

**RUNWAY/ TAXIWAY CLOSURE NOTES:**

1. WORK WITHIN 160' OF TAXIWAY 'B' CENTERLINE SHALL REQUIRE THE CLOSING OF THE TAXIWAY. SEE SAFETY NOTES.
2. TAXIWAY 'B' MAY BE CLOSED AS REQUIRED PER THE PHASING PLAN. THE TAXIWAY SHALL BE RE-OPENED UPON COMPLETION OF PHASE AND ACCEPTANCE BY THE ENGINEER AND INSPECTION BY THE OWNER OF ALL THE WORK.
3. THE CONTRACTOR SHALL SUPPLY A POWER BROOM/SWEEPER ON SITE FOR PAVEMENT CLEAN UP AT ALL TIMES WHEN THE CONTRACTOR IS WORKING ON OR ADJACENT TO ANY TAXIWAY OR PERIMETER ROAD PAVEMENTS. THE CONTRACTOR SHALL BE CONTINUOUSLY MONITORING THE CONDITION OF THE PAVEMENTS TO IMMEDIATELY REMOVE ANY FOD FROM THOSE SURFACES.

**HAUL ROAD / SITE ACCESS**

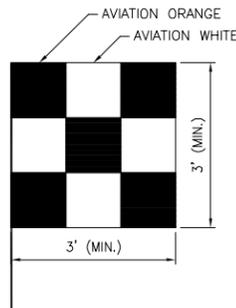
1. THE COST OF ANY HAUL ROAD; STORAGE AREA, GATE AND FENCING CONSTRUCTION AND REMOVAL/SITE RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
2. SEE BARRICADE DETAIL SHEET FOR TYPE AND SPACING OF BARRICADES.
3. EQUIPMENT MATERIAL STORAGE AREAS SHALL BE REMOVED DURING DEMOBILIZATION AND THE SITE RESTORED.

**NOTE:**

1. CONTRACTOR SHALL NOT HAVE ACCESS ON ANY PART OF TAXIWAY "B", OR ANY AIRCRAFT MOVEMENT AREAS WITHOUT PERMISSION FROM ENGINEER AND DAA OPERATIONS.
2. CONTRACTOR SHALL ALWAYS LEAVE ACCESS FOR THE ARFF FACILITY STAFF AND DAA. FIRE FIGHTING EQUIPMENT MUST AT ALL TIME BE ABLE TO MOVE ALONG TAXIWAY 'B' FOR EMERGENCY SERVICES PROVIDED TO THE DULUTH AIRPORT.
3. ALL HAUL ROUTES SHALL BE ON THE MARTIN ROAD AND ACCESS POINTS NORTH SIDE OF RUNWAY 9/27 OUTSIDE AOA.
4. DUE TO OTHER CONSTRUCTION OPERATIONS HAUL ROUTES / SITE ACCESS MAY CHANGE.

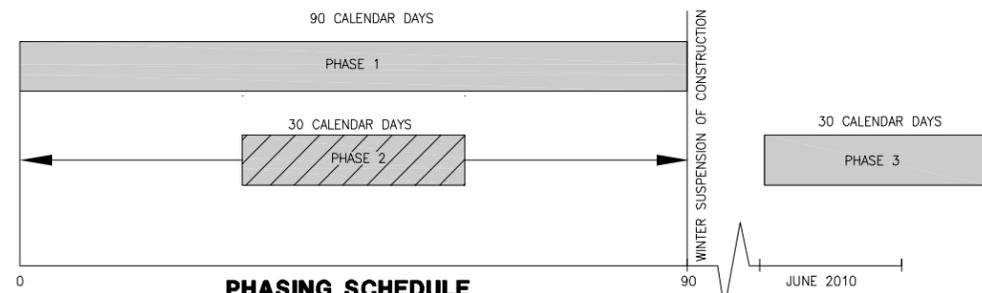
REFERENCE POINT	DESCRIPTION	LATITUDE	LONGITUDE
*①	R/W 27 THRESHOLD	465028.865	921047.041
*②	R/W 9 THRESHOLD	465032.839	921313.063
③	PROPOSED FENCE CORNER	465043.11239	921139.38493
④	PROPOSED FENCE CORNER	465043.36501	921139.21179
⑤	PROPOSED FENCE CORNER	465044.75727	921133.58020
⑥	PROPOSED FENCE CORNER	465044.63789	921133.21442
⑦	PROPOSED NW CORNER OF APRON	465042.75356	921138.59030
⑧	PROPOSED NE CORNER OF APRON	465043.89251	921133.98975
⑨	PROPOSED FENCE CORNER	465039.18552	921137.53870
⑩	PROPOSED FENCE CORNER	465039.35761	921137.41309
⑪	PROPOSED SW CORNER OF APRON	465039.50378	921136.88473
⑫	PROPOSED SE CORNER OF APRON	465040.63811	921132.27798
⑬	PROPOSED FENCE CORNER	465041.47127	921128.92009
⑭	PROPOSED FENCE CORNER	465041.79449	921128.46138
⑮	PROPOSED CONTRACTOR STAGING AREA	465044.09532	921131.91056

\* POINT NOT SHOWN ON THIS SHEET



**CONSTRUCTION SAFETY FLAG**

N.T.S.  
(SAFETY FLAG SHALL BE PROMINENTLY DISPLAYED ON ALL CONSTRUCTION EQUIPMENT)



**PHASING SCHEDULE**

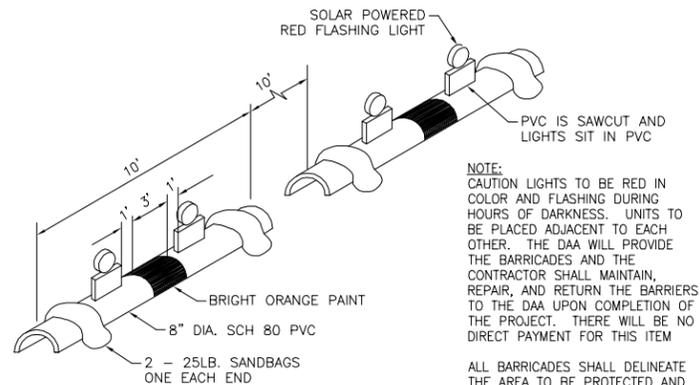
**PHASE 1**  
THIS PHASE SHALL INCLUDE ALL WORK GREATER THAN 260' FROM TAXIWAY 'B' CENTERLINE, EXCEPT BITUMINOUS PAVING AND STRIPING.

**PHASE 2**  
THIS PHASE SHALL INCLUDE ALL WORK WITHIN 260' OF TAXIWAY 'B' CENTERLINE, EXCEPT BITUMINOUS PAVING. PRIOR TO THE START OF THIS PHASE TAXIWAY 'B' SHALL BE CLOSED TO AIRCRAFT.

**PHASE 3**  
THIS PHASE SHALL BE CONSTRUCTED IN THE SPRING OF 2010 AND SHALL INCLUDE FINAL GRADING, BITUMINOUS PAVING, AND STRIPING.

**LOW LEVEL LIGHTED BARRICADES**

1. LOW LEVEL LIGHTED BARRICADES SHALL BE PLACED AROUND ALL OPEN EXCAVATIONS, HOLES, TRENCHES, PAVEMENT DROP-OFFS, AND AREAS IDENTIFIED ON THE PHASING PLAN.
2. STEEL CONCRETE FORMS OR OTHER MATERIALS MAY BE SUBSTITUTED FOR TIMBER WITH APPROVAL OF ENGINEER.
3. PLACE BARRICADES @ 20 FT. O.C. UNLESS OTHERWISE NOTED.
4. LOW LEVEL BARRICADES WILL BE PROVIDED BY THE DAA. LIGHTS WILL BE MAINTAINED BY THE CONTRACTOR.

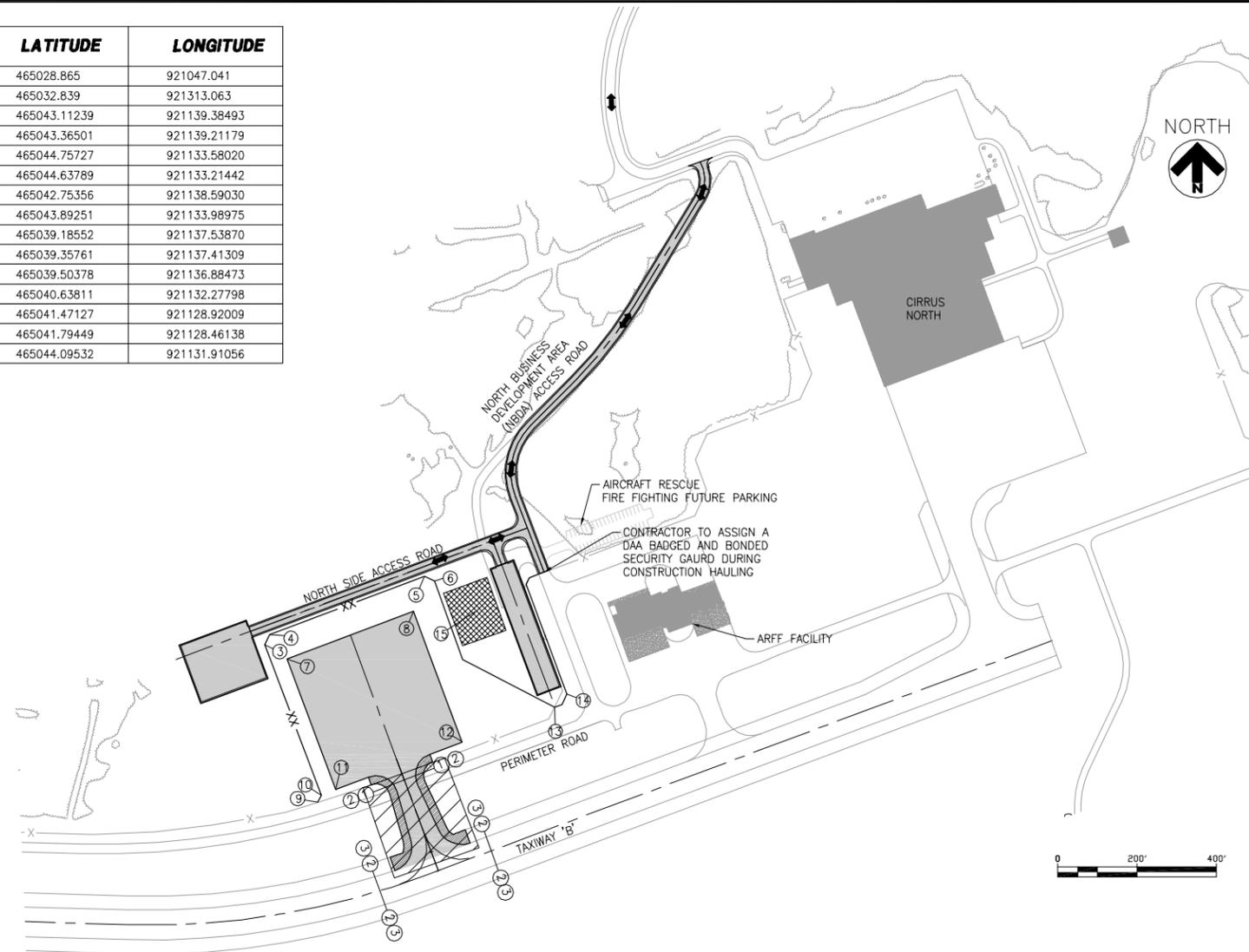


**NOTE:**  
CAUTION LIGHTS TO BE RED IN COLOR AND FLASHING DURING HOURS OF DARKNESS. UNITS TO BE PLACED ADJACENT TO EACH OTHER. THE DAA WILL PROVIDE THE BARRICADES AND THE CONTRACTOR SHALL MAINTAIN, REPAIR, AND RETURN THE BARRIERS TO THE DAA UPON COMPLETION OF THE PROJECT. THERE WILL BE NO DIRECT PAYMENT FOR THIS ITEM

ALL BARRICADES SHALL DELINEATE THE AREA TO BE PROTECTED AND THE BARRICADE LINE SHALL EXTEND TO 10' OFF THE EDGE OF EITHER SIDE OF ANY PAVEMENT.

**LOW LEVEL LIGHTED BARRICADES DETAIL**

N.T.S.



**NOTE:**  
SEQUENCE OF CONSTRUCTION SHOWN IS FOR INFORMATION ONLY AND TO BE USED FOR BIDDING PURPOSES

**LEGEND**

- ① — ② BARRICADE (# 1, 2 & 3 ARE FOR PHASING)
- ↔ ↔ ↔ CONTRACTOR ACCESS AND HAUL ROUTES
- ▨ CONTRACTOR STAGING AREA MATERIAL STOCKPILES
- ① PART 77 REFERENCE POINTS
- ▨ EXISTING BUILDINGS/HANGARS
- ▨ PROPOSED BITUMINOUS PAVEMENT



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**NORTH BUSINESS DEVELOPMENT AREA**

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature *Darren K. Christopher*

Typed Name DARREN K. CHRISTOPHER

Date 06/18/2009 Reg. No. 45052

**REVISIONS**

NO.	DESCRIPTION	DATE

**DATE ISSUED: 08-18-2009**

**REVIEWED BY: MLS**

**DRAWN BY: JKE**

**DESIGNED BY: DKC**

**AEP PROJECT NUMBER**

**214-1882-077**

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**SHEET TITLE**

**CONSTRUCTION SAFETY AND PHASING PLAN (SHEET 1 OF 2)**

**SHEET NUMBER**

**C004**

**BID DOCUMENTS**