PROPOSED AIRPORT PROJECT

AMBLER AIRPORT REHABILITATION

A.I.P. NO. 3-02-0354-_____/61303

2014

VOLUME II

SPONSORED BY THE STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

APPROVED BY: RYAN F. ANDERSON, P.E., PRE-CONSTRUCTION ENGINEER, NORTHERN REGION PRECONSTRUCTION

ACCEPTED FOR CONSTRUCTION: STEVE TITUS, P.E., REGIONAL DIRECTOR, NORTHERN REGION

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

D-01.02 D-04.21
F-01.01
S-00.11 S-01.00 S-05.01 S-30.03

INDEX

SHEET TITLE | SHEET NO.
--- | ---
TITLE SHEET | 1
ESTIMATE OF QUANTITIES SHT 1 OF 2 | 2-3
BASE OF BEARING | 4-5
PROJECT LAYOUT PLAN | 6
CONSTRUCTION Phasing Plan | 7
CONSTRUCTION Safety Plan Phase 1 | 8
CONSTRUCTION Safety Plan Phase 2 | 9
CONSTRUCTION Safety Plan Phase 3 | 10
CONSTRUCTION Safety Plan Details | 11-12
ESCP Plan | 13-15
CLEARING Plan | 16
MINING Plan | 17
TYPICALS | 18-21
PLAN AND PROFILE RUNWAY 01-19 | 22-23
RUNWAY INTERSECTION Grading Plan | 24
PLAN AND PROFILE RUNWAY 10-28 | 25-26
Taxiway and Apron Plan and Profile Sheet | 27
ACCESS ROAD Plan AND Profile Sheets | 28-29
MATERIAL Site, Road Plan AND Profile Sheets | 30-34
SIGN Details | 35-36
SEGMENTED CIRCLE Details | 37
CULVERT SUMMARY AND DETAIL | 38
GATE Details | 39-40
DEMOLITION Plan | 41
RUNWAY LIGHTING Plan | 42-44
APRON DETAIL | 45
EER SITE Plan | 46
TRENCH SECTIONS | 47
AIRPORT LIGHTING DETAILS | 48-50
WIND CONE DETAILS | 51
EER ELECTRICAL Details | 52-54
POWER ONE-LINE Diagram | 55
AIRPORT LIGHTING CONTROL | 56-58
J-BOX Details | 59
FUEL STATION | 60
PARKING Plan AND Details | 61

INDEX CONTINUED

SHEET TITLE | SHEET NO.
--- | ---
PARK AND DETAILS | E21
REL Plan AND Details | E22
REL Details | E23
SNOW REMOVAL EQUIPMENT BUILDING SREF SITE Plan | E24
SNOW REMOVAL EQUIPMENT BUILDING SREF SITE SELECTION | E25
ARCHITECTURAL FLOOR Plan | E26
ARCHITECTURAL EXTERIOR ELEVATIONS | E27
ARCHITECTURAL BUILDING SECTIONS | E28
ARCHITECTURAL Details | E29
ARCHITECTURAL Details | E30
STRUCTURAL FLOOR Plan AND NOTES | E31
STRUCTURAL GRADE BEAM AND BOLLARD Details | E32
SNOW REMOVAL EQUIPMENT BUILDING Details | E33
FUEL PIPING AND HEATING FLOOR Plan | E34
FUEL HEATER AND FUEL TANK Details | E35
AIR COMPRESSOR SCHEMATIC | E36
ELECTRICAL SCHEDULES | E37
ELECTRICAL LIGHTING Plan | E38
ELECTRICAL POWER Plans | E39
POWER AND CONTROL Diagrams | E40
Details | E41

SEC 19, 20, 29, 30 & 31, T20N, R5E KRM
USGS AMBLER RIVER (A-4)
### ESTIMATE OF QUANTITIES - NTP #1

<table>
<thead>
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<th>UNIT</th>
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<td>G-115-s1</td>
<td>WORKER MEALS AND LODGING</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
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<td>G-130-s1</td>
<td>FIELD LABOR</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
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<td>G-130-s3</td>
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<td>P-155(1)-s1</td>
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<td>P-157-s3</td>
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### ESTIMATE OF QUANTITIES - NTP #2

| T-162-s1 | [20'] DOUBLE SWING GATE | EACH | 1 |
| G-100-s1 | MOBILIZATION AND DEMOBILIZATION | LUMP SUM | ALL REQUIRED |
| G-115-s1 | WORKER MEALS AND LODGING | LUMP SUM | ALL REQUIRED |
| G-130-s1 | FIELD LABOR | LUMP SUM | ALL REQUIRED |
| G-130-s2 | NUCLEAR TESTING EQUIPMENT STORAGE SHED | EACH | 1 |
| G-131-s1 | ENGINEERING TRANSPORTATION (TRUCK) | EACH | 2 |
| G-131-s2 | ENGINEERING TRANSPORTATION (AV) | EACH | 2 |
| G-135-s1 | CONSTRUCTION SURVEYING BY THE CONTRACTOR | LUMP SUM | ALL REQUIRED |
| G-210-s1 | CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENT | LUMP SUM | ALL REQUIRED |
| G-211-s1 | ASBESTOS COMPLIANCE PLAN | LUMP SUM | ALL REQUIRED |
| G-710-s1 | HIGHWAY TRAFFIC MAINTENANCE | CONTINGENT SUM | ALL REQUIRED |
| G-710-s2 | HIGHWAY TRAFFIC PRICE ADJUSTMENT | CONTINGENT SUM | ALL REQUIRED |
| G-710-s3 | HIGHWAY TRAFFIC CONTROL | LUMP SUM | ALL REQUIRED |
| G-710-s4 | CALCIUM CHLORIDE FOR DUST CONTROL | TON | 280 |
| P-100-s1 | AIRPORT LIGHTING | LUMP SUM | ALL REQUIRED |
| P-105-s1 | ROTATING BEACON, MEDIUM INTENSITY, L-801A | EACH | 1 |
| P-160(1)-s1 | PRIMARY 8-FOOT LIGHTED WIND CONE, IN PLACE | EACH | 1 |
| P-160(2)-s1 | SUPPLEMENTAL, 8-FOOT LIGHTED WIND CONE, IN PLACE | EACH | 2 |
| P-160-s1 | ELECTRICAL ENCLOSURE AND FOUNDATION, IN PLACE | EACH | 1 |
| P-160-s2 | INSTALLATION OF ELECTRICAL EQUIPMENT IN NEW OR EXISTING STRUCTURE | EACH | 1 |
| P-160(1)-s1 | INSTALL APPROACH LIGHTING AIDS (PAPI RACEWAY | EACH | 2 |
| P-160(2)-s1 | INSTALL APPROACH LIGHTING AIDS (PAPI RACEWAY | EACH | 2 |
| P-160(1)-s1 | REMOVE APPROACH LIGHTING AIDS | EACH | 1 |
| P-151-s2 | CLEARING | ACRE | 243 |
| P-152-s1 | EMBANKMENT, NON-NOA COVER | SQUARE YARD | 18,100 |
| P-152(1)-s1 | BORROW, A | TON | 156,000 |
| P-152(1)-s2 | BORROW, B | TON | 17,000 |
| P-153-s1 | EXTRA EXCAVATION BY DIRECTIVE | CONTINGENT SUM | ALL REQUIRED |
| P-154-s2 | SUBGRADE COURSE | CUBIC YARD | 110,300 |
| P-157-s1 | EROSION AND POLLUTION CONTROL ADMINISTRATION | LUMP SUM | ALL REQUIRED |
| P-157-s2 | TEMPORARY EROSION AND POLLUTION CONTROL | CONTINGENT SUM | ALL REQUIRED |
| P-157-s3 | TEMPORARY EROSION AND POLLUTION CONTROL | CONTINGENT SUM | ALL REQUIRED |
| P-157-s4 | TEMPORARY EROSION AND POLLUTION CONTROL AMENDMENTS | CONTINGENT SUM | ALL REQUIRED |
| P-157-s5 | WITHHOLDING | CONTINGENT SUM | ALL REQUIRED |
| P-157-s6 | SWPPP MANAGER | LUMP SUM | ALL REQUIRED |
| P-167-s1 | DUST POLLUANT | LUMP SUM | ALL REQUIRED |
| P-208-s1 | CRUSHED AGGREGATE SURFACE COURSE | TON | 57,000 |
| P-610-s1 | STRUCTURAL PORTLAND CEMENT CONCRETE | CUBIC YARD | 20 |
| P-640-s1 | SEGMENTED CIRCLE (Panel-Type) | LUMP SUM | ALL REQUIRED |
| P-650-s1 | SOIL ANCHOR TE DON | SET | 3 |
| P-660-s1 | REFLECTIVE MARKER, TYPE II | EACH | 40 |
| P-665-s1 | CONE, 18 INCH | EACH | 118 |
| P-670-s1 | STANDARD SIGNS | SQUARE FOOT | 34.75 |
| S-142-s1 | EQUIPMENT STORAGE BUILDING | SQUARE YARD | 264,000 |
| S-142-s2 | EQUIPMENT STORAGE BUILDING | LUMP SUM | ALL REQUIRED |
| T-901-s1 | SEEDING | ACRE | 11 |
### TABLE OF LUMP SUM QUANTITIES

<table>
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<tr>
<th>ITEM NO.</th>
<th>UNIT</th>
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<td>P-167x2</td>
<td>GALLON</td>
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<td>L-100x2</td>
<td>REGULATOR, L-82B</td>
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<td>MEDIUM INTENSITY RUNWAY EDGE AND THRESHOLD, L-861 and L-861E</td>
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<td>TAXIWAY EDGE LIGHT, L-861T</td>
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<td>L-100x2</td>
<td>WIND CONE HANDBASE, L-867, SIZE D</td>
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<td>L-100x2</td>
<td>REMOVE EXISTING RUNWAY AND TAXIWAY LIGHT</td>
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<td>HANDHOLE, L-867, SIZE B</td>
<td>EACH</td>
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<tr>
<td>L-100x2</td>
<td>MEDIUM INTENSITY THRESHOLD LIGHT, L-861SE</td>
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<td>#6 STRANDED BARE COPPER GROUND CONDUCTOR</td>
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<td>UNDERGROUND HANDHOLE, L-867, SIZE D</td>
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<td>CONDUCTORS, #2 AWG, COPPER, 600V, XHHW</td>
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<td>CONDUCTORS, #10 AWG, COPPER, 600V, XHHW</td>
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<td>2-INCH RIGID STEEL CONDUIT</td>
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<td>2-INCH HOPE CONDUIT</td>
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<td>1-INCH RIGID STEEL CONDUIT</td>
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### TABLE OF ESTIMATED EXCAVATION AND FILL QUANTITIES

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### TABLE OF ESTIMATING FACTORS

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### GENERAL NOTES:

1. Locations of utilities shown on the plans (AEC, power, gas, telephone, and community fuel line) are based on plans from utilities and field observations. Locations must be field verified.

2. Unsuitable excavation shall be tested for NOA content and used as non-NOA cover if it meets non-NOA requirements.

3. Excess excavation may be disposed of in the area north of runway 10-28 (see plan sheet 5).

4. The contractor shall comply with all requirements of the NOA material sales agreement in Appendix H when working in the subject lands as defined within the agreement. All materials extraction within the subject lands must be completed prior to the date of completion of the agreement.
**MONUMENT COORDINATE TABLE**

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<th>EASTING</th>
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**ACCESS ROAD ASBUILT C/L COORDINATE TABLE**

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**ACCESS ROAD ASBUILT C/L COORDINATE TABLE**

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**GENERAL NOTES**

1. THE BASIS OF VERTICAL IS, 205.93 ft (ORTHOMETRIC), AT R/W STATION 9+00.00 = TRAVERSE POINT #1.
2. THE BASIS OF BEARING IS, N 22'31'58 E BETWEEN R/W STATION 9+00.00 = TP#1 AND R/W STATION 42+99.99 (43+00.00 REC) = POINT #1003. OBTAINED FROM 1989 RECORD OF SURVEY, AMBLER AIRPORT.
3. REFER TO AMBLER AIRPORT SURVEY CONTROL DIAGRAM, PREPARED BY USKH, INC. DATED APRIL 2013 FOR ADDITIONAL INFORMATION.
SCOPE OF PROJECT

1. Extend Runway 01-19 (clearing, grubbing, and borrow B only) from STA 11+97 to 17+00 and STA 51+90 to 57+67. 75' Runway, 150' runway safety area (NTP #1).
2. Reconstruct Runway 01-19 from STA 17+00 to STA 51+90. When from 60' to 75' Runway, 120' to 150' Runway safety area and complete Runway Extensions (NTP #2).
3. Reconstruct Runway 10-28 (NTP #1).
4. Remove Terrain Obstructions (NTP #3).
5. Rehabilitate Taxiway and Apron (NTP #3).
6. Install Airport Lighting, Windcones, and Segmented Circle. Remove VAs, Install PAPI Pad (NTP #5).
7. Realignment (including clearing and grubbing) 1,240' of Waring Street (Airport Access Road) from STA 34+17 to STA 47+43 (NTP #2).
8. Rehabilitate and Resurface 3,250' of Waring Street. Apply Calcium Chloride from STA 10+00 to 34+17.
9. Clearing (NTP #2).
10. Construct Material Site Access Road (NTP #1).

AMBLER AIRPORT REHABILITATION
AP# 3-02-0354-14/61303
PROJECT LAYOUT PLAN
NOTE:

1. The contractor shall schedule and sequence work in accordance with FAA Advisory Circular 150/5370-2.
2. The contractor is responsible for any damage, beyond normal wear, to any public roads or bridges. For additional safety information, including haul route information, see the Amberl Airport Rehabilitation Safety Plan in the appendices.
3. No parking, material storage, or lottering is allowed in front of the FAA ANCS facility or on FAA property. All material stockpiles are to be located off airport property.
4. A minimum of 2,400' of runway shall remain open throughout construction, including access to the taxiway (including lighting during hours of darkness). Equipment shall be kept out of the operational areas while the existing runway is active. No hauling of materials or equipment movements shall occur at any time within the runway. The contractor shall schedule additional closed runway closures during nighttime or other periods with few scheduled operations. However, the runway must be able to be opened within 15 minutes notice for emergencies.
5. Mark closed runways, taxiway and runways under construction. Provide two portable lighted runway closure markers and additional, closed runway markers as needed.
6. No equipment parking is allowed in the RPZ, DFA or OFZ of either runway.
7. The edges of any temporary taxiway and active runway shall be delineated with reflective markers or reflective marker cones spaced at 50' intervals. Runway markers shall have white retroreflective sheeting and taxiway markers shall have blue retroreflective sheeting. Threshold cones and markers shall have 180 degree green reflective band towards the safety area and a 180 degree red reflective band towards the runway.
8. Maintain aircraft access to the aircraft parking areas on the apron at all times during construction. Maintain access to Amberl at all times during construction. At no time shall access to Amberl be restricted.

CONSTRUCTION SEQUENCING:

Phase 1 - Remove terrain obstructions, construct runway 1-19 extensions from STA 11+97 to 16+24, and STA 51+90 to 56+97. Rehabilitate runway 10-28 from STA 504+00 to 533+40. Construct access road realignment from STA 34+17 to STA 41+43. Construct material site road. Existing 2,400' x 60' of runway 1-19 to remain open.

Phase 2 - Rehabilitate runway 10-28 from STA 504+00 to 56+97 and runway 1-19 from STA 42+00 to STA 51+90. Open temporary runway 1-19 from STA 11+47 to STA 42+30.

Phase 3 - Open all of runway 10-28, rehabilitate runway 1-19 from STA 17+40 to STA 42+00 using half width construction to maintain access to taxiway and apron. Rehabilitate taxiway and apron, using half width construction on the taxiway to maintain access to the apron. Rehabilitate airport access road from STA 10+00 to STA 34+11.
TEMPORARY THRESHOLD MARKER DETAIL

HAZARD MARKER BARRIER NOTES:
1. Place barriers to limit access to the closed runway. Use low style barriers 12 to 15 inches high when adjacent to an active movement area.
2. Shall prevent the extension of runway edge lights and runway threshold lights during closure of the runway.
3. Hazard marker barriers are not to be placed within the OZ of the active runway. Consider jet blast when placing barriers.
4. See CFP section 16.1 for spacing requirements.

ELEVATION VIEW

PREPARATION OF FLAG & FLASHER MOUNT DETAIL
* Flags shall alternate color arrangement on each barrier as they are placed in the airport operations area in sequence.

NOTES:
1. CHEVRONS SHALL BE YELLOW, CONSTRUCTED OF HEAVY FABRIC OR SNOW FENCE FASTENED SECURELY TO THE SURFACE, OR PAINTED DIRECTLY ON THE SURFACE.
2. THRESHOLD BAR AND CENTERLINE MARKINGS SHALL BE PAINTED DIRECTLY ON THE SURFACE. USE WHITE ACRYLIC LOW VOC ZONE MARKING PAINT, AECXEL-22W-D010-C08 OR EQUAL.
3. CONTINUE CENTERLINE MARKING WITH 120' STRIPES, 80' SKIP FOR FULL LENGTH OF RUNWAY. ADJUST STRIPE/SKIP LENGTH AT RUNWAY MIDPOINT AS REQUIRED TO PROVIDE DIMENSIONS ON THIS DETAIL.
4. DURING TEMPORARY NIGHT RUNWAY CLOSURES, PROVIDE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS ON CENTERLINE OF EACH THRESHOLD.
5. SAND BAGS OR OTHER BALLAST USED OVER THE MARKERS SHALL BE OF SIMILAR COLOR TO THE MARKER.

NOTES:
1. CLOSED RUNWAY MARKERS ARE TO BE SPACED AT 1,000' MAXIMUM.
2. THE MARKERS SHALL BE PAINTED YELLOW.
3. MARKERS SHALL BE CONSTRUCTED OF PLYWOOD OR HEAVY FABRIC FASTENED TO GROUND.
4. MARKERS SHALL NOT MOVE OR DEFORM IN WIND OR PROP BLAST.
5. SAND BAGS OR OTHER BALLAST USED OVER THE MARKERS SHALL BE OF SIMILAR COLOR TO THE MARKER.
6. **Equipment Shall Operate On Gravel Pads.** No equipment may operate on unpermitted wetlands, unless the ground is adequately frozen and protected from damage.

7. **See Amblers Airport Rehabilitation Geotechnical Report for Subsurface Conditions at the Airport and Surrounding Area.**

8. **When directed by the Engineer, watering for dust and nox control on the airport and the contractor's haul routes shall be subservient to P-1050.**

9. **Permit Seedings of Embankment Slopes is to occur per Item 1-001-3.**

---

**NOTES:**

1. The Contractor shall consider controls shown on this sheet as general guidance in developing the Storm Water Pollution Prevention Plan (SWPPP). The Contractor shall thoroughly review the slopes and grades shown on the construction plans, profiles and typical sections and understand their relationship with drainage plans and the need for specific erosion and sediment control measures.

2. Install erosion and sediment controls prior to any earth disturbing activities.

3. Provide perimeter protection in areas not shown on the plans as needed to prevent sediment from leaving the project areas.

4. Construct permanent erosion control on all slopes. Install seeding, fertilizers, mulch over all disturbed areas not scheduled to receive surface course immediately. All disturbed areas shall be temporarily or permanently stabilized within 14 days of activity cessation.

5. Install appropriate temporary erosion and runoff control that conforms to Best Management Practices (BMP) at the base of all slopes adjacent to water bodies. The design rainfall amount for the 2-year, 24-hour storm is 1.6 inches.
NOTE:
1. MAINTAIN A 300' BUFFER BETWEEN THE AMBLER RIVER AND ANY EXCAVATION.
2. DO NOT EXPAND THE EXISTING BOUNDARIES OF THE CONTRACTOR STAGING AREA WITHOUT ENGINEERS' APPROVAL. ANY EXPANSION WILL REQUIRE THE CONTRACTOR TO NECESSARY PERMITS AND CLEARANCES.
3. INSTALL EROSION AND SEDIMENT CONTROLS AROUND THE CONTRACTOR STAGING AREA PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
4. EQUIPMENT SHALL OPERATE ON GRAVEL PADS. NO EQUIPMENT MAY OPERATE ON UNPERMITTED WETLANDS UNLESS THE GROUND IS ADEQUATELY FROZEN AND PROTECTED FROM DAMAGE.
5. NO FILL SHALL BE PLACED ON UNPERMITTED WETLANDS (SEE SHEET 14).
6. WHEN DIRECTED BY THE ENGINEER, WATERING FOR DUST AND NOA CONTROL SHALL BE SUBSIDIARY TO P-152Q(2).
7. REFER TO THE APPENDICES OF THE PROJECT SPECIFICATIONS FOR THE WETLANDS PERMIT, NORTHWEST ARCTIC BOROUGH TITLE 9 PERMIT, AND NANA MATERIAL SALES AGREEMENT FOR FURTHER STIPULATIONS.

LEGEND
- CUT LIMITS
- FILL LIMITS
- APPROXIMATE BMP
- SURFACE FLOW DIRECTION
- APPROXIMATE PERIMETER PROTECTION BMP
- LOW WATER CROSSING

AMBLER AIRPORT REHABILITATION
AP# 3-02-0354-61303
ESCP PLAN 2 OF 3
GENERAL SITE INFORMATION:

1. AVERAGE RAINFALL: 23.1 INCHES (WESTERN REGION CLIMATE CENTER)
2. HISTORICAL AVERAGE DATES OF FREEZING TEMPERATURES: SEPTEMBER 25 TO MAY 16 (WESTERN REGION CLIMATE CENTER).
3. APPROXIMATE GROWING SEASON: MAY 3 TO OCTOBER 3 (REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: ALASKA REGION (VERSION 2.0)).
4. SOILS, SLOPES, TOPOGRAPHY: DOMINANT NATIVE SOILS CONSIST OF SILTY SAND/SANDY SILT AND ORGANICS. PERMAFROST IS DISCONTINUOUS. IT SHALL BE EXPECTED THAT FROZEN GROUND MAY BE ENCOUNTERED IN EXCAVATIONS AND TO EXPECT DIFFICULTY HANDLING MOIST OR WET THAWED SILTY SOILS. SLOPES IN THE PROJECT AREA ARE DOMINANTLY 4:1, WITH STEEPER SLOPES ALONG ROADS.
5. VEGETATION: THE MAJORITY OF THE PROJECT AREA IS IN UPLANDS WITH THE EXCEPTION OF THE RUNWAY 19 EXTENSION AREA AND THE ROAD TO THE AREA IS MATERIAL SITE. THE PREVIOUSLY CLEARED OR DISTURBED UPLAND AREA WITHIN THE AIRPORT PROPERTY IS COMPRISED OF WHITE SPRUCE AND ASPEN TREES. MUCH OF THE UPLAND AREA FOR THIS PROJECT IS PARTIALLY VEGETATED BY LOW SHRUB VEGETATION.

PROJECT AREA DATA

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ENVIRONMENTAL INFORMATION:

RECEIVING WATER BODIES: GRIZZLY CREEK, AMBLER AND KOBUK RIVERS

1. IMPAIRED WATER BODIES: NONE
2. TOTAL MAXIMUM DAILY LOAD WATERS: NONE
3. THREATENED AND ENDANGERED SPECIES: SEE APPENDIX C
4. HISTORIC PLACES: SEE APPENDIX C
5. CONTAMINATED SITES OF RECORD: SEE APPENDIX C
6. ALL CONSTRUCTION ACTIVITY SHALL COMPLY WITH THE MIGRATORY BIRD TREATY ACT
7. STORM SEWER: NONE
NOTES:

1. For the airport access road, clear to the row limits.
2. For the material site road, clear as needed for construction and operation but not further than 10' beyond the toe of slopes.
3. Coordinate with FAA before clearing within the ANICS clear zone.
4. Any logs or wood fragments greater than 4 feet long and 4 inches in diameter shall be disposed of off airport property.
5. All clearing activities shall be conducted in a manner such that there will be minimal disturbance to the underlying organic material and be conducted when the ground is frozen and there is adequate snow cover to protect the underlying soil and vegetation.
6. Trees and brush clearing adjacent to or within wetlands shall be done such that it causes minimal impact to wetlands.
7. Areas to receive new embankment, except for the material site road shall be cleared and grubbed.
8. Outside airport property, any trees equal to or greater than 6 inches in diameter measured 1 foot from the ground shall be hand cut and stacked at a location specified by the engineer.
9. Clearing and grubbing of material site B shall be the minimum necessary. Clearing and grubbing of site B is subsidiary to items mined from this material site.

CLEARING LIMITS

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NOTES
1. ALL MINING ACTIVITIES SHALL BE IN FULL COMPLIANCE WITH THE MATERIAL SALES AGREEMENT AND SITE SPECIFIC ASBESTOS COMPLIANCE PLAN.
2. NEW PITTS SHALL BE DESIGNED TO MINIMIZE THE ENVIRONMENTAL FOOTPRINT.
3. STOCKPILING OF MATERIAL OUTSIDE OF THE MATERIAL SITE BOUNDARIES WILL NOT BE ALLOWED. THE EXACT LOCATION AND DIMENSION OF THE STOCKPILES WITHIN THE BOUNDARIES SHALL BE DETERMINED BY THE CONTRACTOR. OVERBURDEN SHALL BE RECOVERED TO A DESIGNATED AREA FOR USE IN RECLAMATION.
4. MAINTAIN A 300' VEGETATIVE BUFFER BETWEEN OVERBURDEN STORAGE AREAS AND THE AMBLER RIVER.
5. INDIVIDUAL BENCH HEIGHTS SHALL NOT EXCEED 25 FEET.
6. AT COMPLETION OF THE PROJECT, OVERBURDEN STOCKPILES SHALL BE PUSHED INTO THE MINED AREA SUCH THAT THE MATERIAL IS SUBMERGED. VEGETATION STOCKPILES WILL BE SPREAD OVER HIGHWALLS ABOVE THE WATER TABLE, AND THE HIGHWALLS WILL BE GRADED TO SLOPE OF 3 HORIZONTAL TO 1 VERTICAL.
I. All sideslopes and other areas to be seeded shall be covered with 6" of non-NoA mineral soil or 6" of topsoil with vegetation or 12" of wood chips/shreeds or slash.

2. Ditches shall be a minimum 3' deep. If additional material is required, the engineer may approve deeper ditches or flatter backslopes provided that they are graded to drain and there are no property or other conflicts.

3. Runway lights are excluded from the runway safety area.

4. Back slope for ditches with no special cut limit specified shall be 4:1.

5. In areas with special cut limits where the typical section is in fill conditions, grade a constant slope from 10' beyond the toe of slope to the special cut limit.

NOTES:

1. All sideslopes and other areas to be seeded shall be covered with 6" of non-NoA mineral soil or 6" of topsoil with vegetation or 12" of wood chips/shreeds or slash.

2. Ditches shall be a minimum 3' deep. If additional material is required, the engineer may approve deeper ditches or flatter backslopes provided that they are graded to drain and there are no property or other conflicts.

3. Runway lights are excluded from the runway safety area.

4. Back slope for ditches with no special cut limit specified shall be 4:1.

5. In areas with special cut limits where the typical section is in fill conditions, grade a constant slope from 10' beyond the toe of slope to the special cut limit.
NOTES:
1. All sideslopes and other areas to be seeded shall be covered with 6" of non-NoA mineral soil or 6" of topsoil with vegetation or 1/2" of wood chips/shreds or slash.
2. Ditches shall be a minimum 3' deep. If additional material is required, the engineer may approve deeper ditches or flatter backslopes provided that they are graded to drain and there are no property or other conflicts.
3. Runway lights are excluded from the runway safety area.
4. Back slope for ditches with no special cut limit specified shall be 4:1.
5. In areas with special cut limits where the typical section is in fill conditions, grade a constant slope from 1' beyond the toe of slope to the special cut limit.

DUST PALLIATIVE
9" Crushed Aggregate Surface Course
Geotextile, Separation
12" Subbase
12" Borrow A
Geotextile, Separation
Unclassified Excavation

RUNWAY TYPICAL SECTION
R/W 01-19 STA 37+35 TO 40+05

Borrow B
Limit of Excavation

NON-NOA COVER (TYP)(SEE NOTE)
Dust Pllilative
9" Crushed Aggregate Surface Course
Geotextile, Separation
12" Subbase
12" Borrow A
Geotextile, Separation
Unclassified Excavation

RUNWAY TYPICAL SECTION
R/W 01-19 STA 37+35 TO 40+05

0.0%

UNCLASSIFIED
EXCAVATION

Borrow B
Limit of Excavation

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION—DESIGN AND CONSTRUCTION—AMBLER

ALBERT M. L. RECK, P.E.
DESIGN GROUP CHIEF
NOTES:

1. ALL SIDESLOPES AND OTHER AREAS TO BE SEEDED SHALL BE COVERED WITH 6" OF NON-NOA MINERAL SOIL 6" OF TOPSOIL WITH VEGETATION, OR 12" OF WOOD CHIPS/SHREDS OR SLASH.

2. DITCHES SHALL BE A MINIMUM 3' DEEP. IF ADDITIONAL MATERIAL IS REQUIRED, THE ENGINEER MAY APPROVE DEEPER DITCHES OR FLATTER BACKSLOPES PROVIDED THAT THEY ARE GRADED TO DRAIN AND THERE ARE NO PROPERTY OR OTHER CONFLICTS.

3. BACK SLOPE FOR DITCHES WITH NO SPECIAL CUR TYPIL SPECIFIED SHALL BE 4:1.

4. IN AREAS WITH SPECIAL CUR TYPIL WHERE THE TYPICAL SECTION IS IN FILL CONDITIONS, GRADE A CONSTANT SLOPE FROM 10' BEYOND THE TOE OF SLOPE TO THE SPECIAL CUR CUT LIMIT.
1. All sideslopes and other areas to be seeded shall be covered with: 6" of non-NOA mineral soil, 6" of topsoil with vegetation, or 12" of wood chips/shreds or slash.

2. Ditches shall be a minimum 3' deep. If additional material is required, the engineer may approve deeper ditches or flatter backslopes provided that they are graded to drain and there are no property or other conflicts.

3. Ditches along the access road shall be narrowed to match existing terrain from STA 10+00 to STA 34+60.
INTERSECTION GRADING PLAN DETAIL

NOTE: ELEVATIONS ARE PROFILE GRADE
WASTE AREA NOTES:
1. WASTE CONTAINING NOA SHALL BE COVERED WITH NON NOA COVER. SEE TYPICAL SECTION FOR NOA COVER REQUIREMENTS.
2. WASTE AREA SHALL BE GRADED TO DRAIN AWAY FROM THE RUNWAY.
1. No work shall be performed on lease lots. Match existing grade at lease lot boundaries.

2. The back of the spot elevation grid is from 50 ft. lateral offset increments of the taxiway stationing.

3. Provide smooth transitions between all finished grade spot elevation locations.

4. See Sheet B1 for existing building locations and new building layout.

5. Extend apron beyond the grid to the coordinates shown. Typical section shall match the apron typical section.

6. Extents of apron rehabilitation - Airport boundary - 50' o.c. spacing (TYP).
EXISTING CULVERTS

1-5 STA 21+70

100' WIDE ROW BOUNDARY

1. CURVE ID
   \[ \Delta = 9.45' \]
   \[ R = 588' \]
   \[ L = 589.23' \]
   \[ T = 322.03' \]
   \[ PI = 13+73.84 \]

   NORTHING = 4785535.2
   EASTING = 1659119.41

2. CURVE ID
   \[ \Delta = 229.10' \]
   \[ R = 25' \]
   \[ L = 90' \]
   \[ T = 322.03' \]
   \[ PI = 26+49.34 \]

   NORTHING = 478784.94
   EASTING = 1659575.39

NOTE:

STATIONS 19+00 TO 24+00 ARE BEING RECONSTRUCTED UNDER AMBLER BRIDGE #1552 REPLACEMENT (03251) WHICH MAY BE CONCURRENT TO WORK UNDER THIS CONTRACT. INFORMATION SHOWN ON THESE PLANS DEPICT PLANNED CONSTRUCTION UNDER THIS SEPARATE PROJECT. DO NOT BEGIN WORK SOUTH OF STATION 30+00 UNTIL AFTER OCTOBER 31, 2014 WITHOUT PERMISSION FROM THE ENGINEER.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION—DESIGN AND CONSTRUCTION-AVIATION

AMBLER AIRPORT REHABILITATION
61303

ACCESS ROAD PLAN & PROFILE SHEET 1 OF 2
NOTE:

VERTICAL PROFILE IS APPROXIMATE AND SUBJECT TO MINOR APPROVALS AS APPROVED BY THE ENGINEER. IN NO CASE SHALL THE GRADE EXCEED 13%.

MATERIAL SITE ROAD

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MATERIAL SITE ROAD SHT 1 OF 5

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

NORTHERN REGION DESIGN AND CONSTRUCTION-AVIATION

AMBLER AIRPORT REHABILITATION

61303
AP # 3-02-0354---61303

DESIGN SHEET

MATERIAL SITE ROAD SHT 1 OF 5

DESIGN GROUP CHIEF

10/21/10

DRAWN BY

CHECKED BY

DATE REVISIONS
11 CURVE ID
De = 14.32
E = 84.22
L = 100.46
N = 4795400.82
E = 1667920.98

PI STA = 2104+76.49
N = 4795400.82
E = 1667920.98

12 CURVE ID
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E = 84.22
L = 170.06
N = 4795709.64
E = 1068597.79

PI STA = 2117+84.39
N = 4798255.64 E = 1669207.78

DESIGN / STATE
OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION-DESIGN AND CONSTRUCTION-AVIATION

AMBLER AIRPORT REHABILITATION
61303
AP # 3-02-0354-___/61303
MATERIAL SITE ROAD SHT 4 OF 5

MATERIAL SITE ROAD SHT 4 OF 5
SIGNING NOTES

1. REMOVE AND DISPOSE OF ALL EXISTING SIGNS AND SIGN FOUNDATIONS WITHIN THE PROJECT LIMITS, EXCEPT THOSE DESIGNATED FOR REINSTALLATION, SALVAGE OR OTHERWISE NOTED.

2. MOUNTING HEIGHTS ARE PER STANDARD DRAWING S-05.01 UNLESS OTHERWISE NOTED.

3. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.

4. INSTALL POST SIGNS WITH SUITABLE TYPE CONCRETE FOUNDATION PER STANDARD DRAWING S-30.03. ATTACH THE SIGN POST TO THE SUITABLE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHER AND TWO FLAT WASHERS.

5. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO SIGN POSTS WITH ALUMINUM DRIVE RIVETS. WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.

6. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE FASTENER SPECIFICATION TABLE ON THIS SHEET.

7. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR OUT OF DATE SIGNING UP AT ANY TIME.

8. ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.

9. ALL LETTERING THAT INCLUDES UPPER AND LOWER CASE LETTERS SHALL BE SERIES E-WIDTHED AS NOTED IN APPENDIX E OF THE AS5 DESIGN, EXCEPT FOR 0.5" SIGNS WHICH ARE SERIES 2000 LETTERS.

10. LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, SYSTEM AND SANDBOX SPOUTS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.

FASTENER SPECIFICATION TABLE

<table>
<thead>
<tr>
<th>FASTENERS</th>
<th>STEEL</th>
<th>STAINLESS STEEL</th>
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</thead>
<tbody>
<tr>
<td>BOLTS</td>
<td>ASTM A 307</td>
<td>ASTM F 593</td>
</tr>
<tr>
<td>NUTS</td>
<td>ASTM A 563</td>
<td>ASTM F 594</td>
</tr>
<tr>
<td>WASHERS</td>
<td>ASTM F 844</td>
<td>ASTM A 480</td>
</tr>
</tbody>
</table>

These specifications apply to all sign fastener hardware on the project.
NOTES:

1. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING ATTACH THE FRAME USING TWO POST CUPS ON EACH SIDE. A C-_SHAPE BRACKET ON PIPES OR A BRACKET WITH SQUARE CORNERS ON TUBES.

2. THE TUBE BRACKETS USED ON EACH INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.

3. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.

4. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR ZEE SHAPE FRAMING AND RIVETS.

FRAMED SIGN ATTACHMENT BRACKETS

3/8" WINDBEAM BOLT AND LONG NUT

EXTRUDED ALUMINUM WINDBEAM

NOTES:

1. ALUMINUM ALLOY 6061-T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.

2. ATTACH SIGNS TO WINDBEAM WITH 3/8" RIVETS AT 4" STAGGERED SPACING.
SEGMENTED CIRCLE NOTES:

1. ALL STRUCTURAL MEMBERS ARE GS-PST (GAULANIZED STEEL - PERFORATED SQUARE TUBING) SIZE AS INDICATED IN DRAWING.

2. ALL BOLTS USED TO FASTEN PANEL ASSEMBLY TOGETHER SHALL BE 3/8" X 4" ZINC PLATED STEEL BOLTS AND WILL INCLUDE 2 EA 3/8" WASHERS AND 1 EA 3/8" NUT, USE 5/8" NUT UNLESS OTHERWISE NOTED.

3. PLACE 9/16" HOLES IN ALUMINUM SHEET PANELS AT BOLT LOCATIONS AS INDICATED IN DRAWING, ATTACH TO FRAME USING 9/16" X 4" ZINC PLATED STEEL BOLTS WHERE LATERAL AND MOUNTING FRAME MEMBERS INTERSECT AND 3/8" X 5" ZINC PLATED STEEL BOLTS THROUGH LATERAL MEMBERS ONLY.

4. ALL GUSSET PLATES SHALL BE FABRICATED FROM 1/4" GAULANIZED STEEL PLATE, SEE DETAIL SHEET FOR FABRICATION DIMENSION.

5. PERFORM NECESSARY EARTHWORK TO MEET 3' EMBANKMENT DEPTH AND PROVIDE STABLE AND/OR WEIGHT AROUND CIRCLE AS DIRECTED BY ENGINEER.

6. ONE PANEL ASSEMBLY IN THE CIRCLE SHALL BE DETACHABLE FROM BASE AT TOP OF MOUNTING TO ALLOW EQUIPMENT ACCESS INTO CIRCLE, LOCATION OF REMOVABLE PANEL TO BE DETERMINED BY ENGINEER (SEE DETAIL D).

7. DIMENSIONS Labeled "RED" ARE FOR INFORMATIONAL PURPOSES ONLY.

8. CONSTRUCT PAD OF APPROXIMATELY THREE FEET OF BORROW EMBANKMENT.
NOTE:
OVERFLOW PIPES AT AIRPORT ACCESS ROAD STATIONS 38+95.5, 39+04.5 SHALL BE VERTICALLY SKewed SUCH THAT THE INLET INVERTS (NORTH) ARE AT THE ELEVATION 200.5' AND THE OUTLET INVERTS (SOUTH) ARE AT ELEVATION 189'.

NOTE:
DEPRESS RIPRAP 12" INTO CHANNEL BOTTOM AND MATCH TOP OF CHANNEL ELEVATION.
CONTINUE 3% ROAD CROSS SLOPE THROUGH GATE WIDENING.

ATTACH PIN TO GATE RAIL. HOLE 1/16" X 3/16" X .060" STEEL SHAFTE.

LANYARD LOOP THROUGH PIN RING. USE EYELET X 1/4" X 7" TAPPING SCREWS GATE RAIL.

SILVER Hinges:

HOLE FOR LATCH PIN PIVOT AND HINGE PLATE.

Hinges are recommended.

NOTE:

Check details of GRADE POST FOUNDATION and CONCRETE FOUNDATION for this design.

HOLE FOR LATCH PIN PIVOT AND HINGE PLATE.

SITE PLAN

GATE DETAILS 2 OF 2

AMBLER AIRPORT REHABILITATION

WASHINGTON COUNTY, ALASKA
NOTES

1. REMOVE RUNWAY, THRESHOLDS, RUNWAY LIGHTS & LIGHT BARS, AND CORRESPONDING ISOLATION TRANSFORMERS. LIMITS OF DEMOLITION INCLUDE ALL EXISTING UNDERGROUND FACILITY, CABLE, AND GROUNDING COMPONENTS ENCOUNTERED DURING EXCAVATION FOR THIS WORK.

2. THIS DRAWING SHEET DOES NOT SHOW WORK ASSOCIATED WITH THE AMBLER SHERIFF'S SCOPE. REFER TO SHEETS WITH SHEET NUMBERS BEGINNING WITH "B".

3. UTILITY DEMOLITION TO BE COORDINATED WITH FLN. REFER TO SHEET E14.

4. DEMOLISH AND REMOVE THE EXISTING FUELLING, THE SIZE BEING APPARENTLY EQUAL TO THE ADDITIONAL PORTION OF THE NO. EEB. SEE DRAWINGS Bxx FOR ADDITIONAL FUELLING WORK.

5. ALL REMOVED ITEMS DETERMINED NOT USEABLE BY THE OWNER, SHALL BECOME THE PROPERTY OF THE CONTRACTOR WHO IS RESPONSIBLE FOR DISPOSAL. THE CONTRACTOR SHALL DELIVER THE REMOVED EQUIPMENT TO THE HOUSING.

6. COORDINATE ALL ELECTRIC UTILITY LINE WORK, ELECTRIC SERVICE OUTAGES, AND METER REMOVALS WITH THE AMBLER PLANT OPERATOR.
NOTES
1. THIS PROJECT INCLUDES, BUT IS NOT LIMITED TO, INSTALLATION OF A COMPLETE AND OPERATIONAL RUNWAY LIGHTING SYSTEM, THREE LIGHTED WIND CONES WITH POLES, ROTATING BEACON, PARALLEL, UNIFORM SYSTEM, PAPI/REIL FOUNDATIONS, AND ELECTRICAL EQUIPMENT BUILDING (EEB) WITH ELECTRICAL EQUIPMENT IN THE EEB.

2. USE RSC AT ALL ROADWAY, TAXIWAY, AND RUNWAY CROSSINGS UNLESS OTHERWISE NOTED.

3. GROUNDING:
   - TWO SEPARATE GROUNDING SYSTEMS ARE DEPICTED ON THE DRAWINGS. EACH GROUNDING SYSTEM INCLUDES A SEPARATE SET OF GROUND RODS. THE SYSTEMS SHALL BE KEPT ELECTRICALLY SEPARATE EXCEPT FOR CONNECTION TO THE GROUNDING ELECTRODE SYSTEM ASSOCIATED WITH STRUCTURES SERVED BY THE BURIED GROUNDING SYSTEM. SEE SPECIFICATIONS L-158.

   A. LIGHTNING PROTECTION COUNTERPOISE (LPC) – THIS IS INSTALLED ABOVE THE FM PAPI/REIL CONDUITS AND CABLES. THE LPC GUARD WIRE IS BONDED TO GROUND RODS USING EXOTHERMIC WELDS. LPC GROUND RODS ARE LOCATED AT EACH PAPI/REIL JUNCTION BOX.

   B. EQUIPMENT GROUNDING SYSTEM (EGC) – FOR RUNWAY AND TAXIWAY LIGHTING, A GROUND ROD IS TO BE INSTALLED AT EACH LIGHT BASE AND HANDHOLE. THE LOCATIONS OF THE EGC GROUND RODS ARE NOT SHOWN ON THE PLANS. ANY GROUND RODS SHOWN ON THE PLANS ARE IN ADDITION TO THOSE REQUIRED ABOVE.

4. VASI SYSTEM TO BE DEMOLISHED. SEE PREVIOUS SHEET.


REFER TO SHEET E8 FOR THRESHOLD. TRENCH SECTION SIMILAR TO D-B BUT WITHOUT WIND CONDUCT.
### Runway and Taxiway Light Schedule

<table>
<thead>
<tr>
<th>Light</th>
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<tr>
<td>RWY PLANNED</td>
<td>RWY PLANNED</td>
<td>24</td>
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<td>45W INCANDESCENT</td>
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<tr>
<td>L-861</td>
<td>DECK THRESHOLD</td>
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<tr>
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<td>N/A</td>
<td>30/45 WATT</td>
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Transformer rating shall be matched to requirements of equipment installed.

**Notes:**
1. All underground conduit 2" deep except segments indicated.
2. L-861 lights may be replaced by L-861E, see sheet E8.
3. Refer to sheet E8 for threshold.

### RWY-RWY Intersection Detail

**RWY-RWY Intersection Detail**

**Ambler Airport**

**Airport Improvements**

**Runway Lighting Plan (2 of 3)**
NOTES
1. ALL UNDERGROUND CONDUIT 2" HOPE THIS SHEET EXCEPT FOR SEGMENTS INDICATED.
   REFER TO SHEET EB FOR THRESHOLD.
NOTES
1. THIS DRAWING SHEET DOES NOT SHOW WORK ASSOCIATED WITH THE AMBLER SREB SCOPE. REFER TO DRAWINGS WITH SHEET NUMBERS BEGINNING WITH "B".
2. UNDERGROUND POWER CABLES NOT ACCURATELY LOCATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE CIRCUITS BEFORE STARTING WORK AND AVOID DAMAGE.
3. PRIMARY/WIND CONE LIGHTING CIRCUIT HANDHOLES ARE L-867, CLASS M, SIZE B.
4. PRIMARY WIND CONE HANDHOLE IS L-867, CLASS M, SIZE D, LOCATED WITHIN 8' OF WIND CONE. OTHER HANDHOLES IN PRIMARY WIND CONE CIRCUIT ARE L-867, CLASS M, SIZE B.
5. SEE WIND CONE DETAILS SHEET E11.
6. JUNCTION BOX SERVES AS LOW POINT DRAIN THROUGH SWALE.

TW TURNOUT LIGHTING DETAIL

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

PLANS DEVELOPED BY:
PDC, INC.

AMBULER AIRPORT
AIRPORT IMPROVEMENTS
AIP NO. 3-02-0354-_______/61303
APRON DETAIL
NOTE:
1. THIS DRAWING SHEET DOES NOT SHOW APRON EXPANSION, SREB REPLACEMENT, TIPDOWN AIRPORT BEACON POLE DETAILS, AND OTHER WORK ASSOCIATED WITH THE AMBLER SREB SCOPE. REFER TO DRAWINGS WITH SHEET NUMBERS BEGINNING WITH "B".

COORDINATE WITH AVEC TO CONNECT OVERHEAD SERVICE LATERAL TO THE EEB. SERVICE LATERAL SHALL NOT EXCEED 50 FEET IN LENGTH. NEW EEB LOAD IS HIGHER THAN EXISTING, SEE SHEET E14.

COORDINATE WITH AVEC TO CONNECT OVERHEAD SERVICE LATERAL TO THE SREB. REFER TO AMBLER SREB SHEETS B1 AND B4 FOR ADDITIONAL LOAD INFORMATION.

PROVIDE AIRPORT BEACON DISCONNECT SWITCH ON EEB AND UNDERGROUND RACEWAY AND WIRING INDICATED ON SHEET E13 AND E17. NEW TIPDOWN BEACON POLE PROVIDED AS INDICATED UNDER AMBLER SREB SCOPE.

FIRE AND ENSURE SEPARATE SPACES IN NEW EEB. SEE EEB ELECTRICAL PLANS FOR CONDUIT ENTRANCE.

HANDHOLE SHALL BE L-867, CLASS IA, SIZE B.

7. AIRPORT LIGHTING CONDUIT BURIAL DEPTH MINIMUM 18". SLOPE CONDUIT INSTALLATION TO DRAIN TOWARDS HANDHOLES AND J-BOXES.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

AMBLER AIRPORT IMPROVEMENTS
AIP NO. 3-02-0354-00000-61.303
EEB SITE PLAN

PLANS DEVELOPED BY:
PDC, INC.

ALBERT M.L. BECK
DESIGN GROUP CHIEF

DATE 2.12.14

CHECKED: MSS

DRAWN: A2

REV. E6/81
BACKFILL PER SPECIFICATION

SECTION A-A TRENCH FOR AIRPORT LIGHTING AND PRIMARY WINDCONE UNDER TAXIWAY

SECTION B-B TRENCH FOR APRON WEST SIDE

SECTION C-C TRENCH FOR TAXIWAY SOUTH SIDE

SECTION D-D TRENCH FOR THRESHOLD RUNWAY 01

SECTION E-E TRENCH FOR PAPI AND AIRPORT LIGHT CIRCUIT

SECTION CUTS ON SHEETS E2, E5 AND E22

Drawn: JLC
Check: ALBERT M.L. BECK
Approved: ALBERT M.L. BECK

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

AMBLER AIRPORT
AIRPORT IMPROVEMENTS
AIP NO. 3-02-0354-_____/61303
TRENCH SECTIONS

PLANS DEVELOPED BY:
PUC, INC.

1. All HOPE DUCTS FOR PAPI AND REIL SHALL HAVE A PULL ROPE PROVIDED AS SUPPLIED BY MANUFACTURER IF NO CONDUCTORS ARE INSTALLED.

The conduit slopes down to J-Box. See sheet E18.
See REL detail sheets for placement of rels and related raceways.

Refer to REL sheets for placement of rels and related raceways.

Refer to plan sheets for placement of rels and related raceways.

Edge safety area.

Threshold lighting detail

Runway 01

No scale

Threshold lighting detail

Runway 10, 19, 28

No scale

Sheet notes

If RED flashing units are made operational, threshold lights shall be L-BRITE. If RED flashing units are not made operational, threshold lights shall be L-BRITE. Coordinate with FAA.

See next sheet for additional details.

State of Alaska

Department of Transportation and Public Facilities

Northern region

Plans developed by:

PDC, Inc.

Ambl er Airport

Airport improvements

AIP no. 3-02-0354-00/61303

Airport lighting details (1 of 3)
RETRO REFLECTIVE SHEETING, W180’ GREEN REFLECTIVE BAND TOWARD APPROACH AND 180’ RED REFLECTIVE BAND TOWARD RUNWAY

RUNWAY THRESHOLD

THRESHOLD LIGHTING SECTION RWY 01

NO SCALE

RUNWAY THRESHOLD

THRESHOLD LIGHTING SECTION RWY 0,19, 28

NO SCALE

THRESHOLD DETAIL RWY 01, 19, 28

NO SCALE

TYPE II REFLECTIVE MARKER SCHEDULE

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REFLECTIVE CONE SCHEDULE

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<tr>
<td>RUNWAY LIGHTS</td>
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</table>

24” CONE

NO SCALE

STATE OF ALASKA PLANS

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

PLANS DEVELOPED BY:

PDC, INC.

AMBLER AIRPORT
AIRPORT LIGHTING DETAILS (2 OF 3)

AIRPORT IMPROVEMENTS

AIRPORT NO. 3-02-0354--/61303

ALBERT M. BRECH DESIGN GROUP CHIEF

PDC, INC.
**Primary Wind Cone Disconnect - Front View**

- Steel cone set 1/2" below finished grade
- See light base burial detail sheet E10
- 2½" hole for each terminated cable
- Lay transformer on platform; tank cables such that all connectors are at top of base; load 2¾" of stack for each terminated cable

**Wind Cone Assembly - Typical**

- Runway lighting circuit
- Isolation transformer located in wind cone handle, mounted to wind cone
- Constant-brightness cone cover adapter in wind cone
- L-823 1-pole male connector (primary)
- L-823 secondary connector
- Cover to degalv. connector if required
- Connect ground wire to base ground
- LED isolation transformer
- LED lights

**Supplemental Wind Cone Hand Hole Detail**

- 2½" hole for each terminated cable

**Supplemental Wind Cone Wiring Diagram**

- 1" B.C. metal conduit to E29 - See plans
- 2½" hole for each terminated cable

**Sheet Notes**

- Type, size, and positioning of anchor bolts and associated hardware shall be in accordance with manufacturer's instructions.
- Anchor bolts shall be threaded for nuts.
- Circuit size and positioning shall be in accordance with manufacturer's instructions.
- Wind cone shall be for type L-823 style 1-8, size 1, 1½" if, internally loaded with LED lights and obstruction light for operation on 120 volts.
- Supplemental wind cone shall be for type L-823 style 1-8, size 1, 1½" if, internally loaded with LED lights and obstruction light for operation on 24 volt series lighting circuit.
- Primary wind cone disconnect shall be for type L-807 hand hole, class II (1/2" diameter). Install within 5' of wind cone.
- Weatherproof outlet shall be 20 amp duplex receptacle in weatherproof box with 7/16" thick metal cover. Connect outlet to source size of wind cone disconnect switch.

**Wind Cone Pole Mounting Elevation**

- 1½" offset galvanized nuts, tips
- 1½" offset galvanized washers, tips
- See foundation

**Wind Cone Pole Mounting Plan View**

- No scale

---

**Design Notes**

- Designed by:
- Approved by:
- Date:

**State of Alaska**

**Department of Transportation and Public Facilities**

**Northern Region**

**Plans Developed By:**

**AMBLER AIRPORT**

**Airport Improvements**

**AIP No.: 3-02-0354---/61303**

**Wind Cone Details**
**EQUIPMENT LIST (OVAL NUMBERS)**

**ITEM**

1. CURRENT CENTER PANEL, L-201, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR. SEE SPECIFICATIONS L-100.
2. CURRENT CENTER PANEL, L-201, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
3. CURRENT CENTER PANEL, L-201, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
4. CURRENT CENTER PANEL, L-201, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
5. CURRENT CENTER PANEL, L-201, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.

**DESCRIPTION**

- ELECTRICAL CENTER PANEL, L-201, 15 KV, 600 A, 3-STEP, 3 PHASE, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
- ELECTRICAL CENTER PANEL, L-201, 15 KV, 600 A, 3-STEP, 3 PHASE, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
- ELECTRICAL CENTER PANEL, L-201, 15 KV, 600 A, 3-STEP, 3 PHASE, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
- ELECTRICAL CENTER PANEL, L-201, 15 KV, 600 A, 3-STEP, 3 PHASE, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.
- ELECTRICAL CENTER PANEL, L-201, 15 KV, 600 A, 3-STEP, 3 PHASE, MOUNT TOP AT 5'-0" ABOVE FINISHED FLOOR.

**SYMBOLS**

- FLUORESCENT FIXTURE WITH JUNCTION BOX
- WALL MOUNTED, BATTERY OPERATED EMERGENCY FIXTURE
- SINGLE POLE SWITCH
- DUPLR RECEPCTBLE
- OPEN-CIRCUIT INTERRUPTER, CIRCUIT BREAKER RECEPCTBLE
- SPECIAL PURPOSE RECEPCTBLE, MARKET TYPE AS SHOWN
- LOCATION BOX
- DEVICE SYMBOL, STATIONary NON-FIRED
- PANEL BOX

**MOUNTING HEIGHT SCHEDULE**

- BRANCH CIRCUIT HOME RUN TO PANEL BOX - No. of Amps Indicates Number of Circuits. Panel and Circuit Numbers As Shown
- NUMBER OF CONDUCTORS IN PANEL BOX - Allowance at Marks Indicates One Line and One Neutral Conductor and Equipment grounding conductor, etc., in three phases. Equipment grounding conductors indicated.
- NOT ALL SYMBOLS ARE USED

**NOTES**

1. ALL CONDUIT AND DEVICE TO BE MOUNTED IN H penetrations. ALL INTERIOR 12/3 Cu wire shall be 1/2" and shall be insulated. SURFACE MOUNTED, AND TO LOCATION SHOWN ON CONTRACTORS' DRAWINGS.
2. PROVIDE AND INSTALL AN INSULATED GREEN-COLOR-CODED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT TO GROUND ALL ELECTRICAL FIXTURES AND DEVICES, INCLUDING I-JUNCTIONS.
3. ALL CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, THERMAL, MINIMUM TYPE, 1/2"-ON, WITH TOP BAKED SQUARE 0 OR EQUAL.
4. ALL ELECTRICAL MACHINES, THERMAL AND MATERIAL SHALL COMPLY TO THE 2011 EDITION OF THE N.E.C.
5. ALL EXTERIOR PANELS SHALL Be SEALED WITH SILICONE SEALANT.
6. COOLING THERMOSTAT TO BE CONNECTED TO EMERGENCY POWER SUPPLY AND SHUTTER MOTOR WHEN CALLING FOR COOLING.

**ELECTRICAL EQUIPMENT BUILDING SERVICE EQUIPMENT ELEVATION**

**AMBLER AIRPORT**

**AIRPORT IMPROVEMENTS**

**AP NO. 3-02-0354-____-61303**

**E13/ EEB ELECTRICAL DETAILS (2 OF 3)**

**DESIGN GROUP CHIEF**

**PLANS DEVELOPED BY:**

**FDC, INC.**

**DATE 2-12-14**

**STATE OF ALASKA**

**DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**

**NORTHERN REGION**

**APPROVED**

**ALBERT M. L. BECK**

**DESIGN GROUP CHIEF**

**DATE 2-12-14**

**REVISIONS**

**E13/ 81**
### PANEL "A"

**VOLTAGE:** 120/240V, 1PH, 3W  
**MIN. A.L.C.:** 10,000 A  
**MIN. BUS:** 225A  
**MIN. A.I.C. RATING:** 10,000  
**MOUNTING:** SURFACE  

**LOAD SUMMARY**:  

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<th>LOAD DESCRIPTION</th>
<th>VA</th>
<th>AMP</th>
<th>PH</th>
<th>PHASE</th>
<th>NOTE</th>
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**TOTAL AMPERES:** 102.5  
**TOTAL KVA:** 90.3  
**TOTAL NOTES:** 1. TOTAL LOAD IS SUM OF THE PANEL LOADS.

---

### PANEL "B"

**VOLTAGE:** 120/240V, 3W  
**MIN. A.L.C.:** 10,000 A  
**MIN. BUS:** 100A  
**MIN. A.I.C. RATING:** 10,000  
**MOUNTING:** SURFACE  

**LOAD SUMMARY**:  

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<thead>
<tr>
<th>LOAD DESCRIPTION</th>
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<th>PH</th>
<th>PHASE</th>
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**TOTAL AMPERES:** 100  
**TOTAL KVA:** 100  
**TOTAL NOTES:** 1. TOTAL LOAD IS SUM OF THE PANEL LOADS.

---

**SHEET NOTES**

1. TOTAL LOAD IS SUM OF THE PANEL LOADS.

---

**DESIGN MAN.**  
**DRAWN:**  
**CHECKED MAN.**  
**DATE:**  
**REVISIONS:**

---

**STATE OF ALASKA**  
**DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**  
**NORTHERN REGION**  
**APPROVED:** ALBERT M.L. BECK  
**DATE:** 2.12.14  
**DESIGN GROUP CHIEF:**

---

**PLANS DEVELOPED BY:**  
**PDC, INC.**

---

**AMBLER AIRPORT**  
**AIRPORT IMPROVEMENTS**  
**AP NO.:** 3-02-0354---/61303  
**EET ELECTRICAL DETAILS (3 OF 3)**
POWER ONE-LINE DIAGRAMS

NO SCALE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

PLANS DEVELOPED BY:
PDC, INC.

AMBLER AIRPORT
AIRPORT IMPROVEMENTS
AIP NO. 3-02-0354-____]!=/61303
POWER ONE-LINE DIAGRAM

Sheet 15/81

DESIGN - MW

CHECKED - MW

DATE: 11:17 AM

Sheet

E15

11/03/14
AIRPORT LIGHTING CONTROL PANEL:
The airport lighting control panel incorporates automatic control of airport lighting based on:
1. DAYLIGHT SENSING AND REMOTE RADIO SIGNALS FROM AIRCRAFT.
2. The panel also allows manually initiated tests and complete manual operation of lighting from the electrical equipment building.
3. Airport lighting controlled manually includes runway/taxiway, airport beacon, and primary wind cone.

SUPPLEMENTARY WIND CONES ARE NORMALLY POWERED DIRECTLY FROM THE RUNWAY LIGHTING CIRCUIT; SEE PANEL FOR INFORMATION.

SEE SPECIFICATIONS L-109 FOR ADDITIONAL REQUIREMENTS.

CONTROL PANEL FEATURES:
1. This is the primary function of the control panel and associated radio controller. The pilot light indicates the control panel is energized.
2. Airport lighting mode - three position switch.
   - Selects the airport lighting control mode.
   - Mode is initiated from the runway/taxiway lighting control panel.
3. Airport lighting control - two position switch.
   - Selects the airport lighting control mode.
   - Radio: Airport lighting controlled by radio controller only.
   - Auto: Airport lighting controlled by radio controller and/or photocontrol.

CONTROL PANEL FRONT LAYOUT:

NOTES:
1. Relay coil, core, and fix shall be sized minimum for design input. All other contacts relay coil shall be sized by the supplier and/or contractor to meet requirements.
2. Power relay C1 and C2 shall be off due contacts rated for 1/2 HP at 120 or 240 VAC.
3. Timing relay 1 shall be adjustable 0-30 min. Rating of design is 80000, coil 12 VDC, energizing motor driven reset timer no. 645-6-44 or equal.

RUNWAY LIGHTING CONTROL PANEL DIAGRAM:

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

PLANS, DEVELOPED BY:
PDC, INC.

AMBLER AIRPORT
AIRPORT IMPROVEMENTS
AP NO. 3-02-3354-1/0/3
AIRPORT LIGHTING CONTROL (1 OF 2)

DESIGN:\n\[Signature\]
\[Signature\]

CHECKED:\n\[Signature\]
\[Signature\]

DATE: 2/19

By DATE

Revisions:

E16 SHEET

1/81
**DESIGN:**

**DRAWN:** LC

**CHECKED:** LC

---

**PAPIREIL JUNCTION BOX DETAIL**

NO SCALE

Product shall be HUBBELL QUAZITE No. PG2436BA30 Box and PG2436HA00 Cover or approved equal. Bottom extension not needed. Open bottom. Refer to Drain Rock and Filter Fabric detail. THIS SHEET.

---

**DRAIN ROCK AND FILTER FABRIC DETAIL**

NO SCALE

Conduit stubbed 2' into box through field-drilled holes, typical.

---

**PAPIREIL J-BOX CONDUIT ENTRY**

NO SCALE

---

**PLAN VIEW**

---

**PLAN VIEW**

---

**STATE OF ALASKA**

**DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**

**NORTHERN REGION**

APPROVED: ALBERT M. BECK

DATE: 1/22/14

DESIGN GROUP CHIEF

---

**PLANS DEVELOPED BY:**

**PDC, INC.**

---

**AMBLER AIRPORT**

**AIRPORT IMPROVEMENTS**

AIP NO. J-02-0354-_______/61303

**J-BOX DETAILS**

---

**SHEET NOTES**

1. Each underground PAPIREIL handhole shall be constructed of polymer concrete, reinforced with steel rods reinforcing, and a minimum size of 24" X 24" X 30 inches deep. The enclosure and cover shall be green in color. Conduit shall be heavy duty Schedule 80 with a minimum rating of 15,000 pounds over a 1" X 1" area. The enclosure shall be designed and tested to withstands of many load. The cover shall be non-clip and embossed with the words "PAPIREIL." 

---

**PRODUCT SHALL BE HUBBELL QUAZITE NO. PG2436BA30 BOX AND PG2436HA00 COVER OR APPROVED EQUAL. BOTTOM EXTENSION NOT NEEDED. OPEN BOTTOM. REFER TO DRAIN ROCK AND FILTER FABRIC DETAIL.**
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

DESIGN DEVELOPED BY:
PDC, INC.

AMBLER AIRPORT
AIRPORT IMPROVEMENTS
AIP NO. 3-02-0354-_____/61303
VASI DEMOLITION

SHEET NOTES
1. COORDINATE VASI DEMO WITH FAA/DOT.
2. REMOVE FOUR VASI LIGHT UNITS, FOUNDATIONS, AND ANCHORS. REMOVE VASI CONDUITS AND WIRING WHERE ENCOUNTERED DURING EXCAVATION. ABANDON REMAINING UNDERGROUND WIRING AND RACEWAYS IN PLACE.
NOTES:
1. PROVIDE PRECAST FOUNDATIONS, CONDUITS AND STUB OUTS. PROVIDE GROUND
RODS AND GROUND CONDUCTORS AS SHOWN.
2. INSTALLATION OF PAPI CABLE AND PAPI UNITS (LIGHT HOUSING ASSEMBLIES) TO
BE PERFORMED BY OTHERS. PAPI CABLES AND PAPI UNITS ARE SHOWN HERE
FOR REFERENCE ONLY.
3. USE 2" RSC ELBOWS FOR CONDUIT TURNS.

ABBREVIATIONS
EMB EMBANKMENT
LHA LIGHT HOUSING ASSEMBLY
MATERIAL AND EQUIPMENT PROVIDED BY FAA

1. FRANGIBLE COUPLING: TOP OF FOUNDATION

2" STEEL COMPRESSION TYPE CONNECTOR
2" EMT NIPPLE
2" COMPRESSION TYPE CONNECTOR
1-1/2" BCU TO END

DETAIL 1
POWER AND CONTROL WIRE LEGS (2 PER LHA)
NO SCALE

DETAIL 2
STRUCTURAL LEG DETAIL
NO SCALE

PLAN VIEW
LIGHT HOUSING ASSEMBLY
NO SCALE

SECTION A-A

NOTES:
1. PROVIDE PRECAST FOUNDATIONS. CONCRETE SHALL HAVE A MINIMUM DESIGN STRENGTH OF 3000 PSI COMPLYING WITH SPECIFICATION P-61.

2. ENSURE ONLY NFS MATERIAL COMPACTED TO 95% IS BELOW ALL FOUNDATIONS. IF NFS MATERIAL IS NOT PRESENT, EXCAVATE AS REQUIRED TO PROVIDE A MINIMUM OF 4 FEET OF NFS MATERIAL BENEATH PAPI FOUNDATIONS.

3. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, DEFORMED STEEL BARS.

4. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR PLACEMENT OF CONDUIT STUB-OUTS.

5. INSTALLATION OF PAPI CABLE AND PAPI UNITS (LIGHT HOUSING ASSEMBLIES) TO BE PERFORMED BY OTHERS. PAPI CABLE, UNITS, AND COMPONENTS ARE SHOWN HERE FOR REFERENCE ONLY.

PLANS DEVELOPED BY:
PDC, INC.

AMBLER AIRPORT
AIRPORT IMPROVEMENTS
AP No. 3-02-0354-_____/61303
PAPI PAD DETAILS

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

STATE OF ALASKA

DESIGN GROUP CHIEF
M.L. BECK

MATERIAL AND EQUIPMENT PROVIDED BY FAA

2 REQUIRED, ONLY 1 SHOWN
FINGER COMPRESSION LEGS AND FRANGIBLE COUPLING, SEE DETAIL 1
1-1/2" BCU TO END

1" PVC SCH 40
2" EMT STRAIGHT STEEL CONDUIT
3" HOPE CONDUIT TO PULL BOX

PRECAST CONCRETE FOUNDATION

POWER & CONTROL LEGS SEE DETAIL 1

PAPI FOUNDATION SECTION

PLAN PAPI FOUNDATION

60'

SOIL COMPACTION SEE NOTE 2

PAPI HOUSING ASSEMBLY

NOTES:
1. PROVIDE PRECAST FOUNDATIONS. CONCRETE SHALL HAVE A MINIMUM DESIGN STRENGTH OF 3000 PSI COMPLYING WITH SPECIFICATION P-61.

2. ENSURE ONLY NFS MATERIAL COMPACTED TO 95% IS BELOW ALL FOUNDATIONS. IF NFS MATERIAL IS NOT PRESENT, EXCAVATE AS REQUIRED TO PROVIDE A MINIMUM OF 4 FEET OF NFS MATERIAL BENEATH PAPI FOUNDATIONS. PLACE TAIL IN 6" LITE AND COMPACT TO 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 OR ATM T-12.

3. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, DEFORMED STEEL BARS.

4. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR PLACEMENT OF CONDUIT STUB-OUTS.

5. INSTALLATION OF PAPI CABLE AND PAPI UNITS (LIGHT HOUSING ASSEMBLIES) TO BE PERFORMED BY OTHERS. PAPI CABLE, UNITS, AND COMPONENTS ARE SHOWN HERE FOR REFERENCE ONLY.
REIL UNIT #2 AND INDIVIDUAL CONTROL CABINET (SEE DETAIL SHEET E23)

1. PROVIDE PRECAST FOUNDATIONS. CONCRETE SHALL HAVE A MINIMUM DESIGN STRENGTH OF 3000 PSI COMPLYING WITH SPECIFICATION P-610.
2. PROVIDE REIL FOUNDATIONS, AIMING PAD, MARKER, AND RACEWAY. PROVIDE GROUND RODS AND GROUND CONDUCTORS AS SHOWN. SEE "REIL PLAN" SHEET FOR ADDITIONAL INFORMATION.
3. INSTALLATION OF REIL UNITS AND REIL CABLES TO BE PERFORMED BY OTHERS. REIL COMPONENTS ARE SHOWN HERE FOR REFERENCE ONLY.
4. AIMING PAD WITH FLEX STAKE MARKER 3' DISTANCE TO REIL AIMING PAD CAN BE ADJUSTED TO AVOID PLACING PAD IN DITCHES OR OTHER LOW AREAS. 15 DEGREES MUST BE MAINTAINED. SEE FLEX STAKE MARKER AND AIMING PAD DETAILS THIS SHEET.

REIL AIMING PAD
FLEX STAKE MARKER

AIMING PAD
HEAD GROUNDED TO GND BUS IN CONTROL BOX

EXOTHERMIC WELD (TYP)

3/4" x 10' GND ROD, COPPERCLAD, EXOTHERMIC WELD TO #6 BCU (TYP)

REIL HANDHOLE

NOTES:

1. INSTALLATION OF REIL UNITS AND CABLES TO BE PERFORMED BY OTHERS. REILS AND CABLES ARE SHOWN HERE FOR REFERENCE ONLY.

2. CONDUIT LOCATIONS SHALL BE DETERMINED IN THE FIELD FOLLOWING MANUFACTURER'S INSTRUCTIONS. THE LOCATIONS SHALL ALLOW EASY ACCESS TO THE COMPONENTS IN THE CABINETS. WHEN POSSIBLE, CONDUITS SHOULD ENTER THROUGH THE BOTTOM OF THE CABINETS.

REIL HANDHOLE

2" RSC FROM HANDHOLE AT REIL TO INCLUDE 90" ELBOW, THEN 2" HOPE TO PAPI/REIL J-BOX SEE PREVIOUS PLAN SHEET

REIL UNIT #2 PLAN VIEW

REIL UNIT #1 PLAN VIEW

REIL DETAILS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

PLANS DEVELOPED BY:
PDC, INC.

AMBLER AIRPORT
AIRPORT IMPROVEMENTS
AIP NO. 3-02-0354-61303/61303
REIL DETAILS
**DEMO PLAN KEY NOTES:**

1. **EXISTING 45'x46' SRC BUILDING** (ALL COMPONENTS, APPURTENANCES & EQUIPMENT) SHALL BE DEMOLISHED AND REMOVED FROM THE SITE AND AMBER. BUILDING IS METAL FRAMED STRUCTURE WITH GRAVEL FLOOR. FOUNDATION IS UNKNOWN, BUT IT IS ESTIMATED TO BE AN 8" H/D SILL PLATE ON GRADE WITH 4" ON GROUND ANCHORS @ 2 A.C. REMOVE BUILDING, SILL PLATE & ANCHOR RODS.

2. **EXISTING 12'x20' BLDG** TO BE RELOCATED.

3. **EXISTING ELECTRIC ENCLOSURE BLDG TO BE REMOVED IN AMBER AIRPORT REHABILITATION SCOPE.**

4. **REMOVE & DISPOSE OF EXISTING ROTATING BEACON.**

5. **REMOVE & DISPOSE OF EXISTING CHAIN LINK FENCE.**

6. **REMOVE AND DISPOSE OF EXISTING 1000 GAL HEATING OIL TANK.**

7. **SALVAGE EXISTING 2000 GAL VEHICLE FUEL DISPENSING TANK FOR USE AS HEATING OIL STORAGE TANK.**

8. **EXISTING OIL STORAGE FOUNDATION ON PRESSURE SPACED SALVAGED REEL.**

9. **EXISTING UNDERGROUND ELECTRIC SERVICE.**

10. **EXISTING EDGE OF APRON.**

**GRADING PLAN KEY NOTES:**

1. **NEW 2000 GALLON VEHICLE FUEL TANK CONVERTED TO HEATING OIL STORAGE FOUNDATION ON PRESSURE TREATED 12x12x'1" TIMBERS SPACED AT 2' MAXIMUM.**

2. **NEW 2000 GALLON VEHICLE FUEL TANK FOUNDATION ON PRESSURE TREATED 12x12x'1" TIMBERS SPACED AT 2' MAXIMUM.**

3. **NEW UTILITY POLE AS REQUIRED FOR ELECTRICAL SERVICES. PROVISION OF ELECTRICAL SERVICE WILL NOT BE MEASURED FOR PAYMENT AND SHALL BE SUBMITTED TO BID ITEM 5-142.**

4. **NEW 30' TIP DOWN ROTATING BEACON POLE.**

5. **RELOCATE FAA CONEX SET ON SIX 12x12x'1" TIMBERS SPACED AT 4' MAX. TOP OF TIMBERS SHALL BE 6" ABOVE GRADE, PROVIDE 10' SEPARATION @ EBS ORGANIC DOOR OPENING TO SOUTH.**

6. **CONCRETE APPROX. SEE STRUCTURAL.**

7. **CATCH POINT FOR CAS.**

8. **EXTERNAL BOLLARDS, TYPICAL OF 6, SEE DET 7/552.**

---

**SREB SITE DEMO PLAN**

**SREB GRADING PLAN**

**GRADING PLAN POINT TABLE**

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DRAWING NOTES:

1. Reference Specification 02100 Contaminated Soil, Excavation, Handling and Disposal. For excavation of soils under the existing SREB.

2. Excavate the existing fill to a depth of five feet below finish floor, under the entire building footprint. The excavation should extend at least five feet beyond the perimeter of the building, and the side slopes should be cut no steeper than 1:1. Denier the excavation if water accumulates, to assure that the bottom of excavation can be inspected and the backfill is placed under dry conditions.

3. Excavate a test pit to a depth of at least 10 feet below the floor level, inspect the test pit for frozen soil that contains excess ice or mobile ice features as defined in AASHTO M 408, (Description of frozen soils (vogel-manix procedure). If such frozen soil is observed in the test pit, continue the excavation under the full building area to a depth sufficient to remove said frozen material, and backfill to the bottom to five feet below the building with borrow material.

4. After completing the test pit, described above, compact the bottom of the excavation to the extent necessary to ensure the first lift of backfill, (see below) can be compacted as specified. Replace any subgrade materials that are soft or run with classified fill.

5. After completing the building excavation as described above, line the base of the excavation with separation geotextile, placed following DOT/PHS V.EP 9-011, and backfill with subgrade that is placed in maximum eight inch lifts (loose) and compacted to at least 95% of its maximum unit weight, as determined by TST method adopted TST.

6. Casd shall be measured for payment under bid item Z000.11 under the Amblcr Airport Rehabilitation scope.
BUILDING FRONT ELEVATION

1. 4" x 4" TUBE STEEL CANTON COLUMN
2. 4" x 4" TUBE STEEL CANOPY COLUMN
3. ALUMINUM FINISHED STEEL SHEETING REFERENCE FOR BUILDING REFERENCE
4. INSULATED METAL WALL PANELS
5. BOLLARD, REFER TO STRUCTURAL
6. BOLLARD, INSULATED METAL WALL PANELS
7. CANOPY: 11'

BUILDING SIDE ELEVATION

1. 4" 1/4" = 1'0"
2. 11" x 17" SHEET 1/8" = 1'0"
3. 22" x 34" SHEET 1/4" = 1'0"
4. CANOPY: 11'

STATE OF ALASKA
DEPARTMENT TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION--DESIGN AND CONSTRUCTION--AIRCRAFT
PLANS DEVELOPED BY:
MCCOOL CARLSON GREEN ARCHITECTS

AMBLER AIRPORT
AMBLER AIRPORT REHABILITATION
AP 3-02-0354-2014/61303
ARCHITECTURAL
EXTERIOR ELEVATIONS

DESIGN JEM
DRAWN: W2
CHECKED: D2
DATE: 2/12/17

DESIGN GROUP CHIEF
HOIST BEAM
- TRENCH, REFER TO STRUCTURAL.

FILL ANY Voids BETWEEN PANELS WITH SPRAY INSULATION FOAM.

INSULATED ROOF PANELS
"Z" ROOF PURLINS

INSULATED WALL PANELS
BUILDING STRUCTURE SURROUND

WINDOWSILL
TOP OF WAiNSCOT
BUILDING FRAME -
CONCRETE SLAB-----,
"Z" ROOF PURLINS

CONCRETE SLAB-----,
INSULATED ROOF PANELS
BUILDING STRUCTURE SURROUND

3'-2"

AUTHOR,IZ-EQ
= PERSONNEL ONLY
VIOLATORS ARE SUBJECT TO
PROSECUTION BY AUTHORITY OF
ALASKA STATUTE AS. 02. 15.060

DESIGN DRAWN
CHECKED DDG

STATE OF ALASKA
DEPARTMENT TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION - DESIGN AND CONSTRUCTION - AIRPORT

AMBLER AIRPORT
AMBLER AIRPORT REHABILITATION
AIP 3-02-0354-2014/61303
ARCHITECTURAL
BUILDING SECTIONS

PLANS DEVELOPED BY:
MCCOOL CARLSON GREEN Architects

AMBLER AIRPORT:
Alaska,
2014

DESIGN GROUP CHIEF

APPROVED
ALBERT M.L. BECK, P.E.

DESIGN GROUP CHIEF

DATE 12/19/14

CHECKED DDG

SIGN MESSAGE

AUTHORIZED PERSONNEL ONLY
VIOLATORS ARE SUBJECT TO
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ALASKA STATUTE AS. 02. 15.060

CROSS SECTION

TYPICAL WALL SECTION

1/8" = 1'-0"
1/4" = 1'-0"
1/16" = 1'-0"

1/4" COUNTERSUNK SCREW INTO GIRT
PAINT: APPLY ACRYLIC PRIMER SEALER & 2
COATS ACRYLIC LATEX ENAMEL
SHERWIN WILLIAMS 'DURATION' OR
EQUAL
CLEAN, PREPARE & APPLY
PAINT IN ACCORD WITH
PAINT MANUFACTURER
RECOMMENDATIONS

FLOOR

CONCRETE SLAB

FOUNDATION, SEE STRUCTURAL

1 2'X34 SHEET
1 11X17 SHEET

20036 DRAFT
10337 DRAFT

600 X 434
366 X 428
470 X 716
417 X 716
102 X 383
573 X 370
573 X 364
230 X 229
186 X 287
159 X 267
174 X 242
176 X 233

102 X 177
76 X 95
76 X 71
102 X 71
160 X 71
160 X 71
160 X 71
160 X 71
160 X 71
160 X 71
MECHANICAL EQUIPMENT LIST

AC-1 AIR COMPRESSOR: INGERSOLL RAND
- T30-2340-N3-1, 80 GALLON MINIMUM, 9.0 ACFM @ 175 PSI, 3 HP, 1.15 SF,
- CRANKCASE HEATER, LOW OIL LEVEL CUTOUT, AIR FILTER AND PRESSURE REGULATOR, AUTOMATIC CONDENSATE DRAIN
- MODEL NO. EDV-2000, HOSE REEL: AUTO RETRACTABLE REELCRAFT MODEL NO. 2Z862
- LOW PRESSURE, 50 FOOT, 3/8"

UH-1 UNIT HEATER: MODINE POR185, #1 | UH-2 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, LIMITER: INTERMAC FF34H, T-STAT: HONEYWELL T631C1103

F-1 PADDLE FAN: GRAINGER/DAYTON MODEL #14CB52, 36 INCH, 12,500 CFM @ 395 RPM, 7.8 VA, 120V/1PH/60 HZ

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

MECHANICAL LEGEND

FIXTURE | DESCRIPTION
----- | -------
D | QUICK DISCONNECT AIR VALVE
E | ISOLATION VALVE
F | FUSIBLE VALVE
G | FUEL PIPING - SUPPLY & RETURN
H | AIR COMPRESSOR LINE - BLACK IRON
I | UNIT HEATER
J | OIL SAFETY VALVE

AMBLER AIRPORT REHABILITATION
AP 3-02-0354-2014/61303
FUEL PIPING AND HEATING FLOOR PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION—DESIGN AND CONSTRUCTION—AVIATION
PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.

AMBLER AIRPORT REHABILITATION
AP 3-02-0354-2014/61303
FUEL PIPING AND HEATING FLOOR PLAN
COORDINATE STACK LOCATION WITH LADDER AND/OR BEACON IF REQ'D. STACK SHALL TERMINATE 24" ABOVE ANY PORTION OF THE ROOF WITHIN 10'-0". STACK SUPPORT THROUGH WALL COLLAR BAROMETRIC DRAFT CONTROL BRACE UNIT HEATER TO WALL WITH CHANNEL STRUTS OFF EACH SIDE. SET AT 45 DEGREES. WALL SUPPORT PACKAGE ATTACH TO STRUCTURAL FRAME SUPPORT FROM STRUCTURE OVERHEAD BEAM. CHECKED BY DATE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION—DESIGN AND CONSTRUCTION—AVIATION

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AMBLER AIRPORT
AMBLER AIRPORT REHABILITATION
AP 3-02-0354-2014/61303

UNIT HEATER AND FUEL TANK DETAILS
80 GALLON (MIN) AIR COMPRESSOR
EQUIPMENT UST ON SHEET M1 • 3/4" BLACK IRON PIPE MOUNTED!
RECEIVER. REFER TO MECHANICAL 1/2" MIN 250 PSI ALONG WALL AT 10'-0" FLEXIBLE CONNECTOR 1/2" MINIMUM BLACK RON PIPE .
PRESSURE REGULATOR FILTER/SEPARATOR PROVIDE EARTHQUAKE SEISMIC / BRACING TO WALL AS REQUIRED 1" FLOOR MOUNT ON ISOLATOR PADS .
AUTOMATIC CONDENSATE DRAIN
3/4" BLACK IRON PIPE; 4" DRIP LEG W/ DRAIN VALVE (TYP) , 3/8" QUICK DISCONNECT AIR HOSE COUPLING (TYP)
COMPRSSED AIR SYSTEM PIPING SCHEMATIC
NOTE: DETACHABLE HOSE REEL (SEE MECHANICAL EQUIPMENT UST ON SHEET M1) TO BE USED AT ANY OUTLET.

STATE OF ALASKA
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PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
AMBLER AIRPORT REHABILITATION
AP 3-02-0354-2014/61303
AIR COMPRESSOR SCHEMATIC

DESIGN DRAWN CHECKED

REVISIONS
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. MOUNT 2 FEET BELOW ROOF STRUCTURE, A1 MARKER TO ILLUMINATE THE FUEL DISPENSING AREA. PROVIDE WITH MOTION DETECTOR (WATTSTOPPER EW-200-120-G OR APPROVED EQUAL) AND INTEGRAL PHOTOCELL SEE DETAIL 5/E4 FOR CONTROL DIAGRAM.

4. INSTALL #5/8" RMC BOX IN FOUNDATION FOOTING. GROUNDING ELECTRODE SYSTEM IS TO BE BURIED TO 3/4" BELOW GROUND LEVEL. THE BUILDING STEEL FRAME AND THE FOOTING GROUND WITH A #2 AWG CONDUCTOR AT THE SERVICE ENTRANCE.

5. PROVIDE SLACK LOOP TO ACCOMMODATE MOVEMENT OF 12 INCHES IN ANY DIRECTION WHEN TRANSITIONING TO UNDERGROUND CONDUIT.

10. PENETRATIONS THROUGH EXTERIOR WALL SHALL BE BELOW SERVED EQUIPMENT.

11. PROVIDE WITH LIGHT FIXTURES TO HAVE LOCATOR LIGHTS IN TOGGLE.
DETAIL NOTES:

1. NOT USED.
2. 50-AMP 250-VOLT NON-FUSED 3-PHASE DOUBLE-THROW TRANSFER SWITCHES. DEPART-69 CATALOG NO. U050N OR APPROVED EQUAL.
3. SEAL CONDUIT PENETRATION ON INLET AND OUTLET BETWEEN THE RECEPTOR AND RECEPTOR OF THE BUILDING WITH ONE SEAL.
4. PROVIDE A 20-AMP "NASH" POWER CORD CONTAINING THREE #14 AWG POWER CONDUCTORS AND ONE #10 AWG GROUND CONDUCTOR WITH A CORRUGATED CONDUIT ON THE END AND A CORRUGATED PLUG ON THE OTHER END PROVIDE THE FOLLOWING 20-AMP LOW ADAPTATION COVERS.
5. 1-40-80 TRANSFORMER WITH A 20-AMP "NASH" POWER CORD ON THE END AND A 20-AMP "NASH" PLUG ON THE OTHER END PROVIDE THE FOLLOWING 20-AMP LOW ADAPTATION COVERS.
6. MOUNT A CROSS-TIE DOUBLE GENERATOR PLUGGED INLET IN A NEAR-3R ENCLOSURE OF THE SIZE SHOWN IN THE CAT. XPANDER PANEL "G." RETAIN ELECTRIC PRODUCTS CAT. NS. SHOWN OR APPROVED EQUAL. OTHER ACCEPTED MANUFACTURERS - GROOVE-HANDHELD.
7. CALIFORNIA STANDARD 125/250-VOLT, 3-PHASE, 4-WIRE, NON-NEUTRAL, 50-AMP WIRING DEVICES. LITEL-61 CALLED # 12 FLOOR BOARD APPROVED EQUAL. OTHER ACCEPTED MANUFACTURERS - GROOVE-HANDHELD.

NOTES:

ELECTRONIC SPEED CONTROL - SUPPLIED OR RECOMMENDED BY THE PADDLE FAN MANUFACTURER.

HEATING CONTROL WIRING DIAGRAM

TRANSFER SWITCH - GENERATOR INLET ELEVATION

EXTERIOR LIGHTING CONTROL DIAGRAM

POWER ONE LINE DIAGRAM
**NOTES - FUEL DISPENSER**

1. **Sign Colors** - White 3/4" letters on red background. Text - "EMERGENCY FUEL PUMP SHUT DOWN Switch", mount sign 6" above emergency fuel tank pump shut down switch.

2. **Emergency Vehicle Fuel Pump Shut Down Switch** - 20-amp 3-pole 250-volt switch, capable of being locked in the open position in a wet location with a waterproof actuator. Mount switch on the exterior of the building, minimum 5 feet from fuel dispenser.

3. **Power for the Pump** - From a switch-rated 15-amp 1-pole 120/240-volt circuit breaker in panel G. Seal conduit through wall to prevent moisture from entering building. Run circuit underground to fuel dispenser pump mounted on fuel dispensing tank.

4. **MOUNT ALL ITEMS ON THE BUILDING.**

**1 - MOTOR VEHICLE FUEL PUMP ELECTRICAL DETAIL**

**2 - ROTATING BEACON DETAIL**