

Johnson Creek Triple Culvert Design #19-1609P

Cost Increase Request to Fish Barrier Removal Board

11/17/20

Presented by Kevin Long, Project Manager

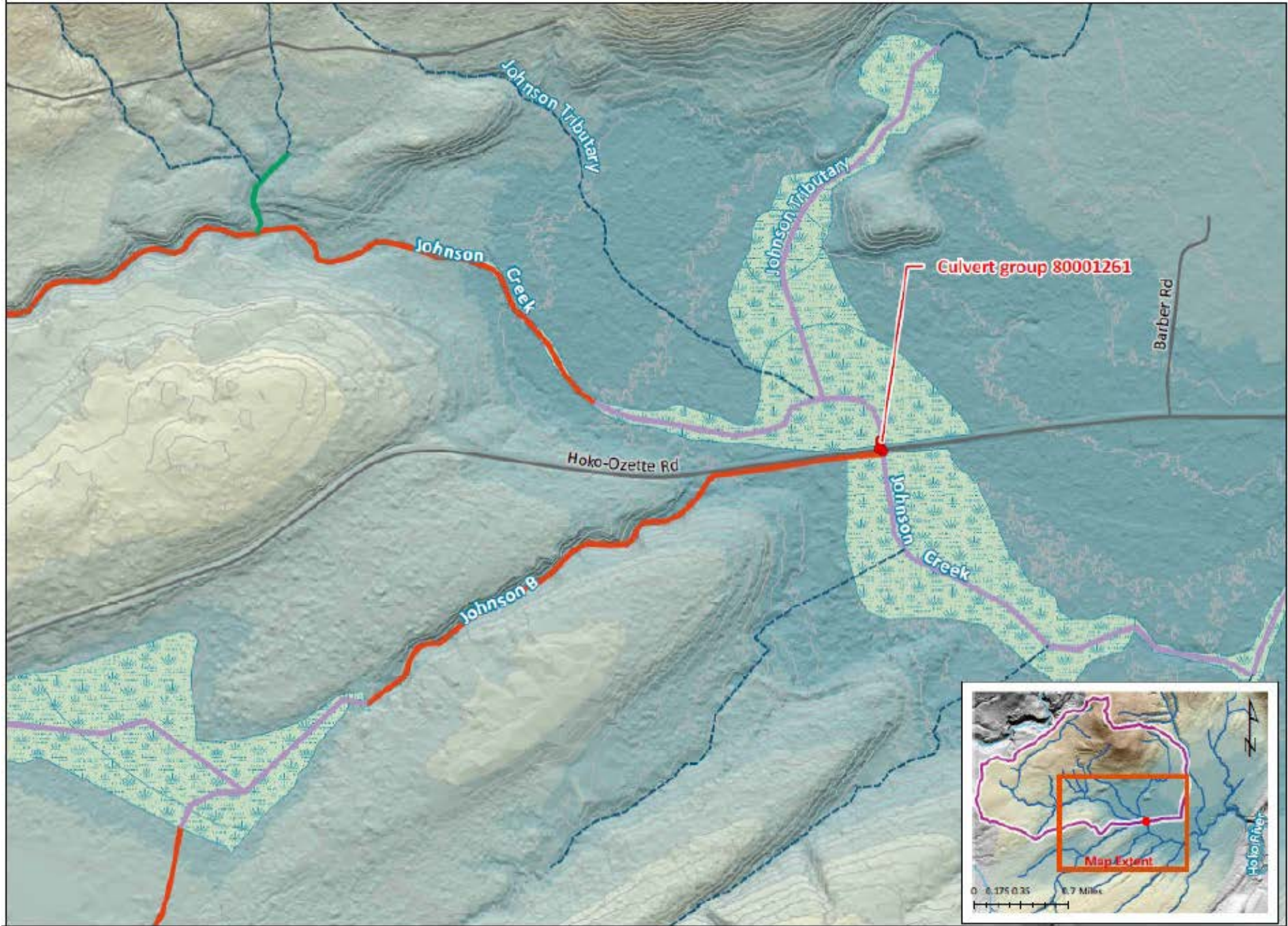


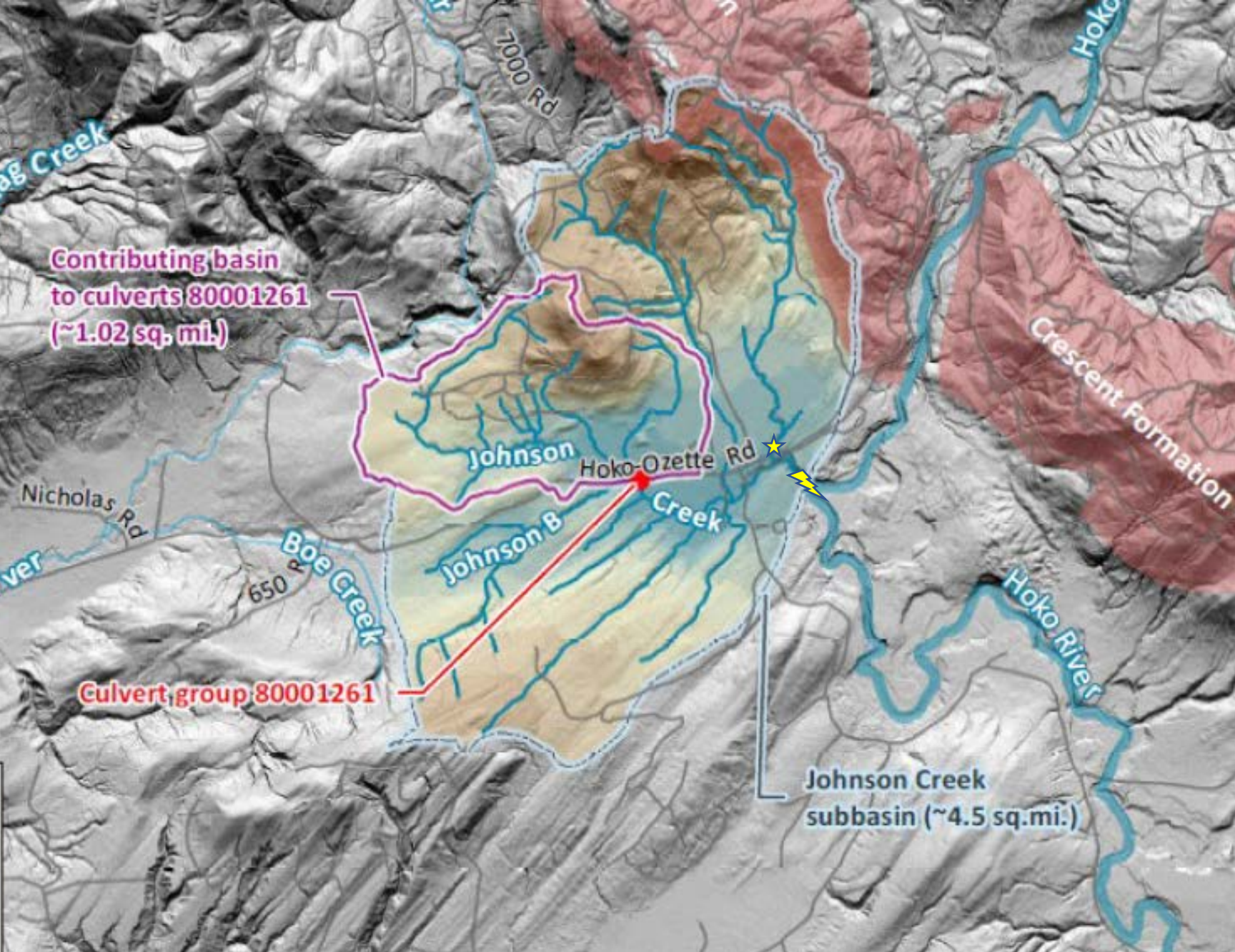
*Community Stewardship,
Collaborative Restoration*

NORTH OLYMPIC



SALMON
COALITION



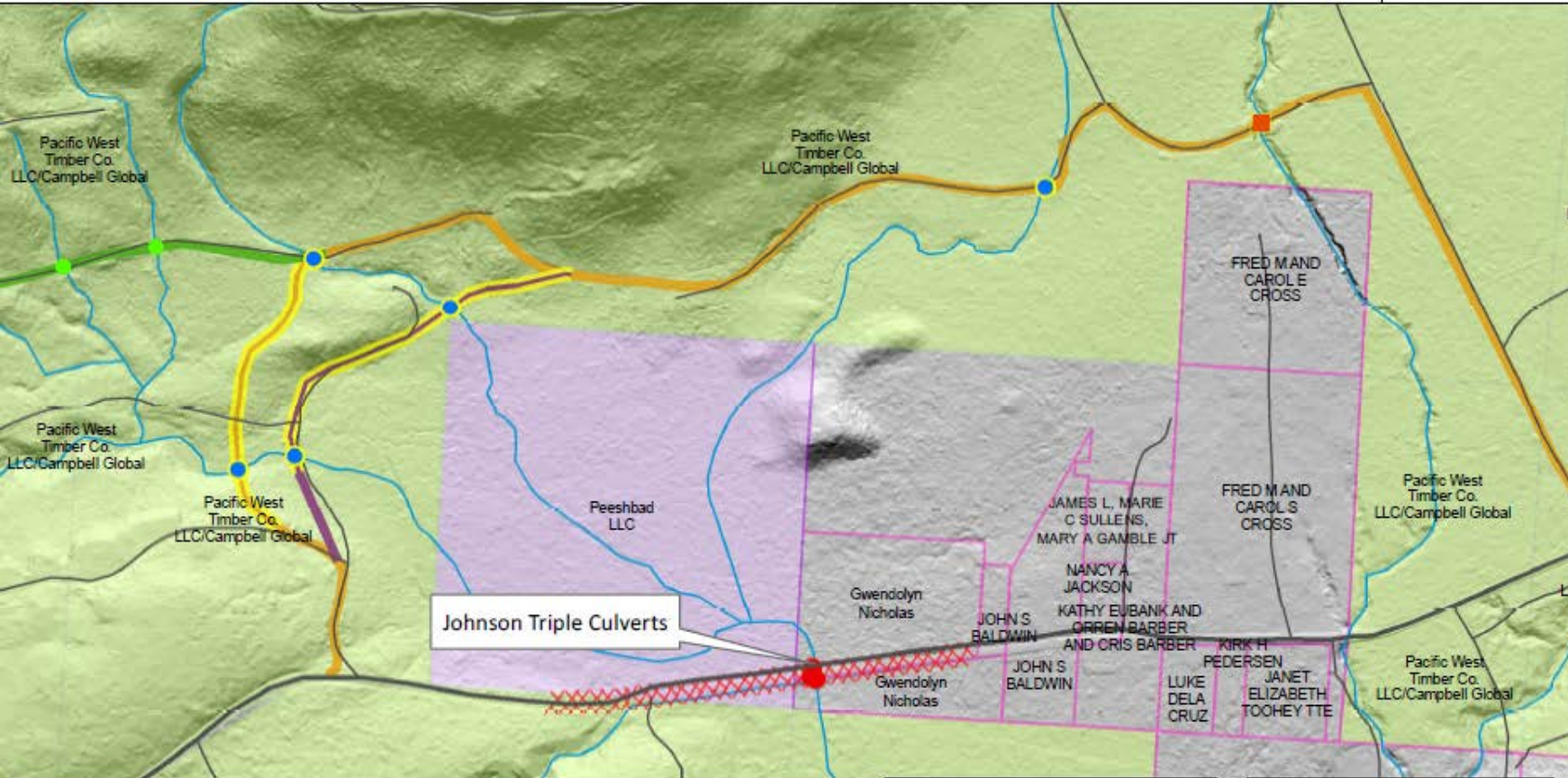


- **Johnson Triples 19-1609P**
-RM ~10
- ★ **Trib To Johnson 17-1429R**
-Construction Completed 2020
- Cost Increase \$194k
- ⚡ **Johnson Creek Culvert Removal**
-17-1418R
-RM 0 Hoko mile 12.5
-Construction Completed 2019
-Returned \$798,845



CONSTRAINTS

- Road very low through forested wetland
- Raise road ~5.5' _____
- Soils very poor for great depth limits design options
- Johnson B trib runs along length of project ~~~~~
- Wetlands extend on both sides of road for nearly the entire project length
- Walls to retain fill will be required
- Walls and road fills are heavy and set on very poor soils



ROAD RELOCATION CONSIDERED

- Not viable
- All Private Ownership
- Multiple new crossings required
- New road grades needed

Explanation

Rd_Alts_CONCEPT
 Alt, Type

Rd_Reroute_Xings_CONCEPT
 Type

, Decommission
 A, Modify
 A, New
 A_2, Modify
 A_2, New
 B, Modify
 B, New

Modify (?)
 New Bridge (?)
 New Culvert(?)

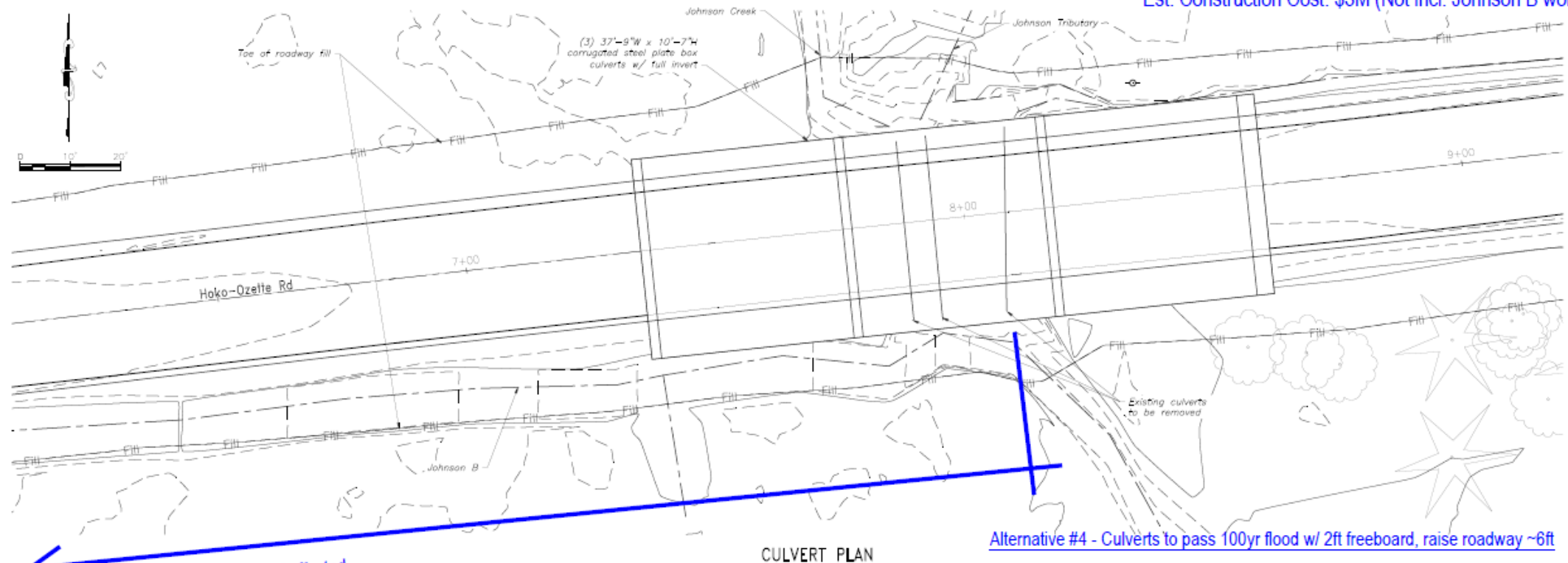
Crossing (WDFW ID)
 80001261

Hoko Landowners
 <all other values>
 Pacific West Timber Co. LLC/Campbell Global
 Peeshbad LLC

Roads (PacWest)
 Hoko-Ozette Road

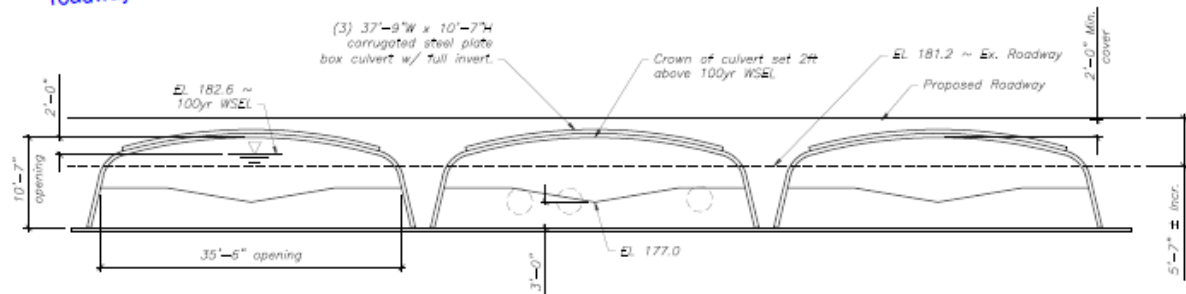
| Road segment length | | |
|---------------------|--------------|-------------|
| Alt | Type | Length (ft) |
| A | Modify | 6,811 |
| A | New | 1,177 |
| A 2 | Modify | 350 |
| A 2 | New | 1,387 |
| B | Modify | 9,760 |
| B | New | 500 |
| | Decommission | 1,500 |

| Crossings | | |
|-----------|----------------|-----|
| Alt | Type | Qty |
| A | New bridge | 1 |
| A | New culvert | 3 |
| A | Modify culvert | - |
| | | (4) |
| A 2 | New bridge | 1 |
| A 2 | New culvert | 3 |
| A 2 | Modify culvert | - |
| | | (4) |
| B | New bridge | 2 |
| B | New culvert | 2 |
| B | Modify culvert | 4 |
| | | (8) |



CULVERT PLAN

~420ft of Johnson B channel affected (possible solutions include a retaining wall, shifting roadway to the north, or reconstructing Johnson B)



BOX CULVERTS

Alternative #4 - Culverts to pass 100yr flood w/ 2ft freeboard, raise roadway ~6ft

Pros:

- Greatly reduces frequency of roadway overtopping, with higher level of confidence.
- Main crossing could be supplemented with smaller relief structures distributed across floodplain.
- Greatly improves fish passage, wetland connectivity, and hydraulic function.
- Culvert layout meets current WDFW standards.

Cons:

- Longer construction duration will require a temporary bypass road to be constructed, greatly increasing construction impacts.
- Soft soils are likely to have long-term settlement due to large increase in overburden.
- Roadway footprint increases in width by 10-12ft each side, for a total increase of ~18,000SF. Retaining walls may be possible to limit footprint in key areas (Johnson B), but increase settlement potential.

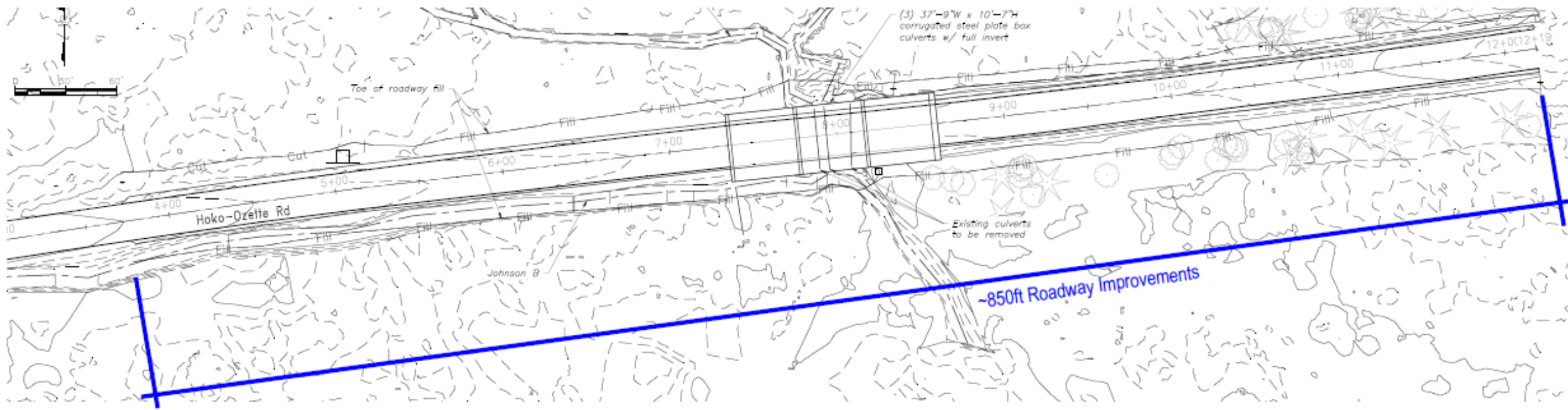
| Rev. | Date | By | Release |
|------|------|----|---------|
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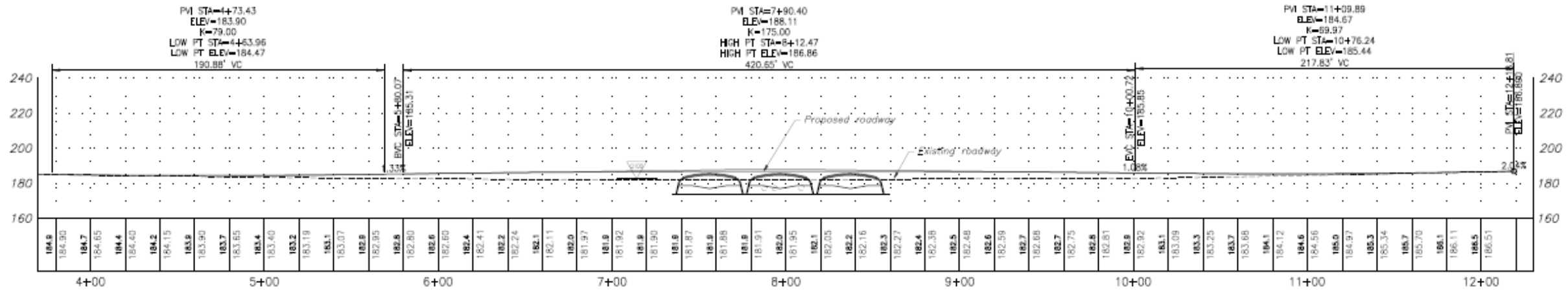
SARGENT
SARGENT ENGINEERS, INC.
320 Route Lane NW • Olympia, WA 98502
Tel 360 867-9284 • Fax 360 867-9318

JOHNSON CREEK CULVERT REPLACEMENT
MP9.5 HOKO OZETTE ROAD
CLALLAM COUNTY, WA
ALT #4 - CULVERT PLAN & PROFILE

| DESIGN TEAM | | SHEET |
|----------------|-------------|---------------|
| DESIGNED BY: | C.B. MOGAN | 1 |
| CHECKED BY: | J.S. SOWARD | IF |
| PREP. DRAFTER: | C.B. MOGAN | 5 |
| | | SHEET |
| | | NO. OF SHEETS |
| | | DATE |
| | | SCALE |
| | | PROJECT NO. |
| | | 19175.00 |



ROADWAY PLAN



| | | | | |
|--|---|------------------------|----------------------|--|
| OVERALL PROJECT | 1st GRANT | UPDATED | UPDATED | |
| <i>Budget must account for all costs to complete the project</i> | <i>Enter only the amount of the grant request</i> | OVERALL PROJECT | GRANT REQUEST | <i>The Grant Request should be 0. Sponsors</i> |
| Amount | Amount | Amount | Amount | Match |

Design Costs

| Category | Task Description | Qty | Rate | | | | | | |
|------------------------------|--|------|--------------|-----------|-----------|------------|-----------|-----------|------|
| 1. Cultural Resources | <i>Cultural resource assessment</i> | - | \$ - | \$ - | \$ - | \$ 2,725 | \$ 2,725 | \$ - | \$ - |
| 2. Survey | <i>Site Survey</i> | 1.00 | \$ 5,300.00 | \$ 5,300 | \$ 5,300 | \$ 18,525 | \$ 18,525 | \$ - | \$ - |
| 3. Geotech | <i>Geotech Bores/Design/Reporting</i> | 1.00 | \$ 22,375.00 | \$ 22,375 | \$ 22,375 | \$ 94,375 | \$ 94,375 | \$ - | \$ - |
| 4. Wetland Delineation | <i>Delineate/Report/Mitigation Plan?</i> | - | \$ - | \$ - | \$ - | \$ 10,000 | \$ 10,000 | \$ - | \$ - |
| 5. Civil Design | <i>0-100% Design and PSE package</i> | 1.00 | \$ 35,904.00 | \$ 35,904 | \$ 35,904 | \$ 108,997 | \$ 49,099 | \$ 59,898 | \$ - |
| 6. Hydraulic Design | <i>Hydraulic Models/Culvert Sizing</i> | 1.00 | \$ 84,249.00 | \$ 84,249 | \$ 84,249 | \$ 84,249 | \$ 84,249 | \$ - | \$ - |
| 7. Grant Administration | <i>NOSC Admin/Bookkeeping</i> | 1.00 | \$ 18,379.00 | \$ 18,379 | \$ 18,379 | \$ 27,090 | \$ 27,090 | \$ - | \$ - |
| 8. NOSC personnel and fringe | <i>NOSC Staff Costs</i> | 1.00 | \$ 39,608.00 | \$ 39,608 | \$ 32,725 | \$ 52,527 | \$ 52,527 | \$ - | \$ - |
| 9. Travel | <i>NOSC Staff Travel and Per Diem</i> | 1.00 | \$ 68.00 | \$ 68 | \$ 68 | \$ 832 | \$ 832 | \$ - | \$ - |
| | | | \$ - | \$ - | \$ - | | | \$ - | \$ - |
| | | | \$ - | \$ - | \$ - | | | \$ - | \$ - |
| | | | \$ - | \$ - | \$ - | | | \$ - | \$ - |
| | | | \$ - | \$ - | \$ - | | | \$ - | \$ - |
| | | | \$ - | \$ - | \$ - | | | \$ - | \$ - |

| | | | | | | |
|--|--------|------------|------------|---------------------|------------|------------|
| | STotal | \$ 205,883 | \$ 199,000 | \$ 399,320 | \$ 339,422 | \$ 59,898 |
| | | | | ZERO MATCH GRANT | | |
| | GTOTAL | \$ 205,883 | \$ 199,000 | | \$ 339,422 | \$ 59,898 |
| | | | | PRISM Project Total | | \$ 399,320 |

Cost Increase Request=\$140,422

RCO Percentage Match Percentage
85% 15%

QUESTIONS?



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