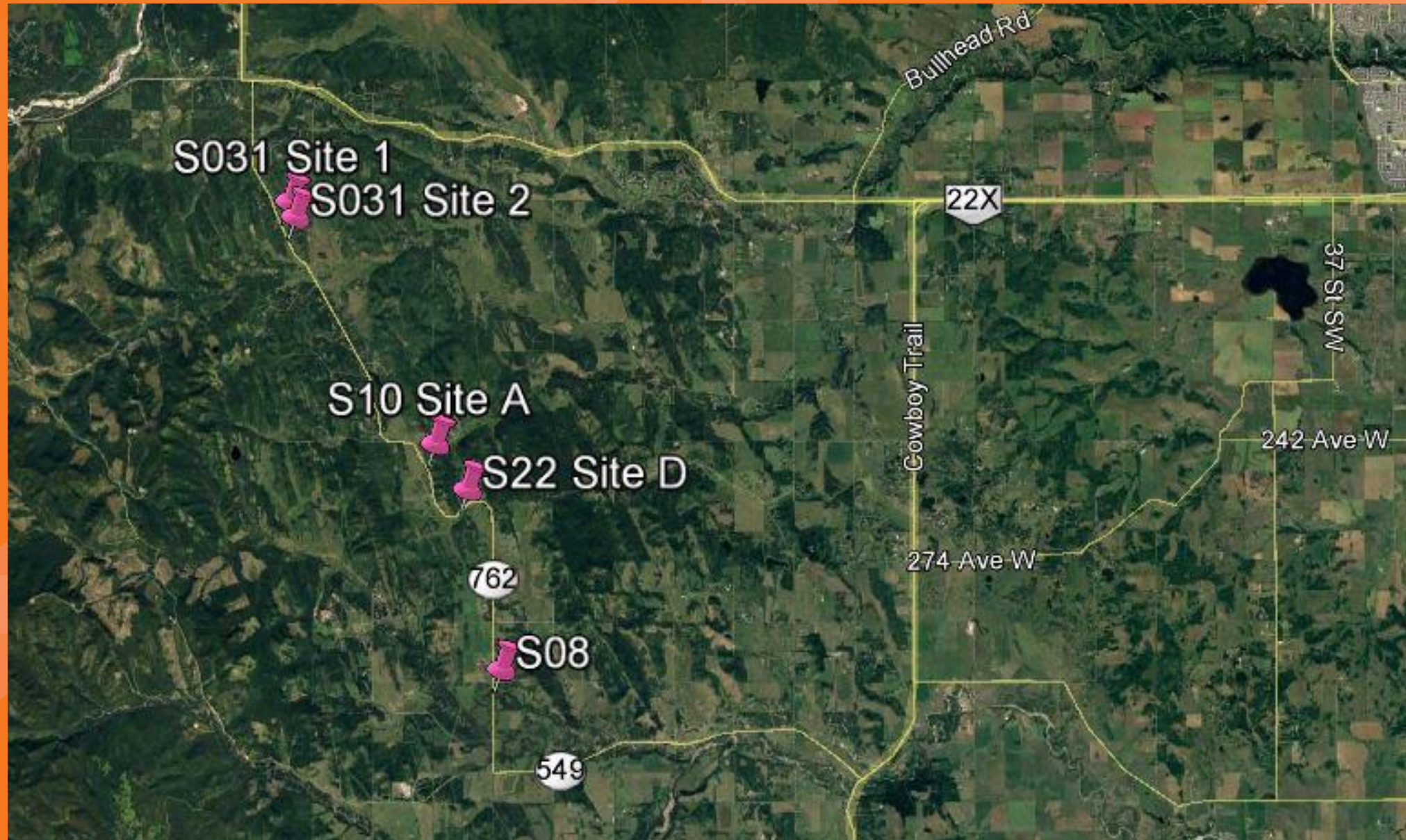


Alberta Transportation Geohazard Risk Management Program Hwy 762 Slide Repairs

“It’s like getting 4 projects in 1”

March, 2018

Hwy 762 Problem Sites



Hwy 762 Problem Sites



S008

Fisher Creek Site

- 6 m, l. clay
- Landowner



Hwy 762 Problem Sites



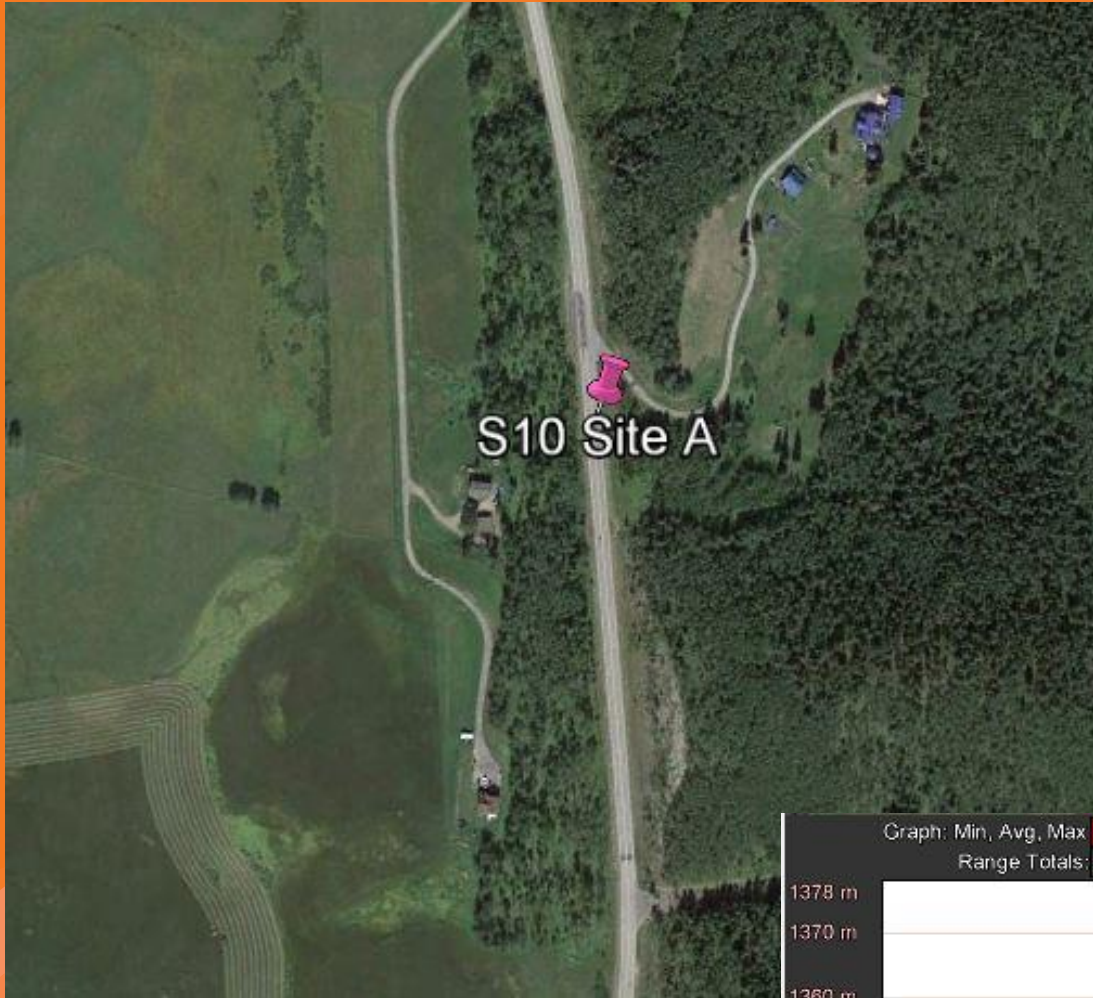
S022

S-Curve Site

- 7-10 m, l. clay
- Pipeline
- Landowner



Hwy 762 Problem Sites



S010

Archery Range Site

- 6 m deep, fill
- Landowner



Hwy 762 Problem Sites

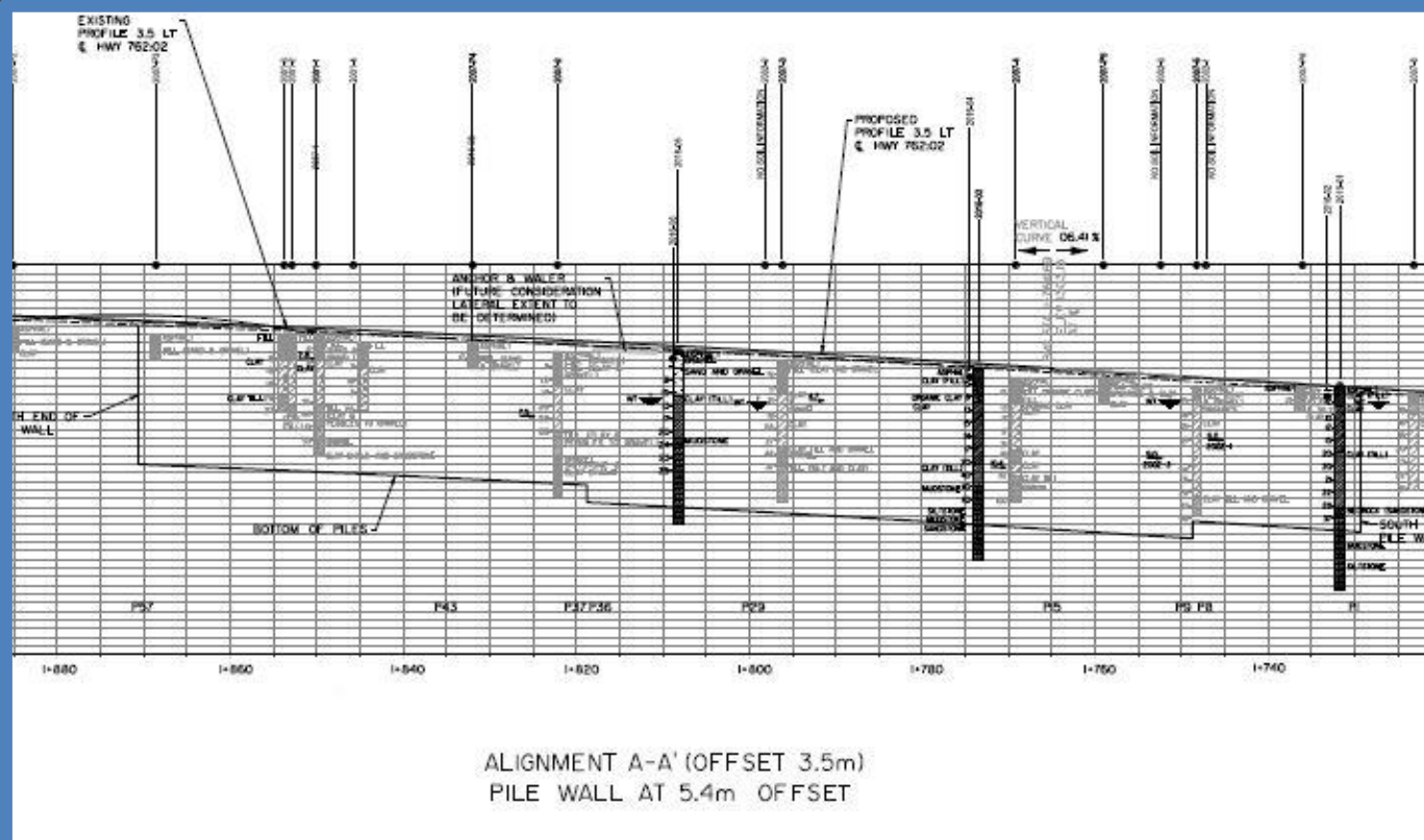


S031 Mystery Culvert Sites

- 3-4 m, fill
- Drainage

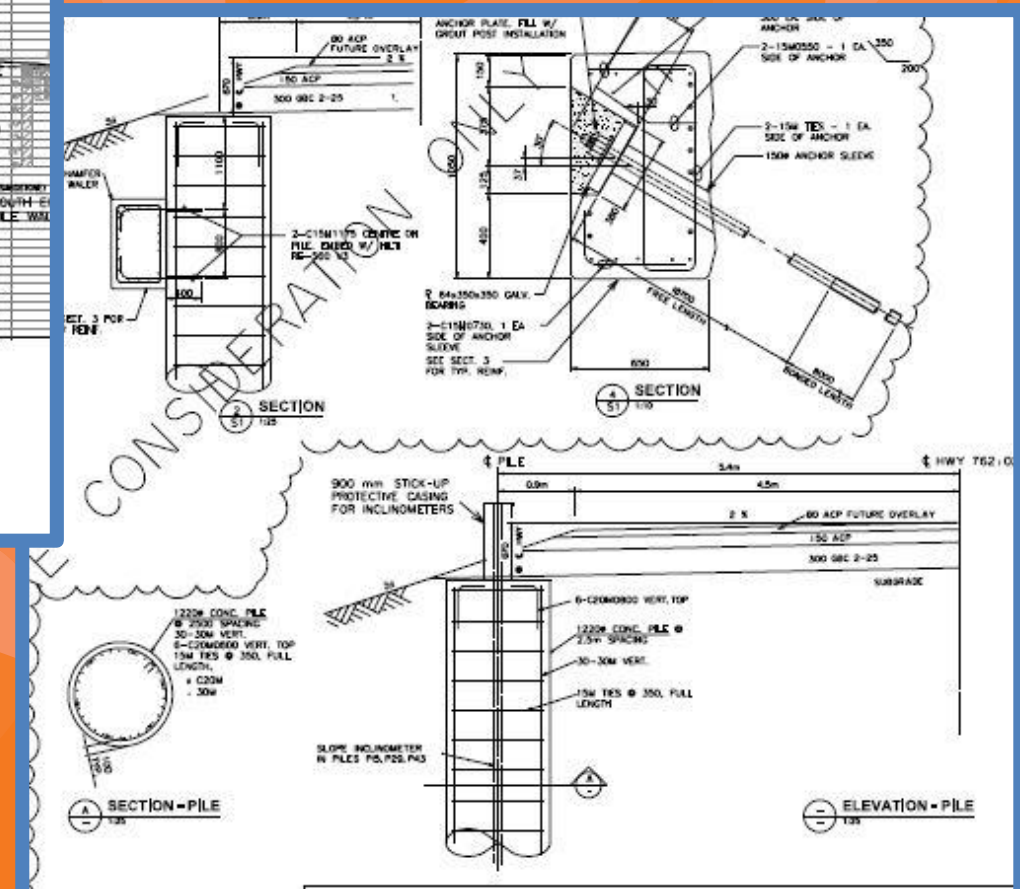


Repairs – S008 FISHER CREEK SITE



- 140 m long CIP concrete pile wall
- 16 – 18 m deep
- 1.2 m dia. @ 2.5 m spacing
- 30 – 30M bars
- Provisions for future tie-back anchors

Concrete	\$1019K
Steel	\$ 536K
Drill	\$ 857K
All Other	\$ 471K
Total	\$2883K



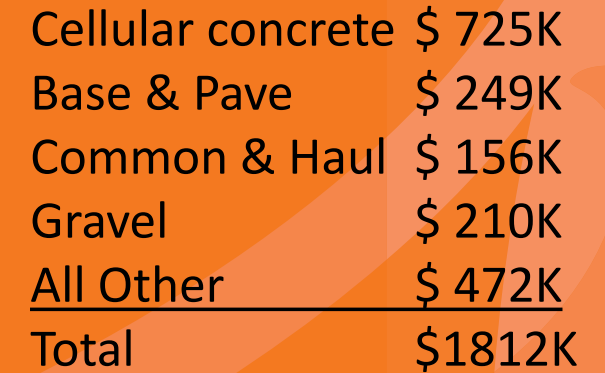


Diagram illustrating the cross-section of a highway embankment structure, showing the relationship between the existing ground, cellular concrete fill, and the finished pavement.

Key Dimensions and Components:

- ROW (Right-of-Way):** 15.0 m ROW (Right-of-Way) on both sides of the centerline.
- Centerline:** SHIFTED HWY 76282 CL.
- Lane Width:** 4.5 m LANE (on both sides of the centerline).
- Cellular Concrete Fill:** 2.1 m Q/S TO UPPER LIMIT OF CELLULAR CONCRETE FILL (on the left side).
- Cellular Concrete:** 1.0 m Q/S TO UPPER LIMIT OF CELLULAR CONCRETE FILL (on the right side).
- Pavement:** FINISHED PAVEMENT (1.8 m wide).
- Drainage:** DAYLIGHT BLANKET DRAIN TO DRAINAGE PIPE TO OUTFALL (0.200 m (MIN.)).
- Blanket Drain:** BLANKET DRAIN (COARSE DRAINAGE GRAVEL) NON-WOVEN GEOTEXTILE (TYPE B) WOVEN GEOTEXTILE.
- Cellular Concrete (Lift Thickness):** CELLULAR CONCRETE (LIFT THICKNESS 0.6m MAX.).
- Cellular Concrete (Lift Upper Limit):** CELLULAR CONCRETE (LIFT UPPER LIMIT).
- Gravel Base:** GRANULAR BASE TO EXTEND FROM TOP OF CELLULAR CONCRETE TO FINISHED SURFACE WITH MIN. 0.3m GBC DEPTH.
- Allowance for Future Overlay:** ALLOWANCE FOR FUTURE OVERLAY (BY OTHERS).
- AOP Replacement:** AOP REPLACEMENT.
- Existing Ground:** EXISTING GROUND.
- Flatten Slope:** FLATTEN SLOPE TO THE @ 0.6m FROM ROW LIMIT.
- Variable Tie to ROW:** VARIABLE TIE TO ROW.
- Refer to Typical:** REFER TO TYPICAL.
- 1:200 m (MAX.):** 1:200 m (MAX.) (Slope ratio).

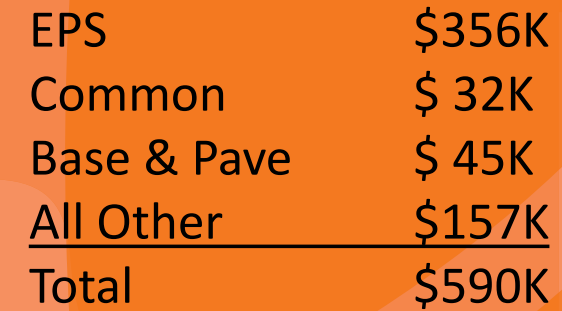


Diagram illustrating the typical cross-section of an EPS (Expanded Polystyrene) lightweight fill structure, showing dimensions and materials.

Dimensions:

- EXISTING ROW: 2.5 m (Shoulder)
- LANE: 4.8 m
- LANE: 4.8 m
- EXISTING ROW: 1.2 m (Clean Out Ditch)
- Variable Slope (MAX 2:3:1)
- 1.3m (MIN) TO 1.4m (MAX) GRAVEL COVER OVER EPS INCLUDES PAVEMENT AND FUTURE OVERLAY
- 2.5 m (Height of structure)
- 0.2 m (Base layer thickness)

Materials and Components:

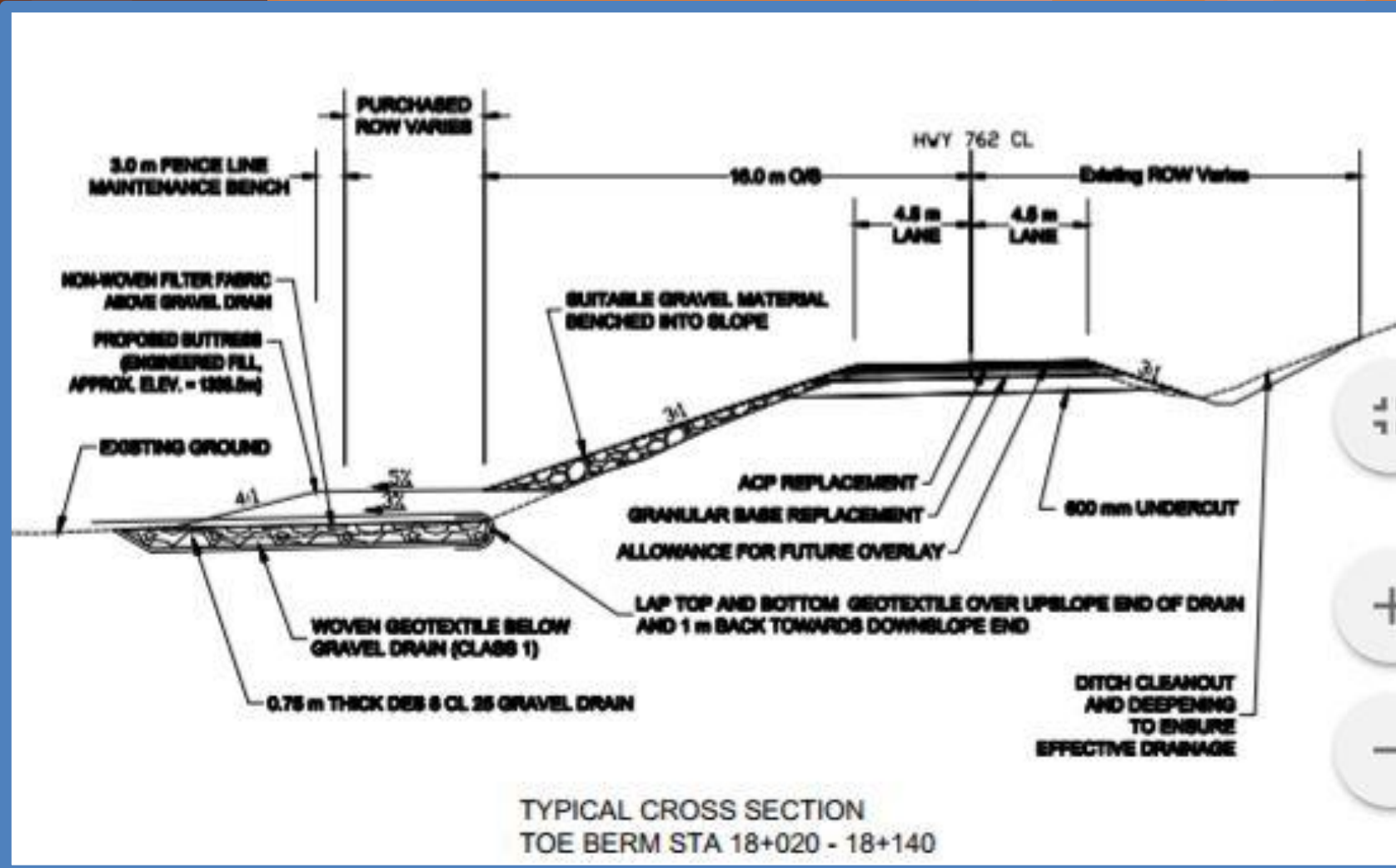
- TEXTURED GEOMEMBRANE (HDPE) BETWEEN ROAD STRUCTURE AND EPS
- TEXTURED GEOMEMBRANE (LDPE) ON SIDES OF EPS OVERLAPPED 90°
- EXISTING GROUND
- EXISTING SLOPE (SUITABLE MATERIAL FROM ROAD DEMINATION)
- EPS GEOFOAM
- GRANULAR BASE GBC OVER 2 CM
- ACP TYPE L1 (PG 62-34)
- 200mm DRAINAGE SAND WITH PRE-FABRICATED STRIP DRAINS

Labels:

- HWY 702/32 CL
- CLEAN OUT DITCH

Section Title: EPS LIGHTWEIGHT FILL TYPICAL SECTION STA 10+030 - 10+090

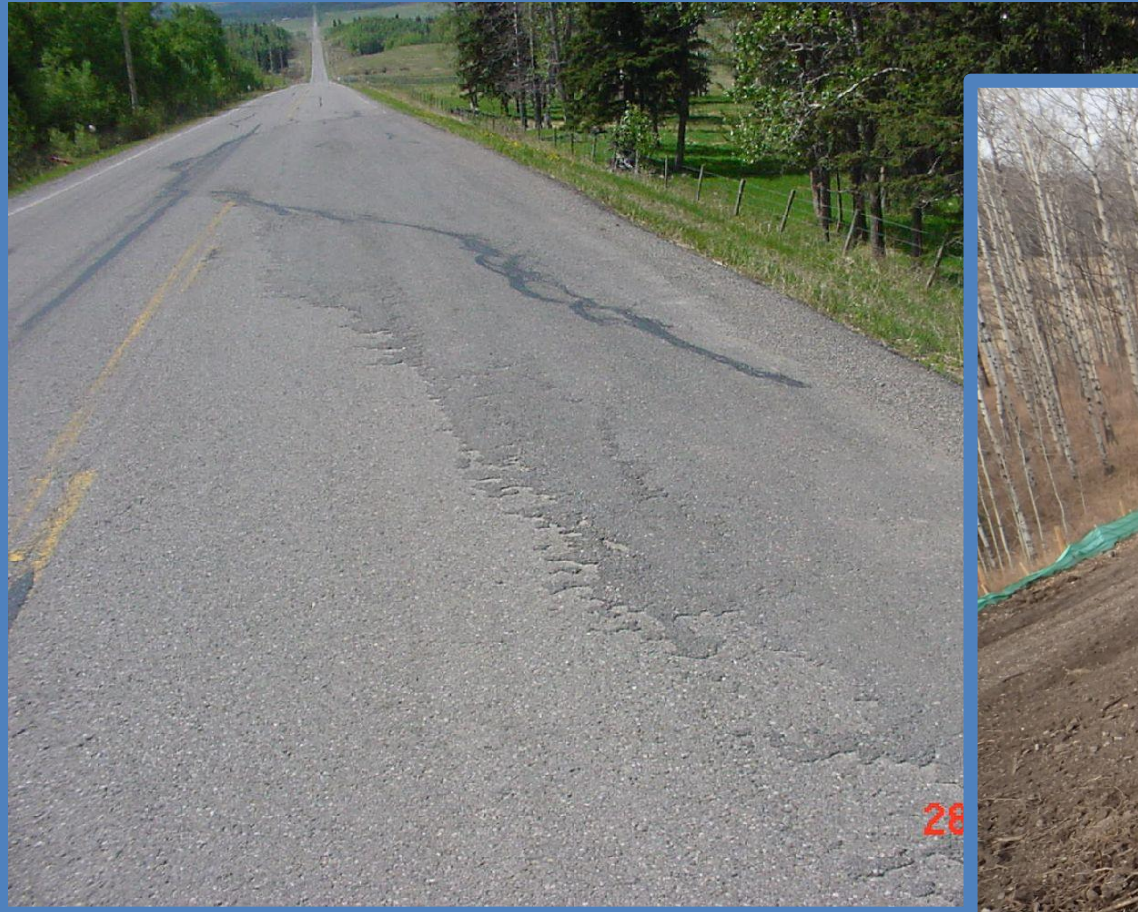
Repairs – S031 MYSTERY CULVERT SITE



Gravel	\$129K
All Other	\$214K
Total	\$343K

120 m road resurfacing
120 m long berm
1.2 m high 10 m wide
Drainage improvements

Photos – S008 FISHER CREEK SITE



Photos – S022 S-CURVE SITE



Slope Stabilization using CEMATRIX Cellular Concrete.mp4

Photos – S010 ACHERY RANGE SITE



Photos – S031 MYSTERY CULVERT SITE



Site	C Estimate	Final Cost
S008	2,830,000	2,081,630
S010	1,812,000	3,595,920
S022	590,000	974,746
S031	343,000	848,283
Total	\$5,575,000	\$7,500,782

Consultant: Tetra Tech Canada
Contractor: Bow Mack Paving (Okotoks)

