



Parcs
Canada

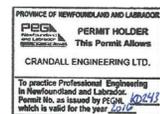
Parks
Canada

HIGHWAY 430 SEGMENT "C" REHABILITATION GROS MORNE NATIONAL PARK ROCKY HARBOUR, NL

DRAWING LIST

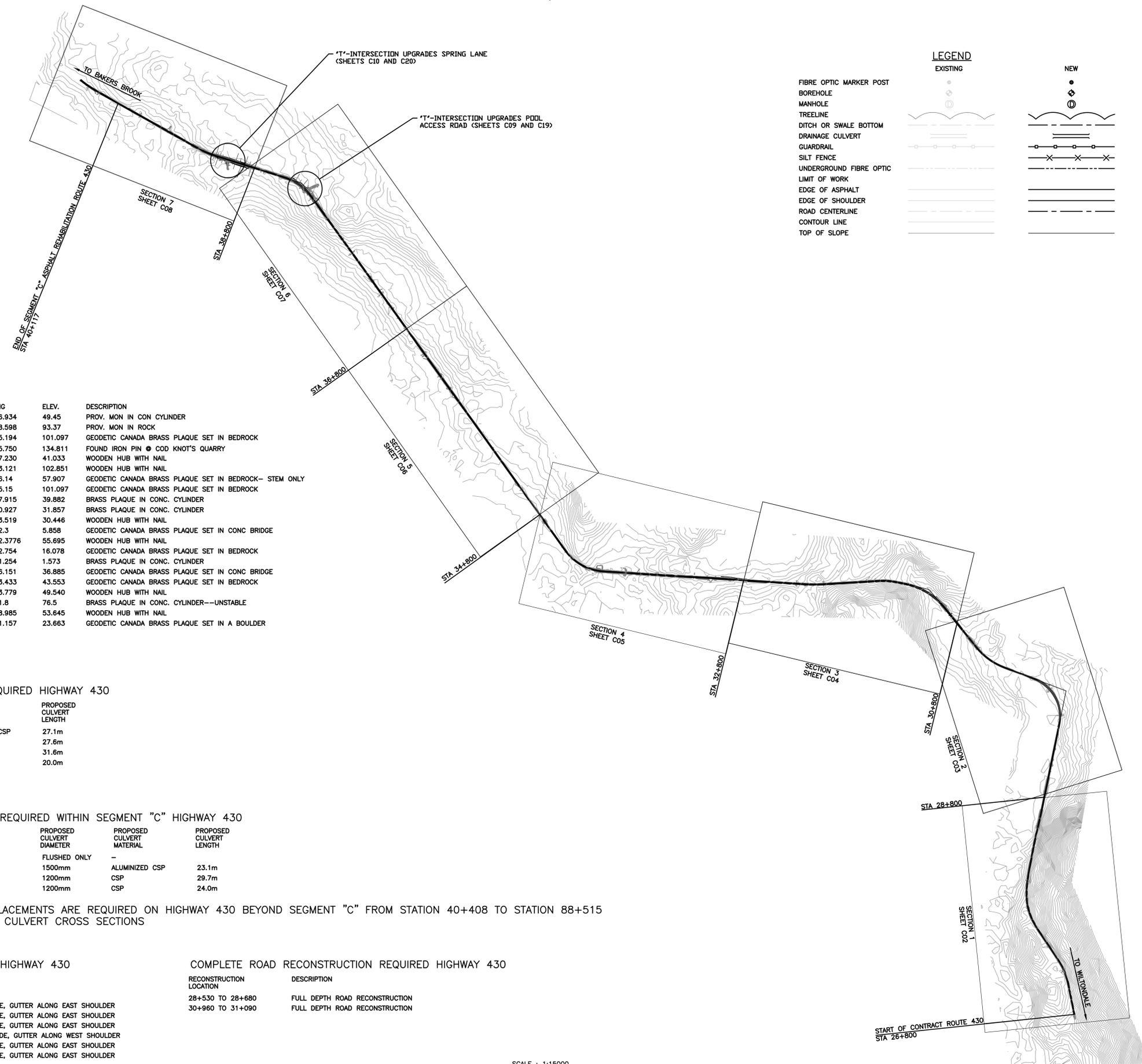
CIVIL / SEGMENT "C" REHABILITATION

- C01 OVERALL SITE PLAN
- C02 HIGHWAY 430 PLAN AND PROFILE STA 26+800 TO STA 28+800
- C03 HIGHWAY 430 PLAN AND PROFILE STA 28+800 TO STA 30+800
- C04 HIGHWAY 430 PLAN AND PROFILE STA 30+800 TO STA 32+800
- C05 HIGHWAY 430 PLAN AND PROFILE STA 32+800 TO STA 34+800
- C06 HIGHWAY 430 PLAN AND PROFILE STA 34+800 TO STA 36+800
- C07 HIGHWAY 430 PLAN AND PROFILE STA 36+800 TO STA 38+800
- C08 HIGHWAY 430 PLAN AND PROFILE STA 38+800 TO STA 40+120
- C09 HIGHWAY 430 INTERSECTION UPGRADE POOL ACCESS ROAD
- C10 HIGHWAY 430 INTERSECTION UPGRADE SPRING LANE
- C11 CULVERTS PLAN AND SECTION STA 28+859 AND STA 29+096
- C12 CULVERTS PLAN AND SECTION STA 30+900 AND STA 30+990
- C13 CULVERTS PLAN AND SECTION STA 32+790 AND STA 32+923
- C14 CULVERTS PLAN AND SECTION STA 34+731
- C15 MISCELLANEOUS DETAILS AND CROSS SECTIONS
- C16 MISCELLANEOUS DETAILS AND CROSS SECTIONS
- C17 TYPICAL ROAD CROSS SECTIONS
- C18 TYPICAL INTERSECTION CROSS SECTIONS
- C19 PROPOSED "T" - INTERSECTION UPGRADES POOL ACCESS ROAD
- C20 PROPOSED "T" - INTERSECTION UPGRADES SPRING LANE



PCA PROJECT NO. 678





LEGEND

| EXISTING | NEW |
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CONTROL POINTS

| POINT NAME | EASTING | NORTHING | ELEV. | DESCRIPTION |
|------------|------------|--------------|---------|--|
| 37G3028 | 434354.804 | 5491426.934 | 49.45 | PROV. MON IN CON CYLINDER |
| 37G3027 | 435639.712 | 5490498.598 | 93.37 | PROV. MON IN ROCK |
| 76F766 | 438092.716 | 5491505.194 | 101.097 | GEODETIC CANADA BRASS PLAQUE SET IN BEDROCK |
| F.I.P #2 | 437818.209 | 5491085.750 | 134.811 | FOUND IRON PIN @ COD KNOT'S QUARRY |
| PWC 3-15 | 435618.021 | 5491677.230 | 41.033 | WOODEN HUB WITH NAIL |
| PWC 4-15 | 437981.590 | 5491473.121 | 102.851 | WOODEN HUB WITH NAIL |
| 76F767 | 436465.57 | 5491556.14 | 57.907 | GEODETIC CANADA BRASS PLAQUE SET IN BEDROCK- STEM ONLY |
| 76F766 | 438092.66 | 5491505.15 | 101.097 | GEODETIC CANADA BRASS PLAQUE SET IN BEDROCK |
| F-2 1972 | 438836.232 | 5491317.915 | 39.882 | BRASS PLAQUE IN CONC. CYLINDER |
| C-1 1972 | 438989.814 | 5491080.927 | 31.857 | BRASS PLAQUE IN CONC. CYLINDER |
| PWC 5-15 | 439006.400 | 5491073.519 | 30.446 | WOODEN HUB WITH NAIL |
| HSF1-1972 | 439459.1 | 5490712.3 | 5.858 | GEODETIC CANADA BRASS PLAQUE SET IN CONC BRIDGE |
| PWC 6-15 | 439610.439 | 5488542.3776 | 55.695 | WOODEN HUB WITH NAIL |
| 89F194 | 439665.050 | 5489252.754 | 16.078 | GEODETIC CANADA BRASS PLAQUE SET IN BEDROCK |
| H-2 1972 | 439810.549 | 5489931.254 | 1.573 | BRASS PLAQUE IN CONC. CYLINDER |
| 89F196 | 436082.216 | 5491566.151 | 36.885 | GEODETIC CANADA BRASS PLAQUE SET IN CONC BRIDGE |
| 89F197 | 434981.074 | 5492603.433 | 43.553 | GEODETIC CANADA BRASS PLAQUE SET IN BEDROCK |
| PWC 7-15 | 434797.034 | 5492793.779 | 49.540 | WOODEN HUB WITH NAIL |
| B-2 1972 | 433430.8 | 5494671.8 | 76.5 | BRASS PLAQUE IN CONC. CYLINDER--UNSTABLE |
| PWC 8-15 | 432487.941 | 5495218.985 | 53.645 | WOODEN HUB WITH NAIL |
| 76F927 | 431370.082 | 5495801.157 | 23.663 | GEODETIC CANADA BRASS PLAQUE SET IN A BOULDER |

NEW CULVERT CONSTRUCTION REQUIRED HIGHWAY 430

| CULVERT LOCATION (STATION) | PROPOSED CULVERT DIAMETER | PROPOSED CULVERT MATERIAL | PROPOSED CULVERT LENGTH |
|----------------------------|---------------------------|---------------------------|-------------------------|
| 28+861 | 1200mm x 2 | ALUMINIZED CSP | 27.1m |
| 30+900 | 900mm | CSP | 27.6m |
| 30+990 | 900mm | CSP | 31.6m |
| 32+790 | 1200mm | CSP | 20.0m |

EXISTING CULVERT REPLACEMENT REQUIRED WITHIN SEGMENT "C" HIGHWAY 430

| CULVERT LOCATION (STATION) | EXISTING CULVERT DIAMETER | EXISTING CULVERT MATERIAL | PROPOSED CULVERT DIAMETER | PROPOSED CULVERT MATERIAL | PROPOSED CULVERT LENGTH |
|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-------------------------|
| 28+065 | 1200mm | STEEL | FLUSHED ONLY | - | - |
| 29+096 | 1500mm | STEEL | 1500mm | ALUMINIZED CSP | 23.1m |
| 32+923 | 900mm | STEEL | 1200mm | CSP | 29.7m |
| 34+731 | 900mm | STEEL | 1200mm | CSP | 24.0m |

*AN ADDITIONAL 86 CULVERT REPLACEMENTS ARE REQUIRED ON HIGHWAY 430 BEYOND SEGMENT "C" FROM STATION 40+408 TO STATION 88+515 REFER TO DWG C25 TO C35 FOR CULVERT CROSS SECTIONS

NEW ASPHALT GUTTER REQUIRED HIGHWAY 430

| ASPHALT GUTTER LOCATION(STATION) | DESCRIPTION OF GUTTER LOCATION |
|----------------------------------|---|
| 27+750 TO 28+000 | HIGHWAY @ 7.6% GRADE, GUTTER ALONG EAST SHOULDER |
| 28+350 TO 28+450 | HIGHWAY @ 5.9% GRADE, GUTTER ALONG EAST SHOULDER |
| 30+400 TO 30+600 | HIGHWAY @ 6.0% GRADE, GUTTER ALONG EAST SHOULDER |
| 31+300 TO 31+600 | HIGHWAY @ 10.0% GRADE, GUTTER ALONG WEST SHOULDER |
| 32+200 TO 32+500 | HIGHWAY @ 7.0% GRADE, GUTTER ALONG EAST SHOULDER |
| 37+550 TO 37+900 | HIGHWAY @ 6.9% GRADE, GUTTER ALONG EAST SHOULDER |

COMPLETE ROAD RECONSTRUCTION REQUIRED HIGHWAY 430

| RECONSTRUCTION LOCATION | DESCRIPTION |
|-------------------------|--------------------------------|
| 28+530 TO 28+680 | FULL DEPTH ROAD RECONSTRUCTION |
| 30+960 TO 31+090 | FULL DEPTH ROAD RECONSTRUCTION |



MONCTON 1077 Prince St. Saint John 123 Prince William Street Fredericton 504 Highway Street
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| revisions | | date |

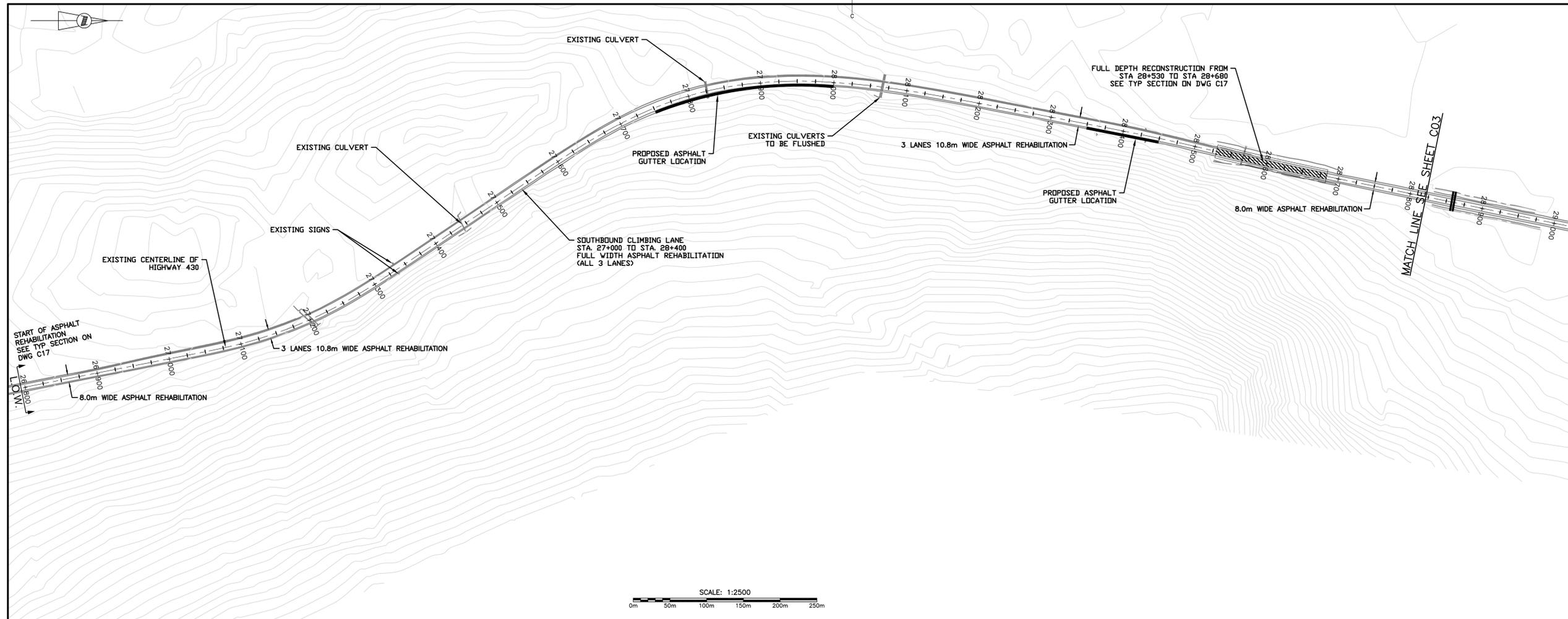
project project

**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

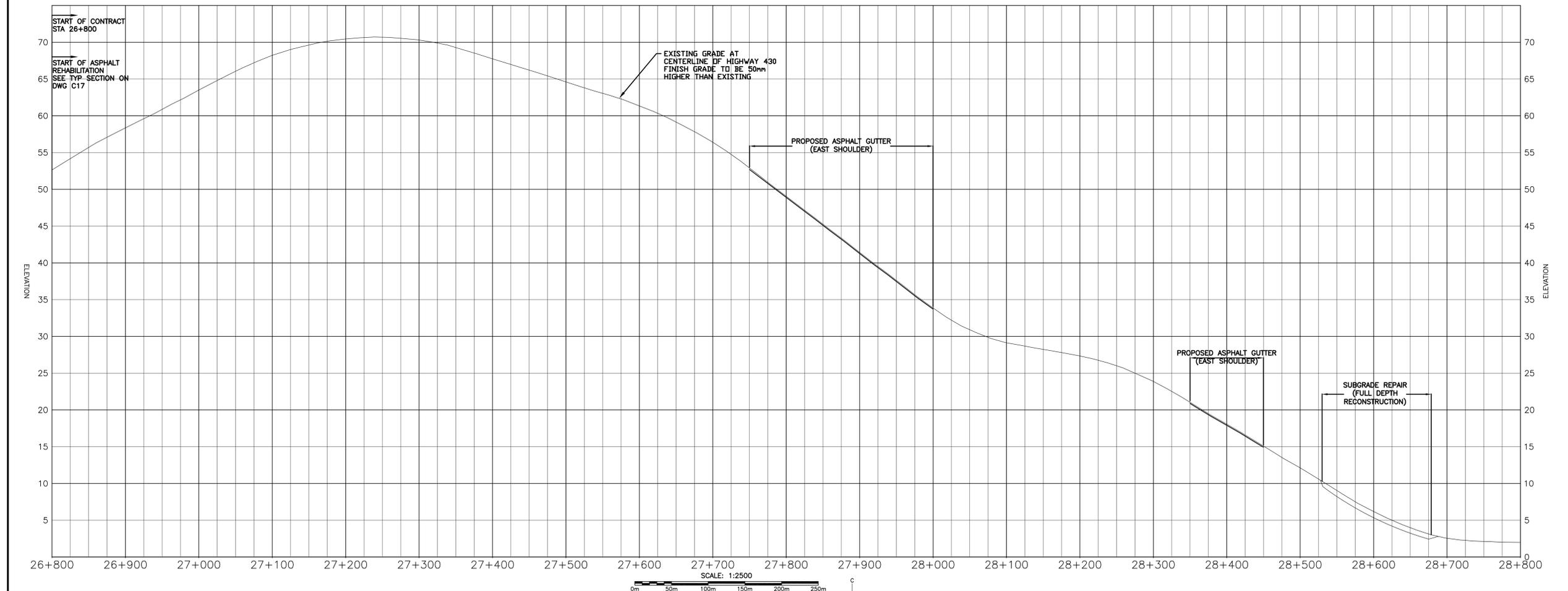
drawing design

OVERALL SITE PLAN

| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Submission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C01 | |



MONCTON 1275 St. George Blvd. 1275 St. George Blvd. 1275 St. George Blvd.
 S2C 2S2, N.B. Canada S2C 2S2, N.B. Canada S2C 2S2, N.B. Canada
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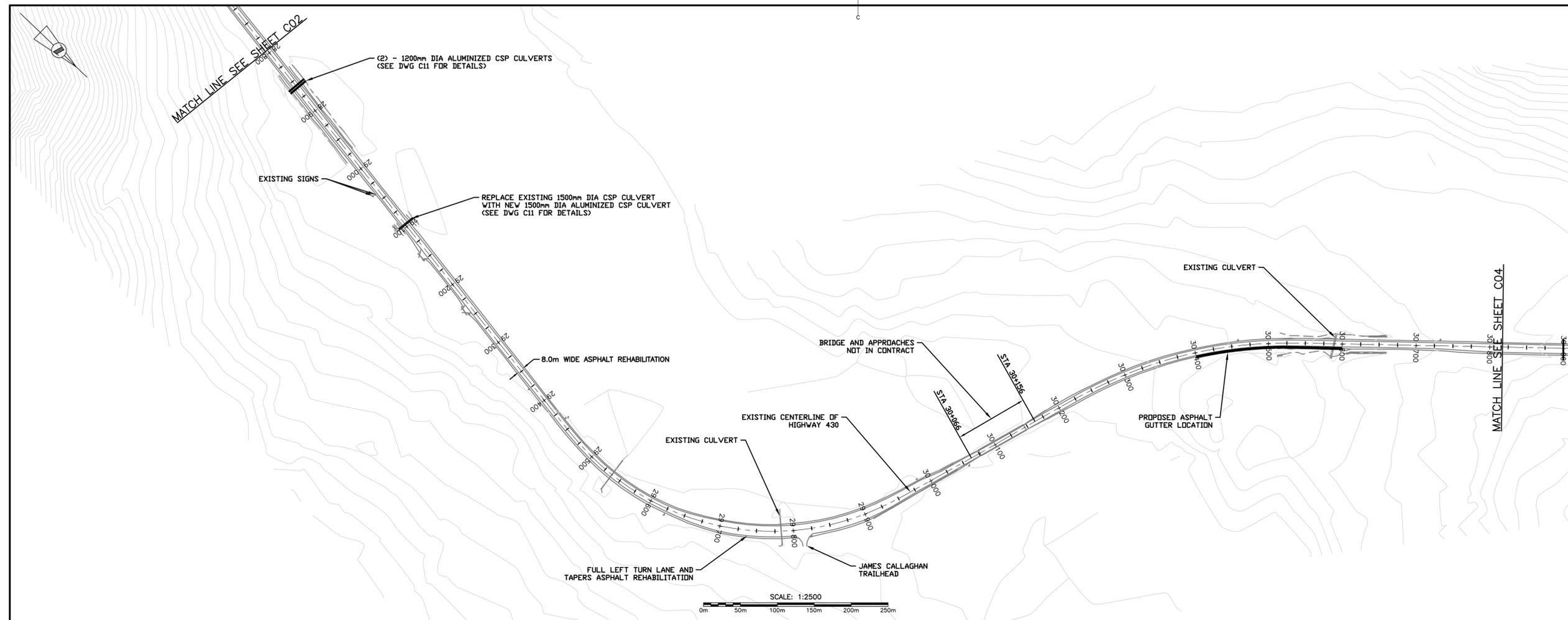
HIGHWAY 430 SEGMENT "C" REHABILITATION

HIGHWAY 430 PLAN AND PROFILE STA 26+800 TO STA 28+800

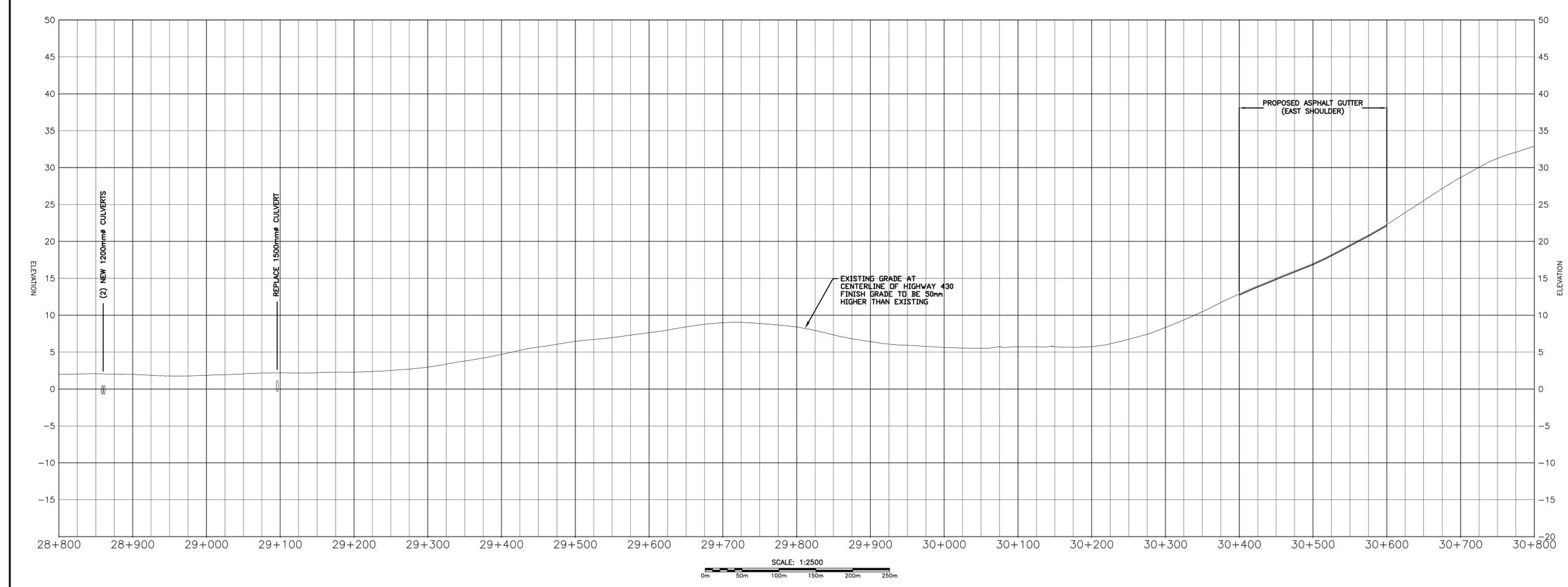
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| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C02 | |



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SCALE: 1:2500
0m 50m 100m 150m 200m 250m



SCALE: 1:2500
0m 50m 100m 150m 200m 250m

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**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

drawing design
**HIGHWAY 430
PLAN AND PROFILE
STA 28+800 TO
STA 30+800**

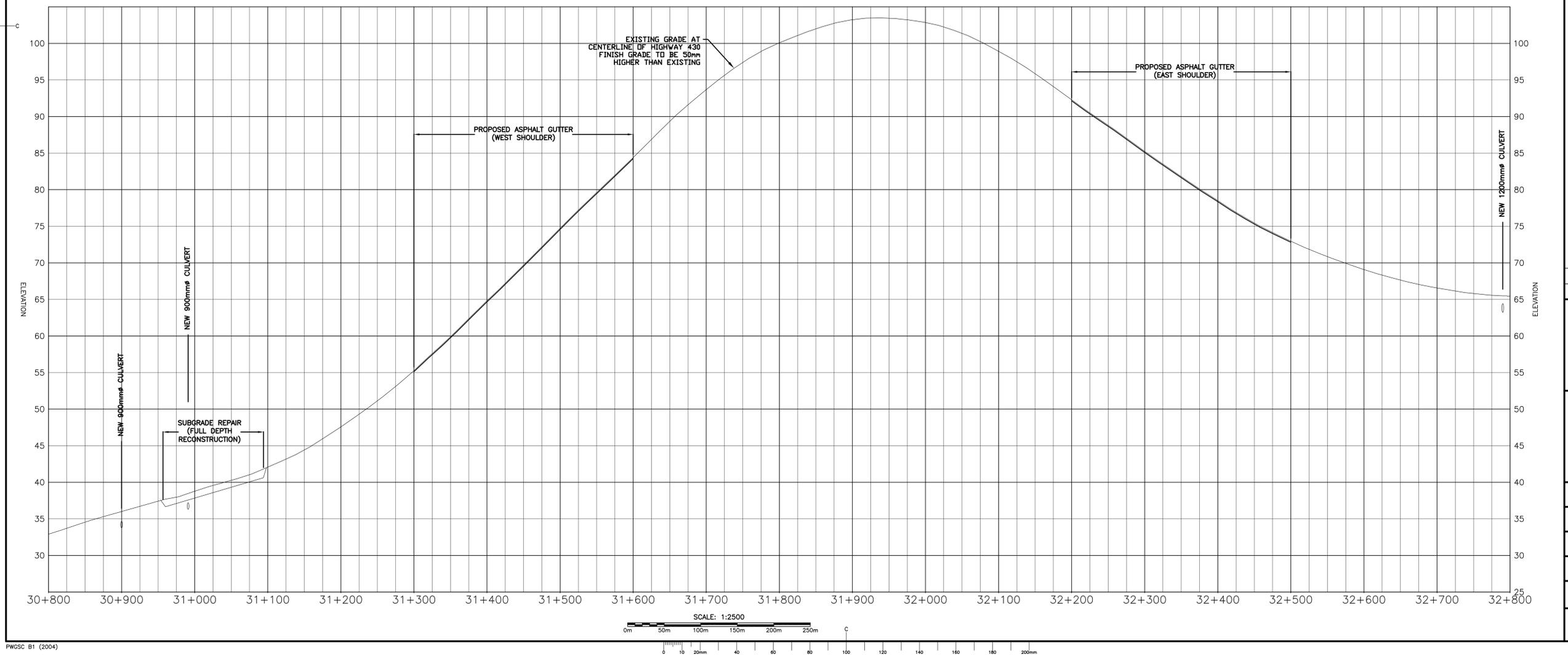
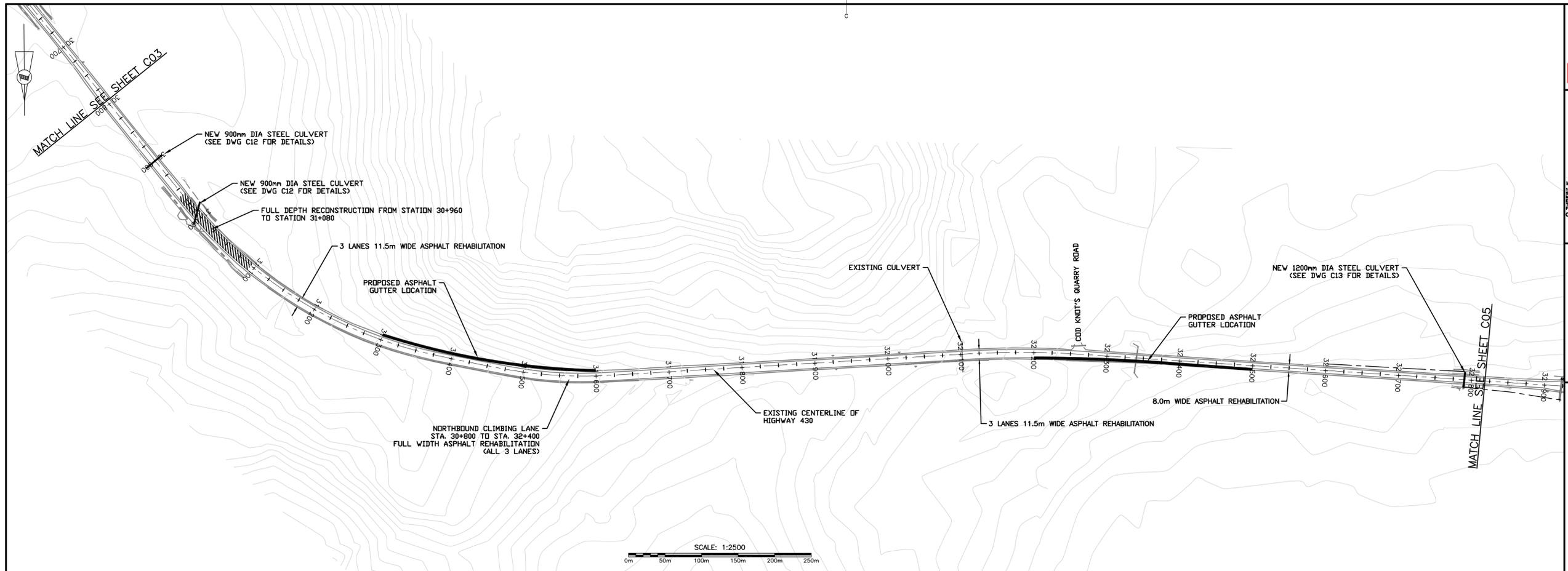
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| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Submission |
| PCA Project Manager | Administrateur de projets APC |

project number no. du projet
PCA NO.: 678

drawing no. no. du dessin
C03



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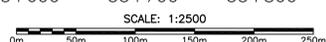
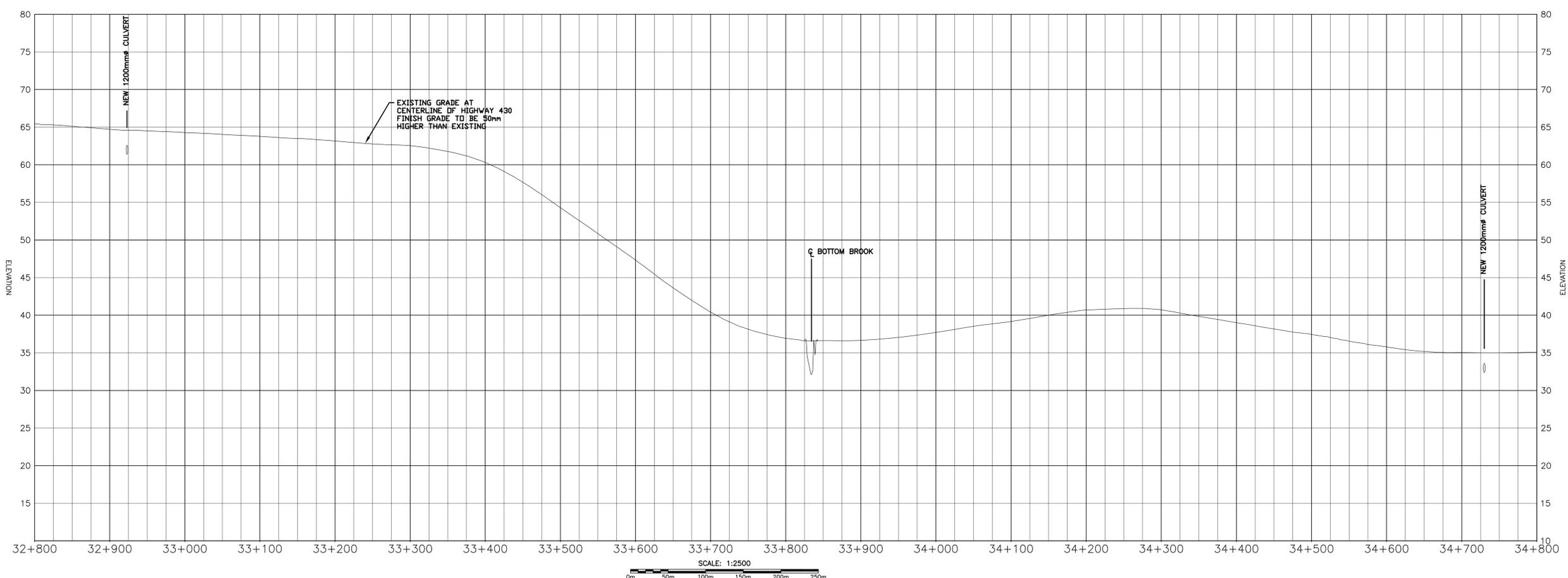
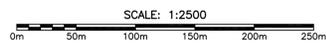
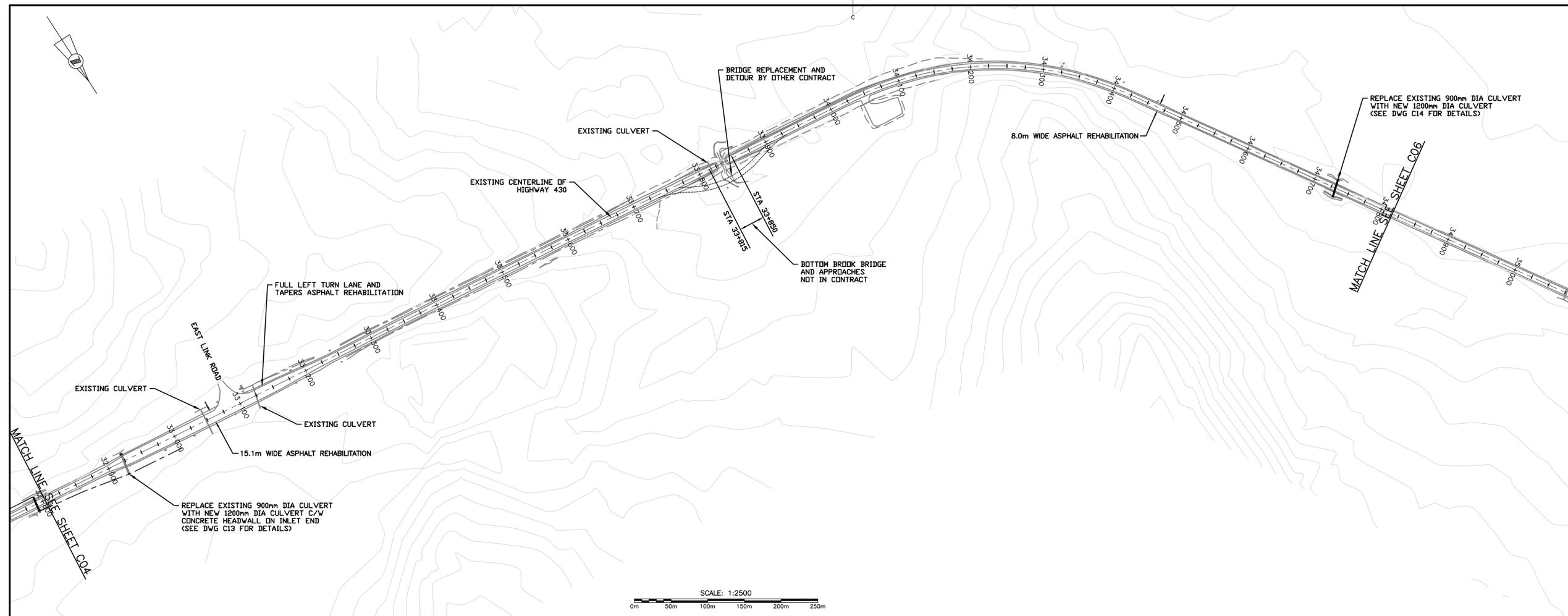
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| revisions | | date |
| project | | project |

**HIGHWAY 430
 SEGMENT "C"
 REHABILITATION**

designed G. FLANAGAN conçu
 date OCTOBER 23, 2015
 drawn A.CALDWELL dessiné
 date OCTOBER 23, 2015
 approved J.BABIN approuvé
 date OCTOBER 23, 2015
 Tender Soumission
 PCA Project Manager Administrateur de projets APC
 project number no. du projet
PCA NO.: 678
 drawing no. no. du dessin
C04



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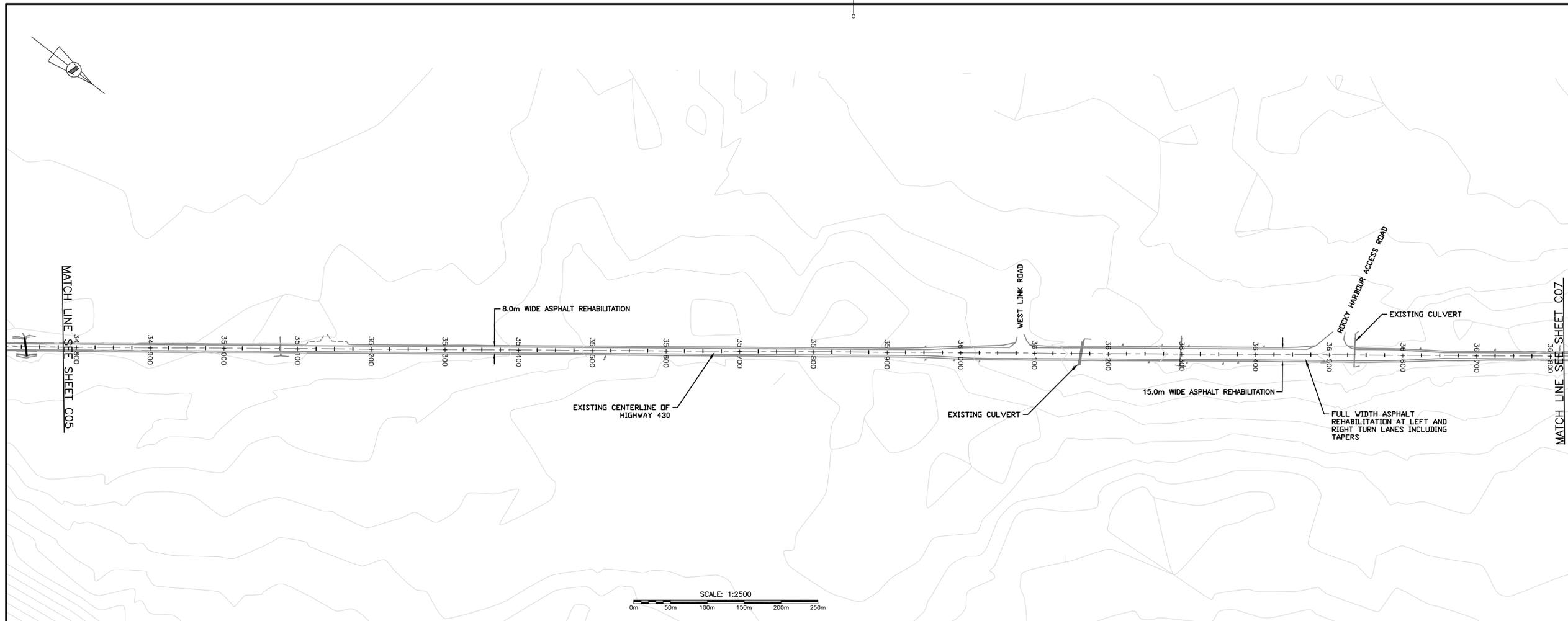
project project
**HIGHWAY 430
 SEGMENT "C"
 REHABILITATION**

drawing design
**HIGHWAY 430
 PLAN AND PROFILE
 STA 32+800 TO
 STA 34+800**

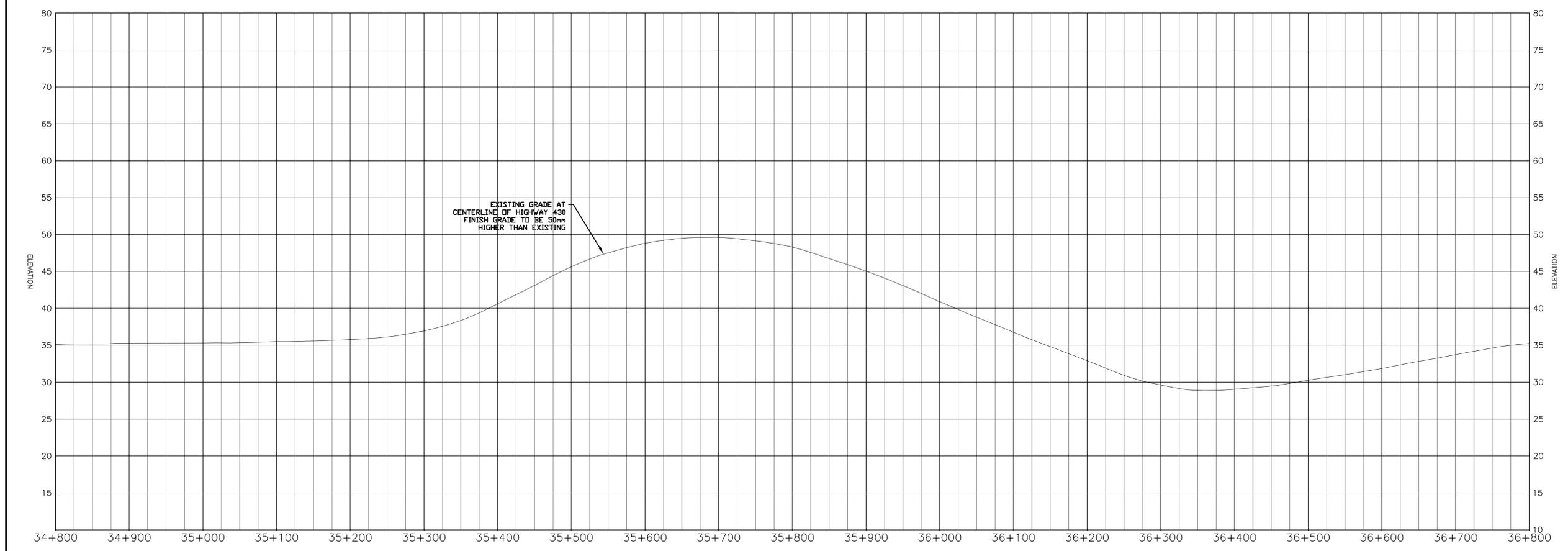
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| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C05 | |



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| revisions | | date |
| project | | project |

**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

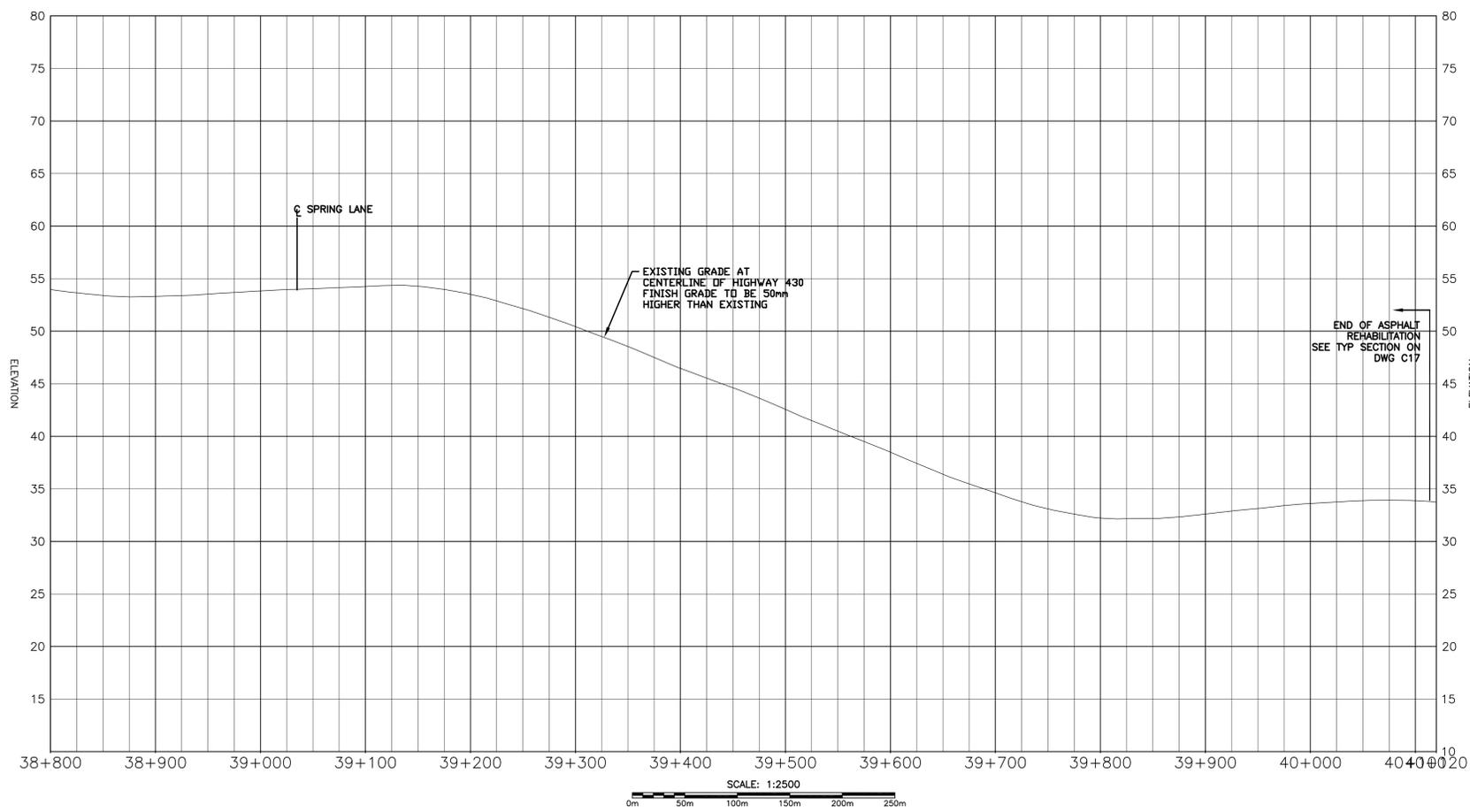
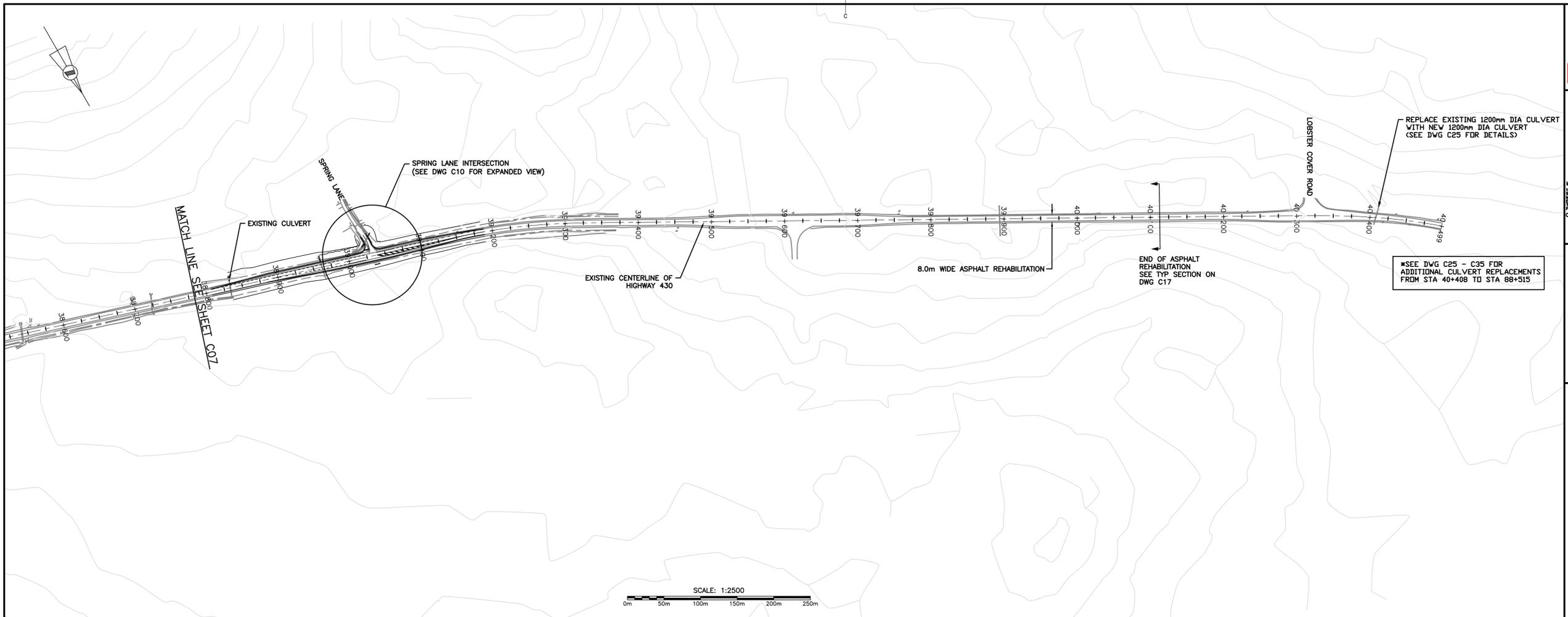
drawing design
**HIGHWAY 430
PLAN AND PROFILE
STA 34+800 TO
STA 36+800**

designed G. FLANAGAN conçu
 date OCTOBER 23, 2015
 drawn A.CALDWELL dessiné
 date OCTOBER 23, 2015
 approved J.BABIN approuvé
 date OCTOBER 23, 2015
 Tender Soumission

PCA Project Manager Administrateur de projets APC
PCA NO.: 678
 drawing no. no. du dessin
C06



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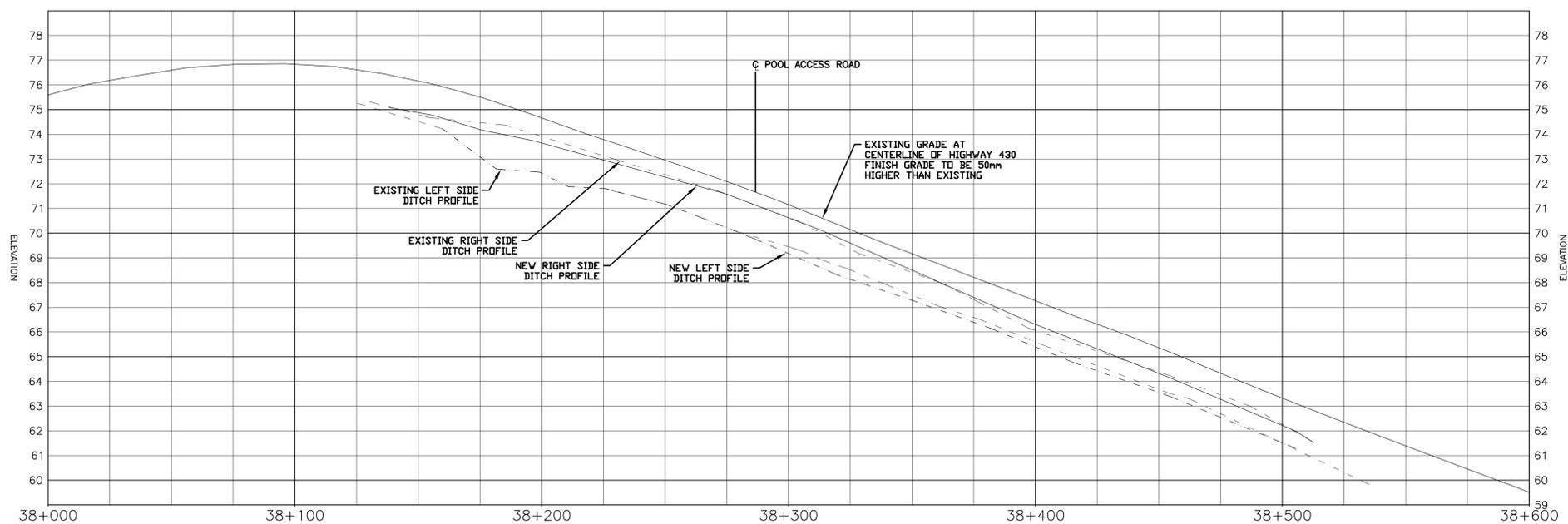
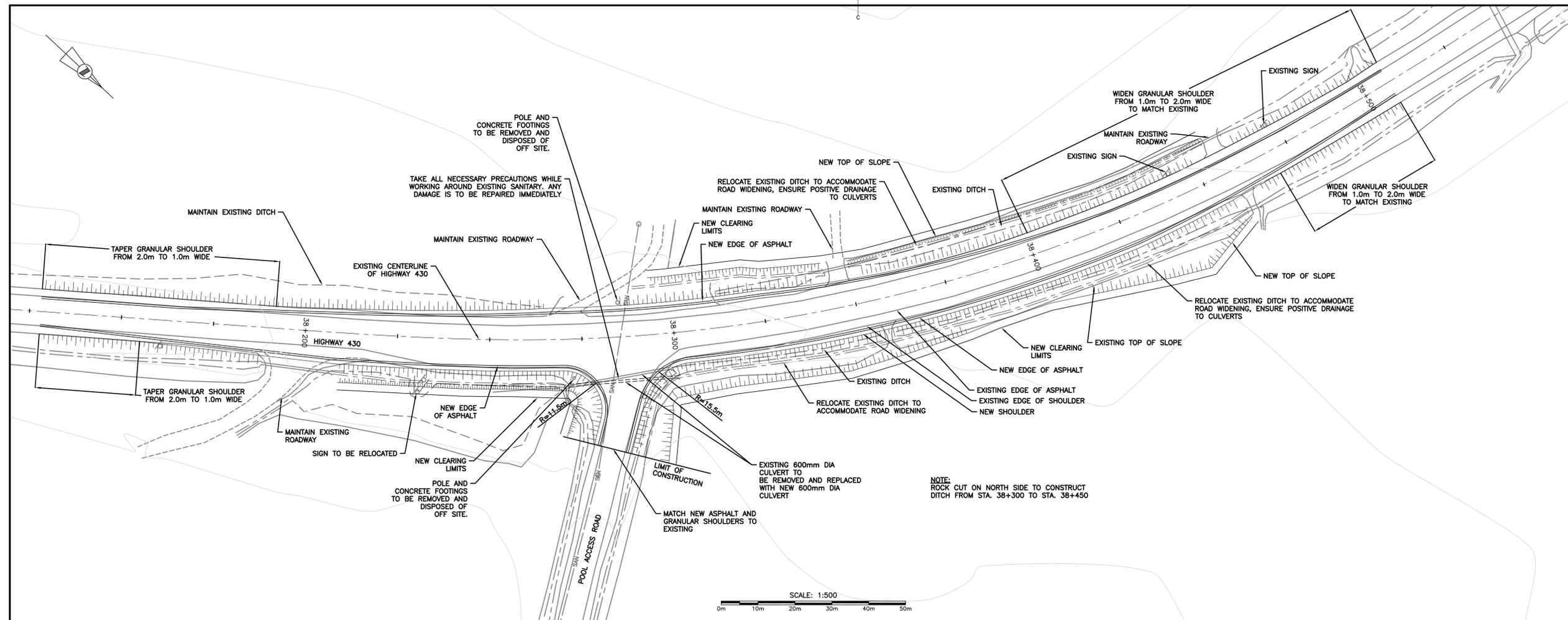
**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

**HIGHWAY 430
PLAN AND PROFILE
STA 38+800 TO
STA 40+120**

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| date OCTOBER 23, 2015 | |
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| date OCTOBER 23, 2015 | |
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| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C08 | |



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NEWFOUNDLAND 1000 St. John's Street 506 752-1000
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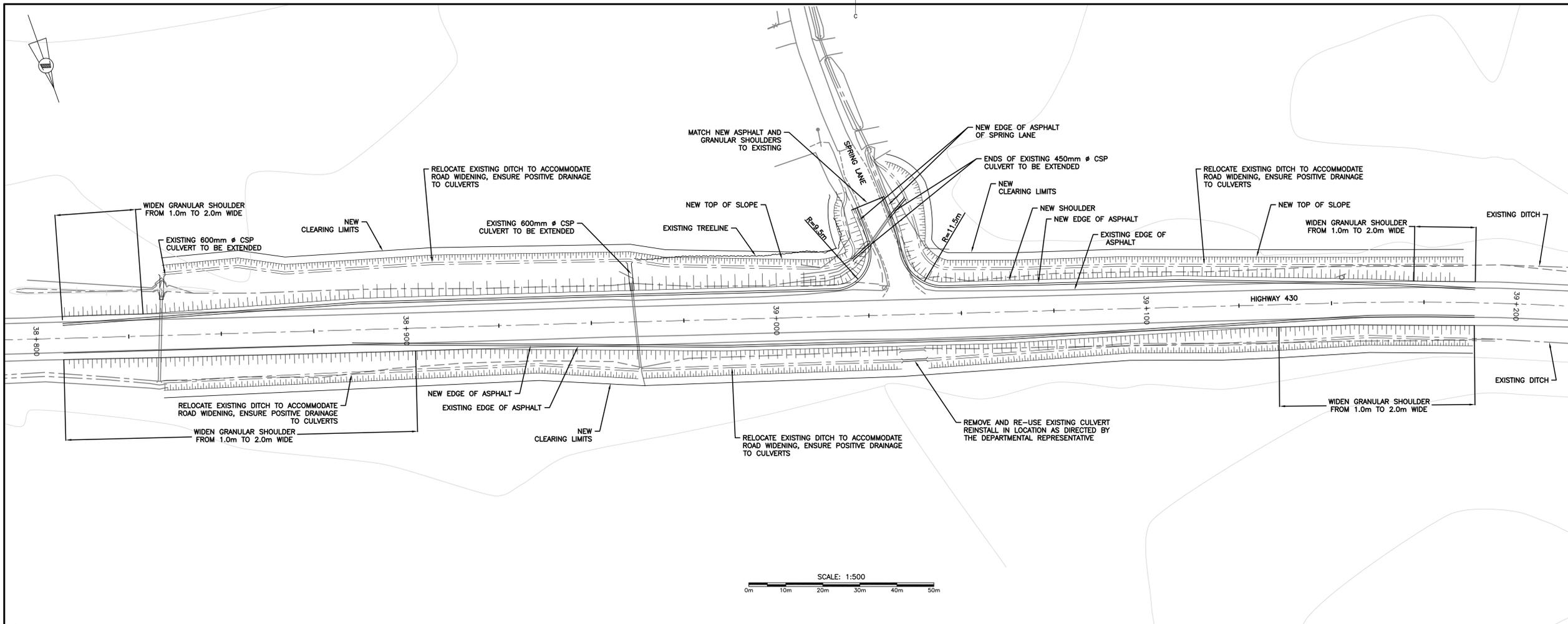
**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

**HIGHWAY 430
INTERSECTION UPGRADE
POOL ACCESS ROAD**

| | |
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| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
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| date OCTOBER 23, 2015 | |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C09 | |



MONCTON 1277 Ave. St. George Blvd. 123 Prince William Street
 2025 2025, N.B. Canada 2025 2025, N.B. Canada
 Tel: (506) 852-2277 Fax: (506) 852-2277 Tel: (506) 852-2277 Fax: (506) 852-2277
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 This Permit Allows
 CRANDALL ENGINEERING LTD.
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 in Newfoundland and Labrador.
 Permit No. as issued by PEG, 2014/17
 which is valid for the year 2016

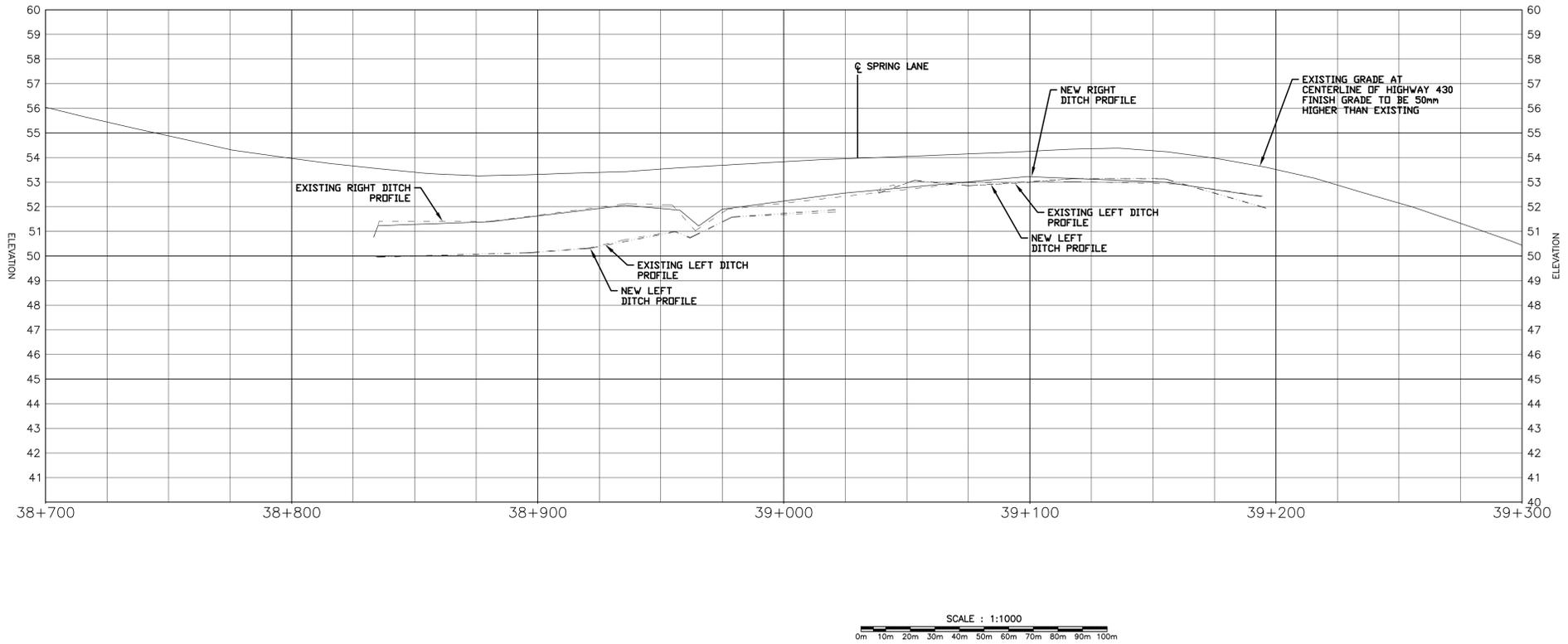


| | | |
|-----------|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
| revisions | | date |
| project | | project |

**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

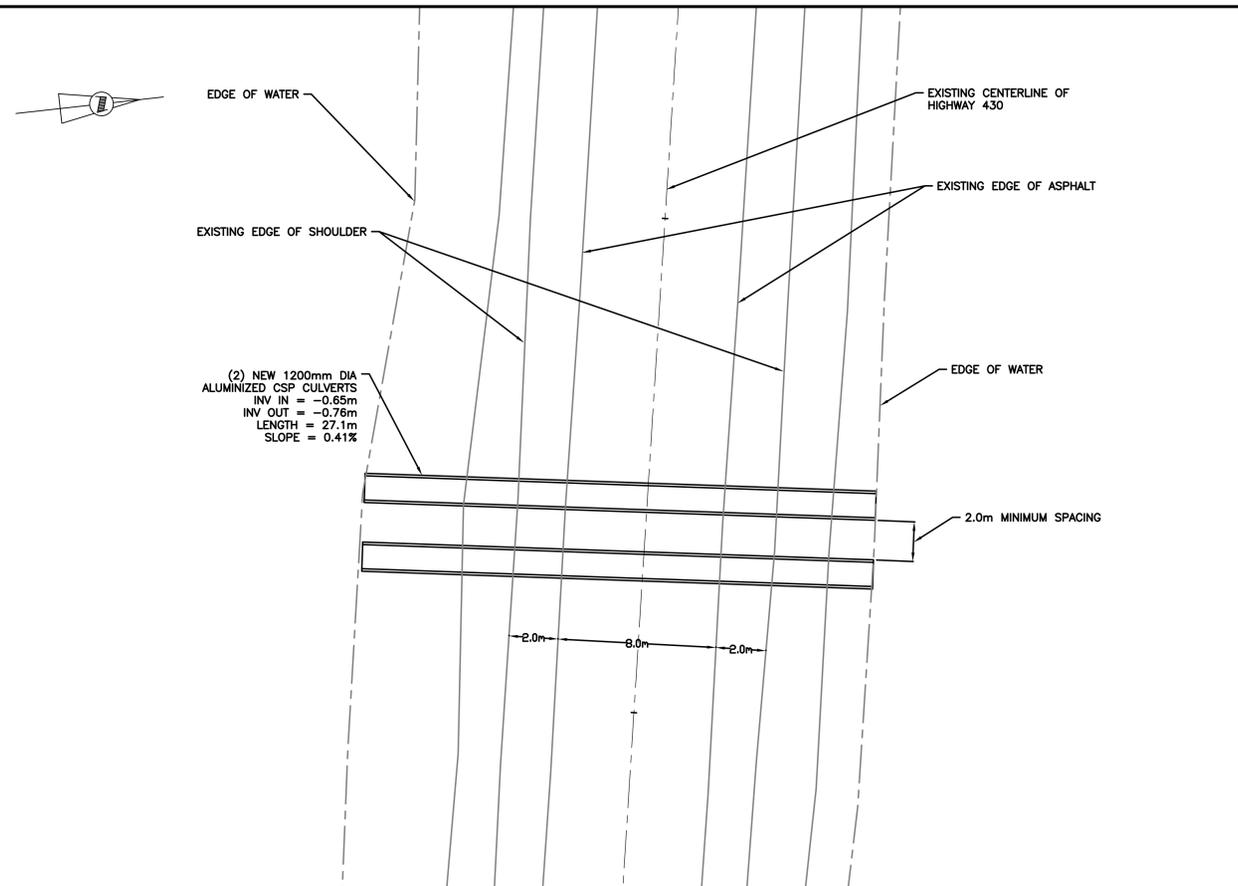
**HIGHWAY 430
INTERSECTION UPGRADE
SPRING LANE**

| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Submission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C10 | |

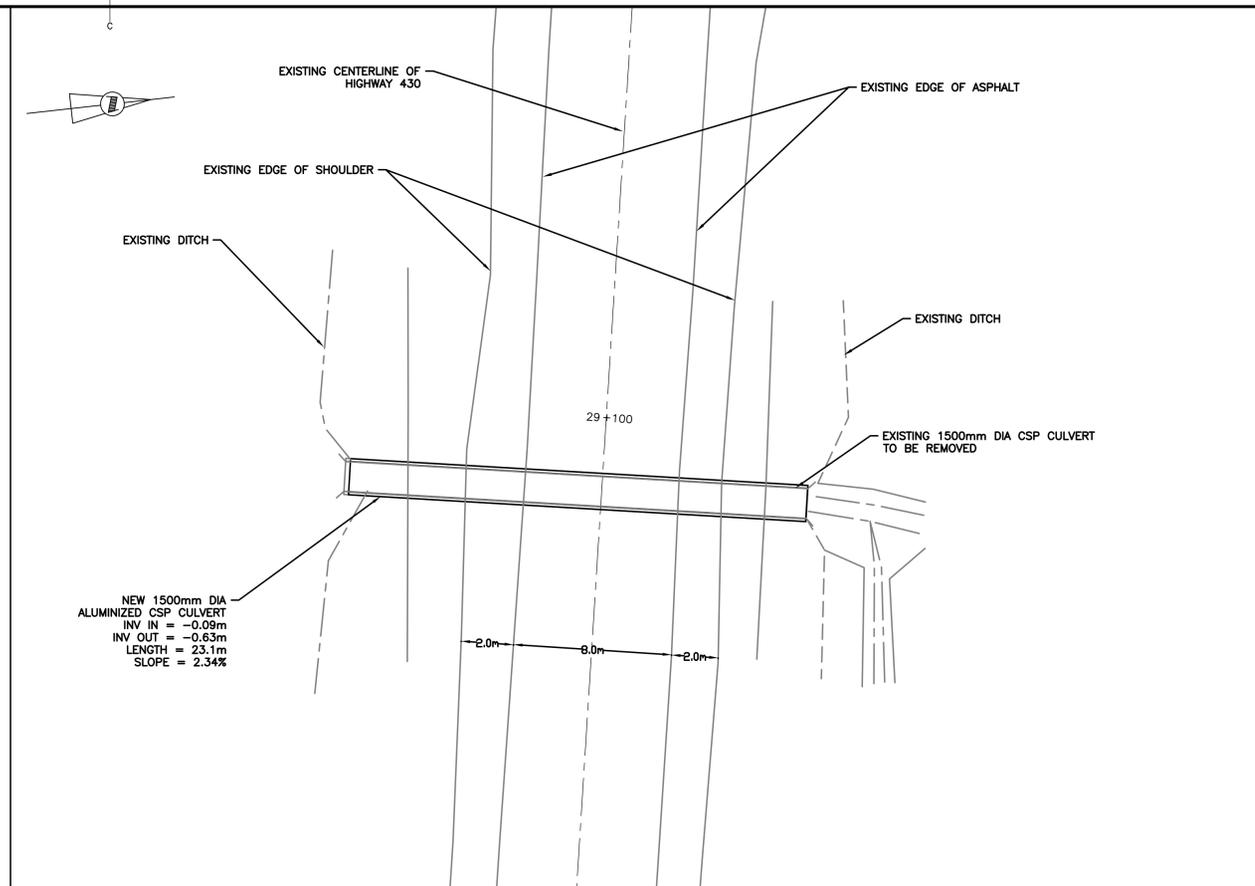




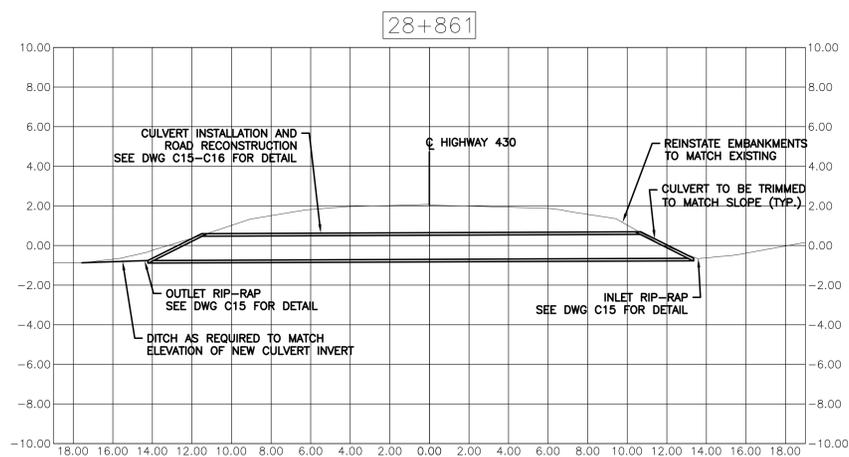
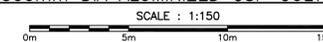
MONCTON 1077 Ave. St. George Blvd. 2000 2000, N.B. Canada
 SAINT JOHN 123 Prince William Street 2nd Floor, N.B. Canada
 FREDERICTON 504 Regent Street 2nd Floor, N.B. Canada
 TEL (506) 857-2777 TEL (506) 853-2883 TEL (506) 661-4400
 FAX (506) 857-2343 FAX (506) 853-2880 FAX (506) 661-4400
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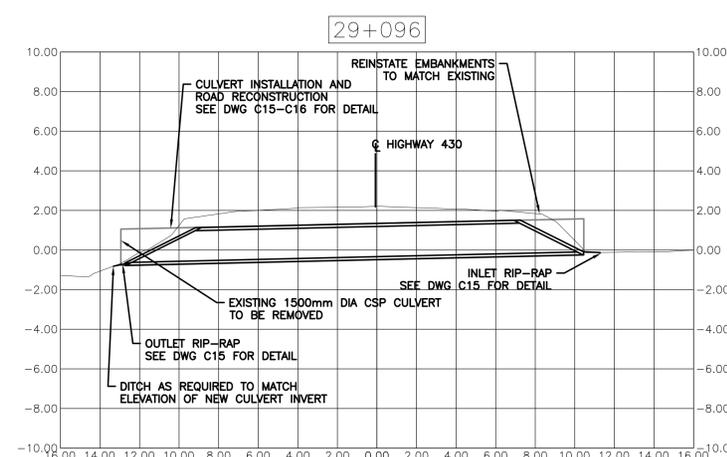
(2) NEW 1200mm DIA ALUMINIZED CSP CULVERTS STA 28+861



REPLACE EXISTING 1500mm DIA CSP CULVERT WITH NEW 1500mm DIA ALUMINIZED CSP CULVERT STA 29+096



PROFILE VIEW OF 2 NEW 1200mm DIA ALUMINIZED CSP CULVERTS



PROFILE VIEW OF NEW 1500mm DIA ALUMINIZED CSP CULVERT



| | | |
|-----------|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
| revisions | | date |

HIGHWAY 430 SEGMENT "C" REHABILITATION

CULVERTS PLAN AND SECTION STA 28+859 AND STA 29+096

| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C11 | |



MONCTON 1077 Blvd. St. George Blvd. 133 Prince William Street
 2002 2002 2002
 506 853-2244 506 853-2277 506 853-2283
 Fax: (506) 853-2243 Fax: (506) 853-2280 Fax: (506) 853-2280
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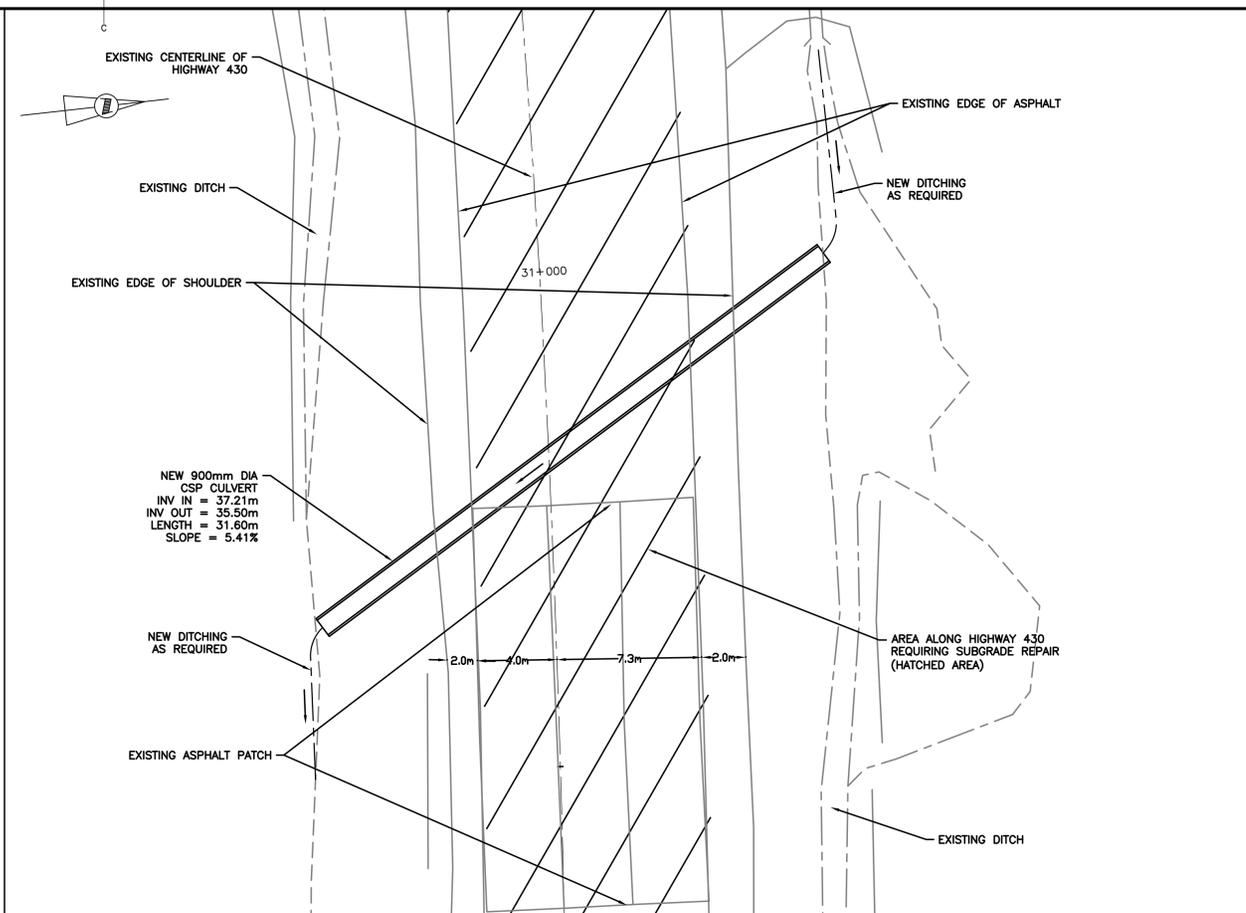
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|---|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
|---|-------------------|------------|

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|-----------|---------|
| revisions | date |
| project | project |

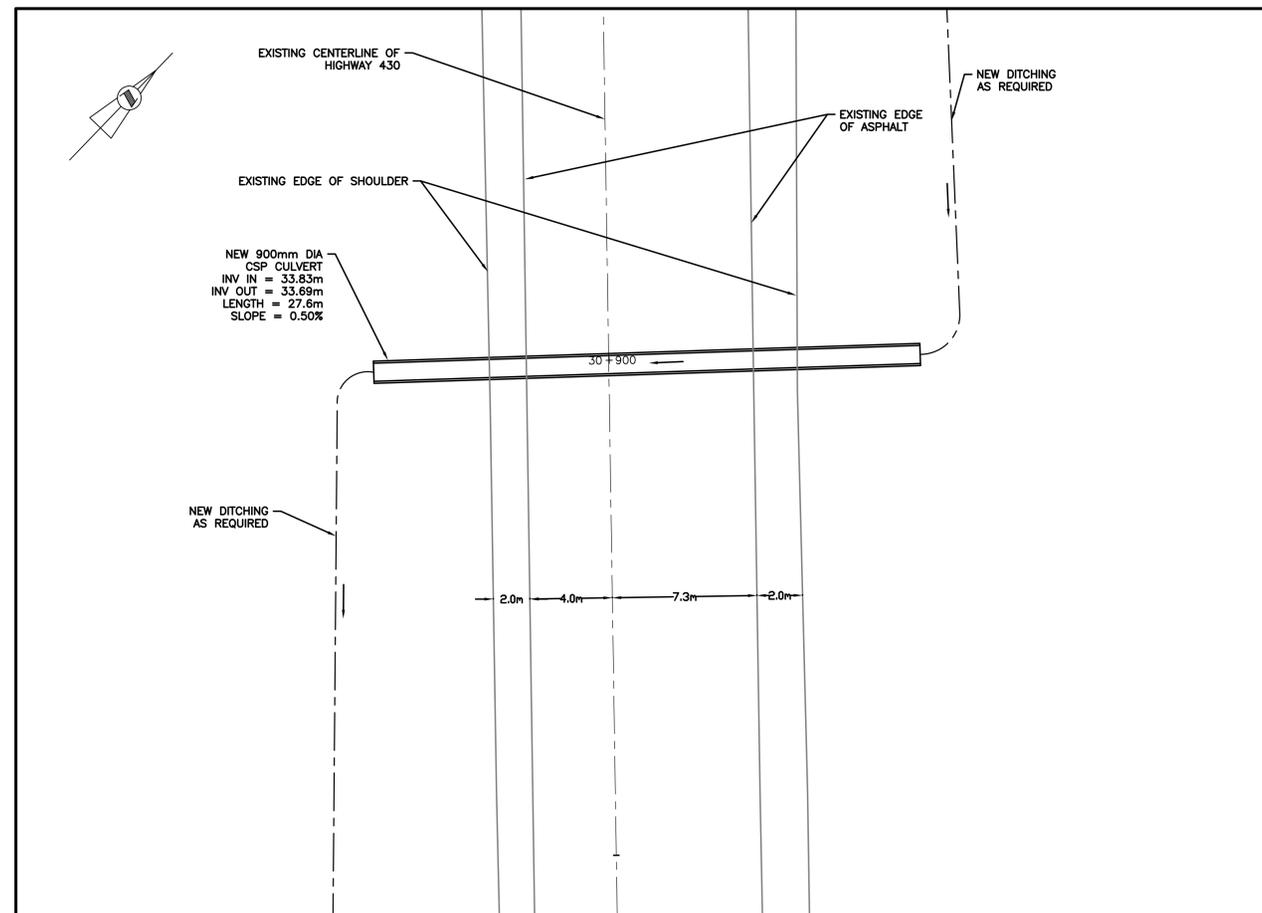
**HIGHWAY 430
SEGMENT "C"
REHABILITATION**

**CULVERTS
PLAN AND SECTION
STA 30+900 AND
STA 30+990**

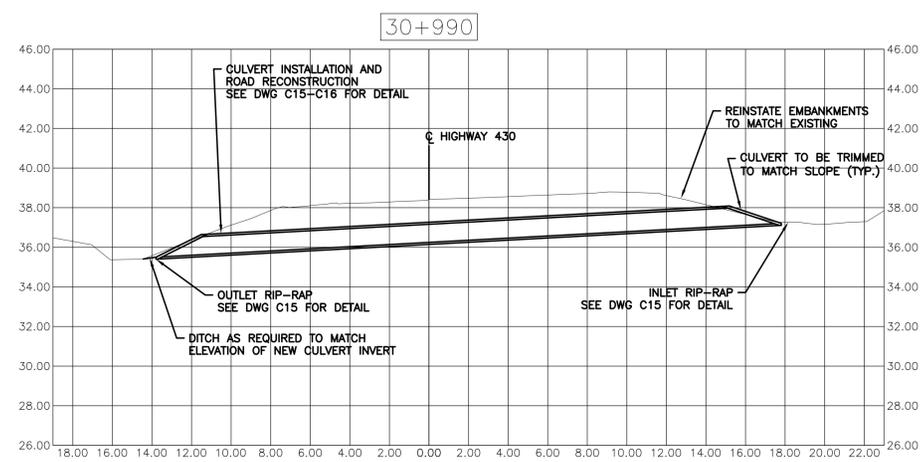
| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | date |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | date |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | date |
| Tender | Submission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C12 | |



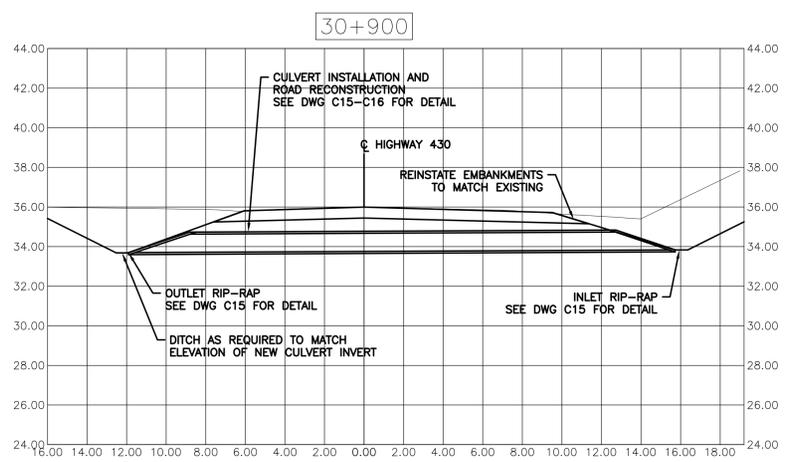
NEW 900mm DIA CSP CULVERT STA 30+990



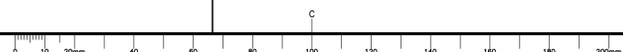
NEW 900mm DIA CSP CULVERT STA 30+900



PROFILE VIEW OF NEW 900mm DIA CSP CULVERT

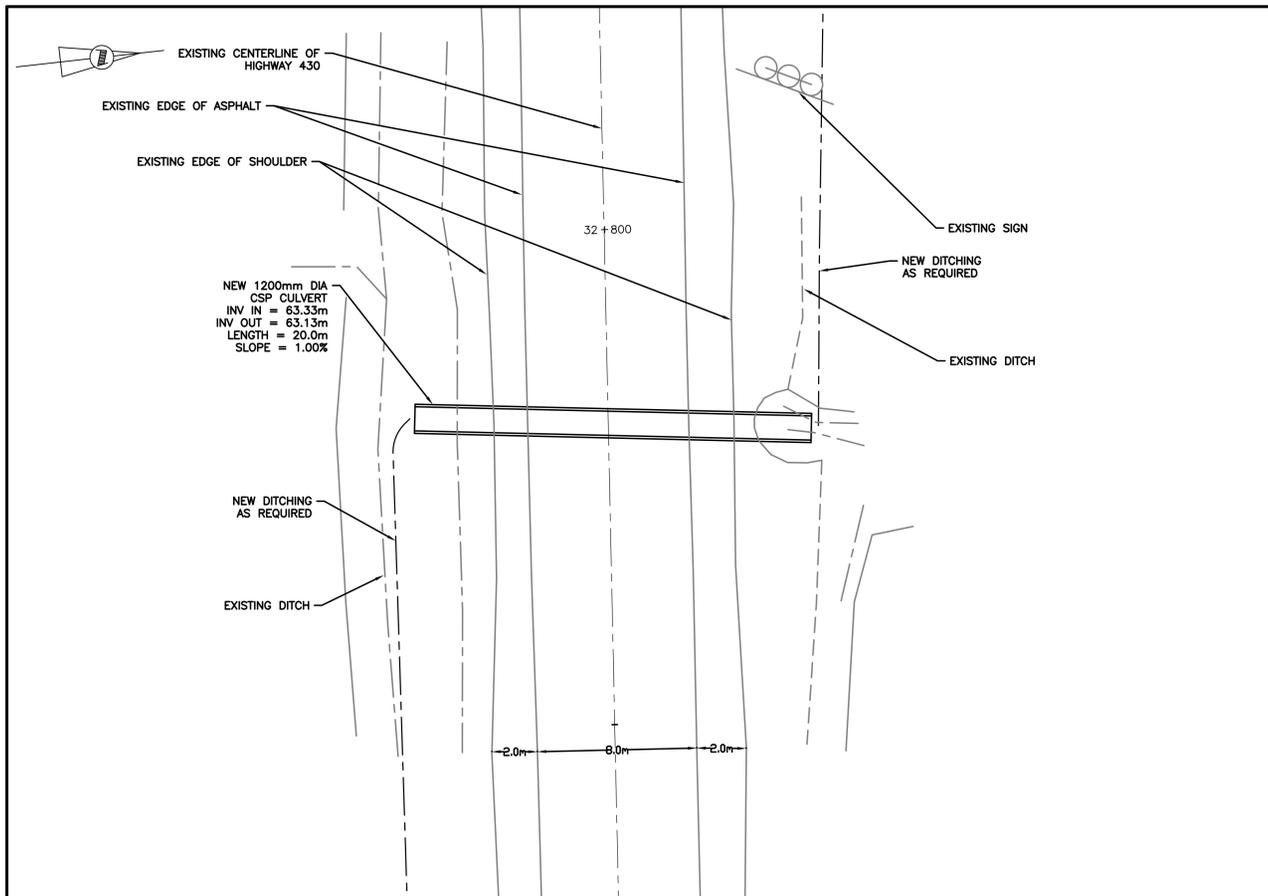


PROFILE VIEW OF NEW 900mm DIA CSP CULVERT

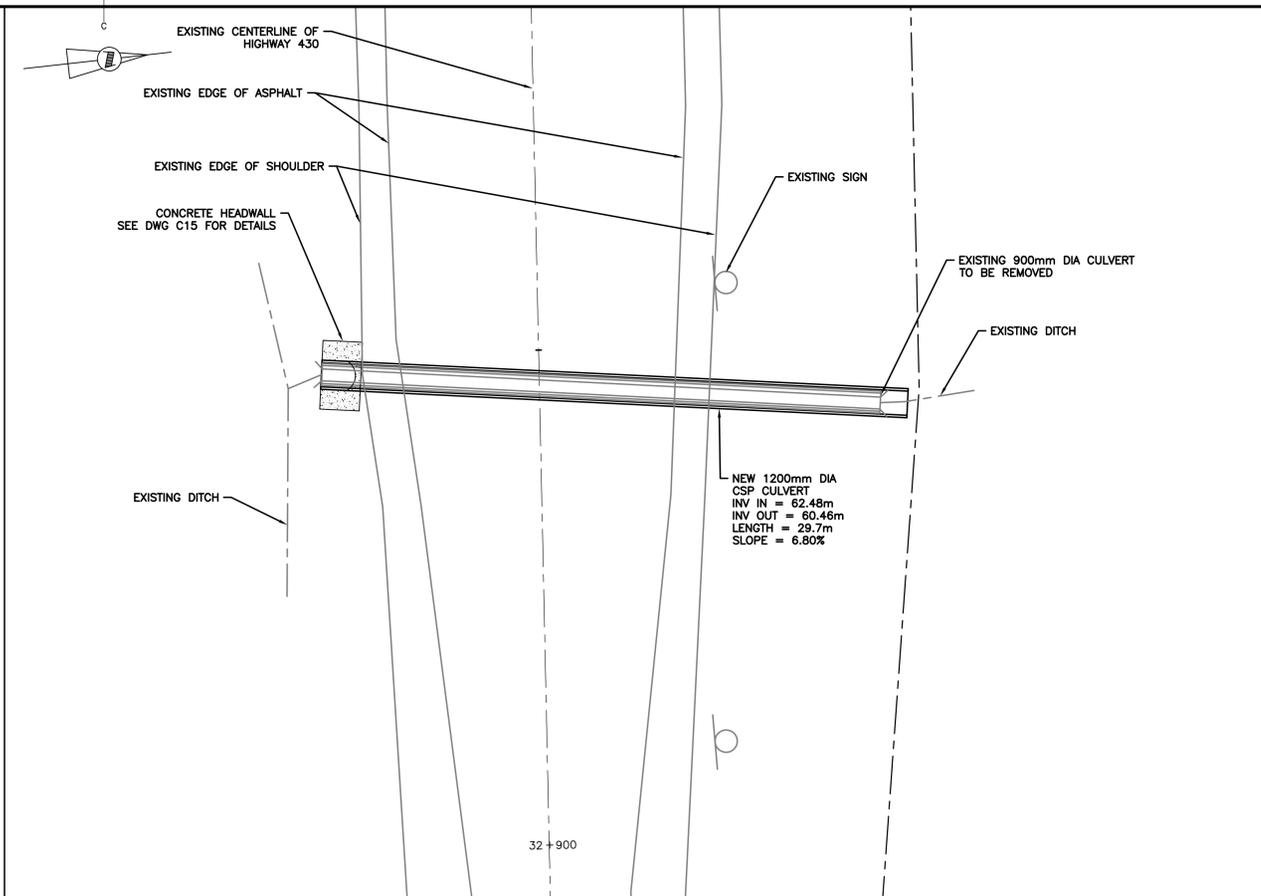




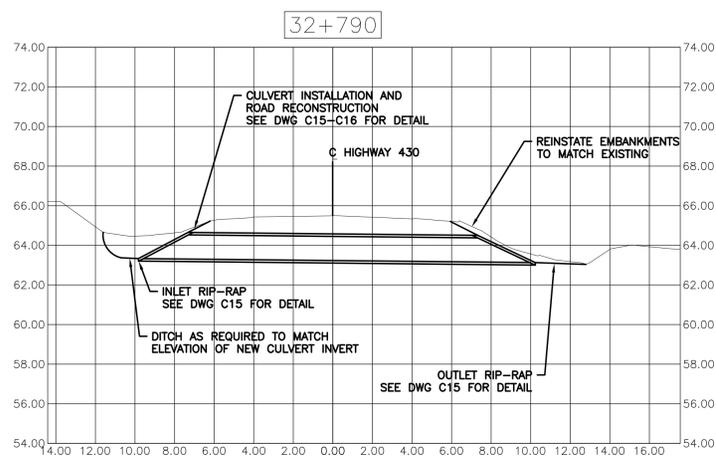
MONCTON 1077 Ave. St. George Blvd. 257-2025
 FREDERICTON 123 Prince William Street 544-7227
 SAINT JOHN 244-7000, 488-0000
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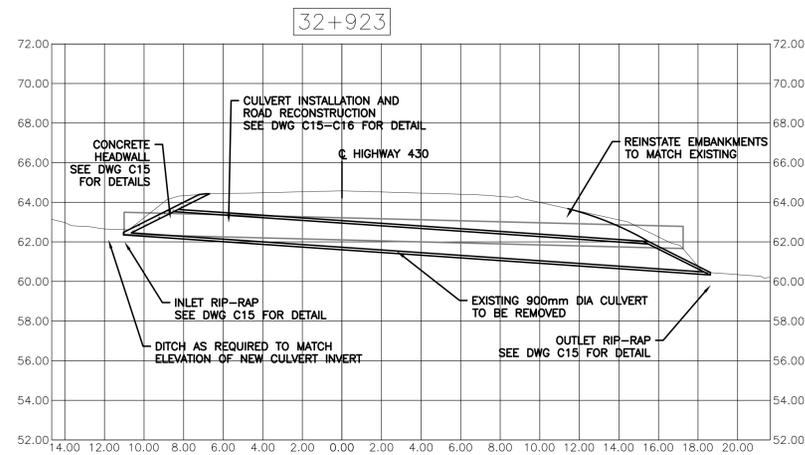
NEW 1200mm DIA CSP CULVERT STA 32+790



REPLACE EXISTING 900mm DIA CSP CULVERT WITH NEW 1200mm DIA CSP CULVERT STA 32+923



PROFILE VIEW OF NEW 1200mm DIA CSP CULVERT



PROFILE VIEW OF NEW 1200mm DIA CSP CULVERT



| | | |
|---|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
|---|-------------------|------------|

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| revisions | | date |
| project | | project |

HIGHWAY 430
SEGMENT "C"
REHABILITATION

CULVERTS
PLAN AND SECTION
STA 32+790 AND
STA 32+923

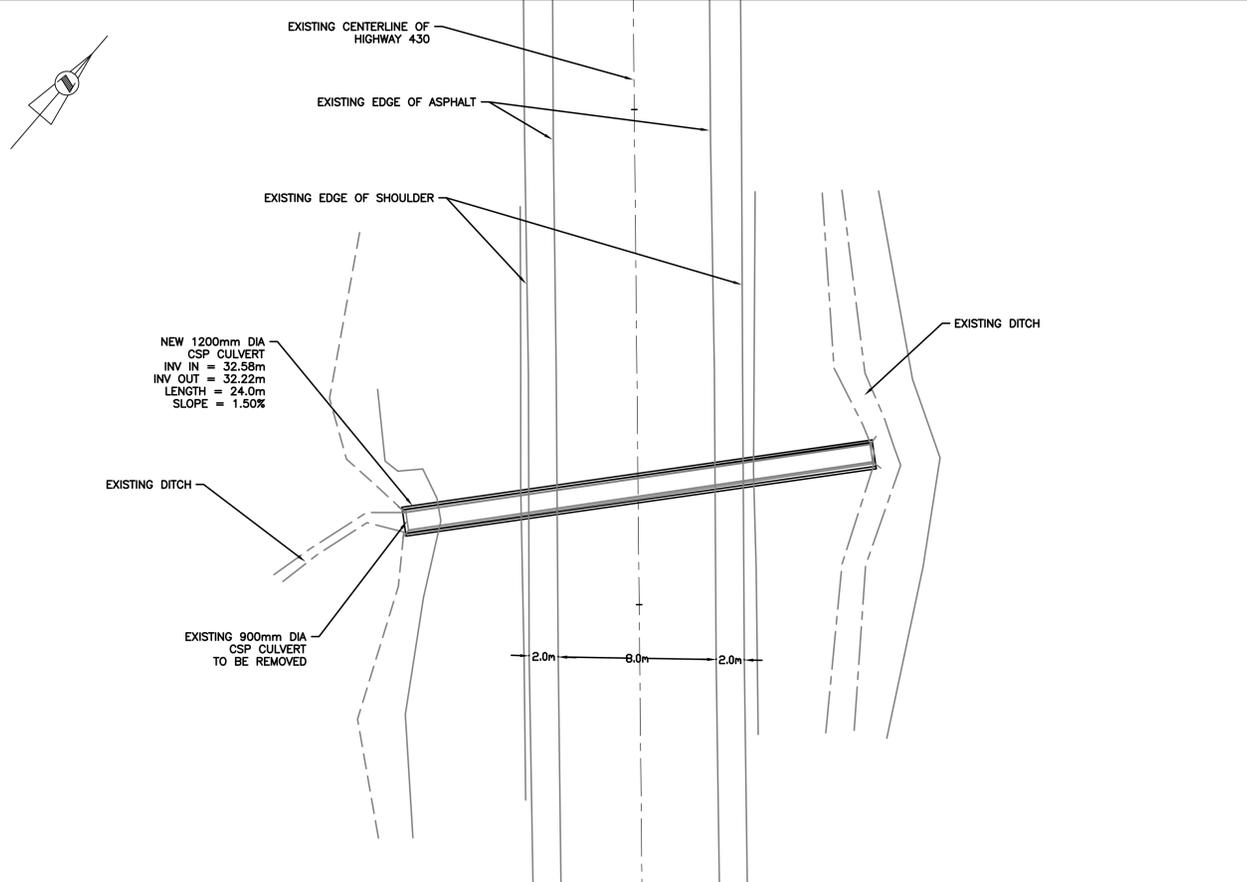
| | |
|-----------------------|------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Soumission |

PCA Project Manager Administrateur de projets APC

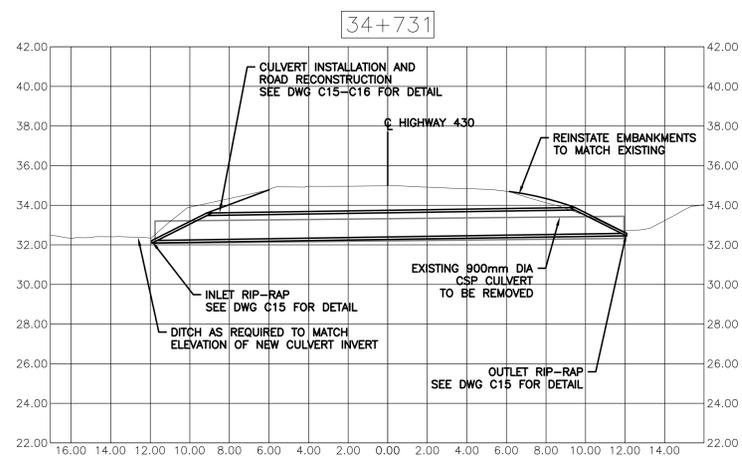
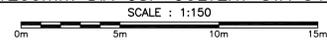
PCA NO.: 678

drawing no. no. du dessin

C13



REPLACE EXISTING 900mm DIA CSP CULVERT WITH
NEW 1200mm DIA CSP CULVERT STA 34+731



PROFILE VIEW OF NEW 1200mm DIA CSP CULVERT



MONCTON 1077 Ave. St. George Blvd. 1077 Ave. St. George Blvd. 1077 Ave. St. George Blvd.
 SAINT JOHN 123 Prince William Street 123 Prince William Street 123 Prince William Street
 FREDERICTON 504 Regent Street 504 Regent Street 504 Regent Street
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| 1 | ISSUED FOR TENDER | 29/01/2016 |
| revisions | | date |

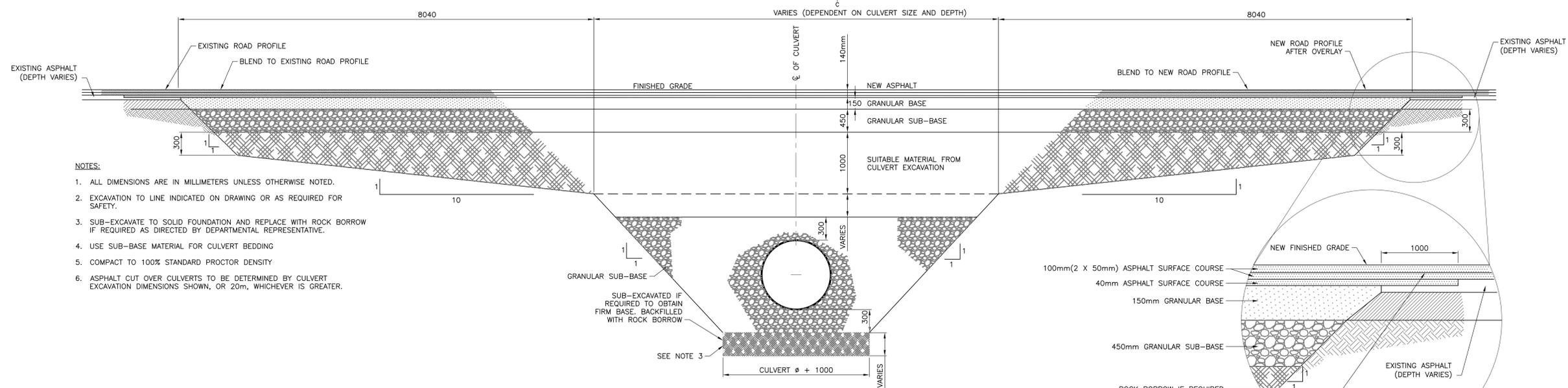
project project
**HIGHWAY 430
 SEGMENT "C"
 REHABILITATION**

drawing dessin
**CULVERTS
 PLAN AND SECTION
 STA 34+731**

| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 23, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 23, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 23, 2015 | |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C14 | |



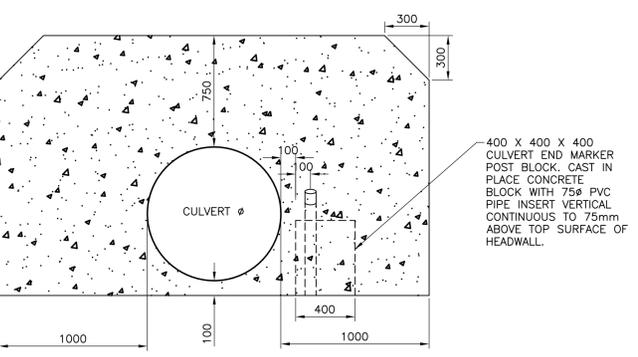
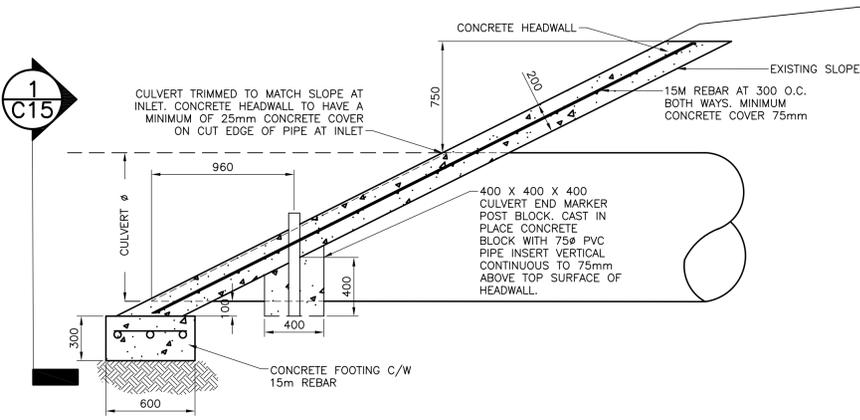
MONCTON 1077 Ave. St. George Blvd. 202 852-2000
 SAINT JOHN 123 Prince William Street 506 733-2000
 FREDERICTON 504 Regent Street 506 733-2000
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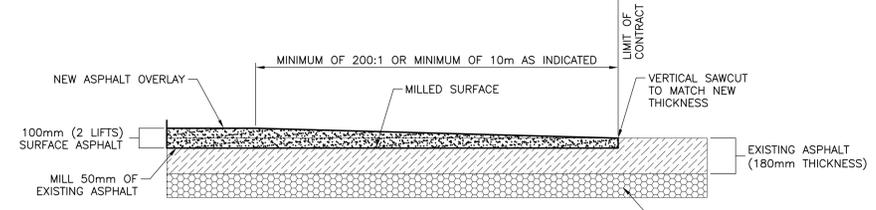
- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 2. EXCAVATION TO LINE INDICATED ON DRAWING OR AS REQUIRED FOR SAFETY.
 3. SUB-EXCAVATE TO SOLID FOUNDATION AND REPLACE WITH ROCK BORROW IF REQUIRED AS DIRECTED BY DEPARTMENTAL REPRESENTATIVE.
 4. USE SUB-BASE MATERIAL FOR CULVERT BEDDING
 5. COMPACT TO 100% STANDARD PROCTOR DENSITY
 6. ASPHALT CUT OVER CULVERTS TO BE DETERMINED BY CULVERT EXCAVATION DIMENSIONS SHOWN, OR 20m, WHICHEVER IS GREATER.

TYPICAL CULVERT INSTALLATION
SCALE: N.T.S.

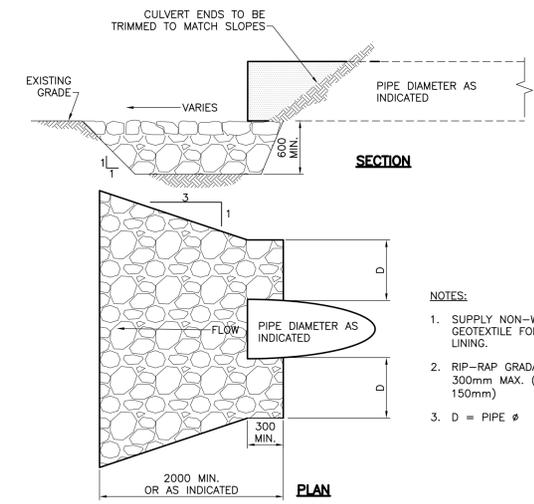
MILL 1000mm KEY WAY 50mm THICK IN AREAS OUTSIDE THE ASPHALT REHABILITATION. IN ASPHALT REHABILITATION AREA 40mm OF ASPHALT SURFACE COURSE TO THE SAME ELEVATION AS THE MILLED SURFACE OVERLAY 100mm OF ASPHALT SEAL COURSE WITH REHABILITATION OPERATIONS.



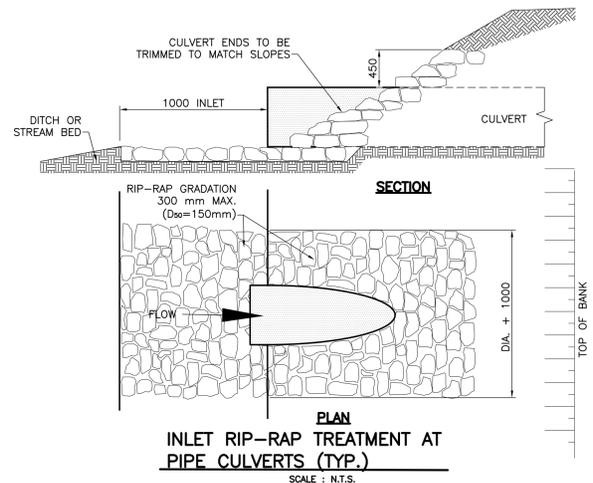
CONCRETE HEADWALL (TYP.)
SCALE: 1:20



ASPHALT OVERLAY KEY JOINT
SCALE: N.T.S.



OUTLET RIP-RAP APRON AT NEW PIPE CULVERTS (TYP.)
SCALE: N.T.S.



INLET RIP-RAP TREATMENT AT PIPE CULVERTS (TYP.)
SCALE: N.T.S.

PROVINCE OF NEWFOUNDLAND AND LABRADOR
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 This Permit Allows
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 which is valid for the year 2016.



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|-----------|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
| revisions | | date |

project project
HIGHWAY 430 SEGMENT "C" REHABILITATION

MISCELLANEOUS DETAILS AND CROSS SECTIONS

| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 22, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 22, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 22, 2015 | |
| Tender | Submission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |

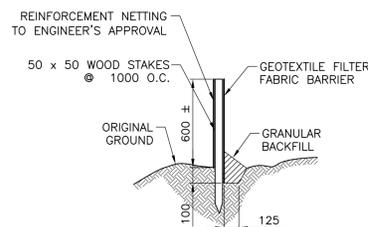
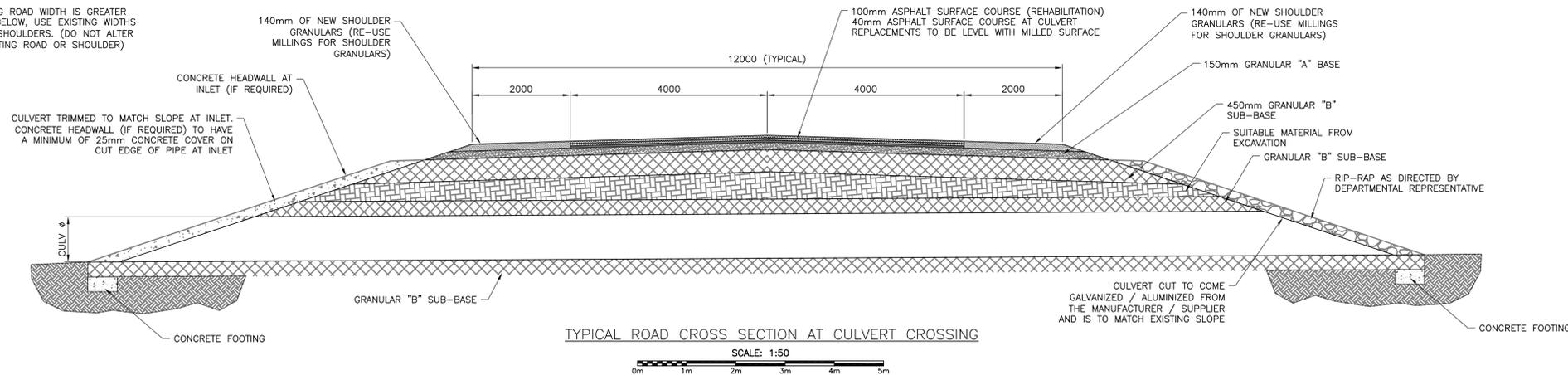
PCA NO.: 678

drawing no. no. du dessin
C15



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NOTE:
 WHERE EXISTING ROAD WIDTH IS GREATER
 THAN SHOWN BELOW, USE EXISTING WIDTHS
 FOR FINISHED SHOULDERS. (DO NOT ALTER
 WIDTH OF EXISTING ROAD OR SHOULDER)

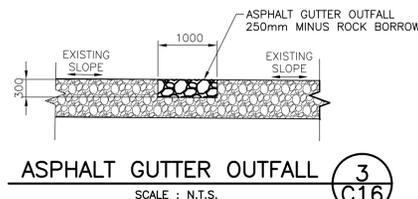
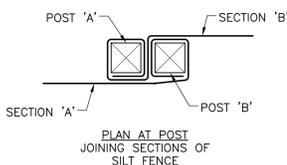
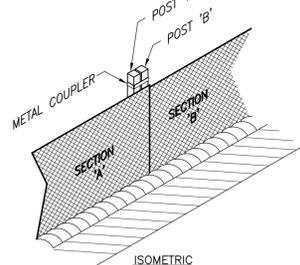


SILT FENCE INSTALLATION

- EXCAVATE 150 x 150 TRENCH WHERE INDICATED.
- UNROLL SILT FENCE ONE SECTION AT A TIME AND POSITION POSTS AGAINST THE DOWNSTREAM WALL OF THE TRENCH. REINFORCEMENT NETTING MUST BE ON THE DOWNSTREAM SIDE OF FLOW DIRECTION.
- DRIVE POST INTO THE GROUND UNTIL THE REINFORCEMENT NETTING IS APPROXIMATELY 50mm FROM THE TRENCH BOTTOM.
- LAY THE TOE-IN FLAP OF THER FABRIC IN THE BOTTOM OF THE TRENCH. BACKFILL THE TRENCH AND TAMP THE SOIL.
- JOIN SILT FENCE SECTIONS AS SHOWN ABOVE.

SILT FENCE INSTALLATION (TYP.)

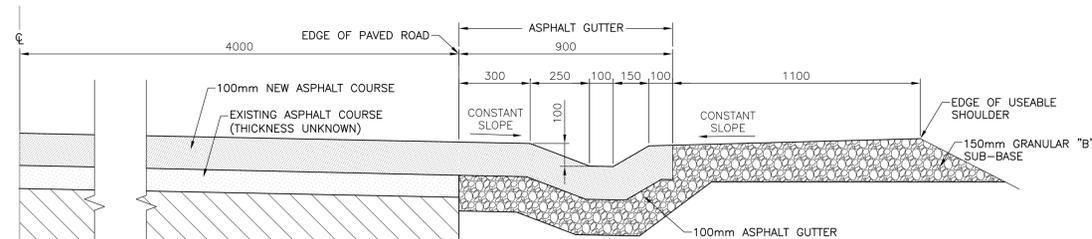
SCALE : N.T.S.



ASPHALT GUTTER OUTFALL

SCALE : N.T.S.

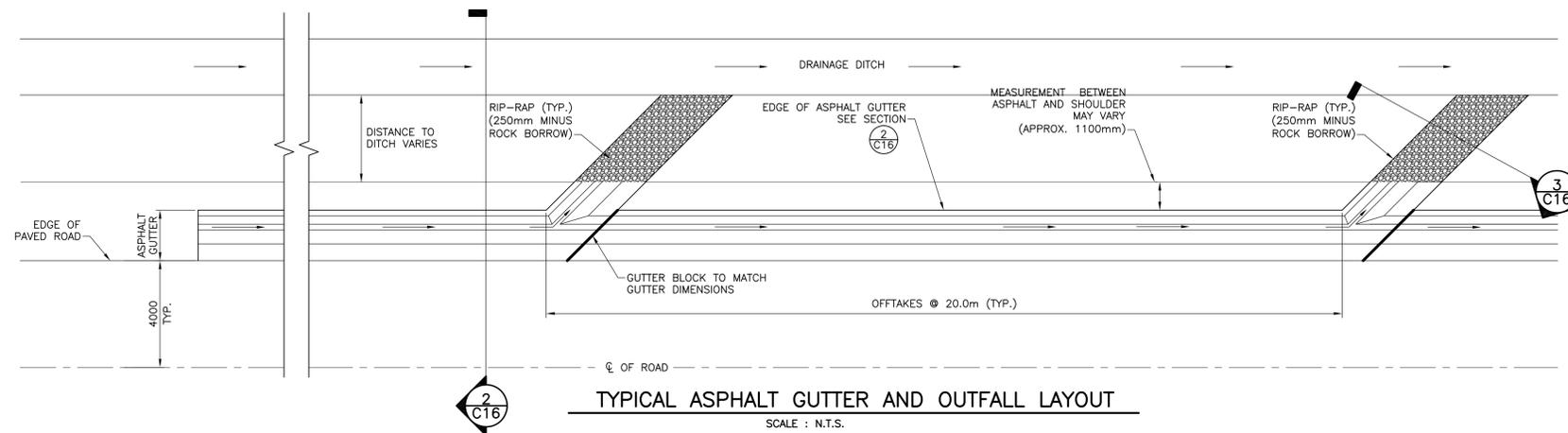
3
C16



NEW ASPHALT GUTTER SECTION

SCALE : N.T.S.

2
C16



TYPICAL ASPHALT GUTTER AND OUTFALL LAYOUT

SCALE : N.T.S.

2
C16

PROVINCE OF NEWFOUNDLAND AND LABRADOR
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| revisions | | date |

**HIGHWAY 430
 SEGMENT "C"
 REHABILITATION**

**MISCELLANEOUS DETAILS
 AND CROSS SECTIONS**

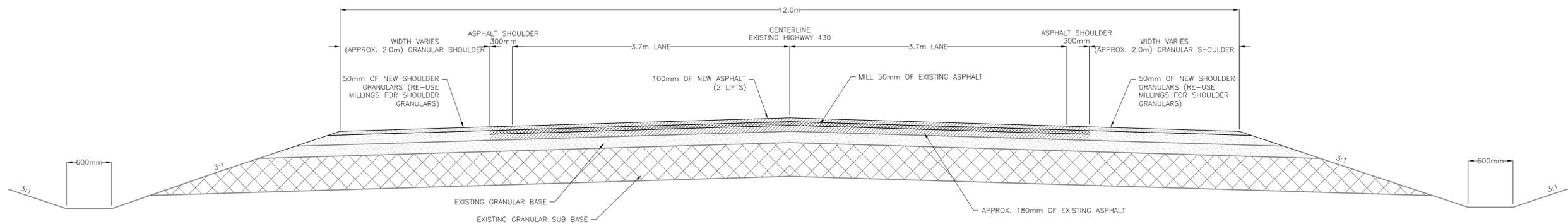
| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 22, 2015 | |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 22, 2015 | |
| approved J.BABIN | approuvé |
| date OCTOBER 22, 2015 | |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C16 | |



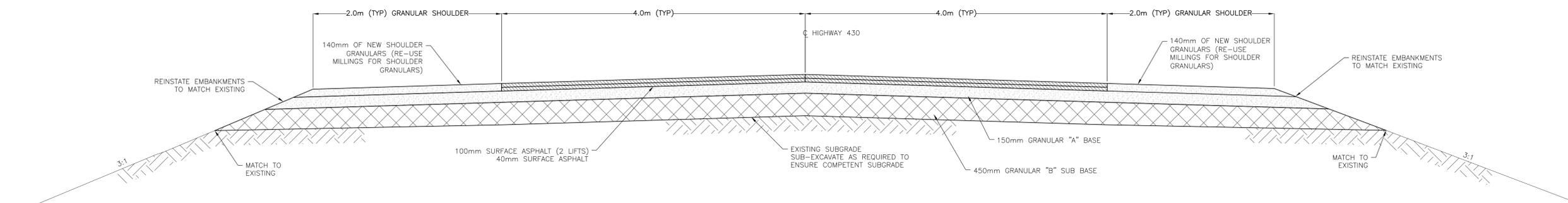
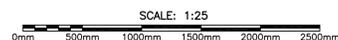
MONCTON 1077 Ave. St. George Blvd. 2000
 506 853-2244
 Fax: (506) 853-2244
CRANDALLENGINEERING.CA

SANT JOHN 123 Prince William Street
 2nd Floor, N.B. Canada
 St. John's, NL A1B 1X6
 Tel: (709) 853-2244
 Fax: (709) 853-2244

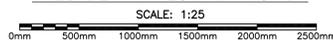
FREDERICTON 504 Regent Street
 2nd Floor, N.B. Canada
 Fredericton, N.B. Canada
 Tel: (506) 461-4400
 Fax: (506) 461-3250



TYPICAL ROAD CROSS SECTION FOR HIGHWAY 430 ASPHALT REHABILITATION



TYPICAL ROAD CROSS SECTION FOR AREAS DESIGNATED FOR FULL DEPTH RECONSTRUCTION



| | | |
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| revisions | | date |

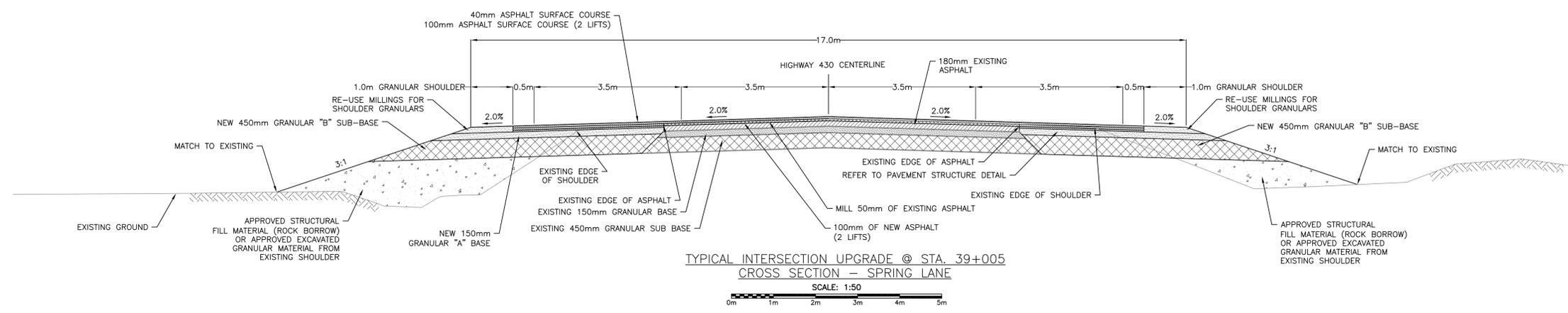
project project
HIGHWAY 430 SEGMENT "C" REHABILITATION

drawing dessin
TYPICAL ROAD CROSS SECTIONS

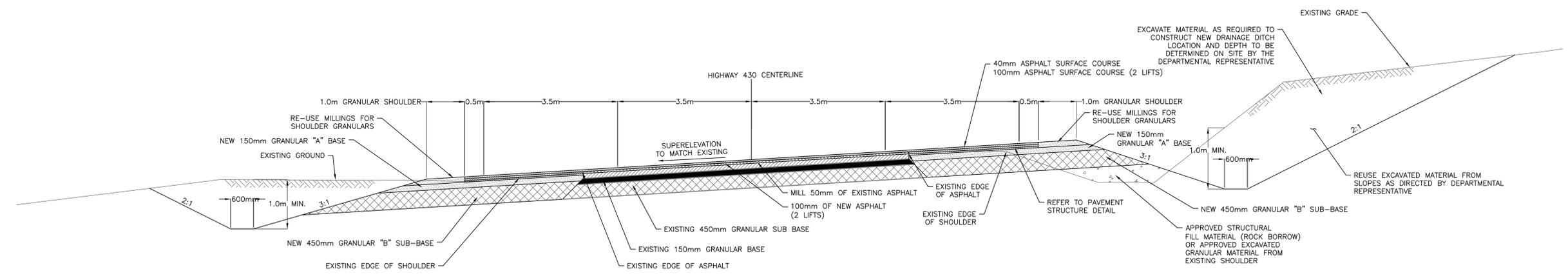
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| designed G. FLANAGAN | conçu |
| date OCTOBER 22, 2015 | date |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 22, 2015 | date |
| approved J.BABIN | approuvé |
| date OCTOBER 22, 2015 | date |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |
| project number | no. du projet |
| PCA NO.: 678 | |
| drawing no. | no. du dessin |
| C17 | |



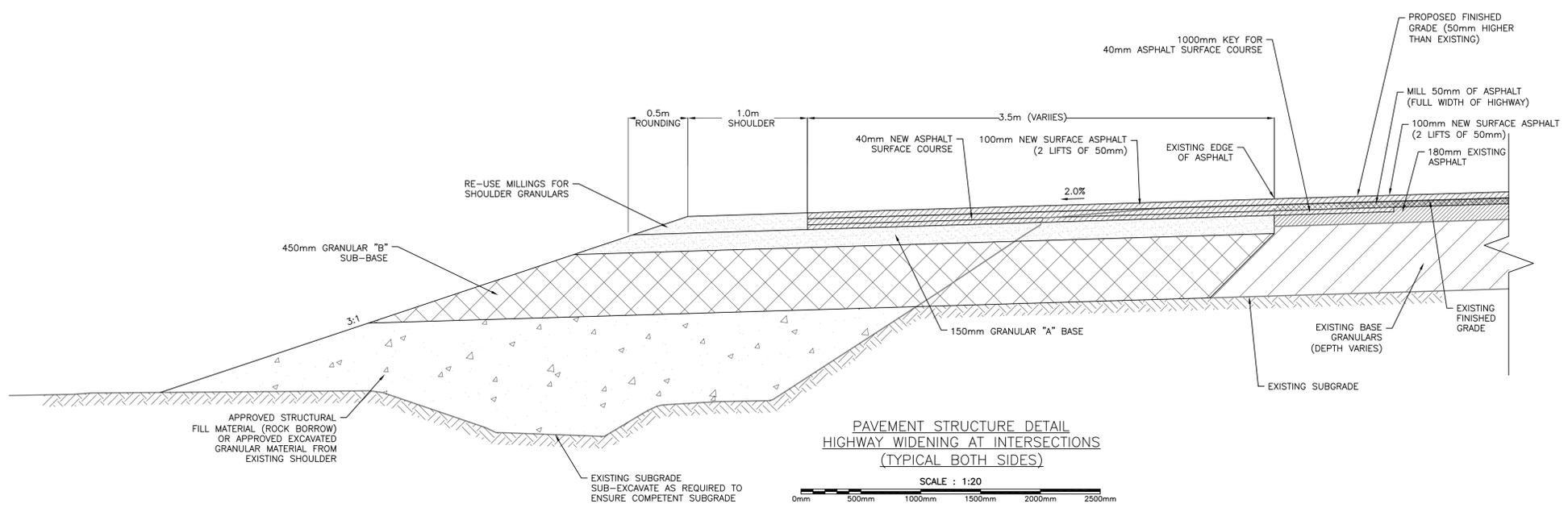
MONCTON 1077 Ave. St. George Blvd. 2000 2000 U.S. Canada
 SAINT JOHN 123 Prince William Street 2nd Floor, N.B. Canada
 FREDERICTON 504 Regent Street 2nd Floor, N.B. Canada
 TEL (506) 852-2777 TEL (506) 853-2883 TEL (506) 661-6465
 FAX (506) 852-2544 FAX (506) 853-2885 FAX (506) 663-3250
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TYPICAL INTERSECTION UPGRADE @ STA. 39+005
 CROSS SECTION - SPRING LANE
 SCALE: 1:50



TYPICAL INTERSECTION UPGRADE @ STA. 38+310
 CROSS SECTION - SWIMMING POOL ACCESS ROAD
 SCALE: 1:50



PAVEMENT STRUCTURE DETAIL
 HIGHWAY WIDENING AT INTERSECTIONS
 (TYPICAL BOTH SIDES)
 SCALE: 1:20

PROVINCE OF NEWBRUNSWICK AND LABRADOR
 P.E.C.E.N. PERMIT HOLDER
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| revisions | | date |

HIGHWAY 430
 SEGMENT "C"
 REHABILITATION

TYPICAL INTERSECTION
 CROSS SECTIONS

| | |
|-----------------------|-------------------------------|
| designed G. FLANAGAN | conçu |
| date OCTOBER 22, 2015 | date |
| drawn A.CALDWELL | dessiné |
| date OCTOBER 22, 2015 | date |
| approved J.BABIN | approuvé |
| date OCTOBER 22, 2015 | date |
| Tender | Soumission |
| PCA Project Manager | Administrateur de projets APC |

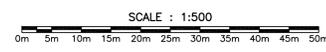
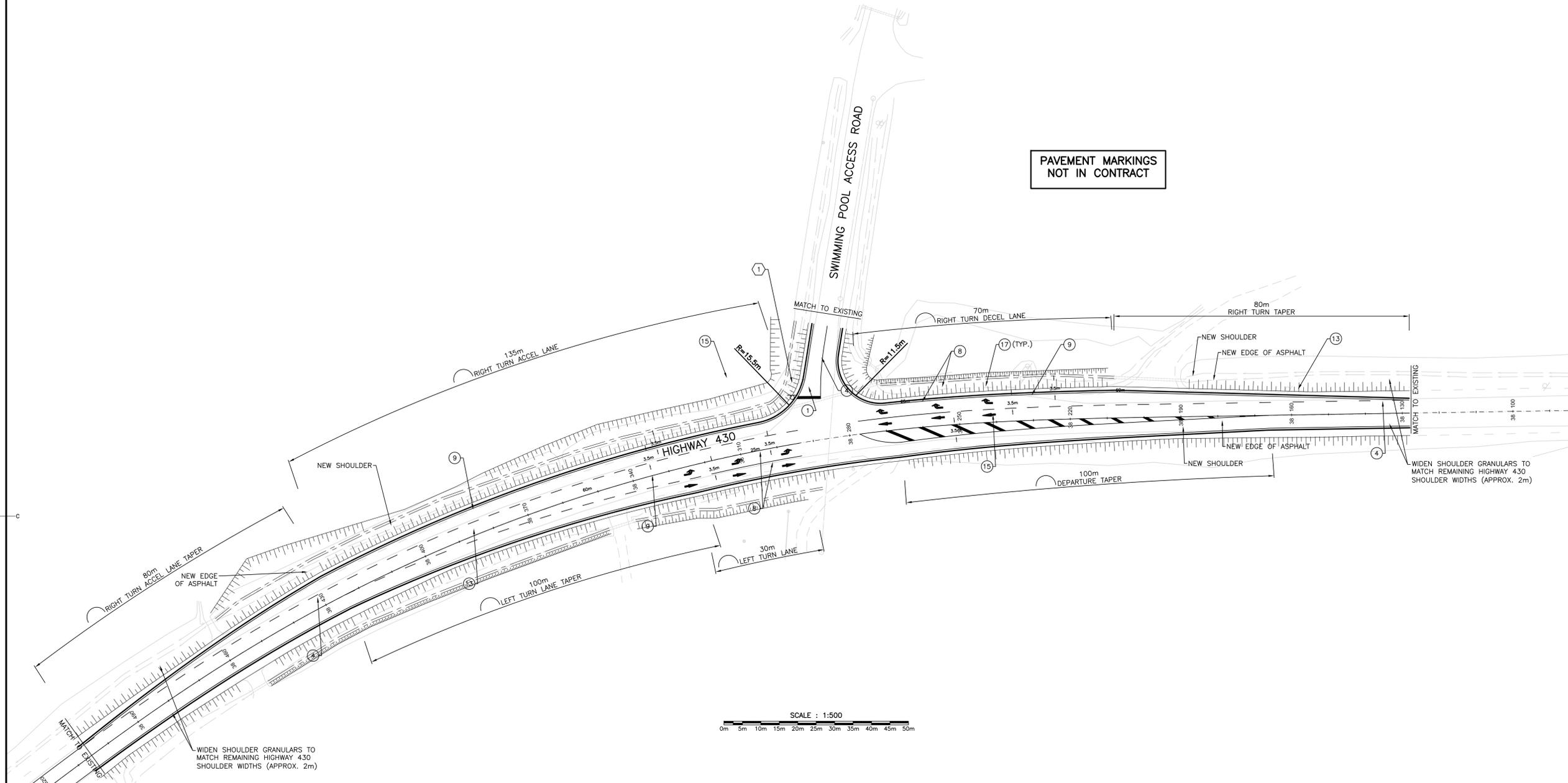
PCA NO.: 678

C18



MONCTON 1077 107 St. George Blvd. 1077 Moncton, N.B. Canada Tel: (506) 847-5777 Fax: (506) 847-5742
 SAINT JOHN 133 Prince William Street 133 Saint John, N.B. Canada Tel: (506) 845-4843 Fax: (506) 845-3355
 FREDERICTON 504 Prospect Street 504 Fredericton, N.B. Canada Tel: (506) 341-4440 Fax: (506) 341-3355
 CRANDALLENGINEERING.CA

PAVEMENT MARKINGS NOT IN CONTRACT



WIDEN SHOULDER GRANULARS TO MATCH REMAINING HIGHWAY 430 SHOULDER WIDTHS (APPROX. 2m)

WIDEN SHOULDER GRANULARS TO MATCH REMAINING HIGHWAY 430 SHOULDER WIDTHS (APPROX. 2m)



| | | |
|-----------|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
| revisions | | date |

project HIGHWAY 430 SEGMENT "C" REHABILITATION

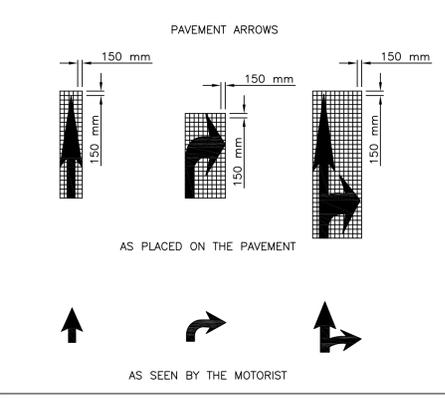
designed P. ALLABY
 date OCTOBER 23, 2015
 drawn G. BUOTE
 date NOVEMBER 6, 2015
 approved G. FLANAGAN
 date NOVEMBER 6, 2015
 PCA Project Manager Administrateur de projets APC
 project number no. du projet
PCA NO.: 678

drawing no. no. du dessin

PROPOSED "T" - INTERSECTION UPGRADES POOL ACCESS ROAD

designed P. ALLABY
 date OCTOBER 23, 2015
 drawn G. BUOTE
 date NOVEMBER 6, 2015
 approved G. FLANAGAN
 date NOVEMBER 6, 2015
 PCA Project Manager Administrateur de projets APC
 project number no. du projet
PCA NO.: 678
 drawing no. no. du dessin
C19

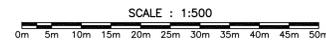
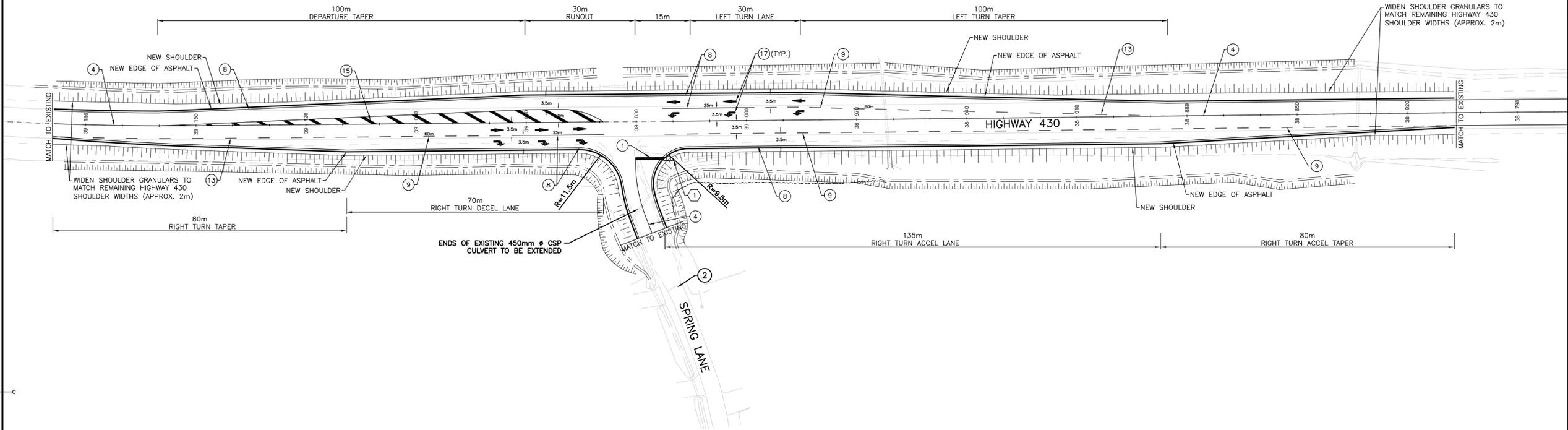
| SIGNAGE SCHEDULE | | | | |
|------------------|------|--------------|------------|---------------|
| | SIGN | NAME | MUTCD CODE | SIZE |
| ① | | STOP SIGN | RA-1 | 600mm x 600mm |
| ② | | YIELD SIGN | RA-2 | 750mm SIDES |
| ③ | | DO NOT ENTER | RB-23 | 600mm x 600mm |
| ④ | | MERGE | WA-35R | 600mm x 600mm |



| LONGITUDINAL AND TRANSVERSE PAVEMENT MARKINGS | | | | | LONGITUDINAL AND TRANSVERSE PAVEMENT MARKINGS (CONT'D) | | | | | | |
|---|------------------------------|-----------------------|-----------------------|--------|--|---|--------------------------------------|-----------------------|-----------------------|----------------|---|
| | NAME | LENGTH DIMENSIONS (m) | WIDTH DIMENSIONS (mm) | COLOUR | USE | | NAME | LENGTH DIMENSIONS (m) | WIDTH DIMENSIONS (mm) | COLOUR | USE |
| ① | STOP BAR | | 400 | WHITE | INTERSECTION STOP LINES | ⑩ | LANE EDGE AND BIKE LANE LINE, DASHED | 1.0 | 100 | WHITE | CONTINUITY LINES IN MERGING AND DIVERGING AREAS, BIKE LANE DISCONTINUITY |
| ② | CROSSWALK LINE | | 200 | WHITE | CROSSWALKS | ⑪ | LANE EDGE LINE, WIDE | 200-300 | | WHITE / YELLOW | EDGE LINES IN CRITICAL AREAS, (WHITE ON THE RIGHT, YELLOW ON THE LEFT) |
| ③ | ZEBRA CROSSWALK LINE | | 150 | WHITE | ZEBRA CROSSWALKS | ⑫ | LANE EDGE LINE WIDE, DASHED | 200-300 | | WHITE | CONTINUITY LINES IN MERGING AND DIVERGING AREAS, SPECIAL FUNCTION LANE LINES |
| ④ | SINGLE CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES | ⑬ | LANE EDGE LINE, BROKEN | 100 | | WHITE | CONTINUITY LINES (THRU LANES) |
| ⑤ | DOUBLE CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES | ⑭ | GUIDING LINE | 100 | | WHITE / YELLOW | GUIDING LINES (YELLOW - EXTENSION OF DIRECTIONAL DIVIDING LINES) (WHITE - EXTENSION OF LANE LINE) |
| ⑥ | DOUBLE + BROKEN CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES ALLOWING PASSING IN ONE DIRECTION | ⑮ | HATCH | VARIES | | YELLOW | AREAS BETWEEN DIRECTIONAL DIVIDING LINES |
| ⑦ | BROKEN CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES ALLOWING PASSING IN BOTH DIRECTIONS | ⑯ | HATCH | 100 | | WHITE | AREAS BETWEEN LANES OR OBSTRUCTIONS IN ONE DIRECTION OF TRAVEL |
| ⑧ | LANE EDGE AND BIKE LANE LINE | | 100 | WHITE | LANE EDGE LINES, LINES PROHIBITING LANE CHANGES | ⑰ | ARROW | SEE ARROW DETAIL | | WHITE | PERMITTED DIRECTION OF TRAVEL |
| ⑨ | LANE EDGE LINE, DASHED | | 100 | WHITE | CONTINUITY LINES IN MERGING AND DIVERGING AREAS, SPECIAL FUNCTION LANE LINES | | | | | | |



PAVEMENT MARKINGS
NOT IN CONTRACT



| | | |
|-----------|-------------------|------------|
| 1 | ISSUED FOR TENDER | 29/01/2016 |
| revisions | | date |

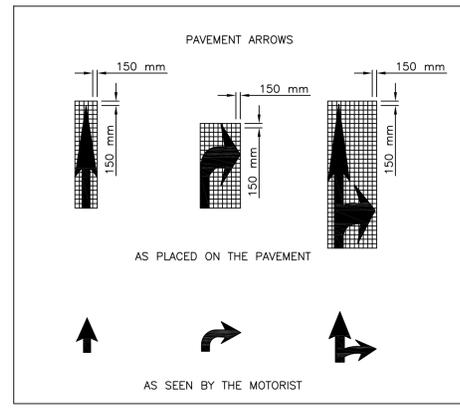
project HIGHWAY 430 SEGMENT "C" REHABILITATION

designed P. ALLABY
 date OCTOBER 23, 2015
 drawn G. BUOTE
 date NOVEMBER 6, 2015
 approved G. FLANAGAN
 date NOVEMBER 6, 2015

PROPOSED "T" - INTERSECTION UPGRADES SPRING LANE

designed P. ALLABY
 date OCTOBER 23, 2015
 drawn G. BUOTE
 date NOVEMBER 6, 2015
 approved G. FLANAGAN
 date NOVEMBER 6, 2015
 PCA Project Manager Administrator de projets APC
 project number no. du projet
PCA NO.: 678
 drawing no. no. du dessin
C20

| SIGN | NAME | MUTCD CODE | SIZE |
|------|--------------|------------|---------------|
| ① | STOP SIGN | RA-1 | 600mm x 600mm |
| ② | YIELD SIGN | RA-2 | 750mm SIDES |
| ③ | DO NOT ENTER | RB-23 | 600mm x 600mm |
| ④ | MERGE | WA-35R | 600mm x 600mm |



| LONGITUDINAL AND TRANSVERSE PAVEMENT MARKINGS | | | | | LONGITUDINAL AND TRANSVERSE PAVEMENT MARKINGS (CONT'D) | | | | |
|---|-----------------------|-----------------------|--------|--|--|-----------------------|-----------------------|----------------|--|
| NAME | LENGTH DIMENSIONS (m) | WIDTH DIMENSIONS (mm) | COLOUR | USE | NAME | LENGTH DIMENSIONS (m) | WIDTH DIMENSIONS (mm) | COLOUR | USE |
| ① STOP BAR | | 400 | WHITE | INTERSECTION STOP LINES | ⑩ LANE EDGE AND BIKE LANE LINE, DASHED | 1.0 | 100 | WHITE | CONTINUITY LINES IN MERGING AND DIVERGING AREAS, BIKE LANE DISCONTINUATION |
| ② CROSSWALK LINE | | 200 | WHITE | CROSSWALKS | ⑪ LANE EDGE LINE, WIDE | 200-300 | | WHITE / YELLOW | EDGE LINES IN CRITICAL AREAS, (WHITE ON THE RIGHT, YELLOW ON THE LEFT) |
| ③ ZEBRA CROSSWALK LINE | | | WHITE | ZEBRA CROSSWALKS | ⑫ LANE EDGE LINE WIDE, DASHED | 200-300 | | WHITE | CONTINUITY LINES IN MERGING AND DIVERGING AREAS, SPECIAL FUNCTION LANE LINES |
| ④ SINGLE CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES | ⑬ LANE EDGE LINE, BROKEN | 100 | | WHITE | CONTINUITY LINES (THRU LANES) |
| ⑤ DOUBLE CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES | ⑭ GUIDING LINE | 100 | | WHITE / YELLOW | GUIDING LINES (YELLOW - EXTENSION OF DIRECTIONAL DIVIDING LINES) (WHITE - EXTENSION OF LANE LINES) |
| ⑥ DOUBLE + BROKEN CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES ALLOWING PASSING IN ONE DIRECTION | ⑮ HATCH | 100 | | YELLOW | AREAS BETWEEN DIRECTIONAL DIVIDING LINES |
| ⑦ BROKEN CENTRELINE | | 100 | YELLOW | DIRECTIONAL DIVIDING LINES ALLOWING PASSING IN BOTH DIRECTIONS | ⑯ HATCH | 100 | | WHITE | AREAS BETWEEN LANES OR OBSTRUCTIONS IN ONE DIRECTION OF TRAVEL |
| ⑧ LANE EDGE AND BIKE LANE LINE | | 100 | WHITE | LANE EDGE LINES, LINES PROHIBITING LANE CHANGES | ⑰ ARROW | | | WHITE | PERMITTED DIRECTION OF TRAVEL |
| ⑨ LANE EDGE LINE, DASHED | | 100 | WHITE | CONTINUITY LINES IN MERGING AND DIVERGING AREAS, SPECIAL FUNCTION LANE LINES | | | | | |