

FORM 1100



GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Transportation and Infrastructure
Highway Design Division

DIVISION 11

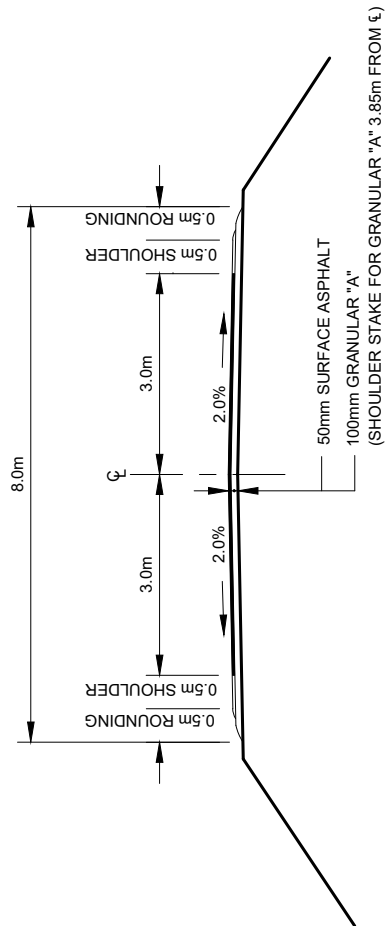
STANDARD ROAD CROSS-SECTIONS

INDEX

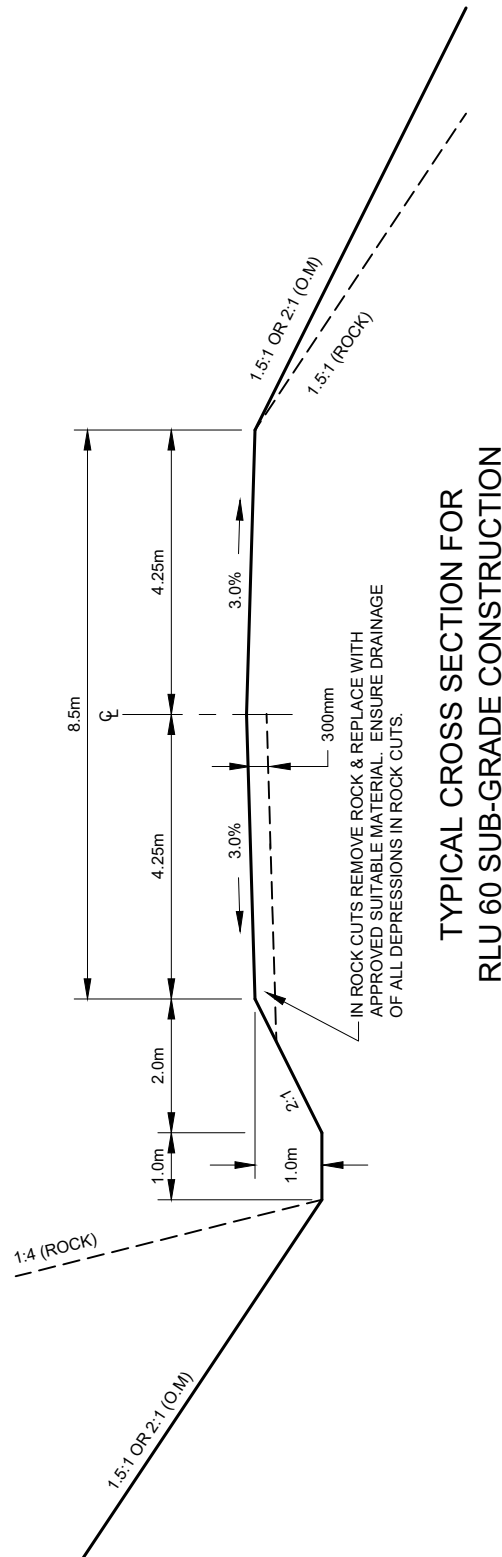
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RLU 60

- NOTES:
1. SHOULDER STAKE 3.75m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W 20.0m
STANDARD WIDTH OF CUTTING 20.0m
STANDARD WIDTH OF GRUBBING 15.0m



TYPICAL CROSS SECTION FOR
RLU 60 FINAL CONSTRUCTION



TYPICAL CROSS SECTION FOR
RLU 60 SUB-GRADE CONSTRUCTION



TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY DESIGN DIVISION

TYPICAL CROSS SECTION RLU 60

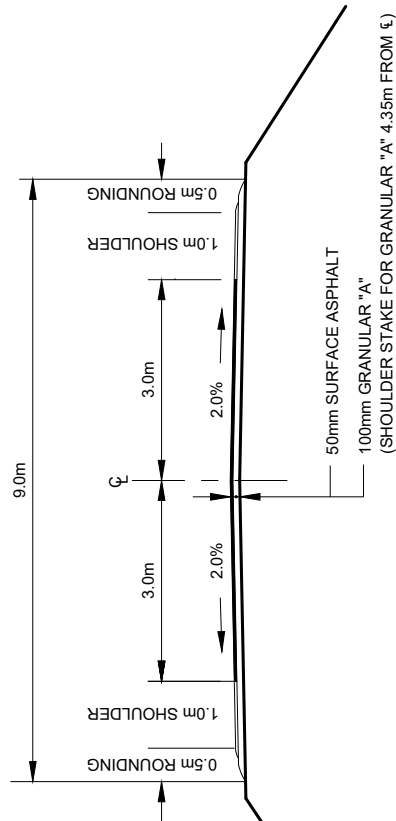
DRAWN BY: KYLE BENNETT

DATE: JAN 26, 2024

SCALE 1:100

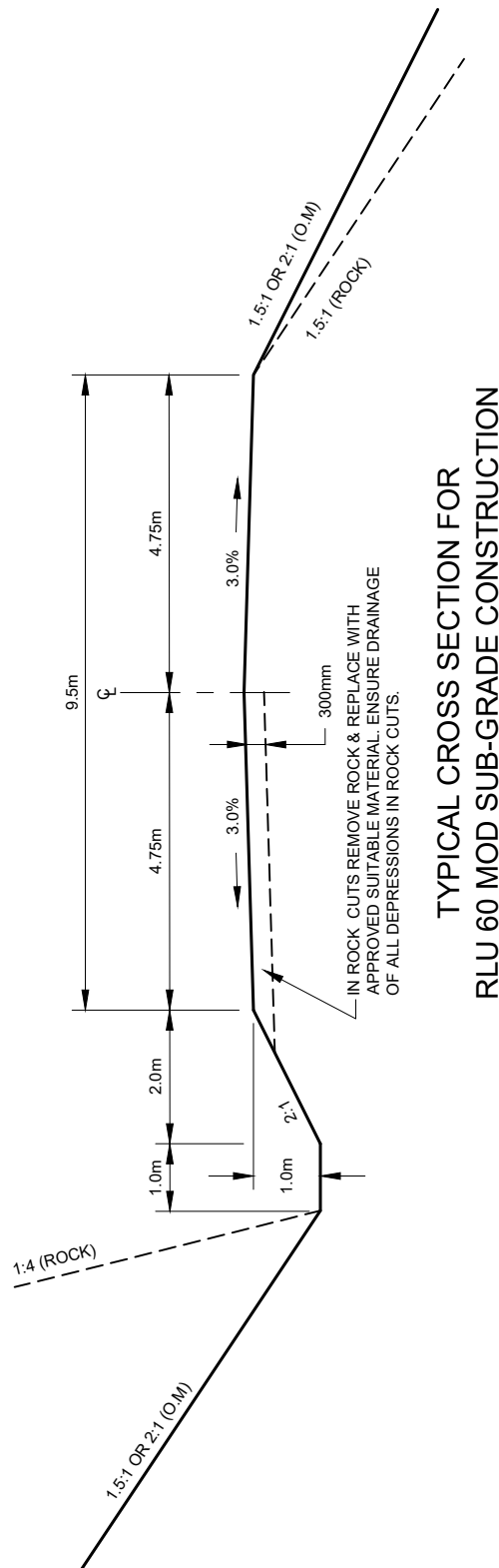
MARCH 2024

1110-1



TYPICAL CROSS SECTION FOR
RLU 60 MOD FINAL CONSTRUCTION

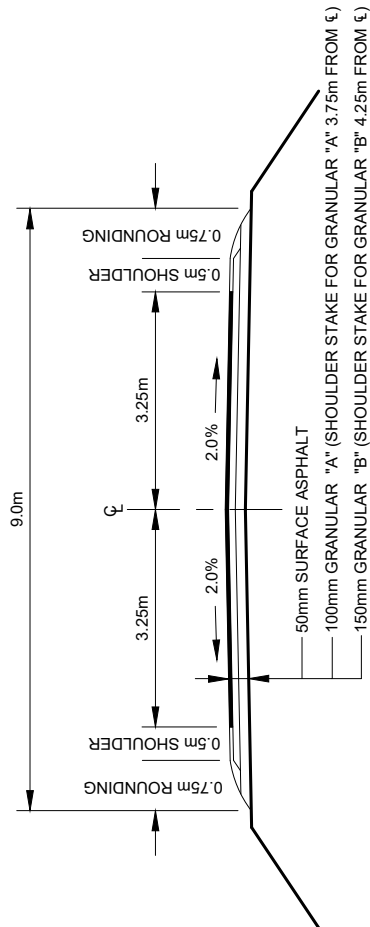
- NOTES:**
1. SHOULDER STAKE 4.25m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W. 20.0m
STANDARD WIDTH OF CUTTING 20.0m
STANDARD WIDTH OF GRUBBING 15.0m



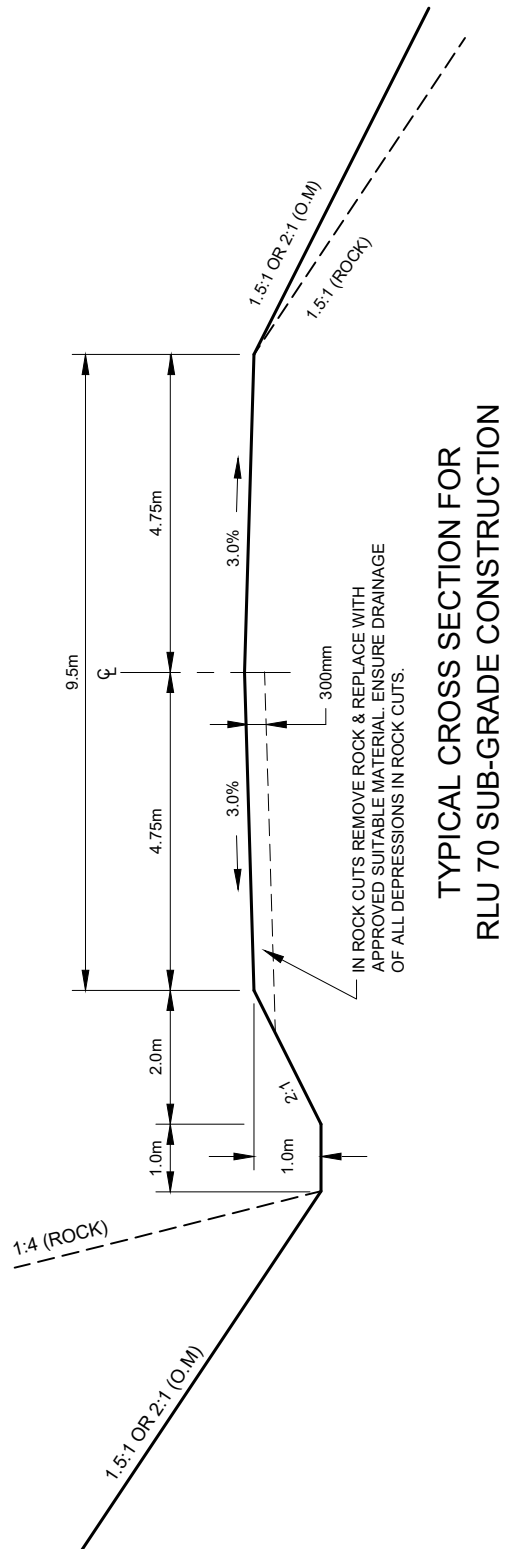
TYPICAL CROSS SECTION FOR
RLU 60 MOD SUB-GRADE CONSTRUCTION

RLU 70

- NOTES:
1. SHOULDER STAKE 4.0m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W. 20.0m
STANDARD WIDTH OF CUTTING 20.0m
STANDARD WIDTH OF GRUBBING 15.0m



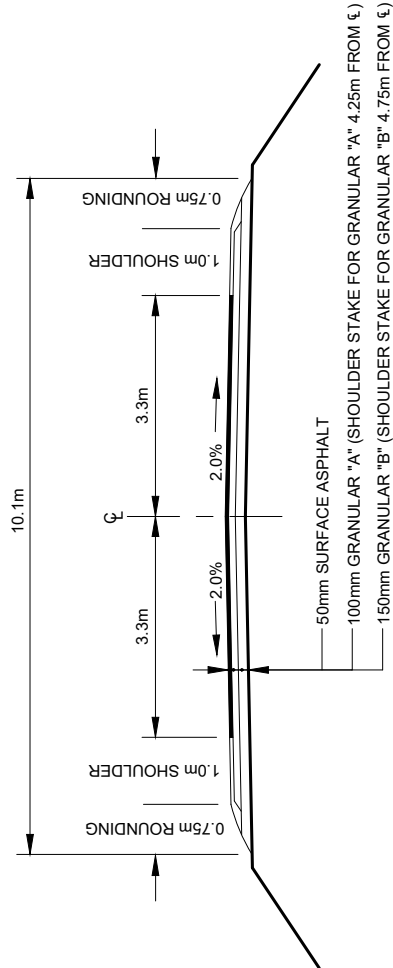
TYPICAL CROSS SECTION FOR
RLU 70 FINAL CONSTRUCTION



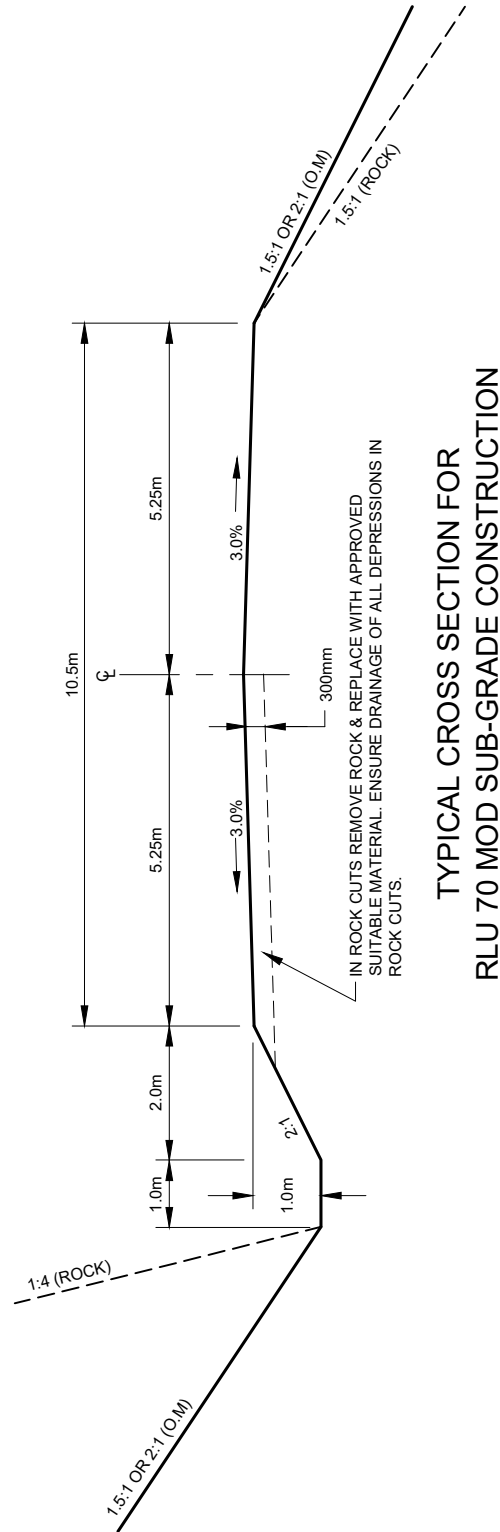
TYPICAL CROSS SECTION FOR
RLU 70 SUB-GRADE CONSTRUCTION

RLU 70 (MODIFIED)

- NOTES:
1. SHOULDER STAKE 4.5m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W. 20.0m
STANDARD WIDTH OF CUTTING 20.0m
STANDARD WIDTH OF GRUBBING 15.0m



TYPICAL CROSS SECTION FOR RLU 70 MOD FINAL CONSTRUCTION



TYPICAL CROSS SECTION FOR RLU 70 MOD SUB-GRADE CONSTRUCTION



TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY DESIGN DIVISION

TYPICAL CROSS SECTION RLU 70 MODIFIED

DRAWN BY: KYLE BENNETT

DATE: JAN 29, 2024

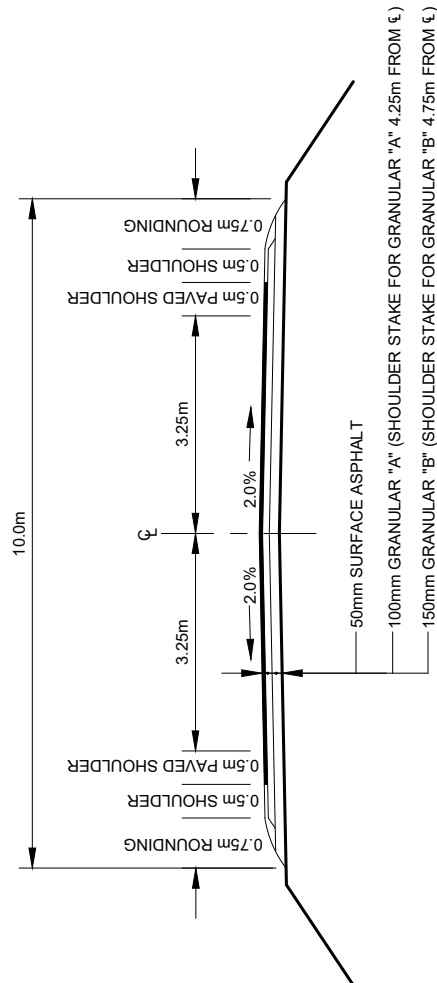
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MARCH 2024

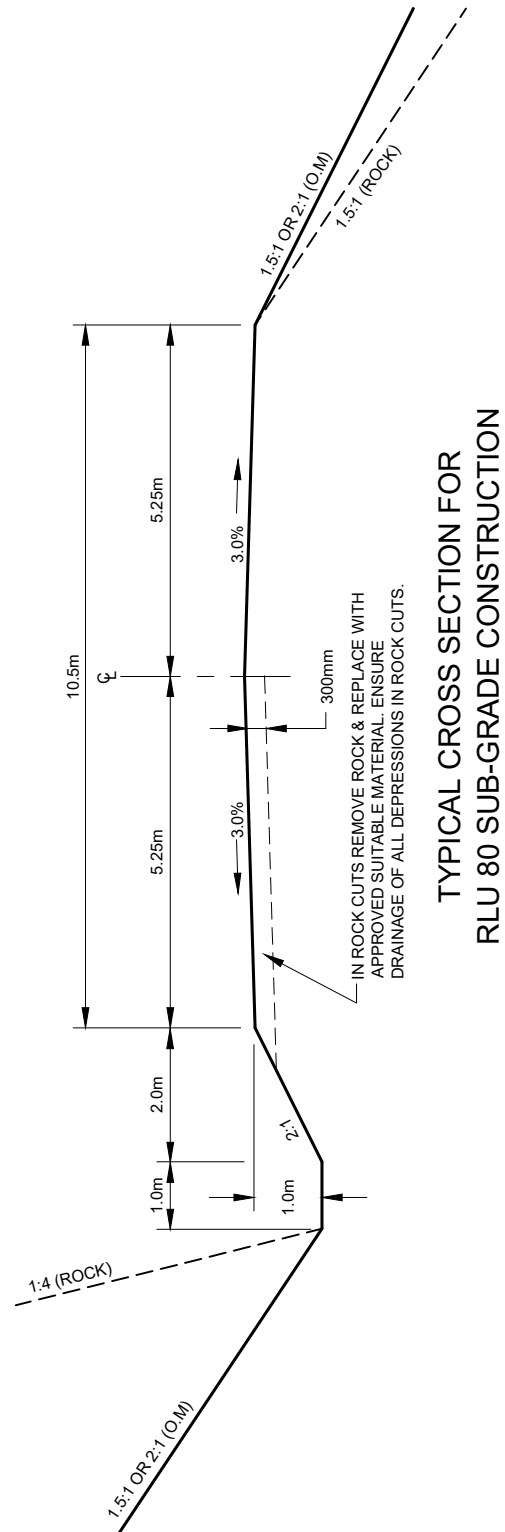
1116-1

RLU 80

- NOTES:
1. SHOULDER STAKE 4.5m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W. 30.0m
STANDARD WIDTH OF CUTTING 30.0m
STANDARD WIDTH OF GRUBBING 20.0m



TYPICAL CROSS SECTION FOR RLU 80 FINAL CONSTRUCTION



TYPICAL CROSS SECTION FOR RLU 80 SUB-GRADE CONSTRUCTION



TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY DESIGN DIVISION

TYPICAL CROSS SECTION RLU 80

DRAWN BY: KYLE BENNETT

DATE: JAN 29, 2024

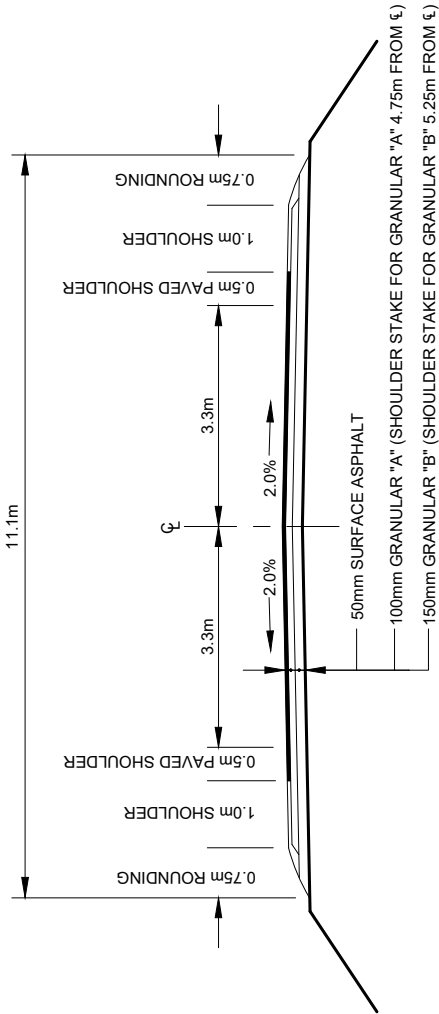
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MARCH 2024

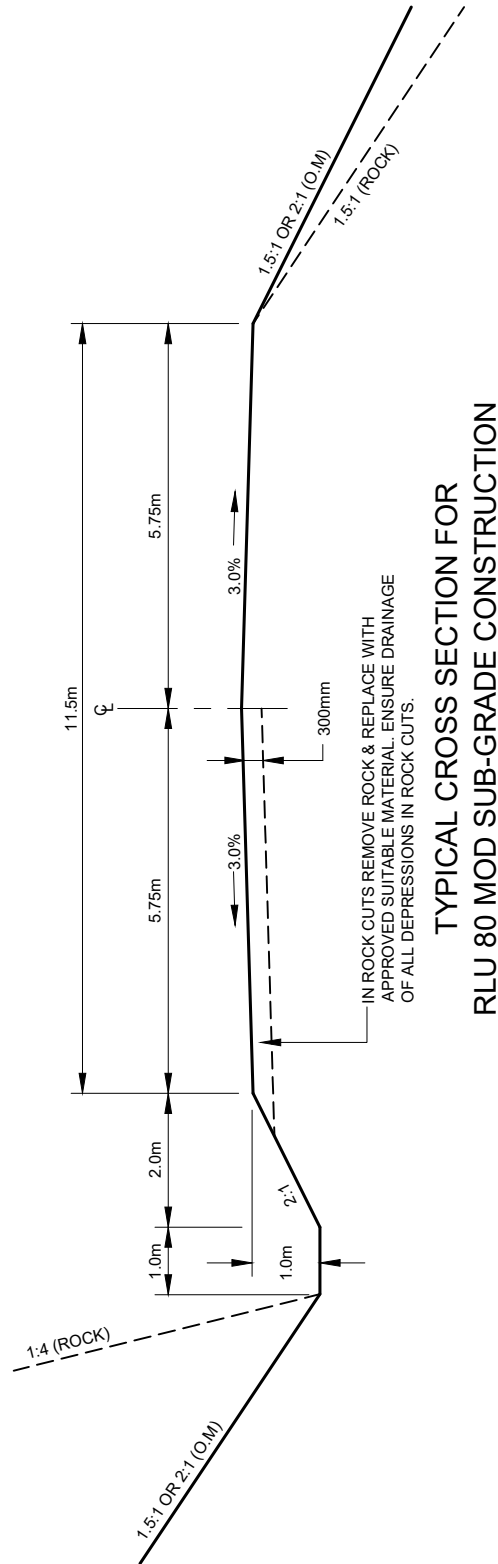
1120-1

RLU 80 (MODIFIED)

- NOTES:
1. SHOULDER STAKE 5.0m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W. 30.0m
STANDARD WIDTH OF CUTTING 30.0m
STANDARD WIDTH OF GRUBBING 20.0m



TYPICAL CROSS SECTION FOR
RLU 80 MOD FINAL CONSTRUCTION



TYPICAL CROSS SECTION FOR
RLU 80 MOD SUB-GRADE CONSTRUCTION



TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY DESIGN DIVISION

TYPICAL CROSS SECTION
RLU 80 MODIFIED

DRAWN BY: KYLE BENNETT

DATE: JAN 29, 2024

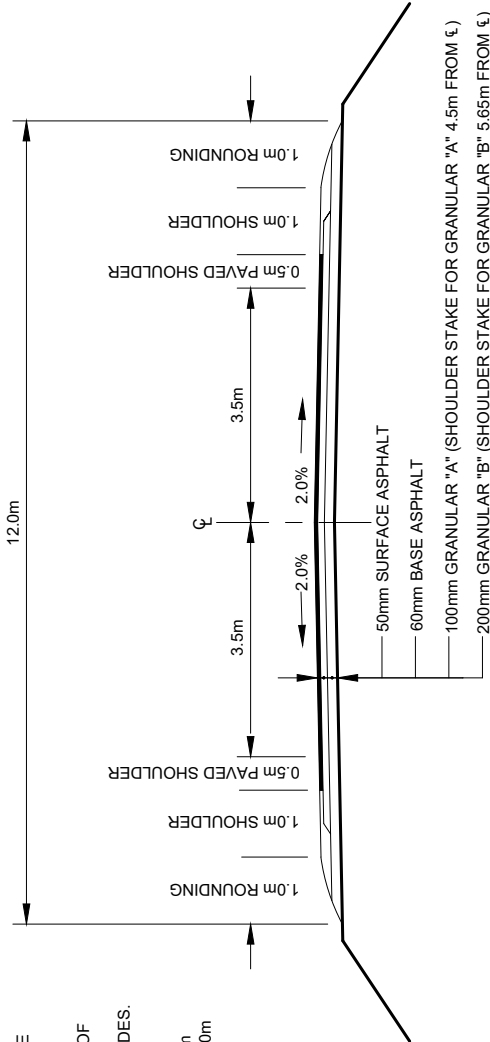
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MARCH 2024

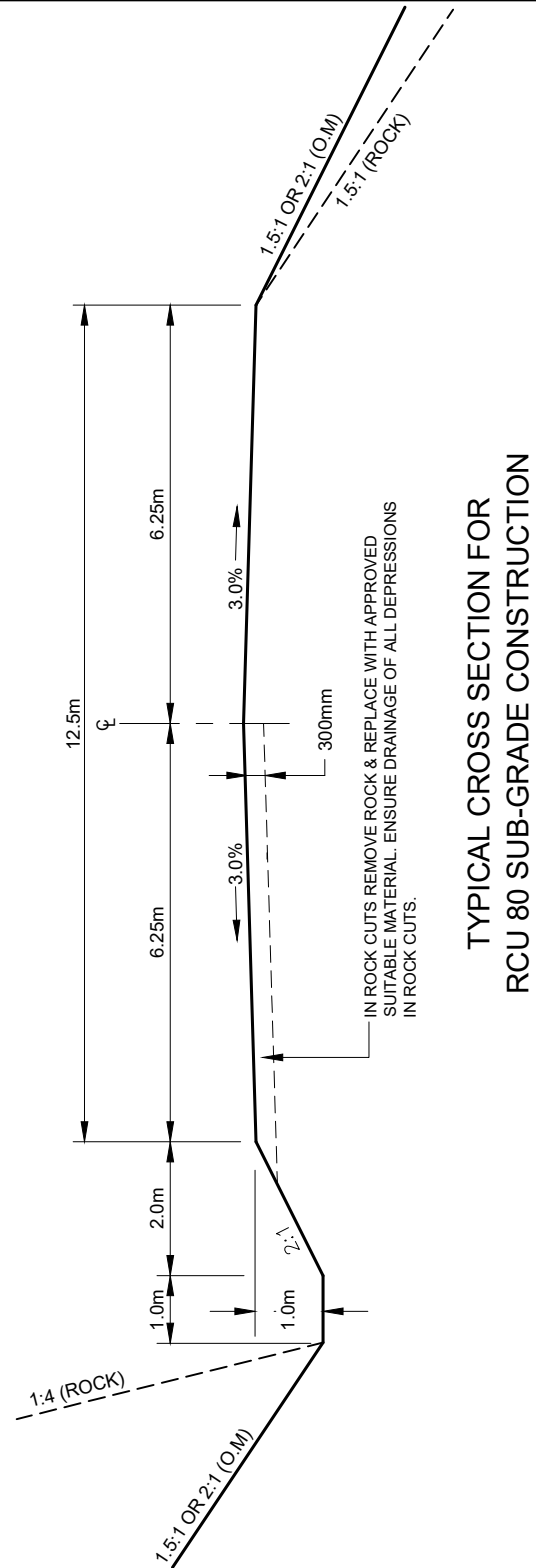
1121-1

RCU 80

- NOTES:
1. SHOULDER STAKE 5.25m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH OF R.O.W. 40.0m
STANDARD WIDTH OF CUTTING 40.0m
STANDARD WIDTH OF GRUBBING 30.0m



TYPICAL CROSS SECTION FOR RCU 80 FINAL CONSTRUCTION

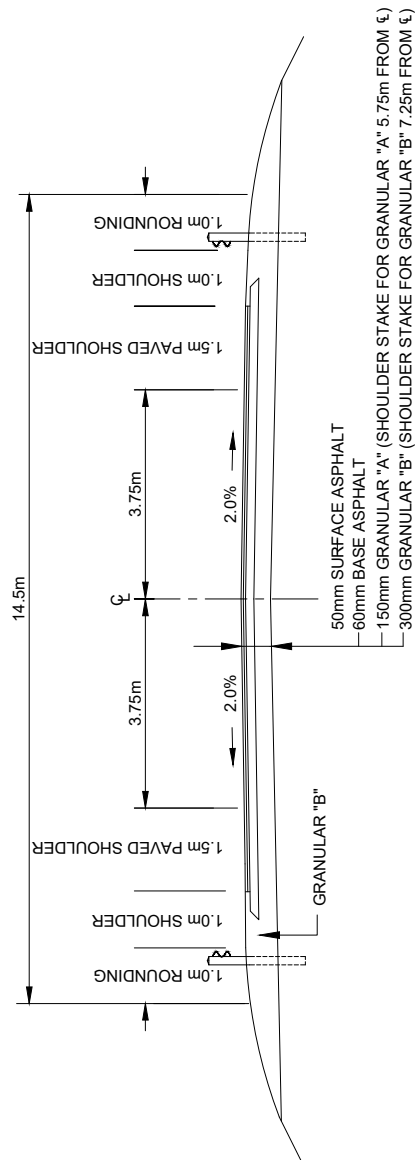
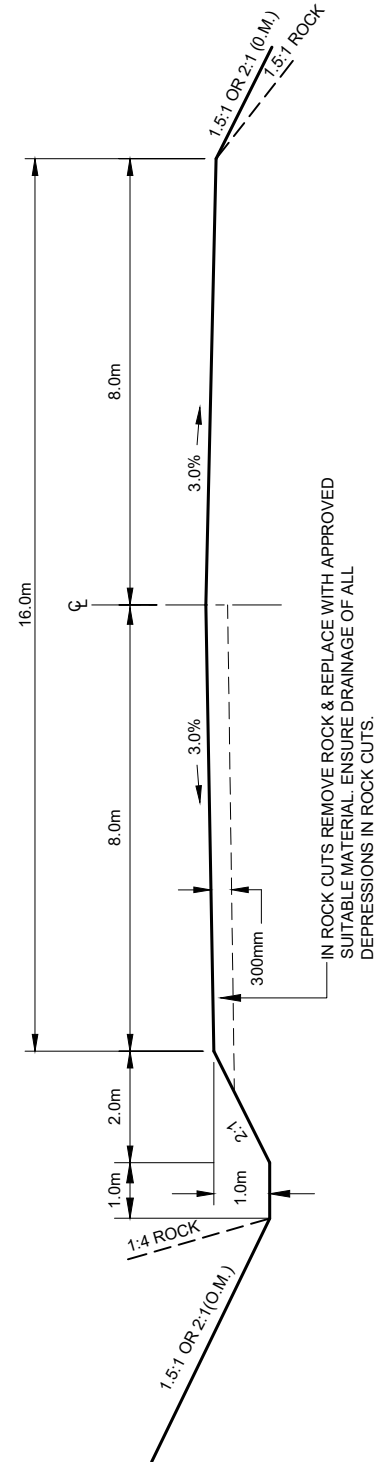


TYPICAL CROSS SECTION FOR RCU 80 SUB-GRADE CONSTRUCTION

RAU 90

NOTES:

1. SHOULDER STAKE 6.75m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
3. IF CLIMBING LANE IS REQUIRED ADD 3.75m TO BOTH CROSS SECTIONS.
4. STANDARD WIDTH R.O.W. 60m (2 LANES).
STANDARD WIDTH CUTTING 60m.
STANDARD WIDTH GRUBBING 40m.
5. HYDROSEEDING, WHERE APPLICABLE, TO EXTEND FROM MID-POINT OF SHOULDER ROUNDING.

TYPICAL CROSS SECTION FOR
RAU 90 FINAL CONSTRUCTIONTYPICAL CROSS SECTION FOR
RAU 90 SUB-GRADE CONSTRUCTION

TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY DESIGN DIVISION

TYPICAL CROSS SECTION RAU 90

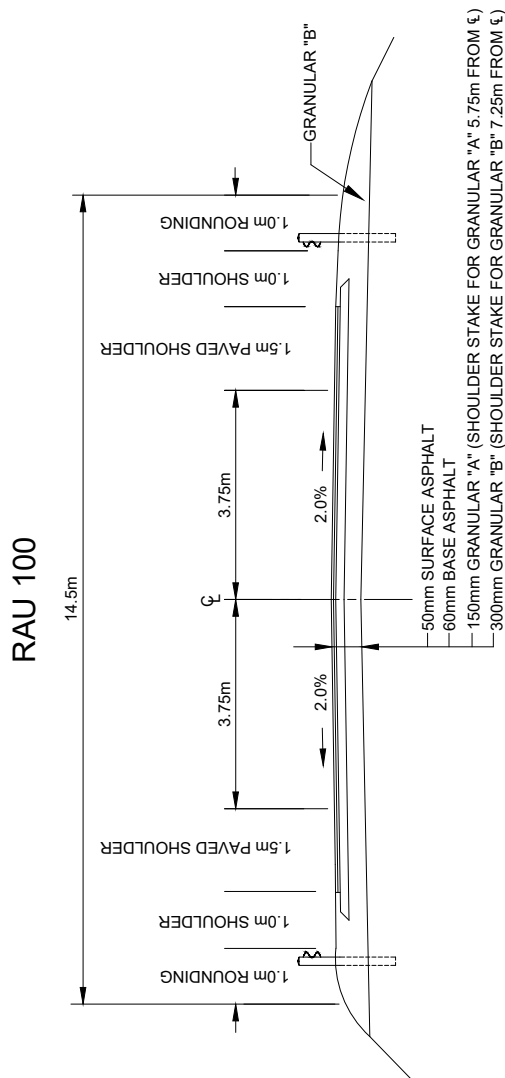
DRAWN BY: KYLE BENNETT

DATE: JAN 29, 2024

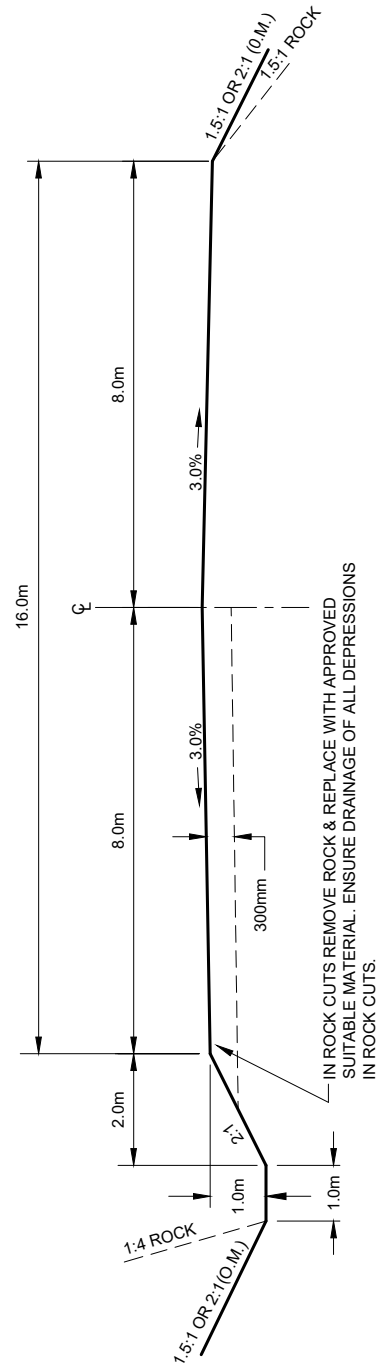
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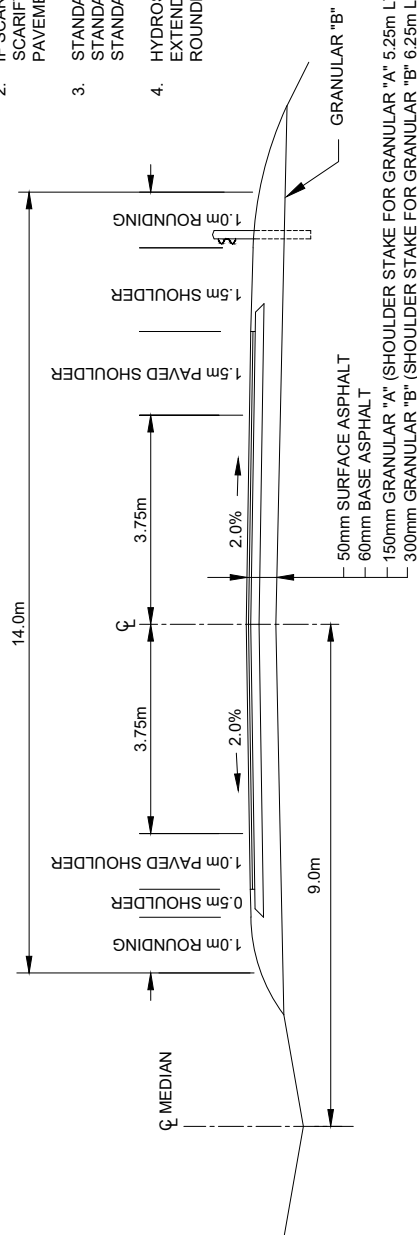
MARCH 2024

1125-1

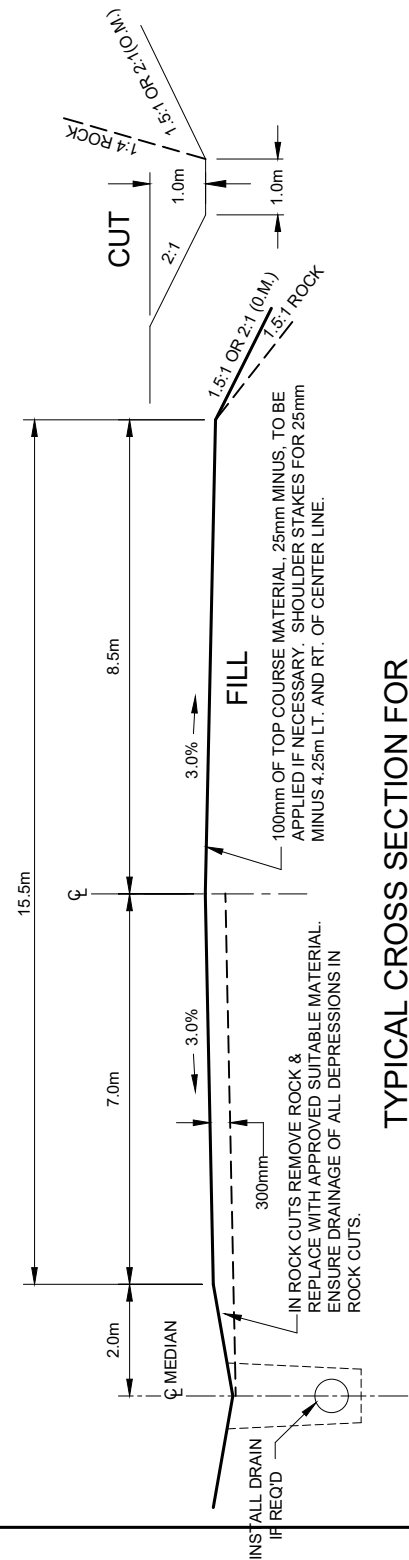


1. SHOULDER STAKE 6.75m FOR SHOULDERING MACHINE TO ACHIEVE REQUIRED ROUNDING.
2. IF SCARIFYING IS REQUIRED WIDTH OF SCARIFYING SHALL BE WIDTH OF PAVEMENT PLUS 300mm ON BOTH SIDES.
3. IF CLIMBING LANE IS REQUIRED ADD 3.75m TO BOTH CROSS SECTIONS.
4. STANDARD WIDTH R.O.W. 60m (2 LANES).
STANDARD WIDTH CUTTING 60m.
STANDARD WIDTH GRUBBING 40m.
5. HYDROSEEDING, WHERE APPLICABLE, TO EXTEND FROM MID-POINT OF SHOULDER ROUNDING.

TYPICAL CROSS SECTION FOR
RAU 100 FINAL CONSTRUCTION



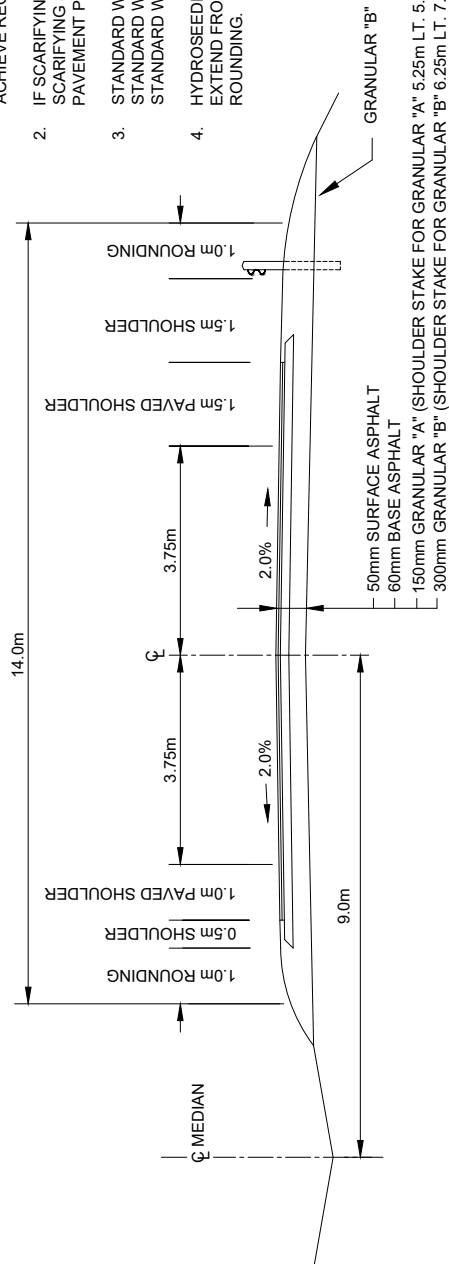
TYPICAL CROSS SECTION FOR
RAD 90 FINAL CONSTRUCTION (HALF SECTION)



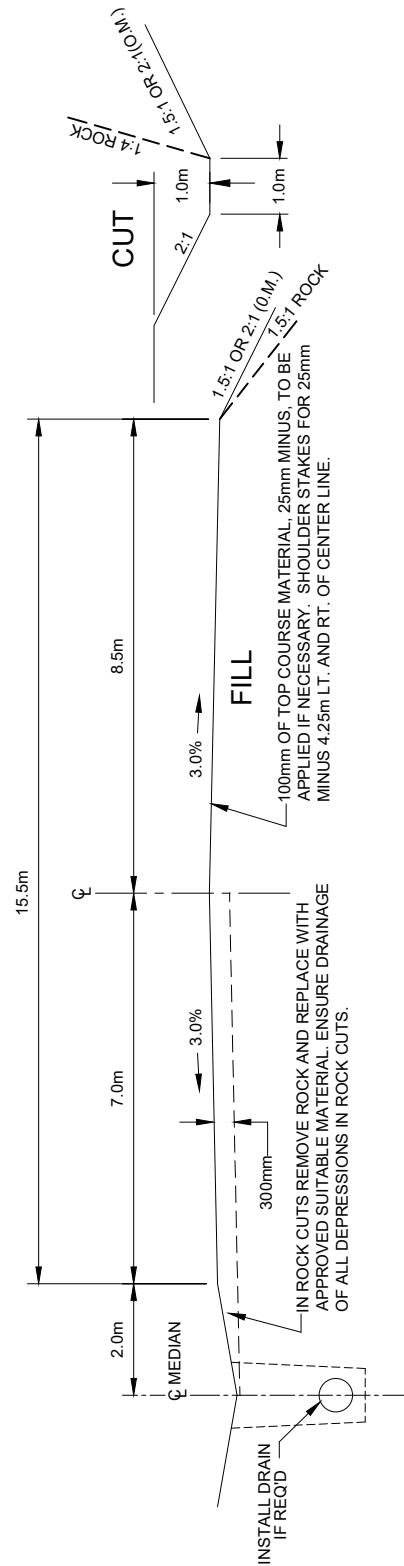
TYPICAL CROSS SECTION FOR
RAD 90 SUB-GRADE CONSTRUCTION

- NOTES:
 1. SHOULDER STAKE 5.75m LT. 7.25m RT.
FOR SHOULDERING MACHINE TO
ACHIEVE REQUIRED ROUNDING.
 2. IF SCARIFYING IS REQUIRED WIDTH OF
SCARIFYING SHALL BE WIDTH OF
PAVEMENT PLUS 300mm ON BOTH SIDES.
 3. STANDARD WIDTH R.O.W. 90m.
STANDARD WIDTH CUTTING 90m.
STANDARD WIDTH GRUBBING 70m.
 4. HYDROSEEDING, WHERE APPLICABLE, TO
EXTEND FROM MID-POINT OF SHOULDER
ROUNDING.
- GRANULAR "B"
- AR "A" 5.25m LT. 5.75m RT. OF ϵ
AR "B" 6.25m LT. 7.75m RT. OF ϵ

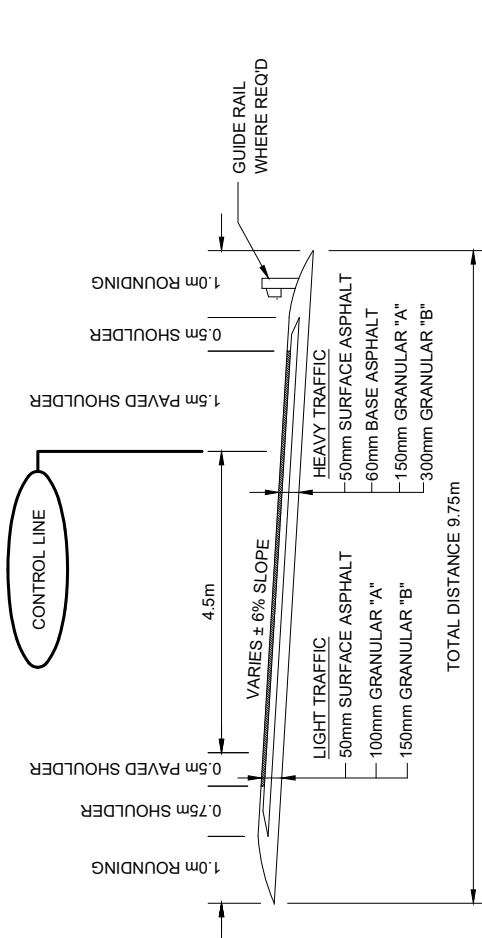
RAD 100



TYPICAL CROSS SECTION FOR
RAD 100 FINAL CONSTRUCTION (HALF SECTION)

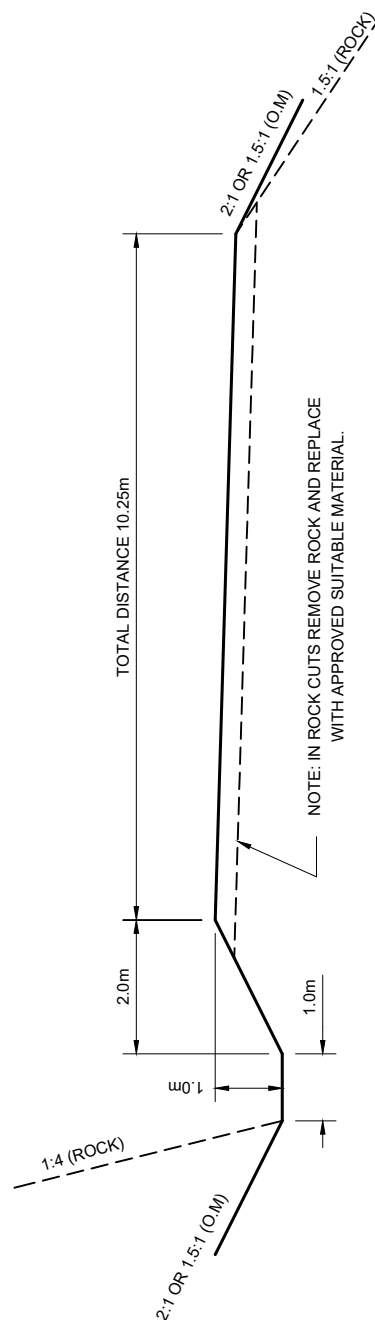


TYPICAL CROSS SECTION FOR
RAD 100 SUB-GRADE CONSTRUCTION

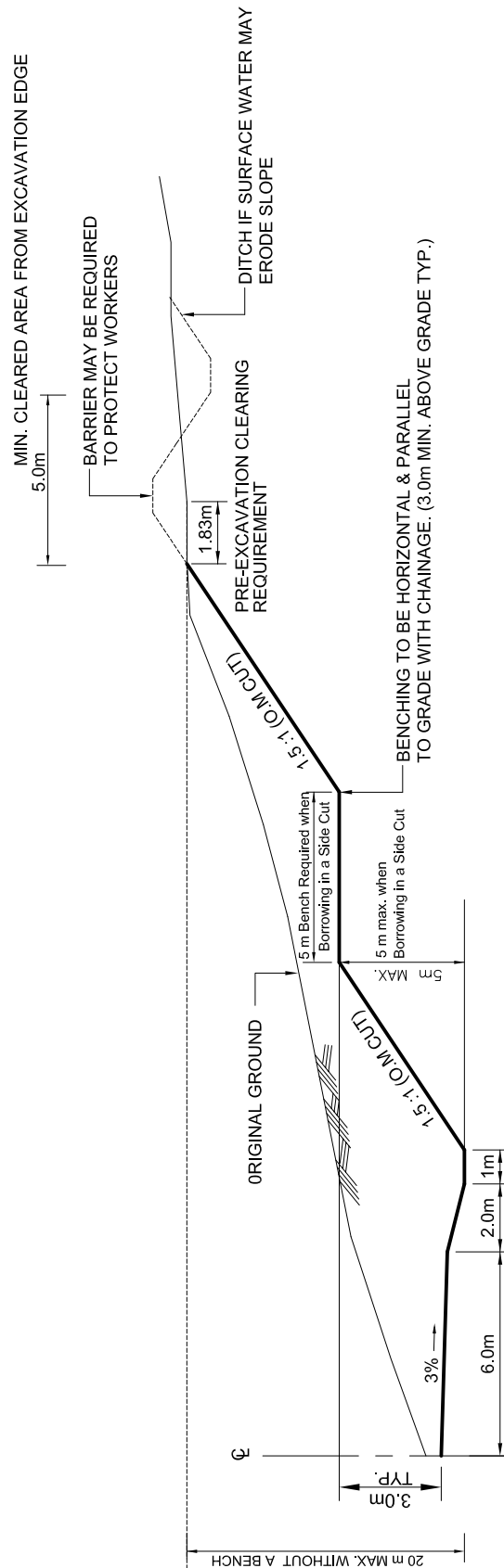


STAKE DISTANCES (METERS FROM CONTROL LINE)	LIGHT TRAFFIC		HEAVY TRAFFIC	
	LT	RT	LT	RT
GRANULAR "B"	6.50	2.75	6.25	2.50
GRANULAR "A"	5.50	2.00	5.50	2.00
SHOULDER	5.75	2.00	5.75	2.00

TYPICAL CROSS SECTION FOR
RAMP FINAL CONSTRUCTION



TYPICAL CROSS SECTION FOR
RAMP SUB-GRADE CONSTRUCTION



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

TYPICAL SECTION SHOWING O.M. BACKSLOPE TREATMENT WITH BENCHING

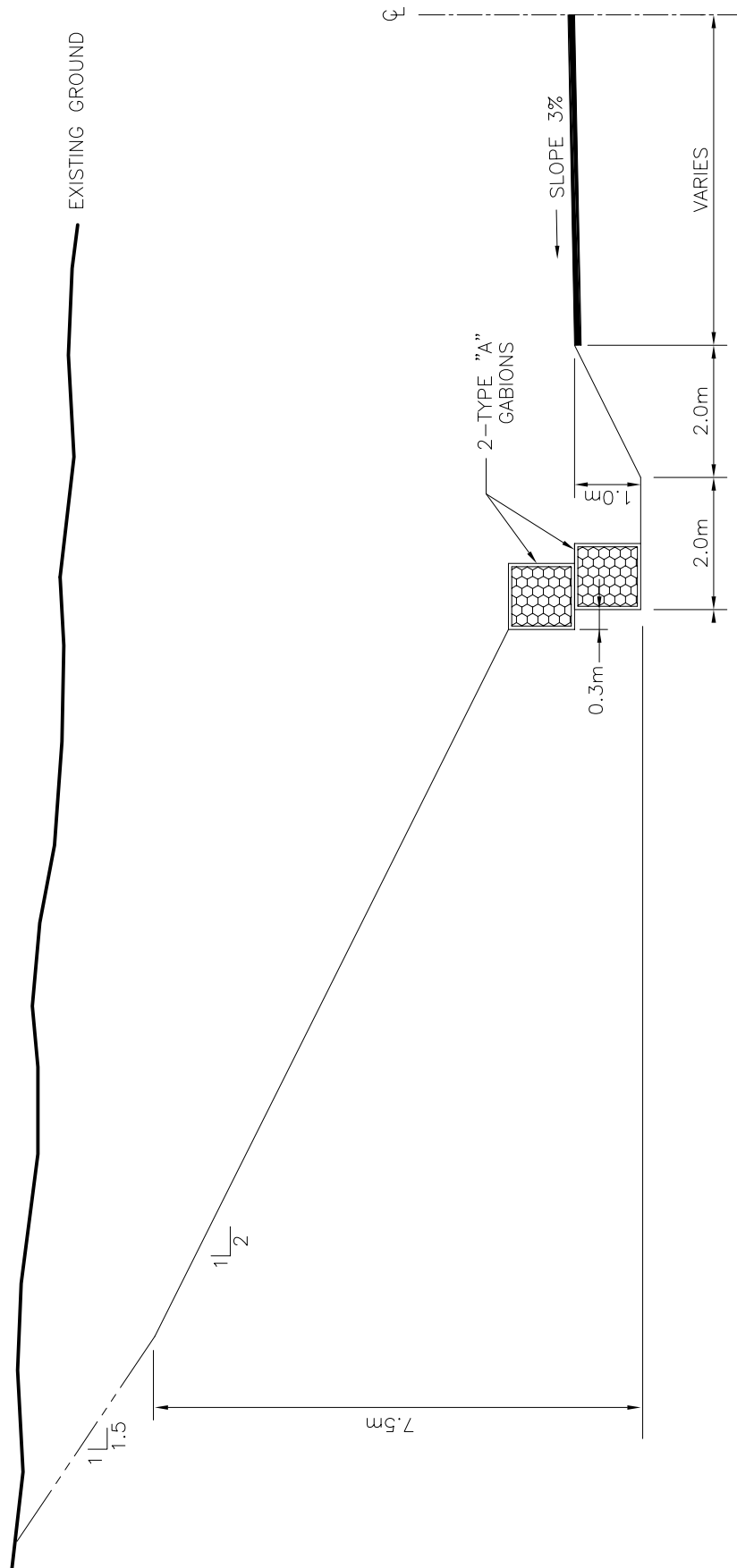
DRAWN BY: BMF

DATE: 02-01-10

SCALE N.T.S.

MARCH 2013

1150-1



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

GABION PROTECTION OF SLOPES

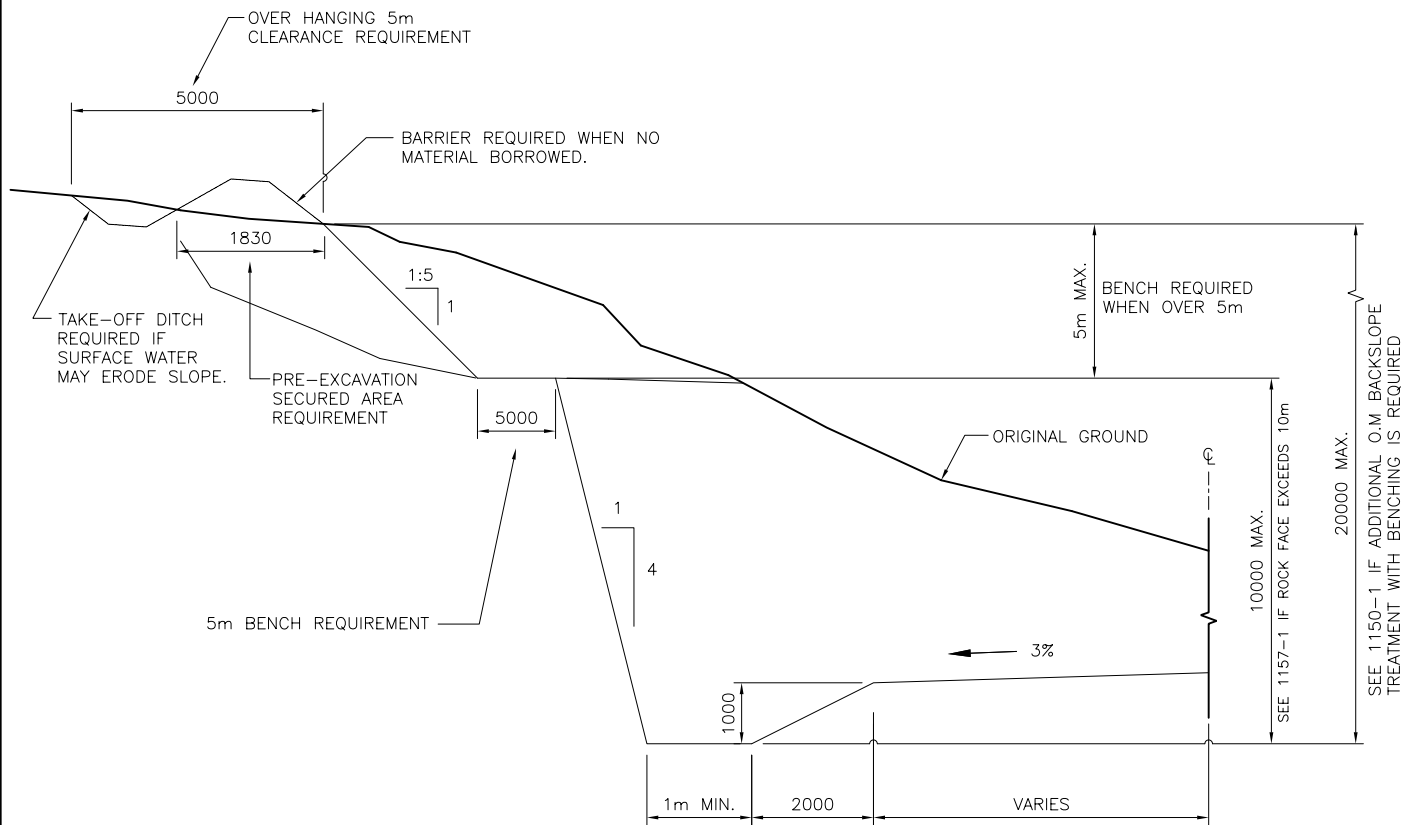
DRAWN BY: H. JONES

DATE: 02-01-10

SCALE: N.T.S.

MARCH 2011

1154-1



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

TYPICAL SECTION - ROCK CUT WITH NO BENCHING

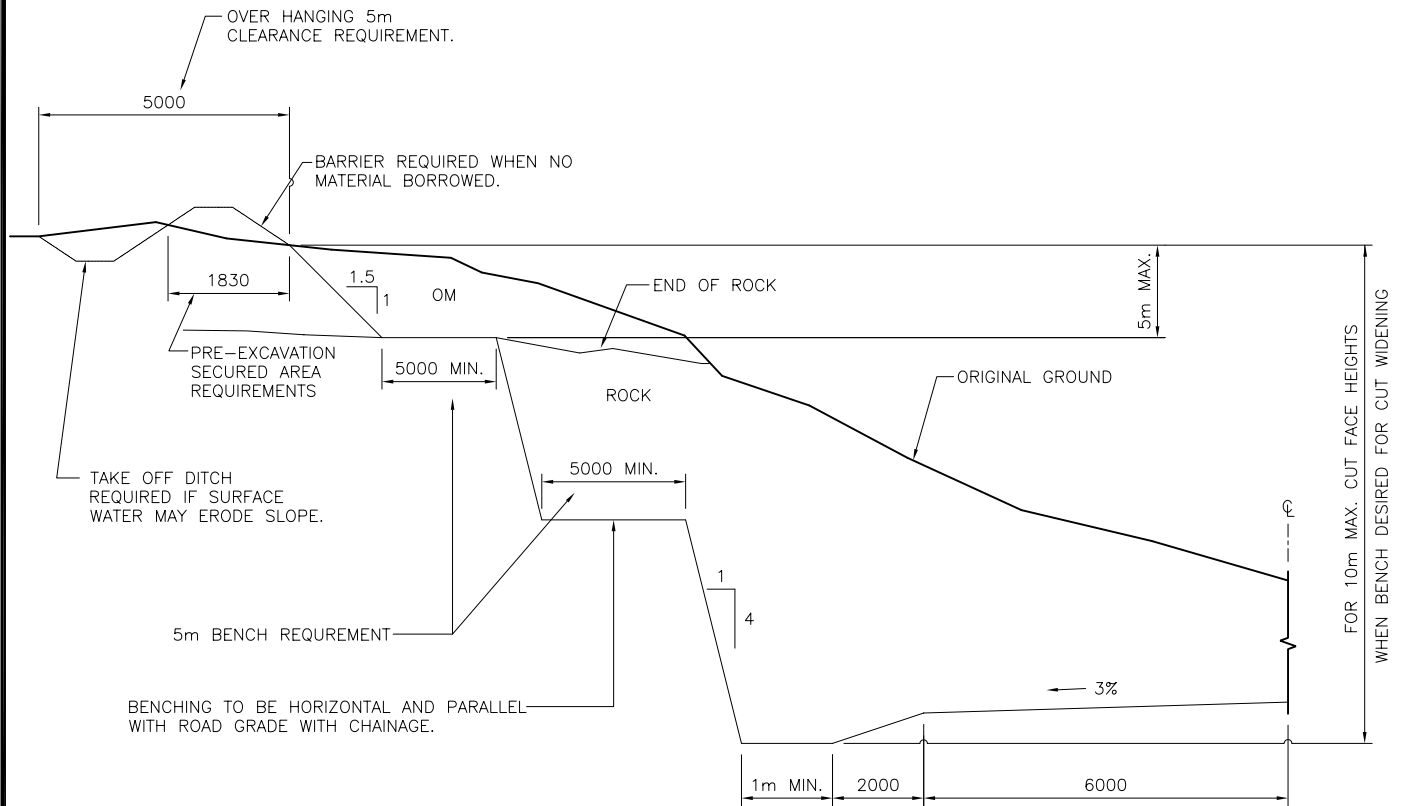
DRAWN BY: M.B.

DATE: 01-04-13

SCALE N.T.S.

MARCH 2013

1155-1



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

TYPICAL SECTION - ROCK BACKSLOPE TREATMENT WITH BENCHING UNDER 10 m CUT HEIGHT

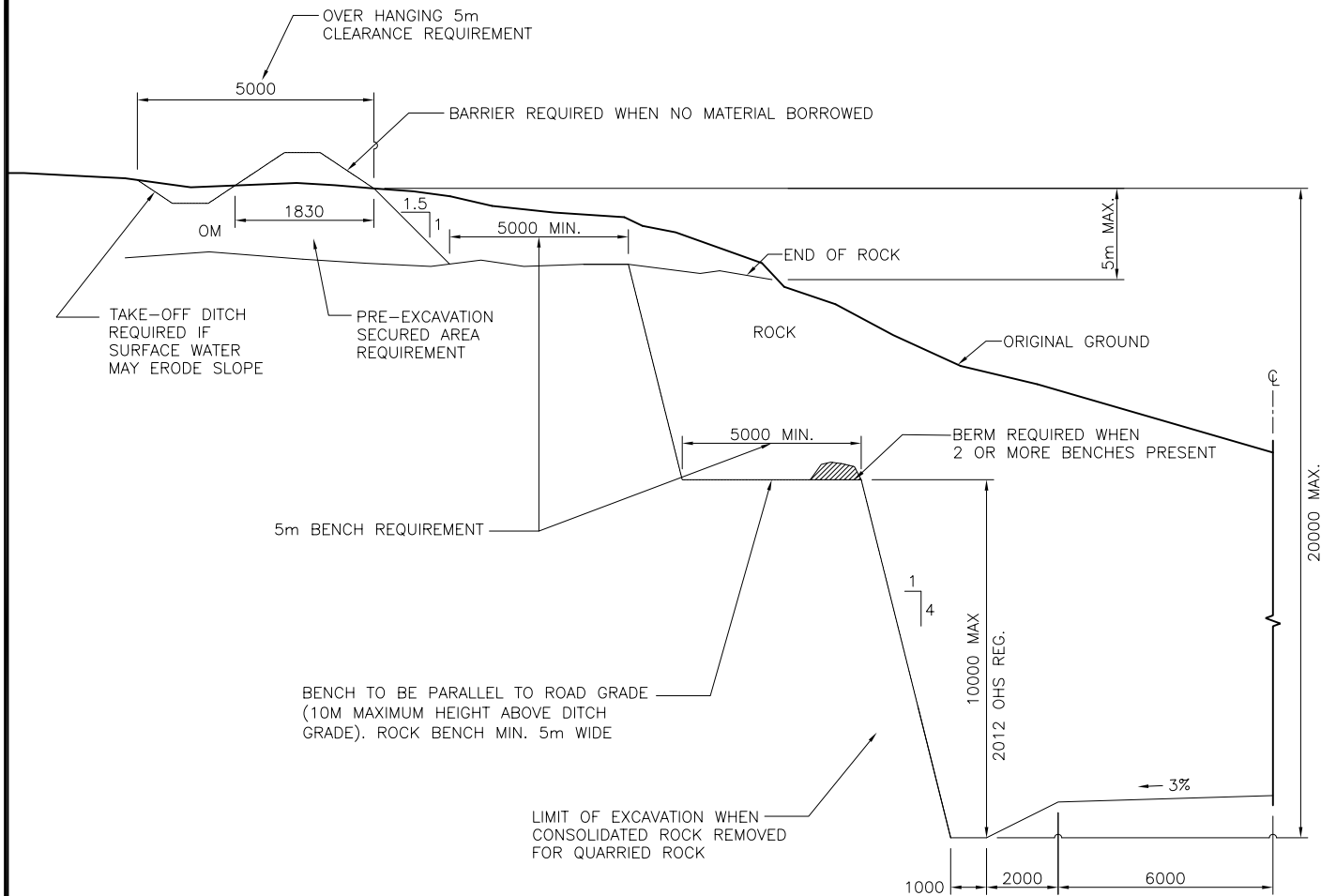
DRAWN BY: M.B.

DATE: 01-04-13

SCALE N.T.S.

MARCH 2013

1156-1



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

TYPICAL SECTION - ROCK BACKSLOPE TREATMENT WITH OVER 10 m CUT HIEGHT

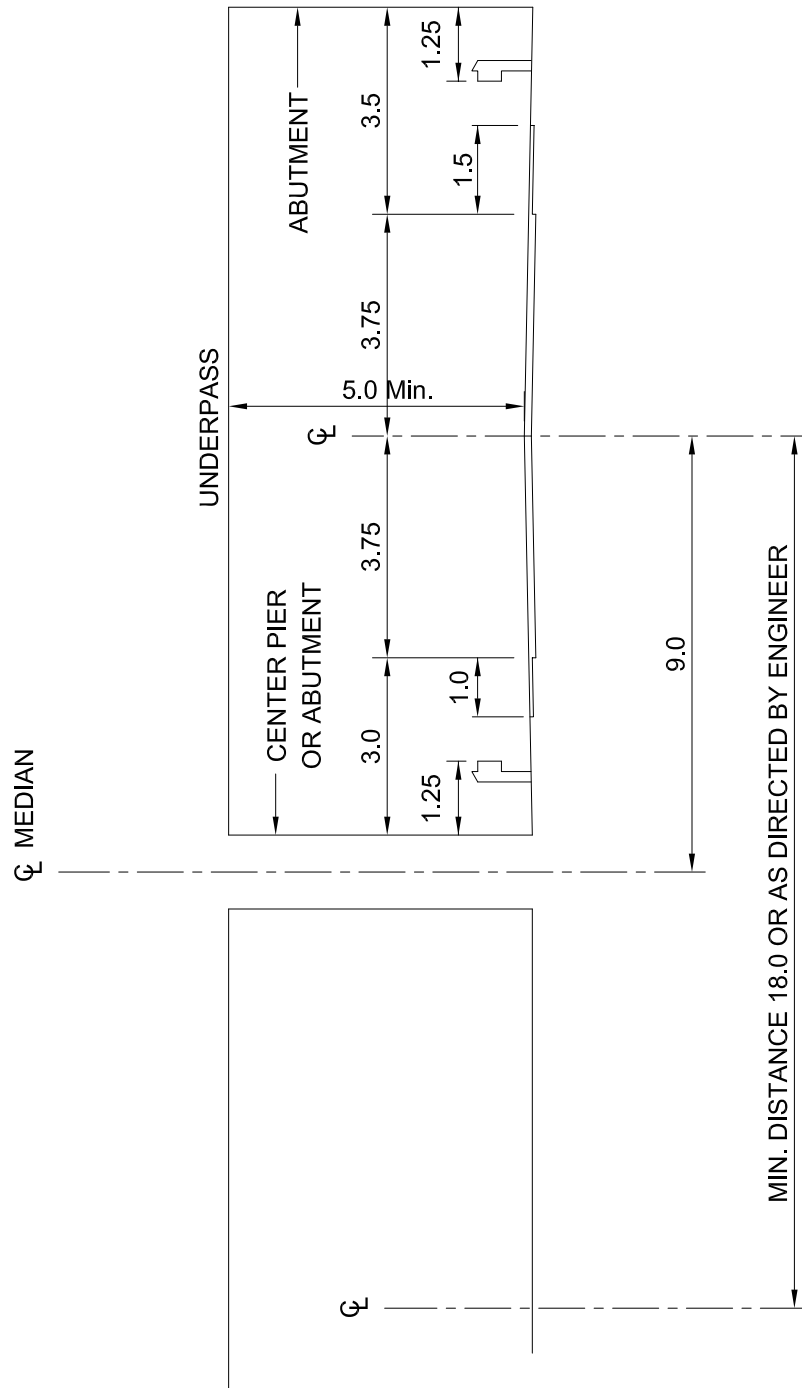
DRAWN BY: M.B.

DATE: 01-04-13

SCALE N.T.S.

MARCH 2013

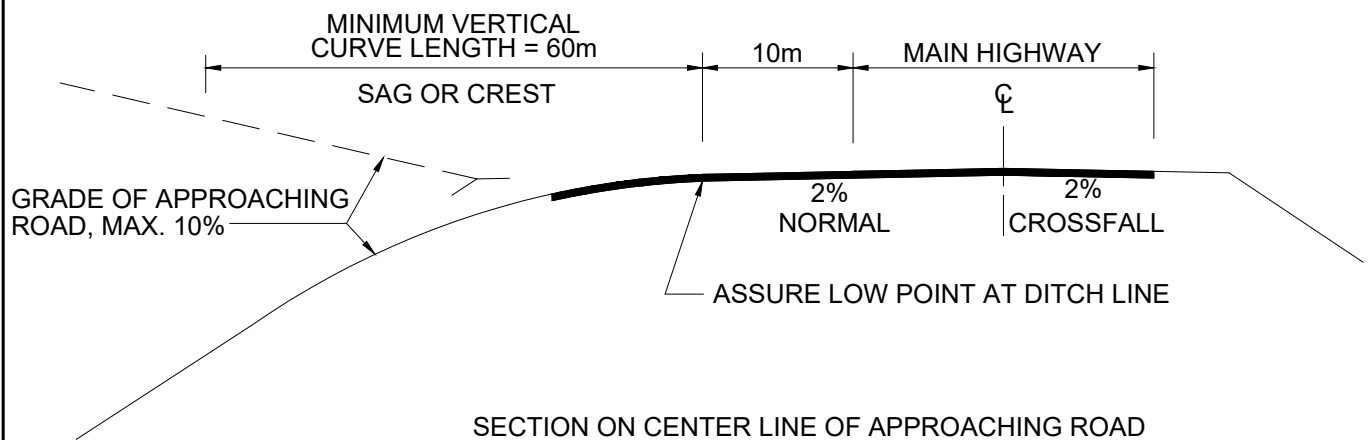
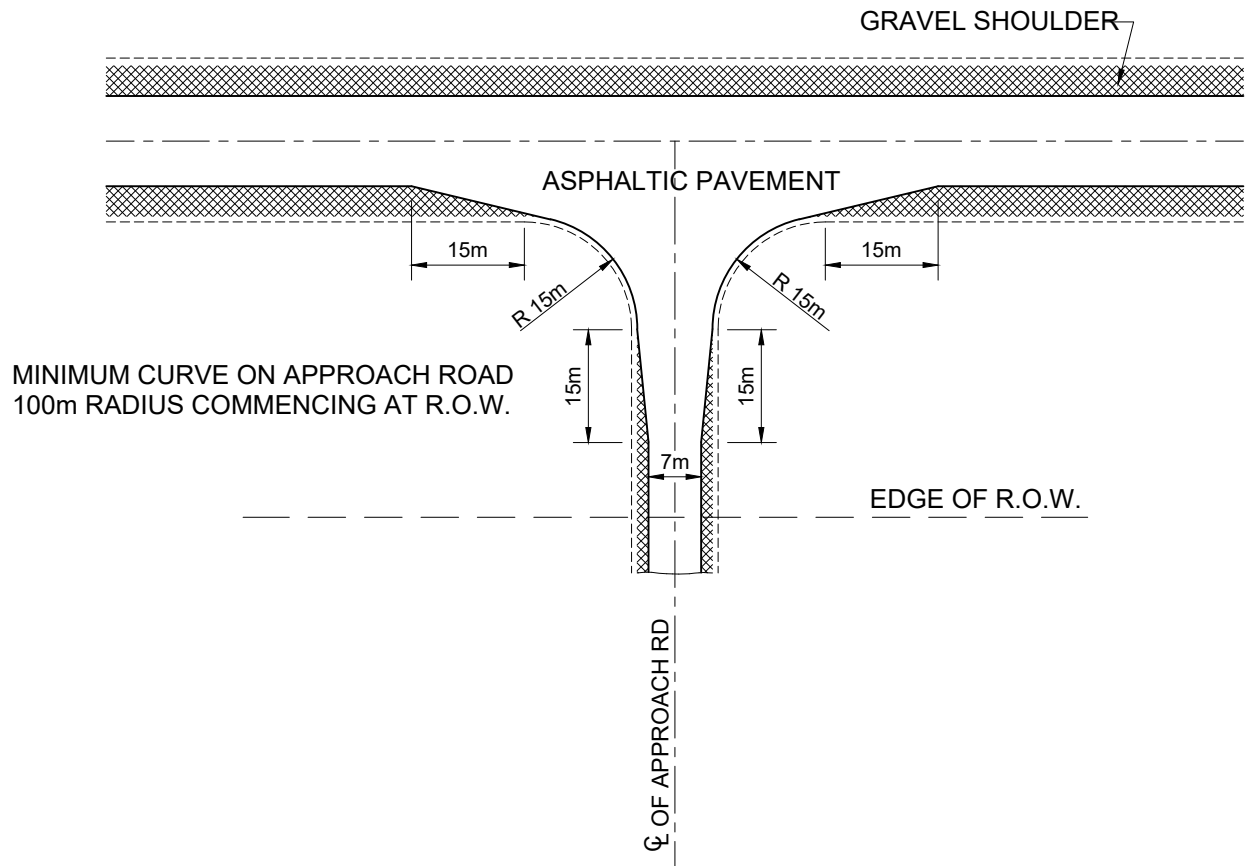
1157-1



NOTES:
DIMENSIONS BASED ON GEOMETRIC DESIGN STANDARDS.

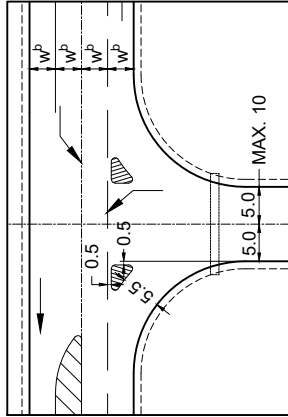
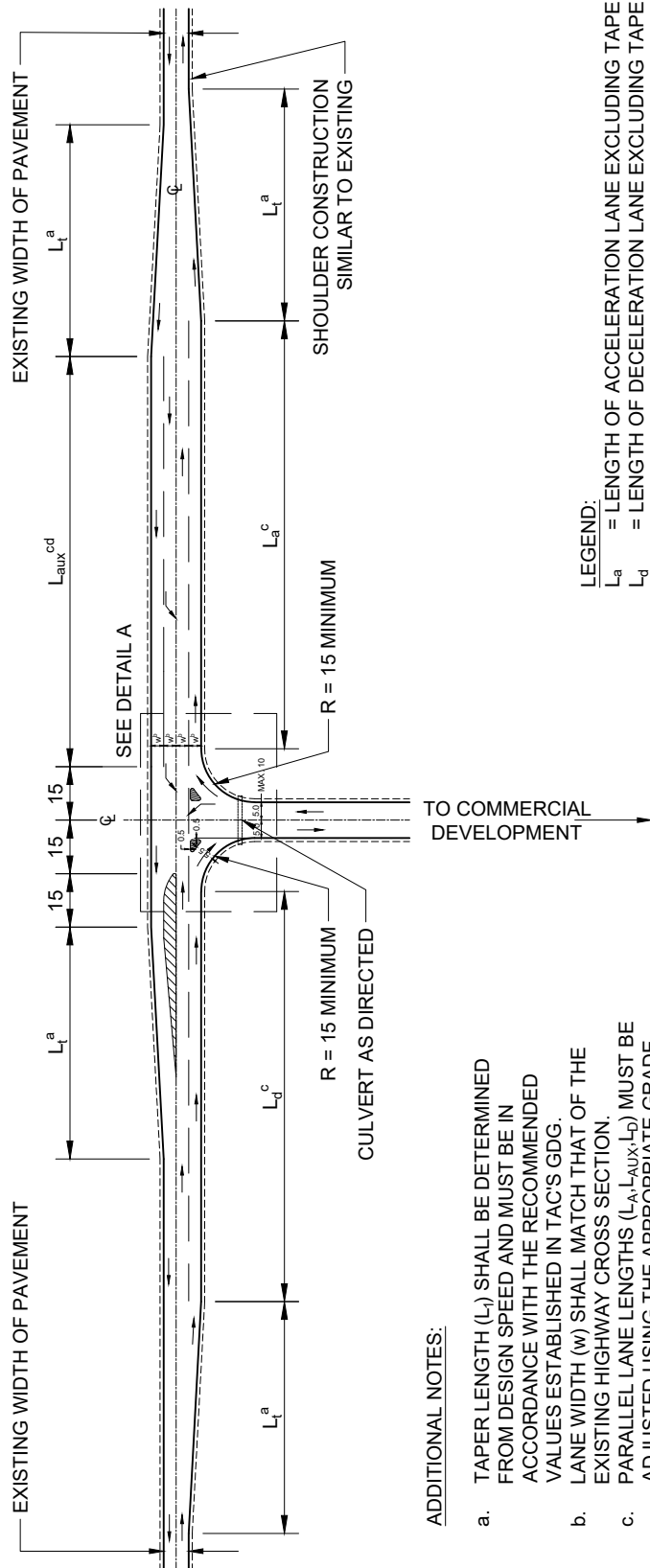
MINIMUM SIGHT DISTANCE 300m

HEIGHT OF EYE = 1.0m HEIGHT OF OBJECT = 0.0m



GENERAL NOTES:

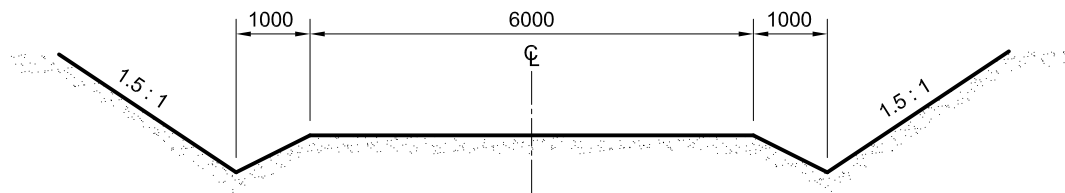
1. ALL DESIGN CRITERIA SHALL BE DETERMINED FROM THE RECOMMENDED VALUES PUBLISHED IN THE LATEST VERSION OF TRANSPORTATION ASSOCIATION OF CANADA'S GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS (TAC GDG).
2. DESIGN SPEED SHALL BE DETERMINED AS 10 km/h + POSTED SPEED.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.

DETAIL AADDITIONAL NOTES:

- a. TAPER LENGTH (L_t) SHALL BE DETERMINED FROM DESIGN SPEED AND MUST BE IN ACCORDANCE WITH THE RECOMMENDED VALUES ESTABLISHED IN TAC'S GDG.
- b. LANE WIDTH (w) SHALL MATCH THAT OF THE EXISTING HIGHWAY CROSS SECTION.
- c. PARALLEL LANE LENGTHS (L_a, L_{aux}, L_d) MUST BE ADJUSTED USING THE APPROPRIATE GRADE FACTORS.
- d. DESIGN VALUE FOR THE LEFT TURNING AUXILIARY LANE SHALL BE EXCLUSIVE OF THE TAPER AND BE TAKEN AS DECELERATION LENGTH + STORAGE LENGTH.

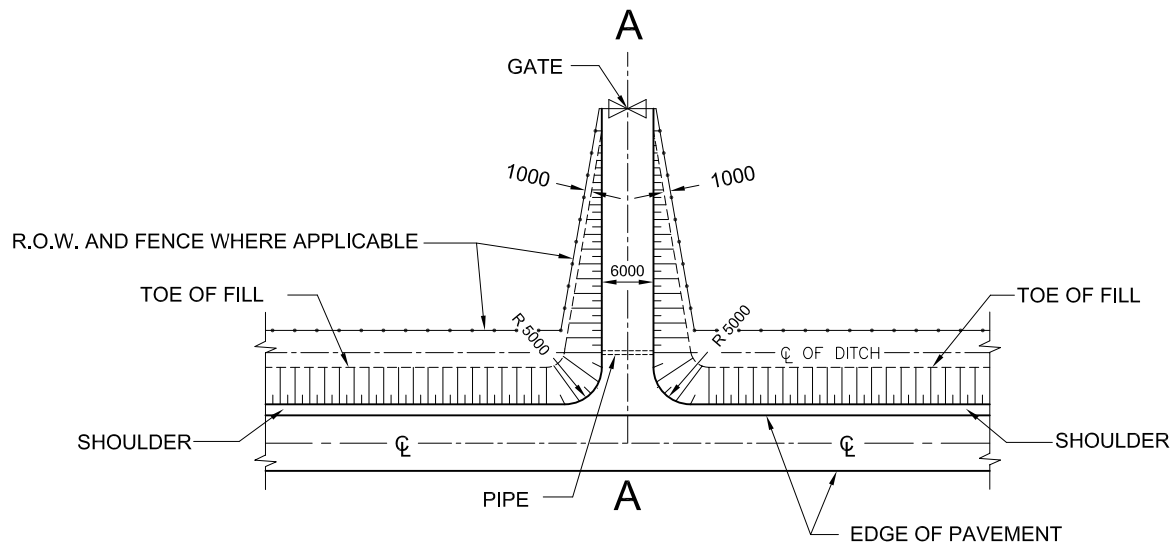
LEGEND:

L_a = LENGTH OF ACCELERATION LANE EXCLUDING TAPER
 L_d = LENGTH OF DECELERATION LANE EXCLUDING TAPER
 L_t = LENGTH OF TAPER
 R = RADIUS
 w = LANE WIDTH
 L_{aux} = LENGTH OF LEFT TURN AUXILIARY LANE EXCLUDING TAPER



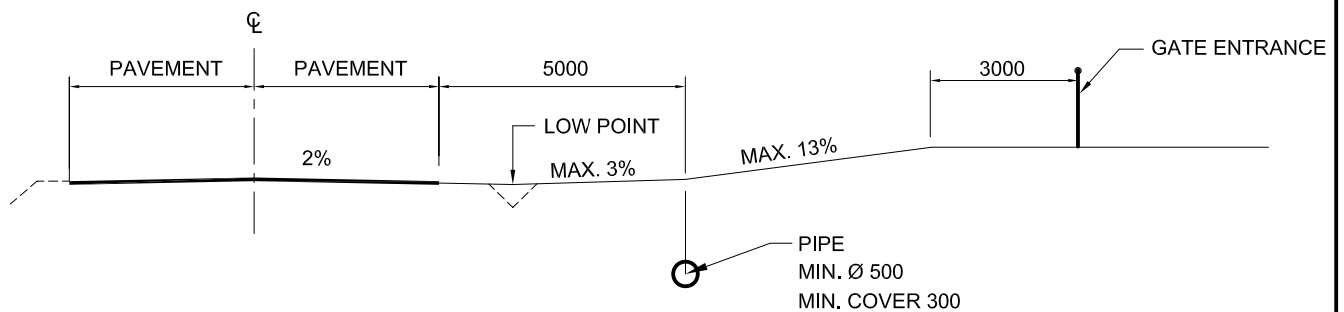
CROSS SECTION OF PRIVATE ENTRANCE

N.T.S.



PLAN

N.T.S.



SECTION A-A

SCALE 1 : 150



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

PRIVATE ENTRANCE IN CUT

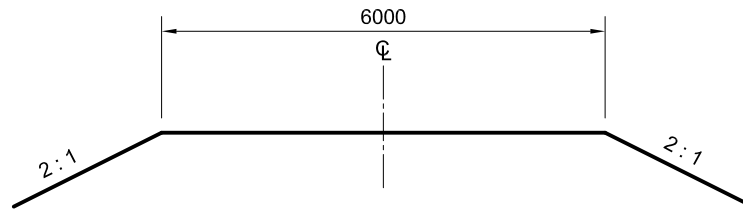
DRAWN BY: DEB KIRBY

DATE: 02-01-10

SCALE N.T.S.

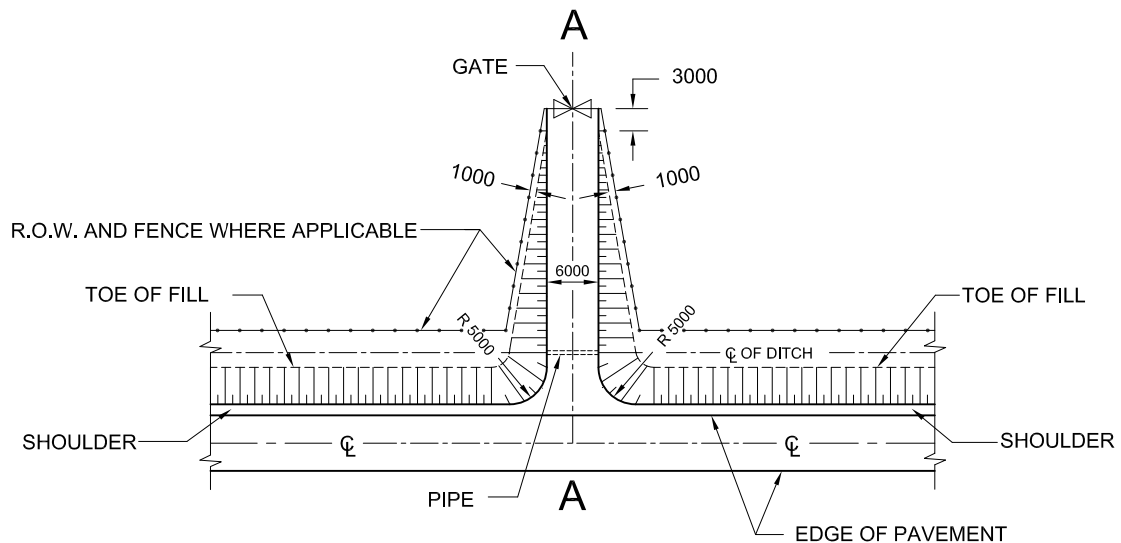
MARCH 2011

1175-1



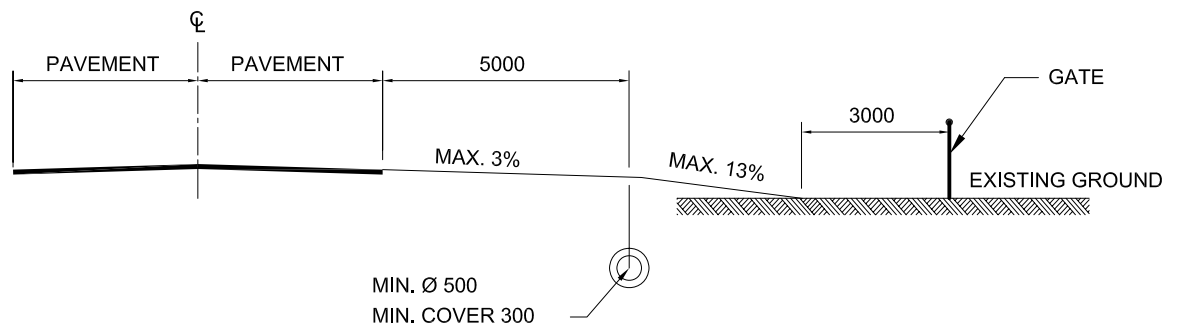
CROSS SECTION OF PRIVATE ENTRANCE

N.T.S.



PLAN

N.T.S.



SECTION A-A

N.T.S.



TRANSPORTATION AND WORKS
HIGHWAY DESIGN DIVISION

PRIVATE ENTRANCE IN FILL

DRAWN BY: DEB KIRBY

DATE: 02-01-10

SCALE N.T.S.

MARCH 2011

1176-1