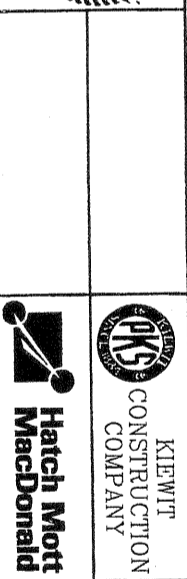
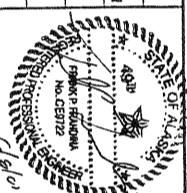


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 cad file: 32AC0100.DWG

NO.	DESCRIPTION	CHK'D	APP'D	DATE	REV.	ISSUED FOR	AUTH. BY	DATE
1	REMOVED ELECTRICAL DUCT BANK ON SOUTH SIDE, COORDINATED SECTION CALL OUTS.	RAW	FPF	18MAR99	1	CONSTRUCTION	FPF	04JUNE99
					0	CONSTRUCTION	FPF	18MAR99

DESIGNED BY: F.P. FRANDINA  
 DRAWN BY: I. ROMAN/C. MALLON  
 CHECKED BY: R.J. WELLS  
 O.C. MGR: C. TATTERSALL  
 PROJ. MGR: F.P. FRANDINA



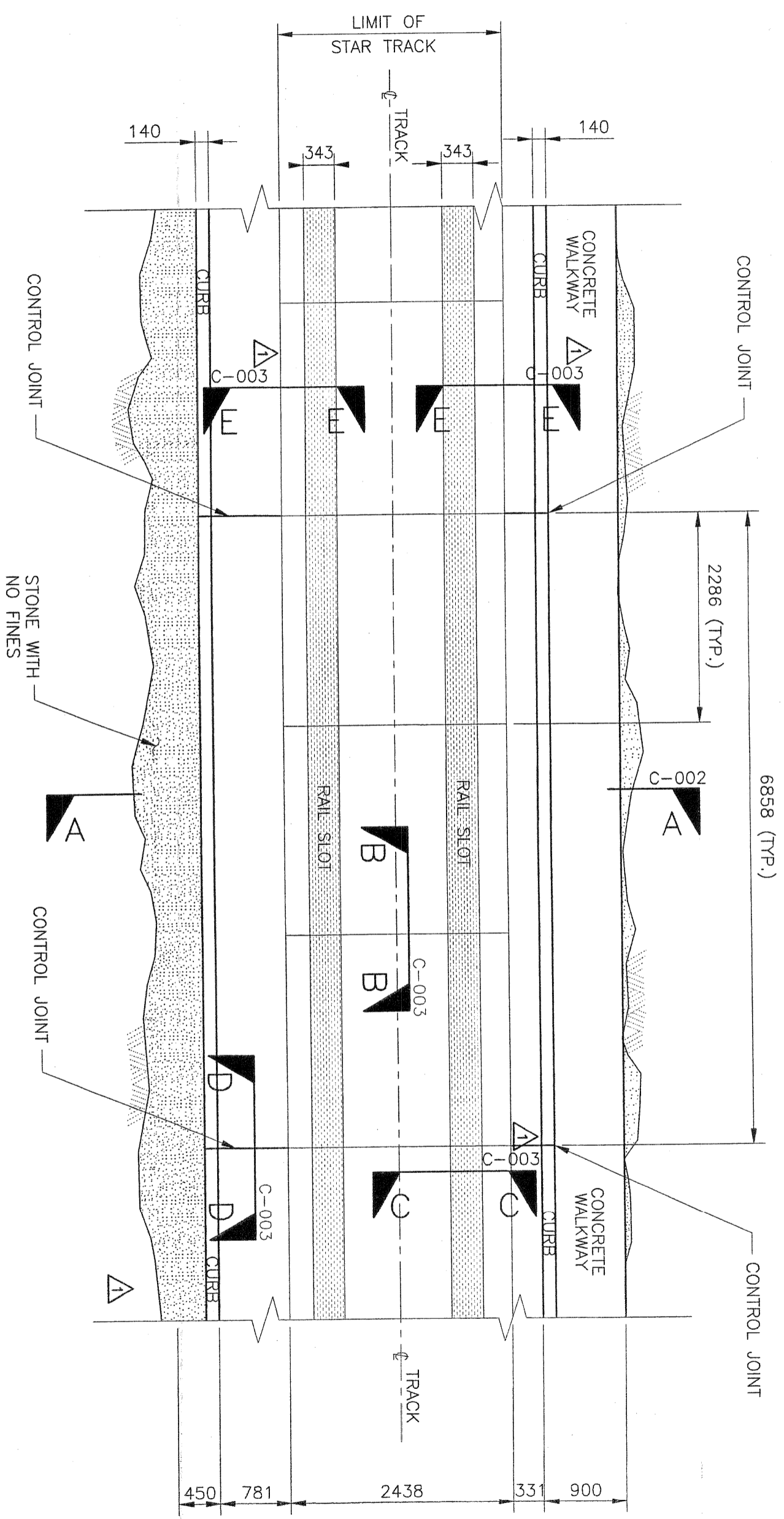
STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 WHITTIER ACCESS - TUNNEL  
 TUNNEL INVERT - ROAD AND TRACK  
 TYPICAL INVERT PLAN

PROJECT DESIGNATION: ACNH-0496(5)/52371  
 SCALE: 1:50 U.N.  
 DRAWING NO: 53.02A-C-001  
 SHEET NO: 1

# PLAN VIEW

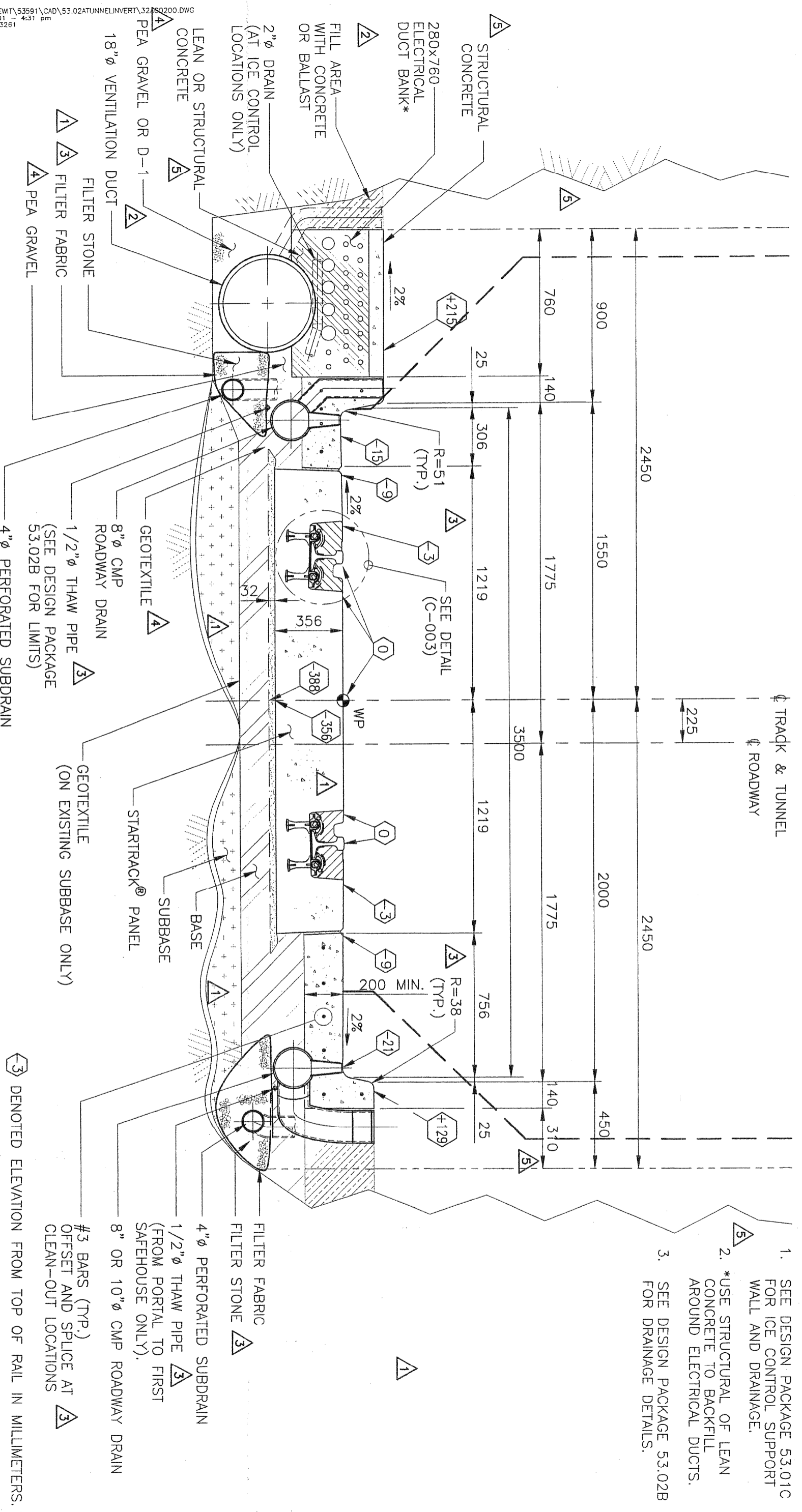
SCALE: 1:50

NOTE: DIMENSIONS ARE SHOWN TO THE WORKING POINT AT THE TOP OF THE CURB.



**NOTES:**

1. SEE DESIGN PACKAGE 53.01C FOR ICE CONTROL SUPPORT WALL AND DRAINAGE.
2. \* USE STRUCTURAL OF LEAN CONCRETE TO BACKFILL AROUND ELECTRICAL DUCTS.
3. SEE DESIGN PACKAGE 53.02B FOR DRAINAGE DETAILS.



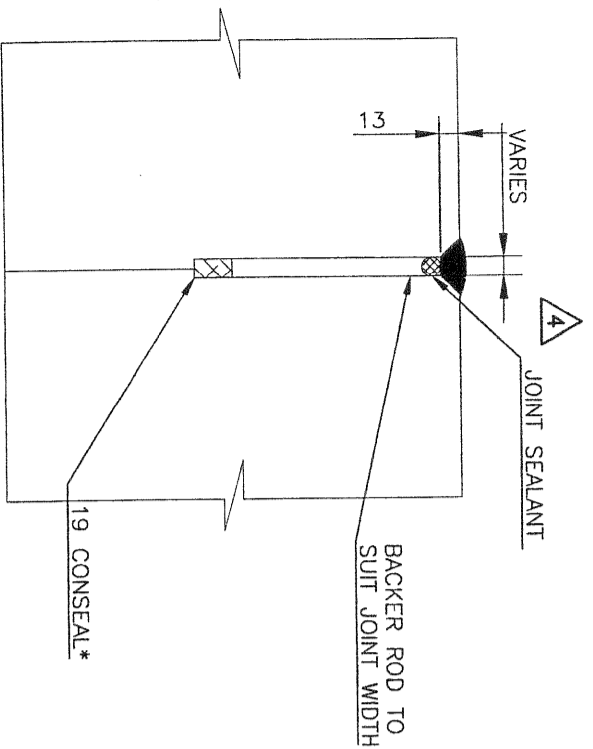
5	REVISED MIN. RAIL CLEAR. & CURB (N. SIDE).	FPF	FPF	20AUG99
4	ADDED PEA GRAVEL AROUND VENT. DUCT.	FPF	FPF	
3	REVISED MIN. RAIL CLEAR. & CURB (N. SIDE).	FPF	FPF	23JUL99
2	ADDED COs TO RHS/WALK & FILTER STONE @ PERI.	RAW	FPF	08APR99
1	REVISED LIMITS OF LEAN CONCRETE.	RAW	FPF	23MAR99
0	RAISED N.CURB, DELETED S.DUCT/BANK	RAW	FPF	18MAR99

5	RECORD DRAWING	FPF	FPF	MAR2001
4	CONSTRUCTION	FPF	FPF	20AUG99
3	FINAL DESIGN APPROVAL	FPF	FPF	23JUL99
2	CONSTRUCTION	FPF	FPF	04JUNE99
1	FINAL APPROVAL	RAW	FPF	23MAR99
0	CONSTRUCTION	RAW	FPF	18MAR99
		REV.	FPF	11DEC98

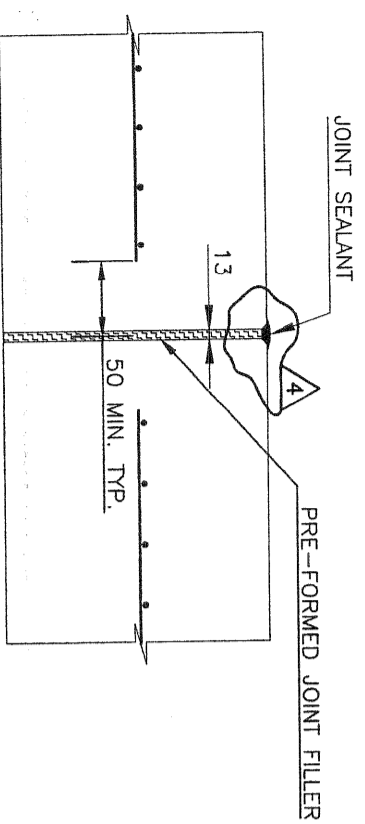
SECTION A-A (C-001)  
SCALE: 1:20



DESIGNED BY: R. J. WELLER DRAWN BY: L. ROMAN/C. MALDON CHECKED BY: F. P. FRANDINA O.C. MGR: C. TATTERSALL PROJ. MGR: F. P. FRANDINA						STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES WHITTIER ACCESS - TUNNEL TUNNEL INVERT - ROAD AND TRACK SECTION				PROJECT DESIGNATION ACNH-0496(5)/52371 SHEET NO. 53591	
NO. DESCRIPTION CHK'D APP'D DATE		REV. ISSUED FOR DATE		SCALE 1:20 U.N.		SHEET NO. 53591		REV.		5	

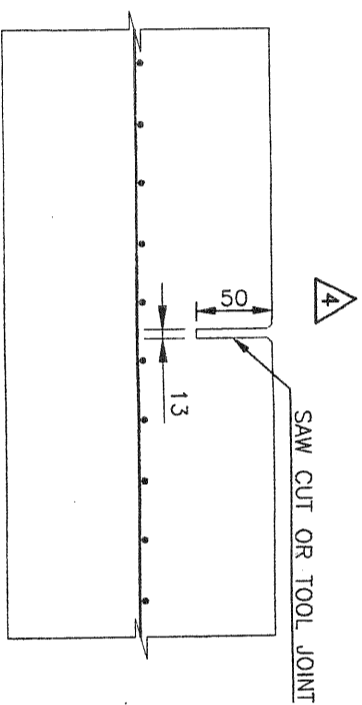


SECTION B-B (C-001)  
SCALE: 1:5



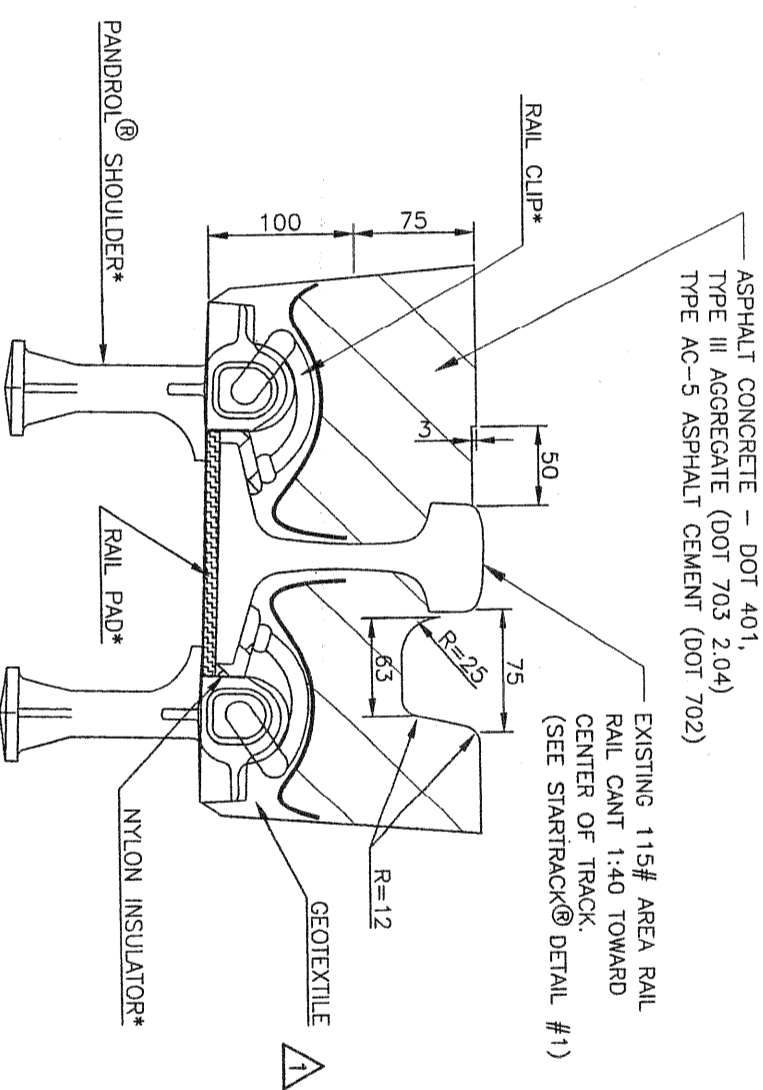
TYP. EXPANSION JOINT DETAIL  
SCALE: 1:5

- NOTE:
1. USE AT END OF POUR.
  2. ALIGN JOINT WITH JOINT IN STARTTRACK® SYSTEM.
  3. EXTEND JOINT SEALER 12.5 mm BELOW BOTTOM OF CHAMFER. (TYP.)



SECTION D-D, (C-001)  
TYP. CONTROL JOINT  
SCALE: 1:5

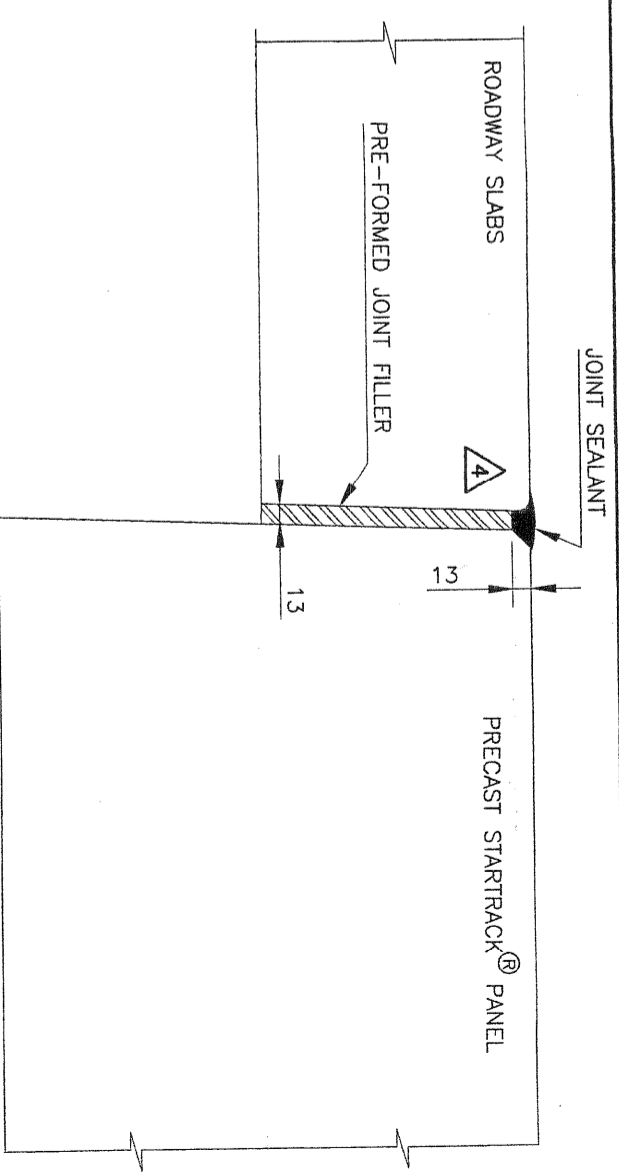
NOTE: EXTEND JOINT THROUGH CURB



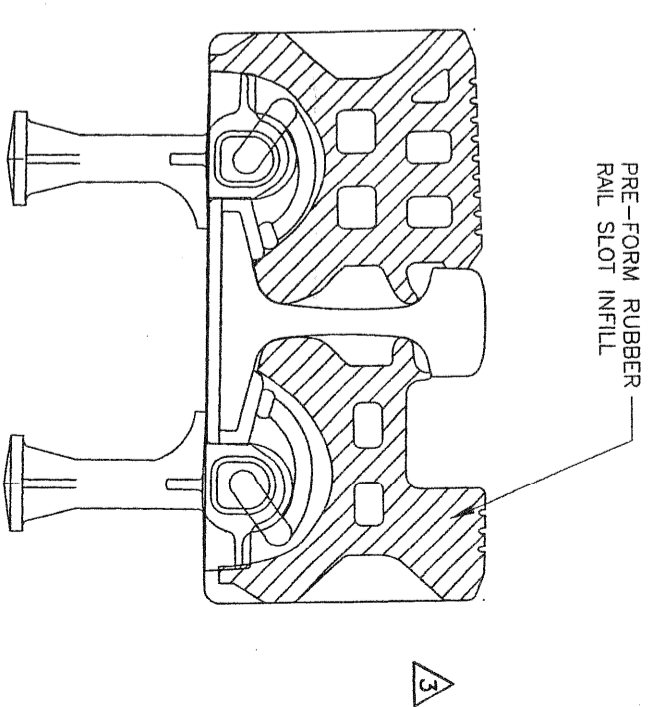
SECTION C-C, TYP. RAIL SLOT DETAIL (C-001)  
SCALE: 1:5

STA. 4+049.8 TO 8+087.0

STA. 3+998.0 TO 4+049.8 (BEAR VALLEY)  
STA. 8+087.0 TO 8+141.0 (WHITTIER)



SECTION E-E, LONGITUDINAL JOINT (C-001)  
SCALE: 1:5



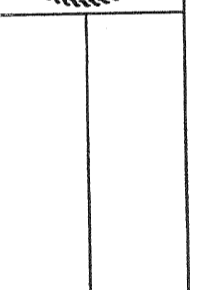
\* SUPPLIED BY STARTTRACK® PANEL MANUFACTURER.

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2:05:51 4:31 pm  
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NO.	DESCRIPTION	CHK'D	APP'D	DATE
1	RAIL SLOT DETAIL REV'D.	RAW	FPF	21APR99
2	HOLD ON ASPHALT RAIL SLOT DETAIL.	RAW	CJT	09JUN99
3	ADDED RAIL SLOT DETAIL.	RAW	FPF	22JUN99
4	REVISED JOINT SEALING PROFILES	CJT	14MAR00	

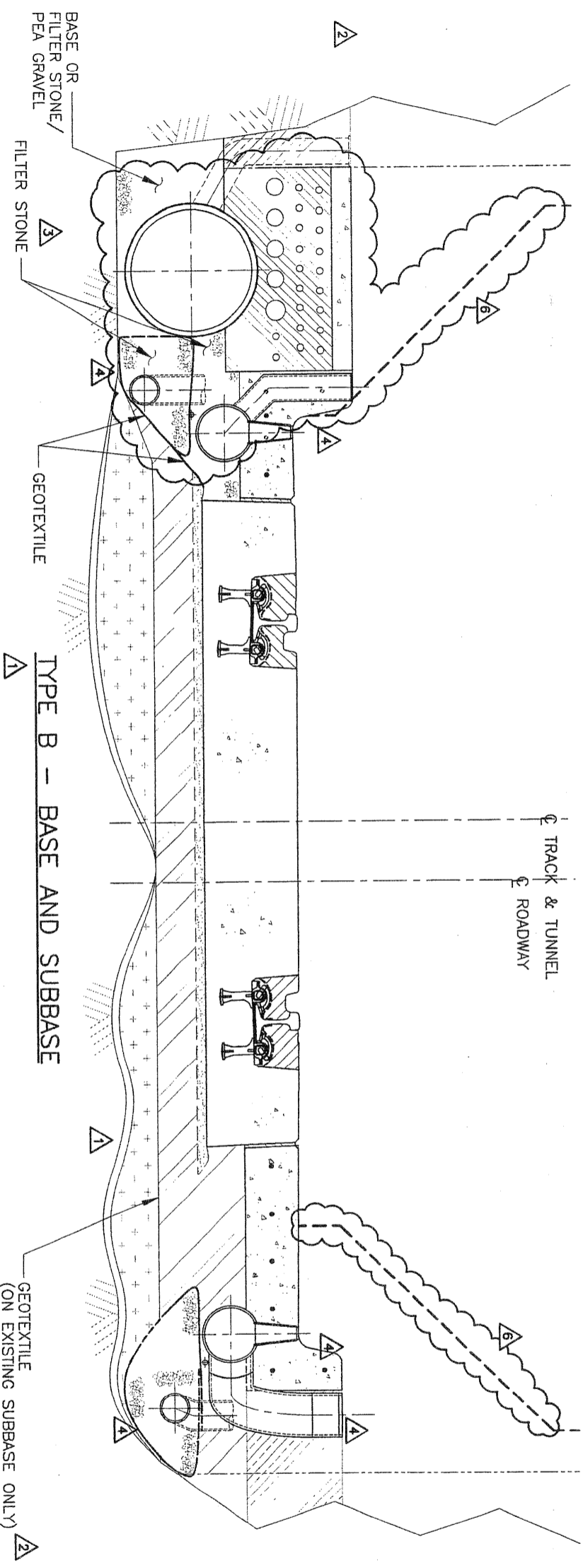
REV.	DESCRIPTION	ISSUED FOR	DATE
0	CONSTRUCTION		11DEC98
1	FINAL APPROVAL		21APR99
2	CONSTRUCTION		09JUN99
3	CONSTRUCTION		06JUL99
4	RECORD DRAWING		MAR2001

DESIGNED BY:	DRAWN BY:	CHECKED BY:	Q.C. MGR:	PROJ. MGR:
C. TATTERSALL	I. ROMAN	F. FRANDINA	C. TATTERSALL	F. FRANDINA



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
WHITTIER ACCESS - TUNNEL  
TUNNEL INVERT - ROAD AND TRACK  
TYPICAL DETAILS

PROJECT DESIGNATION	SCALE	SHEET NO.
ACHN-0496(5)/52371	1:5	U.N.
53591		
DRAWING NO. 53.02A-C-003		REV. 4



NAME	MATERIAL	COMPACTION
LEVELING COURSE	3/8" MINUS, NFS	NOT COMPACTED
BASE	150 MIN. THICK AGGREGATE BASE	PER SPECIFICATION, MIN. 95% M.D.D. (ASHTO T-180)
SUBBASE	SUITABLE EXISTING MATERIAL (SEE NOTE 5.) OR AGGREGATE BASE	PROOF ROLL EXISTING 95% M.D.D. (ASHTO T-180)
EXISTING MATERIAL	MAX. DEPTH = "TOOTH DEPTH"	NOT COMPACTED
COARSE FILL	BALLAST	NOT COMPACTED
LEAN CONCRETE	10 MPa MINIMUM	N/A
FILTER STONE OR PEA GRAVEL	SEE DESIGN PKG 53.02B	SEE DESIGN PKG 53.02B

**SUBBASE PREPARATION PROCEDURE:**

- 1) REMOVE EXISTING MATERIAL TO TOP OF SUBBASE.
- 2) REMOVE ANY UNSUITABLE MATERIAL TO EXCAVATOR "TOOTH DEPTH" AS DEFINED BELOW.
- 3) PROOF ROLL SUBBASE WITH VIBRATORY COMPACTOR OR EQUIVALENT COMPACTIVE EFFORT BY CONSTRUCTION EQUIPMENT.
- 4) REMOVE ANY UNSUITABLE MATERIAL IDENTIFIED DURING THE PROOF ROLLING.
- 5) UNSUITABLE MATERIAL IS DEFINED AS:
  - A) FROST SUSCEPTIBLE MATERIAL.
  - B) FINE TO MEDIUM SAND POCKETS.
  - C) MATERIAL CONTAINING DELETERIOUS MATTER (e.g. ORGANIC MATTER, WASTE, DEBRIS)
  - D) FROZEN MATERIAL.
  - E) MATERIAL THAT IS NOT FIRM AND UNYIELDING.
- 6) REMOVE ALL EXISTING MATERIAL TO EXCAVATOR "TOOTH DEPTH" FOR A DISTANCE OF 300 m FROM EXISTING PORTAL DOORS.
- 7) FILL UNDRAINED POCKETS WITH SUBBASE MATERIAL TO ABOVE STATIC WATER LEVEL PRIOR TO PROOF ROLLING.

**NOTE:**

STRUCTURAL CONCRETE CAN BE USED IN PLACE OF LEAN CONCRETE AROUND THE ELECTRICAL CONDUIT.

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NO.	DESCRIPTION	CHK'D	APP'D	DATE
1	SUBBASE & BASE REV'D, GEOTEXTILE REMOVED	CJT	FPF	31DEC98
2	REVISD MIN. RAIL CLEAR. & CURB (N. SIDE).	FPF	FPF	20AUG99
3	REVISD MIN. RAIL CLEAR. & CURB (S. SIDE).	FPF	FPF	23JUL99
4	ADDED CLEAN-OUTS AT RT.-SIDE OF SIDEWALK PIPES, CHANGED WVF TO REINF. BARS.	RAW	FPF	21APR99
5	REVISD LIMITS OF LEAN CONCRETE.	RAW	FPF	23MAR99
6	REVISD DRAINAGE TO MATCH 53.02B, REVISED ELEC. DUCTBANK & VENT DUCT-N. SIDE, ELEM. DUCTBANK	RAW	FPF	18MAR99
7	S. SIDE, RASSED CURB HGT. TO 230mm-N. CURB.	CJT	FPF	31DEC98

NO.	REVISIONS	REV.	ISSUED FOR	AUTH. BY	DATE
1	RECORD DRAWING	FPF			MAR2001
2	CONSTRUCTION	FPF			20AUG99
3	FINAL DESIGN APPROVAL	FPF			23JUL99
4	CONSTRUCTION	FPF			04JUN99
5	FINAL APPROVAL	FPF			23MAR99
6	FINAL APPROVAL	RAW			08MAR99
7	CONSTRUCTION	CJT			31DEC98
8	CONSTRUCTION	FPF			08DEC98

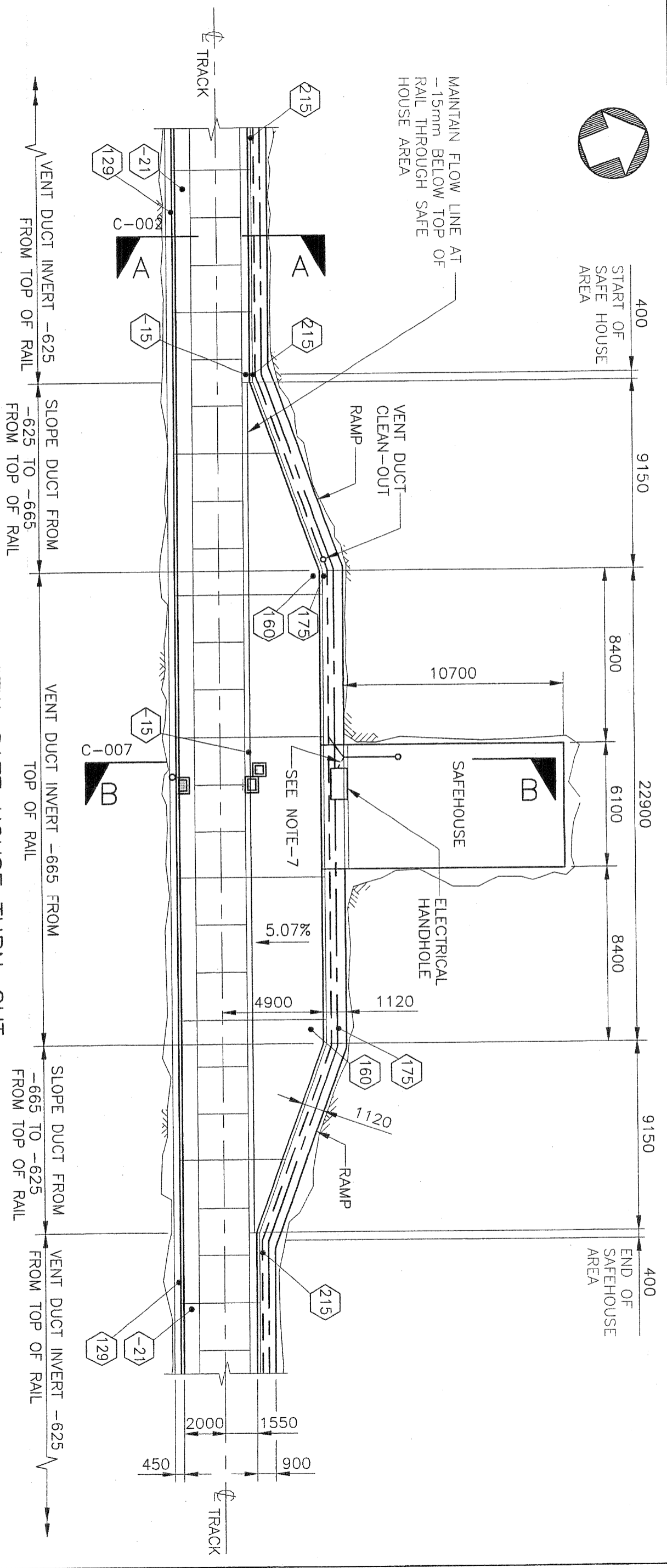
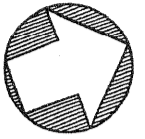
DESIGNED BY: C. HATTERSALL  
DRAWN BY: L. ROMAN/C. MALLON  
CHECKED BY: R. J. WELLER  
Q.C. MGR: C. HATTERSALL  
PROJ. MGR: F. P. FRANDINA

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
WHITTIER ACCESS - TUNNEL  
TUNNEL INVERT - ROAD AND TRACK  
TYPE B - BASE AND SUB-BASE

KIEWIT  
CONSTRUCTION COMPANY  
Hatch Mott MacDonald

SCALE IN MILLIMETERS  
0 200 400 600 800 1000

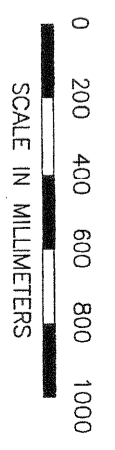
PROJECT DESIGNATION: ACHN-0496(5)/52371  
SHEET NO.: 53591  
DRAWING NO.: 53.02A-C-005  
REV.: 6



**PLAN VIEW-SAFE HOUSE TURN-OUT**  
SCALE: 1:200

- LEGEND**
- ELECTRICAL DUCT BANK
  - - - VENTILATION DUCT
  - DENOTES ELEVATION OF POINT MEASURED PERPENDICULAR TO TOP OF RAIL, IN MILLIMETERS.

- NOTES:**
1. CONTROL JOINTS IN INTEGRAL PAVEMENT/CURB SPACED NO GREATER THAN 6858 mm. CONTROL JOINTS MUST ALIGN WITH TRACK PANEL JOINTS. ADDITIONAL CONTROL JOINTS REQUIRED AT THE BEGINNING AND END OF EVERY TURN-OUT.
  2. FOR PROFILE OF NORTH CURB AT SAFE HOUSE SEE DWG. 53.02A-C-008.
  3. FOR DETAILS OF DRAINAGE SEE DESIGN PACKAGE 53.02B.
  4. FOR ELECTRICAL DETAILS; SEE DESIGN PACKAGE 52.01D.
  5. FOR VENTILATION DETAILS; SEE DESIGN PACKAGE 51.02B.



- NOTES: (CONT.)**
6. VENTILATION DUCT IS NOT INSTALLED BETWEEN SAFE HOUSE 4 AND 5.
  7. AIR FOR SAFE HOUSES 1-4 IS SUPPLIED FROM BEAR VALLEY (WEST). SAFE HOUSES 5-8 ARE SUPPLIED FROM WHITTIER (EAST). INSTALL WYE IN DIRECTION OF AIR FLOW.

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2.05.01 11:44:53 pm  
MCG03261

DESIGNED BY: F. FRANDINA		DRAWN BY: I. ROMAN/C. MALDON	
CHECKED BY: R. WELLS		DATE: MAR 2001	
APPROVED BY: C. TAITERSALL		DATE: 04 JUNE 99	
PROJECT DESIGNATION: ACHN-0496(5)/52371		SHEET NO.: 53591	

NO.	DESCRIPTION	CHK'D	APP'D	DATE	REV.
0	RECORD DRAWING				
0	CONSTRUCTION				

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
WHITTIER ACCESS - TUNNEL  
TUNNEL INVERT - ROAD AND TRACK  
TYPICAL TURN-OUT INVERT PLAN

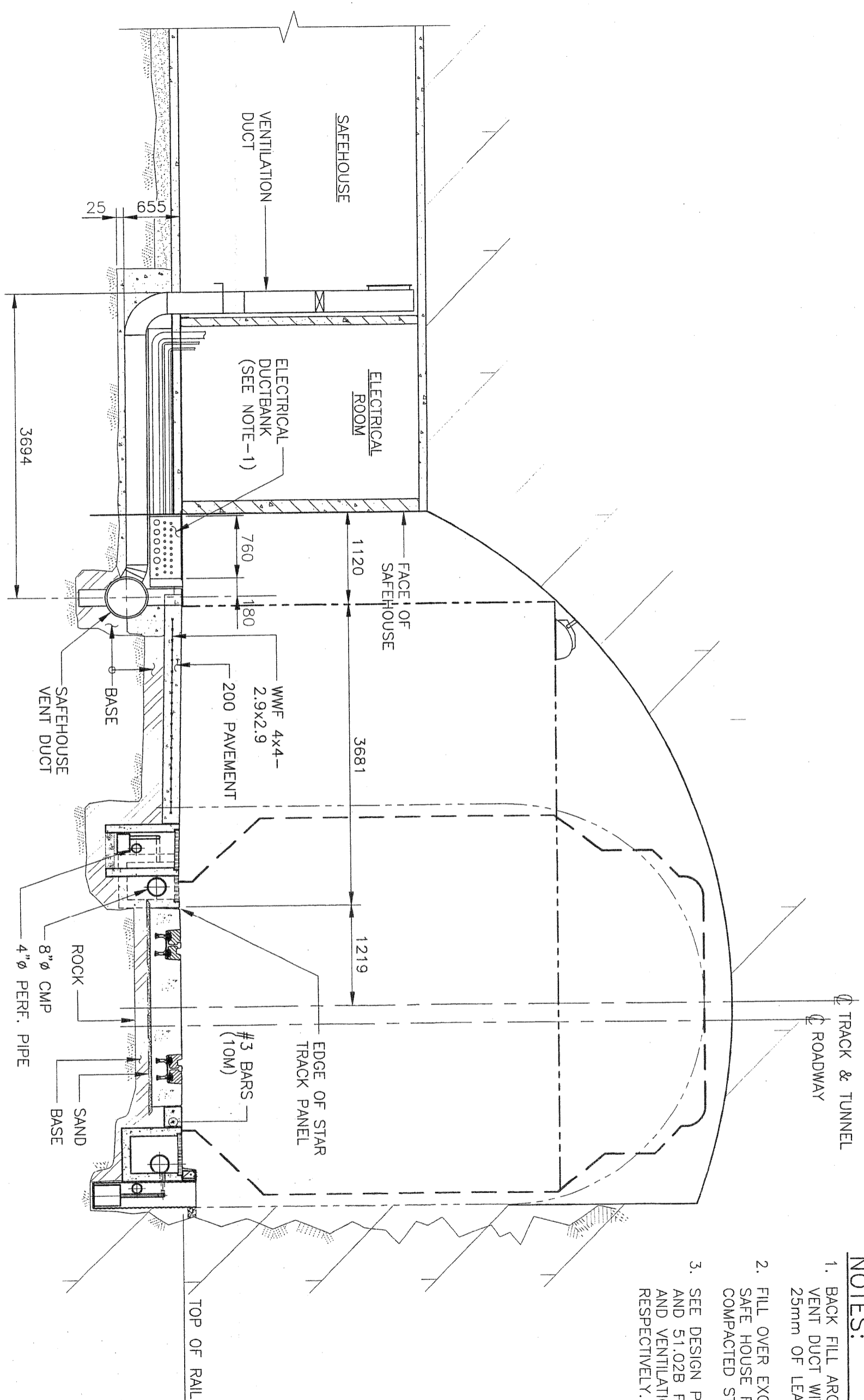
KIEWIT  
CONSTRUCTION  
COMPANY

Hatch Mott  
MacDonald

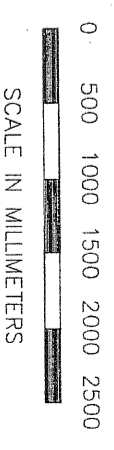
PROJECT DESIGNATION: ACHN-0496(5)/52371  
SHEET NO.: 53591  
SCALE: 1:200  
U.N.  
DRAWING NO. FT 00A-C-006

**NOTES:**

1. BACK FILL AROUND SAFE HOUSE VENT DUCT WITH A MINIMUM 25mm OF LEAN CONCRETE.
2. FILL OVER EXCAVATIONS IN SAFE HOUSE FLOOR WITH WELL COMPACTED STONE.
3. SEE DESIGN PACKAGE 52.01D AND 51.02B FOR ELECTRICAL AND VENTILATION DETAILS RESPECTIVELY.



**CROSS SECTION B-B (C-006)**  
SCALE: 1:50



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cad file: 32AC0700.DWG					
NO.	DESCRIPTION	CHK'D	APP'D	DATE	REV.
	RECORD DRAWING			MAR2001	0
	CONSTRUCTION			04JUNE99	0
DESIGNED BY: R.J. WELLS DRAWN BY: IROMAN/C.MALLON CHECKED BY: F.P. FRANDONIA D.C. MGR: C.JATTERSALL PROD. MGR: F.P. FRANDONIA		ISSUED FOR: AUTH. BY: DATE:		PROJECT DESIGNATION: ACNH-0496(5)/52371 53591 SHEET NO. 0	
KIEWIT CONSTRUCTION COMPANY Hatch Mott MacDonald		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES WHITTIER ACCESS - TUNNEL TUNNEL INVERT - ROAD AND TRACK TURN-OUT CROSS SECTION		SCALE: 1:50 U.N. DRAWING NO. 53.02A-C-007	