PUBLIC CONSULTATION CENTRE
Thursday January 27, 2011 from 3:00 – 7:00 p.m.

MITCHELL'S BRIDGE

Welcome

Welcome to the Public Consultation Centre for the

Mitchell's Bridge

Class Environmental Assessment

The purpose of this Public Consultation Centre is the following:

- To present a brief history and review of the project to date,
- To present the preferred alternative, and
- To request comment from interested and directly affected Public.

Project Team Representatives are available to discuss the project with you.

Please ask questions and make your opinions known to us.

We encourage you to complete a comment sheet before leaving.

PLEASE SIGN IN

PUBLIC CONSULTATION CENTRE
Thursday January 27, 2011 from 3:00 – 7:00 p.m.

MITCHELL'S BRIDGE

Study Location

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Thursday January 27, 2011 from 3:00 – 7:00 p.m.

MITCHELL'S BRIDGE

Class Environmental Assessment Process

The **Class Environmental Assessment for Municipal Roads Projects**, 2000 as amended in 2007 (Class EA) is an approved process by the Ministry of the Environment for planning and designing municipal road and water projects. The Class EA describes the process that proponents must follow in order to meet the requirements of the Environmental Assessment Act. The process is shown on the next panel.

Four types of projects to which the Class EA applies are:

- **Schedule 'A'**: Projects which are pre approved where the proponent may proceed without following the procedures set out within Municipal Class EA process.
- **Schedule 'A+':** Projects, which are also pre approved but where the public is to be advised prior to project implementation.
- **Schedule 'B':** Projects, which are approved but subject to screening and where Phases 1 and 2 of the planning process have been completed.
- **Schedule 'C':** Projects, which must proceed under the full planning and documentation procedures specified in the Class EA document.

The Mitchell's Bridge Class Environmental Assessment is being planned as a **Schedule 'B'** project**.**

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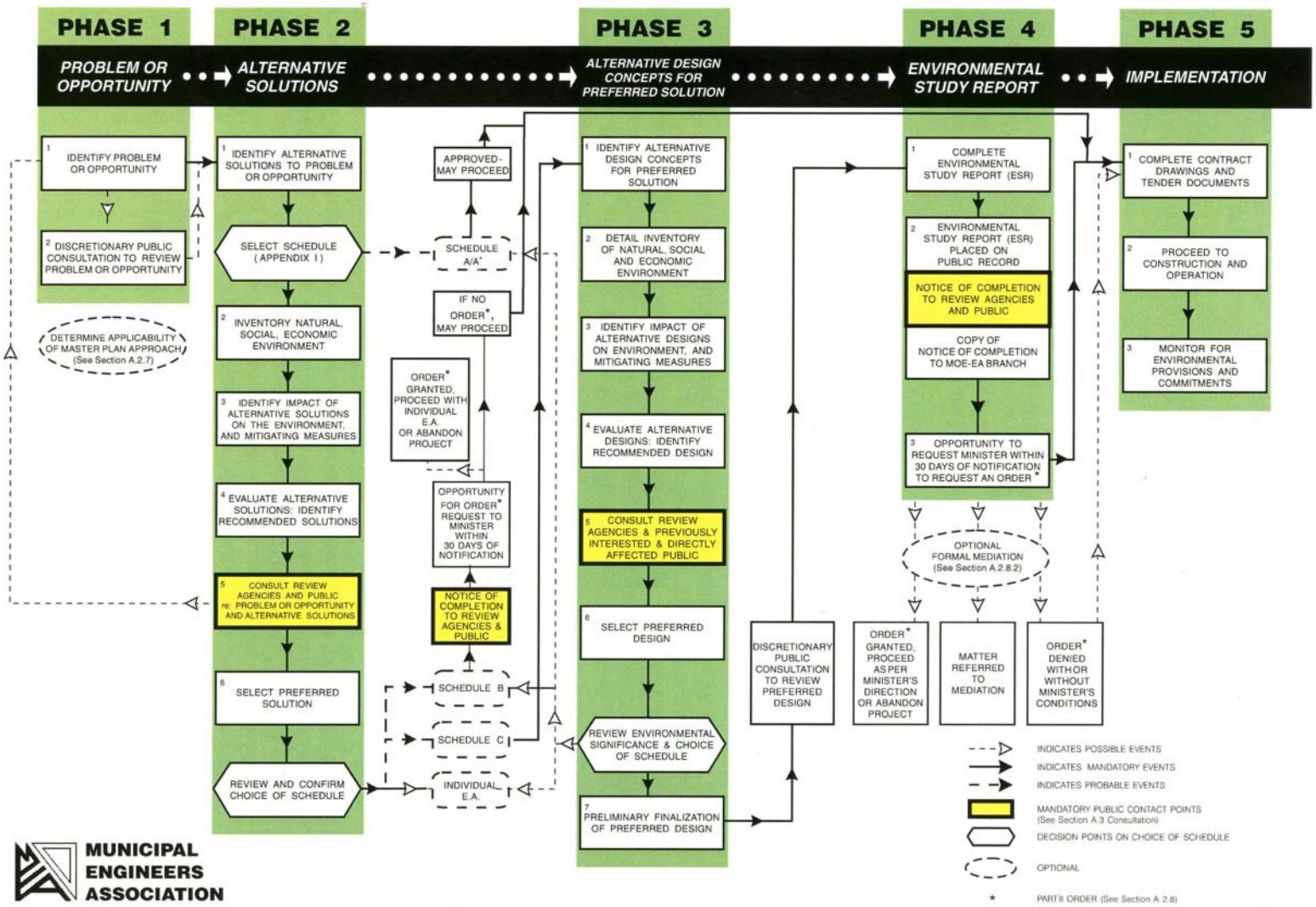
MITCHELL'S BRIDGE

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



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MITCHELL'S BRIDGE

Class Environmental Assessment Process to Date

Phase 1: Problem or Opportunity

Mitchell's Bridge can be described as being in a poor condition and approaching the end of its service life. Constructed in 1926, the bridge can be described as a three-span bridge, consisting of two 6.1m concrete end spans and a single 30.5m structural steel through truss centre span, with a concrete deck and concrete wearing surface. The bridge's out to out width is 5.4 m with the width of the single lane travelled way being 4.6 m. The bridge was recently triple posted at 8, 17 and 21 tonne but due to damage associated with a recent vehicular collision to the bridge the posting has been reduced to a single 8 tonne limit.

The *"problem"* at the Mitchell's Bridge is that:

- The general deterioration of some of the structural components may lead to the bridge becoming unsafe for use by the travelling public if repairs are not carried out,
- The width of the travelled way over the deck is sub-standard, and

Some of the main findings associated with the bridges deteriorated state include:

- Non standard barrier and guiderail connections and protection.
- Deterioration of pier top.
- Concrete handrails on wing walls and approach spans have areas of spalling with signs of collision damage.
- Concrete posts are spalled and bases offer little support.
- Concrete curbing spalling and scaling.
- Significant damage to portals of the truss span with deflections to top chord elements.
- Lower elements of bridge exhibit rusting.
- Previous reports recommend bridge replacement.

Photos of the bridge and the various components of the bridge can be seen in the Preliminary Environmental Screening Report available at this PIC.

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MITCHELL'S BRIDGE

Class Environmental Assessment Process to Date

Phase 2: Alternative Solutions

Three Alternative solutions were evaluated and the included the following:

- The "Do Nothing" alternative,
- Close Mitchell's Bridge, and
- Repair or Replace Mitchell's Bridge.

It should be noted that for the *"Do Nothing"* alternative, deterioration will continue to the point where the bridge will not be considered safe and the road will have to be closed to traffic. This leads to the second alternative of *"Close Mitchell's Bridge*". However, the City of Kawartha Lakes considers it unacceptable to close the road at the bridge site since this would adversely affect local residents and traffic patterns. It is currently being used by the school bus services. This leaves the alternative of *"Repair or Replace Mitchell's Bridge"*.

Two Structure Rehabilitation alternatives being considered at this time are:

- Alternative 1 - Prefabricated Steel Bridge - Replace only the superstructure and retain the existing abutments and piers with some improvements, and
- Alternative 2 - Concrete Deck on Girders Bridge - Replace the superstructure and abutments and retain piers with some improvements.

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MITCHELL'S BRIDGE

Class Environmental Assessment Process to Date

Screening Criteria and scoring for the two alternatives Prefabricated Steel Bridge and Concrete Deck on Girder Bridge are shown in the table below. Additionally, a Preliminary Environmental Screen Report has been prepared and is available at this PIC for public review. It provides details of the consultation to date and evaluation data.

The two alternatives are compared with respect to various criteria. Each alternative is assigned a score between 1 and 5 for each criterion. The more desirable the higher the score.

Criterion	Alternative 1 – Prefabricated Steel Bridge		Alternative 2 – Concrete Deck on Girder Bridge	
Bridge Cross-Section Geometry	The bridge will remain a single lane bridge. No opportunity for road widening without replacing the bridge. Does not accommodate for current nor future traffic volumes.	1	Can carry the design road cross-section in accordance with current design standards. Does accommodate current and future traffic volumes.	5
Safety	a) No improvement to traffic safety; two travel directions are not simultaneously accommodated. b) No improvements to safety; driver expectation atypical	1	a) Improvements to safety; vehicles can cross simultaneously with appropriate distance between vehicles and clearances. b) Improvements to safety; driver expectation accommodated.	5
Hydraulic Capacity	No change in hydraulic capacity, existing soffit elevation will be maintained.	5	Slight increase in hydraulic capacity due to greater spans. Existing soffit elevation will be maintained.	5
Impacts to Public During Construction	It is expected that the bridge will be closed during construction activities because of the limited traffic volumes and the many alternative detour routes available.	1	It is expected that the bridge will be closed during construction activities because of the limited traffic volumes and the many alternative detour routes available.	1
Natural Environment Impact	In water work required; 18 sq.m (mitigation can be provided)	4	In water work required; 72 sq.m (mitigation can be provided)	2
Cost	Estimated construction cost is $2.8M	3	Estimated construction cost is $4.5M	1
Un-weighted Total		15		19

From the above table it appears the Preferred Alternative is Alternative 2; replace the existing bridge with a new Two Lane Concrete Deck on Girder Bridge.

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MITCHELL'S BRIDGE

Next Steps

After this Public Consultation Centre, the following will be carried out:

- Receive public comments by January 27, 2011,
- Review preliminary assessment in light of comments received from the public and agencies and confirm or modify,
- Develop preferred alternative in more detail,
- Complete Environmental Study Report (ESR), and
- Construction tentatively planned for 2012.

THANK YOU FOR ATTENDING

Please feel free to ask questions and fill out a comment sheet before you leave.

Additional questions may be addressed to:

Mr. Andrew Superville, P.Eng.
Project Engineer
McCormick Rankin Corporation
920 Princess Street, Suite 101
Kingston, ON K7L 1H1
Tel: (613) 546-2227
Fax: (613) 546-3555

Mr. Darrell Darling, CET
Senior Engineering Technician
City of Kawartha Lakes
12 Peel Street, P.O. Box 9000
Lindsay, ON K9V 5R8
Tel: (888) 822-2225 ext. 1153
Fax: (705) 324-2982

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

BENCH MARK EL. 100.00
(NON-GEODETIC)
NAIL AT SHOULDER OF ROAD, APPROX 15m NORTH OF THE N/E CORNER OF BRIDGE

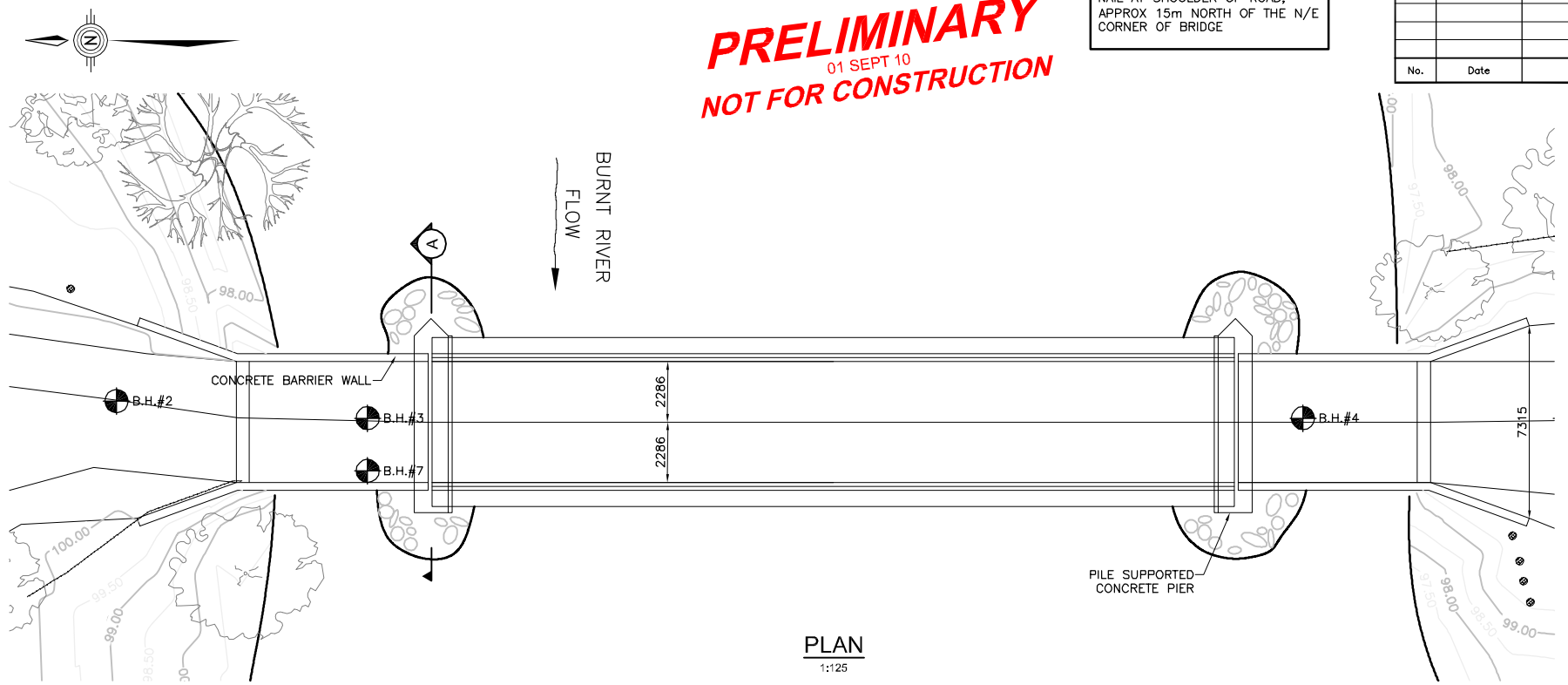
PRELIMINARY
01 SEPT 10
NOT FOR CONSTRUCTION

No.	Date	Revision

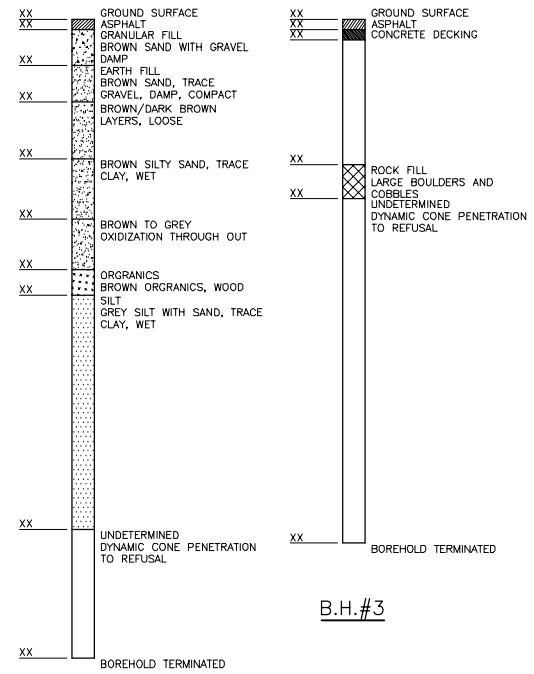
McCORMICK RANKIN CORPORATION
A member of MMM GROUP

Client: CITY OF KAWARTHA LAKES
Project: MITCHELLS BRIDGE
Title: GENERAL ARRANGEMENT EXISTING

Design	A.S.	Scale		Proj. No.	7475	Dwg No.
Drawn	S.F.R	Check		Date	MARCH 2009	1



PLAN
1:125



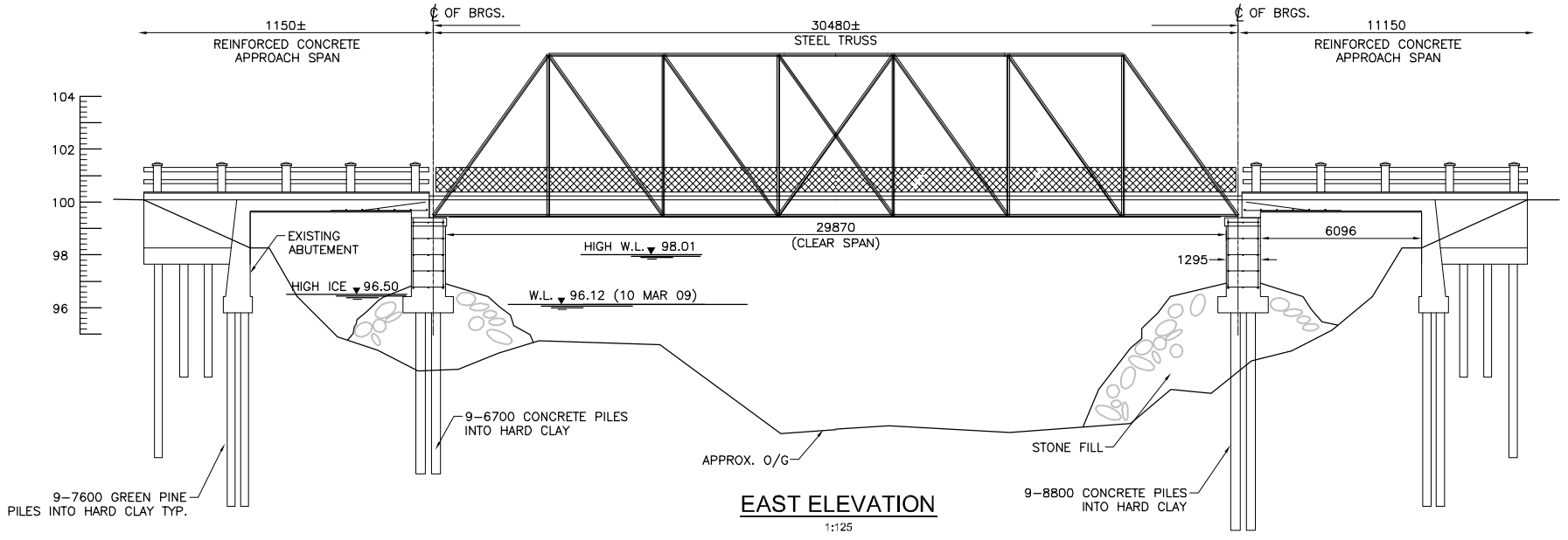
B.H.#2

B.H.#3

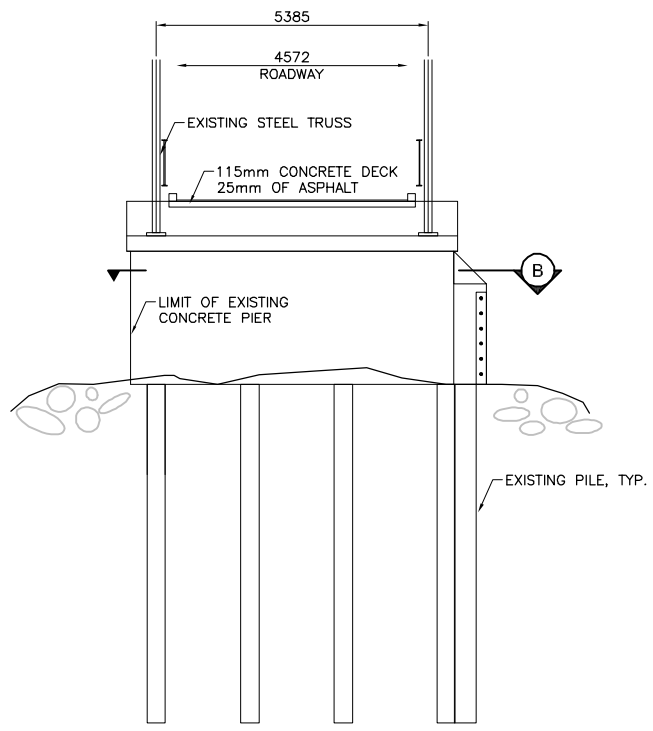
NOTE:
ELEVATIONS ADJUSTED TO AGREE WITH SURVEY ELEVATIONS

BOREHOLE LOGS
GEO-LOGIC GEOTECHNICAL ENGINEERS INC.
PROJECT NO. G022 289 A1, DATED MAY, 2009

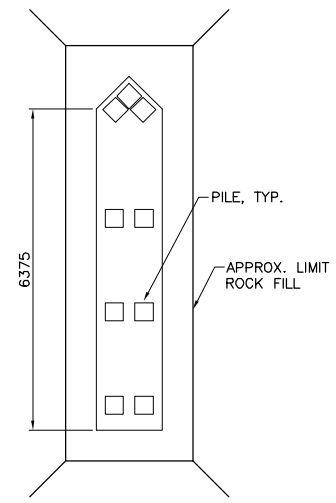
KEY PLAN



EAST ELEVATION
1:125



A SECTION
1:75



B SECTION
1:75

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100mm ON ORIGINAL DRAWING

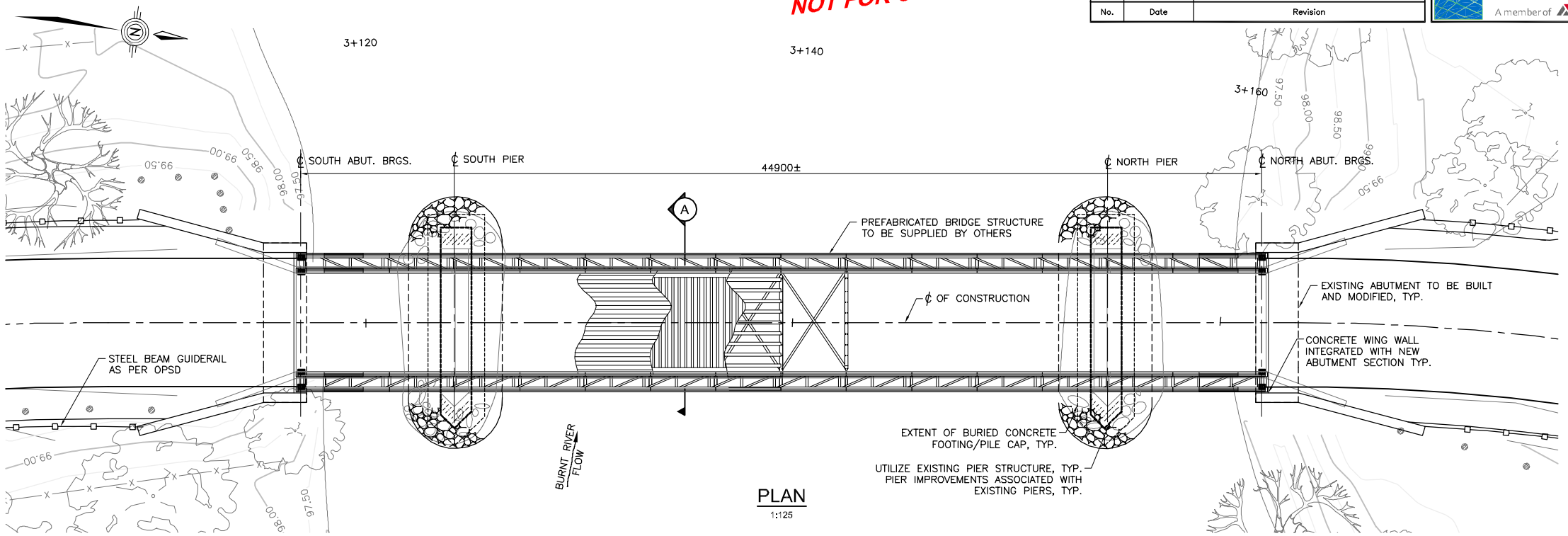
PRELIMINARY
01 SEPT 10
NOT FOR CONSTRUCTION

No.	Date	Revision

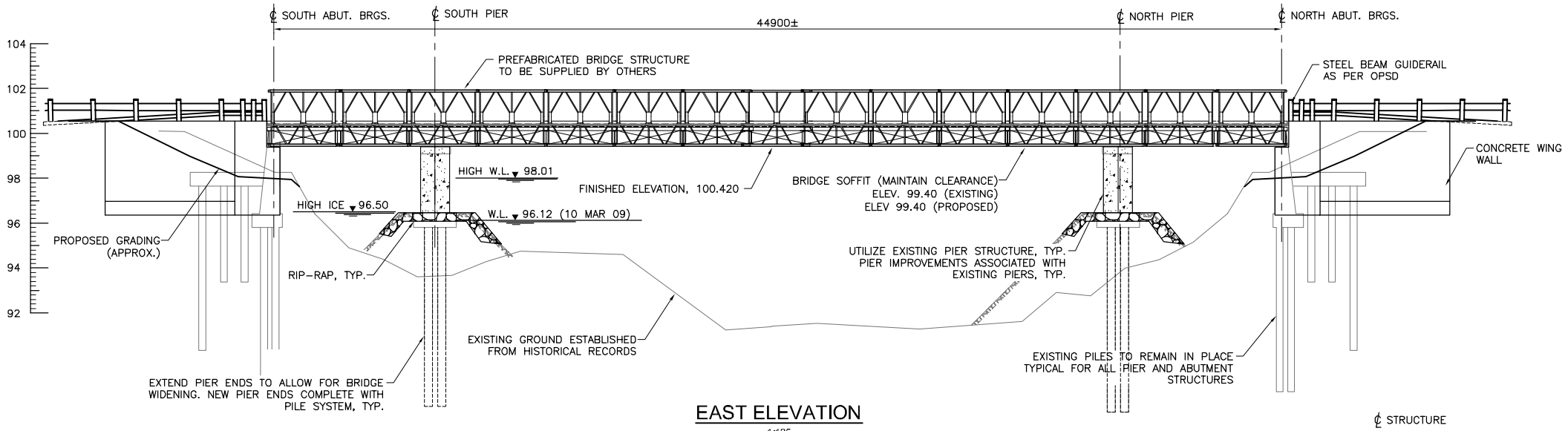
McCORMICK RANKIN CORPORATION
A member of MMM GROUP

Client: CITY OF KAWARTHA LAKES
Project: MITCHELLS BRIDGE
Title: PREFABRICATED STEEL BRIDGE GENERAL ARRANGEMENT ALTERNATIVE 1

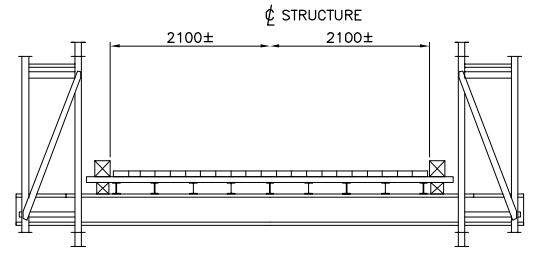
Design	A.S.	Scale		Proj. No. 7475	Dwg No.
Drawn	S.F.R	Check		Date MARCH 2009	



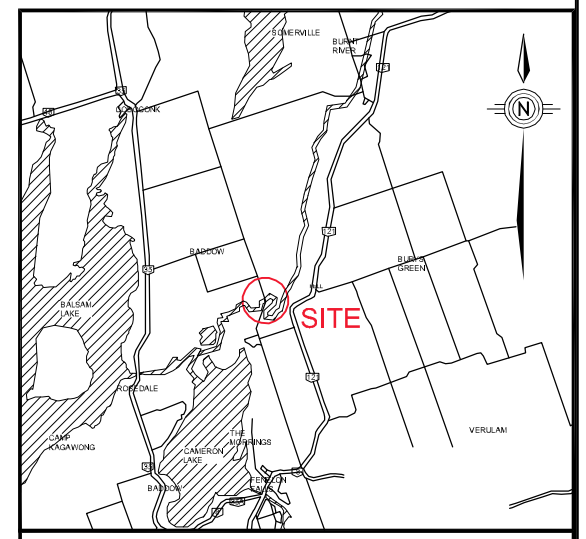
PLAN
1:125



EAST ELEVATION
1:125



A SECTION: PROPOSED
N.T.S.



KEY PLAN
LAT: 44°35'53.31"N / LONG: 78°44'16.42"W

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100mm ON ORIGINAL DRAWING

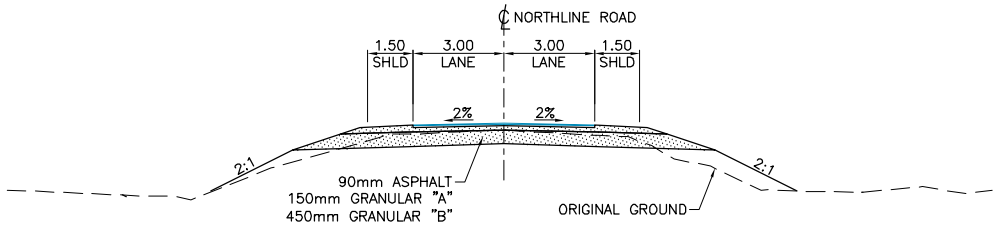
PRELIMINARY
01 SEPT 10
NOT FOR CONSTRUCTION

No.	Date	Revision

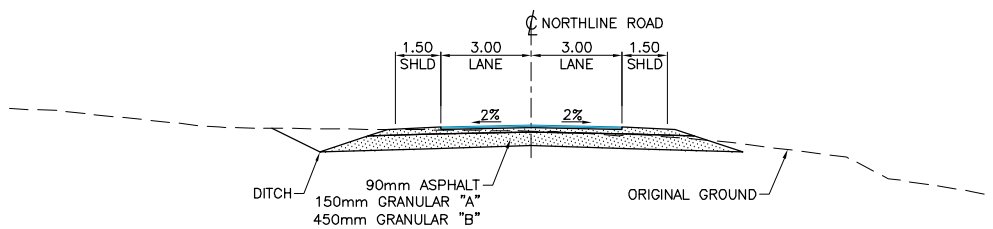
McCORMICK RANKIN CORPORATION
A member of MMM GROUP

Client: **CITY OF KAWARTHA LAKES**
Project: **MITCHELLS BRIDGE**
Title: **ROAD DESIGN ALTERNATIVE 1**

Design	A.S.	Scale	Proj. No. 7475	Dwg No.
Drawn	S.F.R	Check	Date	



TYPICAL SECTION: SOUTH APPROACH
1:125



TYPICAL SECTION: NORTH APPROACH
1:125

LEGEND:
- DITCH, "V" TYPE
- PROPERTY LINE
- CUT–LINE (SLOPE IN PLAN)
- FILL–LINE (SLOPE IN PLAN)

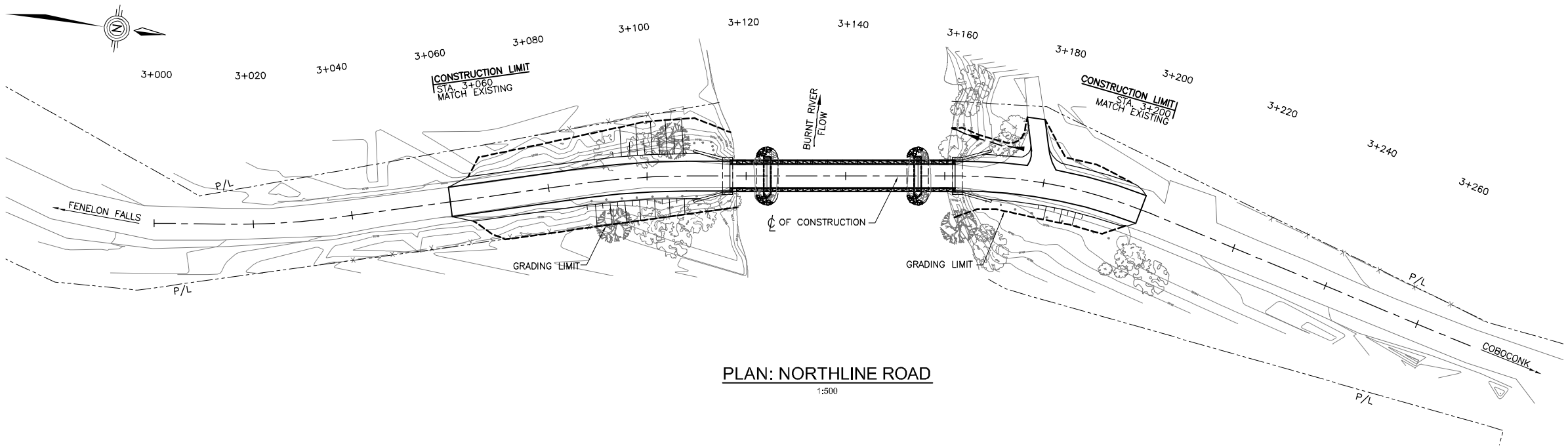
ROAD GEOMETRY DESIGN SUMMARY:
NORTHLINE ROAD:

THE SINGLE LANE CONFIGURATION REFLECTED HERE DOES NOT CONFORM TO STANDARD GEOMETRIC GUIDELINES (MTO's GEOMETRIC DESIGN STANDARDS FOR ONTARIO ROADS AND THE TRANSPORTATION ASSOCIATION OF CANADA, TAC MANUAL). VEHICLES APPROACHING THE BRIDGE MUST YIELD TO APPROACHING VEHICLES ALREADY ON THE BRIDGE STRUCTURE.

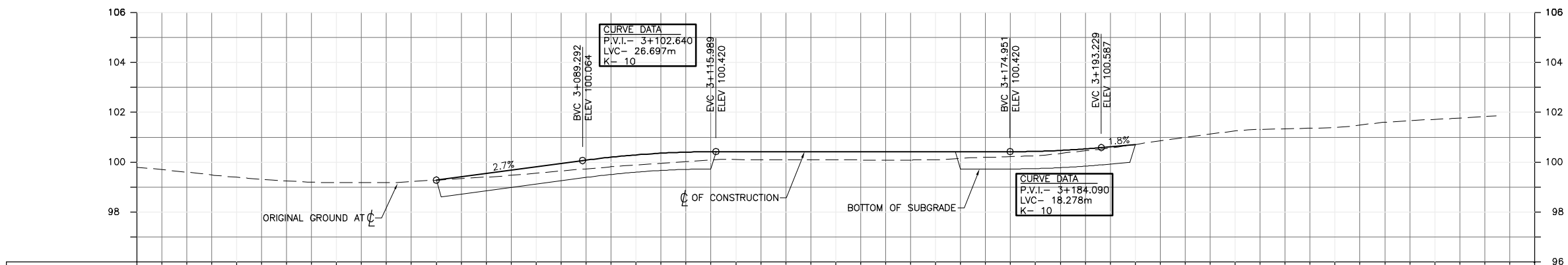
HORIZONTAL ALIGNMENT:
THE HORIZONTAL ALIGNMENT WAS SET TO BEST MATCH THE EXISTING ROAD ALIGNMENT.

VERTICAL ALIGNMENT:
THE CONFIGURATION OF THE NEW BRIDGE RESULTS IN THE ROAD APPROACHES BEING RAISED TO MEET THE TOP OF THE NEW DECK

CROSS SECTION ELEMENTS:
THE CROSS SECTION WAS SET TO BEST MATCH THE EXISTING ROAD STRUCTURE. 3.0m LANE WIDTHS AND 1.5m SHOULDERS WERE ASSUMED.



PLAN: NORTHLINE ROAD
1:500



STATION	3+000	3+020	3+040	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200	3+220	3+240	3+260
EXISTING GRADE AT ℄	99.797	99.392	99.181	99.282	99.559	99.890	99.580	100.115	100.126	100.211	100.656	101.275	101.400	101.723
PROPOSED GRADE AT ℄				MATCH	99.816	100.292	100.420	100.420	100.420	100.433	MATCH			

ELEVATION
HORIZ. = 1:500
VERT. = 1:100

DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

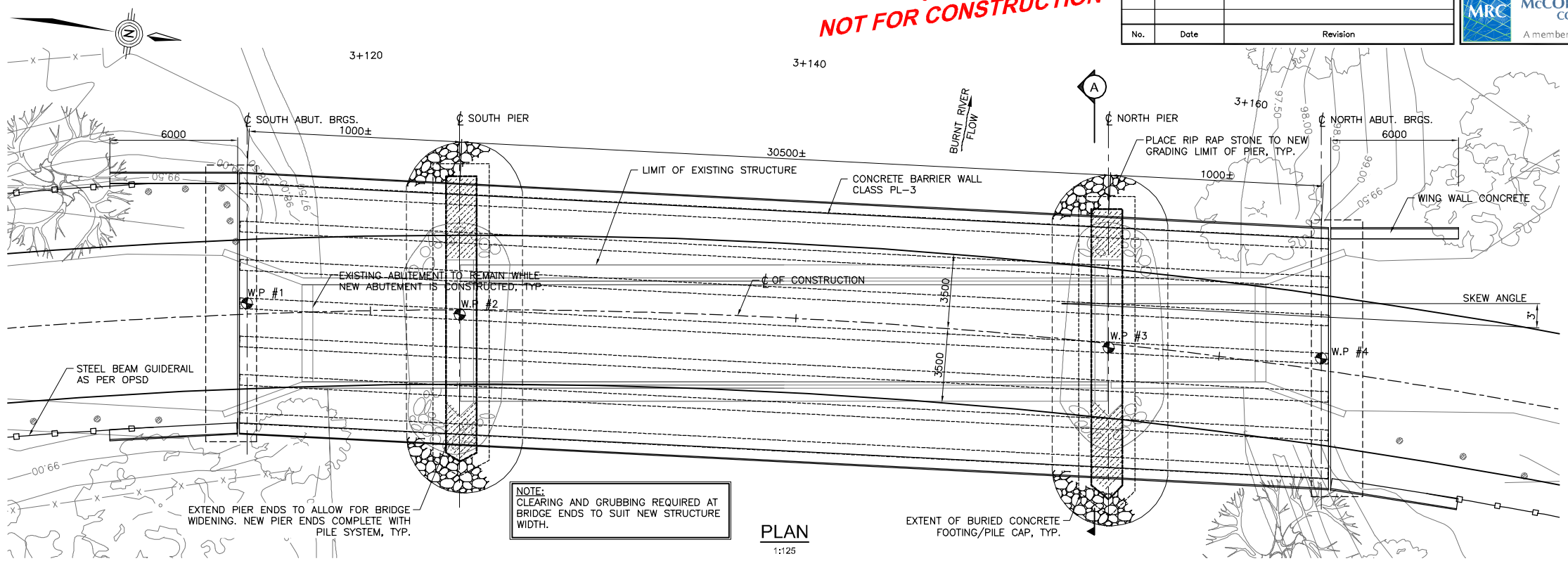
PRELIMINARY
01 SEPT 10
NOT FOR CONSTRUCTION

No.	Date	Revision

McCORMICK RANKIN CORPORATION
A member of MMM GROUP

Client	CITY OF KAWARTHA LAKES
Project	MITCHELLS BRIDGE
Title	CONCRETE DECK ON GIRDER GENERAL ARRANGEMENT ALTERNATIVE 2

Design	A.S.	Scale		Proj. No. 7475	Dwg No.
Drawn	S.F.R	Check		Date MARCH 2009	



W.P. #1
STA. 3+114.20
ELEV. 101.065

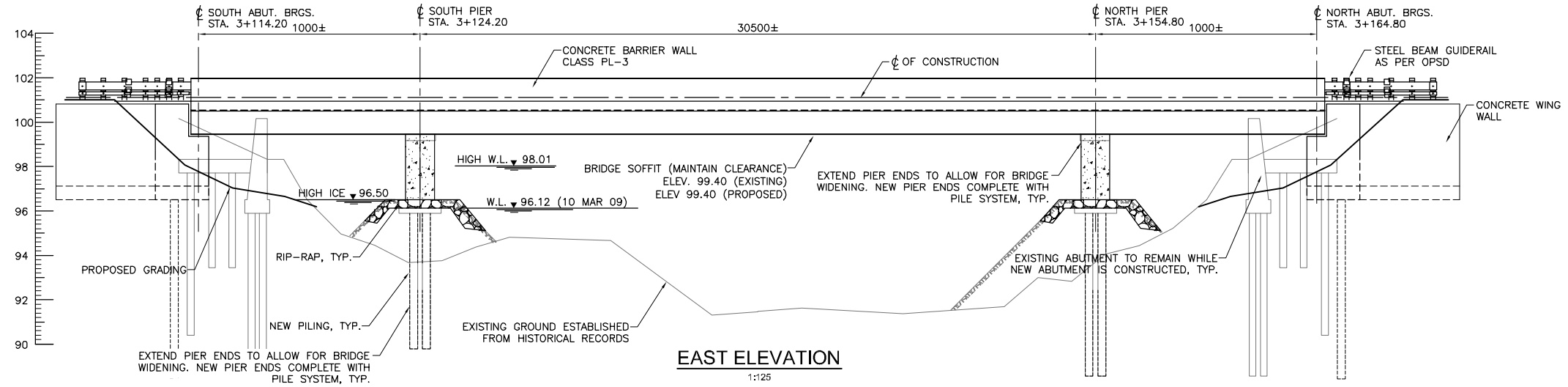
W.P. #2
STA. 3+124.20
ELEV. 101.065

W.P. #3
STA. 3+154.80
ELEV. 101.065

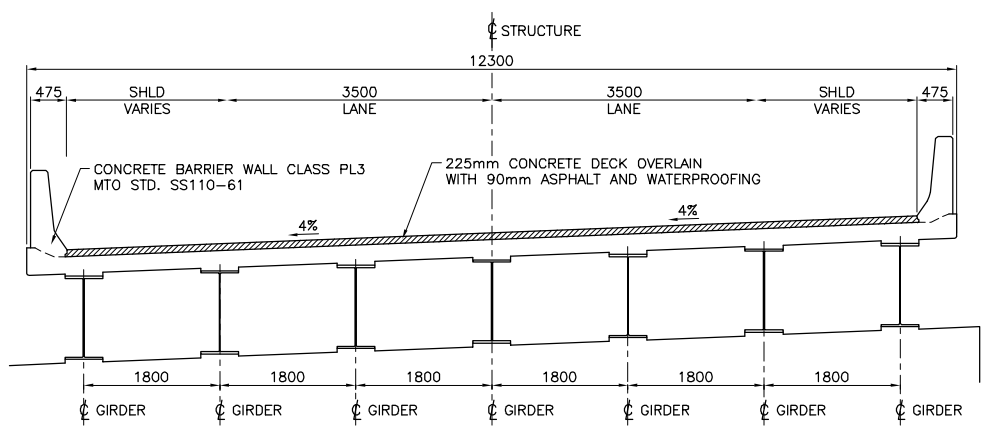
W.P. #4
STA. 3+164.80
ELEV. 101.065

NOTE:
CLEARING AND GRUBBING REQUIRED AT BRIDGE ENDS TO SUIT NEW STRUCTURE WIDTH.

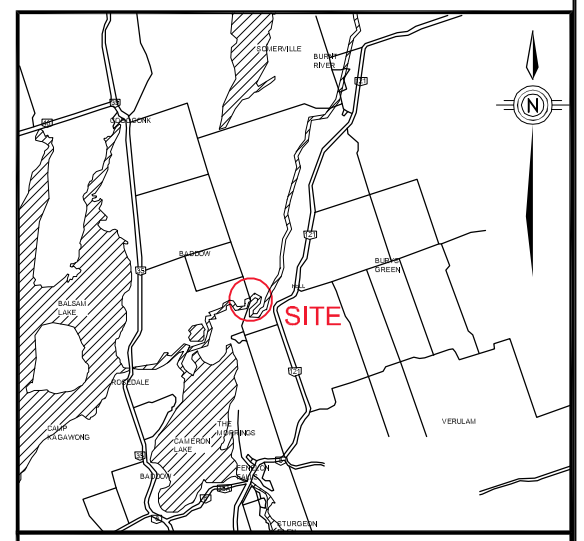
PLAN
1:125



EAST ELEVATION
1:125



A SECTION:PROPOSED
1:50



DRAWING NOT TO BE SCALED
100mm ON ORIGINAL DRAWING

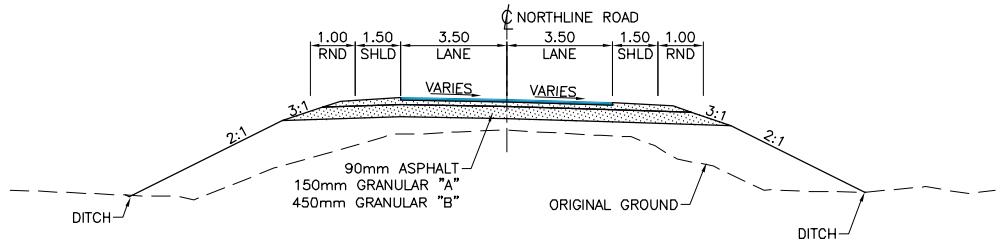
PRELIMINARY
01 SEPT 10
NOT FOR CONSTRUCTION

No.	Date	Revision

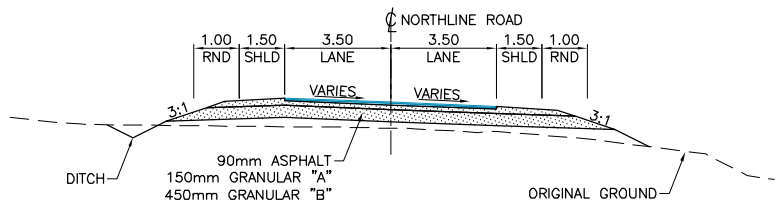
McCORMICK RANKIN CORPORATION
A member of MMM GROUP

Client: **CITY OF KAWARTHA LAKES**
Project: **MITCHELLS BRIDGE**
Title: **ROAD DESIGN ALTERNATIVE 2**

Design	A.S.	Scale	Proj. No. 7475	Dwg No.
Drawn	S.F.R	Check	Date	



TYPICAL SECTION: SOUTH APPROACH
1:125



TYPICAL SECTION: NORTH APPROACH
1:125

LEGEND:

- DITCH, "V" TYPE
- PROPERTY LINE
- CUT–LINE (SLOPE IN PLAN)
- FILL–LINE (SLOPE IN PLAN)
- CSP CULVERT

ROAD GEOMETRY DESIGN SUMMARY:

NORTHLINE ROAD:

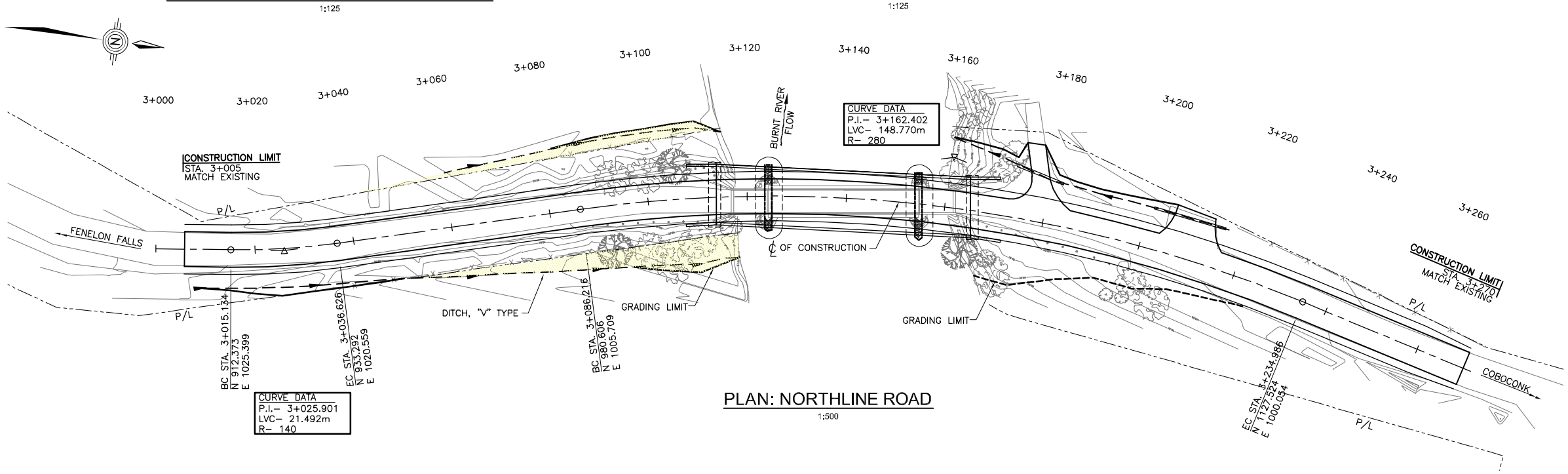
ROAD GEOMETRY DESIGNED TO SATISFY A 80km/h VEHICLE SPEED AND AN ASSUMED POSTED SPEED LIMIT OF 60km/h.

ROAD GEOMETRY DESIGNED IN ACCORDANCE WITH THE GEOMETRIC DESIGN STANDARDS FOR ONTARIO HIGHWAYS AND THE TRANSPORTATION ASSOCIATION OF CANADA (T.A.C. MANUAL).

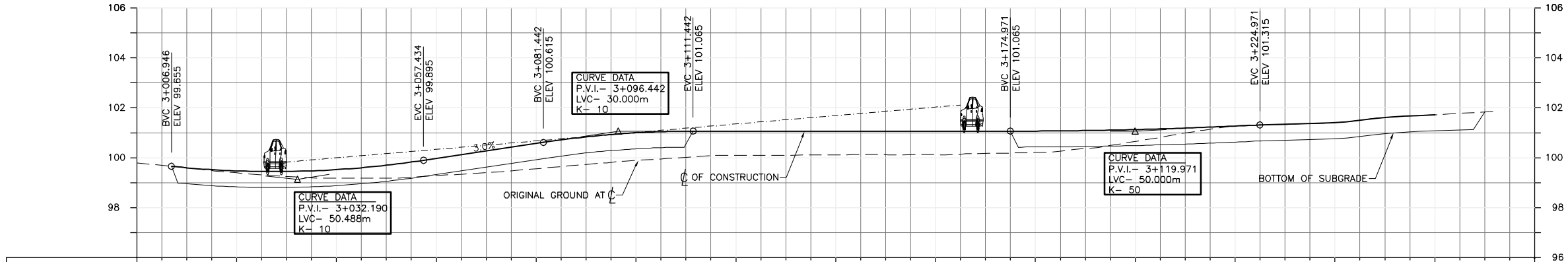
HORIZONTAL ALIGNMENT:
BASED ON A MAXIMUM 4% CROSS–FALL (e=0.04), THE DESIGN SATISFIES THE MINIMUM 280m RADIUS FOR THE 80km/h DESIGN.

VERTICAL ALIGNMENT:
THE DESIGN SATISFIES THE MINIMUM 135m STOPPING SIGHT DISTANCE FOR THE 80km/h DESIGN. THE STOPPING SIGHT DISTANCE ASSUMES A WET PAVEMENT CONDITION AND A MAXIMUM 4% CROSS–FALL THROUGH THE HORIZONTAL 280m RADIUS. THE PLAN OVER PROFILE DEMONSTRATES CONFORMANCE WITH STOPPING SIGHT REQUIREMENTS. THE PROFILE ILLUSTRATES THE SIGHT LINE BETWEEN A DRIVERS EYE AT STA.. 3+165 (1.05m IN HEIGHT) AND A VEHICLES BRAKE LIGHTS AT STA.. 3+030 (0.38m IN HEIGHT).

CROSS SECTION ELEMENTS:
ASSUMING AN AADT OF 1000 VEHICLES AND A DESIGN SPEED OF 80km/h, THE REQUIRED LANE WIDTH FOR A 2 LANE RURAL HIGHWAY IS 3.25m AND THE REQUIRED SHOULDER WIDTH IS 1.0m. IT IS ANTICIPATED THAT FUTURE DEVELOPMENTS WILL RAISE THE AADT IN EXCESS OF 1000 VEHICLES AND FOR THAT REASON A LANE WIDTH OF 3.50m AND A SHOULDER WIDTH OF 1.50m HAS BEEN CHOSEN FOR THE ROAD SECTION.



PLAN: NORTHLINE ROAD
1:500



STATION	3+000	3+020	3+040	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200	3+220	3+240	3+260
EXISTING GRADE AT ℄	99.797	99.392	99.181	99.282	99.559	99.890	99.580	100.115	100.126	100.211	100.656	101.275	101.400	101.723
PROPOSED GRADE AT ℄		99.472	99.524	99.972	100.572	101.000	101.065	101.065	101.065	101.068	101.128	101.268	SPLINE	SPLINE

ELEVATION
HORIZ. = 1:500
VERT. = 1:100