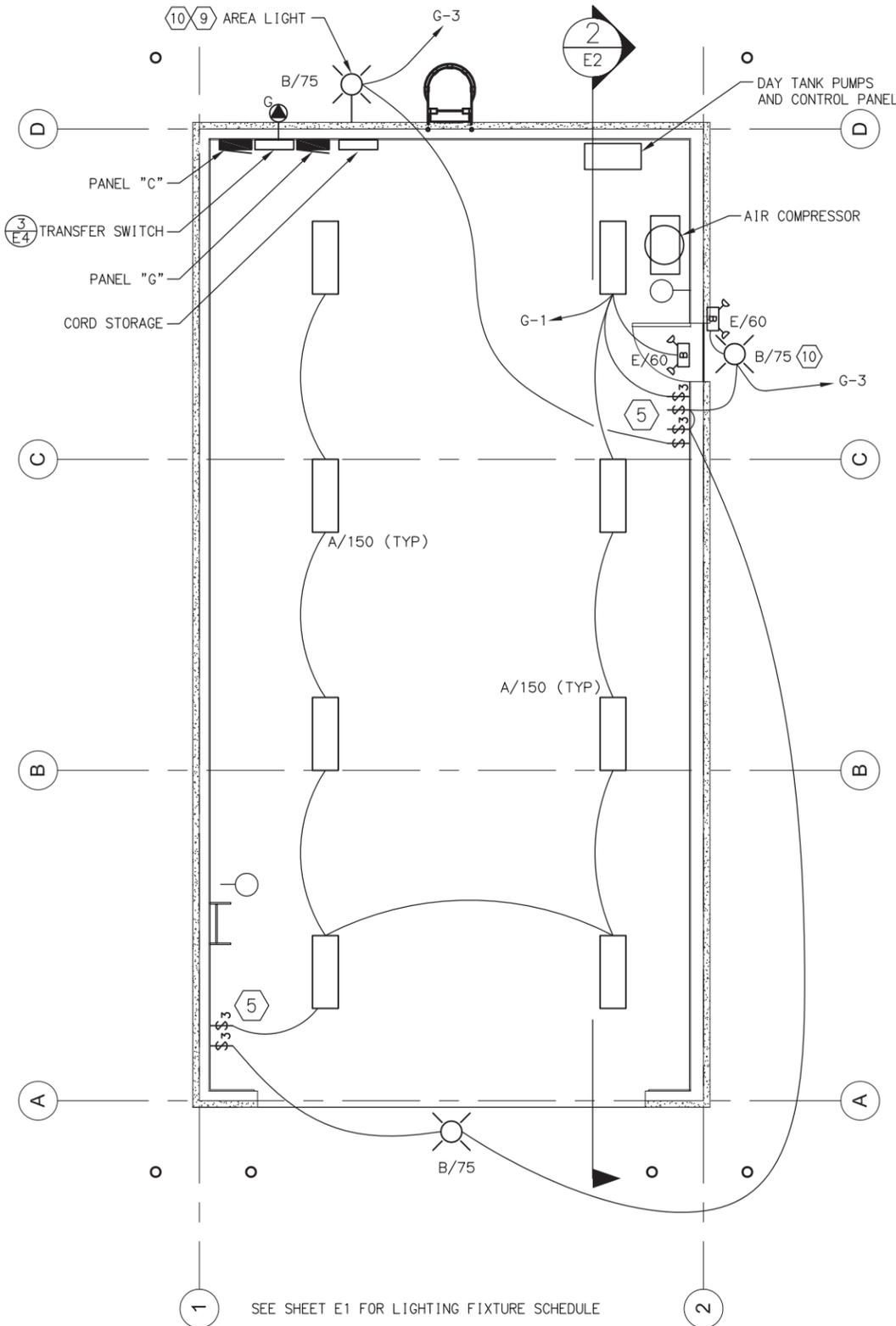
**HOOPER BAY AIRPORT**  
 HOOPER BAY, ALASKA  
 SNOW REMOVAL EQUIPMENT BUILDING  
 PROJECT No. 57419  
 AIP 3-02-0126-00X-20XX  
 ELECTRICAL LEGEND AND SCHEDULES

DATE: 6/5/2014  
 SHEET: E1 OF X  
 AS-BUILT SHEET:

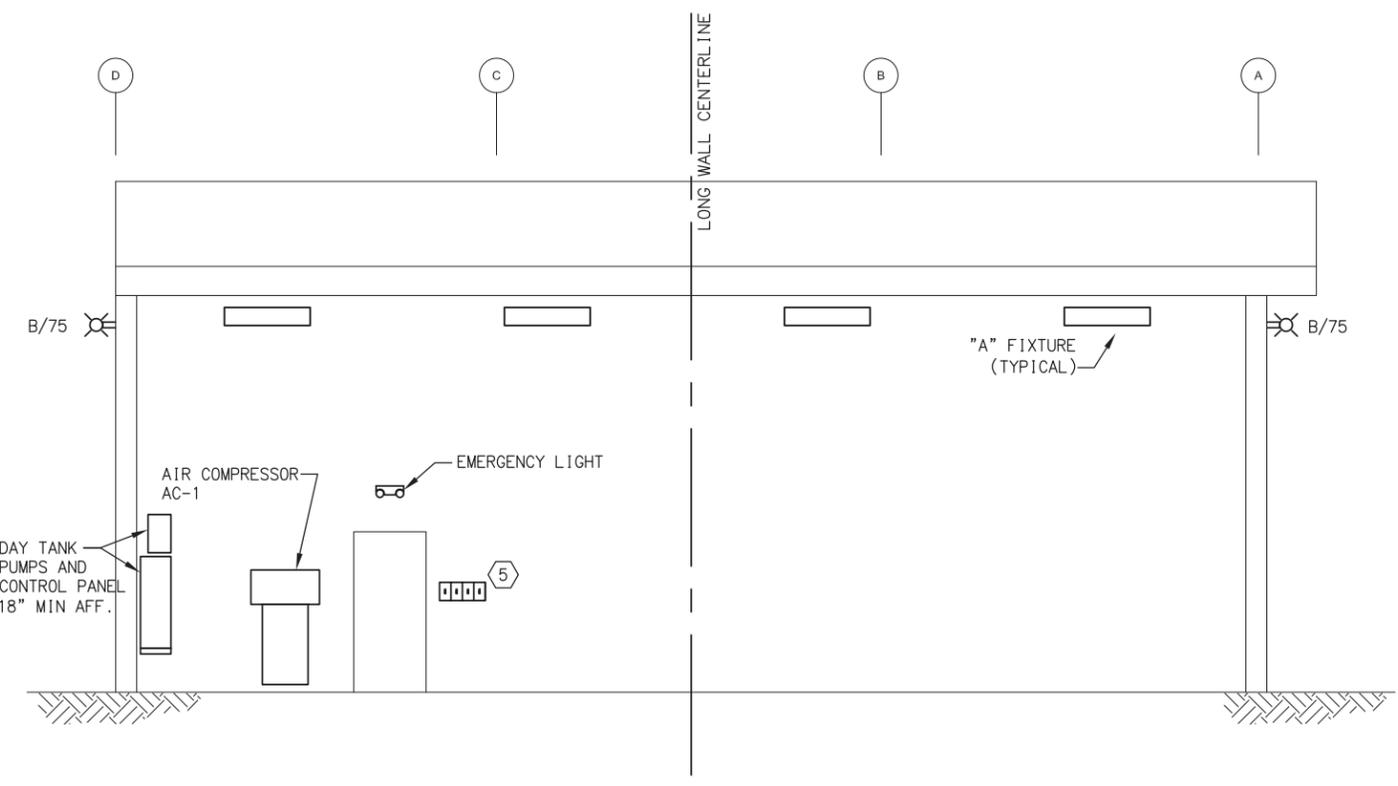
**ELECTRICAL NOTES - SHEETS E2 & E3**

- 1 120-VOLT POWER FOR COMPRESSOR CRANKCASE HEATER AND AUTOMATIC CONDENSATE DRAIN CONTROL TO BE CONNECTED TO NEMA-5-20 RECEPTACLE NEXT TO COMPRESSOR.
- 2 ALL CONDUITS IN THE BUILDING, PASSING THROUGH THE ZONE FROM THE FLOOR TO 1.5' ABOVE THE FLOOR, SHALL BE RMC AND SHALL HAVE A SEAL FITTING LOCATED 18" MINIMUM ABOVE THE FLOOR. THE BUILDING ELECTRICAL INSTALLATION SHALL COMPLY WITH NEC ARTICLE 511 "COMMERCIAL GARAGES, REPAIR AND STORAGE".
- 3 NOT USED.
- 4 STEEL FLOOR IS TO BE BONDED TO THE GROUNDING ELECTRODE SYSTEM WITH A #2 AWG CONDUCTOR AT THE BUILDING DISCONNECT.
- 5 SWITCHES FOR LIGHT FIXTURES-A/150 & B/75 TO HAVE LOCATOR LIGHTS IN TOGGLE.
- 6 FOR ALL EXTERIOR WIRING AND INTERIOR WIRING BELOW 10 FT ABOVE FINISH FLOOR, USE RIGID STEEL CONDUIT. IMC AND EMT CONDUIT MAY BE USED 10 FT A.F.F. WITHIN THE BUILDING ENVELOPE.
- 7 ROOF MOUNTED BEACON, BY OTHERS. SEE ALSO STRUCTURAL DRAWINGS.
- 8 RADIO RECEIVER/CONTROLLER ANTENNA, BY OTHERS. SEE ALSO STRUCTURAL DRAWINGS.
- 9 AIM FIXTURE TO ILLUMINATE THE FUEL DISPENSING AREA AND ELECTRICAL EQUIPMENT BUILDING. LOCATE TO AVOID CONFLICT WITH UNIT HEATER EXHAUST, BEACON LADDER, AND OTHER ITEMS.
- 10 MOUNT 2 FEET BELOW ROOF STRUCTURE. PROVIDE WITH MOTION SENSOR (WATTSTOPPER EW-200-120-G OR APPROVED EQUAL) AND INTEGRAL PHOTOCCELL. SEE DETAIL 4/E4 FOR CONTROL DIAGRAM.
11. PROVIDE SLACK LOOP ADEQUATE TO ACCOMMODATE MOVEMENT OF 12 INCHES IN ANY DIRECTION WHEN TRANSITIONING TO UNDERGROUND CONDUIT.
12. PENETRATIONS THROUGH EXTERIOR WALL SHALL BE BELOW SERVED EQUIPMENT.

Date Revised: 6/04/2014, 8:37 AM  
 Layout Name: Layout1  
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 Designed By:  
 Drawn By:  
 Checked By:

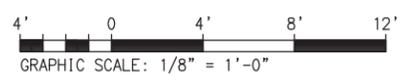


**1 LIGHTING PLAN**  
1/8" = 1'-0"



**2 INTERIOR ELEVATION**  
1/8" = 1'-0"

**SREB GENERAL NOTES:**  
 1. THE WORK SHOWN ON THIS DRAWING IS APPLICABLE TO THE HEATED BUILDING, SREB #1 AND TO THE UNHEATED BUILDING, SREB #2.



**PRE-PS&E**

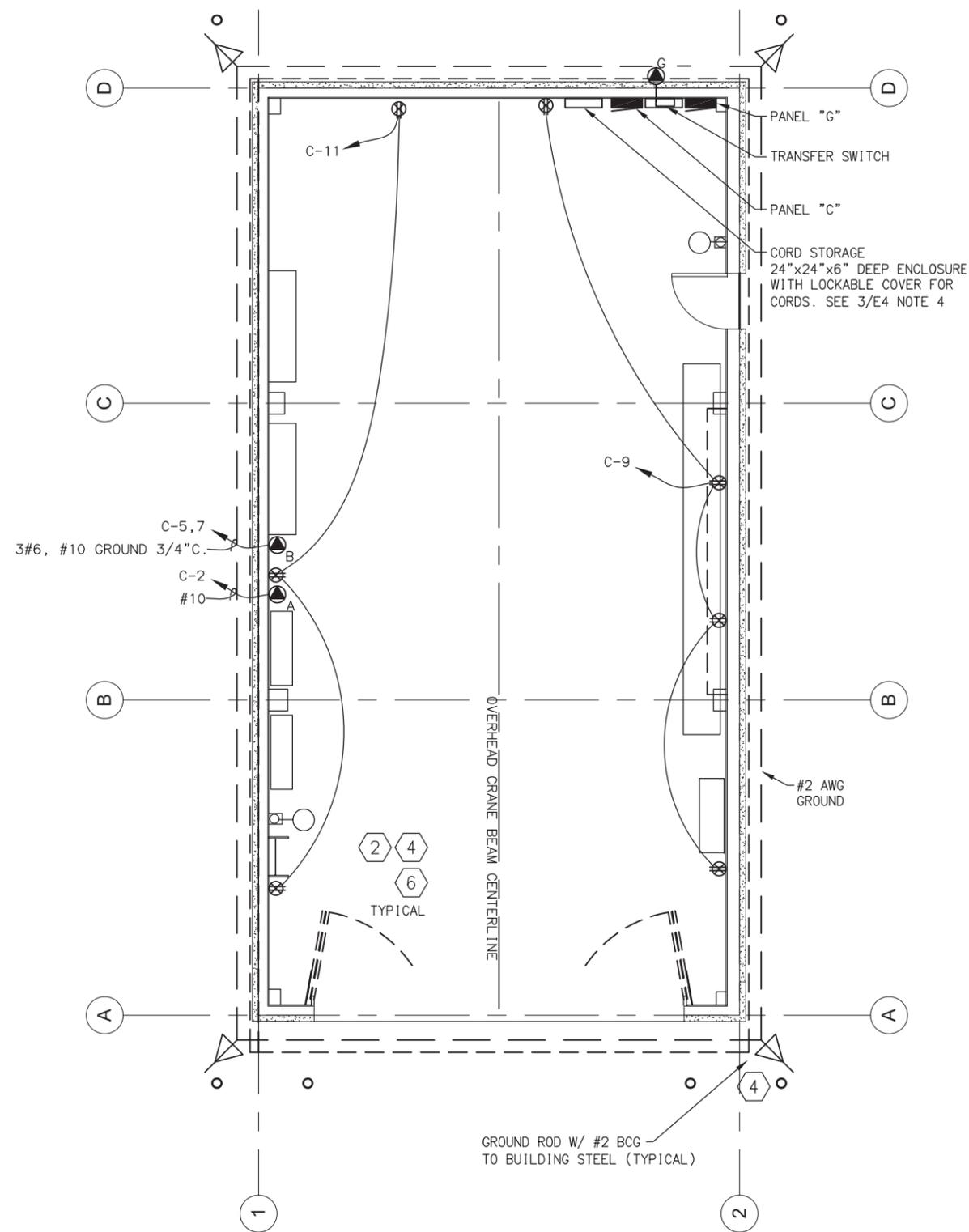
BY	DATE	REVISION

**STATE OF ALASKA**  
**DEPARTMENT OF TRANSPORTATION**  
**AND PUBLIC FACILITIES**  
**CENTRAL REGION**

**HOOPER BAY AIRPORT**  
 HOOPER BAY, ALASKA  
 SNOW REMOVAL EQUIPMENT BUILDING  
 PROJECT No. 57419  
 AIP 3-02-0126-00X-20XX  
 ELECTRICAL LIGHTING PLAN

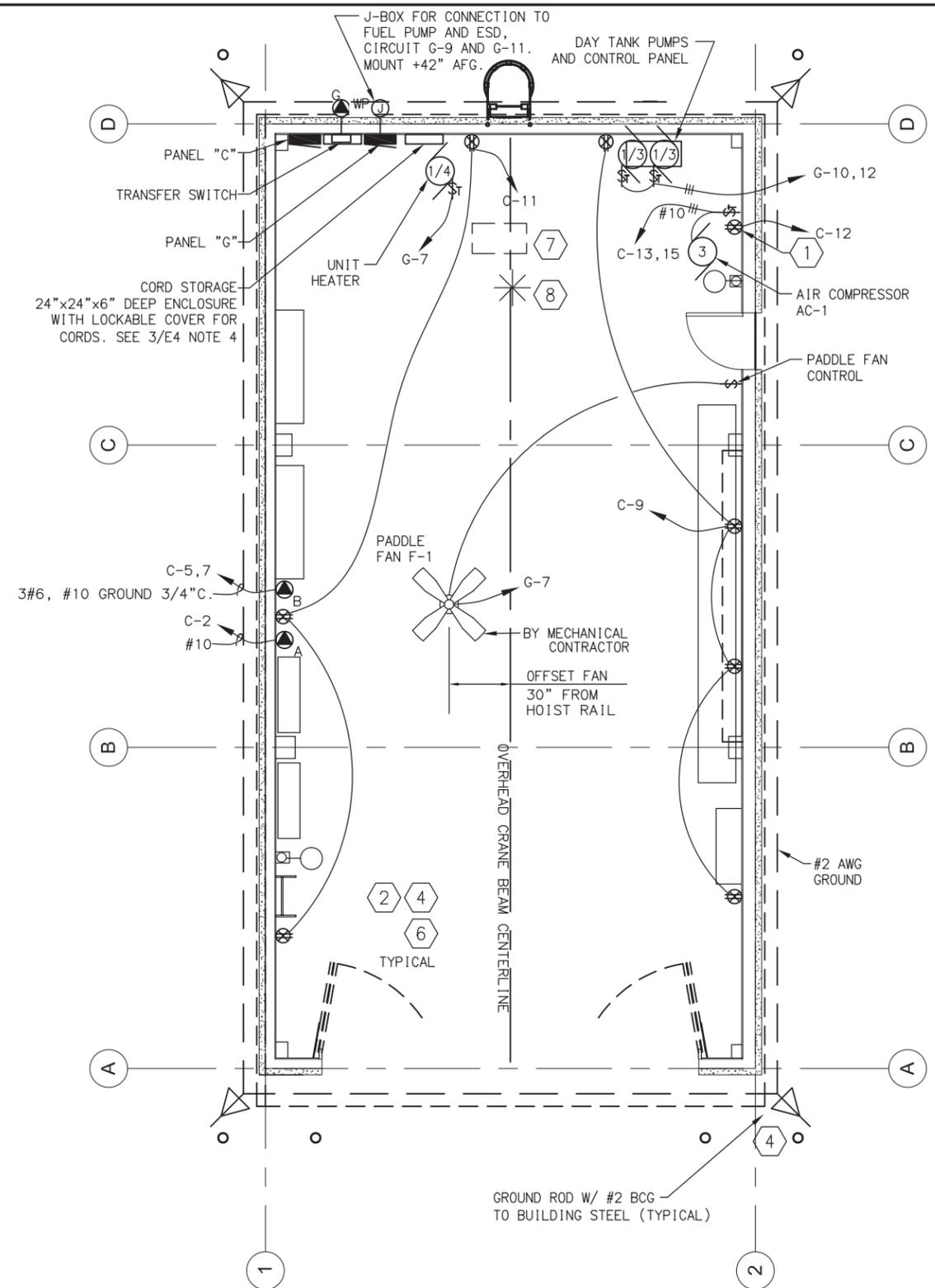
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 SHEET: **E2** OF **X**  
 AS-BUILT SHEET:

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 Designed By:  
 Drawn By:  
 Checked By:



**1**  
**E3** **POWER PLAN - UNHEATED SREB (SREB #2)**  
 1/8" = 1'-0"

- NOTES:
- SEE ELECTRICAL NOTES FOR THIS DETAIL ON SHEET E2.
  - REFER TO AIRPORT LIGHTING SHEETS FOR METER PANEL LOCATION AND DETAIL.



**2**  
**E3** **POWER PLAN - HEATED SREB (SREB #1)**  
 1/8" = 1'-0"

- NOTES:
- SEE ELECTRICAL NOTES FOR THIS DETAIL ON SHEET E2.
  - REFER TO AIRPORT LIGHTING SHEETS FOR METER PANEL LOCATION AND DETAIL.

PLAN PREPARED BY MBA CONSULTING ENGINEERS, INC.

PRE-PS&E

BY	DATE	REVISION

**STATE OF ALASKA**  
**DEPARTMENT OF TRANSPORTATION**  
**AND PUBLIC FACILITIES**  
**CENTRAL REGION**

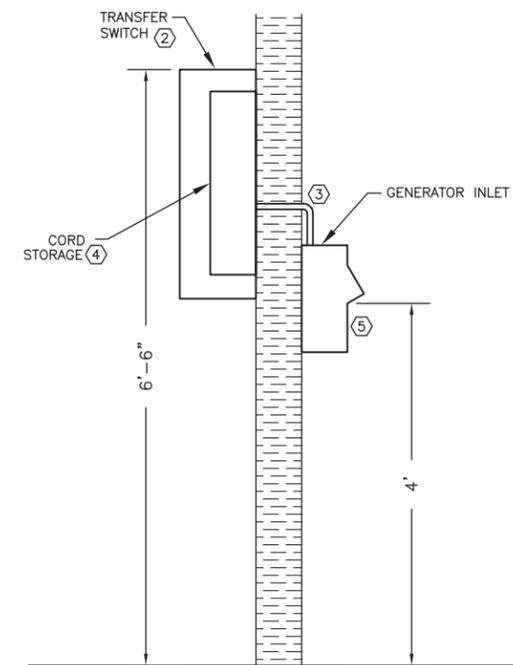
**HOOPER BAY AIRPORT**  
 HOOPER BAY, ALASKA  
 SNOW REMOVAL EQUIPMENT BUILDING  
 PROJECT No. 57419  
 AIP 3-02-0126-00X-20XX  
 ELECTRICAL POWER PLAN & DETAILS

DATE: 6/5/2014  
 SHEET: **E3** OF **X**  
 AS-BUILT SHEET:

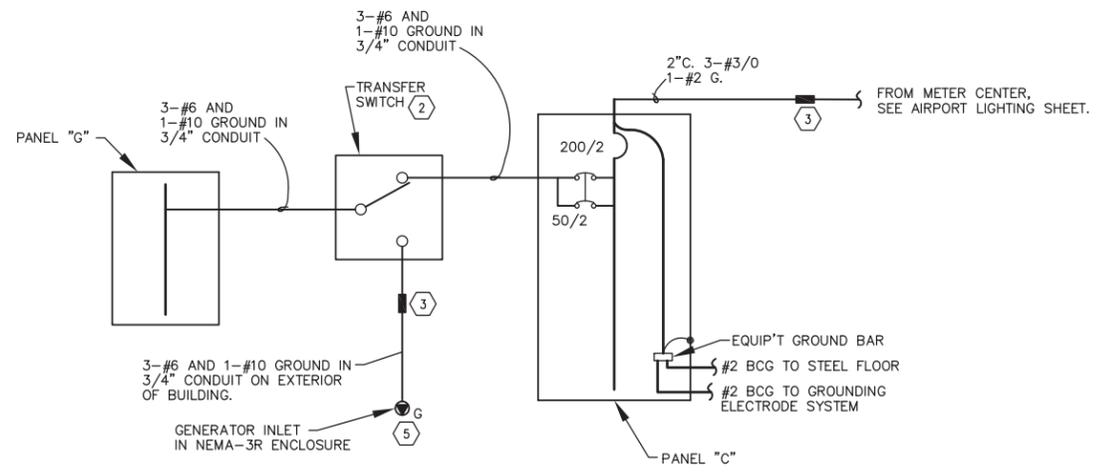
Date Revised: 6/04/2014, 8:36 AM  
 Layout Name: Power (3)  
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**DETAIL NOTES:**

- ① NOT USED.
  - ② 60-AMP 250-VOLT NON-FUSED TWO-POLE DOUBLE-THROW TRANSFER SWITCH, SQUARE-D CATALOG NO. DTU222 OR APPROVED EQUAL.
  - ③ SEAL CONDUIT PENETRATION ON INSIDE AND OUTSIDE BETWEEN THE INTERIOR AND EXTERIOR OF THE BUILDING WITH DUX SEAL.
  - ④ PROVIDE A 20-FOOT "ARCTIC" POWER CORD CONTAINING THREE #8 AWG POWER CONDUCTORS AND ONE #10 AWG GROUND CONDUCTOR WITH A CS63-64C\* CONNECTOR ON ONE END AND A CS63-65C\* PLUG ON THE OTHER. PROVIDE THE FOLLOWING 36-INCH LONG ADAPTER CORDS.
    - (A) 1-4C #10 POWER CORD WITH A CS63-64C\* CONNECTOR ON ONE END AND A NEMA-L14-30 PLUG ON THE OTHER.
    - (B) 1-4C #12 POWER CORD WITH A CS63-64C\* CONNECTOR ON ONE END AND A NEMA-L14-20 PLUG ON THE OTHER. PROVIDE WALL CABINET NEXT TO PANEL-G TO STORE THE CORDS.
  - ⑤ MOUNT A CS63-75C\* (MALE) GENERATOR FLANGED INLET IN A NEMA-3R GALVANIZED/PAINTED ENCLOSURE WITH THE INLET 48 INCHES ABOVE THE FLOOR LEVEL - MIDWEST ELECTRIC PRODUCTS CAT. NO. U050N OR APPROVED EQUAL. (OTHER ACCEPTED MANUFACTURERS - GE, CROUSE-HINDS).
- \* CALIFORNIA STANDARD 125/250-VOLT, 3-POLE, 4-WIRE, NON-NEMA, 50-AMP WIRING DEVICE, LEVITON CATALOG # AS SHOWN, OR APPROVED EQUAL. (OTHER ACCEPTED MANUFACTURERS - CROUSE-HINDS, APPLETON).

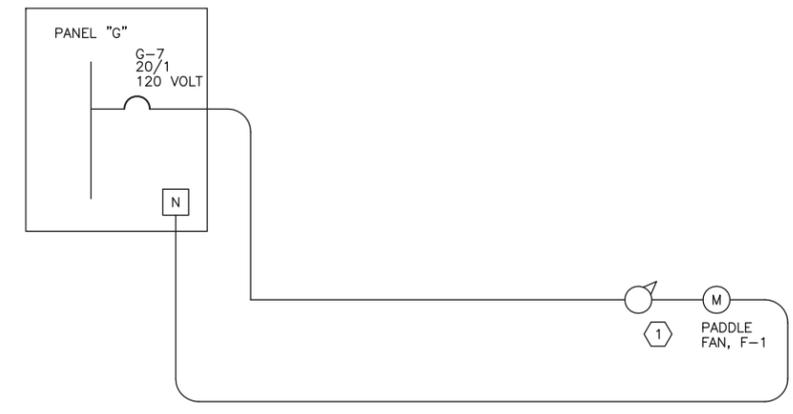


**3**  
**E4** **PANEL "G" - GENERATOR INLET ELEVATION**  
NTS



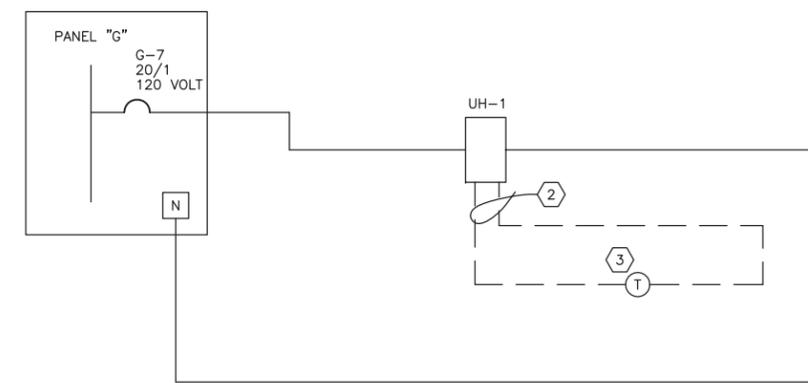
**4**  
**E4** **POWER ONE LINE DIAGRAM**  
NTS

NOTE: REFER TO AIRPORT LIGHTING SHEETS FOR METER PANEL LOCATION AND DETAIL.



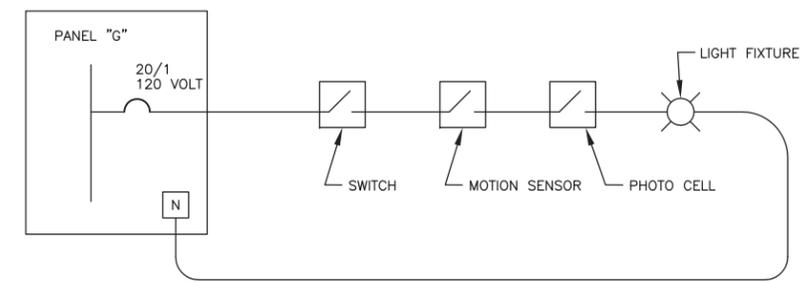
**1**  
**E4** **PADDLE FAN CONTROL DIAGRAM**  
NTS

**NOTES:**  
① ELECTRONIC SPEED CONTROL - SUPPLIED OR RECOMMENDED BY THE PADDLE FAN MANUFACTURER.



**2**  
**E4** **HEATING CONTROL WIRING DIAGRAM**  
NTS

**NOTES:**  
① NOT USED.  
② THERMOSTAT WIRE - CAN RUN EXPOSED BUT MUST BE STAPLED TO WAINSCOT 24 INCHES O.C.  
③ THERMOSTAT FOR UNIT HEATER - NON MERCURY TYPE.



**5**  
**E4** **EXTERIOR LIGHTING CONTROL DIAGRAM**  
NTS

**SREB GENERAL NOTES:**  
1. THE WORK SHOWN ON DETAILS 1/E4 AND 2/E4 IS APPLICABLE TO THE HEATED BUILDING, SREB #1.  
2. THE WORK SHOWN ON DETAILS 3/E4, 4/E4 AND 5/E4 IS APPLICABLE TO THE HEATED BUILDING, SREB #1 AND TO THE UNHEATED BUILDING, SREB #2.



PRE-PS&E

BY	DATE	REVISION

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
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CENTRAL REGION

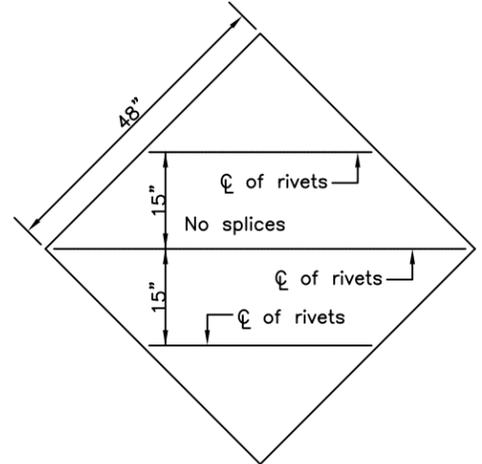
HOOPER BAY AIRPORT  
HOOPER BAY, ALASKA  
SNOW REMOVAL EQUIPMENT BUILDING  
PROJECT No. 57419  
AIP 3-02-0126-00X-20XX  
HEAT CONTROLS & POWER DETAILS

DATE:  
6/5/2014  
SHEET:  
**E4** OF **X**  
AS-BUILT SHEET:

TUBE SIGN POST SPACING								
Sign Width (feet)	No. of Posts	Distance Between Posts	Sign Overhang	Post Type				Notes
				P.S.T.	Wood	Steel Tube	W-Shape	
0.5 to 4.0	1	—	0.5W	X	X	X		See Note 2.
4.5 to 10.0	2	0.6W	0.2W	X	X	X		See Note 3.
10.5 to 11.0	2	6	Varies	X	X	X		See Note 3.
11.5 to 13.0	2	8	Varies				X	
13.5 to 20.0	2	0.6W	0.2W				X	
20.5 to 22.5	3	8	Varies				X	
23.0 to 29.5	3	0.35W	0.15W				X	
30.0 to 31.5	4	8	Varies				X	
32.0 to 40.0	4	0.25W	0.125W				X	

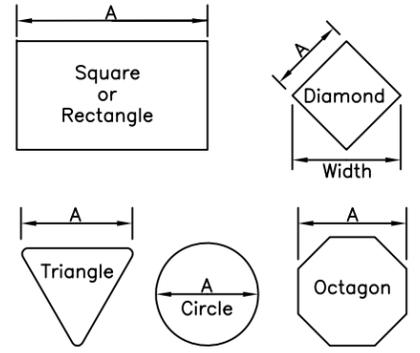
### GENERAL NOTES

1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061-T6 for cold driven rivets, or aluminum alloy 6061-T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located  $(H-0.15)/4$  spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.



### SIGN POST SPACING NOTES:

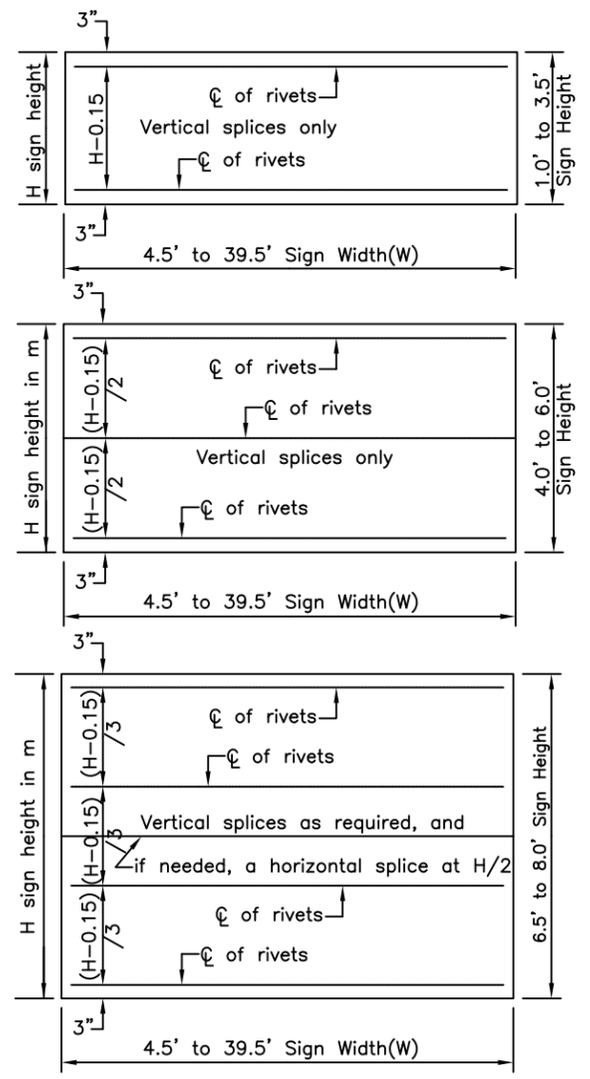
1. Install sign support in accordance with the table above, unless otherwise required by plans or specifications.
2. Exceptions:
  - a. Use one post for all E5-1 gore signs, regardless of width.
  - b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See Standard Drawing S-30 for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Drawing S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.



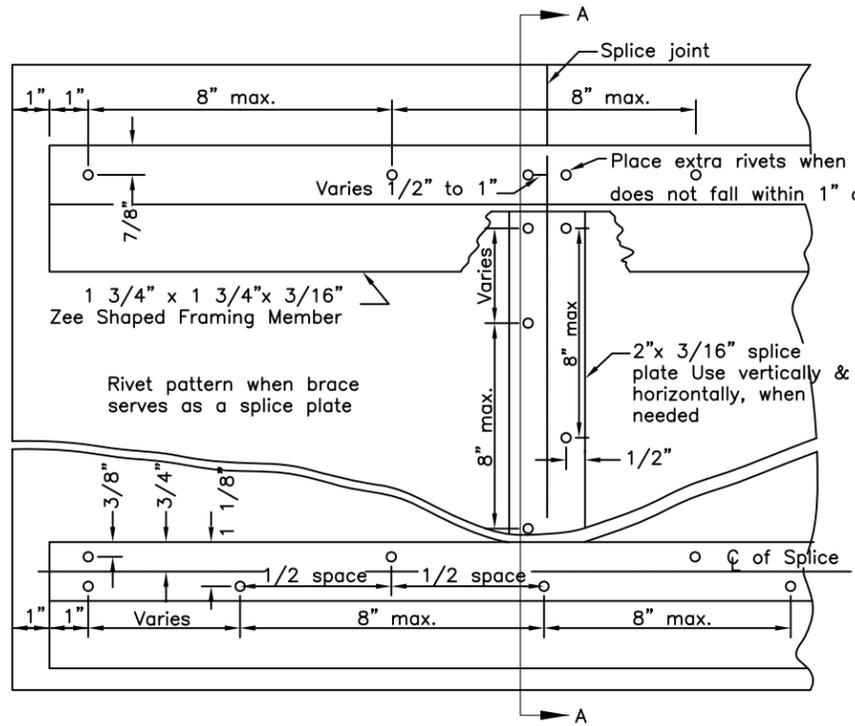
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

Install wind framing on all signs that exceed the dimensions listed.

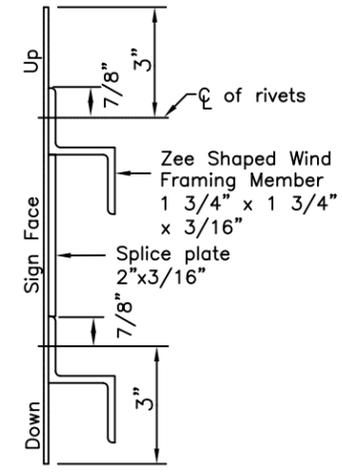
### LIGHT SIGNS



### WIND FRAMING LOCATIONS



### RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



### SECTION A-A

REVISIONS		
Date	Description	By
4/28/10	Delete pipe, rev notes	KJS

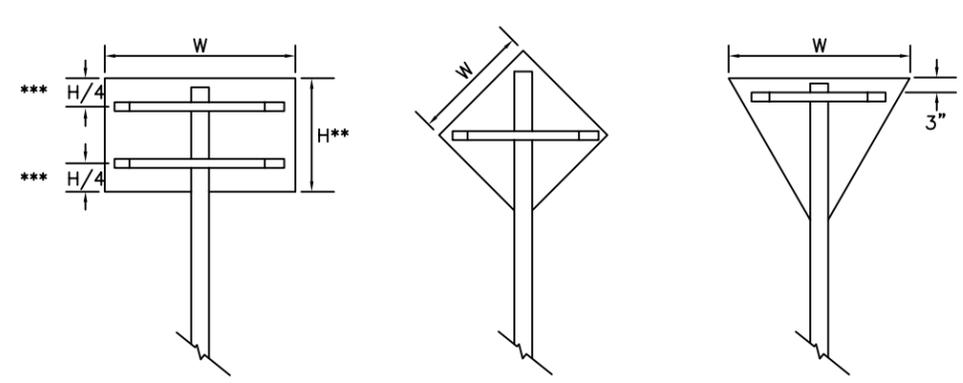
Sheet 1 of 1

State of Alaska  
Department of Transportation  
& Public Facilities

**SIGN FRAMING AND  
POST SPACING**

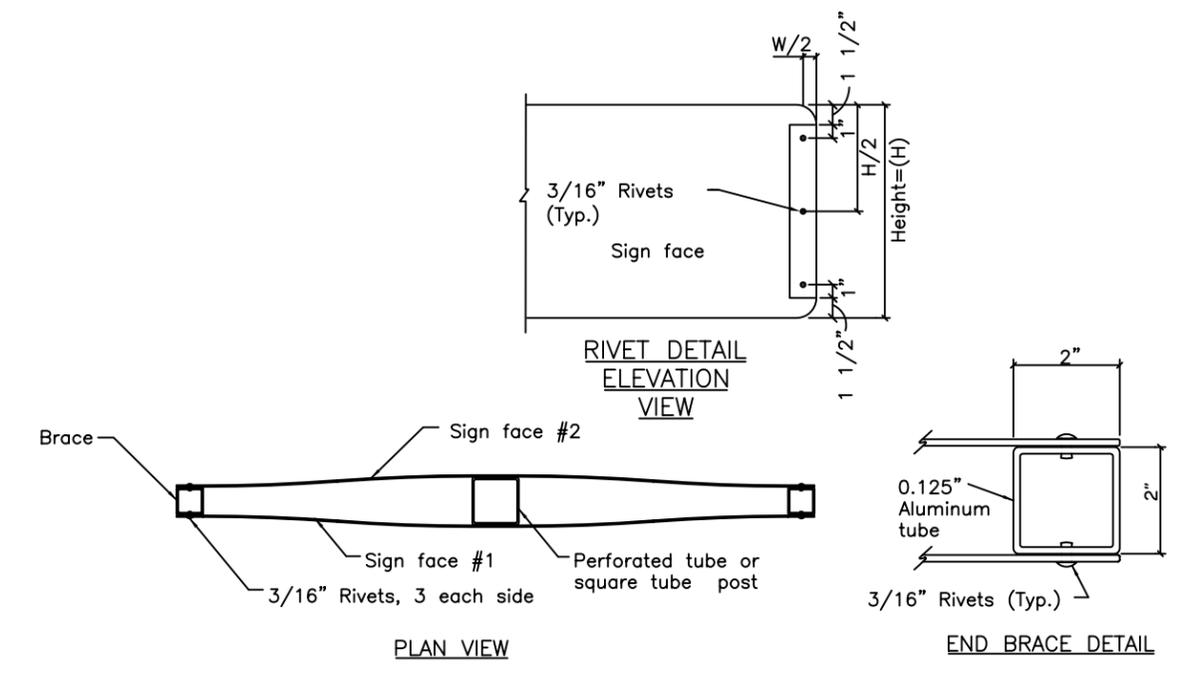
APPROVED

Date 5/31/12

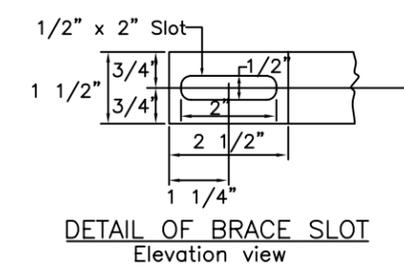


\*\*\*Use one brace when  $H \leq 18"$   
 Use two braces when  $18" < H < 48"$   
 Use three braces when  $H \geq 48"$   
 \*\* Position of brace may be varied to match  
 Predrilled mounting holes in panel

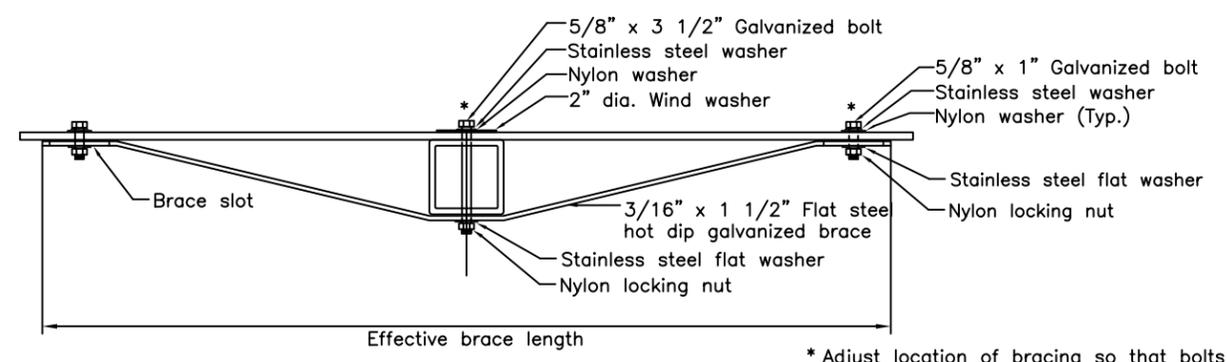
SIGN BRACING PLACEMENT



SMALL STREET NAME SIGN (D3-1, D3-1A, D3-1D) BRACING DETAILS



DETAIL OF BRACE SLOT  
Elevation view



TUBE POST SIGN BRACING  
Plan view

\* Adjust location of bracing so that bolts and washers will miss the sign legend

SIGN WIDTH(W)	EFFECTIVE BRACE LENGTH		
	WARNING	YIELD	OTHER
30"	36"	24"	24"
36"	42"	30"	30"
42"	48"	-	36"
48"	TWO POSTS	36"	42"

< 30" No bracing required and use square tube

REVISIONS		
Date	Description	By

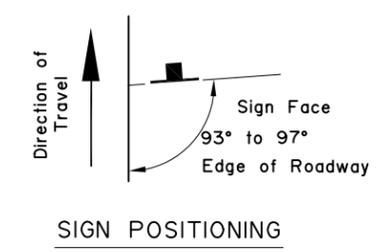
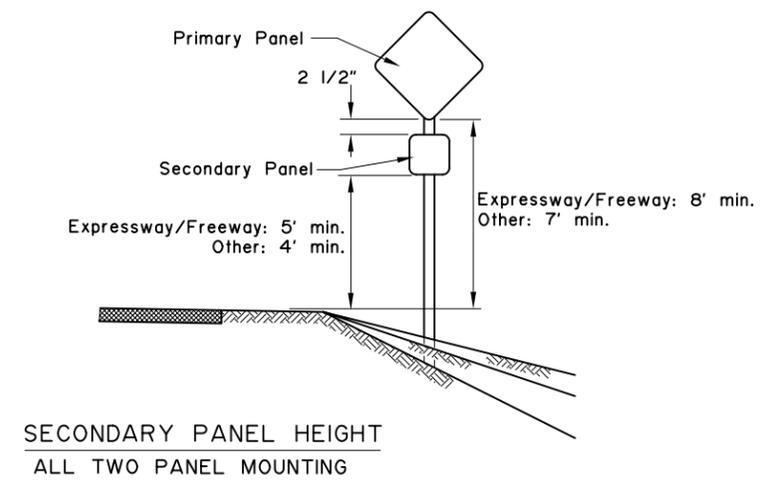
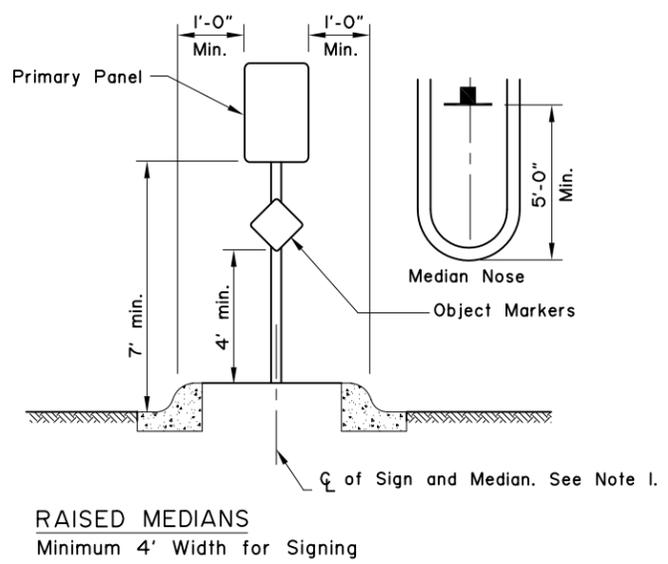
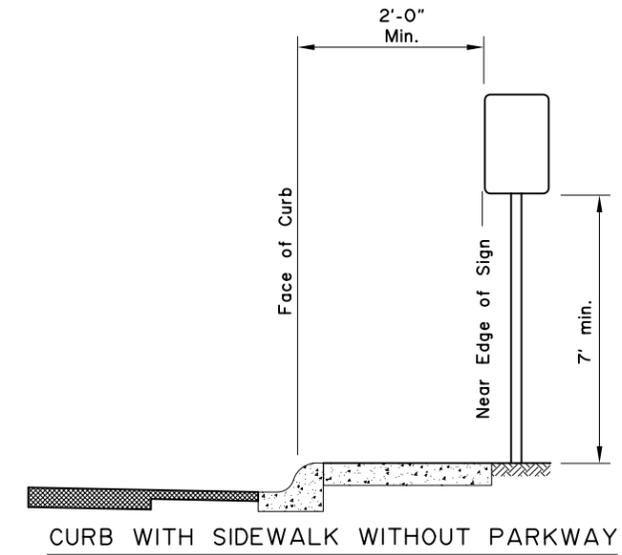
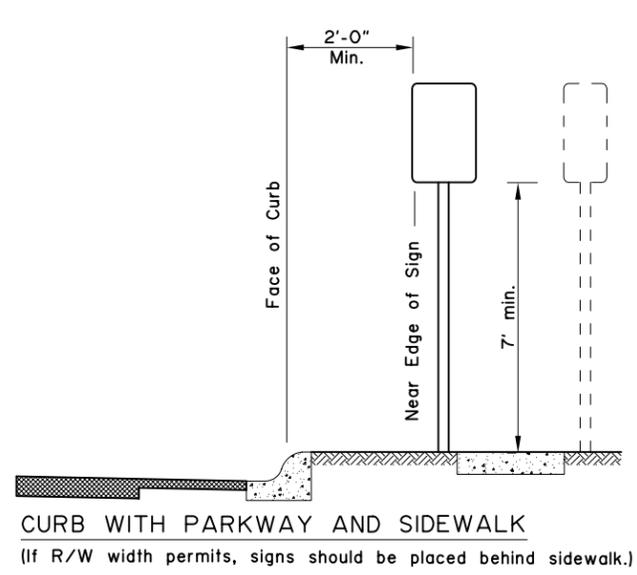
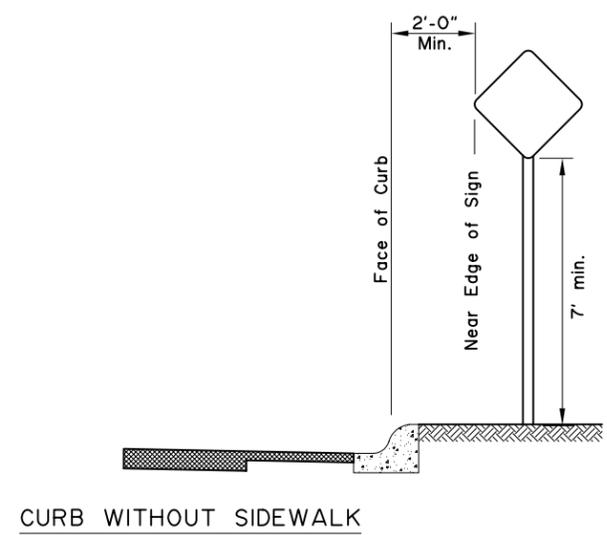
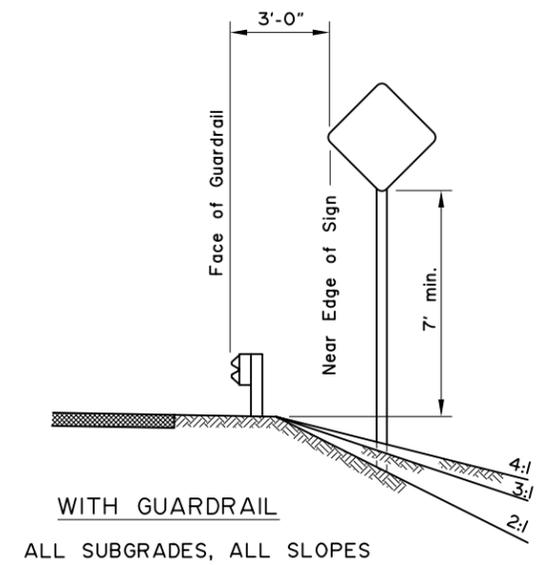
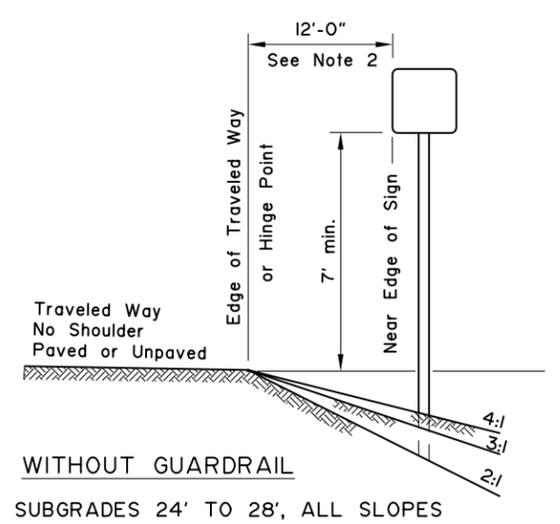
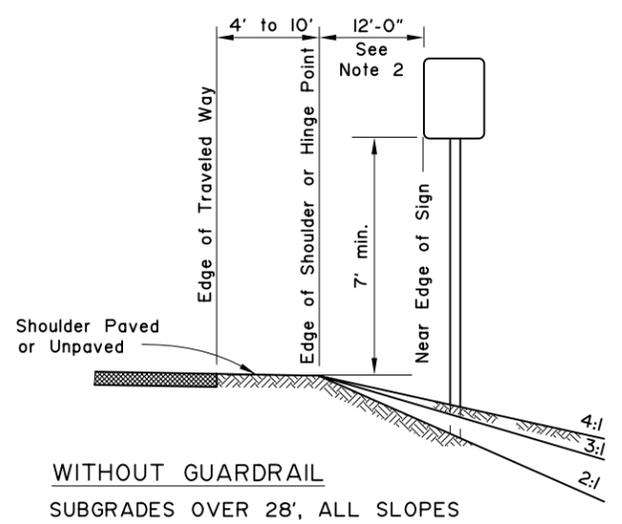
Sheet 1 of 1  
 State of Alaska  
 Department of Transportation  
 & Public Facilities  
**BRACING FOR SIGNS  
 MOUNTED ON SINGLE POST**

APPROVED

Date 2/28/03

## GENERAL NOTES

1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6'.
2. If signs extend over sidewalks, the minimum vertical clearance is 7'-0".
3. Add 6" to mounting height on unpaved roads.
4. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
5. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
6. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.



REVISIONS		
Date	Description	By
4/3/01	Revised Sign Heights	KJS

Sheet 1 of 1

State of Alaska  
Department of Transportation  
& Public Facilities

**POST MOUNTED SIGN  
OFFSET AND HEIGHT**

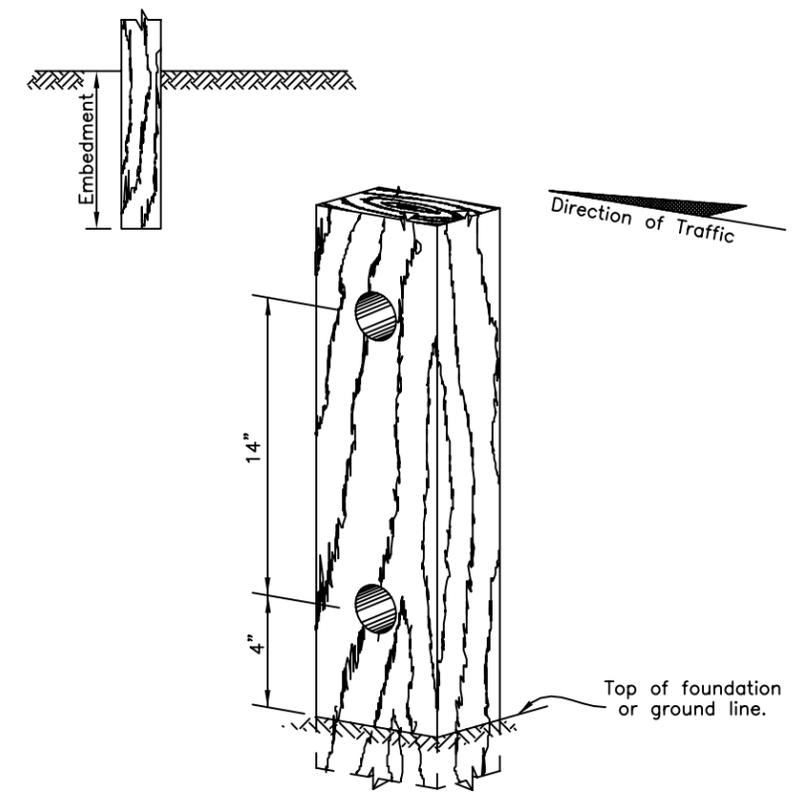
APPROVED

Date: 7/15/82

# S-30.03

## GENERAL NOTES:

1. Refer to Standard Drawing "Sheet Aluminum Sign and Framing" for light sign details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Do not install wood posts larger than 6"x8".
5. Use larger posts than shown on this sheet, with hinges, for multiple support signs where the supports are separated by more than 7 feet.

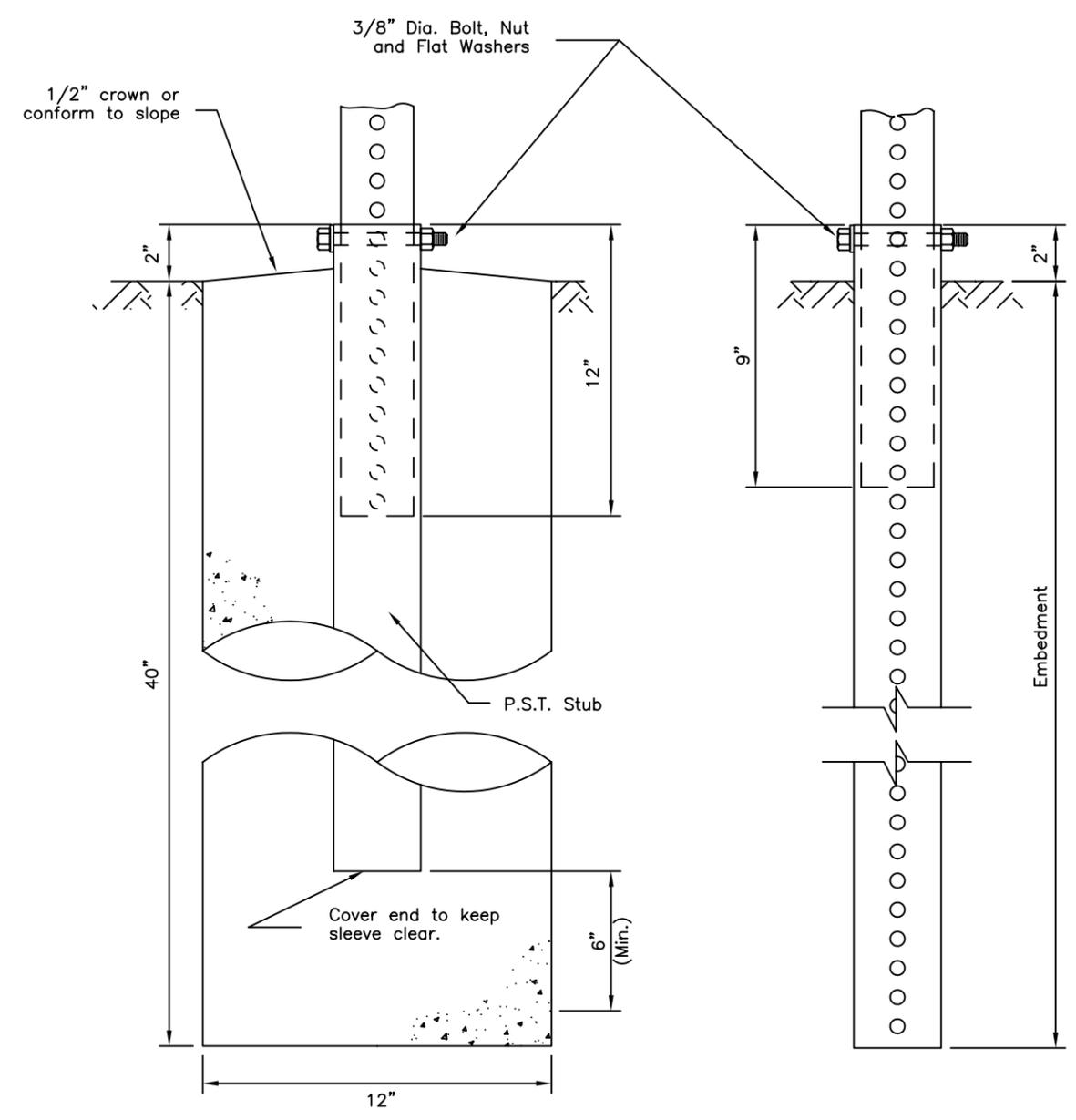


Note: If holes are field drilled after post has been treated, the holes shall be thoroughly swabbed with a 5% solution of pentachlorophenol and mineral spirits.

WOOD POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NUMBER OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	36"	2
4"x6"	1 1/2"	36"	2
6"x6"	1 1/2"	40"	1
6"x8"	3"	48"	1

\* Embedment depth applies in both strong and weak soil.

### WOOD POSTS



SLEEVE TYPE  
-CONCRETE FOUNDATION-

SLEEVE TYPE  
-SOIL EMBEDMENT-\*

PERFORATED STEEL TUBES (P.S.T.) (12 ga. - .105" Wall Thickness)		
POST SIZE (inch)	Embedment Depth	No. of P.S.T.s permitted within 7 ft path
1 1/2" x 1 1/2"	3'-0"	2
1 3/4" x 1 3/4"	3'-0"	2
2" x 2"	3'-6"	2
2 1/4" x 2 1/4"	4'-0"	1
2 1/2" x 2 1/2"	4'-6"	1

\* Use 3"x3"x3/16" Stub for 2 1/2"x2 1/2" PST Applications.

### PERFORATED STEEL TUBE (PST) POSTS

REVISIONS		
Date	Description	By
1/1/85	Redraft-Delete Post	Gdo
4/2/01	Revised PST table	Kjs
	Added note 3	
2/12/02	Revised Wood Posts	Kjs

Sheet 1 of 1

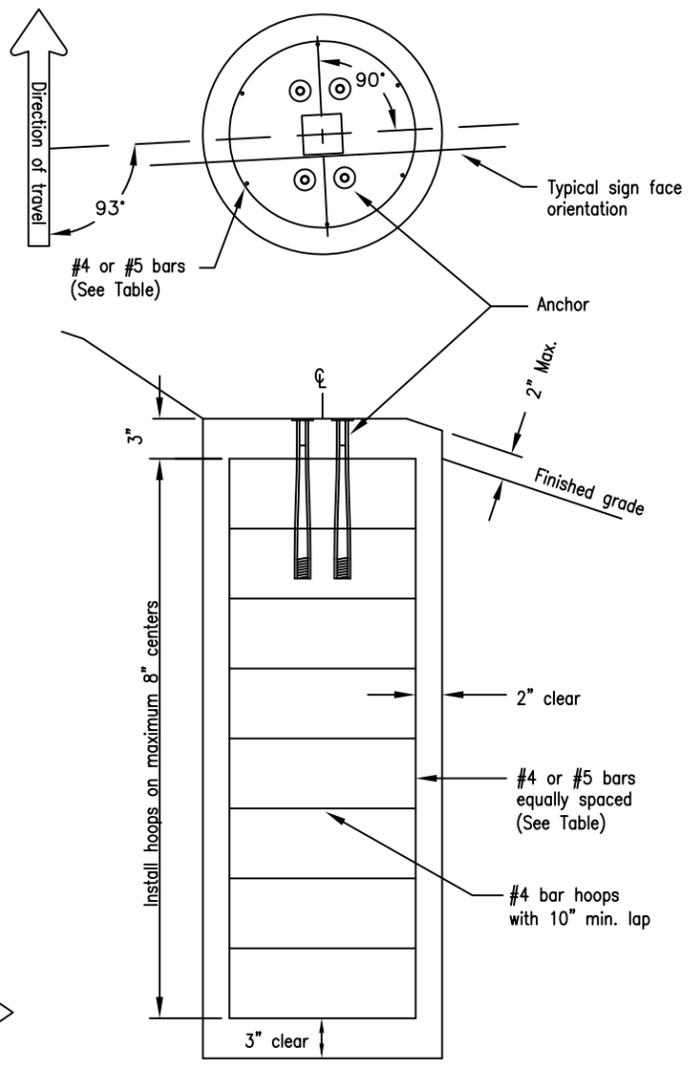
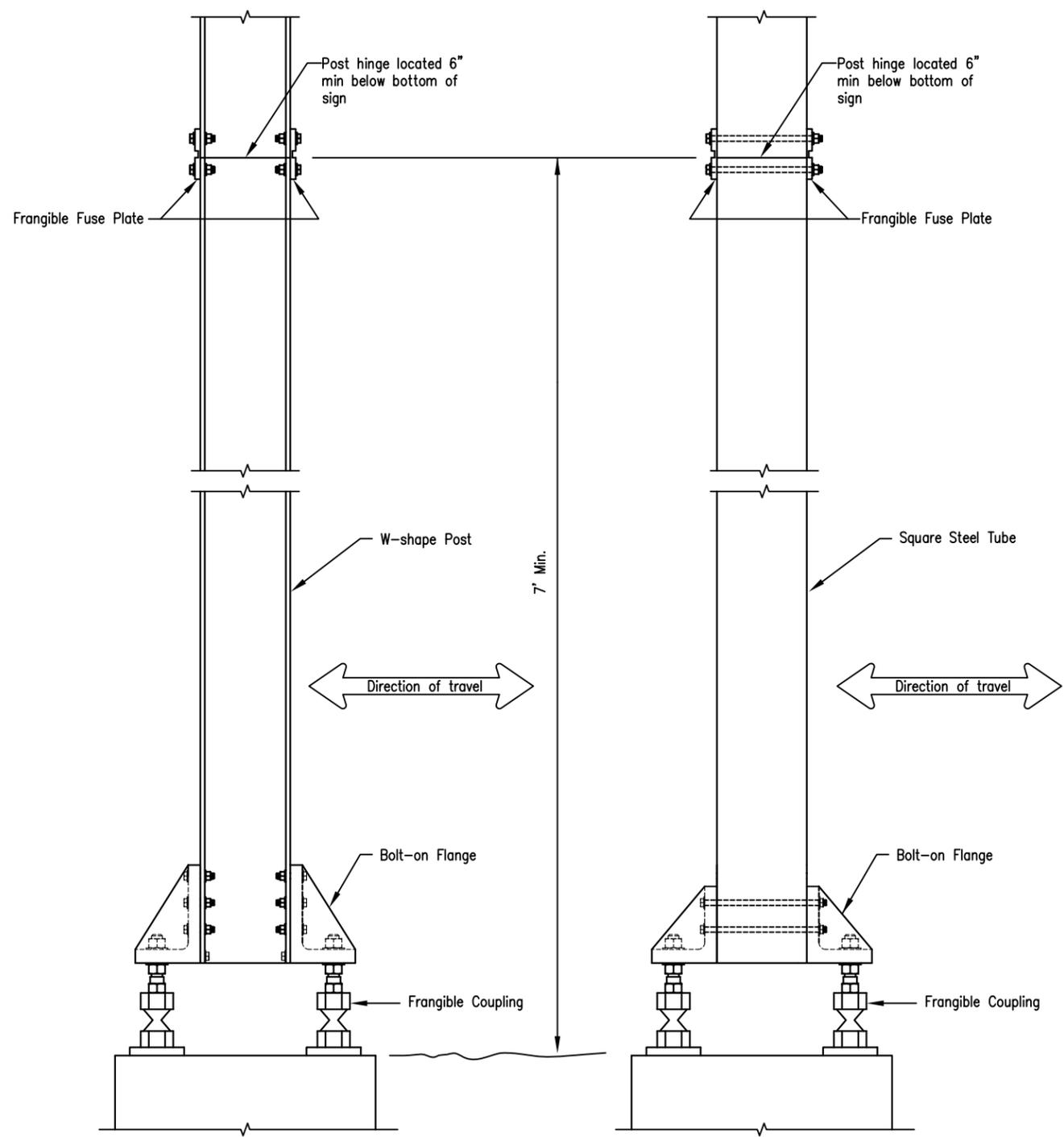
State of Alaska  
Department of Transportation  
& Public Facilities

## LIGHT SIGN STRUCTURE POST EMBEDMENT



APPROVED  
Date 7/15/82

**NOTE:**  
Install hinges when more than one post is used to support a sign. Do not install hinges on single post installations.



**SIGN POST FOUNDATION**

See Table for depth and diameter

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT			
	DIA.	MIN. DEPTH	CV <sup>3</sup> CONC.	VERTICAL BARS QTY. SIZE	LGTH.	HOOPS QTY. SIZE	DIA.
2 1/2" TUBE	1'-6"	4'-0"	0.26	6 #4	3'-6"	7 #4	1'-2"
3" TUBE	1'-6"	4'-0"	0.26	6 #4	3'-6"	7 #4	1'-2"
3 1/2" TUBE	1'-6"	4'-6"	0.30	6 #4	4'-0"	8 #4	1'-2"
4" TUBE	2'-6"	4'-0"	0.72	7 #5	3'-6"	7 #4	2'-2"
4 1/2" TUBE	2'-6"	4'-6"	0.81	7 #5	4'-0"	8 #4	2'-2"
5" TUBE	2'-6"	5'-6"	1.00	7 #5	5'-0"	9 #4	2'-2"
W6 x 9	2'-6"	4'-0"	0.95	8 #5	3'-6"	7 #4	2'-2"
W6 x 12	2'-6"	4'-6"	1.07	8 #5	4'-0"	8 #4	2'-2"
W6 x 15	3'-0"	6'-6"	1.69	8 #5	6'-0"	11 #4	2'-8"
W6 x 30	3'-0"	7'-6"	1.95	8 #5	7'-0"	12 #4	2'-8"

**FOUNDATION TABLE**

\* Foundations sized for use where there are no loose, high moisture, or fine grained soils.

**GENERAL NOTES**

1. Furnish sign posts with NCHRP 350 or MASH compliant FHWA-approved frangible couplings designed to break away safely when struck from any direction. The frangible couplings shall not have specific installation torque requirements.
2. Furnish frangible coupling systems with bolt-on flanges.
3. Details on this sheet illustrate only the general components of a frangible coupling system, and are not intended to specify a particular product.
4. Install frangible fuse plates as specified by the manufacturer and hinged joints when multiple posts are used to support a sign. Do not use round pipes.
5. Install the components of the breakaway system, including hinges, in accordance with the written instructions of the system manufacturer.
6. Use Class A concrete conforming to section 501 of the Standard Specifications. Furnish ASTM A615 grade 60 steel bars for concrete reinforcement conforming to AASHTO M31.
7. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of #3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
8. Install the concrete anchors using a rigid template. Locate the anchors on centers and within tolerances specified by the manufacturer.
9. Install the anchors in fresh concrete as recommended by the manufacturer. Adjust the template's final position until it is level. Remove and replace all foundations that need more than 2 shims under any 1 coupling or more than a total of 3 shims under any pair of couplings to plumb the post.
10. Drill the holes for attaching brackets before the sign posts are hot dip galvanized. Test fit templates in the holes to ensure the brackets can be installed square to the posts.

REVISIONS		
Date	Description	By
4/28/10	Delete pipe, Add hinge	KJS

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**SIGN POST BASE AND  
FOUNDATION**

APPROVED

Date 5/31/12