Barbara Kinrade
Procurement Specialist
City of Hamilton
Corporate Services Department
Procurement Section
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Date Issued: Thursday, April 04, 2019

City of Hamilton

REQUEST FOR TENDERS

Contract Number: C15-20-19 (H)

Red Hill Valley Parkway Resurfacing

ADDENDUM 3

The following queries and responses, issued by the Procurement Section shall form part of the **Request for Tenders** documents for the above, and the revisions and additions noted herein and any attachments shall read in conjunction with all other documents. This Addendum shall, however, take precedence over all previously issued **Request for Tenders** documents where differences occur.

Included in this Addendum are: 2 Pages for Addendum 3 Information
17 Pages of Drawings
19 Pages total for Addendum 3

1. Responses to Vendor Submitted Questions

Question 1

On sheet 1 of 25 for the road resurfacing drawings, it shows that a hot joint is required between lanes and shoulders. Will the contractor be allowed to reduce the number of joints by increasing the paver width, or is the intent to have the edge of the paver screeds line up with the line painting?

Response 1

The Contractor will not be permitted to decrease the number of joints.
The paving shall be completed as shown in the Typical Paving Hot Joint Location on Sheet 1 of 25.

Question 2

Can a quantity breakdown be provided for each Ramp, and North and South Bound lanes?

Response 2

A quantity breakdown will not be provided at this time.

Question 3
Can dimensions be provided on the paving drawings, so we can have a better understanding of requirements in each area?

Response 3
Dimensions will not be provided on the paving drawings at this time. Dimensions are shown in the pavement marking drawings PM-1 to PM-23.

Question 4
Can cross sections be provided, so that we can see where the crown and grade breaks are for paving purposes?

Response 4
Typical cross sections from the original Red Hill Valley Parkway Construction Contracts are being provided in this addendum For Information Only.

END OF ADDENDUM 3

Bidders submitting a bid have made any necessary inquiries with respect to addenda issued by the City and have provided for all addenda in their Tender submission.

All addenda will be posted on the City's bid opportunities portal at: hamilton.bidsandtenders.ca

Procurement Section, City of Hamilton, Ontario
(Revised: July 24, 2018)

PUBLIC WORKS DEPARTMENT

General Manager, Scott Stewart, C.E.T.

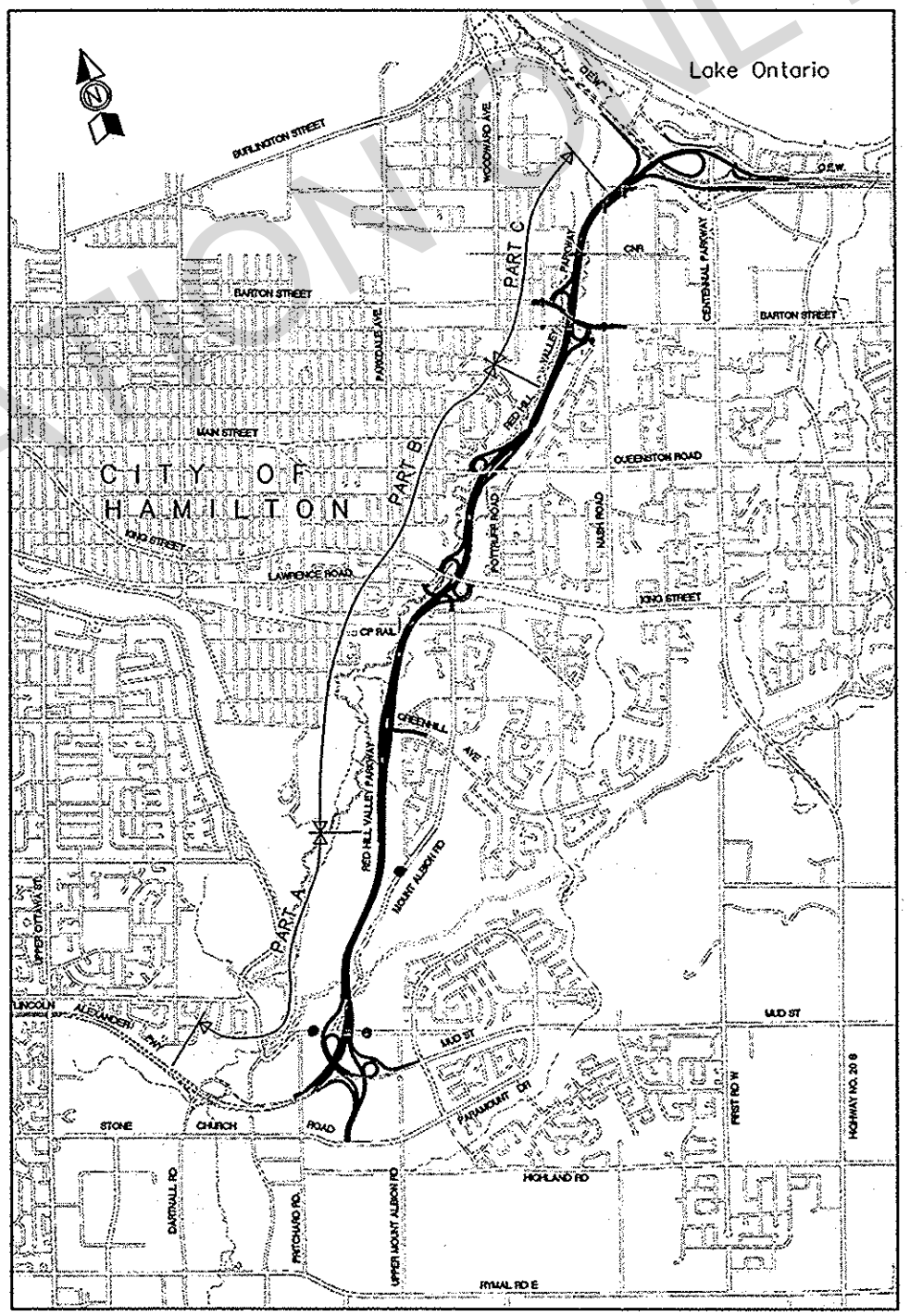
Hamilton

Contract No. PW-06-243 (RHV)

Red Hill Valley Project
Mainline Paving
Mud Street Interchange to QEW Interchange

PART B
South of Greenhill Ave. to Queenston Road

Hot Mix Paving, Granular, Curb & Gutter,
Barriers, Electrical, Structural and Landscaping



KEY PLAN
NTS

FOR INFORMATION ONLY

Issued for : Construction ☐ Tender ☒

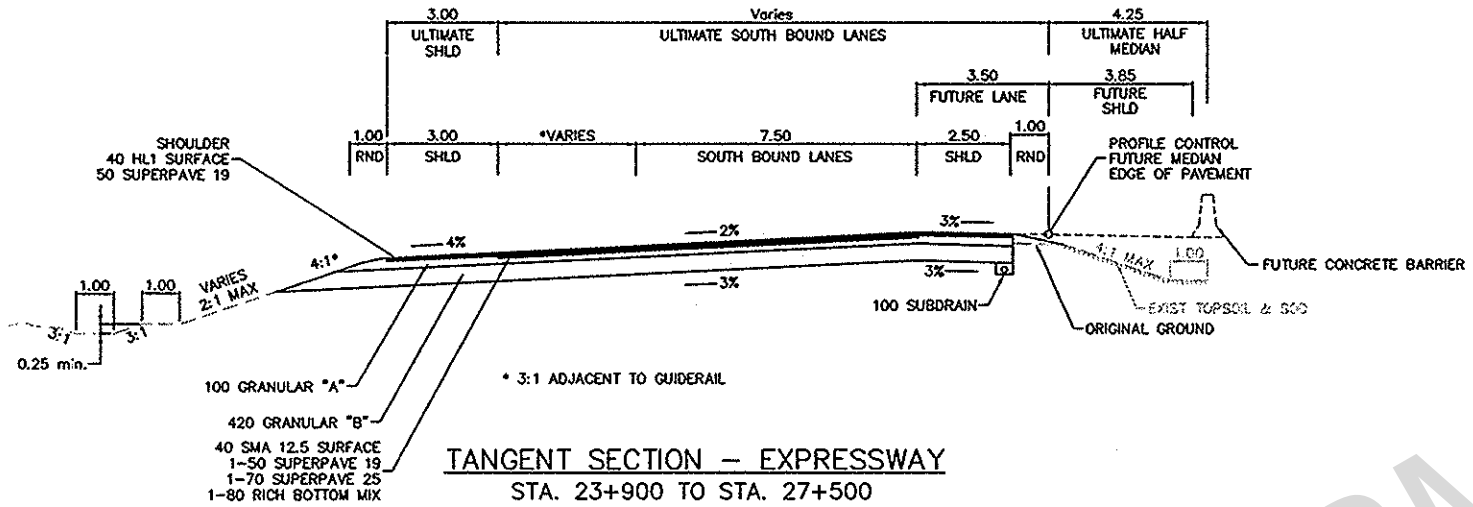
City of Hamilton Contract No. PW-06-243 (RHV)

CONTRACT No. PW-06-243 (RHV)	SHEET No.
DRAWING No.: 06-H-14	127

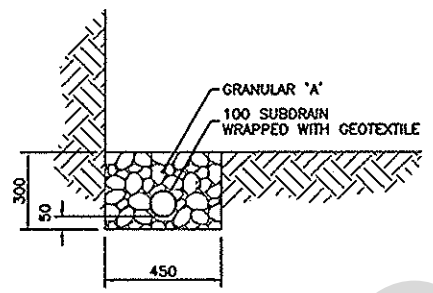
GENERAL NOTES

1. HOT MIX MISCELLANEOUS 40 HL3 OVER 150 GRAN 'A'
2. RUMBLE STRIP TO BE PLACED ALONG PARKWAY WHERE INDICATED; ALL RAMPS EXCLUDED
3. KING STREET, LAWRENCE AVE. AND QUEENSTON ROAD: 50 mm PARTIAL DEPTH REMOVAL, TACK COAT, 50mm HL1
4. ENTRANCE PAVEMENT 50 HL3 WITH 300 GRAN 'A' MINUMUM
5. TOPSOIL AND SOD OR SEEDING REFER TO LANDSCAPE DRAWINGS

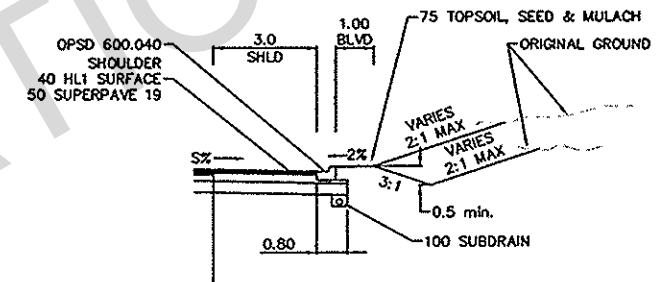
SUPERELEVATION TABLE												
Pavt	+6	+5	+4	+3	+2	+1	0	−1	−2	−3	−4	−5	−6
Sh	−2	−2	−2	−3	−3	−3	−3	−4	−4	−4	−4	−5	−6

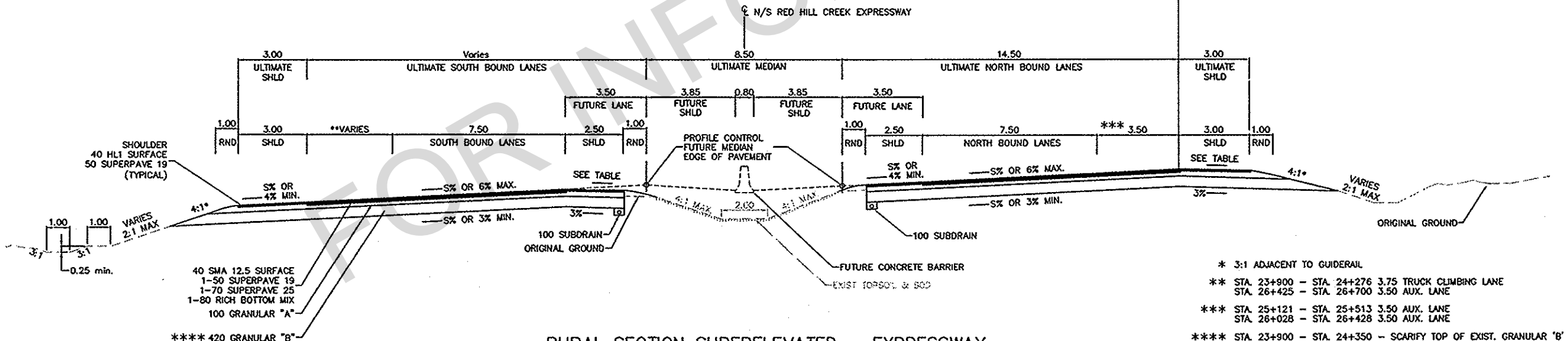


TANGENT SECTION – EXPRESSWAY
STA. 23+900 TO STA. 27+500
SCALE 1:200



SUBDRAIN DETAIL
N.T.S.





RURAL SECTION SUPERELEVATED – EXPRESSWAY
STA. 23+900 TO STA. 27+500
SCALE 1:200

* 3:1 ADJACENT TO GUIDERAIL

** STA. 23+900 – STA. 24+276 3.75 TRUCK CLIMBING LANE
STA. 26+425 – STA. 26+700 3.50 AUX. LANE

*** STA. 25+121 – STA. 25+513 3.50 AUX. LANE
STA. 26+028 – STA. 26+428 3.50 AUX. LANE

**** STA. 23+900 – STA. 24+350 – SCARIFY TOP OF EXIST. GRANULAR 'B'

FOR INFORMATION ONLY

NO.	REVISIONS	INITIAL	DATE

DRAWN BY: A.J.L. DATE: APRIL 2006
REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No.
Elevation=

SCALES

PHILIPS ENGINEERING

REGISTERED PROFESSIONAL ENGINEER G. D. TANSLEY PROVINCE OF ONTARIO

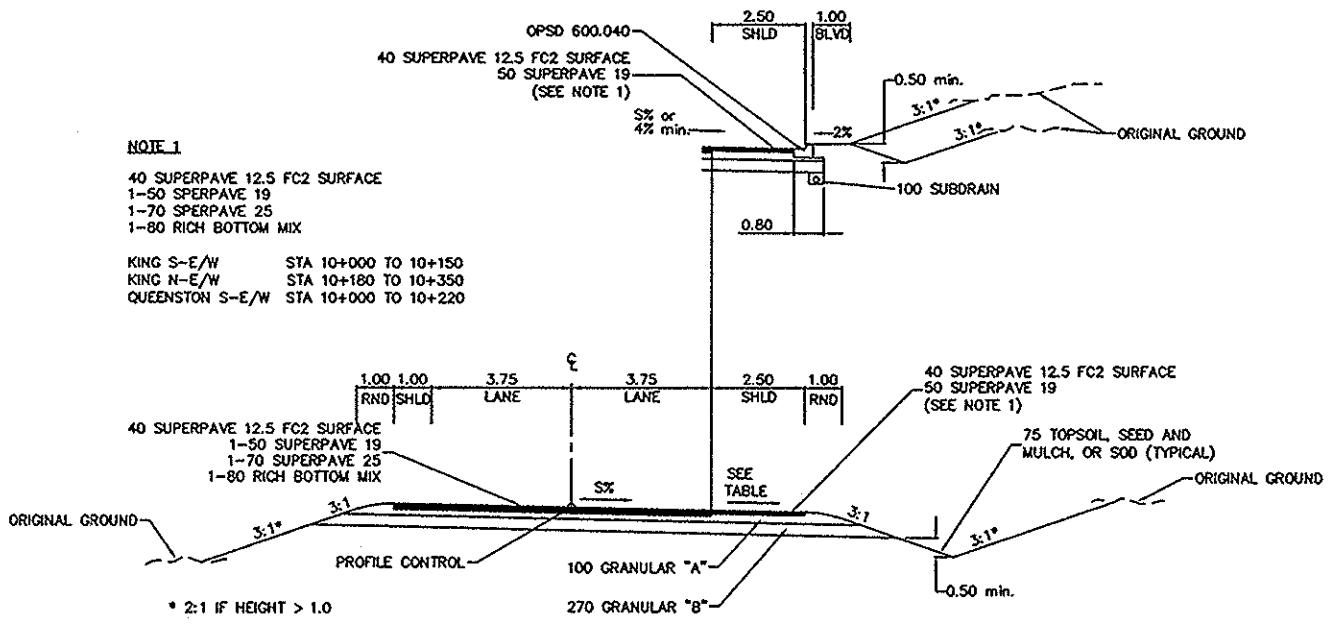
CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
DETAIL SECTIONS

AutoCAD drawing: C:\Work\P1068\Hwy\Dwg\CONTRACT\pn05\s3200.dwg Apr 07/06 3:30pm jmu

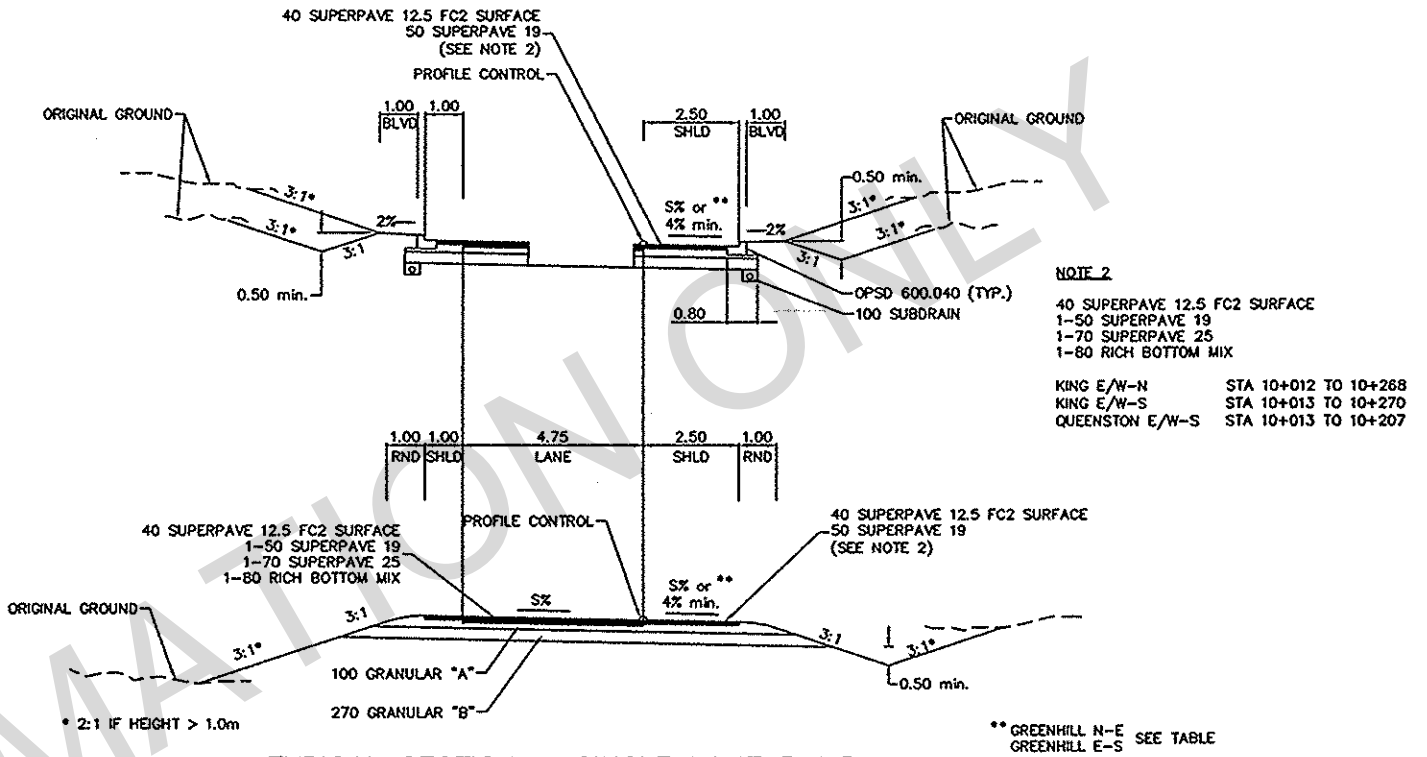
CONTRACT No. PW-06-243 (RHV)	SHEET No.
DRAWING No.: 06-H-14	128

SUPERELEVATION TABLE													
Pavt	+6	+5	+4	+3	+2	+1	0	−1	−2	−3	−4	−5	−6
Sh	−2	−2	−2	−3	−3	−3	−3	−4	−4	−4	−4	−5	−6



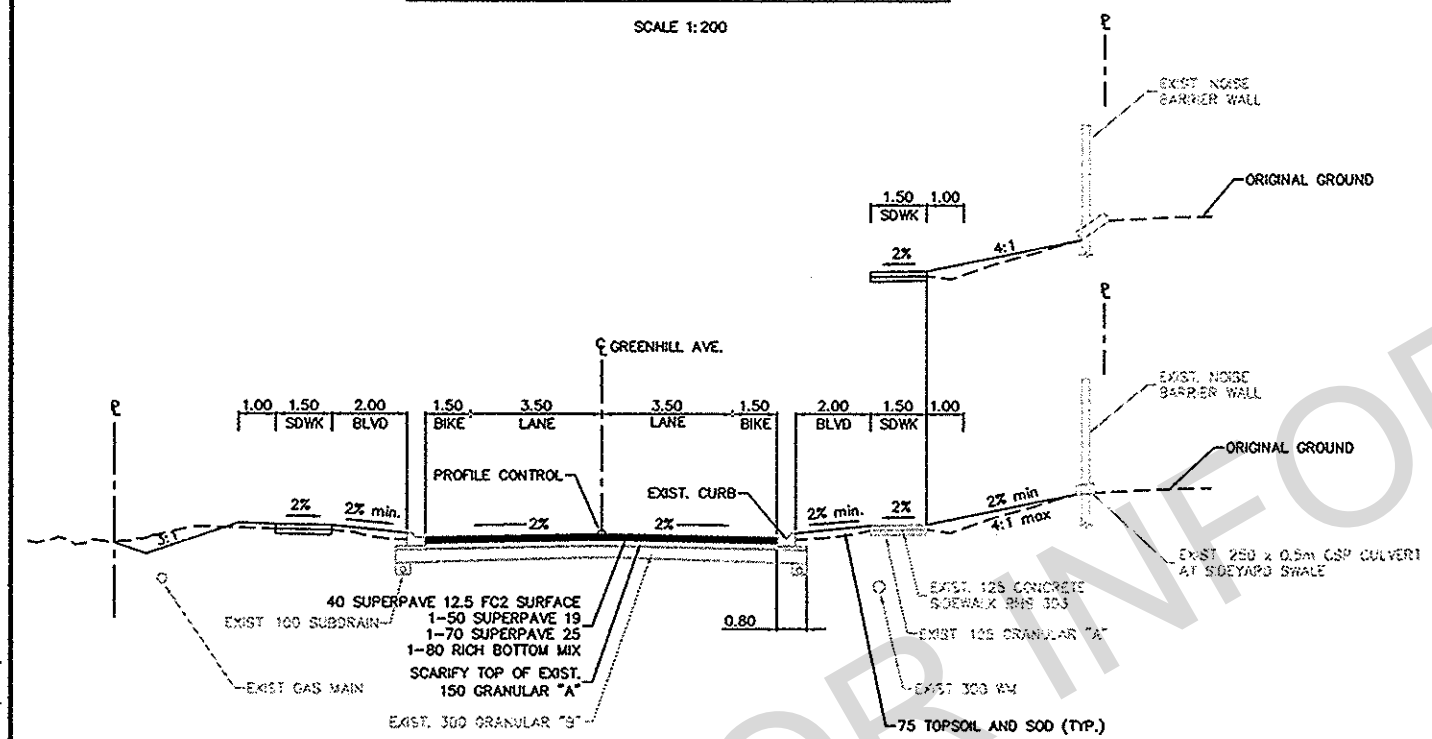
TYPICAL SECTION – TWO LANE RAMP

SCALE 1:200

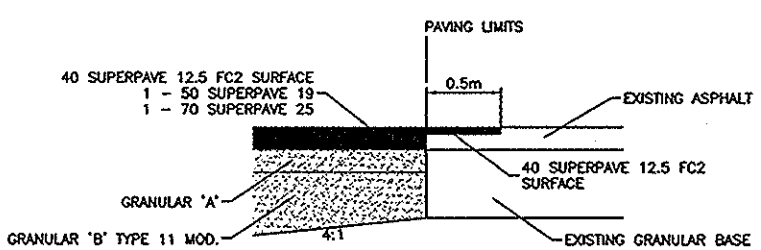


TYPICAL SECTION – SINGLE LANE RAMP

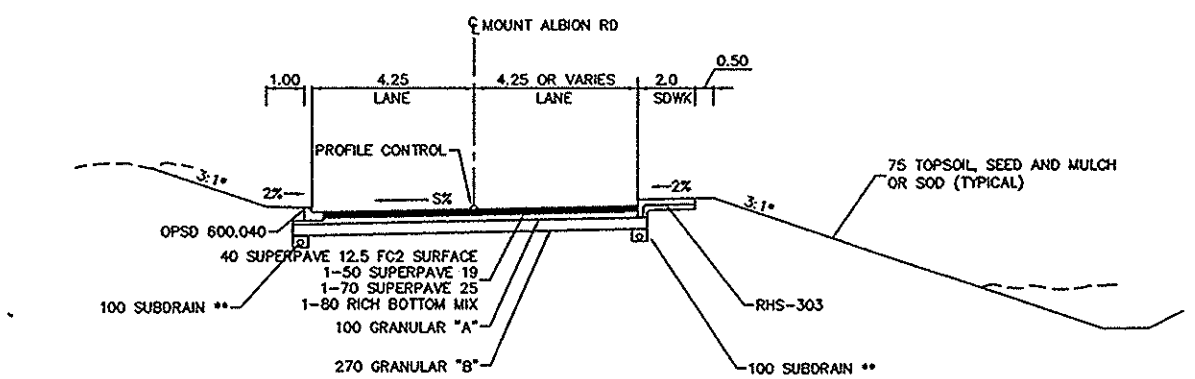
SCALE 1:200



TYPICAL SECTION
GREENHILL AVE.
SCALE 1:200



STEP JOINT DETAIL
N.T.S.



TYPICAL SECTION
MOUNT ALBION ROAD
SCALE 1:200

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE	DRAWN BY:	DATE: APRIL 2006
				REFERENCE MATERIAL: Road Plans : Sewer Plans : Water Plans : Regional Surveyor : Geodetic Bench Mark Index No. Elevation=	

SCALES

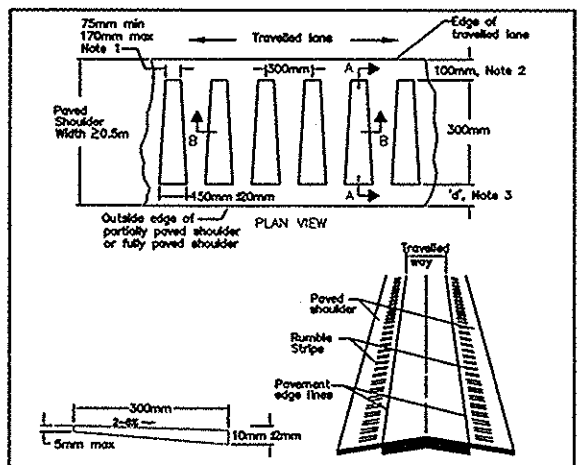
PHILIPS ENGINEERING

REGISTERED PROFESSIONAL ENGINEER G. D. TANSLEY PROVINCE OF ONTARIO

CITY OF HAMILTON
Public Works Department

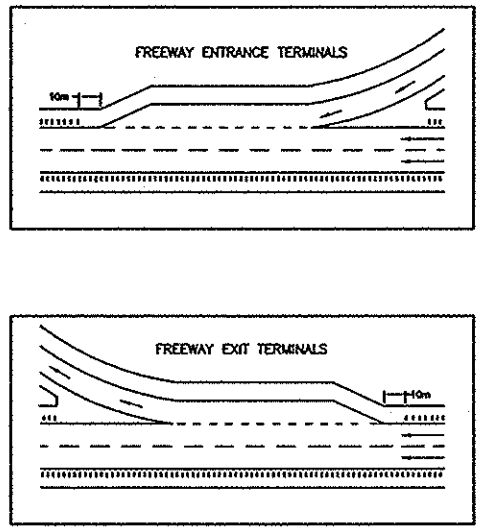
RED HILL VALLEY PROJECT
DETAIL SECTIONS

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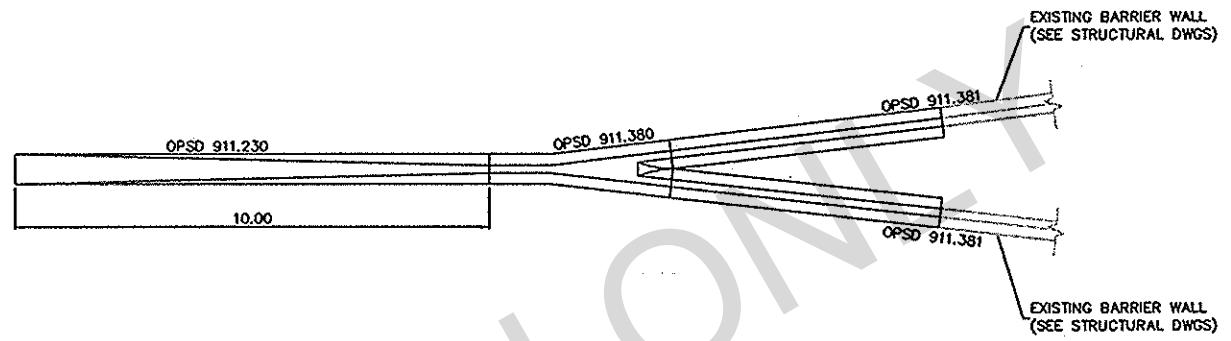
NOTES:
1 The inner width shall not exceed the outer width of the rumble strips.
2 This distance is not to be varied.
3 Distance 'd' to the edge of the paved shoulder shall not be less than 100mm.
A All dimensions are in millimetres unless otherwise shown.

MINISTRY OF TRANSPORTATION ONTARIO DRAWING	Date	1999 09 01	Rev
SHOULDER RUMBLE STRIPS			
MTOD – 503.020			

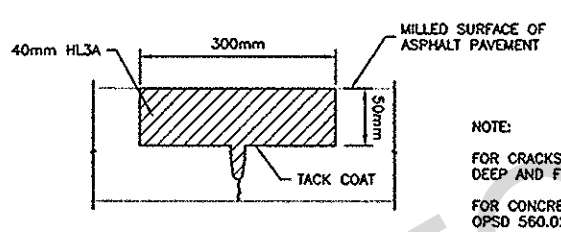


NOTES:
A All dimensions are in millimetres unless otherwise shown.

MINISTRY OF TRANSPORTATION ONTARIO DRAWING	Date	1999 09 01	Rev
SHOULDER RUMBLE STRIPS AT SPEED CHANGE LANES			
MTOD – 503.021			



MEDIAN BARRIER WALL TRANSITION DETAIL
N.T.S.



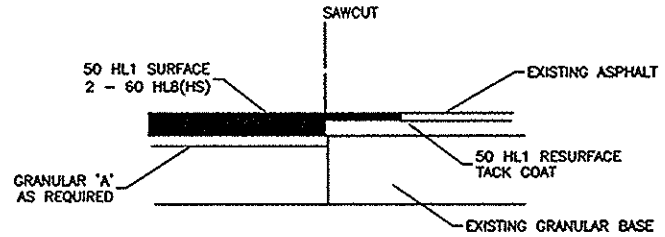
NOTE:

FOR CRACKS 40mm TO 75mm WIDE, ROUT TO 25mm DEEP AND FILL WITH HL3A

FOR CONCRETE CRACK REPAIRS SEE OPSD 560.020

CRACKS GREATER THAN 75mm WIDE

TYPICAL ASPHALT CRACK REPAIR
SCALE 1:25



FULL DEPTH REPAIR AREAS & PAVEMENT REINSTATEMENT
N.T.S.

KING STREET
LAWRENCE AVE.
QUEENSTON ROAD

No.	REVISIONS	INITIAL	DATE

DRAWN BY: | DATE: APRIL 2006
REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No.
Elevation =

SCALES

PHILIPS ENGINEERING

REGISTERED PROFESSIONAL ENGINEER G. D. TANSLEY PROVINCE OF ONTARIO

CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
DETAIL SECTIONS

FOR INFORMATION ONLY

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PUBLIC WORKS DEPARTMENT

General Manager, Scott Stewart, C.E.T.

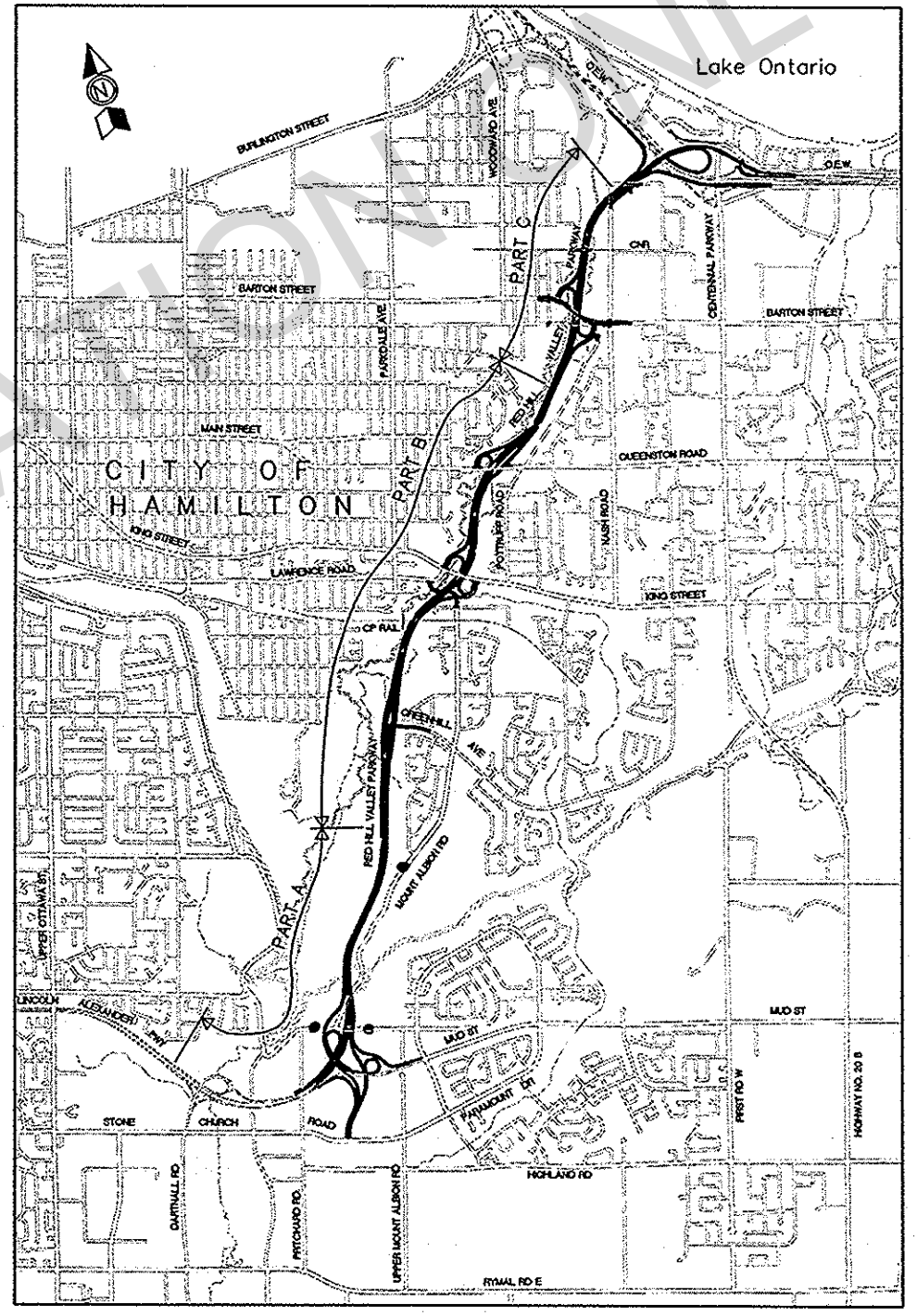
Hamilton

Contract No. PW-06-243 (RHV)

Red Hill Valley Project
Mainline Paving
Mud Street Interchange to QEW Interchange

PART C
Queenston Road to QEW Interchange

Hot Mix Paving, Granular, Curb & Gutter,
Barriers, Electrical, Structural and Landscaping



KEY PLAN
NTS

FOR INFORMATION ONLY

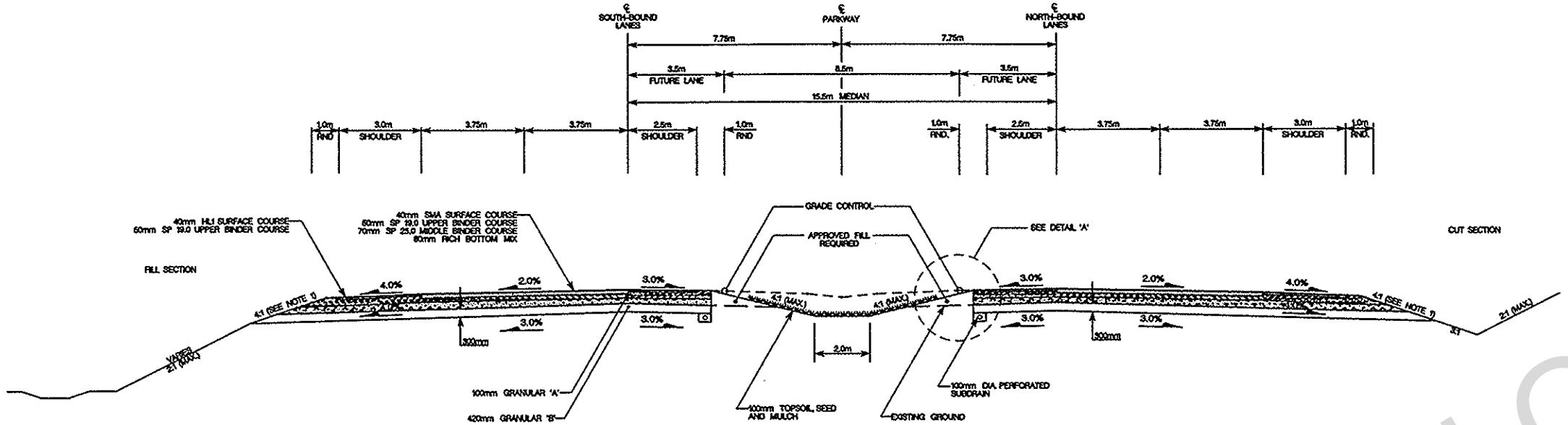
Issued for : Tender ☒ Construction ☐

City of Hamilton Contract No. PW-06-243 (RHV)

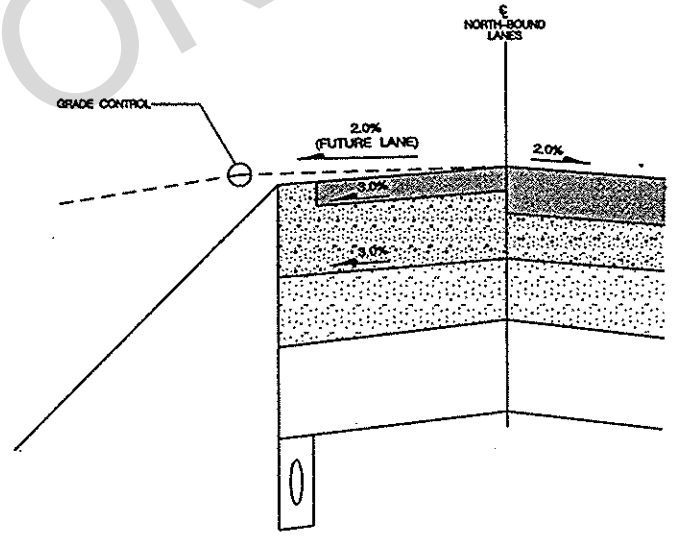
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CONTRACT No PW 06 243 (RHV)
DRAWING No. 06-H-14
FILE No.

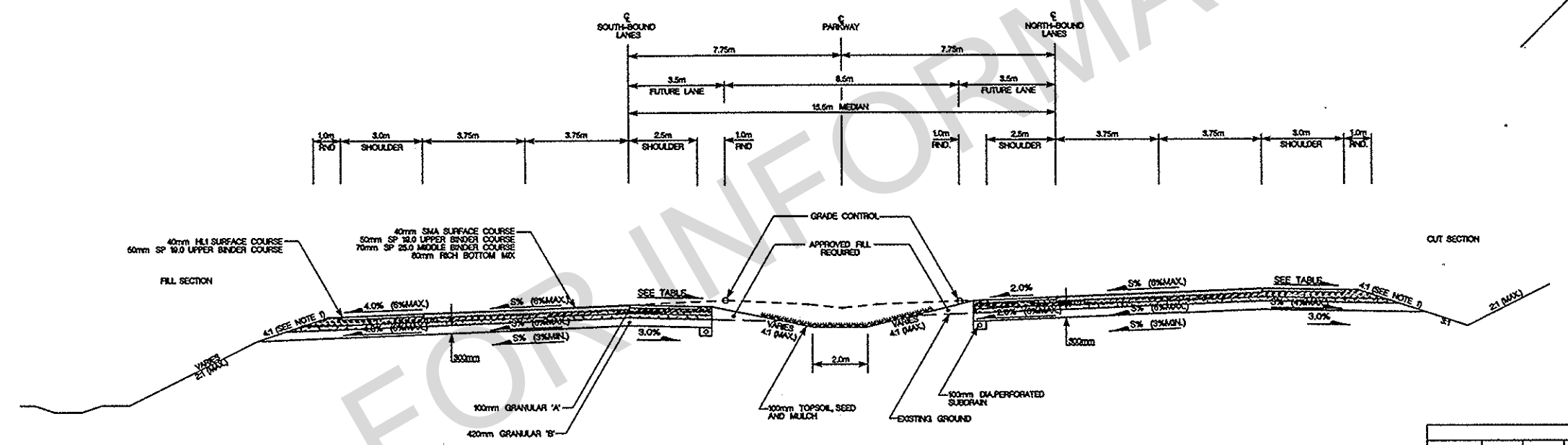
SHEET No 20



TANGENT SECTION PARKWAY
STA. 27+400 TO STA. 28+350



DETAIL 'A'
N.T.S.



SUPERELEVATED SECTION PARKWAY
STA. 27+400 TO STA. 28+350

NOTES:
1. 3:1 ADJACENT TO GUIDERAIL.

PARKWAY SUPERELEVATION TABLE													
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-3	-4	-4	-4	-4	-5	-6

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: DATE: MARCH, 2006
REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No.
Elevation=

SCALES
0 1m 2m 4m

LICENCED PROFESSIONAL ENGINEER J.S. ROBERTS PROVINCE OF ONTARIO

MRC McCORMICK RANKIN CORPORATION

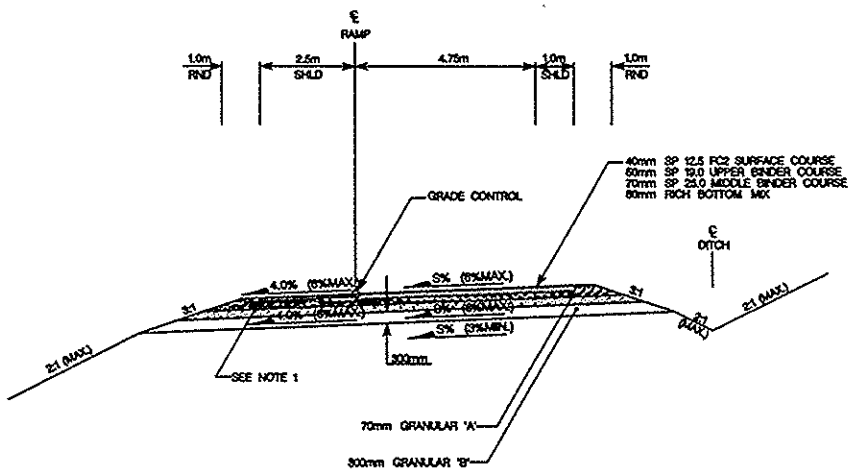
CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
DETAIL SECTIONS

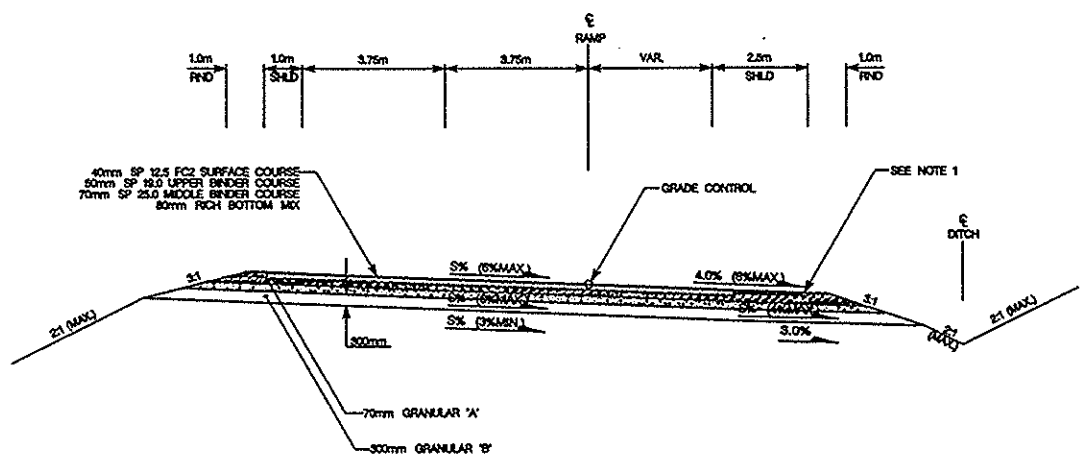
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CONTRACT No PW 06 243 (RHV)
DRAWING No. 06-H-14
FILE No.

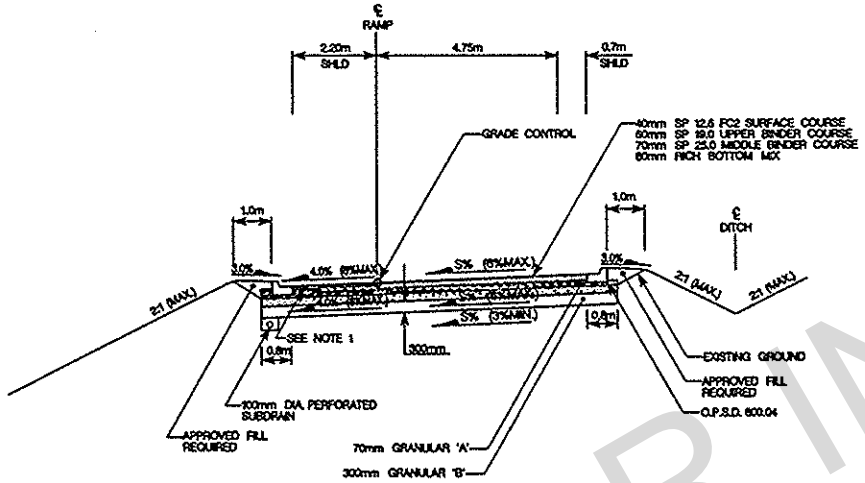
SHEET No
21



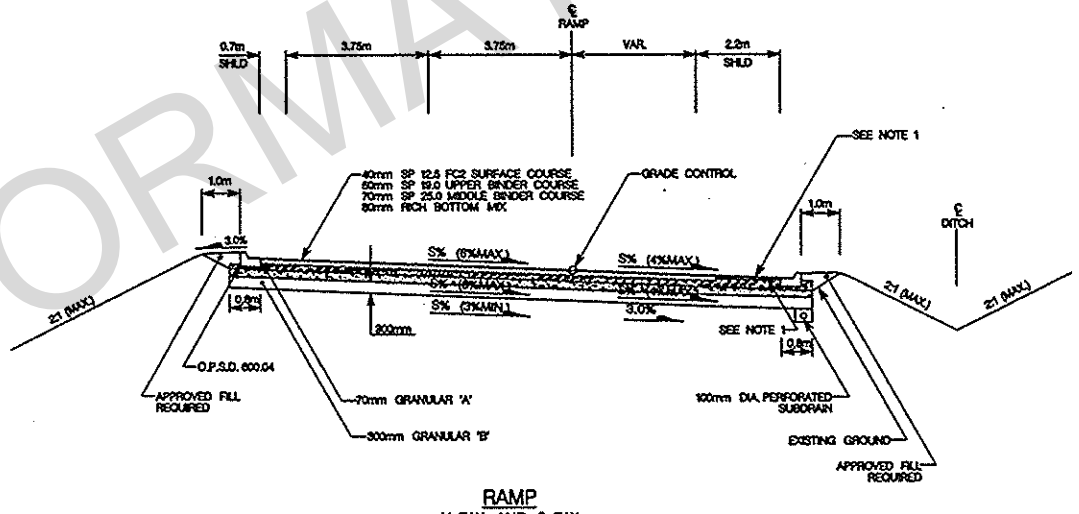
RAMP
E/W-S AND E/W-N
(RURAL SECTION)



RAMP
N-E/W AND S-E/W
(RURAL SECTION)



RAMP
E/W-S AND E/W-N
(URBAN SECTION)



RAMP
N-E/W AND S-E/W
(URBAN SECTION)

NOTE

1. PAVED SHOULDERS
   40mm SP 12.5 FC2 SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE

   FULL DEPTH PAVED SHOULDERS THRU CURVES AND SPIRALS
   40mm SP 12.5 FC2 SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX

RAMP SUPERELEVATION TABLE

Pave	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-3	-4	-4	-4	-4	-5	-6

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: | DATE: MARCH, 2008
REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No.
Elevation=

SCALES
0 1m 2m 4m

LICENCED PROFESSIONAL ENGINEER J.S. ROBERTS PROVINCE OF ONTARIO

MRC McCORMICK RANKIN CORPORATION

CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
DETAIL SECTIONS

PUBLIC WORKS DEPARTMENT

General Manager, Scott Stewart, C.E.T.

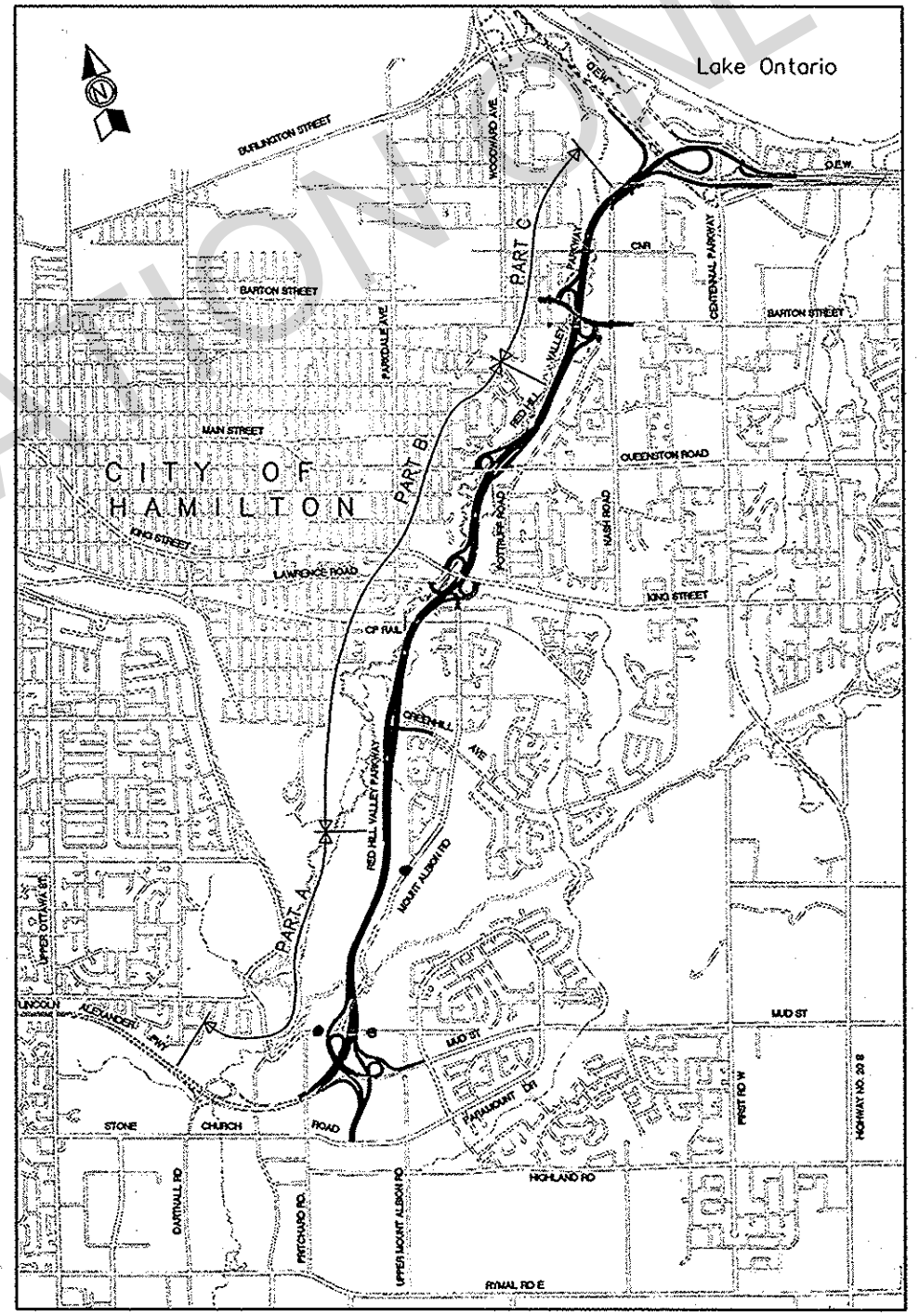
Hamilton

Contract No. PW-06-243 (RHV)

Red Hill Valley Project
Mainline Paving
Mud Street Interchange to QEW Interchange

PART A
Mud Street Interchange to South of Greenhill Avenue

Hot Mix Paving, Granular, Curb & Gutter,
Barriers, Electrical, Structural and Landscaping



KEY PLAN
NTS

Issued for : Tender ☒ Construction ☐

Contract No. PW-06-243 (RHV)

City of Hamilton

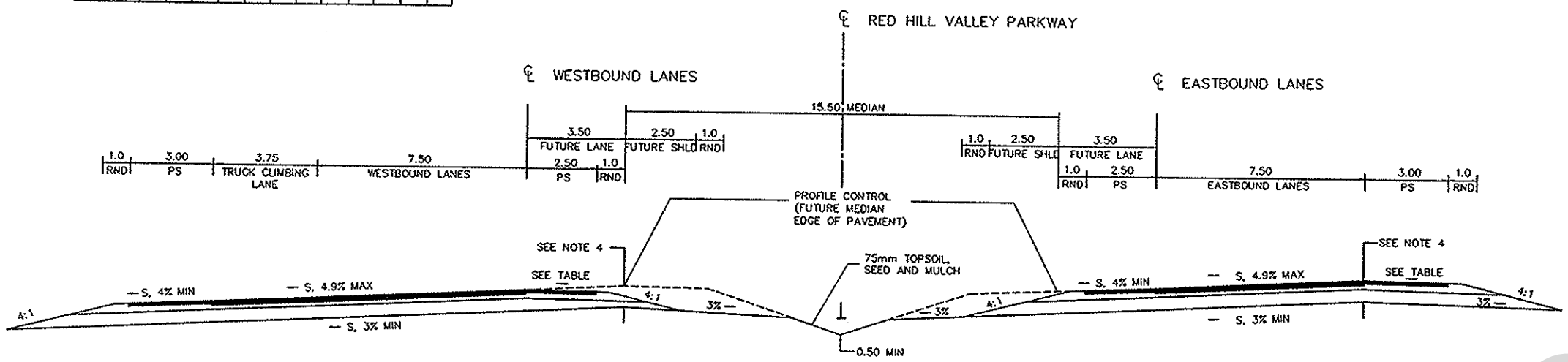
FOR INFORMATION ONLY

SUPERELEVATION TABLE												
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-5	-6

DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

CONTRACT No. PW-06-243 (RHV)
DRAWING No. 06-H-14
FILE No.

SHEET No. PAVT 1



TYPICAL SUPERELEVATED SECTION

(WITH 15.5 MEDIAN)
STA 21+710 – 22+150 WBL
STA 21+873 – 22+150 EBL

NOTES:

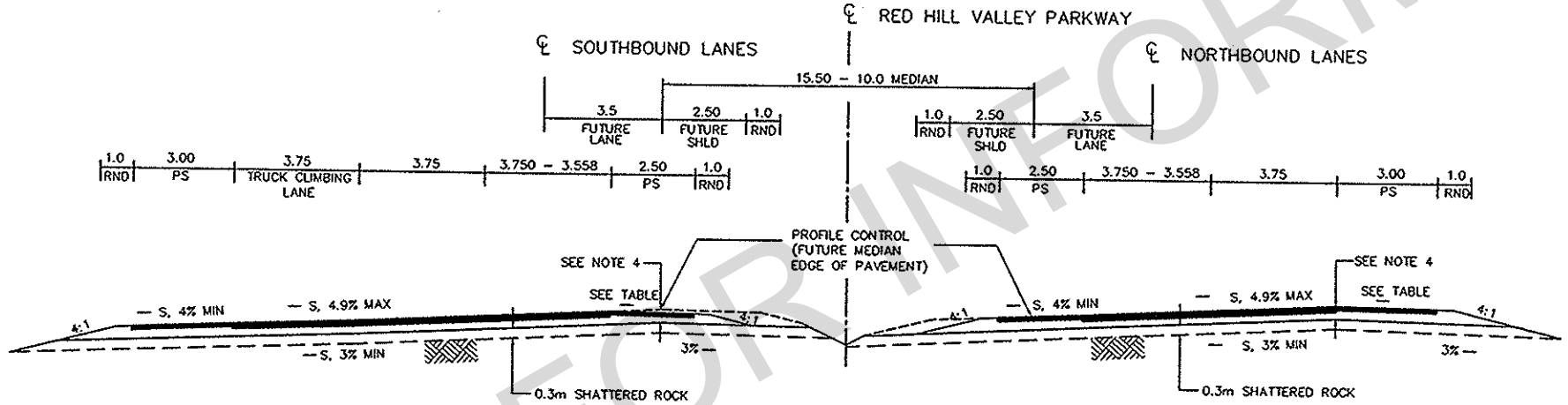
1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:
   RED HILL VALLEY PARKWAY

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

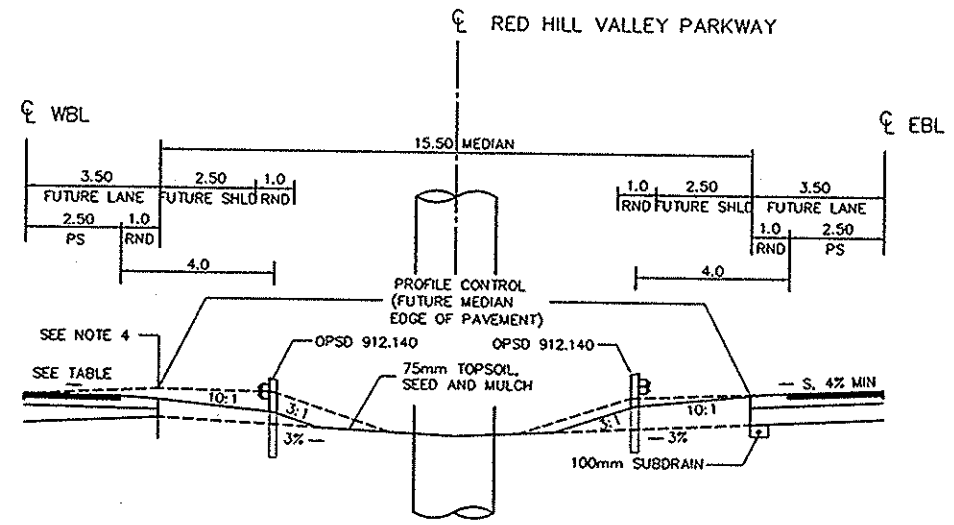
   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

   PAVED SHOULDERS
   40mm HL1 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE
5) RUMBLE STRIPS TO BE PLACED ON PARKWAY ONLY (RAMPS EXCLUDED)



TYPICAL SUPERELEVATED SECTION

(WITH 15.5 – 10.0 MEDIAN)
STA 22+150 – 22+430



MEDIAN TREATMENT AT BRIDGE PIERS

EXIST. PRICHARD RD. STRUCTURE – WBL
PROP. RAMP N–S & RAMP N–E/E–W STRUCTURES EBL & WBL

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: Stantec DATE:
REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

REGISTERED PROFESSIONAL ENGINEER F. E. WILSON PROVINCE OF ONTARIO

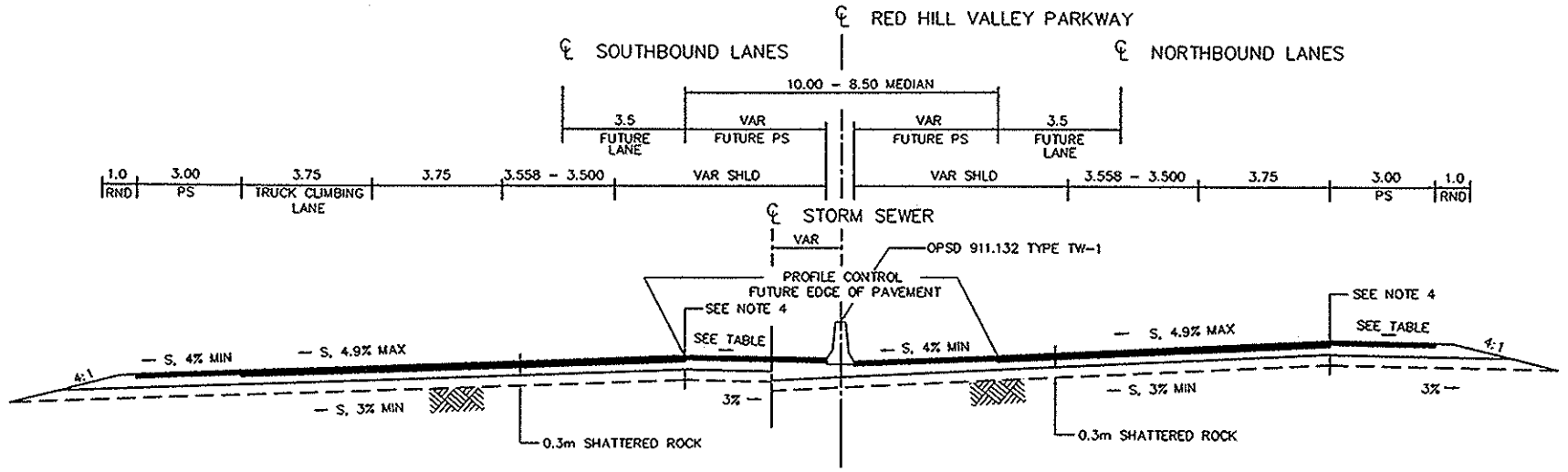
CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

PAVEMENT SECTIONS

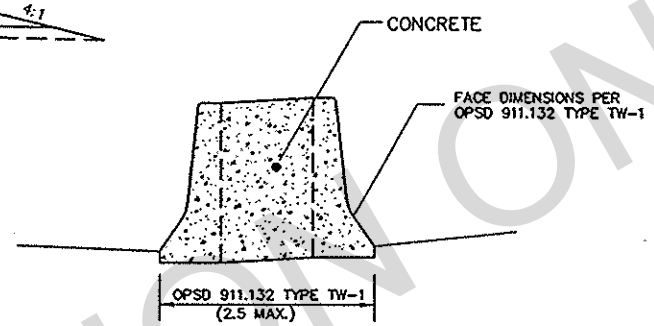
DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED	CONTRACT No. PW-06-243 (RHV) DRAWING No. 06-H-14 FILE No.	SHEET No. PAVT 2

SUPERELEVATION TABLE												
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-5	-6



TYPICAL SUPERELEVATED SECTION

(WITH 10.0 - 8.5 MEDIAN)
STA 22+430.000 - 22+658.905 NBL
STA 22+430.000 - 22+626.91 SBL



ASYMMETRIC MEDIAN BARRIER TRANSITION

N.T.S.

NOTES:

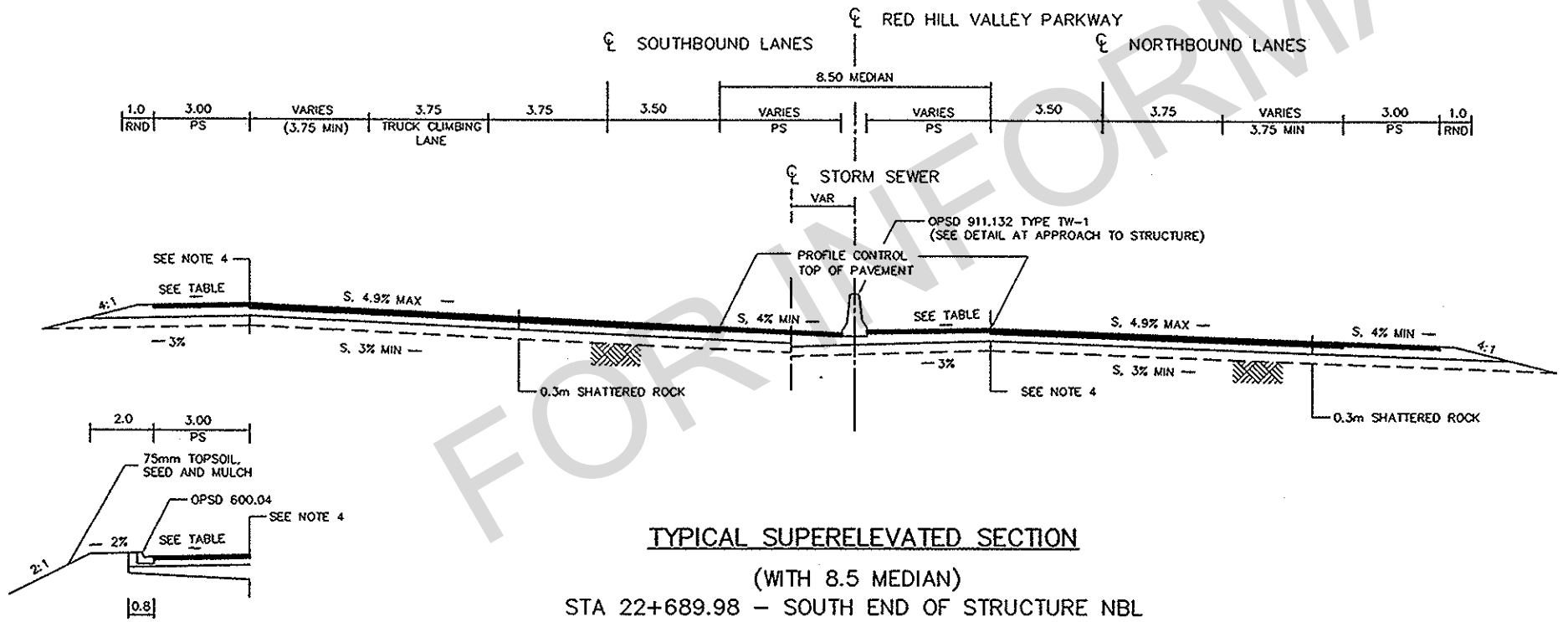
1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS - 3:1, OVER 1.0m - 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:
   RED HILL VALLEY PARKWAY

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

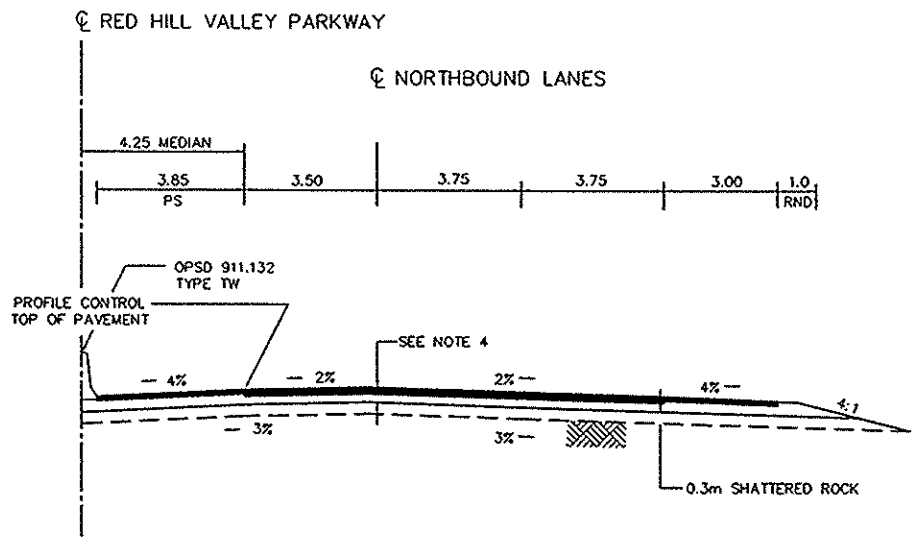
   PAVED SHOULDERS
   40mm HL1 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE
5) RUMBLE STRIPS TO BE PLACED ON PARKWAY ONLY (RAMPS EXCLUDED)



STA 22+770 to
SOUTH END OF STRUCTURE SBL

TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)
STA 22+689.98 - SOUTH END OF STRUCTURE NBL
STA 22+626.91 - 22+770 SBL



TYPICAL TANGENT SECTION

STA 22+658.905 - 22+689.98 NBL

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: Stantec | DATE:
REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

ACCREDITED PROFESSIONAL ENGINEER F. E. WILSON PROVINCE OF ONTARIO

CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

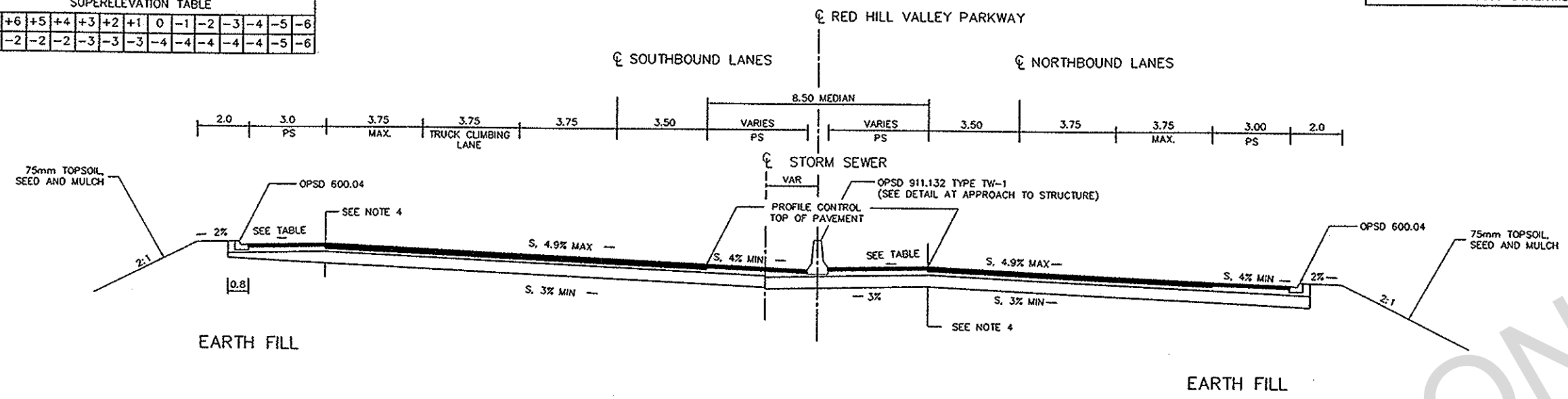
PAVEMENT SECTIONS

DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

CONTRACT No. PW-06-243 (RHV)
DRAWING No. 06-H-14
FILE No.

SHEET No. PAVT 3

SUPERELEVATION TABLE												
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-5	-6

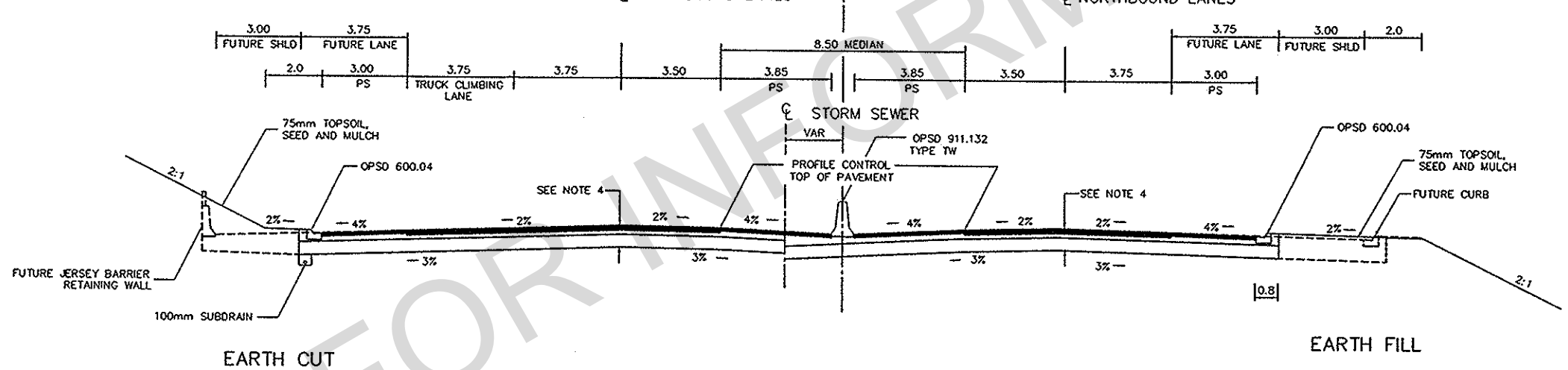


TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)

NORTH END OF STRUCTURE – 23+184.55 NBL

NORTH END OF STRUCTURE – 23+246.55 SBL



TYPICAL TANGENT SECTION

(WITH 8.5 MEDIAN)

STA 23+184.55 – 23+323.878 NBL

STA 23+246.55 – 23+355.88 SBL

NOTES:

1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:
   RED HILL VALLEY PARKWAY

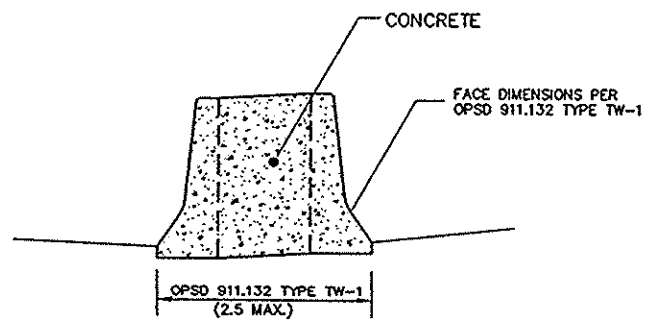
   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

   PAVED SHOULDERS

   40mm HL1 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE
5) RUMBLE STRIPS TO BE PLACED ON PARKWAY ONLY (RAMPS EXCLUDED)



ASYMMETRIC MEDIAN BARRIER TRANSITION

N.T.S.

FOR INFORMATION ONLY

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Sewer Plans :
Water Plans :

Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

F. E. WILSON — REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO

City of HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

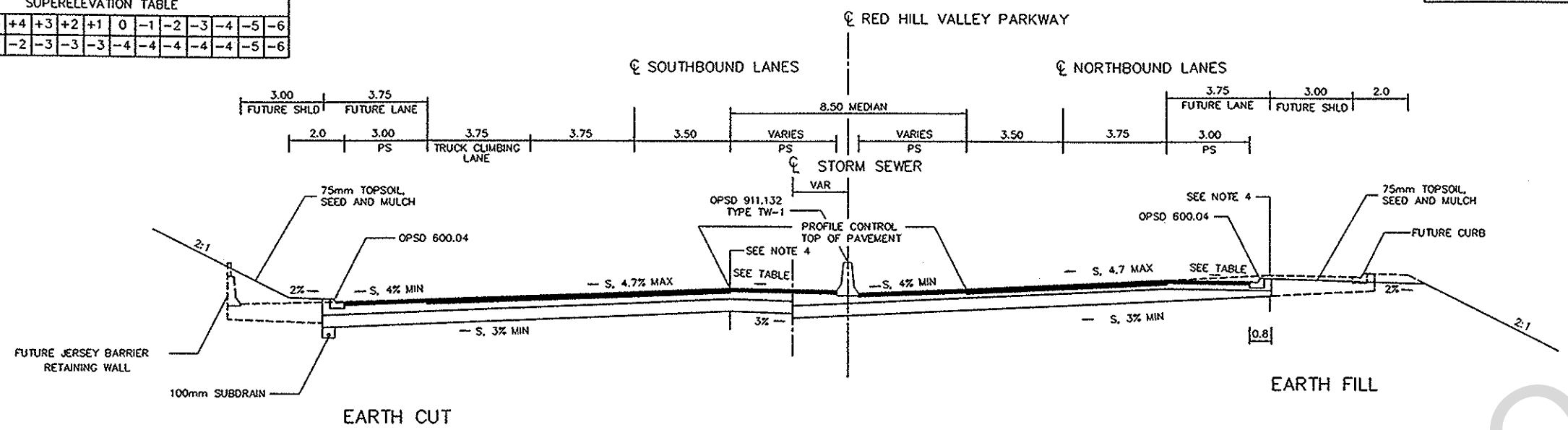
PAVEMENT SECTIONS

DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

CONTRACT No. PW-06-243 (RHV)
DRAWING No. 06-H-14
FILE No.

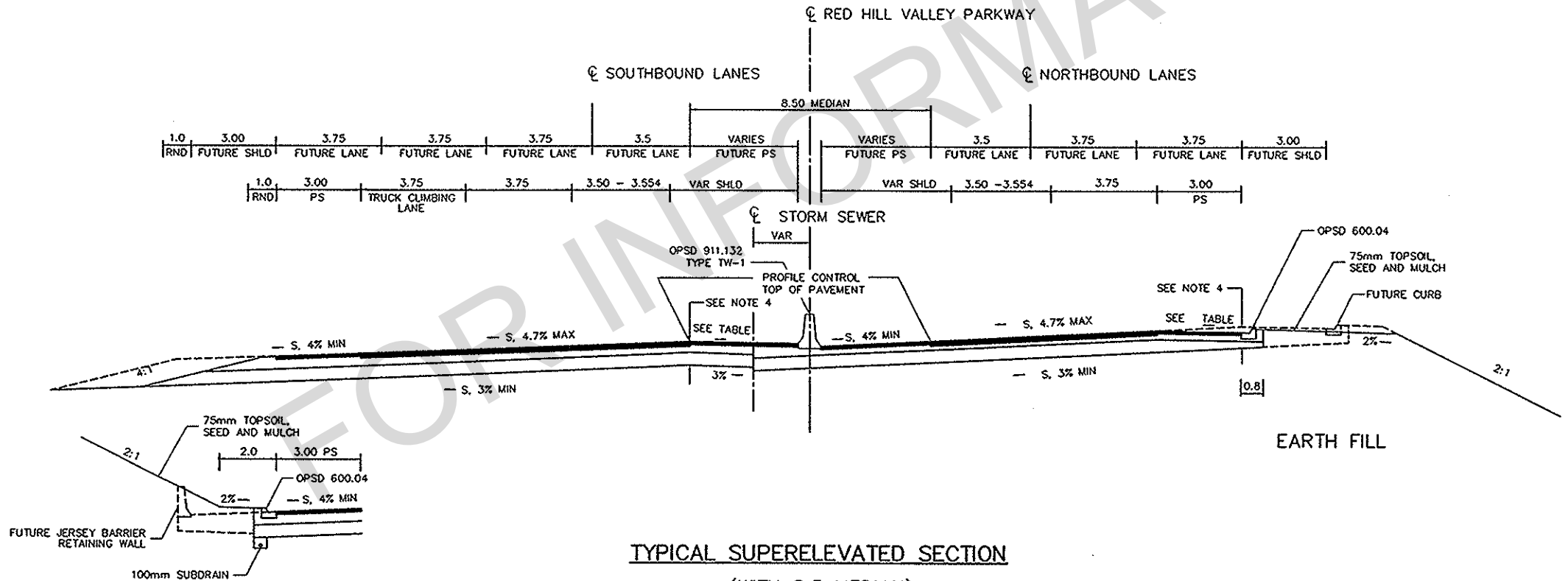
SHEET No. PAVT 4

SUPERELEVATION TABLE													
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Sh	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-5	-6



TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)
STA 23+323.878 – 23+463.258 NBL
STA 23+355.88 – 23+463.258 SBL



STA 23+463.258 – 23+500 SBL

TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)
STA 23+463.258 – 23+522.255

NOTES:

1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m.OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:
   RED HILL VALLEY PARKWAY

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

   PAVED SHOULDERS
   40mm HL1 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE
5) RUMBLE STRIPS TO BE PLACED ON PARKWAY ONLY (RAMPS EXCLUDED)

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: Stantec DATE:
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Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

F. E. WILSON — REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO

CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

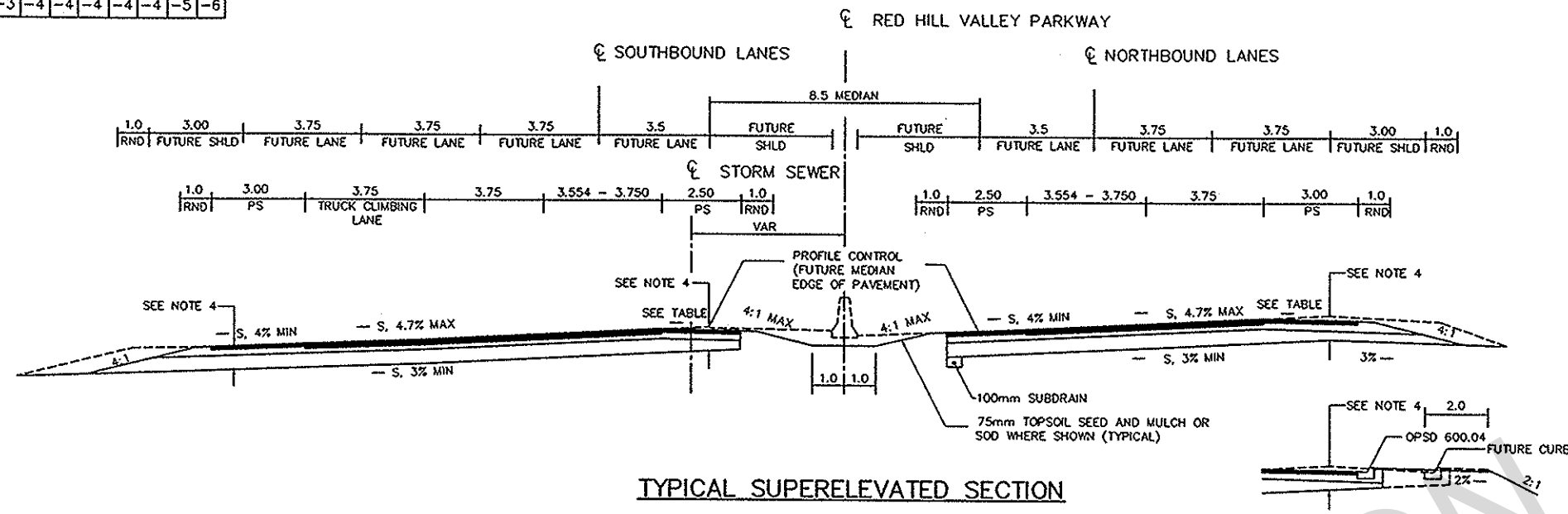
PAVEMENT DETAILS

DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

CONTRACT No. PW-06-243 (RHV)
DRAWING No. 06-H-14
FILE No.

SHEET No. PAVT 5

SUPERELEVATION TABLE												
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-5	-6



TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)
STA 23+522.255 – 23+743.637

STA 23+522.255 – 23+650

NOTES:

1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m.OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:

   RED HILL VALLEY PARKWAY

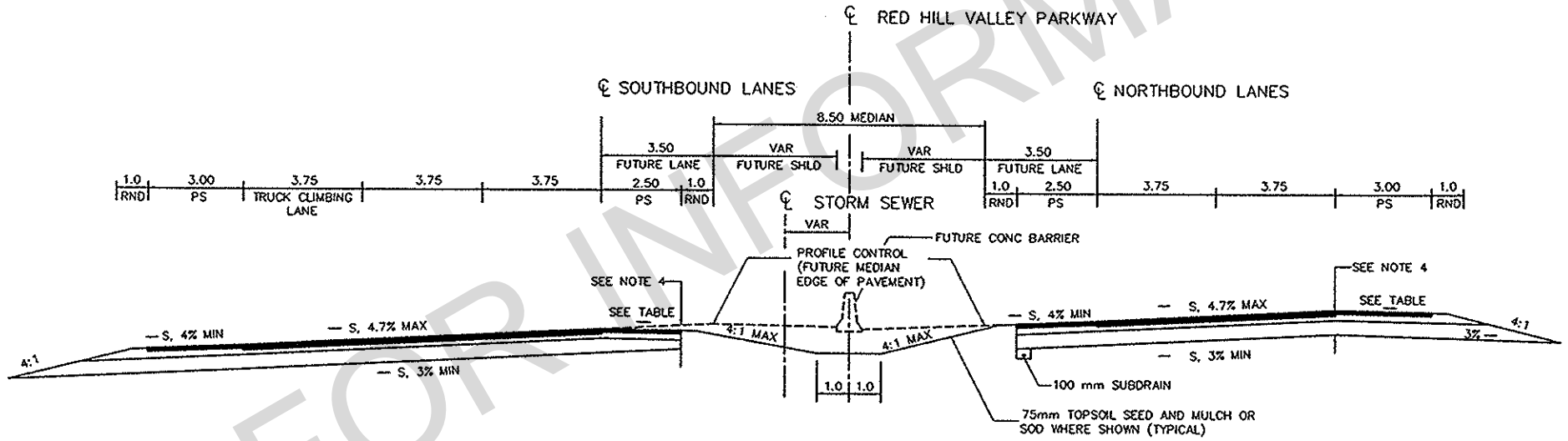
   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

   PAVED SHOULDERS

   40mm HL1 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE
5) RUMBLE STRIPS TO BE PLACED ON PARKWAY ONLY (RAMPS EXCLUDED)



TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)
STA 23+743.637 – 23+883.02 NBL
STA 23+743.637 – 23+851.02 SBL

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: Stantec DATE:
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Road Plans :
Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

F. E. WILSON — REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO

City of HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

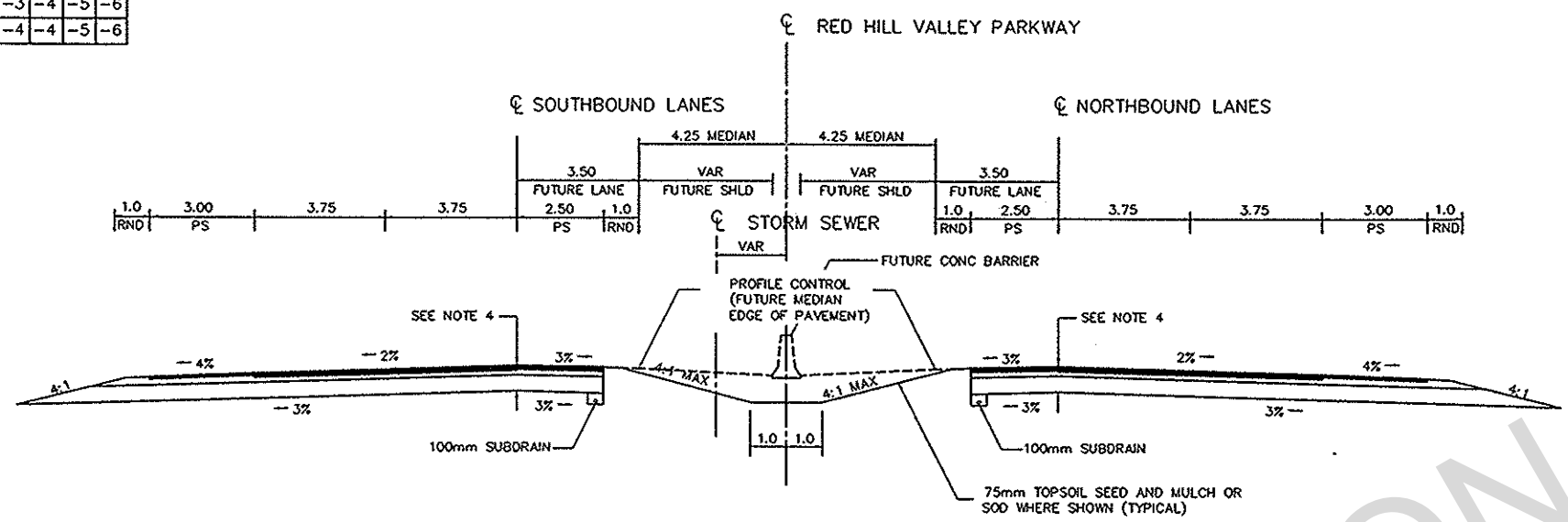
PAVEMENT SECTIONS

DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

CONTRACT No. PW-06-243 (RHV)
DRAWING No. 06-H-14
FILE No.

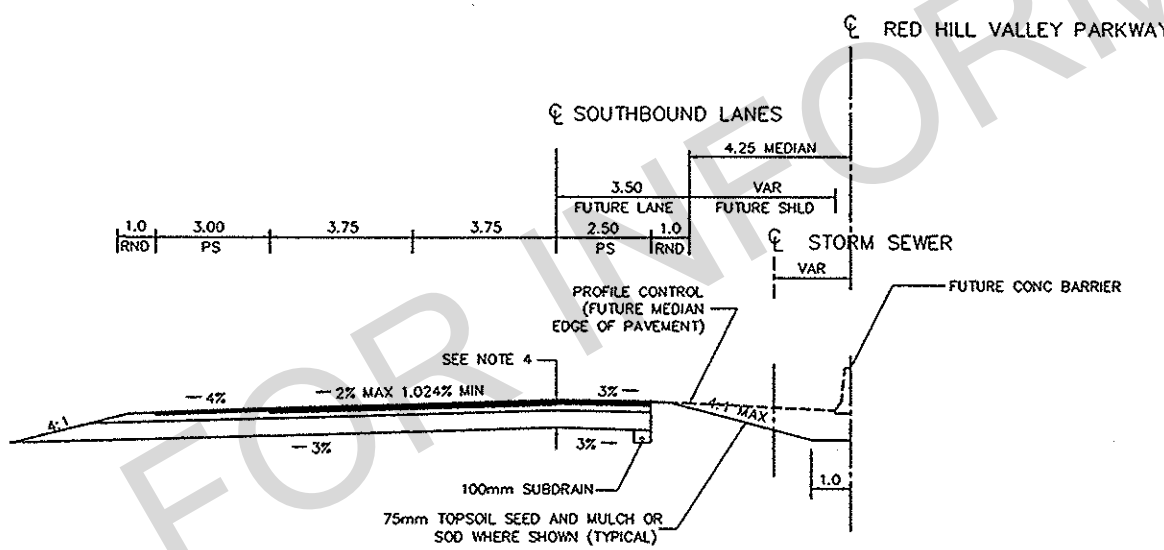
SHEET No. PAVT 6

SUPERELEVATION TABLE													
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-4	-4	-6



TYPICAL TANGENT SECTION

(WITH 8.5 MEDIAN)
STA 23+883.02 – 23+900.839 NBL
STA 23+851.02 – 23+856.94 SBL



TYPICAL SUPERELEVATED SECTION

(WITH 8.5 MEDIAN)
STA 23+856.94 – 23+900.839 SBL

NOTES:

1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:
   RED HILL VALLEY PARKWAY

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

   40mm SMA SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

   PAVED SHOULDERS
   40mm HL1 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE
5) RUMBLE STRIPS TO BE PLACED ON PARKWAY ONLY (RAMPS EXCLUDED)

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: Stantec DATE:
REFERENCE MATERIAL:
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Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

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F. E. WILSON — REGISTERED PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO

CITY OF HAMILTON
Public Works Department

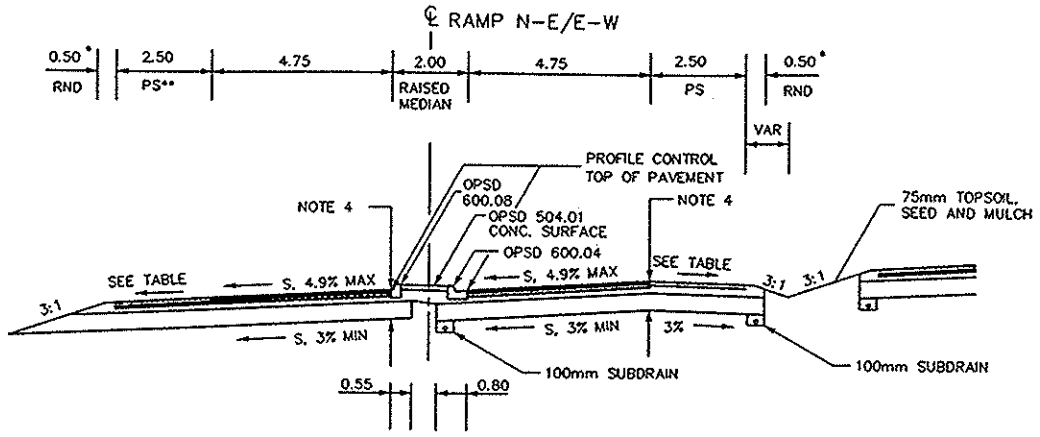
RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

PAVEMENT SECTIONS

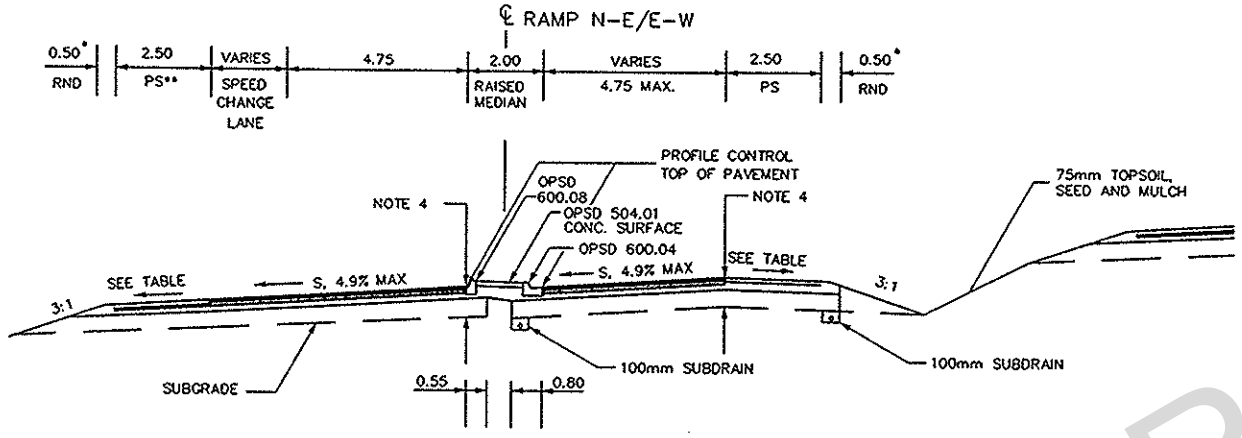
DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

CONTRACT No. PW-08-243 (RHV)
DRAWING No. 08-H-14
FILE No.

SHEET No. PAVT 7



RAMP N-E/E-W
STA 49+182.812 – STA 49+365



RAMP N-E/E-W
STA 49+365 – STA 49+533

SUPERELEVATION TABLE													
Pavt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-5	-6	-6	-6	-6	-6

NOTES:

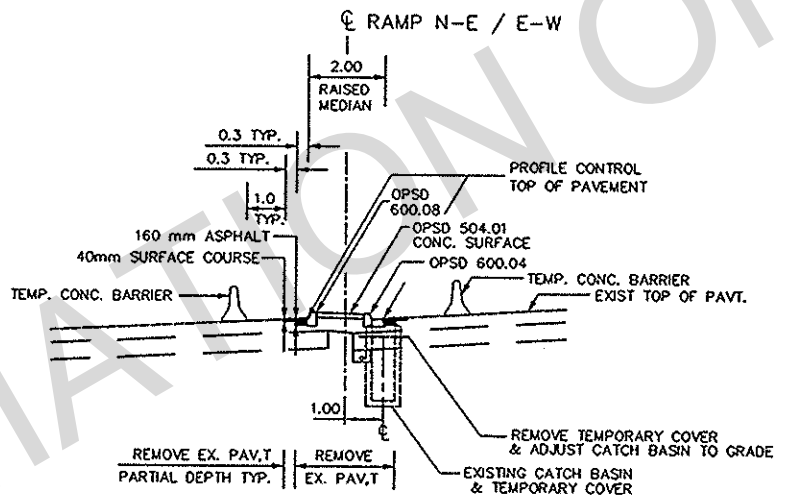
1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m.OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:

INTERCHANGE RAMPS INCL. 1.0 PAVED SHLD.
40mm SP 12.5 FC2 SURFACE COURSE
50mm SP 19.0 UPPER BINDER COURSE
70mm SP 25.0 MIDDLE BINDER COURSE
80mm RICH BOTTOM MIX
70mm GRANULAR A
450mm GRANULAR B TYPE II

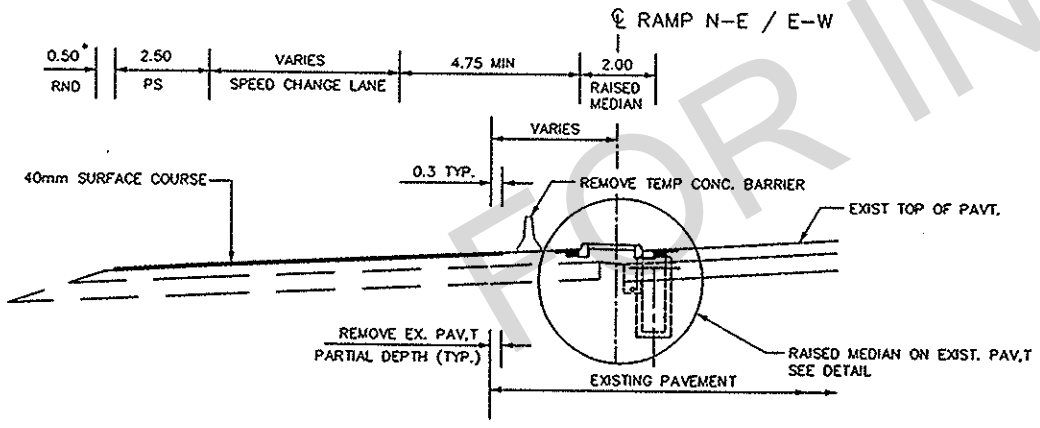
PAVED SHOULDERS
40mm SP 12.5 FC2 SURFACE COURSE
50m SP 19.0 UPPER BINDER COURSE

** FULL DEPTH PAVED SHLDS. THRU CURVES & SPIRALS
40mm SP 12.5 FC2 SURFACE COURSE
50mm SP 19.0 UPPER BINDER COURSE
70mm SP 25.0 MIDDLE BINDER COURSE
80mm RICH BOTTOM MIX

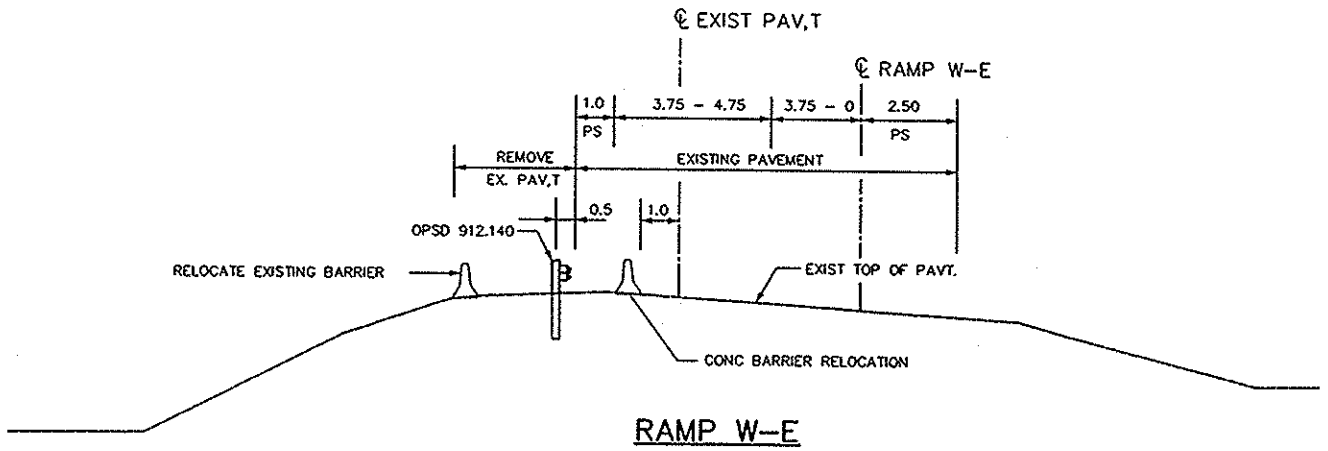
* WHERE STEEL BEAM GUIDE RAIL IS INDICATED THE MIN. ROUNDING SHALL BE 1.0m WITH BREAK POINT AT MIDPOINT OF ROUNDING



RAMP N-E / E-W
STA 49+533 – STA 49+752.282
(RAISED MEDIAN ON EXISTING PAVEMENT)



RAMP N-E / E-W
STA 49+533 – STA 49+590.559



RAMP W-E
VICINITY STA 3+425
(RAMP RESTRUCTURING ON EXISTING PAVEMENT)

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Sewer Plans :
Water Plans :
Regional Surveyor :
Geodetic Bench Mark Index No. 9-21
Elevation= 135.468

SCALES 0 1m 2m 4m

Stantec

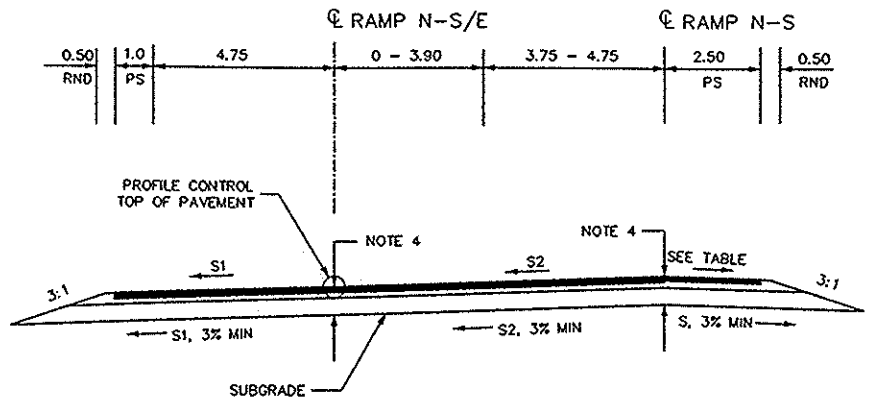
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RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

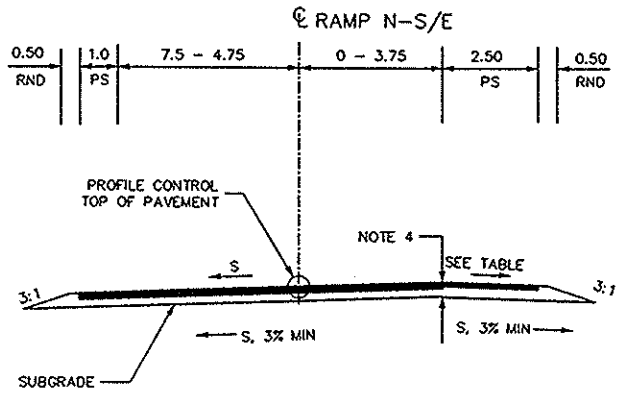
PAVEMENT SECTIONS

DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED	CONTRACT No. PW-06-243 (RHV) DRAWING No. 06-H-14 FILE No.	SHEET No. PAVT 8



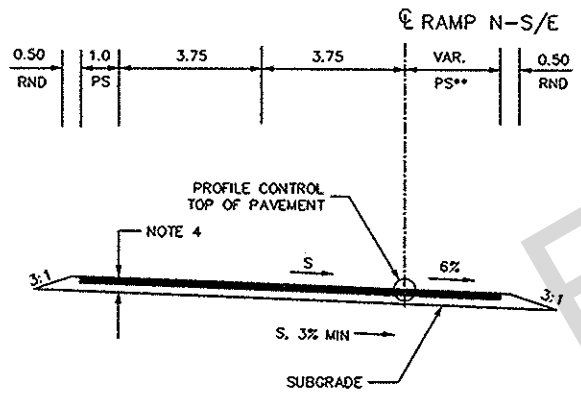
RAMP N-S/E

STA 49+108.373 – STA 49+182.812



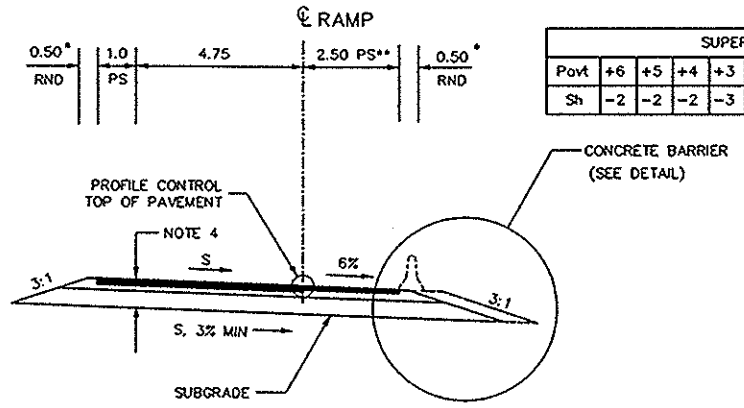
RAMP N-S/E

STA 48+927.20 – STA 49+108.373



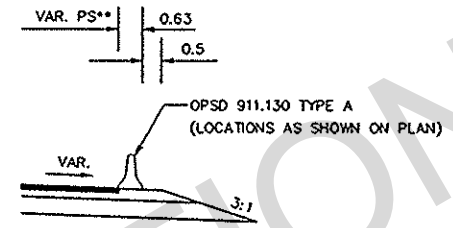
RAMP N-S/E

STA 48+723.106 – STA 49+927.20



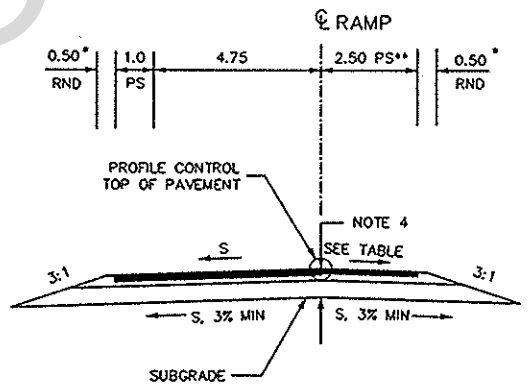
SUPERELEVATION TABLE													
Povt	+6	+5	+4	+3	+2	+1	0	-1	-2	-3	-4	-5	-6
Sh	-2	-2	-2	-3	-3	-3	-4	-5	-6	-6	-6	-6	-6

TYPICAL INTERCHANGE RAMP



TYPICAL INTERCHANGE RAMP

(WITH CONCRETE BARRIER)



TYPICAL INTERCHANGE RAMP

NOTES:

1) THESE TYPICAL SECTIONS ARE TO BE USED IN CONJUNCTION WITH OPSD 200 SERIES
2) RED HILL VALLEY PARKWAY
   FILL SLOPE IS TO BE 4:1 WHERE THE HEIGHT OF FILL IS 2.0m.OR LESS , AND 2:1 FOR FILLS OVER 2.0m
   INTERCHANGE RAMPS
   FILL SLOPE IS TO BE 3:1 WHERE THE HEIGHT OF FILL IS 1.0m OR LESS , AND 2:1 FOR FILLS OVER 1.0m
3) BACKSLOPES: DEPTH OF CUT 1.0m OR LESS – 3:1, OVER 1.0m – 2:1. DEPTH OF CUT IS THE DIFFERENCE IN ELEVATION BETWEEN ORIGINAL GROUND AT THE TOP OF CUT AND BOTTOM OF DITCH.
4) PAVEMENT STRUCTURE:

   INTERCHANGE RAMPS INCL. 1.0 PAVED SHLD.

   40mm SP 12.5 FC2 SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   70mm GRANULAR A
   450mm GRANULAR B TYPE II

   ROCK CUT

   40mm SP 12.5 FC2 SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX
   145mm GRANULAR A

   PAVED SHOULDERS
   40mm SP 12.5 FC2 SURFACE COURSE
   50m SP 19.0 UPPER BINDER COURSE

- WHERE STEEL BEAM GUIDE RAIL IS INDICATED THE MIN. ROUNDING SHALL BE 1.0m WITH BREAK POINT AT MIDPOINT OF ROUNDING

** FULL DEPTH PAVED SHLDS. THRU CURVES & SPIRALS (LOW SIDE ONLY)
   40mm SP 12.5 FC2 SURFACE COURSE
   50mm SP 19.0 UPPER BINDER COURSE
   70mm SP 25.0 MIDDLE BINDER COURSE
   80mm RICH BOTTOM MIX

FULL DEPTH PAVED SHOULDER LOCATIONS	
RAMP	LOCATION
RAMP E-W	STA 2+000.000 – STA 2+242.372
RAMP N-S	EXIST. STRUCTURE – STA 6+673.086
RAMP W-S	STA 5+085.928 – STA 5+417.853
RAMP S-W	STA 9+226.987 – STA 9+501.944
RAMP E-N	STA 4+131.849 – STA 4+273.713
RAMP E-N	STA 4+372.235 – STA 4+619.852
RAMP S-N	STA 7+621.183 – STA 7+868.802

FOR INFORMATION ONLY

No.	REVISIONS	INITIAL	DATE

DRAWN BY: Stantec DATE:

REFERENCE MATERIAL:
Road Plans :
Sewer Plans :
Water Plans :

Regional Surveyor :

Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

R.E.WILSON PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

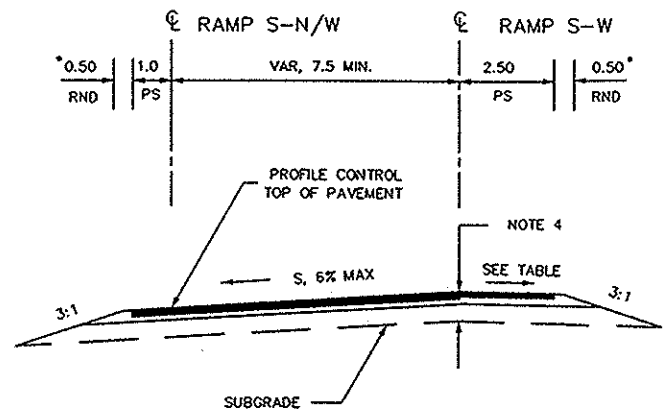
CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

PAVEMENT SECTIONS

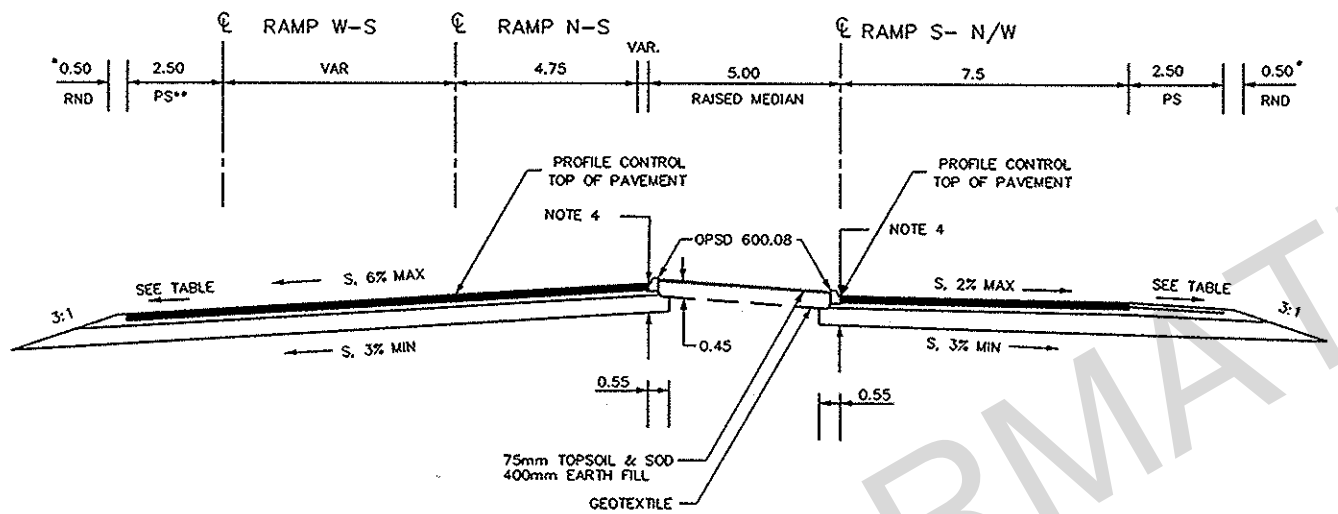
DIMENSIONS SHOWN ON THIS PLAN ARE IN MILLIMETRES UNLESS OTHERWISE NOTED	CONTRACT No. PW-06-243 (RHV) DRAWING No. 06-H-14 FILE No.	SHEET No. PAVT 9

SUPERELEVATION TABLE												
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Sh	-2	-2	-2	-3	-3	-3	-4	-5	-6	-6	-6	-6	-6



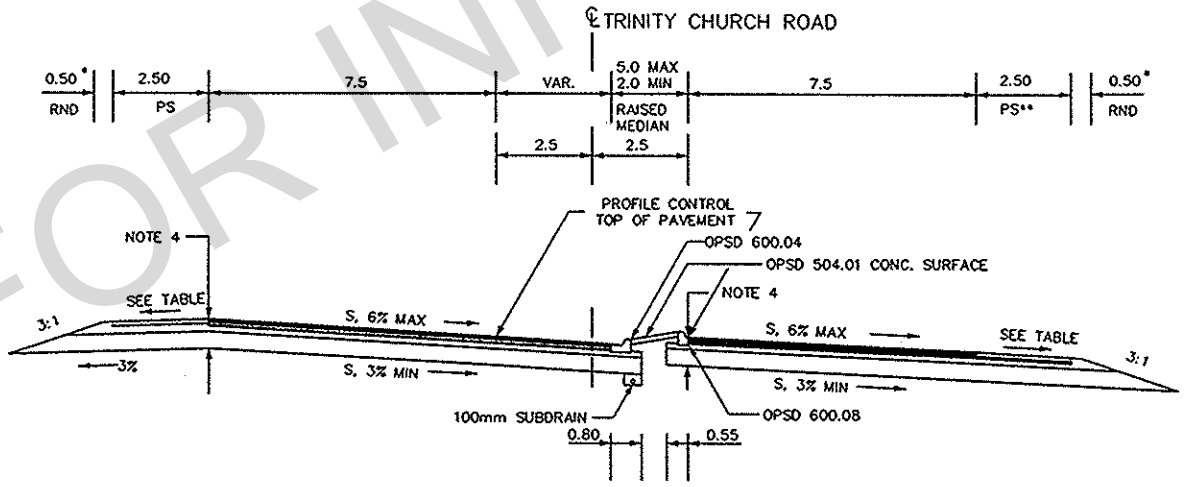
RAMP S-N/W

STA 7+256.016 TO EXIST. STRUCTURE



TRINITY CHURCH RAMPS

STA 7+177.287 TO STA 7+256.016



TRINITY CHURCH ROAD

STONE CHURCH ROAD TO STA 7+177.287

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   PAVED SHOULDERS
   40mm SP 12.5 FC2 SURFACE COURSE
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   80mm RICH BOTTOM MIX

* WHERE STEEL BEAM GUIDE RAIL IS INDICATED THE MIN. ROUNDING SHALL BE 1.0m WITH BREAK POINT AT MIDPOINT OF ROUNDING

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Geodetic Bench Mark Index No. 9-21
Elevation= 135.488

SCALES 0 1m 2m 4m

Stantec

REGISTERED PROFESSIONAL ENGINEER F. E. WILSON PROVINCE OF ONTARIO

CITY OF HAMILTON
Public Works Department

RED HILL VALLEY PROJECT
MUD STREET INTERCHANGE

PAVEMENT SECTIONS