## APPENDIX 10:

# Study-Derived Project Cost Estimates

**Airport Lighting Projects**

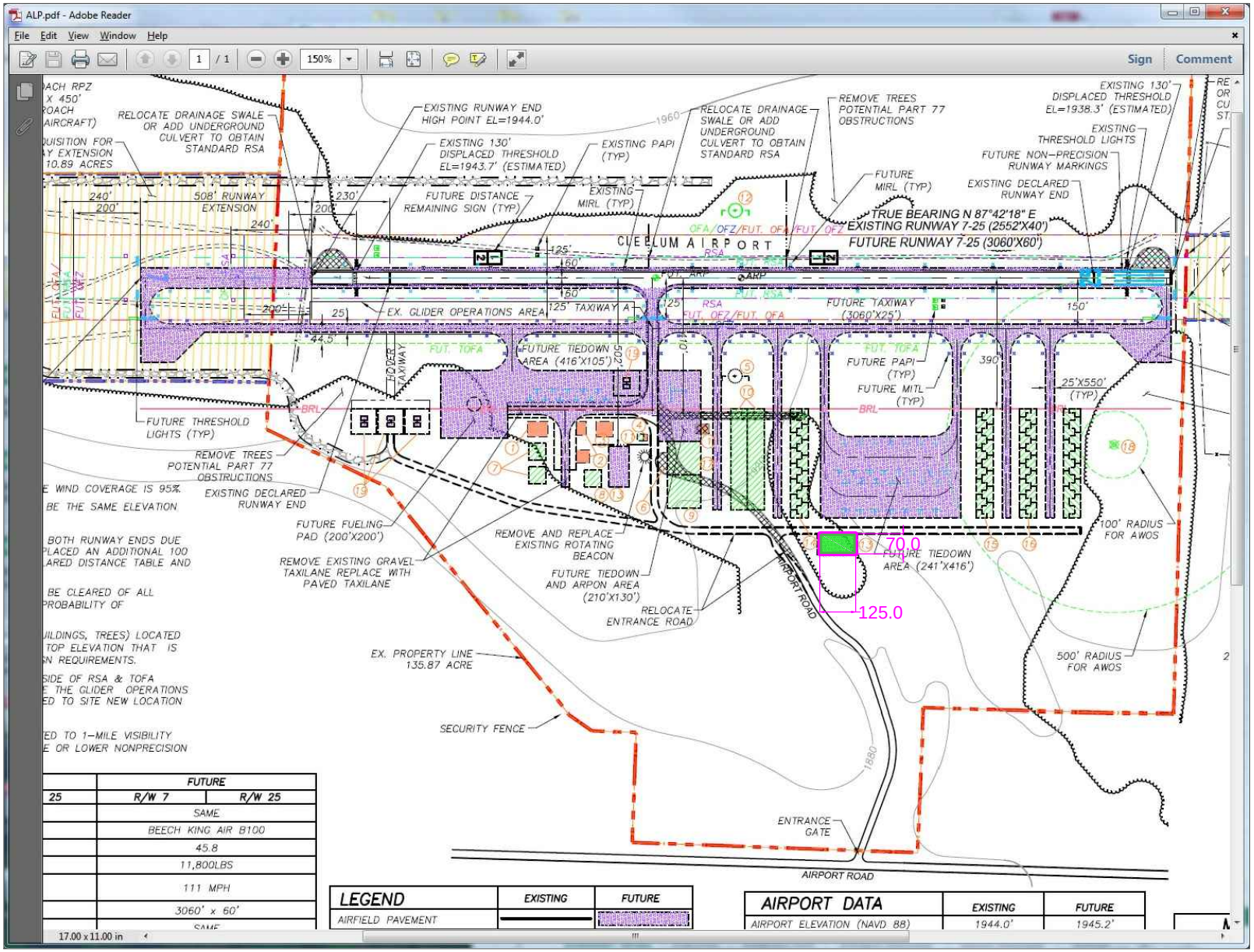
| Airport | Project | RY Length | RY Width | Edge Lights Needed | THLD Lights Needed | Edge Light Unit Cost | Threshold Light Unit Cost | Total Cost | Soft Cost (27.5%) | Total + Soft Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| Grant County International | RWY 14L/32R RY 14L/32R NSTD HIRL LCTD 50 FT FM RY EDGE MARKINGS. | 13,503 | 200 | 135.03 | 16 | $3,408.70 | $2,650.95 | $502,692 | $138,240 | $640,932 |
| Grove Field | RWY 07/25 NSTD MIRL RYS 07 & 25 DSPLCD THLDS UNLGTD. | 2,700 | 40 | 27 | 12 | $3,830.00 | $2,978.60 | $139,153 | $38,267 | $177,420 |
| Port of Whitman Business Air Center | RWY 07/25 NSTD MIRL ONLY CENTER 2240 FT LGTD. | 2,310 | 55 | 23.1 | 12 | $3,408.70 | $2,650.95 | $110,552 | $30,402 | $140,954 |
| Renton Municipal | RWY 16/34 NSTD MIRL; 340 FT SW END UNLIT. | 5,379 | 200 | 53.79 | 12 | $3,830.00 | $2,978.60 | $241,759 | $66,484 | $308,243 |
| Southwest Washington Regional | RWY 12/30 RY 12/30 MIRL NSTD SPACING. | 4,391 | 100 | 43.91 | 12 | $3,830.00 | $2,978.60 | $203,919 | $56,078 | $259,996 |
| AJ Eisenberg | RWY 07/25 NSTD LIRL ONLY W 2604 FT FM RY LIGHTS. | 3,244 | 25 | 32.44 | 12 | $3,830.00 | $2,978.60 | $159,988 | $43,997 | $203,985 |
| De Vere Field | RWY 08/26 RY 08/26 NSTD LIRL - THLD LGTS 360 DEG GREEN. | 2,055 | 30 | 20.55 | 12 | $3,408.70 | $2,650.95 | $101,860 | $28,012 | $129,872 |
| Elma Municipal Airport | RWY 07/25 SW END THLD LGTS 2-360 DEG GREEN; 2-360 DEG RED; NE END THLD LGTS 4-180 DEG GREEN & 180 DEG RED. NSTD MIRL. RY 25 DSPLCD THLD UNLIGHTED; 2095 FT OF RY 07/25 AVBL FOR NIGHT OPNS. | 2,280 | 30 | 22.8 | 12 | $3,830.00 | $2,978.60 | $123,067 | $33,843 | $156,911 |
| Martin Field | RWY 05/23 RY 05/23 NSTD LIRL; SW 1240 FT MED INTST. | 3,819 | 60 | 38.19 | 12 | $3,408.70 | $2,650.95 | $161,990 | $44,547 | $206,537 |
| Roche Harbor Airport | RWY 07/25 RY 07/25 NSTD LIRL, ONLY CENTER 2700 FT OF RY IS LGTD. | 3,593 | 30 | 35.93 | 12 | $3,830.00 | $2,978.60 | $173,355 | $47,673 | $221,028 |
| Vashon Municipal | RWY 17/35 NSTD LIRL; THR LGTS NON-STD COLORS 360 DEG GREEN. | 2,001 | 50 | 20.01 | 12 | $3,830.00 | $2,978.60 | $112,382 | $30,905 | $143,286 |
| Harvey Field | RWY 15L/33R NSTD LIRL; THLD LIGHTS 360 DEGS GREEN. | 2,650 | 35 | 26.5 | 12 | $3,830.00 | $2,978.60 | $137,238 | $37,741 | $174,979 |
| Okanogan Legion | Incorporate new Tech Lighting & Nav Aids (Future RY 2389 x 60) | 2,389 | 60 | 23.89 | 12 | $3,408.70 | $2,650.95 | $113,245 | $31,142 | $144,388 |
| Sand Canyon | Replace RY Lights | 3,446 | 48 | 34.46 | 12 | $3,408.70 | $2,650.95 | $149,275 | $41,051 | $190,326 |
| Goheen Airport | RWY 15 HAS NSTD SINGLE LIGHT VASI BOTH SIDES OF RY. | $6000 total for Removal - $120000 for (2box) PAPIs on both Ends | | | | | | $126,000 | $34,650 | $160,650 |
| Paine Field | REPLACE VASI W/PAPI | $3000 for total removal - $60000 for PAPI | | | | | | $63,000 | $17,325 | $80,325 |

**Airport Striping Projects**

| Airport | Project | RY Length | RY Width | Marking Needed | Removal Area | Add Area | Removal Unit Cost | Removal Cost | Striping Unit Cost | Striping Cost | Total Cost | Soft Cost (27.5%) | Total + Soft Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| De Vere Field | RWY 08 RY 08/26 NSTD MKGS NO NUMBERS SMALL AND SQUARE AIMING POINTS PAINTED ON RWY ENDS. RY 08/26 MARKINGS FADED. | 2,055 | 30 | LD, CL, | 4,230 | 4,230 | $1.38 | $5,837.40 | $1.28 | $5,414.40 | $11,252 | $3,094 | $14,346 |
| Goldendale Airport | RWY 07 NONSTD WHITE LINE CROSSES RWY NEAR RWY 7 MARKING. | 3,491 | 40 | Removal | 72 | 72 | $1.38 | $99.36 | $1.28 | $92.16 | $192 | $53 | $244 |
| Goldendale Airport | RWY 25 NONSTD WHITE LINE CROSSES RWY NEAR RWY 25 MARKING. | 3,491 | 40 | Removal | 72 | 72 | $1.38 | $99.36 | $1.28 | $92.16 | $192 | $53 | $244 |
| Shady Acres | RWY 16 RWY 16 ID IS NOT STD DIST FROM RWY END. | 1,800 | 20 | Removal, LD | 1,030 | 1,030 | $1.55 | $1,596.50 | $1.44 | $1,483.20 | $3,080 | $847 | $3,927 |
| Shady Acres | RWY 34 DSPLCD THLD MKD WITH NSTD CHEVRONS. | 1,800 | 20 | Removal (3 Chevrons) Chev | 726 | 1,208 | $1.55 | $1,125.30 | $1.44 | $1,739.52 | $2,865 | $788 | $3,653 |
| Spanaway Airport | RWY 16 RWY 16 PAVED RWY HAS NON-STD NRS. | 2,725 | 20 | Removal, LD | 1,030 | 1,030 | $1.55 | $1,596.50 | $1.44 | $1,483.20 | $3,080 | $847 | $3,927 |
| Spanaway Airport | RWY 34 RWY 34 PAVED RWY HAS NON-STD NRS. | 2,725 | 20 | Removal, LD | 1,213 | 1,213 | $1.55 | $1,880.31 | $1.44 | $1,746.86 | $3,627 | $997 | $4,625 |

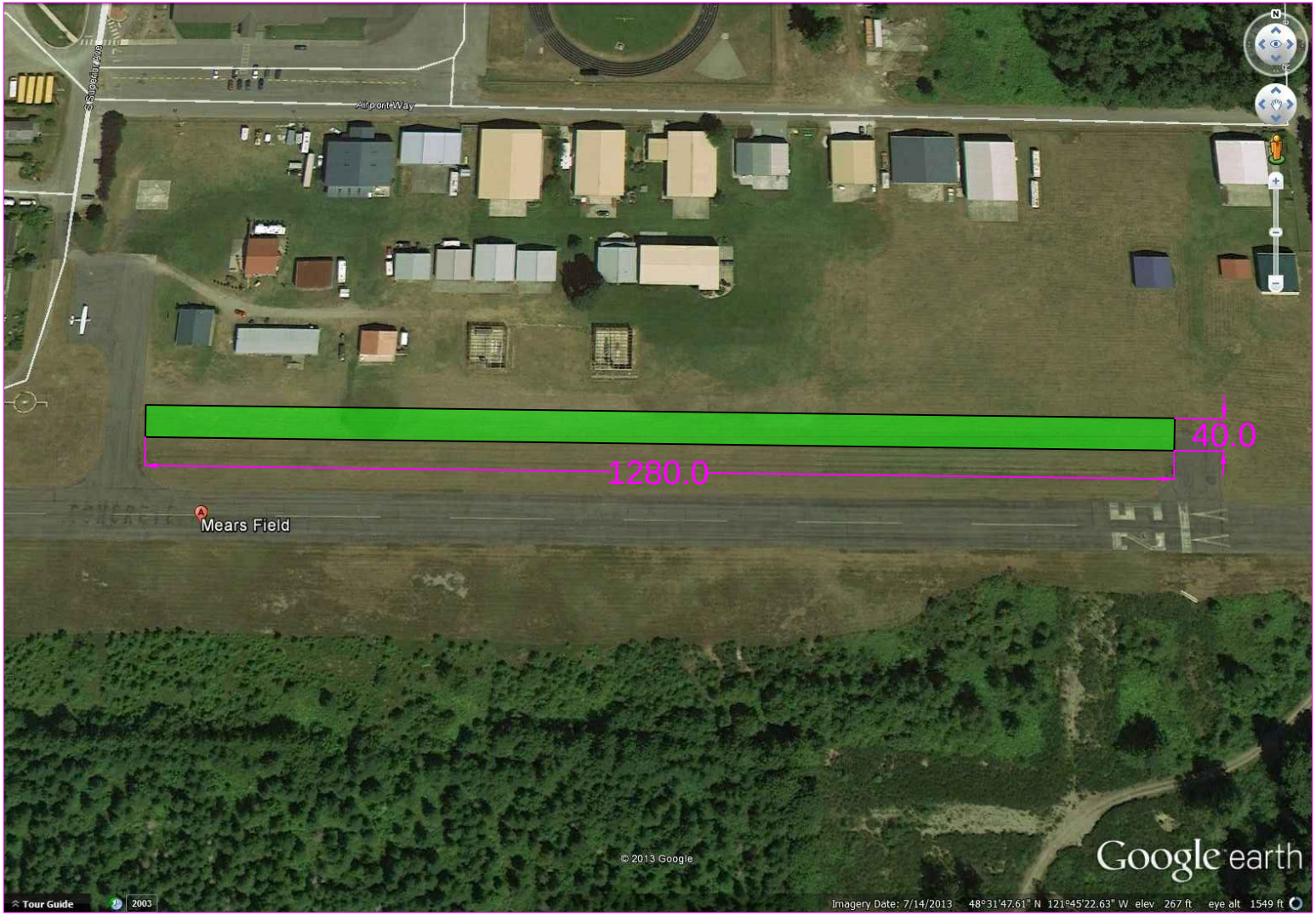
*Boeing Field Passenger Terminal Building ~ est 10,000 ft sq --- Parking Improvements ~ est 112,500 ft sq

| | |
|---|---|
| 10,000 x $120.06 (Terminal Unit Cost) +112,500 x $16.93 (Pavement Unit Cost) = | $3,105,225 |
| $3,105,225 x 27.5% (Soft Costs) = | $853,937 |
| Total Cost = | $3,959,162 |




*Cle Elum - Construct Parking Lot - 125' x 70' = 8750 sq ft

| | |
|---|---|
| 8,750 sq ft x $16.93 (Asphalt Unit Cost) = | $148,138 |
| $148,138 x 27.5% (Soft Costs) = | $40,738 |
| Total Cost = | $188,875 |




*Mears Field - Install New TWY - 1280' x 40' = 51,200 sqft

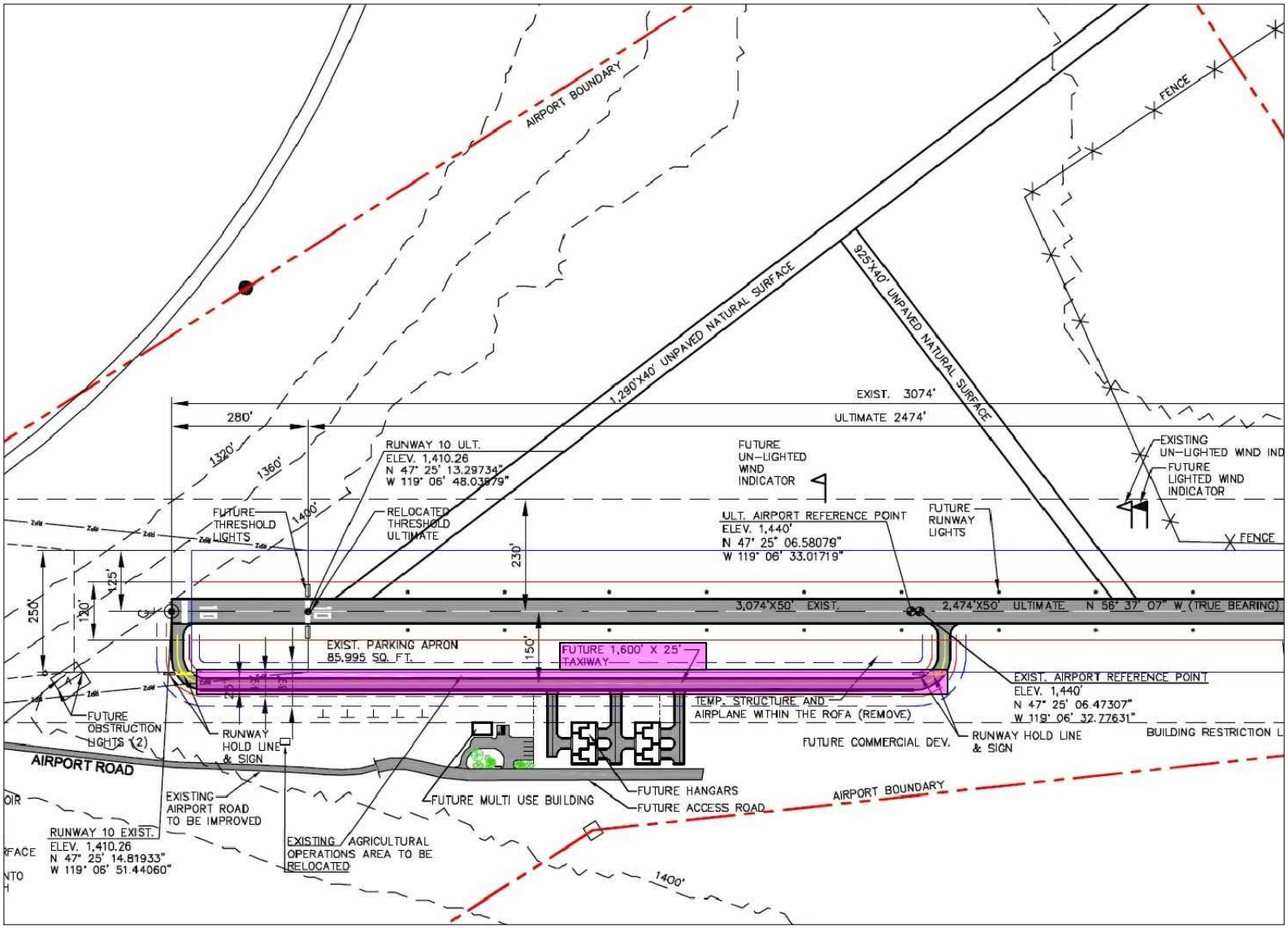
| | |
|---|---|
| 51,200 x $16.93/sq ft (TWY Asphalt Unit Cost) = | $866,816 |
| $866,816 x 27.5% (Soft Costs) = | $238,374 |
| Total Cost = | $1,105,190 |

*Sand Canyon Airport Extend East Side Hangar TWY 30 x 125 = 3750 sq ft TWY --- 41 x 125 = 5125 sq ft APRN

| | |
|---|---|
| 8,875 sq ft x $17.26 (Pavement Unit Cost) = | $153,183 |
| $153,183 x 27.5% (Soft Costs) = | $42,125 |
| Total Cost = | $195,308 |

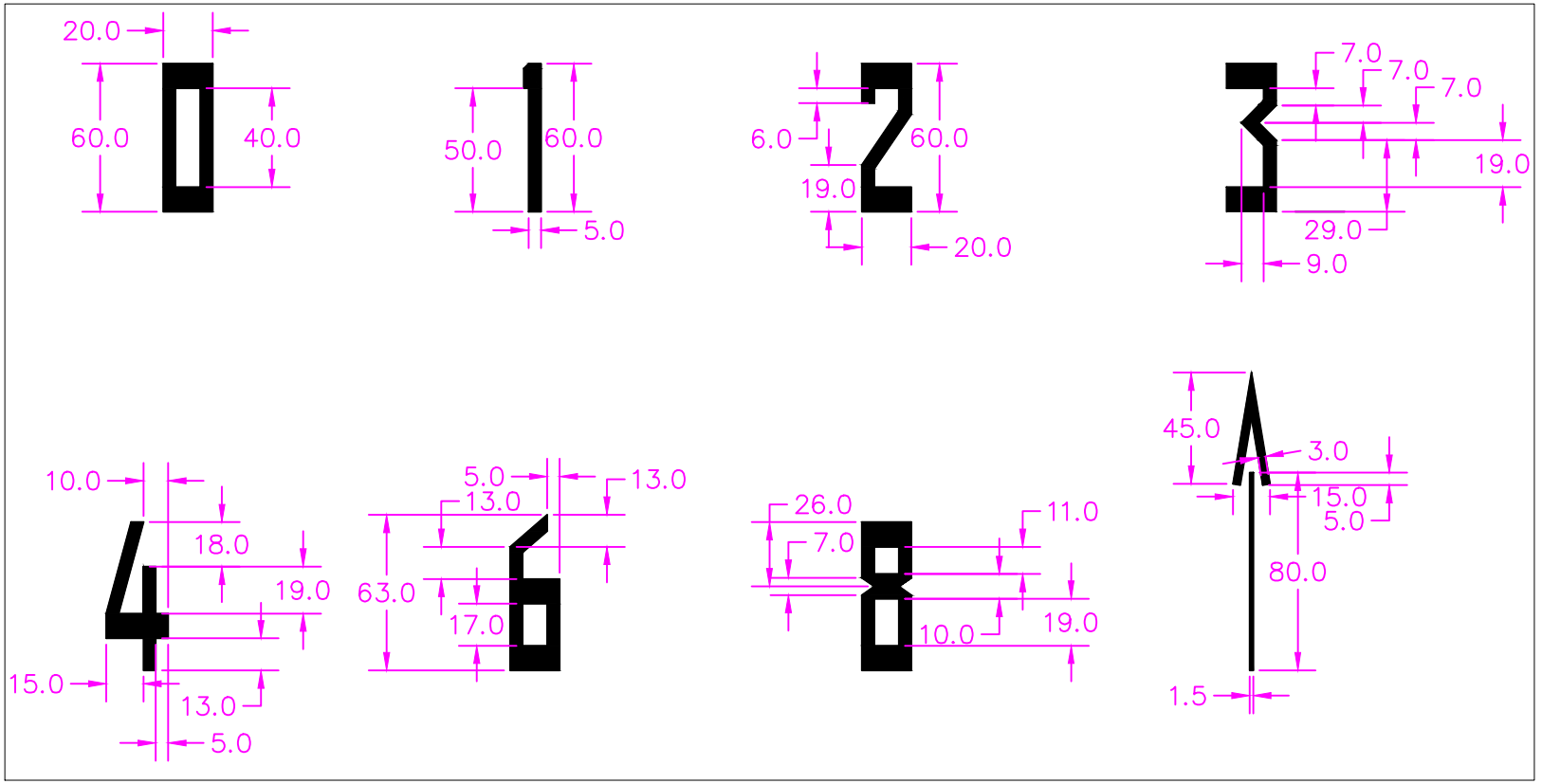
*Tacoma Narrows Aviation FBO Reface ~ 17,250 sqft

| | |
|---|---|
| 17,250 x $21.53 (Hangar Rehab Unit Cost) = | $371,393 |
| $371,393 x 27.5% (Soft Costs) = | $102,133 |
| Total Cost = | $473,525 |




*Wilson Creek TXLN - ALP - 40,000 sq ft

40,000 x $17.26 (Pavement Unit Cost) = $690,400
$690,400 x 27.5% (Soft Costs) = $189,860
Total Cost = $880,260




| | |
|---|---|
| 0 = | 800 sqft |
| 1 = | 318 sqft |
| 2 = | 653.1 sqft |
| 3 = | 633.3 sqft |
| 4 = | 595 sqft |
| 6 = | 712 sqft |
| 8 = | 865 sqft |
| Arrowhead = | 219.7 sqft |
| Arrowtail = | 120 sqft |

Notes:
Dimensions are expressed in feet.
All Characters have the following characteristics unless otherwise specified:

- 60’ High
- 20’ Wide
- Vertical Stroke of 5
- Diagonal Stroke of 5
- Horizontal Stroke of 10

Costs Not Available

| Airport Type | Source | City | Airport | State Airport Classification | ST/LT | Year | Project Name | TOTAL |
|---|---|---|---|---|---|---|---|---|
| Non-NPIAS | MP | Moses Lake | Moses Lake Municipal | Community Service | ST | 2014 | Adjustment of Development Standards | Not Available |
| Non-NPIAS | MP | Republic | Ferry County | Local Service | ST | 2014 | W. Side Access Determination | Not Available |
| NPIAS | MP | Langley | Whidbey Air Park | Rural Essential | ST | 2014 | Fire Flow Improvements | Not Available |
| Non-NPIAS | Survey | Concrete | Mears Field | Community Service | ST | 2014 | Restripe RY, Run up, and Ramps | Not Available |
| Non-NPIAS | MP | Okanogan | Okanogan Legion | Local Service | ST | 2015 | Add Additional Hangars | Not Available |
| Non-NPIAS | MP | Okanogan | Okanogan Legion | Local Service | ST | 2015 | Install Infrastructure | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2015 | Install taxiway reflectors | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2016 | Runway, taxiway and ramp maintenance (5 year plan) | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2016 | Add signage both on and off the airport to locate airport from the street, and to locate facilities/patterns on the airport for pilots. | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2016 | Generate Engineering Plan for an eastside welcome center/FBO facility, access road and vehicle parking, fuel system and all east side features. Will include environmental documentation. | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2017 | Relocate airport access road. Develop airport vehicle parking area. Replace existing airport access gate with an automatic key-coded gate. | Not Available |
| Non-NPIAS | MP | Okanogan | Okanogan Legion | Local Service | ST | 2018 | Develop Hangars | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2018 | Develop welcome center. Remove existing pilot lounge building. | Not Available |
| Non-NPIAS | Survey | Poulsbo | Poulsbo SPB | Seaplane Base | ST | 2018 | Seaplane Base relocation | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | ST | 2019 | Develop self serve fueling system | Not Available |
| Non-NPIAS | Survey | Chewelah | Sand Canyon | Local Service | LT | 2020 | Purchase industrial snow thrower to augment current plow. | Not Available |
| NPIAS | MP | Friday Harbor | Friday Harbor | Commercial Service | LT | 2017-2026 | Future ATCT Development Site | Not Available |
| Non-NPIAS | MP | Okanogan | Okanogan Legion | Local Service | LT | 2021-2025 | Reconstruct Paved SFCs w/New Technology Paving Material | Not Available |
| Non-NPIAS | MP | Okanogan | Okanogan Legion | Local Service | LT | 2021-2025 | Develop NE Portion of Airport | Not Available |