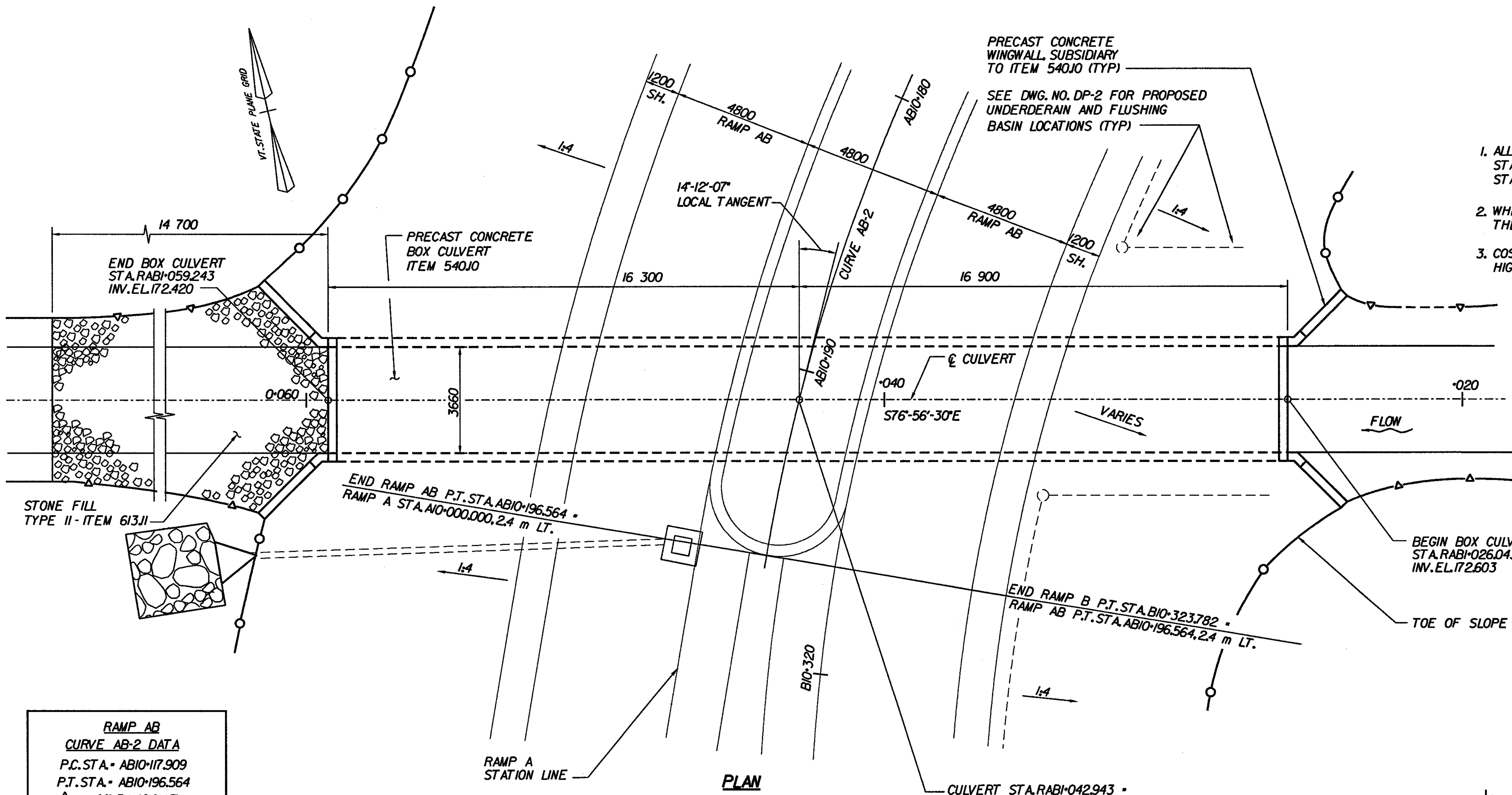
Metric

NOTE: UNLESS NOTED OTHERWISE, ALL STATIONS ARE IN KILOMETERS, ALL ELEVATIONS ARE IN METERS, AND ALL DIMENSIONS ARE IN MILLIMETERS.

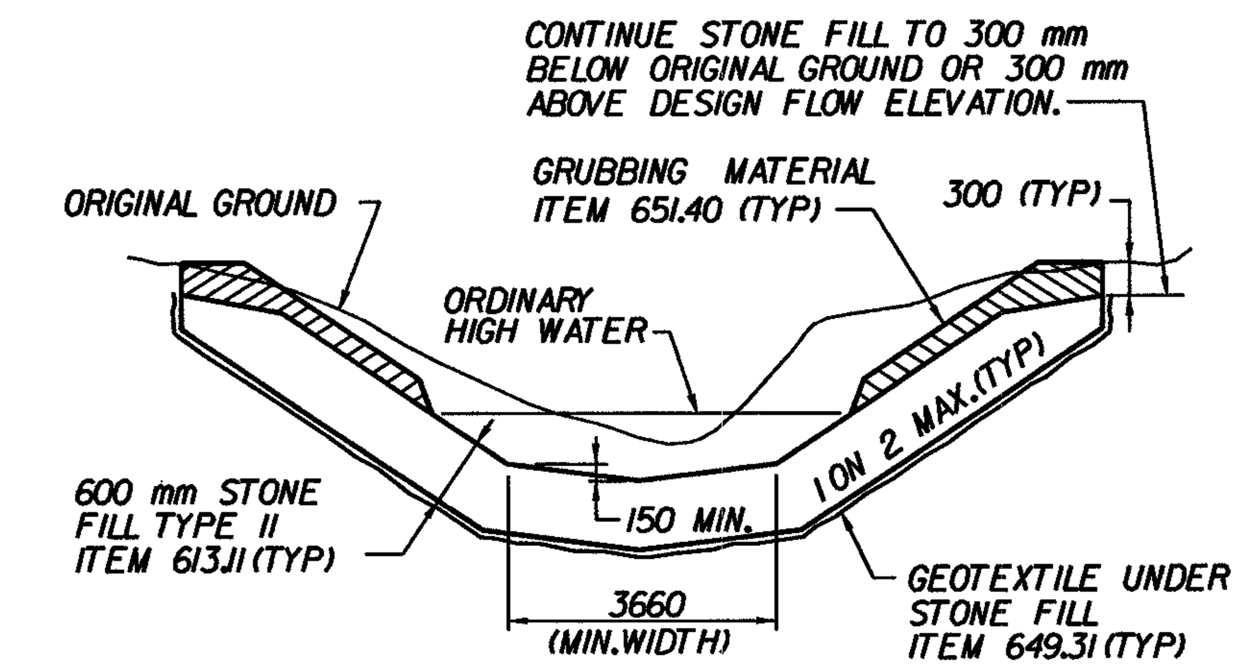


PLAN

2 m 0 2 m

1:100

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1995 (METRIC) & THE LATEST A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (16TH EDITION). DESIGN IS FOR MS-22.5 LIVE LOAD.
2. WHEN NORMAL CONSTRUCTION OR REGULAR ROADWAY TRAFFIC IS MAINTAINED OVER THE BOX CULVERT, THE CONTRACTOR SHALL MAINTAIN A MINIMUM COVER OF 500 mm OF COMPACTED MATERIAL.
3. COST FOR ALL SUBBASE AND PAVEMENT ITEMS ABOVE SUBGRADE SHALL BE INCLUDED IN THE HIGHWAY ESTIMATE.



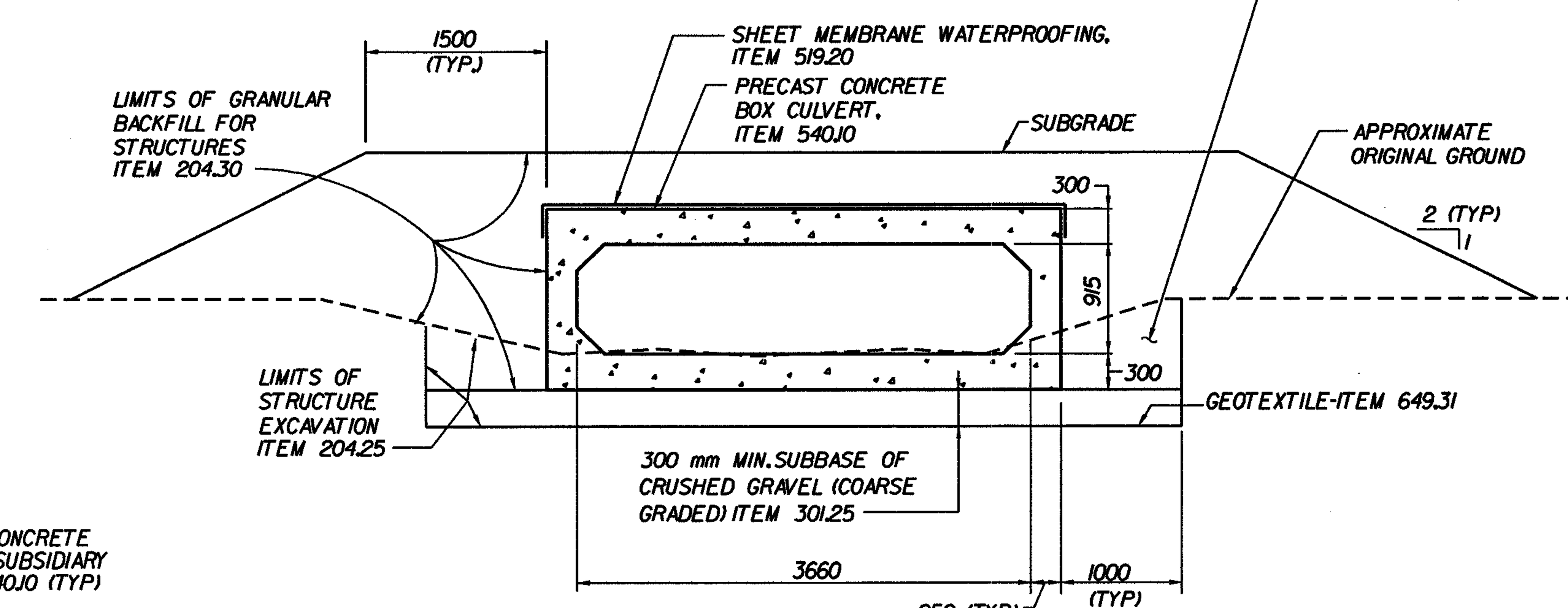
TYPICAL CHANNEL SECTION

N.T.S.

RAMP AB
CURVE AB-2 DATA

P.C.STA. = AB10+117.909
P.T.STA. = AB10+196.564
Δ = 66°-51'-48.6" LT.
R = 67.400 m
T = 44.496 m
L = 78.655 m
E = 13.363 m
e_{max} = 0.077 DN.LT.

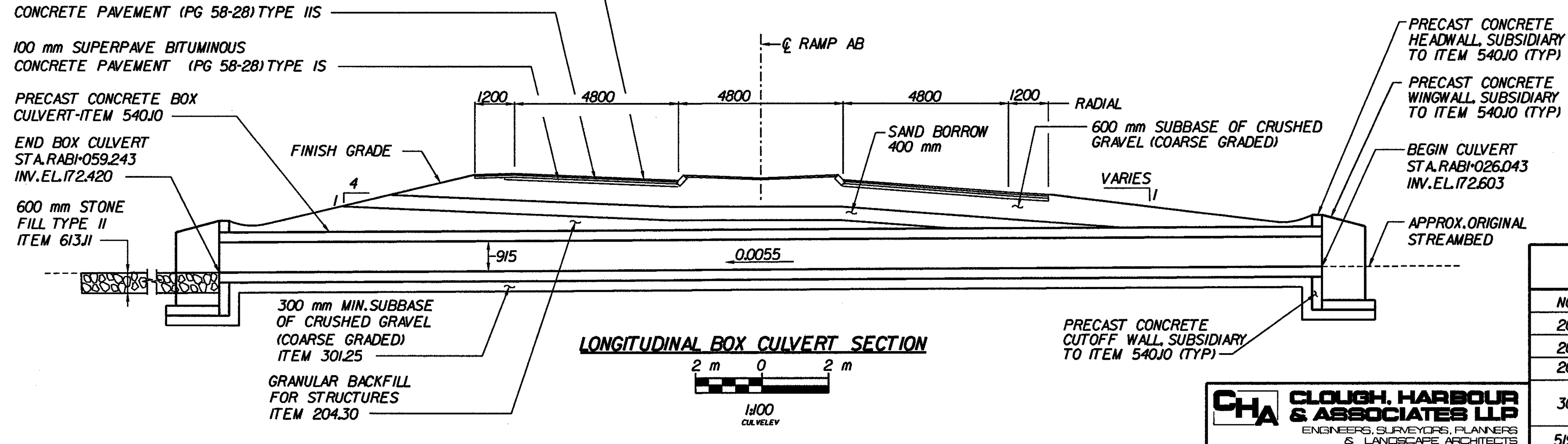
EXCAVATE UNSUITABLE MATERIAL TO DEPTH SHOWN OR AS DIRECTED BY THE ENGINEER.REPLACE AS SHOWN WITH COMPACTED COARSE AGGREGATE AND GRANULAR BACKFILL FOR STRUCTURES. IF LEDGE OR OTHER UNYIELDING MATERIAL IS ENCOUNTERED,IT SHALL BE REMOVED TO A DEPTH OF 300 mm BELOW BOTTOM OF BOX CULVERT AND REPLACED WITH COMPACTED COARSE AGGREGATE.



TYPICAL PRECAST CONCRETE BOX CULVERT SECTION EXCAVATION AND BACKFILL DETAILS

.8 m 0 .8 m

1:40



LONGITUDINAL BOX CULVERT SECTION

2 m 0 2 m

1:100

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS
III WINNERS CIRCLE ALBANY, NEW YORK, 12205

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	TOTAL	FINAL
203.25	CHANNEL EXCAVATION OF EARTH	m^3	86	
204.25	STRUCTURE EXCAVATION	m^3	210	
204.30	GRANULAR BACKFILL FOR STRUCTURES	m^3	800	
301.25	SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)	m^3	86	
519.20	SHEET MEMBRANE WATERPROOFING	m^2	155	
540.10	PRECAST CONCRETE BOX CULVERT	LS	1	
613.11	STONE FILL TYPE II	m^3	66	
649.31	GEOTEXTILE UNDER STONE FILL	m^2	305	
651.40	GRUBBING MATERIAL	m^2	40	

HYDRAULIC DATA

DRAINAGE AREA 24.9 ha DESIGN FLOW = Q50
DESIGN OUTLET VELOCITY @ Q50 = 1.6 m/sec.
DESIGN TAILWATER DEPTH @ Q50 = 0.94 m ELEVATION 173.36
ORDINARY HIGH WATER DEPTH @ Q50 = 200 mm

Q10	FLOW = 3.60 m^3/SEC.	HEADWATER ELEVATION = 173.47
Q25	FLOW = 4.42 m^3/SEC.	HEADWATER ELEVATION = 173.52
Q50	FLOW = 5.18 m^3/SEC.	HEADWATER ELEVATION = 173.58
Q100	FLOW = 5.95 m^3/SEC.	HEADWATER ELEVATION = 173.66

COMMENTS:

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of BENNINGTON		Bridge No. BR900	
Highway No. RAMP AB		Log Sta.	
		Surv. Sta. AB10+190	
RAMP AB CULVERT			
PRELIMINARY INFORMATION			
Designed By C. TUTUNJIAN		Drawn By B. WEATHERBY	
Checked By M. GOGUEN	Date 6/00	Bridge Design Supervisor M.W. OLSTAD	Date 9/00
PROJECT BENNINGTON-HOOSICK		PROJECT NO. D.P.I. 0146 (1) C/4	
I.G.C. Info.			
Bridge Sheet No. BR900		Sheet 248 of 385	

FILE NAME = u:\3573\5\br900\plelsht.dgn
DATE/TIME = 05 SEP 2000
USER = t459