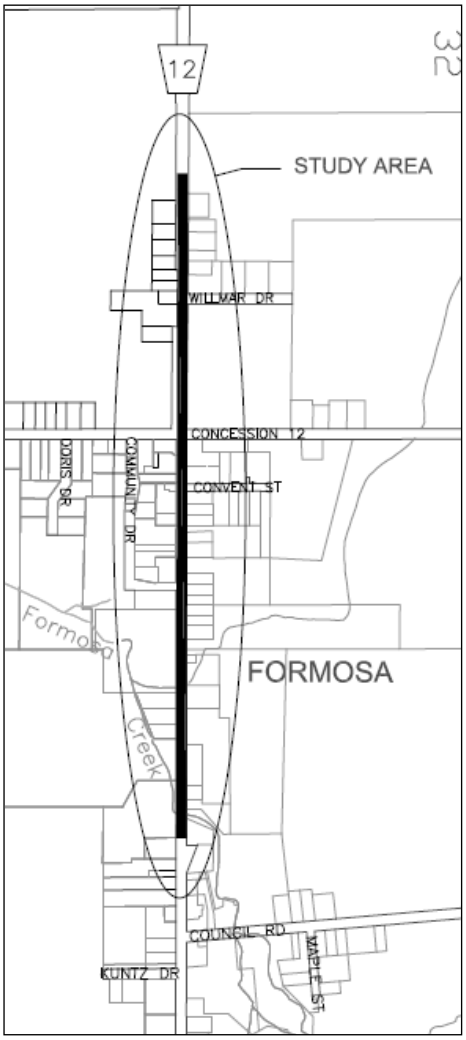
COUNTY OF BRUCE
PUBLIC INFORMATION SESSION
REHABILITATION OF FORMOSA NORTH HILL
BRUCE ROAD 12, MUNICIPALITY OF SOUTH BRUCE



The County of Bruce Highways Department is completing rehabilitation work on Bruce Road 12, north hill located in the hamlet of Formosa, in the Municipality of South Bruce. The work will include rehabilitation of the paved surface from the Formosa Creek Culvert northerly to Willmar Drive and includes a small urban reconstruction from Willmar Drive to the north limit of Formosa.

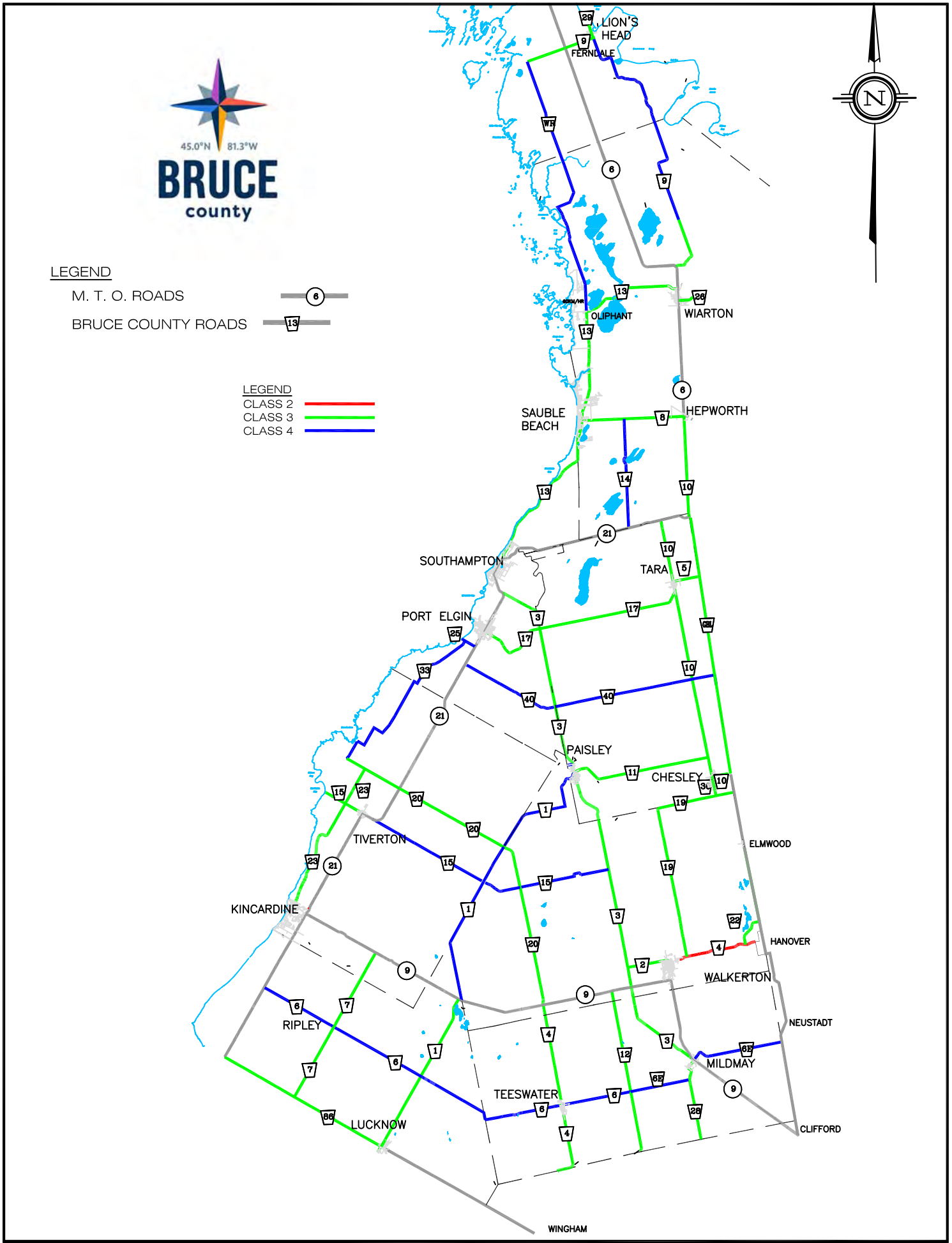
The project is following the approved planning process for a "Schedule A+" project under the Municipal Engineers Association Municipal Class Environmental Assessment, October 200, as amended in 2007 & 2011. These improvements are proposed to address road deficiencies and safety concerns.

A public information session to review the project will be held as follows:

Date: **Thursday December 14, 2017**
Time: **6:30pm – 7:30pm**
Location: **Formosa Hall, 13 Community Drive, Formosa**

For further information, contact the Bruce County Highways Department
Brian Knox, County Engineer
30 Park Street, P.O. Box 398 Walkerton, ON N0G 2V0
bknox@brucecounty.on.ca 1-877-681-1291 ext.263

Notice Issued: December 7, 2017



BRUCE COUNTY ROAD MAP	OCT. 2, 2017	REV 0
2017 ROAD CLASSIFICATIONS	SCALE 1:500 000	FIGURE 3

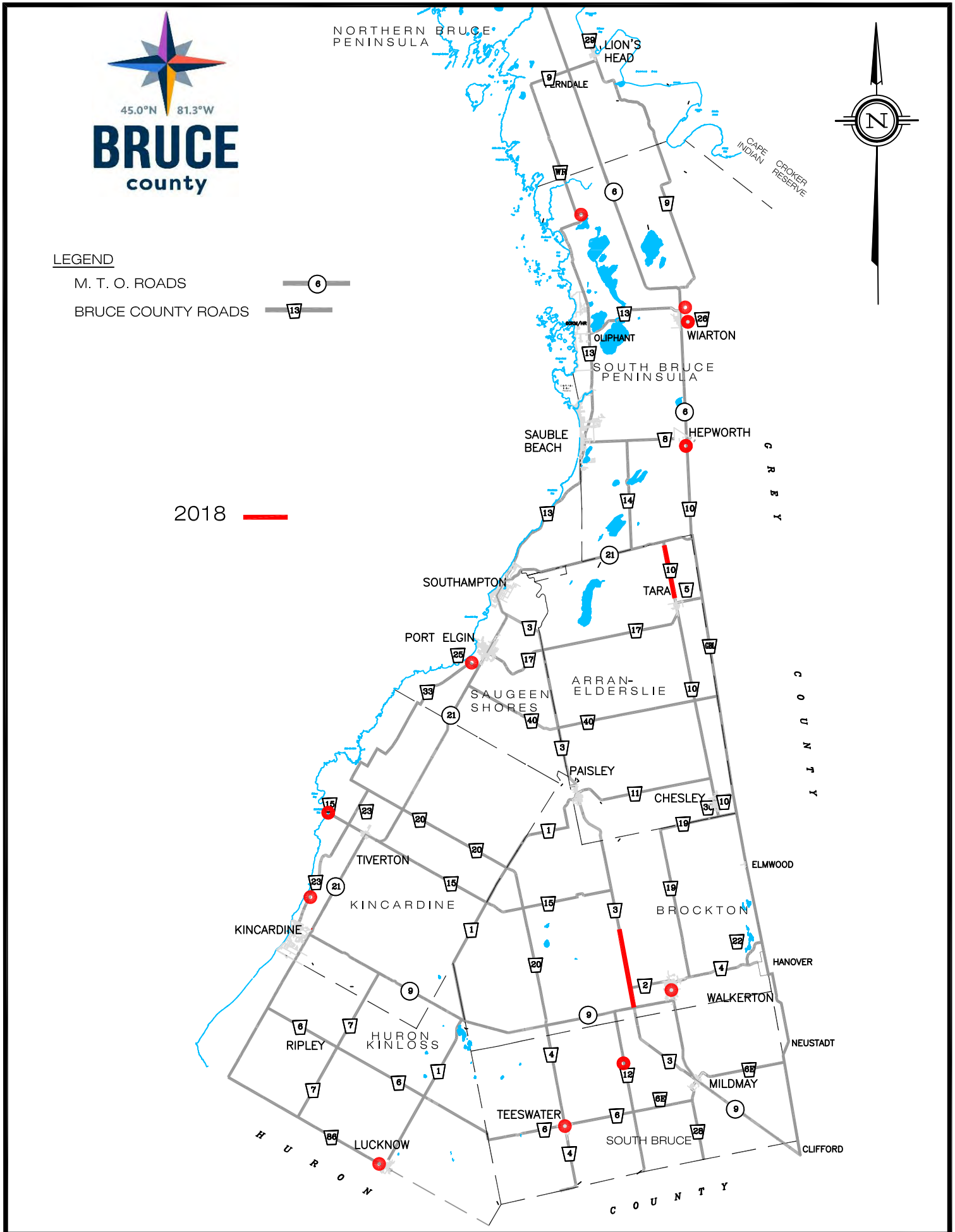
COUNTY OF BRUCE STRUCTURES (BRIDGES)

PROVINCIAL HIGHWAY
COUNTY ROADS

COUNTY BRIDGES ON COUNTY ROADS
COUNTY BRIDGES ON LOCAL ROADS
COUNTY BRIDGES NO LONGER IN USE
COUNTY BRIDGES ON GREY BOUNDARY ROAD
COUNTY BRIDGES ON HURON BOUNDARY ROAD

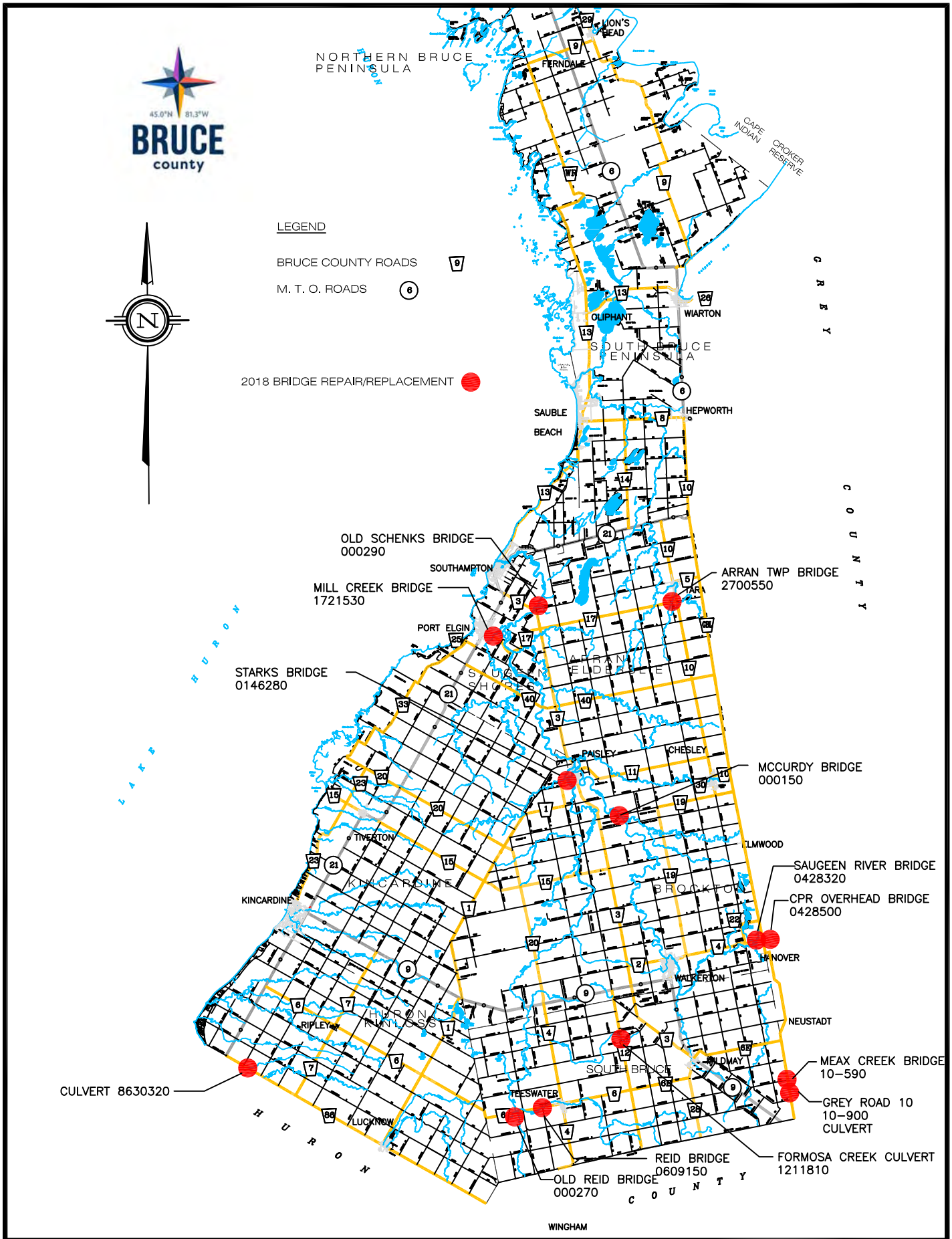
Tobermory
Dunks Bay
Baptist Harbour
Hopkins Bay
Dorcas Bay
Dyers Bay
Dyer Bay
Johnston Harbour
Miller Lake
Pine Tree Harbour
French Harbour
Stokes Bay
Whippoorwill Bay
Stokes Bay
Ferndale
LION'S HEAD
0925710 BARROW BAY BR.
Barrow Bay
Myles Bay
Hope Bay
Hope Bay
CAPE CROKER INDIAN RESERVE
Pike Bay
Pike Bay
Hay Is.
Mar
Red Bay
Red Bay
0902650 HEPBURN BR.
0902080 COLPOYS BAY BR.
COLPOY BAY
PIKE RIVER BR. 1331600
Oliphant
WIARTON
SAUBLE FALLS BR. 1322539
CHIEF'S POINT INDIAN RESERVE
0803520 SINCLAIR BR.
0803360 SAUBLE BR.
SAUBLE BEACH
HEPWORTH
OLD SHENKS BRIDGE 000290
GREY COUNTY
SCHENKS BR. 0350650
BURGOYNE BR. 0347870
CRAIG BR. 0343330
NORTH DUNBLANE BR. 0342830
2ND DUNBLANE BR. 0342250
1ST DUNBLANE BR. 0342150
SAUGEEN INDIAN RESERVE
1702850 TARA CREEK BR.
1038150 SWIMMING POOL BR.
1037350 STATION BR.
270050 INVERMAY BRIDGE
1036030 SAUBLE RIVER BR.
GBL15480 SAUBLE RIVER #093 BR.
GBL14820 SAUBLE RIVER #094 BR.
GBL14225 SAUBLE RIVER #095 BR.
GBL13815 SAUBLE RIVER #096 BR.
MILL CREEK BR. 1721530
CAMPBELL–THEDE BR. 1718700
MILL CREEK BR. 4021770
SOUTHAMPTON
PORT ELGIN
TARA
DEVILS ELBOW BR. 1128080
WILLSCROFT BR. 4012590
TURNERS BR. 4018950
GBL11990 LOT 36 CON 14 ELDERSLIE BR.
0334750 FORRESTER BR.
0333730 WILLOW CREEK BR.
0333300 TEESWATER BR.
0146850 CNR OVERHEAD TRESTLE
HAYS BR. 000220
WATSON BR. 000200
GREGG BR. 000190
DUDGEON BR. 000180
PAISLEY
0146280 STARKS BR.
GBL004900 LOT 35 CON 7 ELDERSLIE
1023350 SWEIGER BR.
SUEZ BR. 3301940
WRIGHTSON BR. 2021600
CONCESSION 6 BR. 2005700
CLANCY BR. 2004540
HEIDMILLER BR. 2001300
TIVERTON
CHESLEY
GBL000200 SCONE BDY BR.
1016540 JOHN BLACK BR.
3001700 CHESLEY MAIN STREET BR.
1109250 BRUNT BR.
1114355 PAISLEY–GEORGE GRANT BR.
1912820 DEER CREEK BR.
000170 BIG IRWIN BR.
000160 LITTLE IRWIN BR.
000150 McCURDY BR.
000140 12TH BRANT BR.
000130 NAGGS BR.
1503600 STEPHENSON BR.
ROBINSON BR. 2308570
BLACKWELL BR. 2306750
KINCARDINE
PENETANGORE BR. 0715900
Cargill
Dunkeld
POLLOCK BR. 0710025
Pine River
Chepstow
HANOVER
WALKERTON
1010450 SCHILLING–DEER BRIDGE
1000020 HANOVER PARK BRIDGE
10–185 GREY BRIDGE
10–189 GREY BRIDGE
0428500 CPR OVERPASS
0428320 SAUGEEN RIVER BR.
0419550 DURHAM STREET BR.
Point Clark
RIPLEY
Amberley
0413240 FORMOSA CREEK BR.
000300 NORMANBY/CARRICKBDRY(Neustadt Br)
0635600 S/R 20
EIGHTEEN MILE BR. 8626210
McLEOD BR. 0635420
Formosa
6E00100 MEAX CREEK BR.
6E01400 CARRICK CREEK BR.
MILDMAY
10–258 GREY BRIDGE
10–901 GREY CULVERT
10–590 GREY BRIDGE
10–900 GREY CULVERT
10–591 GREY BRIDGE
LUCKNOW WEST 8612150
LOT 52 CON 1 8610480
LOT 50 CON 1 8610160
LOT 47 CON 1 8609530
LOT 37/38 CON 1 8607530
LUCKNOW
TEESWATER
HURON COUNTY
WELLINGTON COUNTY
DICKIES CREEK CULVERT 8604600
0604400 McKINNON BR.
0605280 FISCHER BR.
0606960 SWIMMING POOL BR.
0609150 REID BR.
000270 S/R 20
0611070 YOKISSIPPI

LAKE HURON
GEORGIAN BAY



COUNTY OF BRUCE	Nov. 2018	REV 0
2018 PAVED ROAD CAPITAL	SCALE 1:500 000	FIGURE 3

P:\Land Projects 2004\County Road Network\dwg\2017 Paved and TRAFFIC CAPITAL Maps.dwg 5/04/2017 4:29:28 PM EDT



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BRUCE COUNTY HIGHWAYS	NOV. 15, 2018	REV 0
2018 - BRIDGE / CULVERT PROGRAM	SCALE 1:500 000	FIGURE 1

BRUCE ROAD 12
Willmar Dr
Concession 12
Sideroad 10
Concession 12
Doris Dr
Community Dr
Council Rd
Formosa
12
Maple St
Kuntz Dr

Formosa North Hill Rehabilitation - 2018

Municipal Class EA Review

- In review of the Project Schedules, the proposed Formosa north hill rehabilitation as a Schedule A+ project.

Schedule

South Bruce Council Presentation & PIC Notice	November 28 2017
Public information Session Notice Published in papers	December 7, 2017
Public Information Session	December 14, 2017

Formosa Hall 6:30pm-7:30pm (booked 6pm-8pm)

Proponents are encouraged to review section A.2.9 for opportunities to integrate Class EA projects with the Planning Act.

Description of the Project *(Note: The Schedules shall be reviewed inclusively to ensure that the correct schedule is selected)*	Cost Limit for Project Approved Under Schedule			
	Pre Approved		**B**	**C**
	A	**A+**		
GENERAL OPERATION AND MAINTENANCE OF LINEAR PAVED FACILITIES AND RELATED FACILITIES				
1. Normal or emergency operation and maintenance of linear paved facilities and related facilities	NL	-	-	-
2. Shaping and cleaning existing roadside ditches	NL	-	-	-
3. Construction or operation of sidewalks or bicycle paths or bike lanes within existing rights-of-way		NL	-	-
4. Gravel replacement and reshaping on existing roads	NL	-	-	-
5. a) Urban: Resurfacing, with no change to horizontal alignment b) Urban: Patching and frost heave treatment c) Rural: Resurfacing, patching and frost heave treatment with no change to horizontal alignment	- NL NL	NL	-	-
6. Plowing and sanding	NL	-	-	-
7. Stockpiling sand, gravel and fill	NL	-	-	-
8. Stockpiling of de-icing material at existing service facility where stockpiling has previously taken place	NL	-	-	-
9. Initial stockpiling of de-icing material at existing service facility	-	-	NL	-

Description of the Project *(Note: The Schedules shall be reviewed inclusively to ensure that the correct schedule is selected)*	Cost Limit for Project Approved Under Schedule			
	Pre Approved		**B**	**C**
	A	**A+**		
GENERAL OPERATION AND MAINTENANCE OF LINEAR PAVED FACILITIES AND RELATED FACILITIES				
10. Snow and de-icing operations that comply with MOE's **Guideline B-4 "Snow Disposal and De-icing Operations in Ontario"**	NL	-	-	-
11. Streetscaping (e.g. decorative lighting, sidewalk improvement, benches, landscaping not part of another project)	-	NL		-
12. a) Construction of localized operational improvements at specific locations (e.g. the addition of a ramp to an existing interchange; turning lanes at an intersection, but not a continuous centre left turning lane) b) Installation of guide rail		NL		-
13. Installation, construction or reconstruction of traffic control devices (e.g. signing, signalization)	<9.5 m	-	>9.5 m	-
14. Construction of new parking lots	<9.5 m	-	>9.5 m	
15. Installation of safety projects (e.g. lighting including "high mast", grooving, glare screens, safety barriers, energy attenuators)	<2.4 m	-	>2.4 m	-
16. Establishment of a roadside park or picnic area		NL		-
17. Culvert repair and replacement where the capacity of the culvert is not increased beyond the minimum municipal standard or the capacity required to adequately drain the area, whichever is greater, and where there is no change in drainage area	NL	-	-	-
18. Construction of a new culvert or increase culvert size due to change in the drainage area	-	NL		-
19. Reconstruction where the reconstructed road or other linear paved facilities (e.g. HOV lanes) will be for the same purpose, use, capacity and at the same location as the facility being reconstructed (e.g. no change in the number of lanes)	-	NL	-	-
20. Reconstruction or widening where the reconstructed road or other linear paved facilities (e.g. HOV lanes will not be for the same purpose, use, capacity or at the same location as the facility being reconstructed (e.g. additional lanes, continuous centre turn lane)	-	-	<2.4 m	>2.4 m
21. Construction of new roads or other linear paved facilities (e.g. HOV lanes)	-	-	<2.4 m	>2.4 m
22. Redesignation of an existing General Purpose Lane (GPL) or High Occupancy Vehicle (HOV) lanes through signage or pavement marking modifications (i.e. not requiring physical construction): • new parking or turning lane markings on an existing roadway • conversion of one-way or two-way streets • redesignation of existing GPL to HOV; or HOV to GPL	NL	NL	-	-
23. Construction of local roads which are required as condition of approval on a site plan, consent, plan of subdivision or plan of condominium which will come into effect under the Planning Act prior to the construction of the road. [Note – Reference to "local" roads refers to roadway function not municipal jurisdiction. See definition in Glossary of Municipal Class EA.]	NL	-	-	-

COUNTY OF BRUCE

(2)

LIMIT OF CONSTRUCTION

NOTE: CONSTRUCT 4 STEPS OR PLANTER AND STEPS AT THE FRONT OF CONC. SLAB OF HOTEL AS EXISTING GRADE IS TOO STEEP FOR PARKING

100+00 | 105+00 | 110+00

GR. PARKING AREA (BODY SHOP) | 1 STY. FR. HO. | 1 STY. CONC. BL. GAR. | ROCK MOUND | 2 STY. BRICK BLDG. HOTEL | CONC. PLAT. PARKING | GR. PARKING AREA | 1 1/2 STY. ALUM. CLAD FR. HO. | VERANDA | 2 STY. FR. BLDG. GAR. | CONC. DRIVE | FR. ADD. | 1 STY. BR. HO. | PLANTER | SHRUBS | 1 1/2 STY ALUM CLAD FR. HO. | VERANDA | 2 STY. BR. HO. | CONC. | 1 1/2 STY. BR. HO. | LIGHT | 1 1/2 STY. FR. HO. | PORCH | VACANT LOT | TRANSITION | ROCK FACE | PASTURE FIELD | FORMOSA CREEK

PAVED SD. ST. LT. | GR. ENT. LT. | GR. ENT. RT. | GR. HO. ENT. LT. | GR. HO. ENT. RT. | GR. PARKING AREA | GR. ENT. PARKING | GR. HO. ENT. LT. | 2 GR. HO. ENT. RT.

DD 601-D | DD 601-G | CURB DD-601-D | CURB DD-601-G | 2' DIA. C.B. | C.B. (1) (2) (3) (4) (5) (6) (7) (8) (9) | 10" C.P. E.S. | 8" C.P. E.S. | 3.5 C.F.S. 10" C.P. ES. | 100' TAPER | 5' BOULEVARD | 4' CONC. SIDEWALK | 8' PAVED PARKING | H. TEL. STD. | H.T. STD. | H.B.T. | T.V. | G.W. | T.O.P. | C.S.W. | 4' CSW | 2' C.S.W. | 3.0' C.S.W. | 3.5' C.S.W. | 3.6' POP. | 3.0' POP. | 3.5' POP. | F/I

I STY. FR. HO. REMOVED | GR. HO. ENT. RT. | 3 1/2 PINE | SHRUBS | 4' B.B.M. | 1 1/2 STY. BR. HO. | GR. HO. ENT. RT. | 101+36 | WISHING WELL | FLARE INTERSECTION | 35' R. | 25' R. | 30' R. | 2 STY. BR. BLDG. | CONC. PLATFORM | PAVED SD. ST. LT. | GR. HO. ENT. RT. | TOWER | PORCH | 1 1/2 STY. BR. HO. | 1 1/2 STY. FR. HO. | FR. GAR. | GR. PARK'G | TOP BANK | 1.5 SPR. | CONC. WALL | 4" CHERRY | GARDEN | 1 1/2 STY. FR. HO. | ASPHALT HO. ENT. RT. | 1 STY. BR. HO. | ROW 5 POPLAR | GR. HO. ENT. RT. | 1 STY. BR. HO. | 5 0.6' MAPLES @ 2.5' C.S.W. | GR. HO. ENT. RT. | CONC. CURB | FLOW | 1 STY. FR. BLDG. (VACANT) | CONC. SLAB | 8" WALL | H. T. STD. | PORCH | 1 1/2 STY. FR. HO. | 2.0" WILLOW | 12" 0.6' M. | 13' SPR. | 2.0" APPLES | GARDEN | FR. GAR. | ASPH. ENT. RT. | VER. | 2 STY. BR. HO.

NOTE: NEW C.S.W. TO OVERHANG EXISTING CONC. WALL BY APPROX. 1.0' AND PLACE EXTRA CONC. IN AREA, REINFORCE WITH STEEL, PROVIDE HAND RAIL PROTECTION, AND CONSTRUCT NEW STEPS FOR HO. ENT. RT.

NOTE: HEADWALL ON EAST END OF CULVERT BETWEEN CURB & SIDEWALK TO BE REMOVED. EXISTING TIMBER DECK FOR SIDEWALK ON EAST END OF CULVERT TO BE REMOVED AND REPLACED WITH REINFORCED CONC. DECK TO FORM NEW SIDEWALK COMPLETE WITH NEW THREE RAIL TRAFFIC AND PEDESTRIAN PROTECTION

NOTE

ADJUST ALL EXISTING HO. DRIVES & CONC. SIDEWALKS TO CONFORM WITH NEW STREET SIDEWALK
PROPOSE RE-LOCATION OF EXISTING UTILITIES, HYDRO, SIDEWALKS, CATCH BASINS, ETC.
CUT ALL TREES & REMOVE STUMPS AS REQ'D. WITHIN RIGHT OF WAY
REGISTERED EASEMENTS REQ'D FOR OUTLETS ON PRIVATE PROPERTY

OUTLET TO CREEK

BOTTOM EDGE WALL OF ROCK

HAMLET OF FORMOSA

B.M. ELEV. 865.41
NAIL & FLAG IN E. FACE OF H.P. 28' LT. OF STA. 100+83

B.M. ELEV. 865.48
NAIL & FLAG IN E. FACE H.P. 26' LT. STA. 103+82

B.M. ELEV. 863.08
NAIL & FLAG IN E. FACE H.P. 22' LT. STA. 109+14

B.M. ELEV. 848.22
NAIL & WASHERS IN N. W. ROOT OF 3.0' MAPLE 29' RT. OF STA. 109+14

V.P.I. ELEV. 863.40 STA. 99+00 L.V.C. 184' V.C. 600'
EXC. 98+92
+1.056%
-0.786%
SUB-EXC.
PROPOSED GRADE
BVC. 101+71
EXISTING GRADE
GRANULAR
-0.395%
-0.620%
-0.567%
V.P.I. ELEV. 864.05 STA. 104+50 L.V.C. 158' V.C. 1200'
V.P.I. ELEV. 863.30 STA. 106+40 L.V.C. 90' V.C. 1200'
V.P.I. ELEV. 861.64 STA. 109+08 L.V.C. 190' V.C. 400'
V.P.I. ELEV. 847.74 STA. 111+93 L.V.C. 200' V.C. 400'
EVC. 104+48
BVC. 105+95
EVC. 106+85
BVC. 108+13
EVC. 110+03
BVC. 110+93
EVC. 112+96
C.B. (2) T/GRATE 883.45
OUTLET E. 880.70
T/FLOOR 879.70
C.B. (3) T/GRATE 883.85
IN. ET E. 880.20
OUTLET E. 857.90
T/FLOOR 856.90
C.B. (5) T/GRATE 858.14
OUTLET W. 859.47
T/FLOOR 858.47
C.B. (4) T/GRATE 862.14
INLET E. 859.17
OUTLET N. 859.00
T/FLOOR 858.00
C.B. (7) T/GRATE 856.57
OUTLET E. 851.92
T/FLOOR 850.95
OUTLET E. 850.00
C.B. (6) T/GRATE 855.57
INLET S. 852.10
OUTLET W. 851.99
T/FLOOR 850.99
OUTLET W. 850.00
C.B. (9) T/GRATE 847.38
OUTLET W. 845.50
T/FLOOR 844.50
C.B. (8) T/GRATE 847.58
INLET E. 845.00
OUTLET W. 844.83
T/FLOOR 843.83
OUTLET 864.80
8" C.P.C.S.
10" C.P.C.S.
12" C.P.C.S.
18" C.P.C.S.
24" - 10" C.P.C.S.
2-10" C.P.C.S.
3 C.F.S.
4.5 C.F.S.
9 C.F.S.
870
860
850
100+00
101+00
102+00
103+00
104+00
105+00
106+00
107+00
108+00
109+00
110+00
111+00
112+00
113+00
114+00
+68 PAVED SD. ST. LT.
+68 GR. ENT. LT.
+66 LOT ENT. LT.
+68 GR. HO. ENT. RT.
+66 GR. HO. ENT. LT.
+49 PAVED SD. ST. RT.
+49 GR. HO. ENT. LT.
+27 HO. ENT. LT.
+27 HO. ENT. RT.
+14 GAR. ENT. RT.
+14 GR. HO. ENT. LT.
+16 GR. HO. ENTERS
+32 ASPH. HO. ENT. RT.
+82 GR. HO. ENT. RT.
+09 GR. HO. ENT. RT.
+43 GR. HO. ENT. RT.
+75 HO. ENT. RT.

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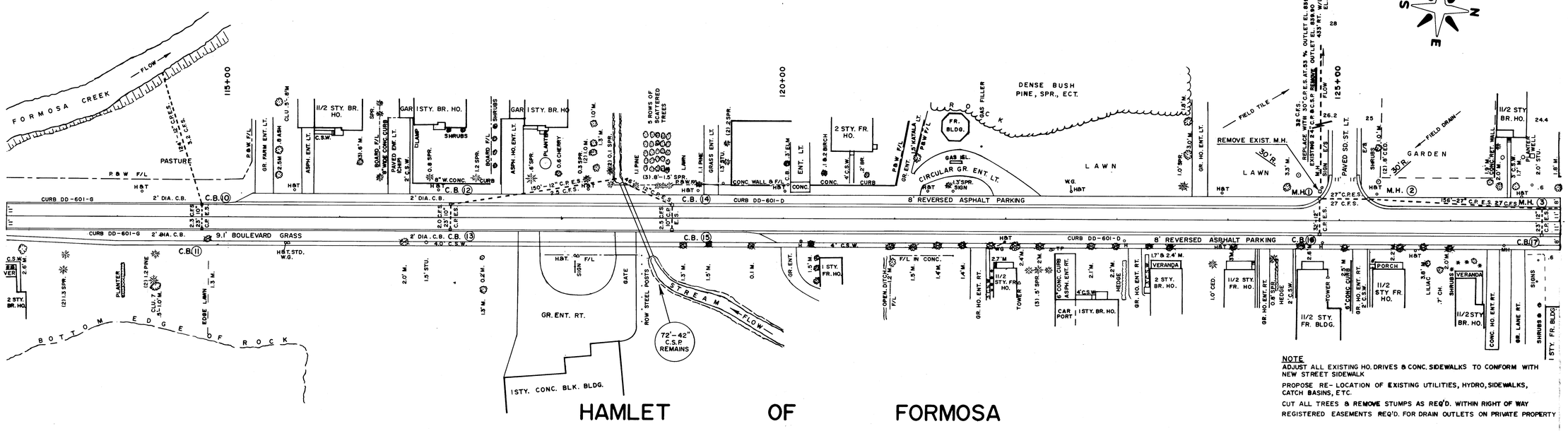
Looking North

West Elevation

COUNTY OF BRUCE



HAMLET OF FORMOSA

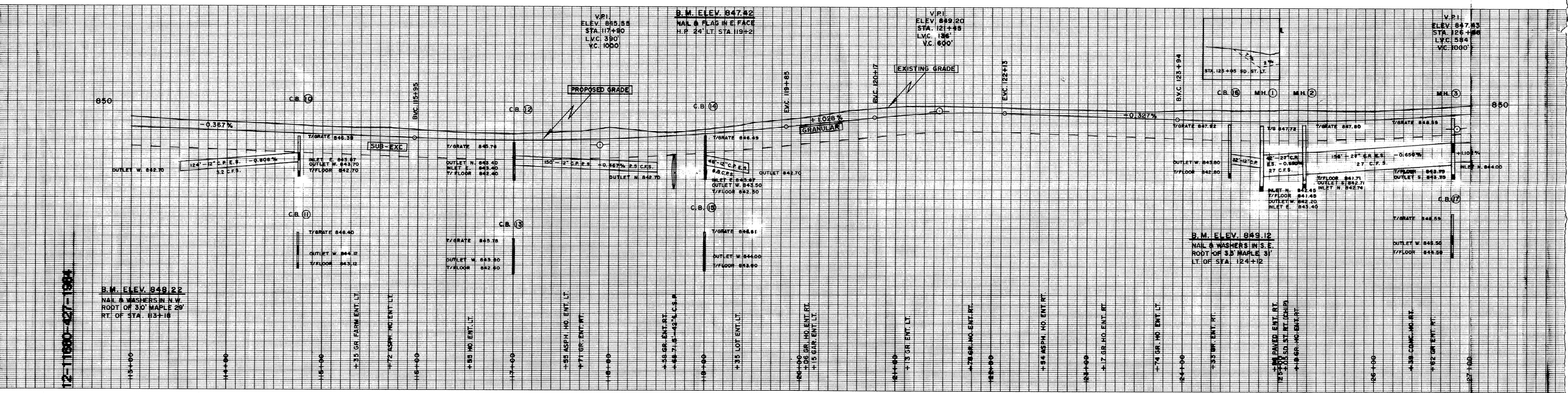
NOTE

ADJUST ALL EXISTING HO. DRIVES & CONC. SIDEWALKS TO CONFORM WITH NEW STREET SIDEWALK

PROPOSE RE-LOCATION OF EXISTING UTILITIES, HYDRO, SIDEWALKS, CATCH BASINS, ETC.

CUT ALL TREES & REMOVE STUMPS AS REQ'D. WITHIN RIGHT OF WAY

REGISTERED EASEMENTS REQ'D. FOR DRAIN OUTLETS ON PRIVATE PROPERTY



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COUNTY OF BRUCE

④

CURVE DATA	
Δ	2° 17' 00"
D	1° RT.
T	114.18'
L	228.33'
EX	1.14'

Z MH -14.83 LT.
Z MH. 22.83 RT.

NOTE:

ADJUST ALL EXISTING HO. DRIVES & CONC. SIDEWALKS TO CONFORM WITH NEW STREET SIDEWALK
PROPOSE RE-LOCATION OF EXISTING UTILITIES, HYDRO, SIDEWALKS, CATCH BASINS, ETC.
CUT ALL TREES AND REMOVE STUMPS AS REQ'D. WITHIN RIGHT OF WAY
ALL MANHOLES ON HORTH HILL TO BE SET BACK AND HAVE DOUBLE GRATES

HAMLET OF FORMOSA

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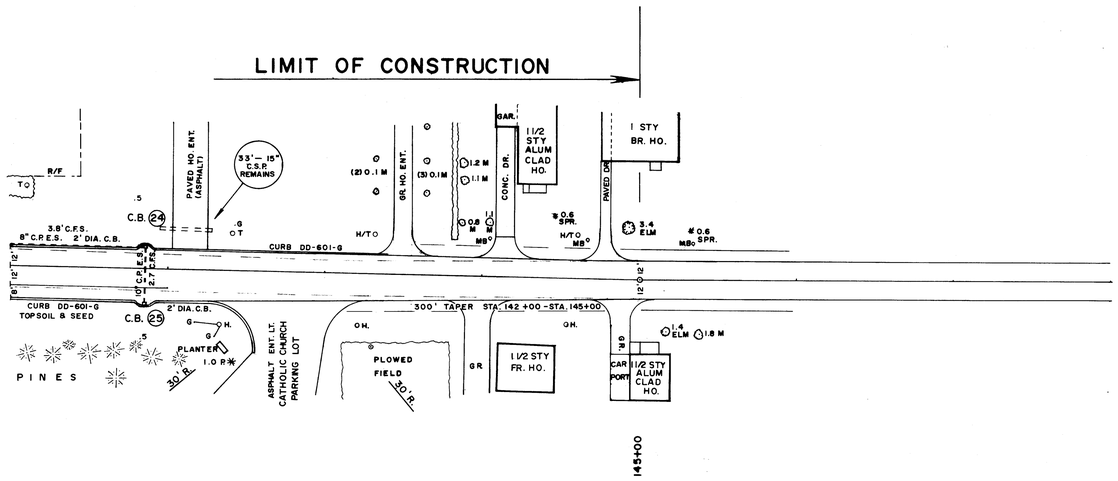
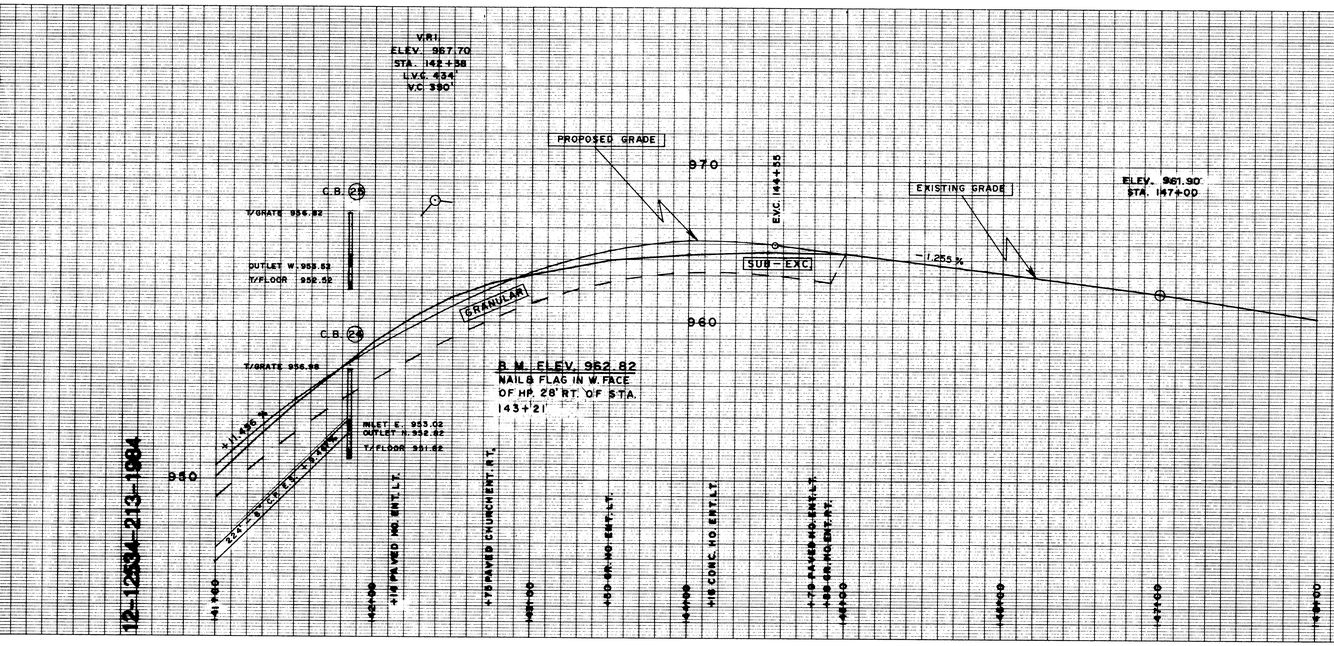
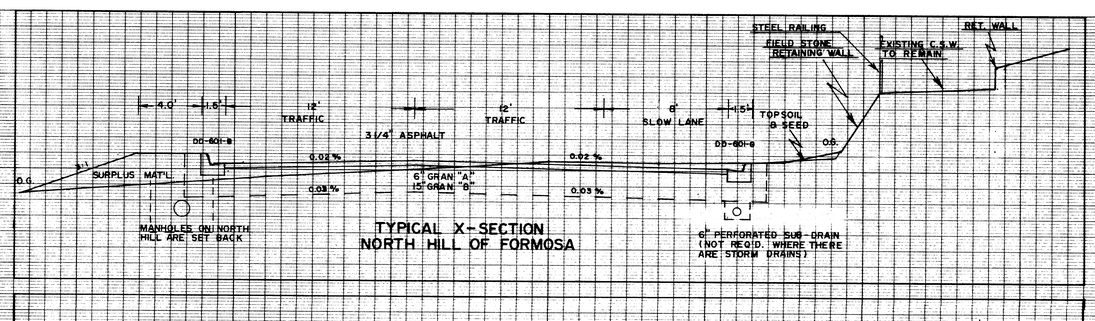
COUNTY OF BRUCE

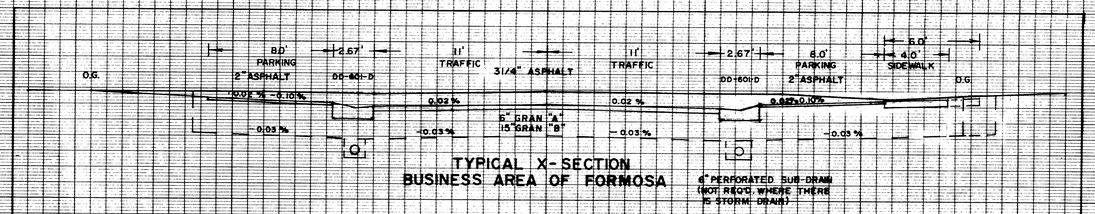


HAMLET OF FORMOSA





TYPICAL X-SECTION
NORTH HILL OF FORMOSA



TYPICAL X-SECTION
BUSINESS AREA OF FORMOSA

6" PERFORATED SUB-DRAIN (NOT REQ'D. WHERE THERE IS STORM DRAIN)

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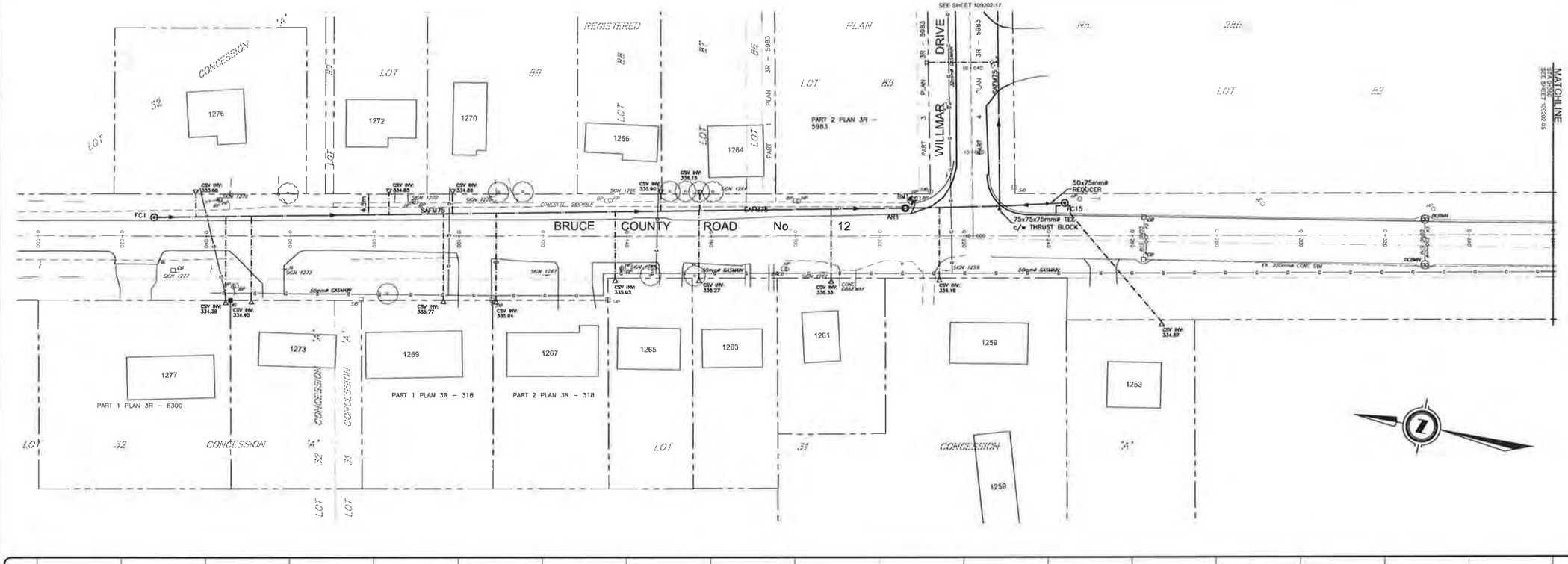
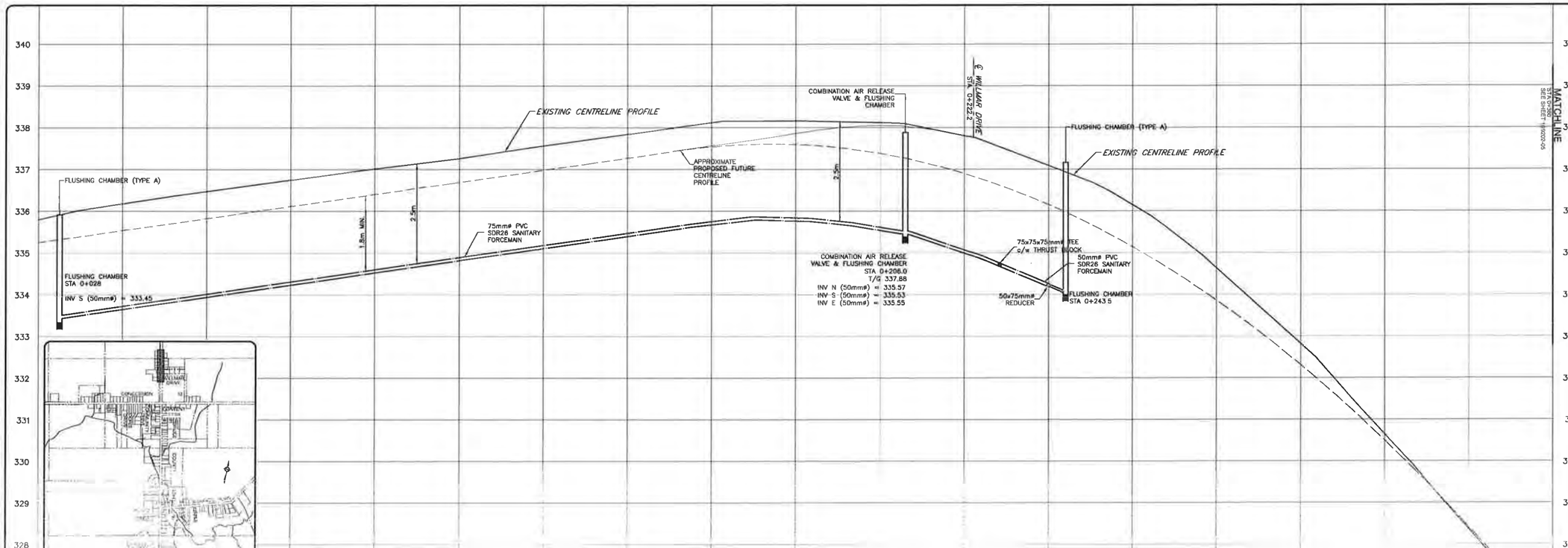


PROPOSED CONSTRUCTION

SAN1	SANITARY MANHOLE
FC1	FLUSHING CHAMBER
AR1	COMBINATION AIR RELEASE VALVE & FLUSHING CHAMBER
	SANITARY SERVICE (125mmø) & CLEANOUT (GRAVITY SEWER)
	SANITARY SERVICE (38mmø), CURB STOP & CHECK VALVE (PRESSURE SEWER)
SA200	SANITARY SEWER AND SIZE
SAFM50	SANITARY FORCEMAIN AND SIZE

EXISTING DETAIL

DCBMH or DIMH	EXISTING DOUBLE CATCHBASIN MANHOLE or DITCH INLET MANHOLE
CB or DI	EXISTING CATCHBASIN or DITCH INLET
STMH	EXISTING STORM MAINTENANCE HOLE
DCB or DI	EXISTING DOUBLE CATCHBASIN or DITCH INLET
FH	EXISTING FIRE HYDRANT
GV	EXISTING GAS VALVE
	EXISTING GASMAIN
EXSTM300	EXISTING STORM SEWER AND SIZE
	PROPERTY LINE OR EASEMENT
	CENTRE LINE OF ROAD
HP/LP	EXISTING HYDRO OR LIGHT POLE
	EXISTING SIGN
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
BP	EXISTING BELL PEDESTAL



BENCHMARK INFORMATION

BM1 SPIKE IN WEST FACE OF HYDRO POLE LOCATED AT THE NORTHEAST CORNER OF COUNTY ROAD 12 & WILLMAR DRIVE.
ELEVATION 338.07m

CAUTION:
THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

DATE	DESCRIPTION
FEB/2016	AS CONSTRUCTED
NOV/2012	RE-ISSUED FOR CONSTRUCTION
SEPT/2012	ISSUED FOR CONSTRUCTION
NOV/2011	ISSUED FOR TENDER
AUG/2011	MOE SUBMISSION
FEB/2011	SUBMISSION TO S.V.C.A.

REVISION / ISSUE

Seal not valid unless signed and dated

WSP
101 14th Avenue, Hanover, Ontario N4N 3W1
Telephone: (519) 364-5700 / Fax: (519) 364-6937
Toll Free: 1-800-565-3894

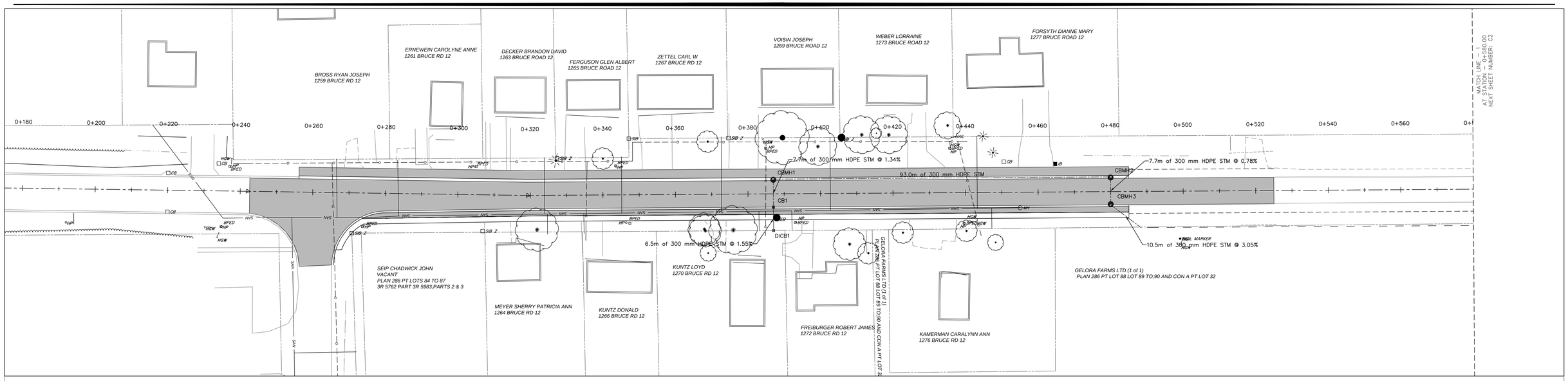
Title:
PLAN AND PROFILE
STATION 0+000 TO STATION 0+360
BRUCE COUNTY ROAD No. 12
FORMOSA SEWER SYSTEM & FORCEMAIN

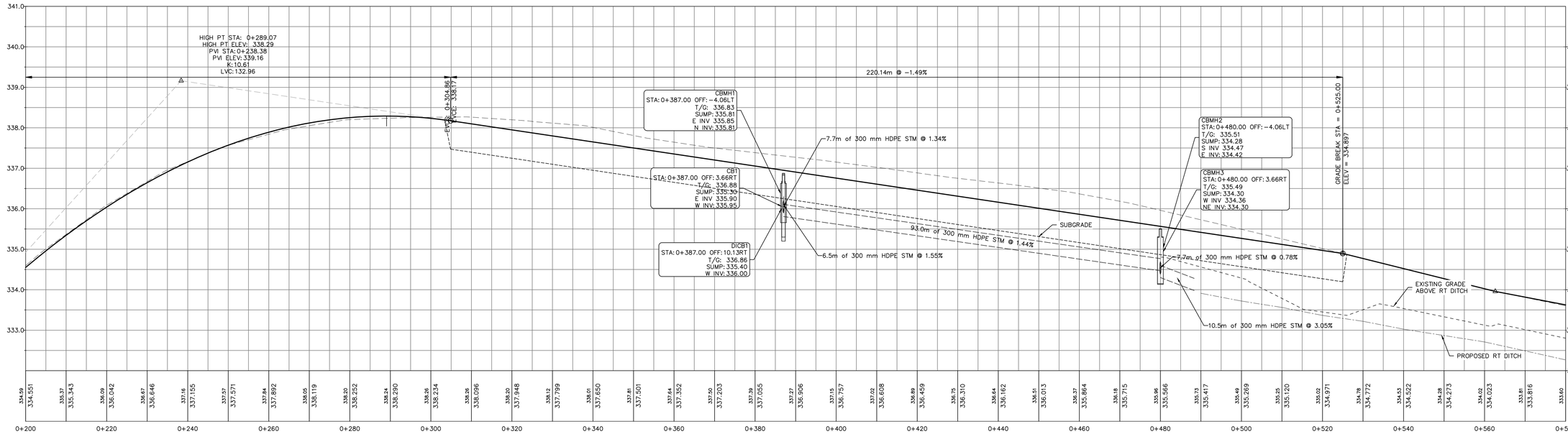
Client:
MUNICIPALITY OF SOUTH BRUCE

ounty Rd 12
y, Ontario
oogle, Inc.
Street View - Aug 2009
County Rd 12

1260 County Rd 12
Mildmay, Ontario
Google, Inc.
Street View - Sep 2013
County Rd 12

1260 County Rd 12
Mildmay, Ontario
Google, Inc.
Street View - Sep 2013
County Rd





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THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVE GROUND SERVICES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS AND WHERE SHOWN, THE ACCURACY OF EACH UTILITY AND STRUCTURE IS NOT GUARANTEED. BEFORE STARTING WORK, VERIFY THE EXACT LOCATIONS OF ALL SERVICES AND STRUCTURES BY CONTACTING THE APPROPRIATE AGENCY/UTILITY

NORTH

NOTES:

NO.	REVISION	BY	DATE
0	FIRST SUBMISSION	MC	APRIL 2017

PROJECT: BRUCE ROAD 12 RECONSTRUCTION
FORMOSA NORTH HILL

TITLE: PLAN AND PROFILE
STA. 0 + 200 TO STA. 0 + 560

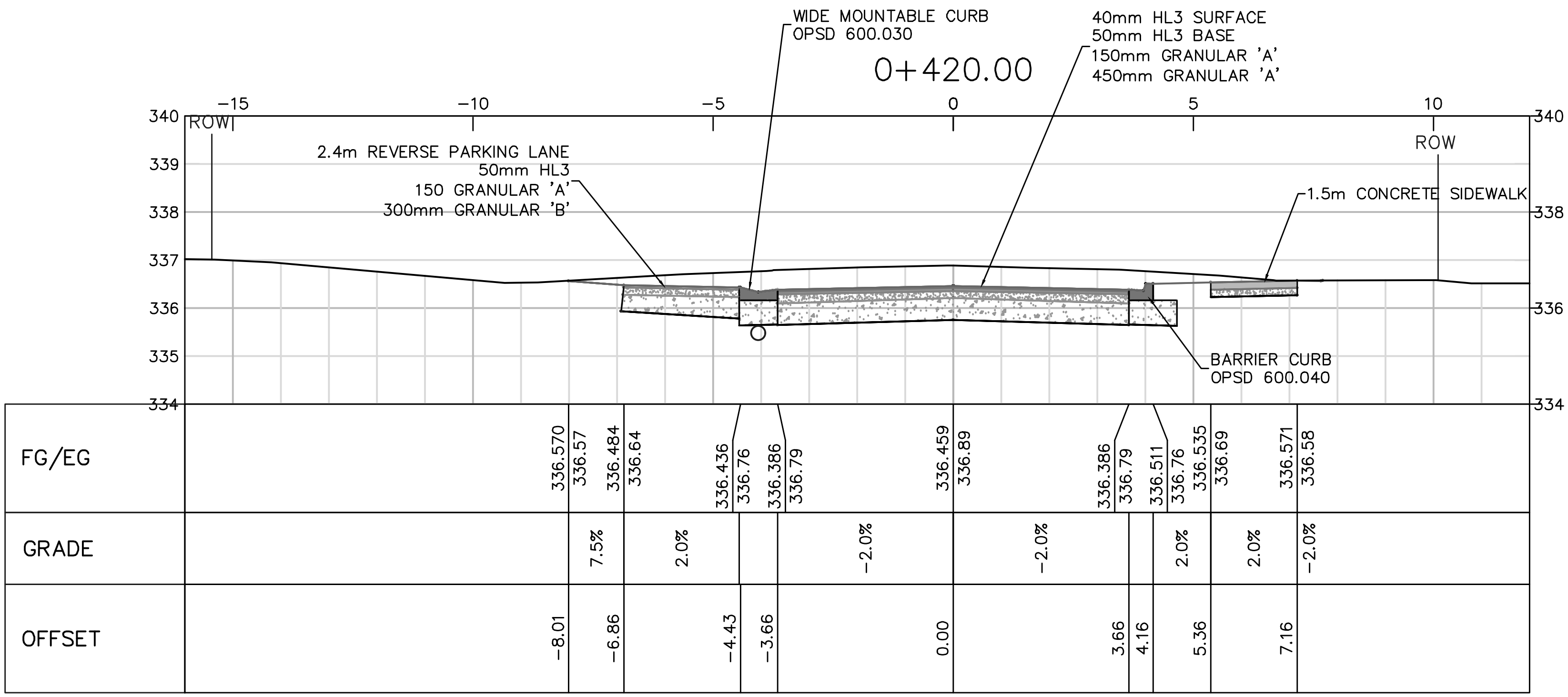
SCALE: H 1:500
V 1:50

DRAWN BY: MC

REVISION: 0

DRWG NO.: C1

45.0°N 81.3°W
BRUCE county
HIGHWAYS DEPARTMENT
30 PARK STREET, WALKERTON ON N0G 2V0
TEL: (519) 881-2400 FAX: (519) 507-3030
bchighways@brucecounty.on.ca



SCALE: H 1:150
V 1:150

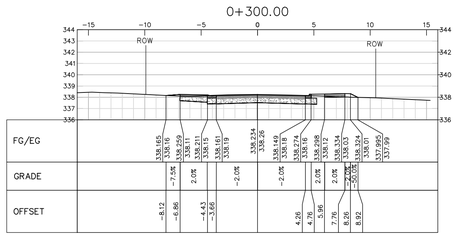
BRUCE ROAD 12 FORMOSA
NORTH HILL TYPICAL CROSS-SECTION

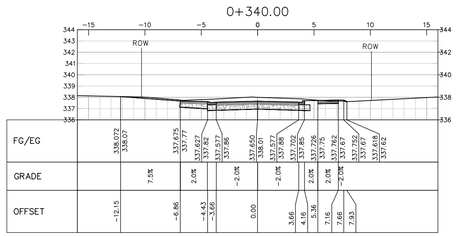
DRWG NO.

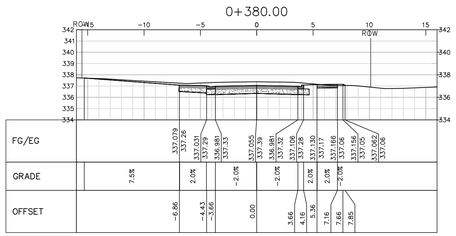
1 of 1

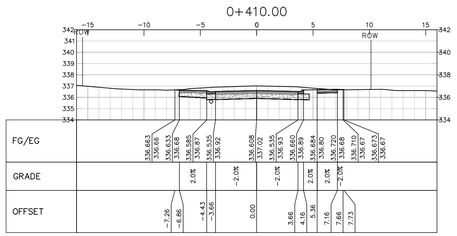
BRUCE county highways

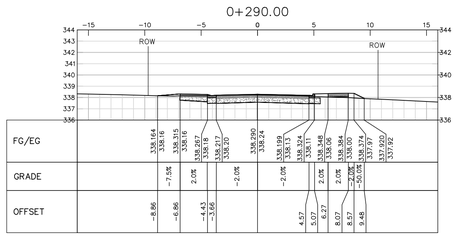
J:\12 FORMOSA NORTH HILL 2017\Drawings\R5 NORTH HILL DESIGN 2017.dwg Wednesday, November 22, 2017

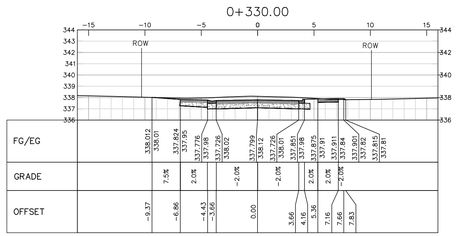


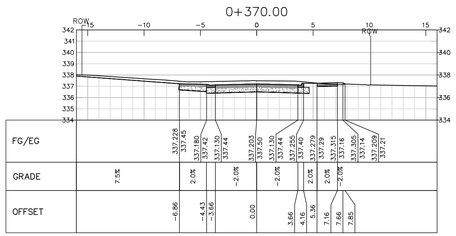


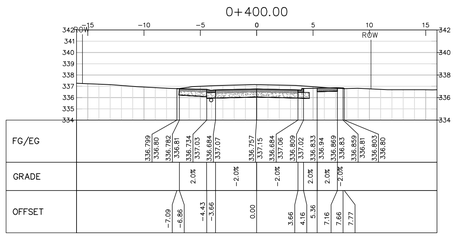


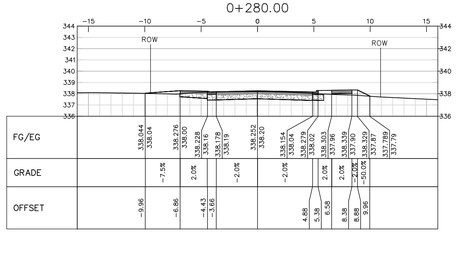


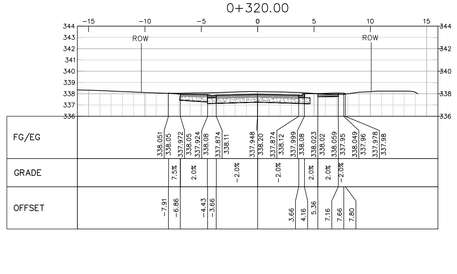


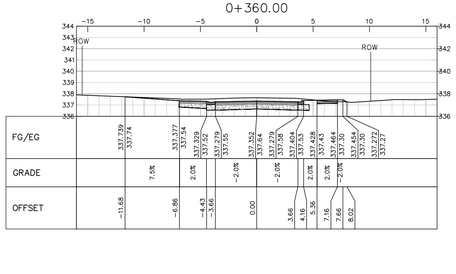


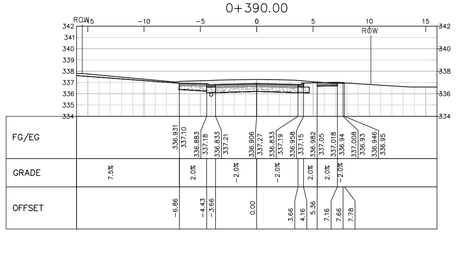


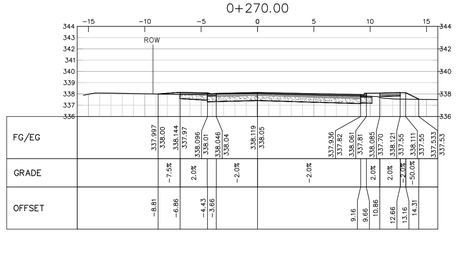


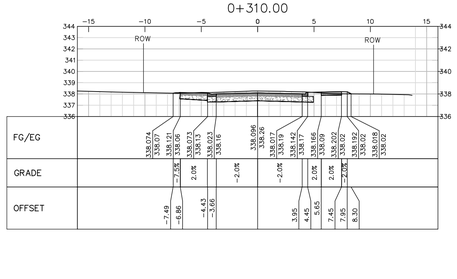


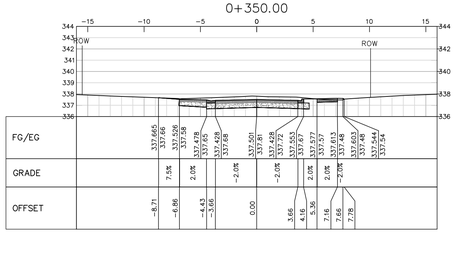


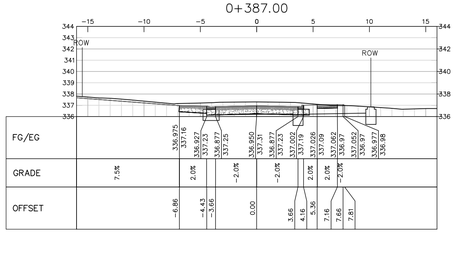












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THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVE GROUND SERVICES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS AND WHERE SHOWN, THE ACCURACY OF EACH UTILITY AND STRUCTURE IS NOT GUARANTEED. BEFORE STARTING WORK, VERIFY THE EXACT LOCATIONS OF ALL SERVICES AND STRUCTURES BY CONTACTING THE APPROPRIATE AGENCY/UTILITY

NORTH

NOTES:

NO.	REVISION	BY	DATE
0	FIRST SUBMISSION	MC	APRIL 2017

PROJECT: BRUCE ROAD 12 RECONSTRUCTION
FORMOSA NORTH HILL

TITLE: CROSS-SECTIONS
STA. 0 + 270 TO STA. 0 + 410

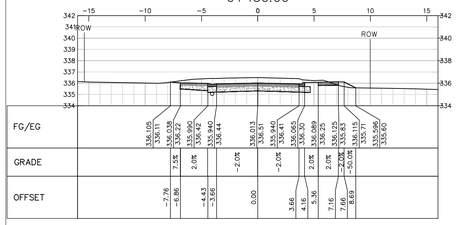
SCALE: H 1:250

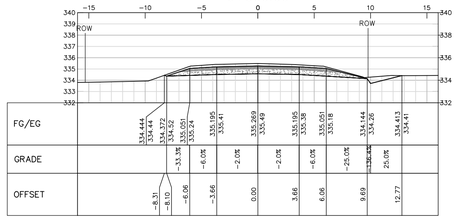
DRAWN BY: MC

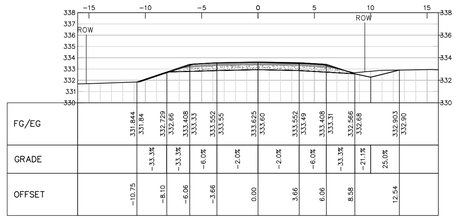
REVISION 0

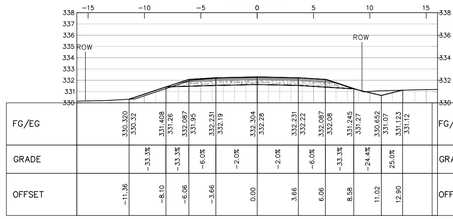
DRWG NO. C3

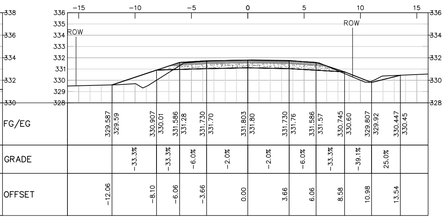
45.0°N 81.3°W
BRUCE county
HIGHWAYS DEPARTMENT
30 PARK STREET, WALKERTON ON N0G 2V0
TEL: (519) 881-2400 FAX: (519) 507-3030
bchighways@brucecounty.on.ca

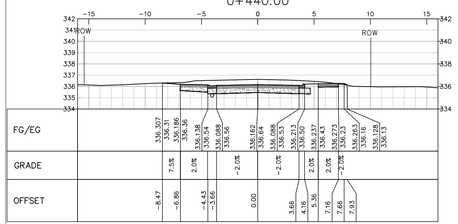


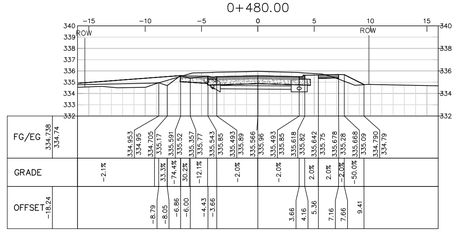


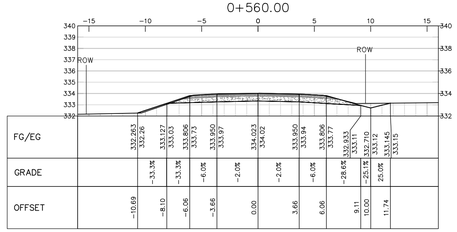


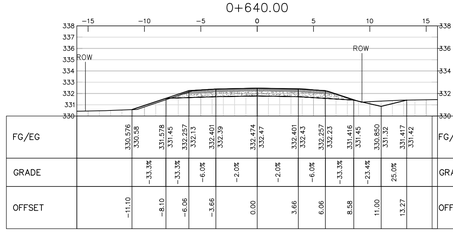


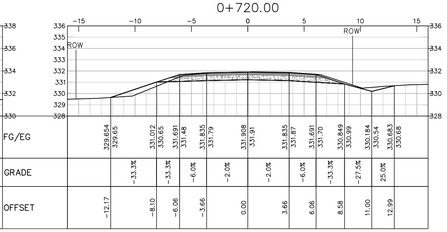


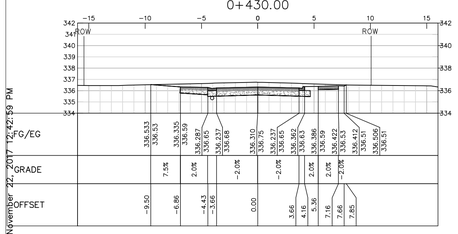


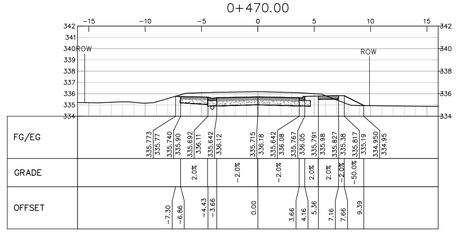


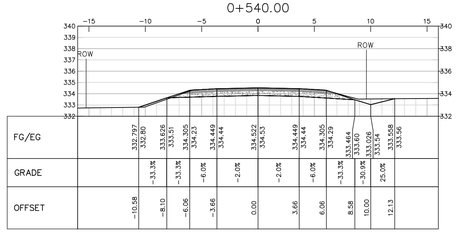


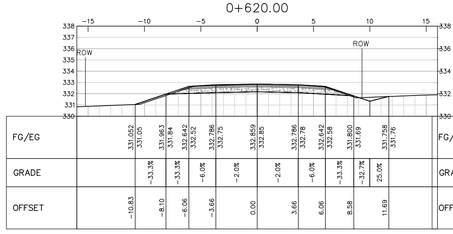


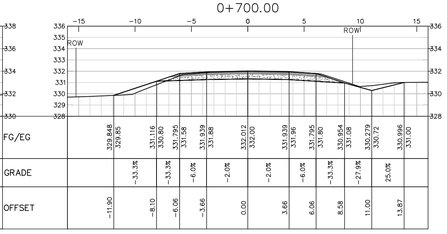


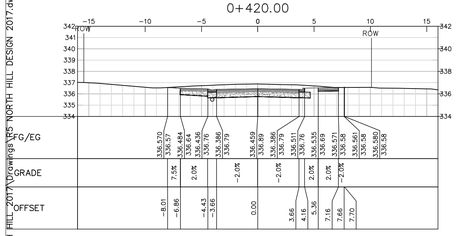


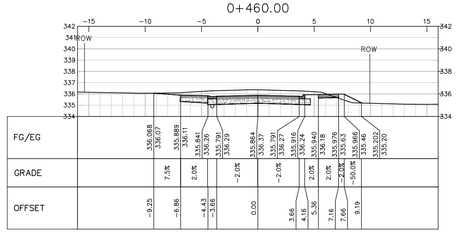


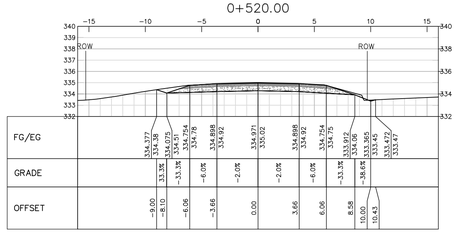


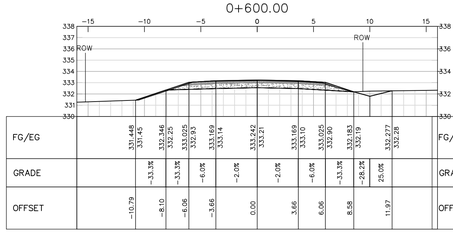


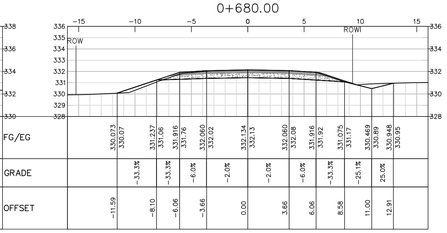












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THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVE GROUND SERVICES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS AND WHERE SHOWN, THE ACCURACY OF EACH UTILITY AND STRUCTURE IS NOT GUARANTEED. BEFORE STARTING WORK, VERIFY THE EXACT LOCATIONS OF ALL SERVICES AND STRUCTURES BY CONTACTING THE APPROPRIATE AGENCY/UTILITY

NORTH

NOTES:

NO.	REVISION	BY	DATE
0	FIRST SUBMISSION	MC	APRIL 2017

PROJECT: BRUCE ROAD 12 RECONSTRUCTION
FORMOSA NORTH HILL

TITLE: CROSS-SECTIONS
STA. 0 + 410 TO STA. 0 + 740

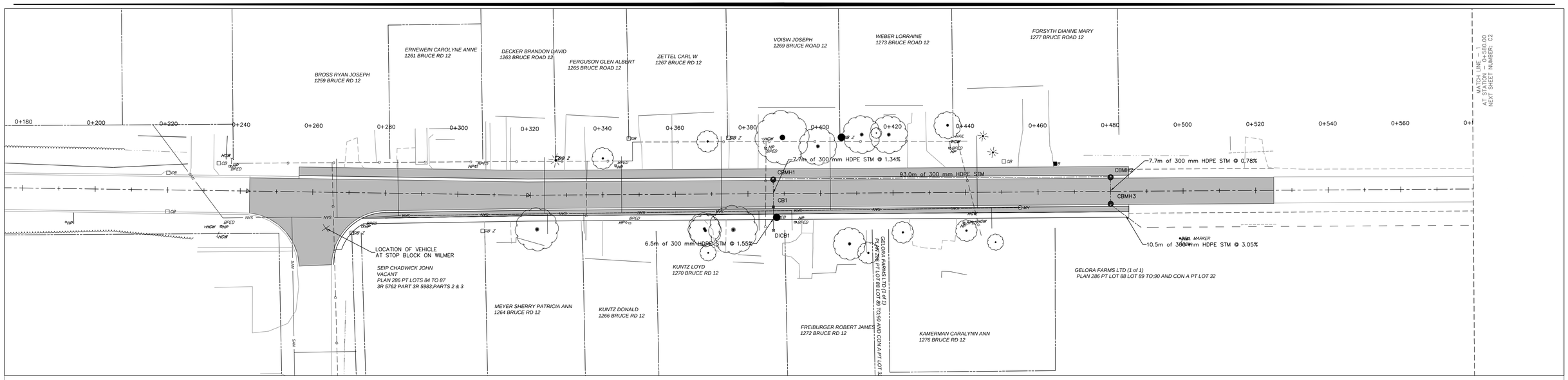
SCALE: H 1:250

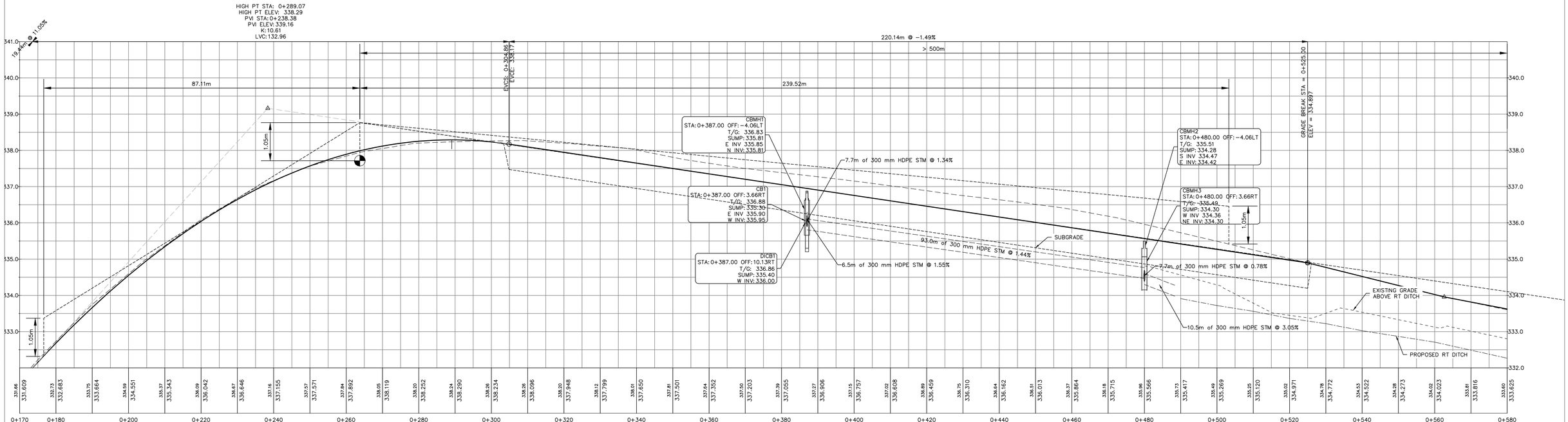
DRAWN BY: MC

REVISION 0

DRWG NO. C4

45.0°N 81.3°W
BRUCE county
HIGHWAYS DEPARTMENT
30 PARK STREET, WALKERTON ON N0G 2V0
TEL: (519) 881-2400 FAX: (519) 507-3030
bchighways@brucecounty.on.ca





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THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVE GROUND SERVICES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS AND WHERE SHOWN, THE ACCURACY OF EACH UTILITY AND STRUCTURE IS NOT GUARANTEED. BEFORE STARTING WORK, VERIFY THE EXACT LOCATIONS OF ALL SERVICES AND STRUCTURES BY CONTACTING THE APPROPRIATE AGENCY/UTILITY

NORTH

NOTES:

NO.	REVISION	BY	DATE
0	FIRST SUBMISSION	MC	NOV 2017

PROJECT: BRUCE ROAD 12 RECONSTRUCTION
FORMOSA NORTH HILL

TITLE: SITE LINE ANALYSIS
STA. 0 + 200 TO STA. 0 + 560

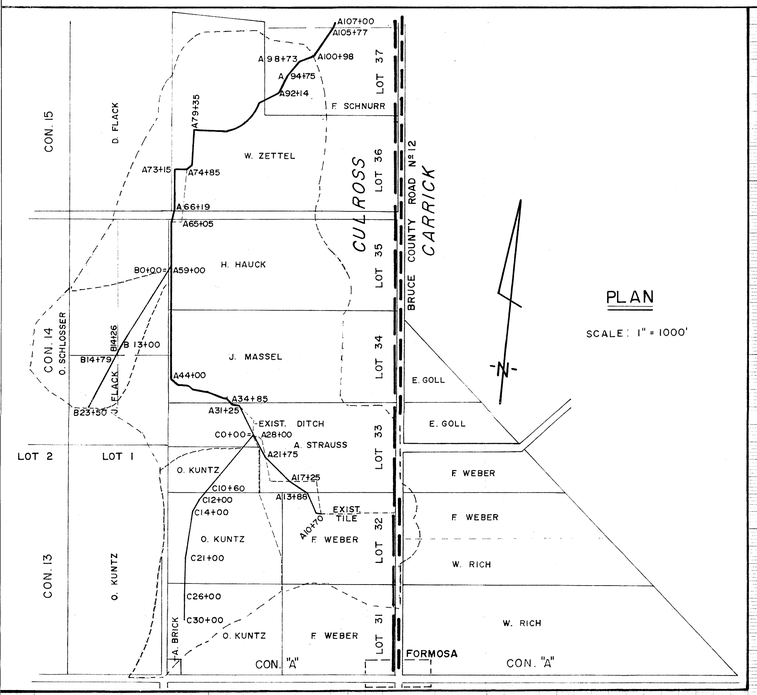
SCALE: H 1:500
V 1:50

DRAWN BY: MC

REVISION: 0

DRWG NO.: C1

45.0°N 81.3°W
BRUCE county
HIGHWAYS DEPARTMENT
30 PARK STREET, WALKERTON ON N0G 2V0
TEL: (519) 881-2400 FAX: (519) 507-3030
bchighways@brucecounty.on.ca



PLAN

SCALE: 1" = 1000'

BENCH MARKS

BM. Nº 1 – ELEV. 100.00 – NAIL IN N.W. FACE T. POLE 75' RT. STA. A65+30

BM. Nº 2 – ELEV. 102.80 – NAIL IN N. FACE CORNER FENCE POST STA. A73+10

BM. Nº 3 – ELEV. 98.94 – NAIL IN S. FACE 2' Ø TREE STA. A83+84

BM. Nº 4 – ELEV. 94.87 – NAIL IN N.W. FACE FENCE POST 40' RT. STA. A94+75

BM. Nº 5 – ELEV. 88.99 – NAIL IN S.W. FACE FENCE POST 30' RT. STA. A102+95

BM. Nº 6 – ELEV. 99.06 – NAIL IN W. FACE FENCE POST STA. A58+99

BM. Nº 7 – ELEV. 104.95 – NAIL IN N.W. FACE FENCE POST 8' LT. STA A45+73

BM. Nº 8 – ELEV. 122.13 – NAIL IN S. FACE 2' Ø TREE STA. A37+00

BM. Nº 9 – ELEV. 138.90 – NAIL IN S.W. FACE 2' Ø TREE 25' RT. STA. A34+00

BM. Nº 10 – ELEV. 141.56 – NAIL IN S.W. FACE FENCE POST 50' EAST STA. A25+90, ON FL.

BM. Nº 11 – ELEV. 142.31 – NAIL IN N.E. FACE 1' Ø TREE 50' N. STA. A10+98, FL.

BM. Nº 12 – ELEV. 103.61 – NAIL IN E. FACE FENCE POST 250' WEST STA. B8+00

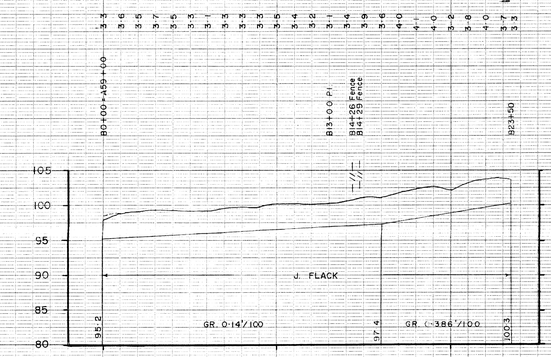
BM. Nº 13 – ELEV. 102.74 – NAIL IN W. FACE 2' Ø DEAD ELM, 70' LT. STA B14+50

BM. Nº 14 – ELEV. 104.90 – NAIL IN N. FACE 1' Ø ELM TREE 30' LT. STA B23+27

B.M. Nº 15 – ELEV. 140.64 – NAIL IN E. FACE 1' Ø TREE, 8' RT. STA. C6+33

B.M. Nº 16 – ELEV. 140.58 – NAIL IN E. FACE CORNER FENCE POST STA. C18+90

B.M. Nº 17 – ELEV. 141.61 – NAIL IN N. FACE FENCE POST 25' RT. C26+54 FL.



"B" DRAIN PROFILE

OPEN DRAIN

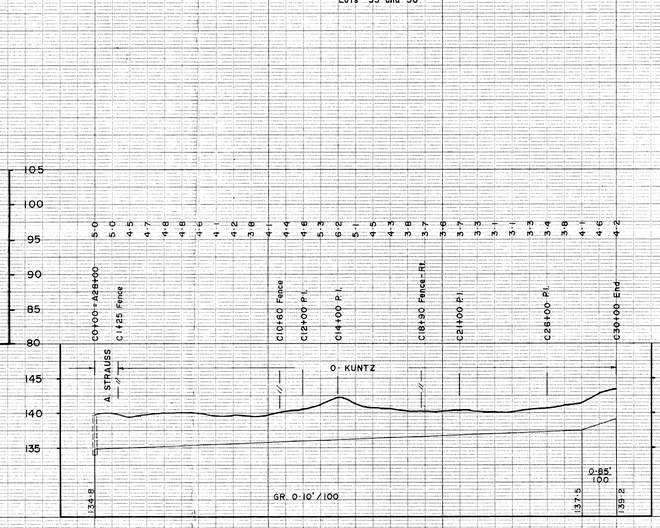
BOTTOM WIDTH - 3 FT. THROUGHOUT

SIDE SLOPES - 1 HOR. TO 1 VERT.

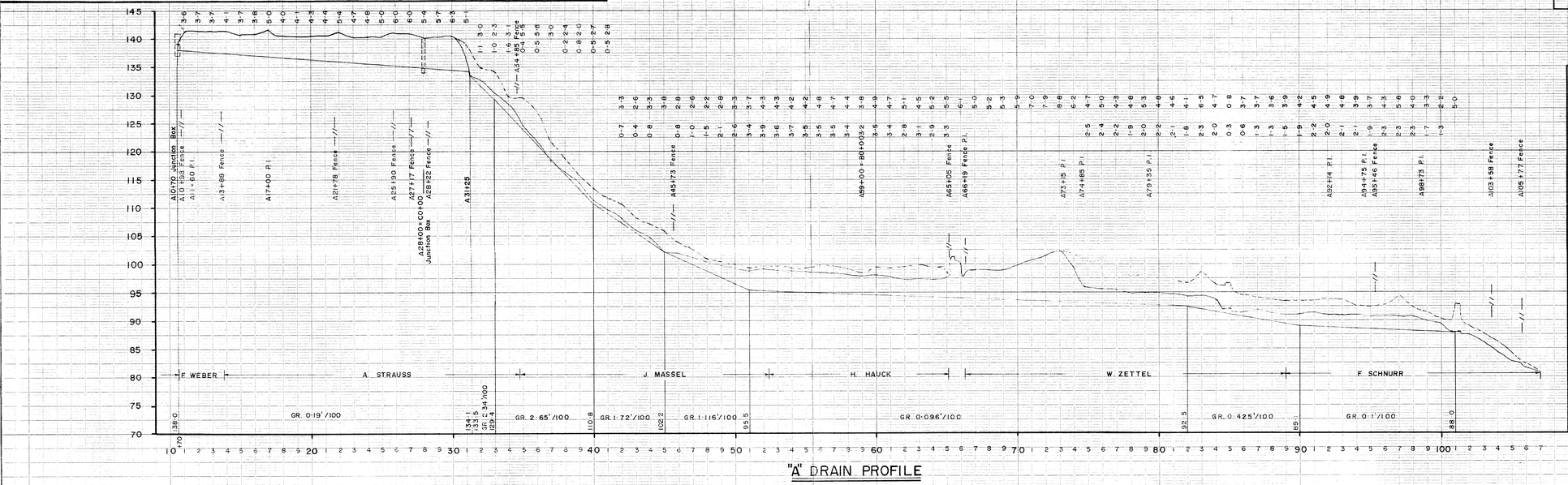
CLEARING - MINIMUM 10 FT. FROM BOTH BANKS

N.B. – NO EXCAVATION REQUIRED BETWEEN STA. A35+00 AND A45+00

– See Special Provisions Regarding Hauling and Disposing of Material Excavated from Lots 35 and 36



"C" DRAIN PROFILE



"A" DRAIN PROFILE

TILE DRAINS

MAIN DRAIN:

STA. A10+70	to	A17+00	630 L.F. of 12" Ø Field Tile
A17+00	to	A28+00	1100 L.F. of 14" Ø Field Tile
A28+00	to	A31+15	315 L.F. of 18" Ø Field Tile
A31+15	to	A31+25	10 L.F. of 18" Ø C.M.P.
– Junction Boxes	STA.	A28+00	A10+70

"B" DRAIN:

STA. B0+00	to	B0+10	10 L.F. of 10" Ø C.M.P.
B0+10	to	B14+29	1419 L.F. of 10" Ø Field Tile
B14+29	to	B23+50	921 L.F. of 8" Ø Field Tile

"C" DRAIN:

STA. C0+00	to	C10+60	1060 L.F. of 12" Ø Field Tile
C10+60	to	C18+90	830 L.F. of 10" Ø Field Tile
C18+90	to	C30+00	1110 L.F. of 8" Ø Field Tile

CLEARING WIDTHS. MINIMUM - 30 FT. BOTH SIDES

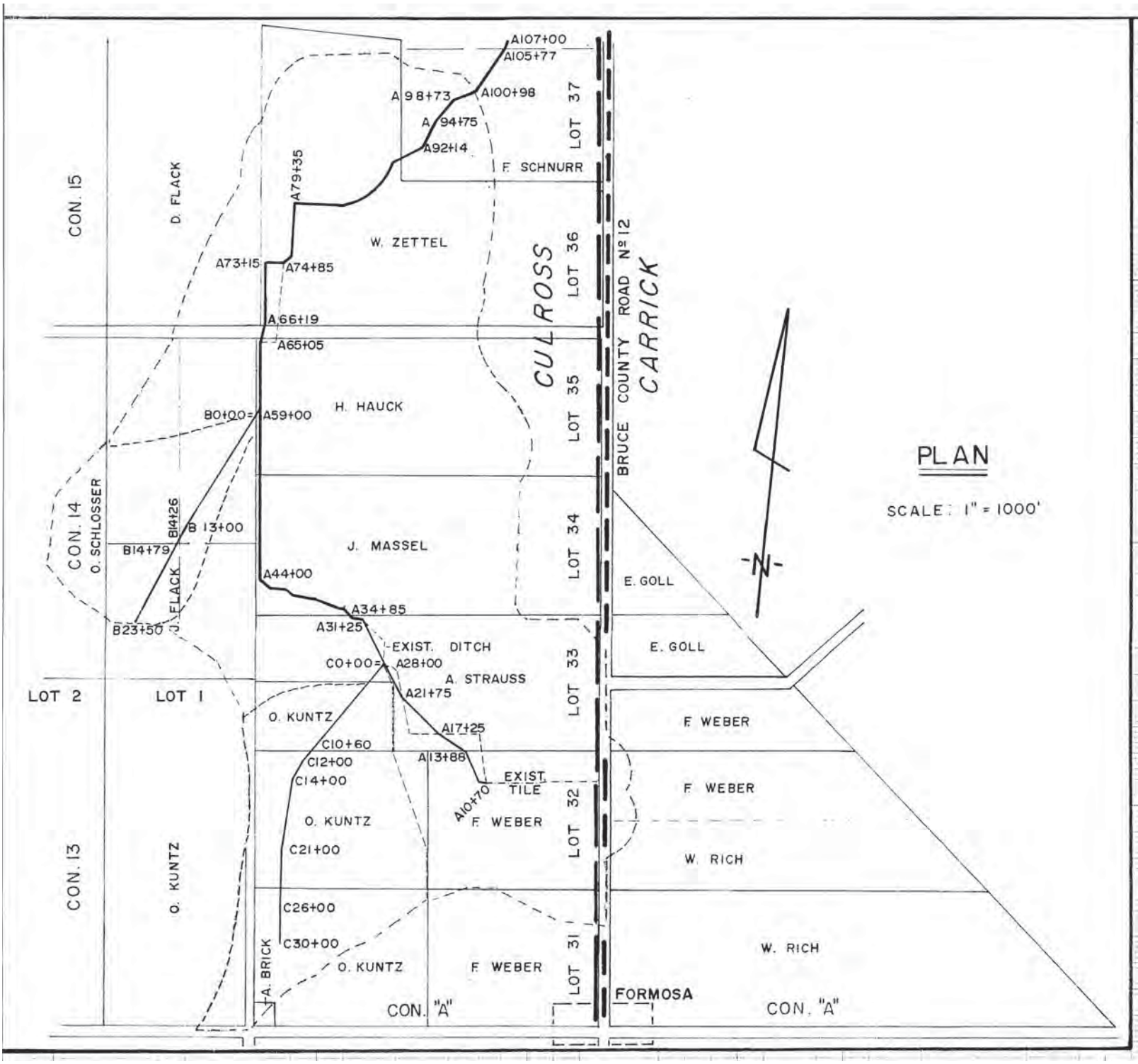
PROJECT Nº	D-74
DRAWING Nº	D-74-1
DRAWN BY:	R.E.A.
DESIGNED BY	G.D.G.
DATE	MARCH 1968
SCALE:	1" HOR. = 400'
	1" VERT. = 10'

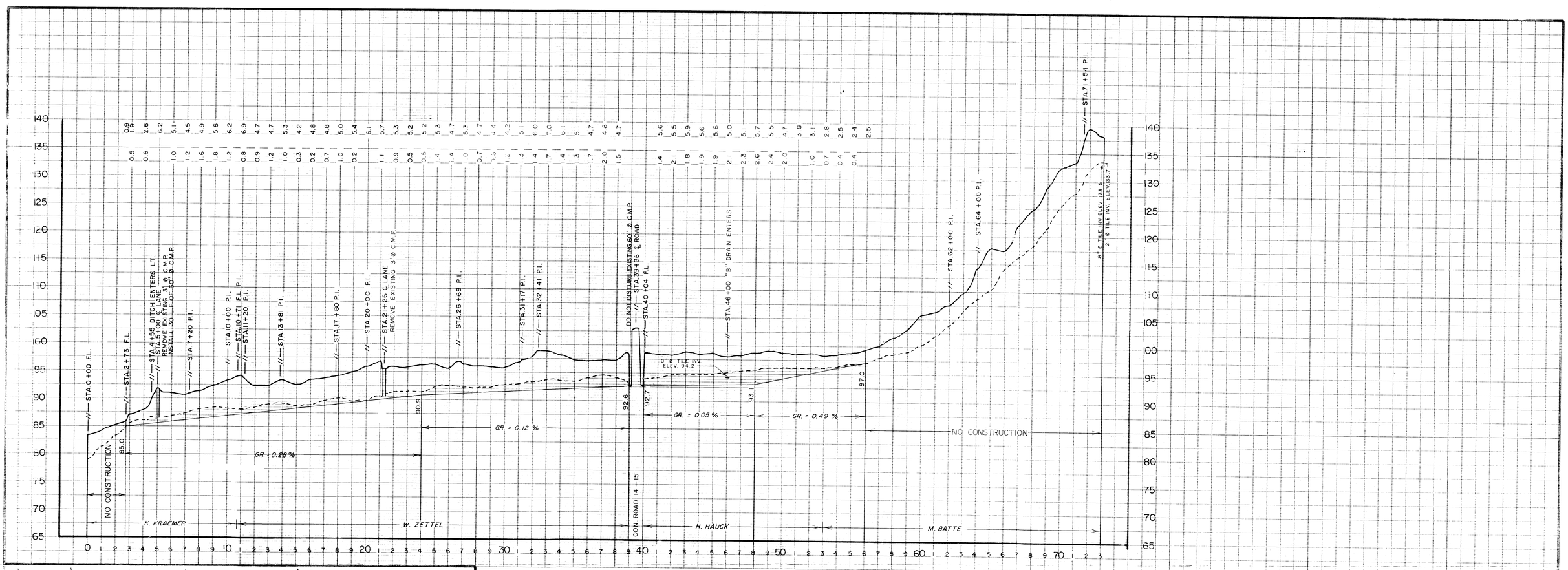
REGISTERED PROFESSIONAL ENGINEER
G. D. GAMSBY
PROVINCE OF ONTARIO

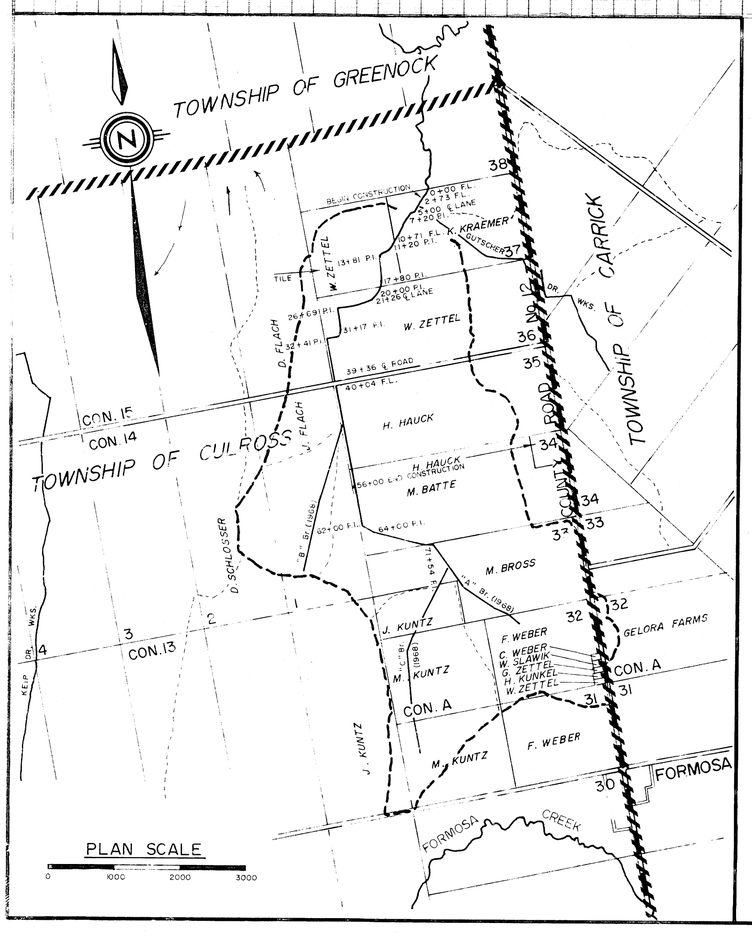
THE HAUCK-ZETTEL MUNICIPAL DRAIN IMPROVEMENT AND EXTENSION TOWNSHIP OF CULROSS

– PLAN AND PROFILE –

GAMSBY AND MANNEROW
CONSULTING PROFESSIONAL ENGINEERS
344 WOOLWICH STREET - GUELPH, ONTARIO


A107+00
A105+77
A 98+73
A100+98
A 94+75
A92+14
A79+35
A73+15
A74+85
A66+19
A65+05
B0+00=A59+00
B14+26
B 13+00
B14+79
B23+50
A44+00
A34+85
A31+25
EXIST. DITCH
C0+00=A28+00
A21+75
A17+25
C10+60
C12+00
C14+00
A13+85
EXIST. TILE
A10+70
C21+00
C26+00
C30+00
CON. 15
CON. 14
CON. 13
D. FLACK
O. SCHLOSSER
O. FLACK
O. KUNTZ
A. BRICK
W. ZETTEL
H. HAUCK
J. MASSEL
A. STRAUSS
F. SCHNURR
E. GOLL
F. WEBER
W. RICH
CULROSS
CARRICK
BRUCE COUNTY ROAD Nº 12
LOT 37
LOT 36
LOT 35
LOT 34
LOT 33
LOT 32
LOT 31
LOT 2
LOT 1
CON. "A"
FORMOSA
PLAN
SCALE: 1" = 1000'
N





OPEN WORK

CLEARING

50' ON SPOIL SIDE AND ALL OVERHANGING LIMBS AND OBSTRUCTIONS CUT AND REMOVED FROM OPPOSITE SIDE

SIDE SLOPES

1.5' HORIZONTAL TO 1.0' VERTICAL THROUGHOUT

BOTTOM WIDTHS

3' BOTTOM THROUGHOUT

LOCATION OF SPOIL

STA. 2 + 73	TO	STA. 10 + 71	WEST SIDE
STA. 10 + 71	TO	STA. 17 + 80	EAST SIDE
STA. 17 + 80	TO	STA. 26 + 69	NORTH SIDE
STA. 26 + 69	TO	STA. 31 + 17	WEST SIDE
STA. 31 + 17	TO	STA. 32 + 41	NORTH SIDE
STA. 32 + 41	TO	STA. 56 + 00	WEST SIDE

NOTES

DO NOT DISTURB EXISTING DITCH BANKS

BENCH MARKS

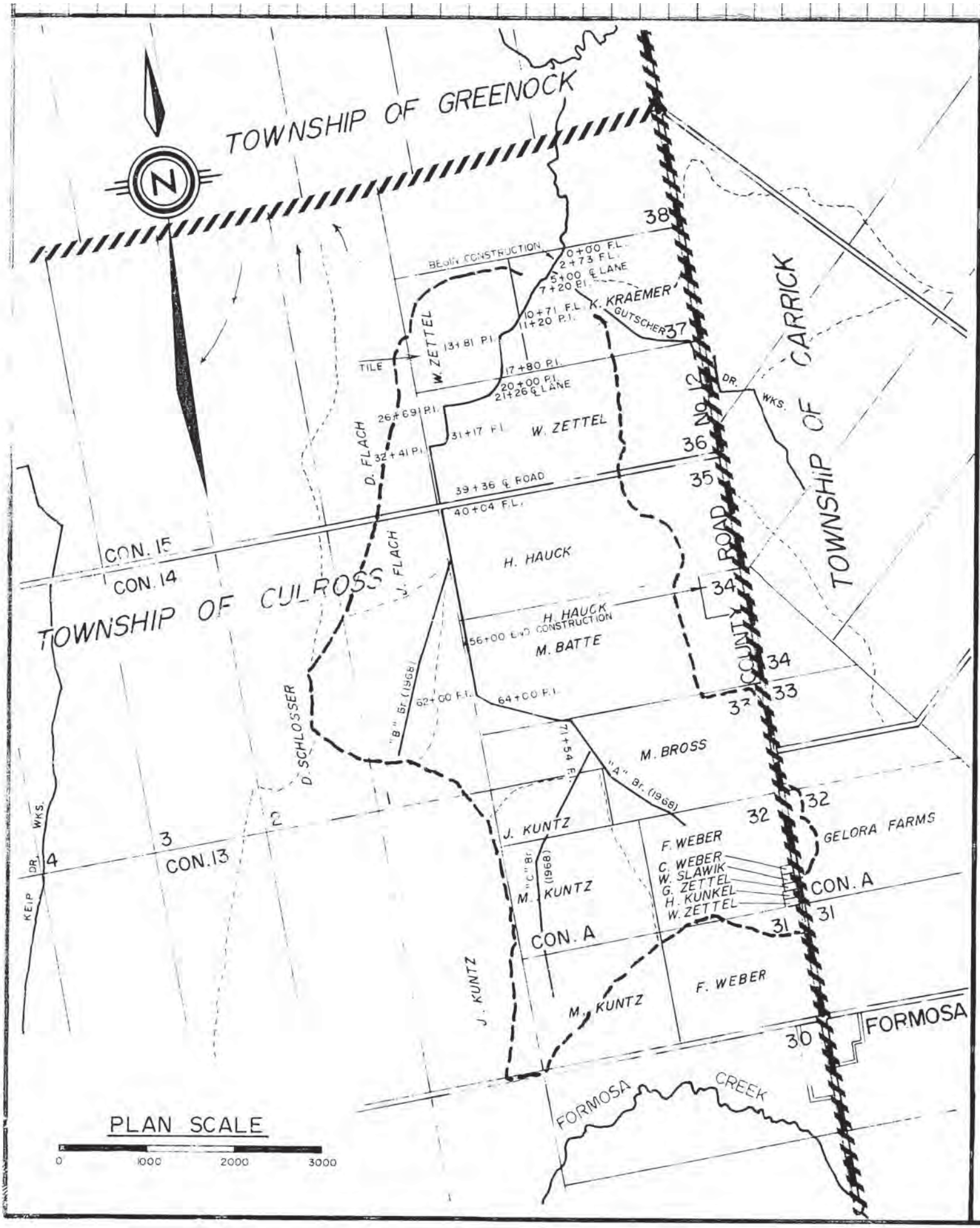
NO.	DESCRIPTION	ELEV.
1	NAIL IN FENCE POST 35' LT. STA. 0 + 00	89.23
2	NAIL IN FENCE POST 25' LT. STA. 10 + 71	95.15
3	NAIL IN CORNER FENCE POST 40' RT. STA. 32 + 41	101.93
4	NAIL IN HYDRO POLE 40' LT. STA. 39 + 91	100.00
5	NAIL IN CORNER FENCE POST STA. 52 + 85	99.34
6	NAIL IN DEAD ELM 35' RT. STA. 62 + 50	110.87
7	NAIL IN DOUBLE MAPLE TREE 45' RT. STA. 71 + 05	138.42

THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORKS, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

REGISTERED PROFESSIONAL ENGINEER
E. W. SHIFFLETT
PROVINCE OF ONTARIO

PROJECT No. D-421	THE HAUCK – ZETTEL MUNICIPAL DRAIN REPAIR AND IMPROVEMENT TOWNSHIP OF CULROSS
DRAWING No. D-421-1	
DRAWN BY: R.B.S.	
DESIGNED BY: C.R.S.	
APPROVED: E.W.S.	
DATE: MARCH, 1977 REVISED MAY, 1977	– PLAN AND PROFILE –
SCALE: AS SHOWN	

GAMSBY AND MANNEROW LIMITED
Consulting Professional Engineers
GUELPH — OWEN SOUND


TOWNSHIP OF GREENOCK
N
38
BEGIN CONSTRUCTION
0+00 F.L.
2+73 F.L.
5+00 ℄ LANE
7+20 P.I.
10+71 F.L.
11+20 P.I.
K. KRAEMER
GUTSCHER
37
W. ZETTEL
13+81 P.I.
TILE
17+80 P.I.
20+00 P.I.
21+26 ℄ LANE
26+69 P.I.
32+41 P.I.
31+17 F.I.
W. ZETTEL
D. FLACH
36
39+36 ℄ ROAD
40+04 F.L.
35
CON. 15
CON. 14
TOWNSHIP OF CULROSS
J. FLACH
H. HAUCK
34
H. HAUCK
56+00 END CONSTRUCTION
M. BATTE
34
33
32
62+00 F.I.
64+00 F.I.
"B" Br. (1968)
D. SCHLOSSER
71+54 F.I.
M. BROSS
"A" Br. (1968)
COUNTY ROAD 12
TOWNSHIP OF CARRICK
DR.
WKS.
J. KUNTZ
32
F. WEBER
GELORA FARMS
C. WEBER
W. SLAWIK
G. ZETTEL
H. KUNKEL
W. ZETTEL
CON. A
31
"C" Br. (1968)
M. KUNTZ
CON. A
F. WEBER
J. KUNTZ
M. KUNTZ
30
FORMOSA
FORMOSA CREEK
KEIP
DR.
WKS.
4
3
CON. 13
PLAN SCALE
0
1000
2000
3000

COUNTY OF BRUCE

REHABILITATION OF FORMOSA NORTH HILL

MUNICIPALITY OF SOUTH BRUCE

COMMENT SHEET

NAME:_____

ADDRESS:_____

CONTACT INFORMATION:_____

COMMENTS:_____

This comment sheet can be submitted by mail, fax or email.

BRUCE COUNTY HIGHWAYS DEPARTMENT
Attention: Brian Knox, P.Eng. County Engineer
P.O. Box 398, 30 Park Street, Walkerton ON N0G 2V0
Phone: 519-881-2400 Fax: 519-507-3030 E-mail: bknox@brucecounty.on.ca

Comments and information received are being collected in accordance with the Municipal Freedom of Information and Protection Act. With the exception of personal information, all comments will become part of the public record.