State of Alaska
Department of Transportation and Public Facilities
Southeast Region

JUNEAU, ALASKA
YANKEE COVE ARTIFICIAL REEFS

PROJECT NO. NH-0003(130) ~ 69221

As-Built Plans
Contractor: Trucano Co.
Project Engr: Al Culbreath
Bedin Constr: Dec. 6, 2007
End Constr: Dec. 20, 2007

LOCATION MAP

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES SOUTHEAST REGION

As-Built Plans
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LOCATION MAP
HIGH TIDE LINE (HTL) = 19.7'

MEAN HIGH WATER (MHW) = 14.8'

NO CONSTRUCTION ACTIVITIES PERMITTED AT TIDE LEVELS ABOVE 12.0' ELEV.

MEAN LOWER LOW WATER (MLLW) = 0.0'

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<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PAY ITEM</th>
<th>PAY UNIT</th>
<th>QUANTITY</th>
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</thead>
<tbody>
<tr>
<td>650(1)</td>
<td>ARTIFICIAL REEFS</td>
<td>LUMP SUM</td>
<td>ALL REQUIRED</td>
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**ESTIMATE OF QUANTITIES**

**BASIS OF ESTIMATE**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ESTIMATING FACTOR</th>
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<tbody>
<tr>
<td>ROCK</td>
<td>320 CY PER REEF</td>
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<tr>
<td></td>
<td>170 LB/CF</td>
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<tr>
<td>AVERAGE REEF THICKNESS 4 FT.</td>
<td>70%</td>
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<tr>
<td>DIMENSIONED REEF VOLUME CONSISTING OF ROCK</td>
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* ARTIFICIAL REEF WILL CONSIST OF ANGULAR ROCK FILL RANGING IN SIZE FROM 1.6 FT TO 3.3 FT, MEASURED IN THE SMALLEST DIRECTION. ROCK WILL BE STACKED TWO LAYERS THICK TO MAINTAIN A RELATIVELY UNIFORM THICKNESS ACROSS THE REEF.

*ROCK REEF*

SECTION A-B1

APPROX. EXISTING GROUND, SUBTIDAL SANDY SUBSTRATE

3.0 FT MIN TO 5.0 FT MAX THICKNESS