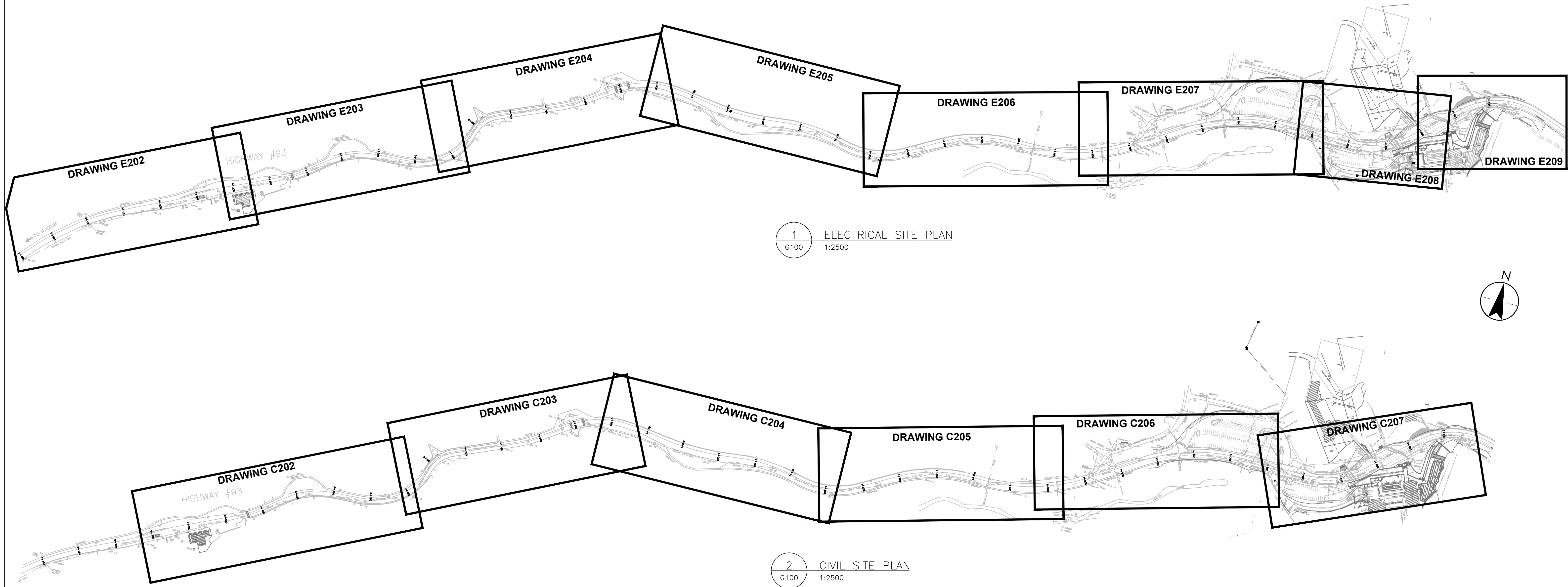
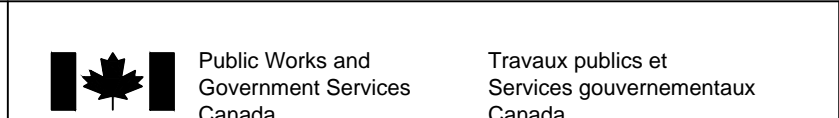


SINCLAIR CANYON INFRASTRUCTURE

KOOTENAY NATIONAL PARK




DRAWING LIST	
SHEET NUMBER	SHEET NAME
G100	COVER SHEET AND DRAWING LIST
C202	PLAN PROFILE Stn 0+300 TO 0+600
C203	PLAN PROFILE Stn 0+600 TO 0+900
C204	PLAN PROFILE Stn 0+900 TO 1+200
C205	PLAN PROFILE Stn 1+200 TO 1+500
C206	PLAN PROFILE Stn 1+500 TO 1+800
C207	PLAN PROFILE Stn 1+800 TO 1+924
C208	DETAILS
C209	DETAILS
E202	LIGHTING PLAN 0+000 TO 0+300
E203	LIGHTING PLAN 0+300 TO 0+600
E204	LIGHTING PLAN 0+600 TO 0+850
E205	LIGHTING PLAN 0+850 TO 1+150
E206	LIGHTING PLAN 1+150 TO 1+450
E207	LIGHTING PLAN 1+450 TO 1+750
E208	LIGHTING PLAN 1+750 TO 1+950
E209	LIGHTING PLAN 1+950 TO 2+050
E210	TRENCH DETAIL - PARKING LOT CAMERAS & DUCT WORK FOR CHARGING STATIONS
E211	POOLSIDE SIDEWALK LIGHTING PLAN
E212	TRENCH DETAILS
E213	PANEL, FIBRE PULL BOX AND MISCELLANEOUS DETAILS
E214	JUNCTION BOX, LUMINAIRE SCHEDULE, PANEL & POLE BASE DETAIL
S100	NOTES AND TABLES STRUCTURAL
S101	TANGENT PILE WALL PLANS & SECTIONS STRUCTURAL
S102	TANGENT PILE WALL & RETAINING WALL DETAILS STRUCTURAL



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0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/ Révision	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA

Project title/Titre du projet

SINCLAIR CANYON
SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par
RP

Drawn by/Dessiné par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

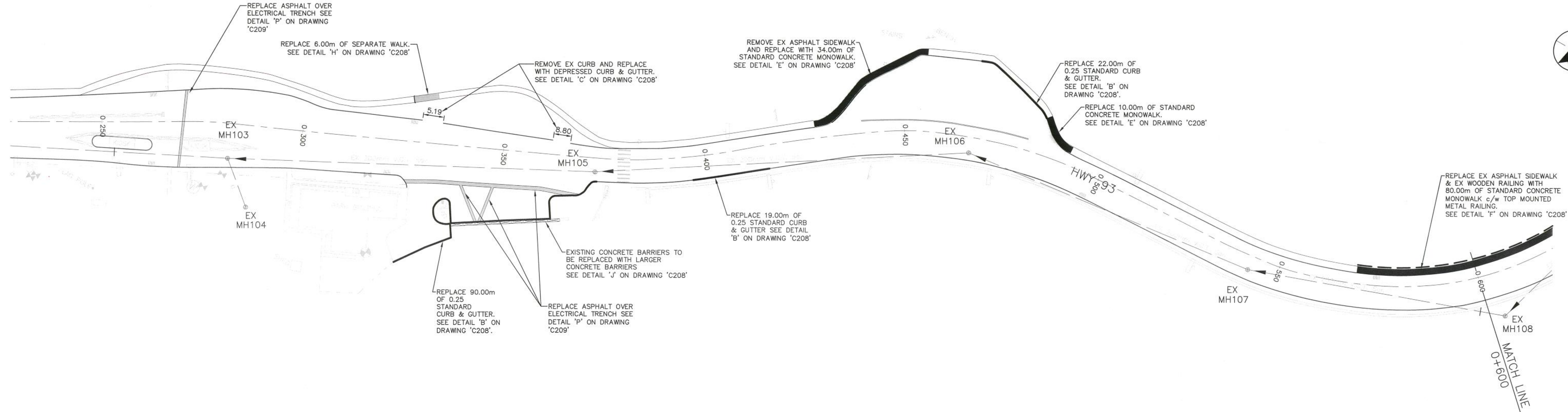
PWGSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin
COVER SHEET AND DRAWING LIST

Project No./No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet/Feuille G100	Revision no./ La Révision no. 6
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Revision/Revision	Description/Description	Date/Date

Client/client
**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet
SINCLAIR CANYON
SITE REHABILITATION

Consultant Signature Box Only
Designed by/Concept par
DB
Drawn by/Dessiné par
MH
PWSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG
PWSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWSC WESTERN REGION RM
Drawing title/Titre du dessin

PLAN PROFILE
Stn 0+300 to 0+600

1:500 Hor / 1:100 Ver
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Project No./No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet/Feuille C202	Revision no./ La Révision no. 6
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P. R. GARDNER
P. R. GARDNER
JAN 14/17

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12. RAILING PROFILE AND MOUNTING DETAILS TO BE COORDINATED WITH RADIIUM HOT SPRINGS SITE REHABILITATION SCOPE OF WORK
13. EXACT LOCATIONS FOR THE ZEBRA CROSSING AND POLES FOR THE FLASHING BEACONS TO BE CONFIRMED ON SITE BASED SIGHTLINES.

6	ISSUED FOR TENDER	2017/01/17
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Client/client

PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA

Project title/Titre du projet

SINCLAIR CANYON

SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par
DB

Drawn by/Dessine par
MH

PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

PLAN PROFILE
Stn 0+600 to 0+900

1:500 Hor / 1:100 Ver
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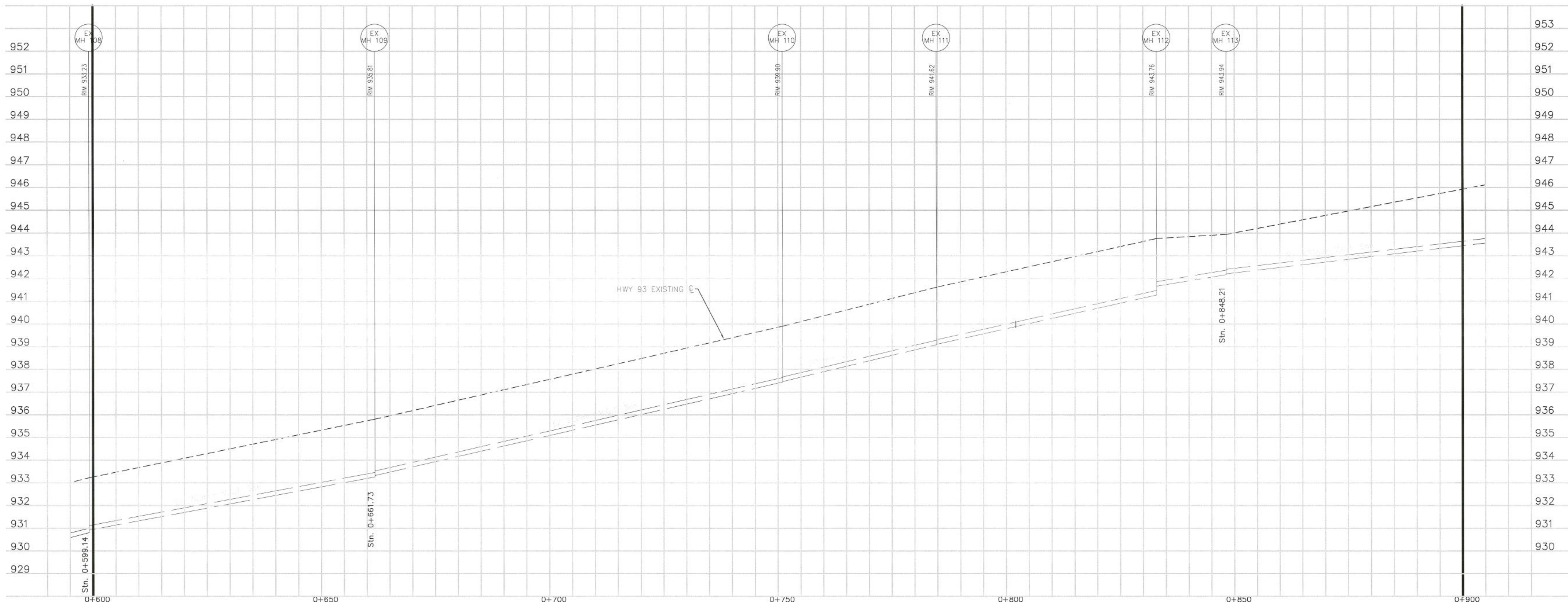
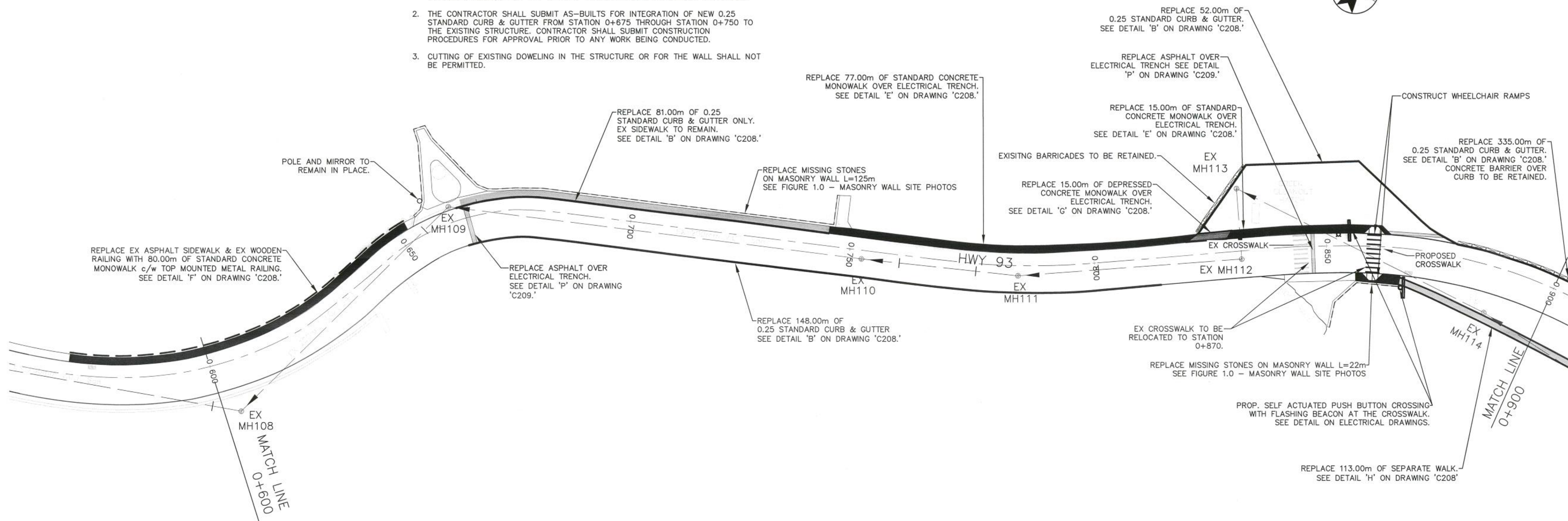
Project No./No. du projet
R.067256.802
WESTERN
PROJECT#
R.079636.001

Sheet/Feuille
C203

Revision no./
La Révision
no.
6

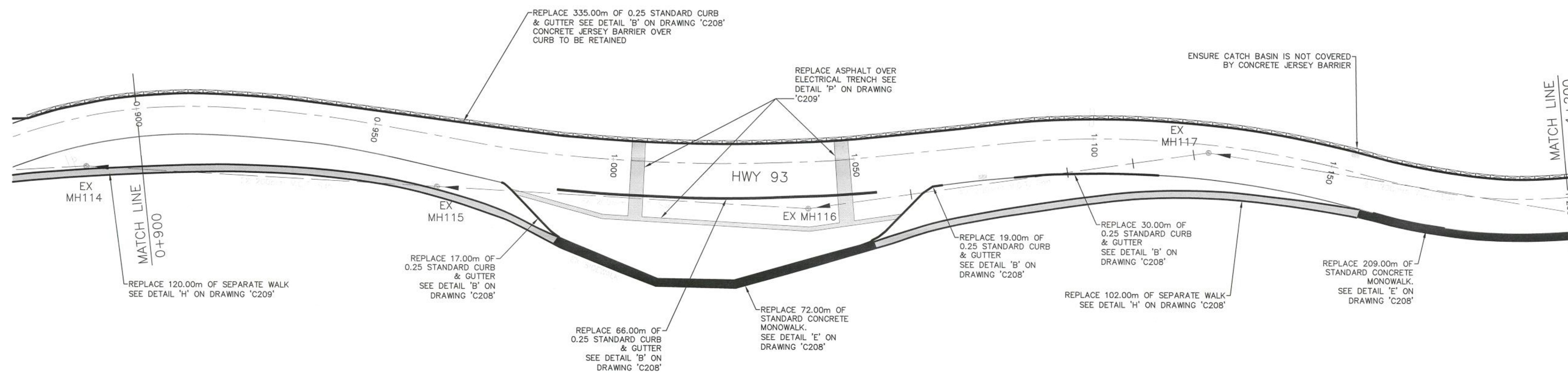
NOTES:

1. THE EXISTING SIDEWALK APPEARS TO BE INTEGRATED INTO THE STRUCTURAL SYSTEM. DRAWINGS FOR THE EXISTING STRUCTURE ARE NO LONGER AVAILABLE.
2. THE CONTRACTOR SHALL SUBMIT AS-BUILTS FOR INTEGRATION OF NEW 0.25 STANDARD CURB & GUTTER FROM STATION 0+675 THROUGH STATION 0+750 TO THE EXISTING STRUCTURE. CONTRACTOR SHALL SUBMIT CONSTRUCTION PROCEDURES FOR APPROVAL PRIOR TO ANY WORK BEING CONDUCTED.
3. CUTTING OF EXISTING DOWELING IN THE STRUCTURE OR FOR THE WALL SHALL NOT BE PERMITTED.





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Revision/	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA

Project title/Titre du projet

SINCLAIR CANYON

SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par

DB

Drawn by/Dessiné par

MH

PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

PWGSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

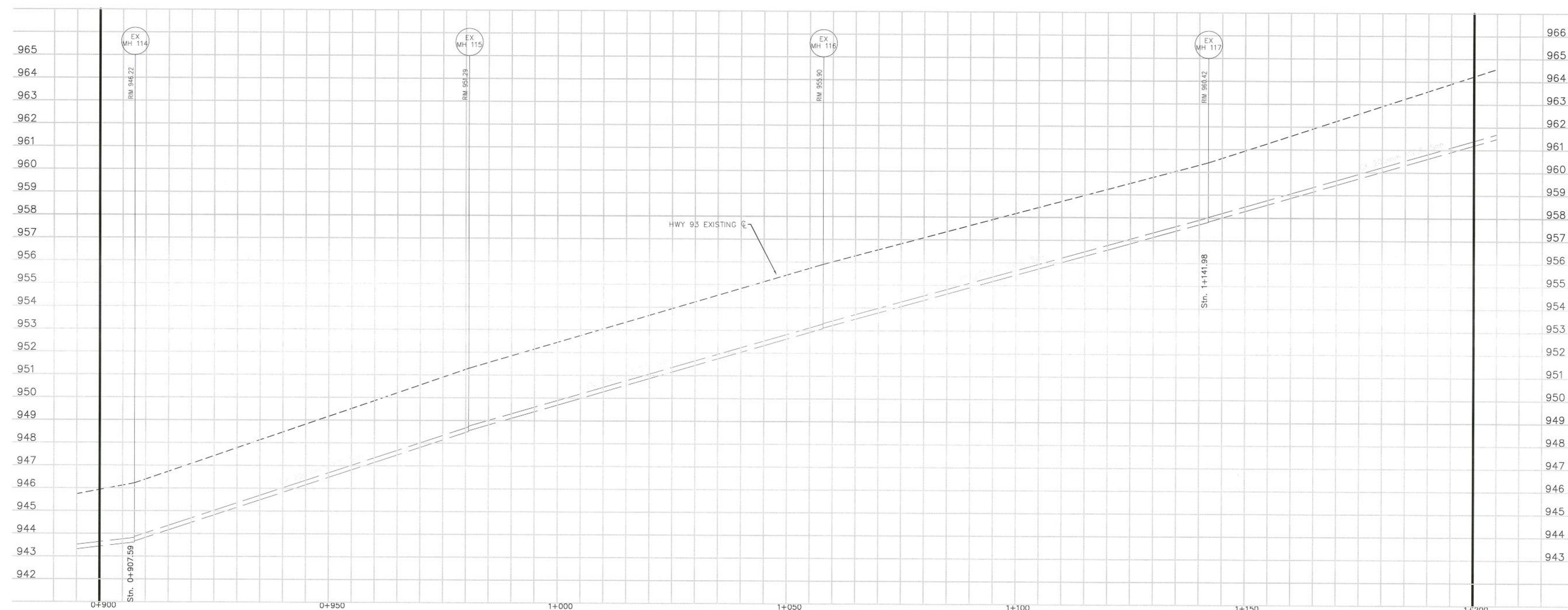
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Project No./No. du projet
R.067256.802
WESTERN
PROJECT#
R.079636.001

Sheet/Fauille
C204

Revision no./
La révision
no.
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Revision/	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA

Project title/Titre du projet

SINCLAIR CANYON

SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par

DB

Drawn by/Dessiné par

MH

PWGSC Project Manager/Administrateur de Projets TPSGC

MOSES YOUNG/TONY TANG

PWGSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC

PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

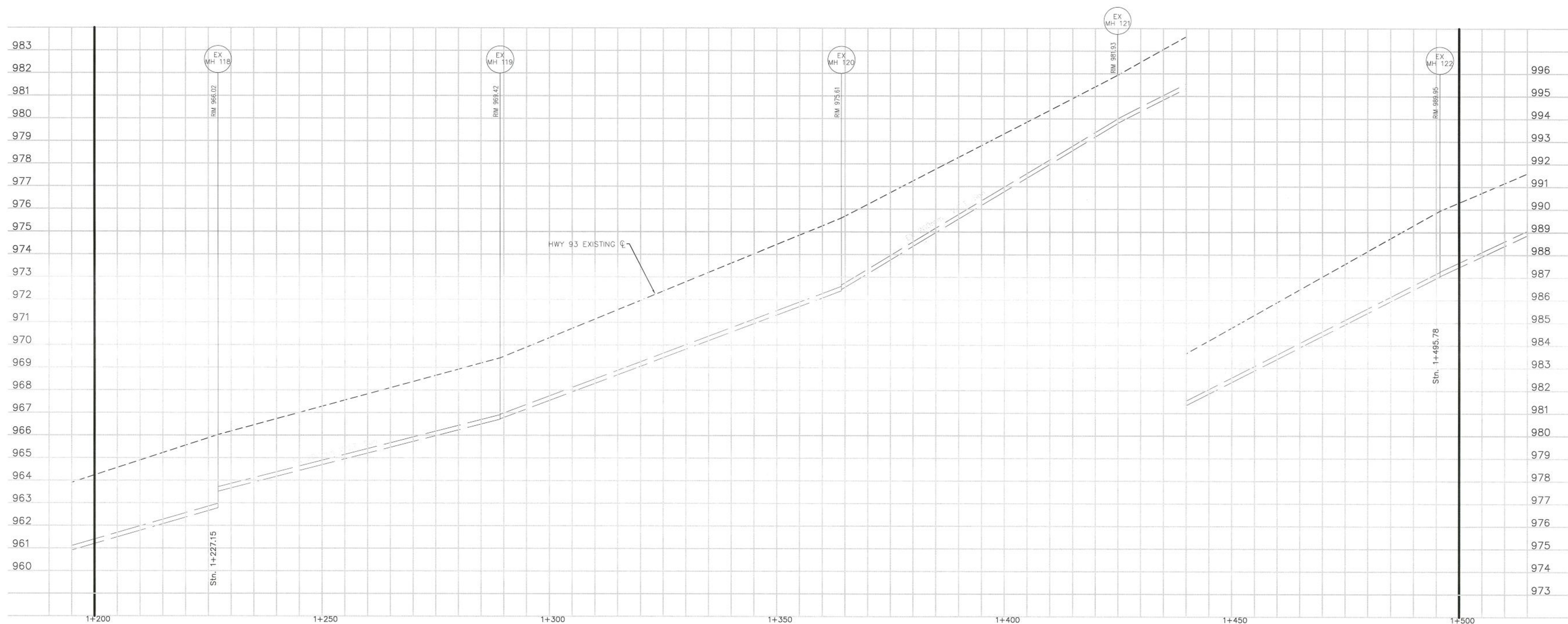
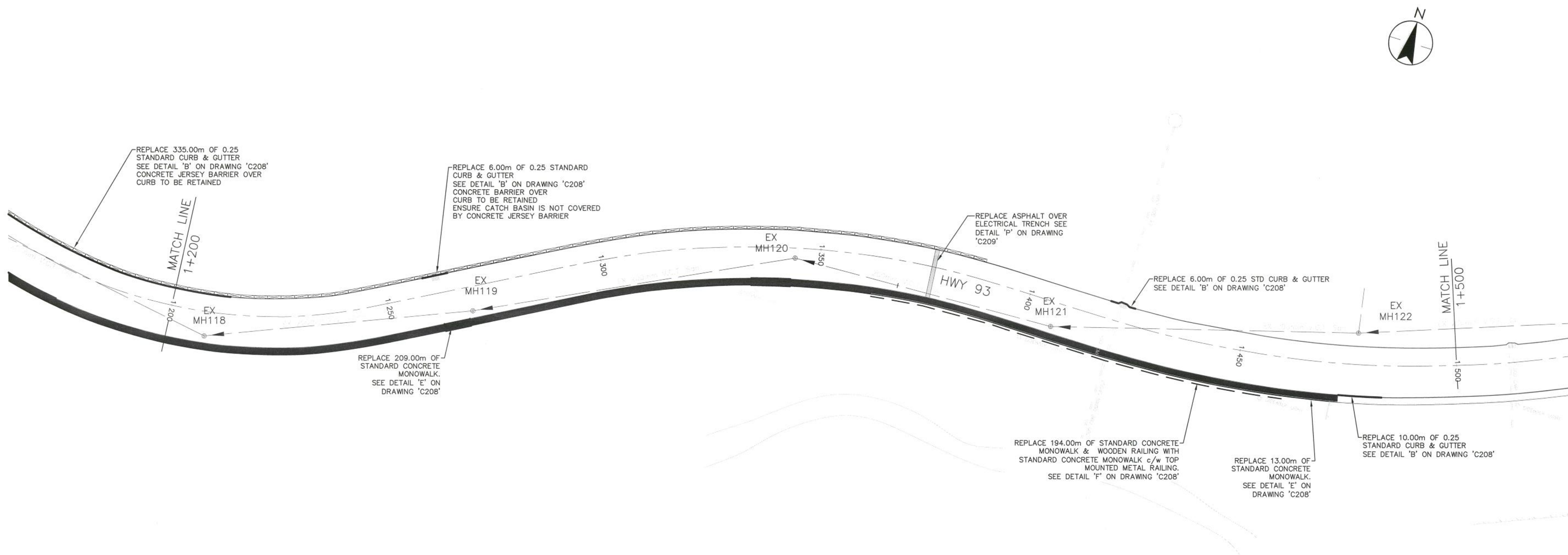
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Stn 1+200 to 1+500

1:500 Hor / 1:100 Ver
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1.0 0 1.0 2.0V

Project No./No. du projet
R.067256.802
WESTERN
PROJECT#
R.079636.001

Sheet/Feuille
C205

Revision no./
La Révision
no.
6





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PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA

Project title/Titre du projet

SINCLAIR CANYON

SITE REHABILITATION

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MH

PWOSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

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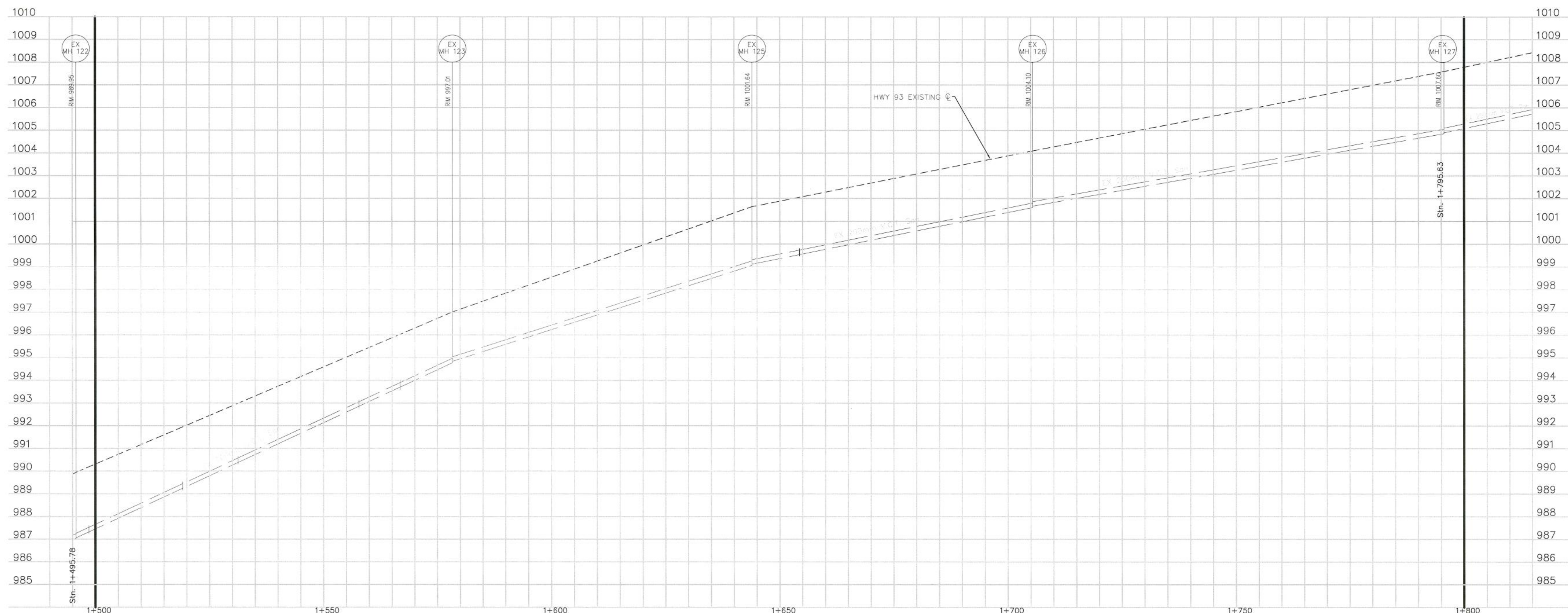
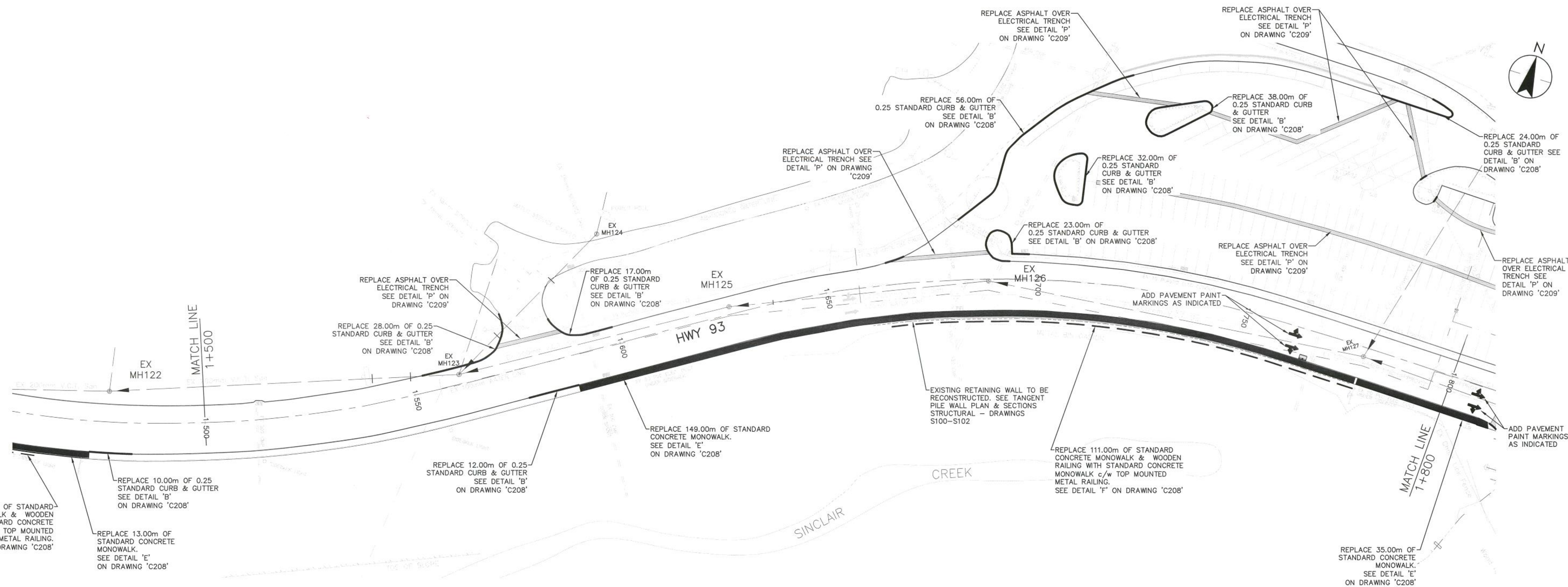
PLAN PROFILE
Stn 1+500 to 1+800

1:500 Hor / 1:100 Ver
1.0 0 5 10H
1.0 0 5 2.0V

Project No./No. du projet
R.067256.802
WESTERN
PROJECT#
R.079636.001

Sheet/Fauille
C206

Revision no./
La Révision
no.
6





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13. MONOLITHIC SIDEWALK TO BE THICKENED TO 163mm AT BOLLARD LOCATIONS TO ACCOMMODATE BOLLARD FOUNDATION. SEE ELECTRICAL DRAWINGS FOR DETAILS.

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Revision/Revision	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet

SINCLAIR CANYON

SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par

DB

Drawn by/Dessiné par

MH

PWGSC Project Manager/Administrateur de Projets TPSCG

MOSES YOUNG/TONY TANG

PWGSC, Regional Manager, Architectural and Engineering Services/

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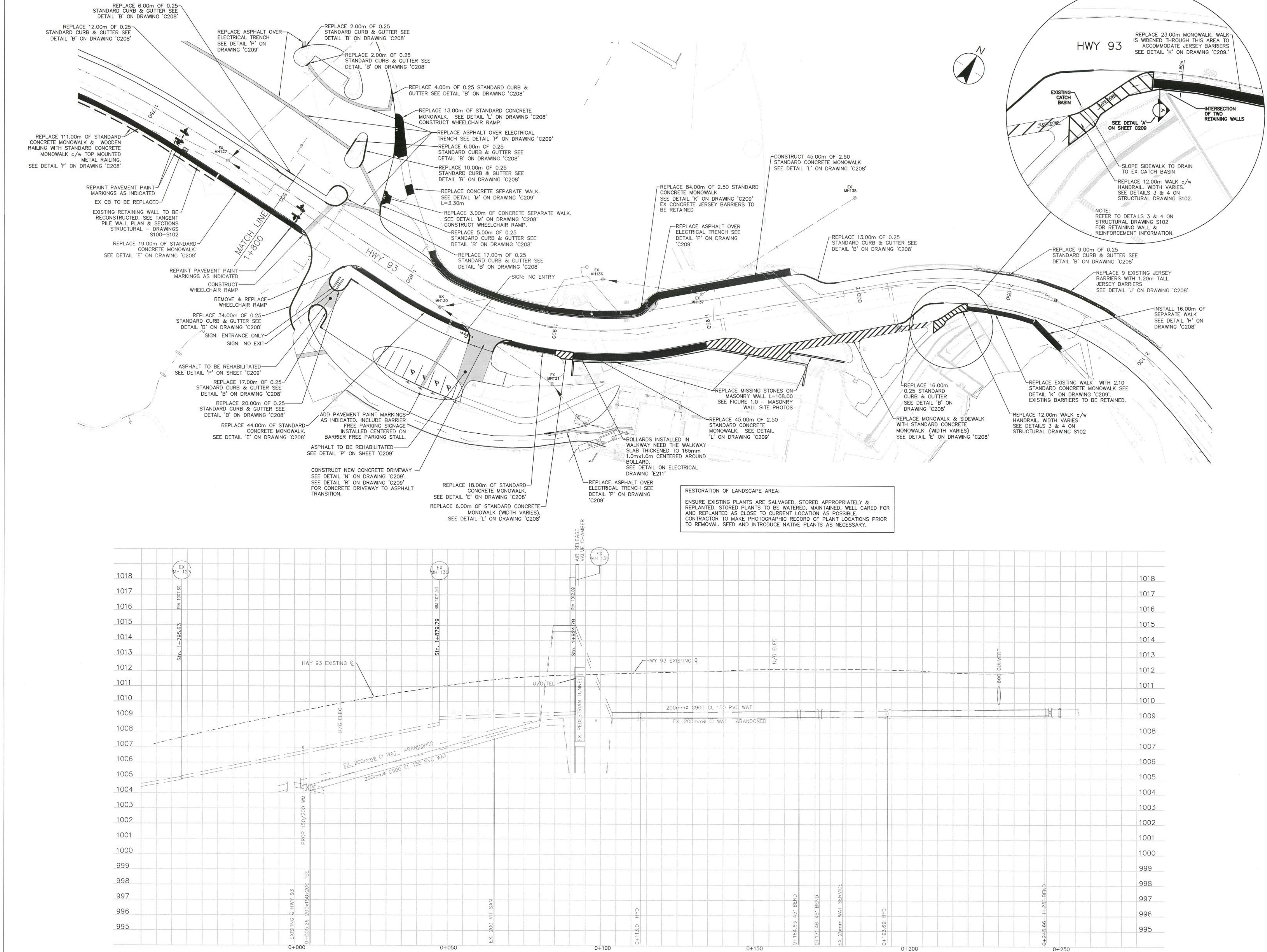
PWGSC WESTERN REGION RM

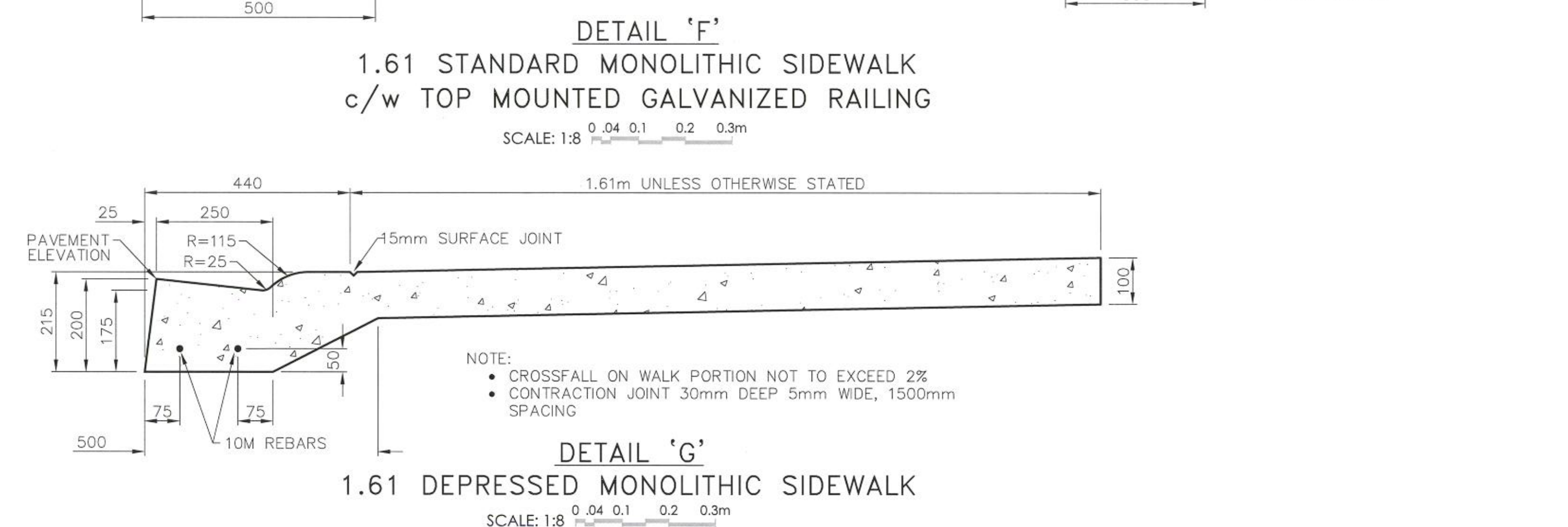
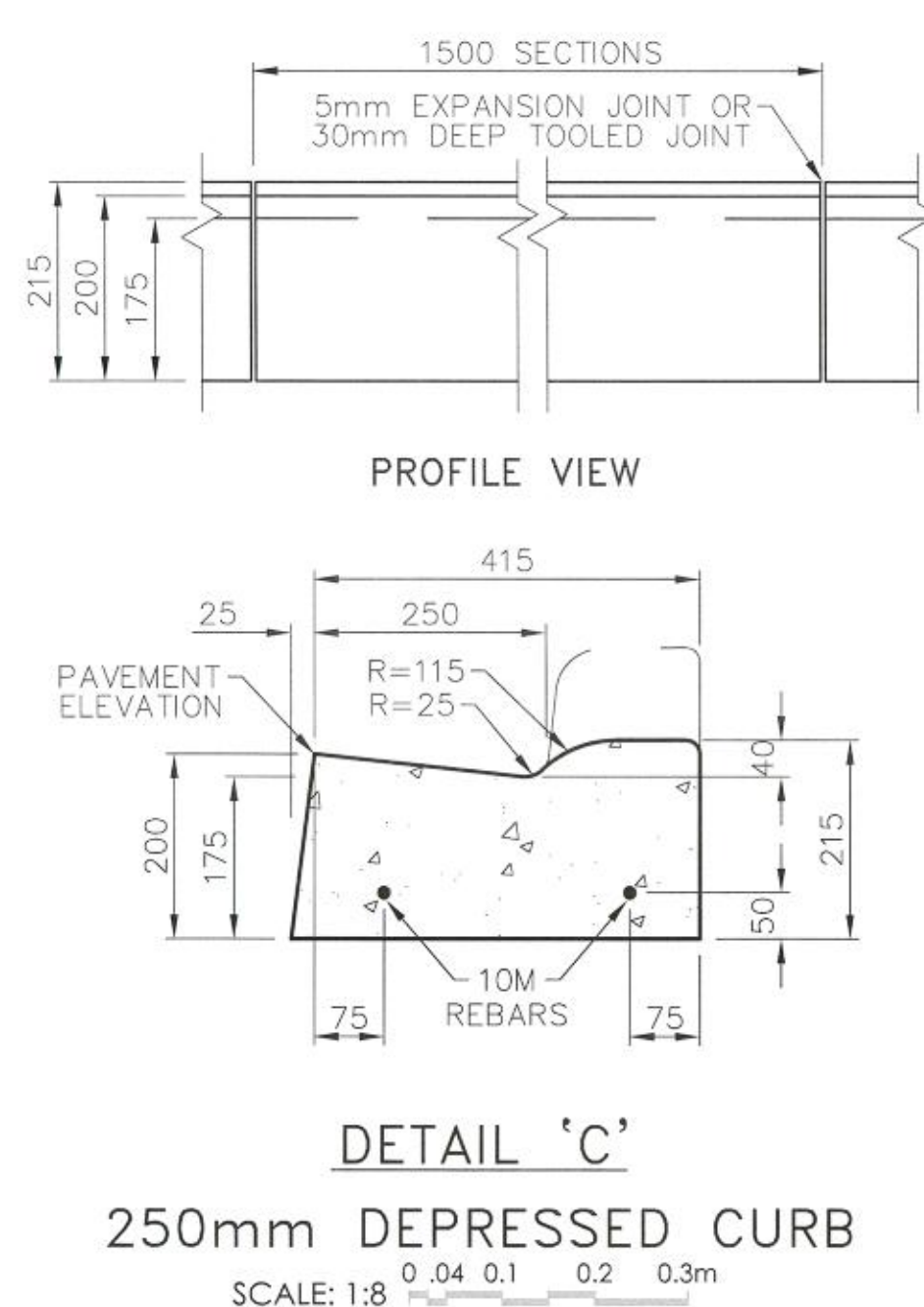
Drawing title/Titre du dessin

PLAN PROFILE
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1:500 Hor / 1:100 Ver

Project No./No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet/Fauille C207	Revision no./ La Révision no. 6
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5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/28
Revision/Revision	Description/Description	Date/Date

Client/client

**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
DB

Drawn by/Dessiné par
MH

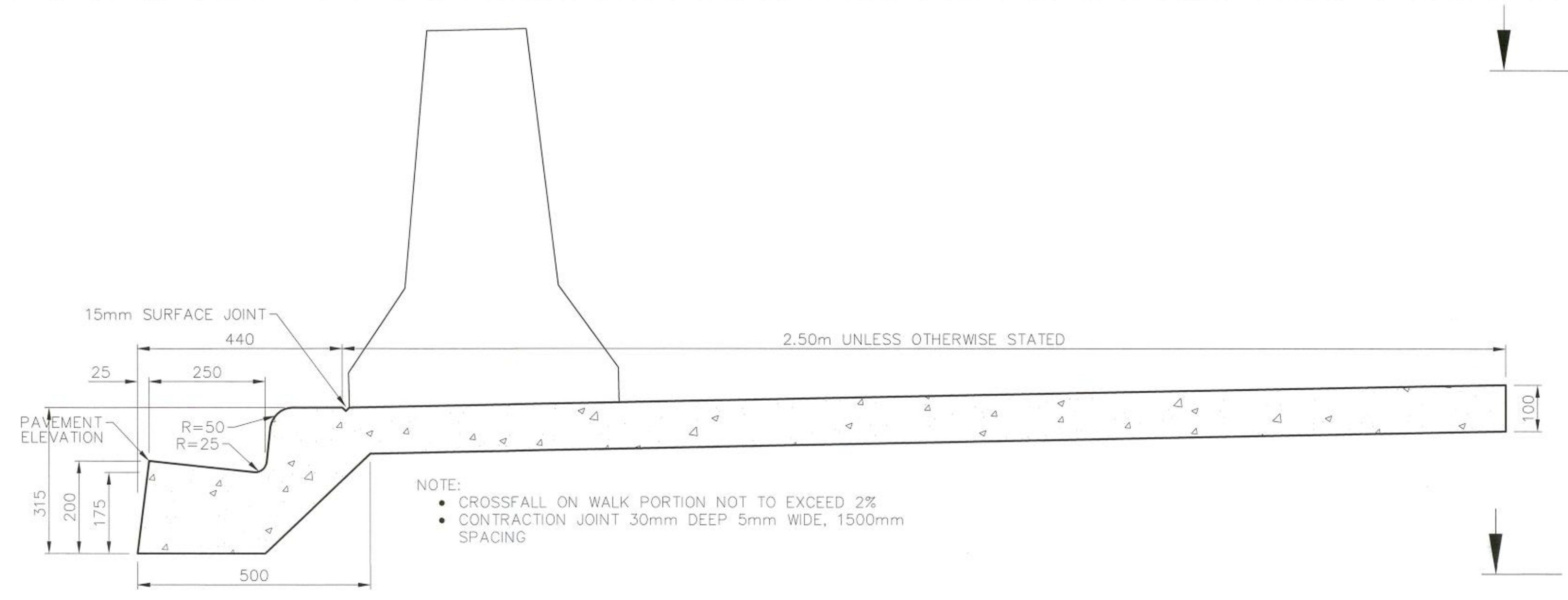
PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régional, Services d'architecture et de génie, TPSGC
PWGSC WESTERN REGION RM

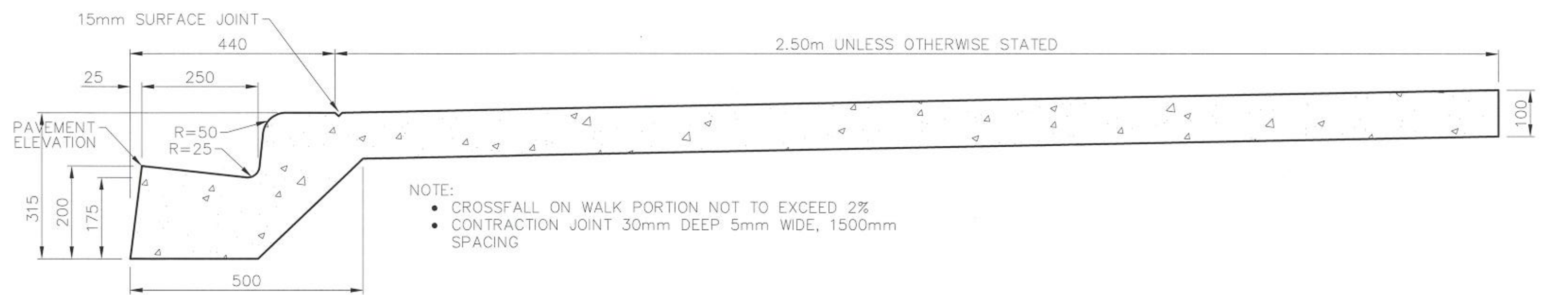
Drawing title/Titre du dessin

DETAILS

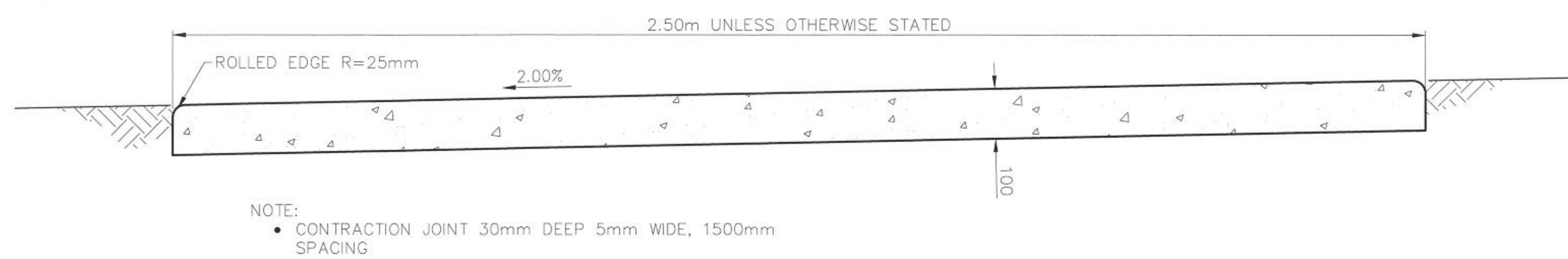
Project No./No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet/Fauille C209	Revision no./ La Révision no. 6
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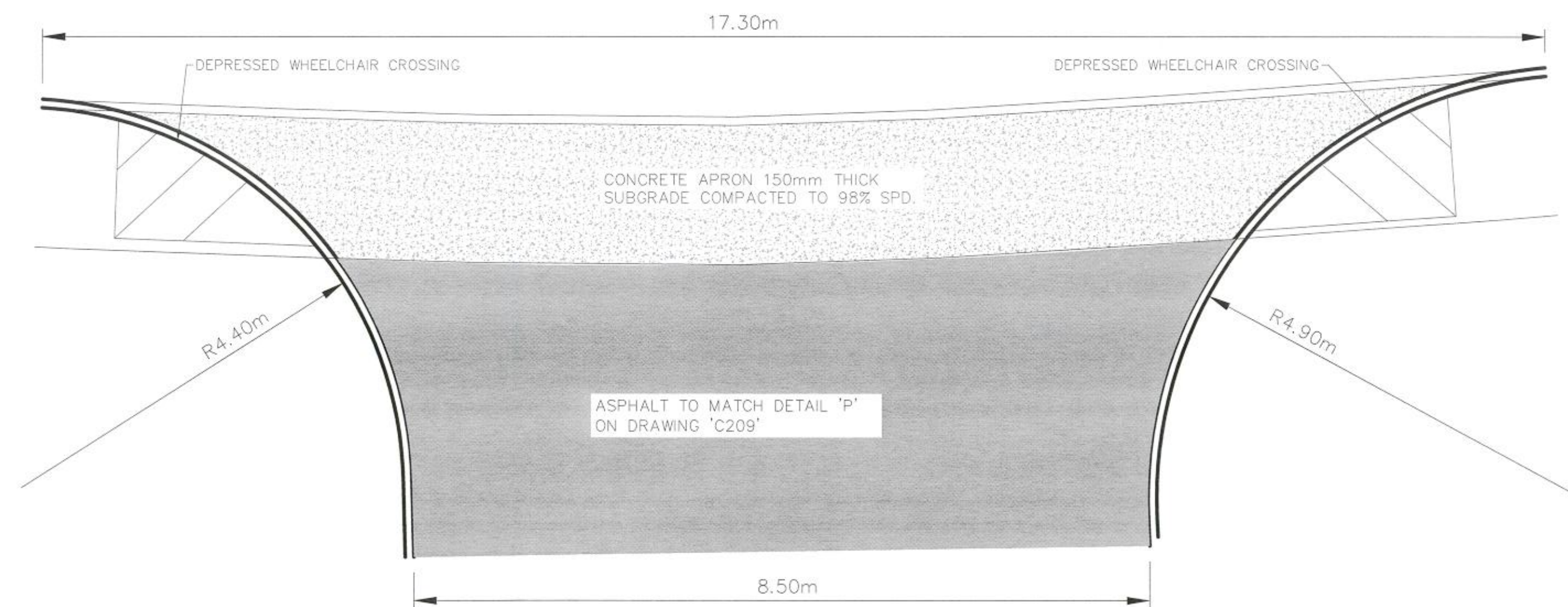
DETAIL 'K'
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SCALE: 1:8



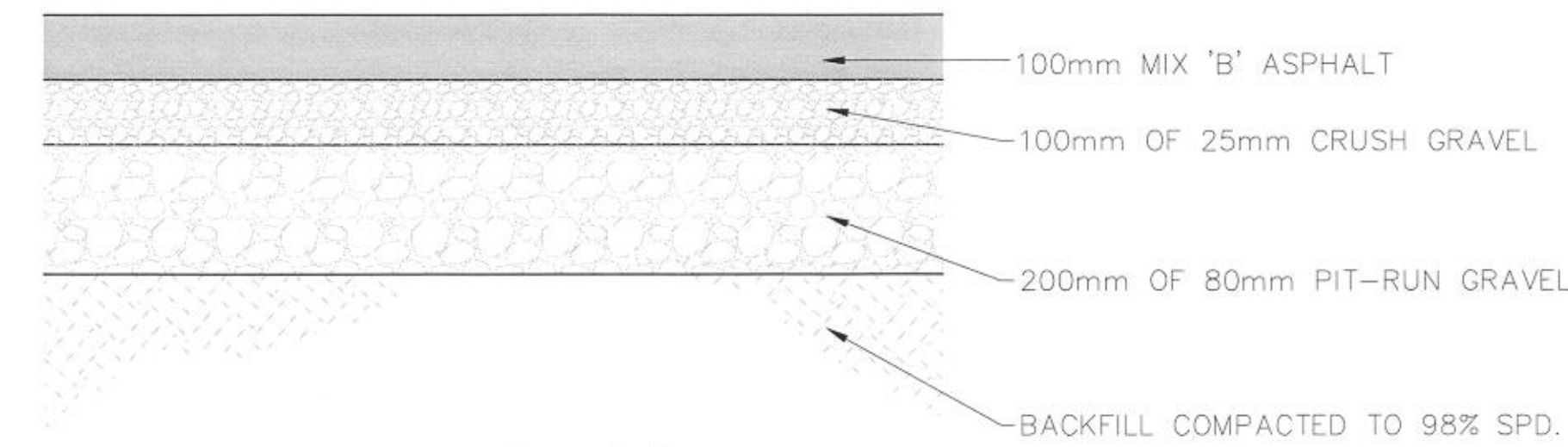
DETAIL 'L'
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SCALE: 1:8



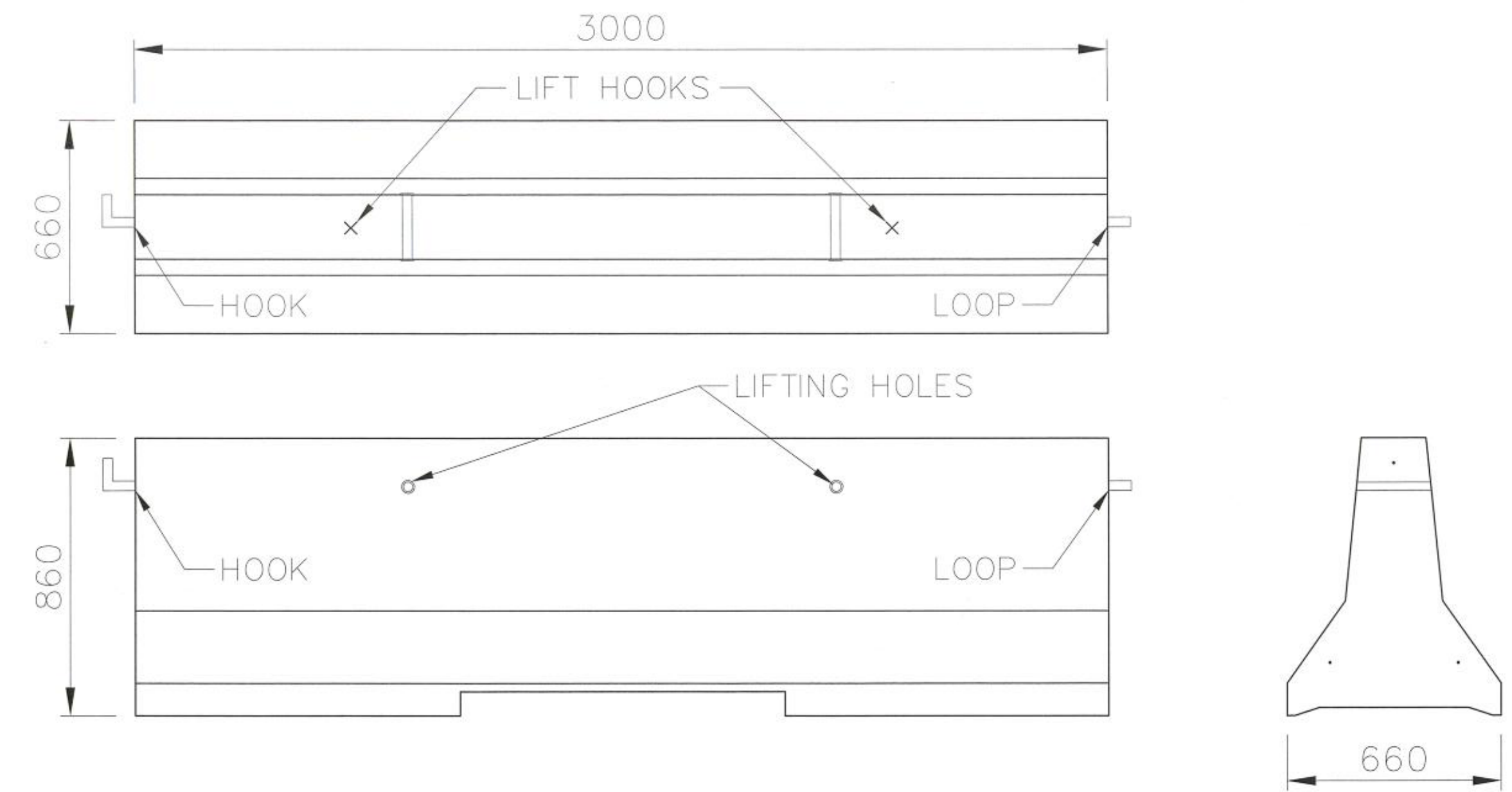
DETAIL 'M'
2.50 SEPARATE WALK
SCALE: 1:8



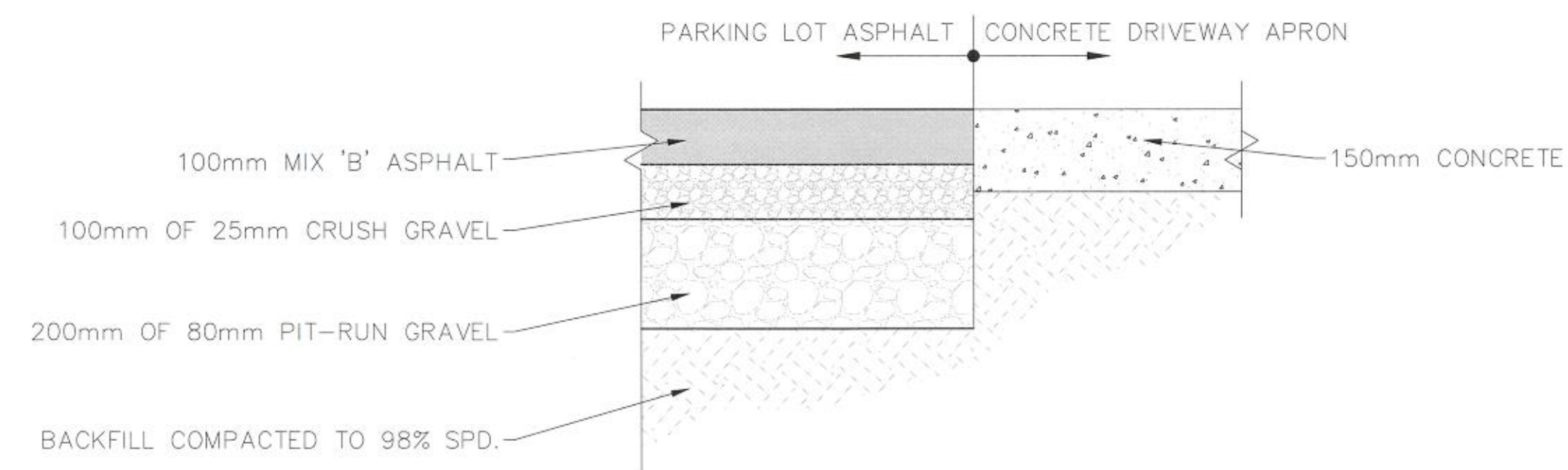
DETAIL 'N'
CONCRETE DRIVEWAY TIE TO HWY 93
SCALE: 1:50



DETAIL 'P'
PAVEMENT STRUCTURE DETAIL
SCALE: NTS



DETAIL 'Q'
STANDARD JERSEY BARRIER
NOT TO SCALE



DETAIL 'R'
PAVEMENT/CONCRETE STRUCTURE
AT DRIVEWAY
SCALE: NTS



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6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
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1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/Revision	Description/Description	Date/Date

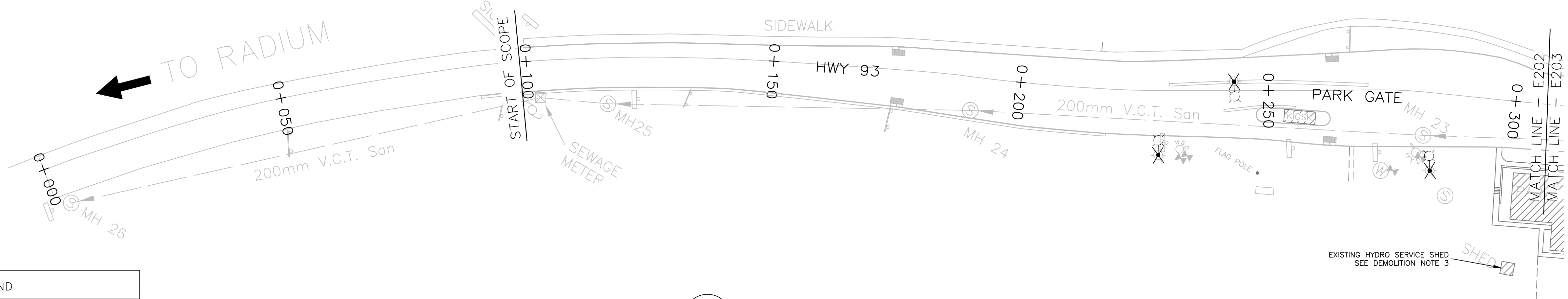
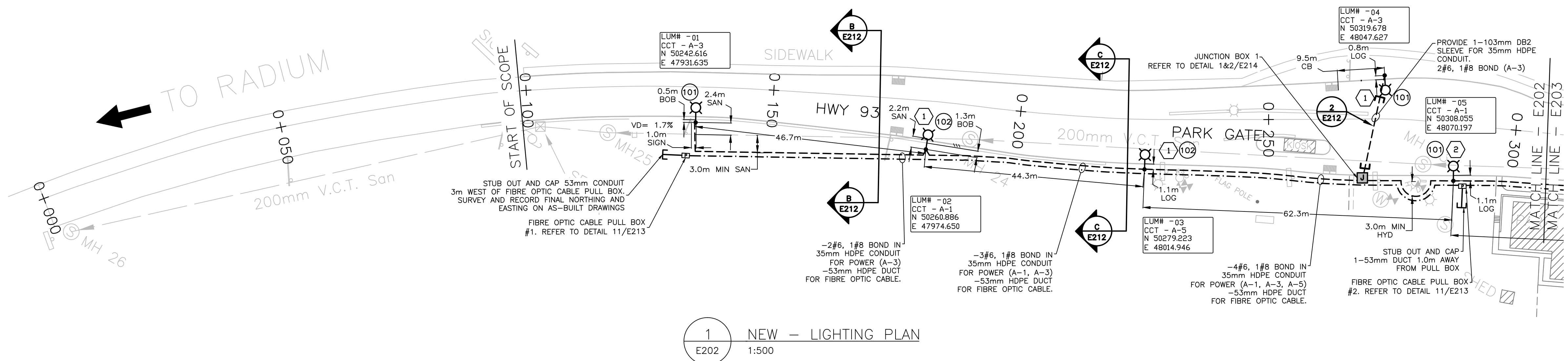
Client/client
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet
**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only
Designed by/Concept par
RP
Drawn by/Dessiné par
NP
PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG
PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin
LIGHTING PLAN 0+000 TO 0+300

Project No./No. du projet
R.067256.802
Sheet/Feuille
E202
Revision no./La Révision no.
6



SYMBOL LEGEND	
---x---x---x---	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
-----	NEW U/G STREETLIGHT CIRCUIT
-.-.-.-.-	NEW U/G FIBRE CABLE
-----	COAX AND HEATER CABLE
[Symbol]	NEW 100A, 347V/600V CDP-A
[Symbol]	NEW WEATHERPROOF JUNCTION BOX
[Symbol]	EXISTING ELECTRICAL BOX TO BE REMOVED
[Symbol]	EXISTING 347/600V BC HYDRO TRANSFORMER
[Symbol]	NEW SINGLE DAVIT STREET LIGHT POLE
[Symbol]	NEW SINGLE POLE MOUNTED LUMINAIRE
[Symbol]	NEW DOUBLE POLE MOUNTED LUMINAIRE
[Symbol]	LED BOLLARD
[Symbol]	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
[Symbol]	LUMINAIRE POLE SUSPENDED CAMERA
[Symbol]	FIBRE PULL BOX
[Symbol]	COAX PULL BOX
[Symbol]	FIBRE PULL BOX (EV CHARGING STATION)
[Symbol]	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
VD=X.XX%	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
LOG	LIP OF GUTTER
BOB	BACK OF BARRIER
BOW	BACK OF WALKWAY
FOW	FRONT OF WALKWAY
LUM# -XX CCT - XX N - XXXX E - XXXX	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER NOTES:

- IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
- ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
- ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
- ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY "DURATAPE" TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
- ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED, DUE TO SITE CONDITIONS, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AT PROJECT COMPLETION.
- CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION. HYDROVAC ALL CONFLICT POINTS.

HORIZONTAL UTILITY CLEARANCES	
UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

NOTE:

- CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
- ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PEFICATIONS.

KEY NOTES:

- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q6, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q4, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.



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1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/ Révision	Description/Description	Date/Date

Client/client

**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
RP

Drawn by/Dessiné par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC

PWGSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

LIGHTING PLAN 0+300 TO 0+600

Project No./No. du projet
R.067256.802
**WESTERN
PROJECT#
R.079636.001**

Sheet/Feuille
E203

Revision no./
La Révision
no.
6

SYMBOL LEGEND	
	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
	NEW U/G STREETLIGHT CIRCUIT
	NEW U/G FIBRE CABLE
	COAX AND HEATER CABLE
	NEW 100A, 347V/600V CDP-A
	NEW WEATHERPROOF JUNCTION BOX
	EXISTING ELECTRICAL BOX TO BE REMOVED
	EXISTING 347/600V BC HYDRO TRANSFORMER
	NEW SINGLE DAVIT STREET LIGHT POLE
	NEW SINGLE POLE MOUNTED LUMINAIRE
	NEW DOUBLE POLE MOUNTED LUMINAIRE
	LED BOLLARD
	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
	LUMINAIRE POLE SUSPENDED CAMERA
	FIBRE PULL BOX
	COAX PULL BOX
	FIBRE PULL BOX (EV CHARGING STATION)
	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
	LIP OF GUTTER
	BACK OF BARRIER
	BACK OF WALKWAY
	FRONT OF WALKWAY
	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER NOTES:

- IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
- ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
- ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
- ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY "DURATAPE" TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
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- CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION. HYDROVAC ALL CONFLICT POINTS.

**HORIZONTAL UTILITY
CLEARANCES**

UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

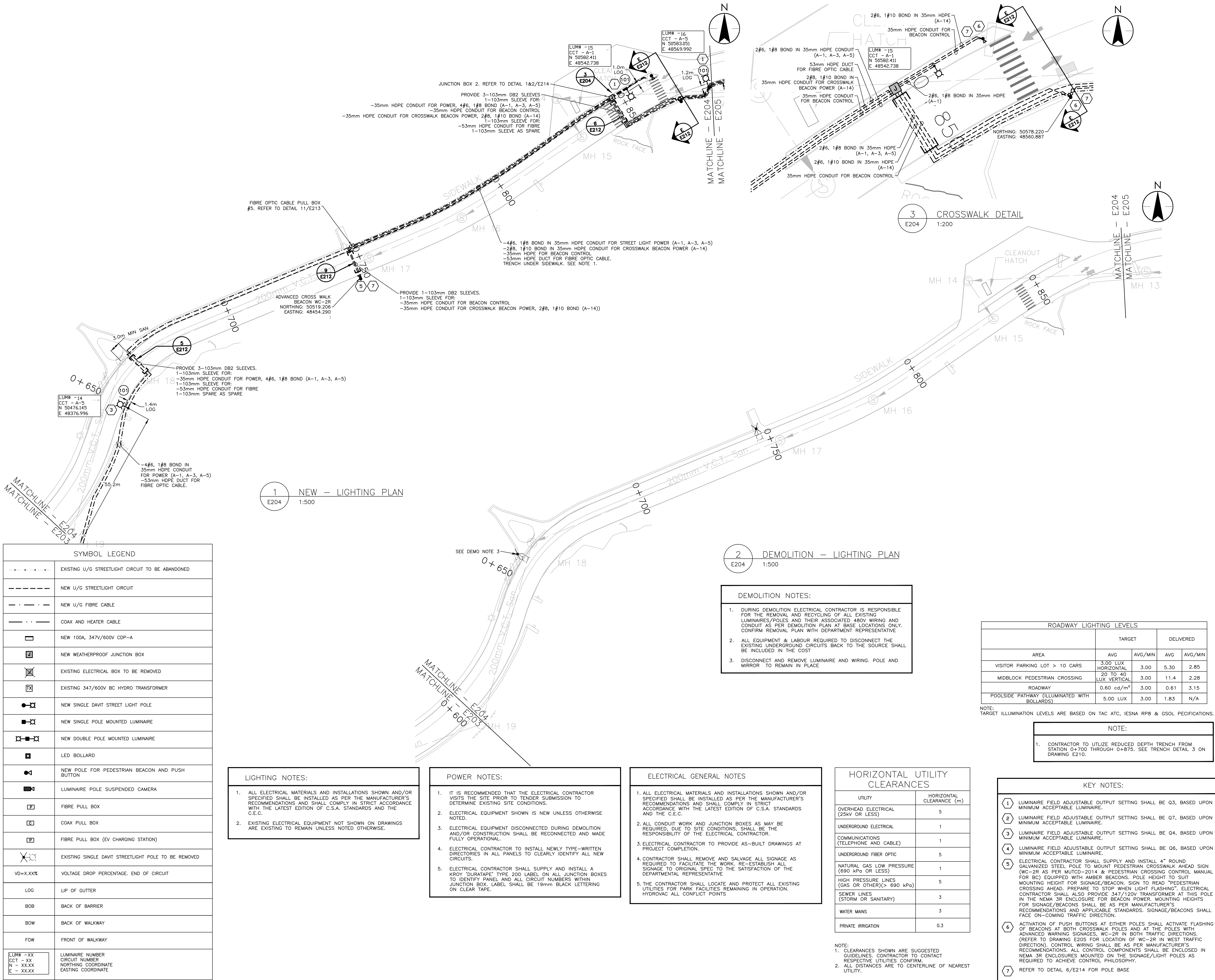
- NOTE:
- CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
 - ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL SPECIFICATIONS.

KEY NOTES:

- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE 05, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE 06, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.



SYMBOL LEGEND	
	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
	NEW U/G STREETLIGHT CIRCUIT
	NEW U/G FIBRE CABLE
	COAX AND HEATER CABLE
	NEW 100A, 347V/600V CDP-A
	NEW WEATHERPROOF JUNCTION BOX
	EXISTING ELECTRICAL BOX TO BE REMOVED
	EXISTING 347/600V BC HYDRO TRANSFORMER
	NEW SINGLE DAVIT STREET LIGHT POLE
	NEW SINGLE POLE MOUNTED LUMINAIRE
	NEW DOUBLE POLE MOUNTED LUMINAIRE
	LED BOLLARD
	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
	LUMINAIRE POLE SUSPENDED CAMERA
	FIBRE PULL BOX
	COAX PULL BOX
	FIBRE PULL BOX (EV CHARGING STATION)
	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
VD=X.XXX%	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
LOG	LIP OF GUTTER
BOB	BACK OF BARRIER
BOW	BACK OF WALKWAY
FDW	FRONT OF WALKWAY
LUM# -XX CCT - XX N - XXXX E - XXXX	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2.	EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER NOTES:	
1.	IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
2.	ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
3.	ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
4.	ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
5.	ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY "DURATAPE" TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2.	ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED, DUE TO SITE CONDITIONS, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3.	ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AT PROJECT COMPLETION.
4.	CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE
5.	THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION. HYDROVAC ALL CONFLICT POINTS

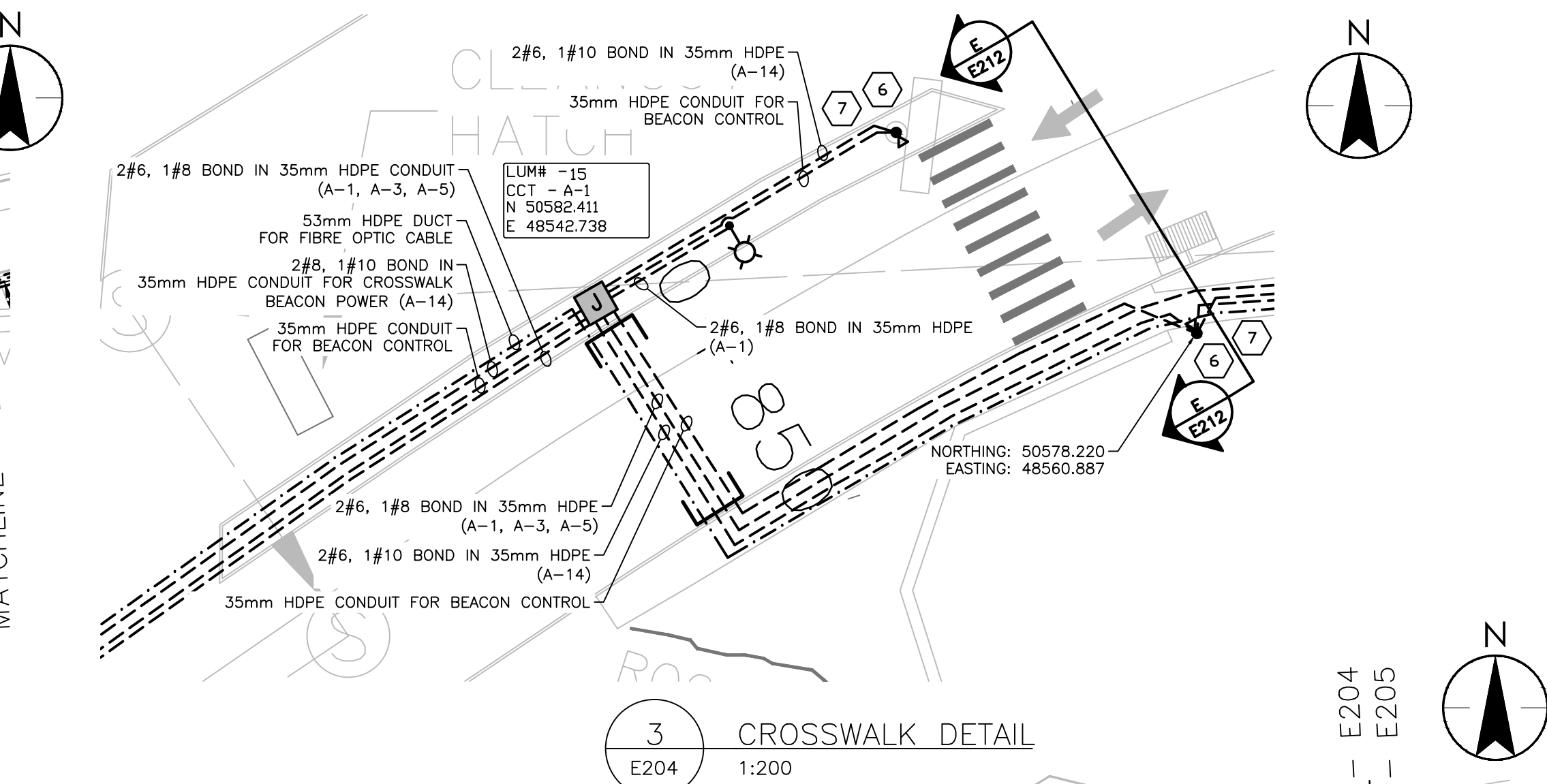
HORIZONTAL UTILITY CLEARANCES	
UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

NOTE:
1. CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
2. ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

2 DEMOLITION - LIGHTING PLAN
E204 1:500

DEMOLITION NOTES:	
1.	DURING DEMOLITION ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND RECYCLING OF ALL EXISTING LUMINAIRES/POLES AND THEIR ASSOCIATED 480V WIRING AND CONDUIT AS PER DEMOLITION PLAN AT BASE LOCATIONS ONLY. CONFIRM REMOVAL PLAN WITH DEPARTMENT REPRESENTATIVE
2.	ALL EQUIPMENT & LABOUR REQUIRED TO DISCONNECT THE EXISTING UNDERGROUND CIRCUITS BACK TO THE SOURCE SHALL BE INCLUDED IN THE COST
3.	DISCONNECT AND REMOVE LUMINAIRE AND WIRING. POLE AND MIRROR TO REMAIN IN PLACE

2 DEMOLITION - LIGHTING PLAN
E204 1:500



3 CROSSWALK DETAIL
E204 1:200

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PECIFICATIONS.

NOTE:	
1.	CONTRACTOR TO UTILIZE REDUCED DEPTH TRENCH FROM STATION 0+700 THROUGH 0+875. SEE TRENCH DETAIL 3 ON DRAWING E210.

KEY NOTES:	
1	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q3, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
2	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q7, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
3	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q4, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
4	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q6, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
5	ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL 4" ROUND GALVANIZED STEEL POLE TO MOUNT PEDESTRIAN CROSSWALK AHEAD SIGN (WC-2R AS PER MUTCD-2014 & PEDESTRIAN CROSSWALK CONTROL MANUAL FOR BC) EQUIPPED WITH AMBER BEACONS. POLE HEIGHT TO SUIT MOUNTING HEIGHT FOR SIGNAGE/BEACON. SIGN TO READ "PEDESTRIAN CROSSING AHEAD. PREPARE TO STOP WHEN LIGHT FLASHING". ELECTRICAL CONTRACTOR SHALL ALSO PROVIDE 347/120V TRANSFORMER AT THIS POLE IN THE NEMA 3R ENCLOSURE FOR BEACON POWER. MOUNTING HEIGHTS FOR SIGNAGE/BEACONS SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE STANDARDS. SIGNAGE/BEACONS SHALL FACE ON-COMING TRAFFIC DIRECTION.
6	ACTIVATION OF PUSH BUTTONS AT EITHER POLES SHALL ACTIVATE FLASHING OF BEACONS AT BOTH CROSSWALK POLES AND AT THE POLES WITH ADVANCED WARNING SIGNAGES. WC-2R IN BOTH TRAFFIC DIRECTIONS. (REFER TO DRAWING E205 FOR LOCATION OF WC-2R IN WEST TRAFFIC DIRECTION). CONTROL WIRING SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS. ALL CONTROL COMPONENTS SHALL BE ENCLOSED IN NEMA 3R ENCLOSURES MOUNTED ON THE SIGNAGE/LIGHT POLES AS REQUIRED TO ACHIEVE CONTROL PHILOSOPHY.
7	REFER TO DETAIL 6/E214 FOR POLE BASE

Public Works and Government Services Canada

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6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/Revision	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

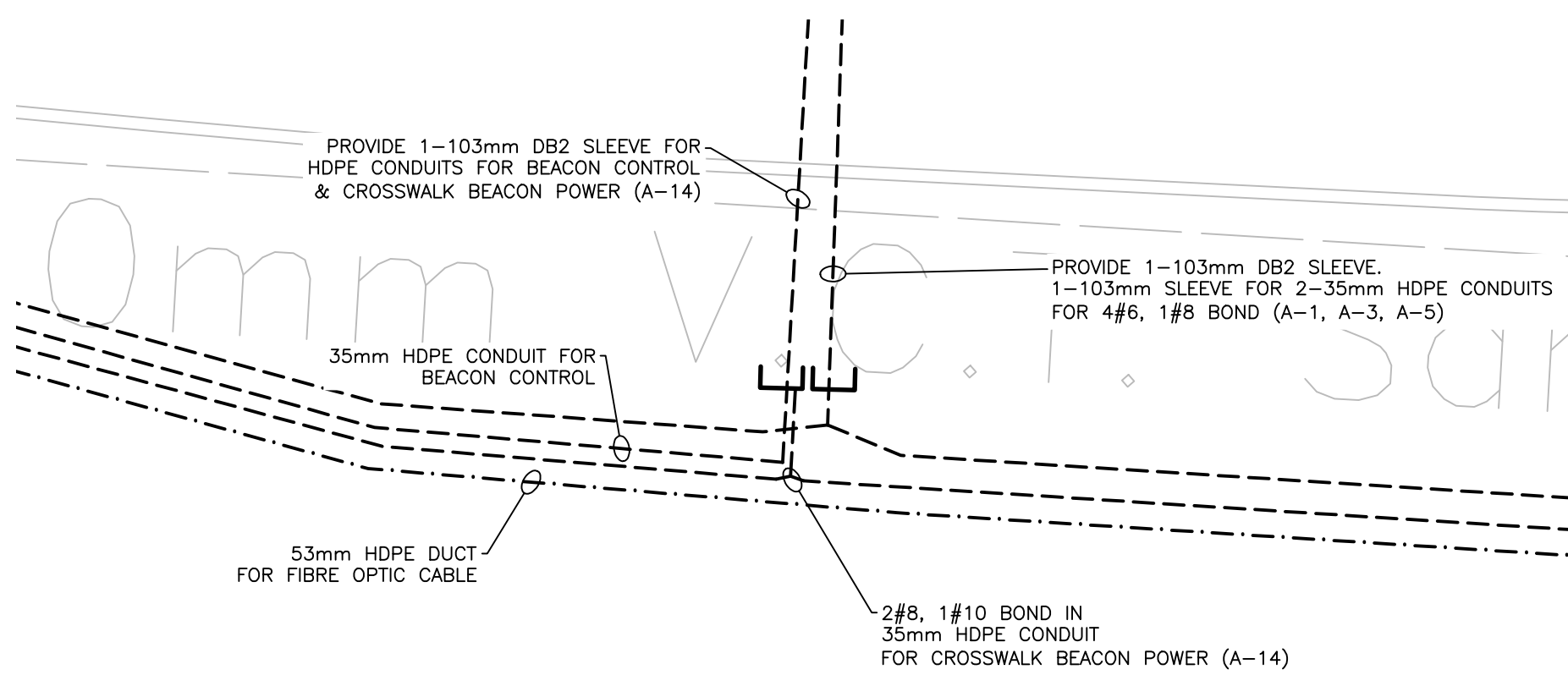
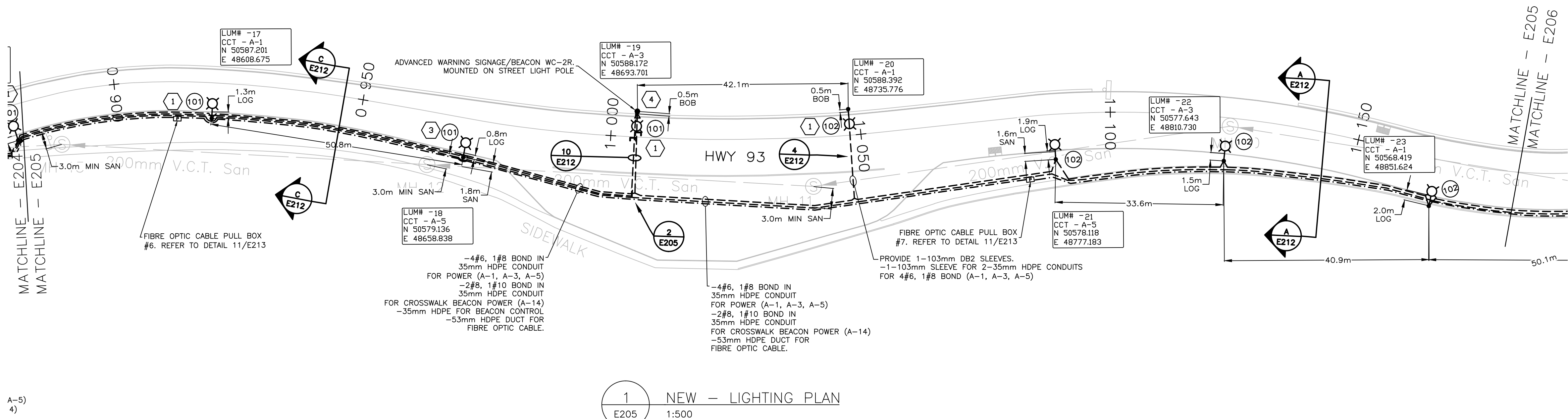
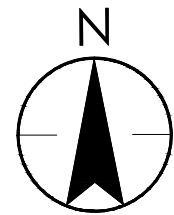
SINCLAIR CANYON
SITE REHABILITATION

Project title/Titre du projet

Consultant Signature Box Only

Designed by/Concept par RP	Drawn by/Dessine par NP
PWGSC Project Manager/Administrateur de Projets TPSGC MOSES YOUNG/TONY TANG	
PWGSC Regional Manager/Architectural and Engineering Services/ Gestionnaire régionale, Services d'architectural et de génie, TPSGC PWGSC WESTERN REGION RM	
Drawing title/Titre du dessin LIGHTING PLAN 0+600 TO 0+850	

Project No./No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet/Feuille E204	Revision no./ La Révision no. 6
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SYMBOL LEGEND	
	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
	NEW U/G STREETLIGHT CIRCUIT
	NEW U/G FIBRE CABLE
	COAX AND HEATER CABLE
	NEW 100A, 347V/600V CDP-A
	NEW WEATHERPROOF JUNCTION BOX
	EXISTING ELECTRICAL BOX TO BE REMOVED
	EXISTING 347/600V BC HYDRO TRANSFORMER
	NEW SINGLE DAVIT STREET LIGHT POLE
	NEW SINGLE POLE MOUNTED LUMINAIRE
	NEW DOUBLE POLE MOUNTED LUMINAIRE
	LED BOLLARD
	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
	LUMINAIRE POLE SUSPENDED CAMERA
	FIBRE PULL BOX
	COAX PULL BOX
	FIBRE PULL BOX (EV CHARGING STATION)
	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
	VOLTA GE DROP PERCENTAGE, END OF CIRCUIT
	LIP OF GUTTER
	BACK OF BARRIER
	BACK OF WALKWAY
	FRONT OF WALKWAY
	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2.	EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER NOTES:	
1.	IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
2.	ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
3.	ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
4.	ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
5.	ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY "DURATAPE" TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2.	ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED, DUE TO SITE CONDITIONS, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3.	ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AT PROJECT COMPLETION.
4.	CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
5.	THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION. HYDROVAC ALL CONFLICT POINTS.

HORIZONTAL UTILITY CLEARANCES	
UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

NOTE:
1. CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
2. ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m ²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PEFICATIONS.

KEY NOTES:	
1	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q6, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
2	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q4, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
3	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q5, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
4	ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL PEDESTRIAN CROSSWALK AHEAD SIGN (WC-2R AS PER MUTCD-2014 & PEDESTRIAN CROSSING CONTROL MANUAL FOR BC) EQUIPPED WITH AMBER BEACONS ON THE STREET LIGHT POLE. SIGN TO READ "PEDESTRIAN CROSSING AHEAD. PREPARE TO STOP WHEN LIGHT FLASHING". ELECTRICAL CONTRACTOR SHALL ALSO PROVIDE 347/120V TRANSFORMER AT THE LIGHT POLE IN NEMA 3R ENCLOSURE FOR BEACON POWER. MOUNTING HEIGHTS FOR SIGNAGE/BEACONS SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS AND APPLICABLE STANDARDS. SIGNAGE/BEACONS SHALL FACE ON-COMING TRAFFIC DIRECTION.



Revision/	Description/Description	Date/Date
6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29

Client/client
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet
SINCLAIR CANYON SITE REHABILITATION

Consultant Signature Box Only
Designed by/Concept par
RP
Drawn by/Dessine par
NP
PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG
PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

LIGHTING PLAN 0+850 TO 1+150

Project No./No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet/Feuille E205	Revision no./ La Révision no. 6
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2017-JAN-17

6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
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3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/ Revisions	Description/Description	Date/Date

Client/client

**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
RP

Drawn by/Dessine par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

PWGSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

LIGHTING PLAN 1+150 TO 1+450

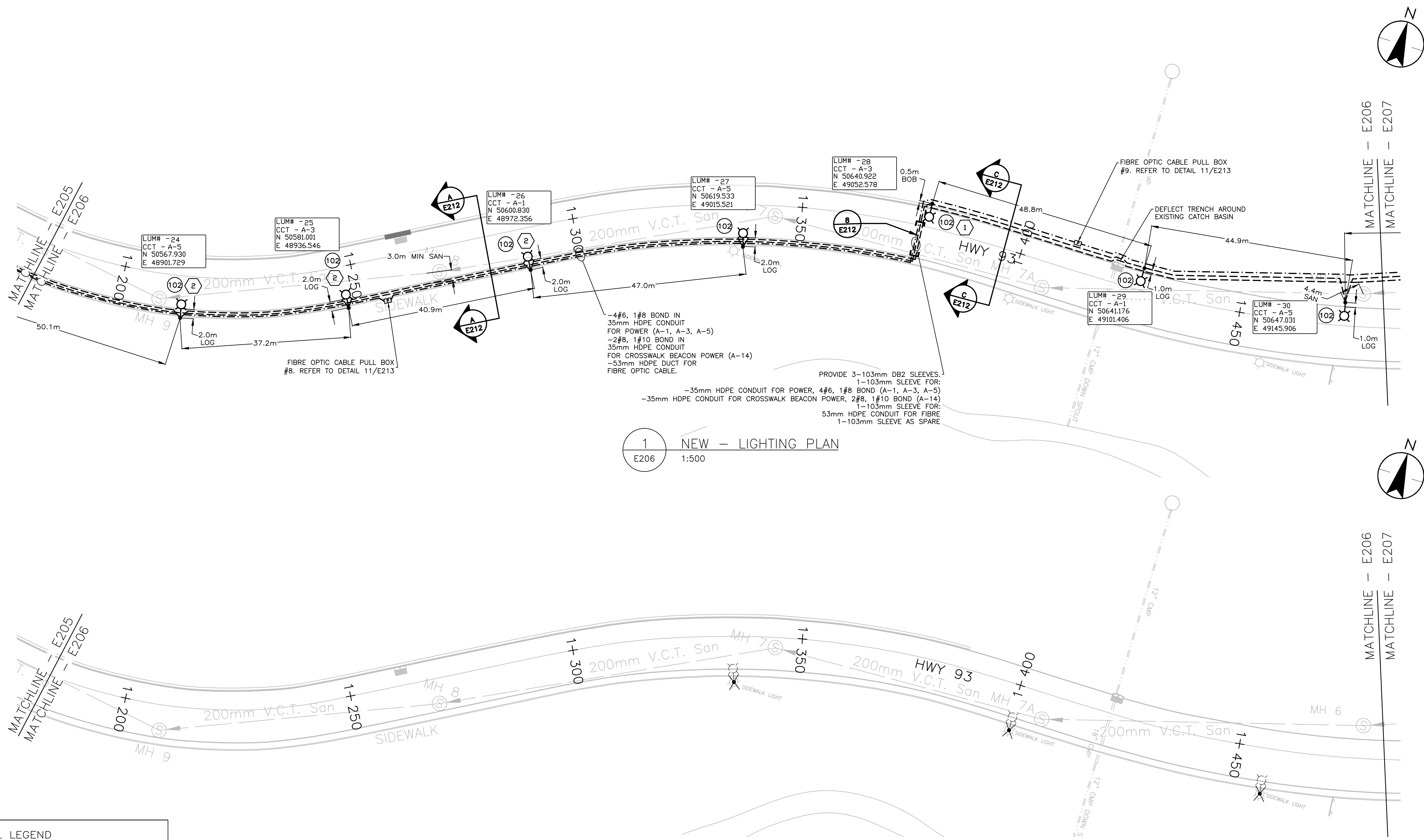
Project No./No. du projet
R.067256.802

**WESTERN
PROJECT#
R.079636.001**

Sheet/Feuille
E206

Revision no./
La Révision
no.

6



SYMBOL LEGEND	
---	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
---	NEW U/G STREETLIGHT CIRCUIT
---	NEW U/G FIBRE CABLE
---	COAX AND HEATER CABLE
	NEW 100A, 347V/600V CDP-A
	NEW WEATHERPROOF JUNCTION BOX
	EXISTING ELECTRICAL BOX TO BE REMOVED
	EXISTING 347/600V BC HYDRO TRANSFORMER
	NEW SINGLE DAVIT STREET LIGHT POLE
	NEW SINGLE POLE MOUNTED LUMINAIRE
	NEW DOUBLE POLE MOUNTED LUMINAIRE
	LED BOLLARD
	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
	LUMINAIRE POLE SUSPENDED CAMERA
	FIBRE PULL BOX
	COAX PULL BOX
	FIBRE PULL BOX (EV CHARGING STATION)
	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
VD=X.XX%	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
LOG	LIP OF GUTTER
BOB	BACK OF BARRIER
BOW	BACK OF WALKWAY
FDW	FRONT OF WALKWAY
LUM# -XX CCT - XX N - XXXX E - XXXX	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

MATCHLINE - E206
MATCHLINE - E207

LIGHTING NOTES:

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER NOTES:

- IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
- ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
- ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
- ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
- ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY "DURATAPE" TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
- ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED, DUE TO SITE CONDITIONS, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AT PROJECT COMPLETION.
- CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION. HYDROVAC ALL CONFLICT POINTS.

HORIZONTAL UTILITY CLEARANCES

UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER) (> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

- NOTE:
- CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
 - ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

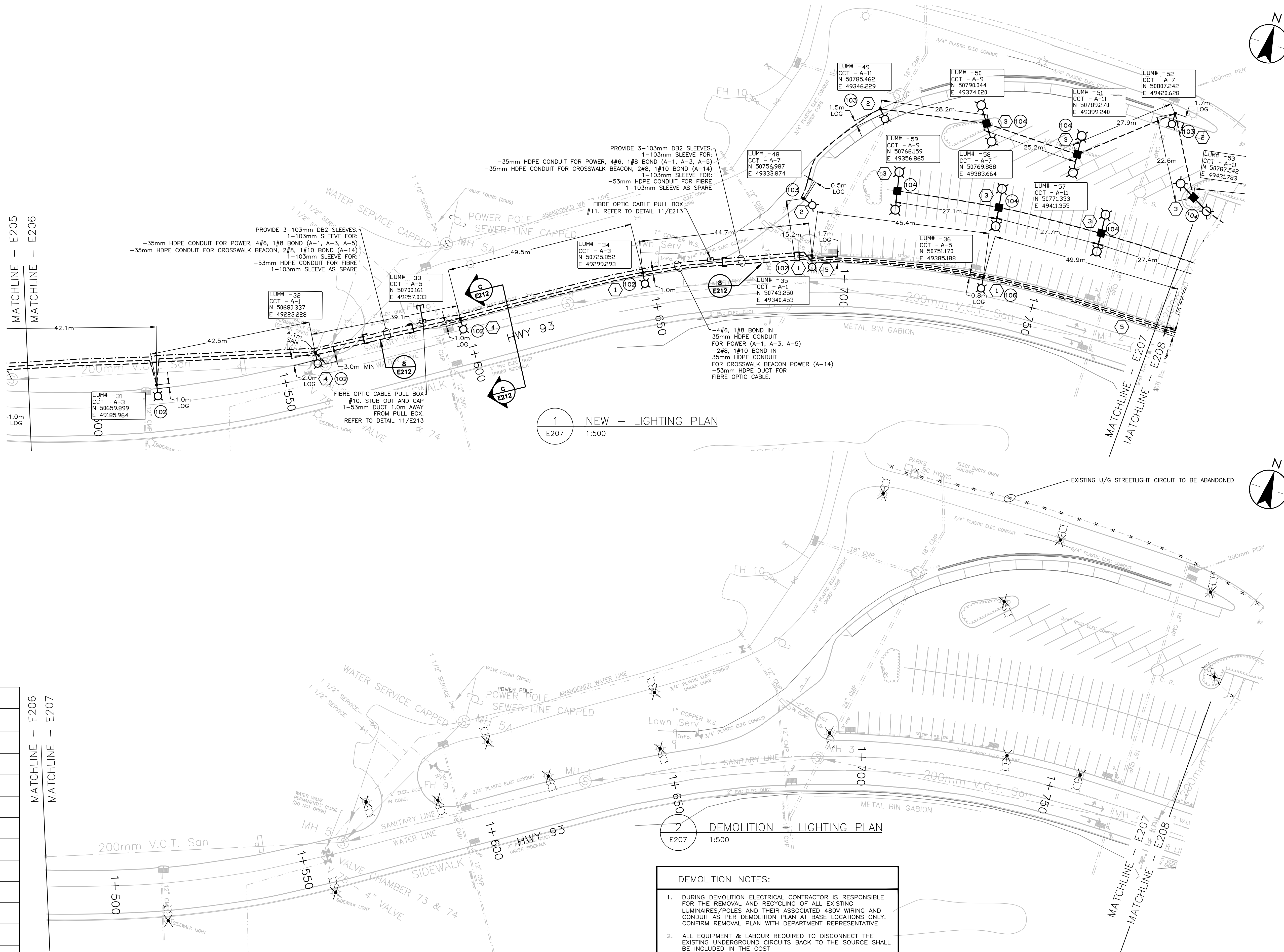
ROADWAY LIGHTING LEVELS

AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PEFICATIONS.

KEY NOTES:

- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q6, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q2, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q1, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
- LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q8, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
- REFER TO DRAWING E-210 FOR ADDITIONAL TRENCHING FOR PARKING LOT SECURITY CAMERAS (COAX & HEATER CABLE).



Revision/	Description/Description	Date/Date
6	ISSUED FOR TENDER	2017/01/17
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4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29

Client/client

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet

SINCLAIR CANYON SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par
RP

Drawn by/Dessine par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC

MOSES YOUNG/TONY TANG

PWGSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

LIGHTING PLAN 1+450 TO 1+750

Project No./No. du projet
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WESTERN PROJECT#
R.079636.001

Sheet/Feuille
E207

Revision no./
La Révision
6



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4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/	Description/Description	Date/Date

Client/client

**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
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PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

LIGHTING PLAN 1+750 TO 1+950

Project No./No. du projet

R.067256.802

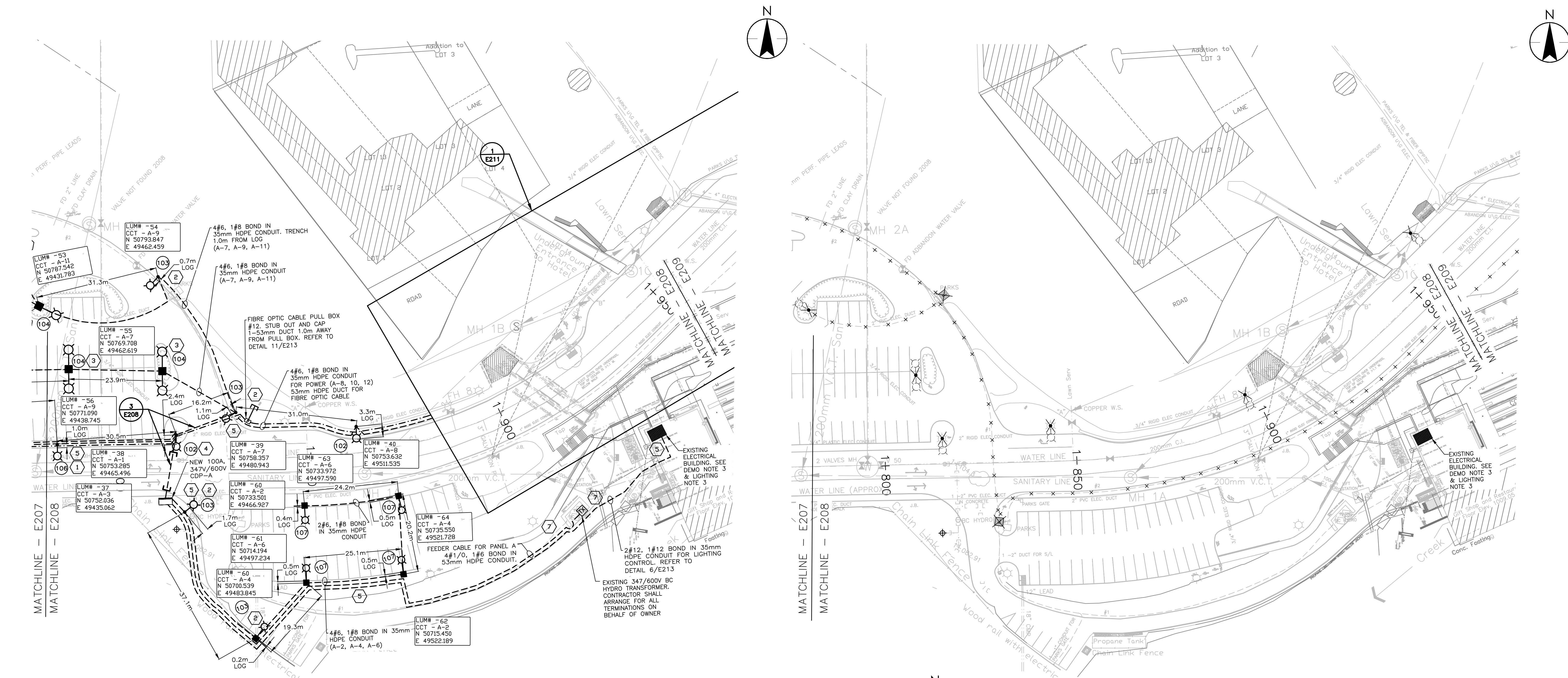
WESTERN
PROJECT#
R.079636.001

Sheet/Feuille

E208

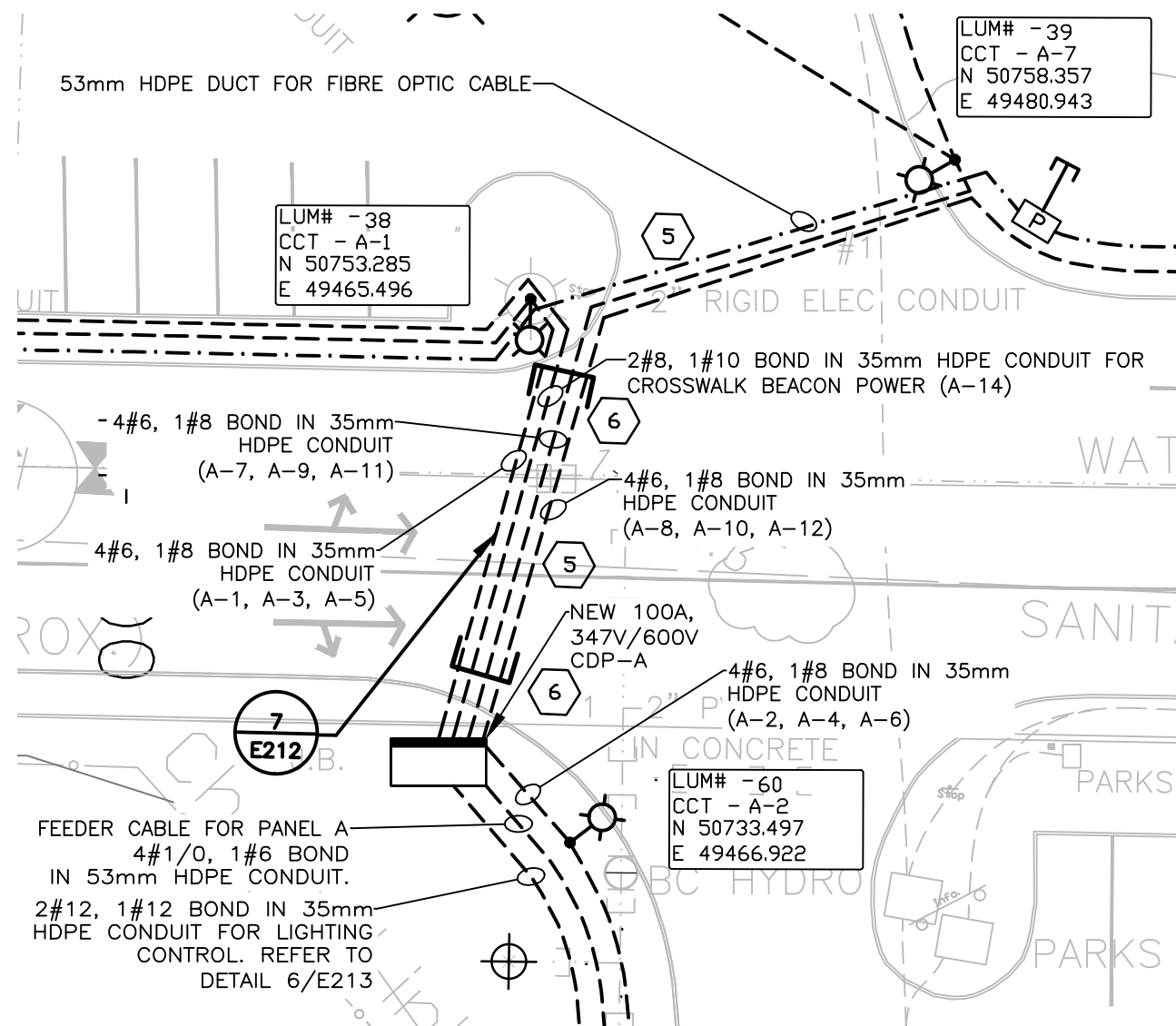
Revision no./
La Révision
no.

6



SYMBOL LEGEND	
---x---x---	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
-----	NEW U/G STREETLIGHT CIRCUIT
-----x-----	NEW U/G FIBRE CABLE
-----x-----	COAX AND HEATER CABLE
□	NEW 100A, 347V/600V CDP-A
□	NEW WEATHERPROOF JUNCTION BOX
⊗	EXISTING ELECTRICAL BOX TO BE REMOVED
⊗	EXISTING 347/600V BC HYDRO TRANSFORMER
●	NEW SINGLE DAVIT STREET LIGHT POLE
■	NEW SINGLE POLE MOUNTED LUMINAIRE
■	NEW DOUBLE POLE MOUNTED LUMINAIRE
■	LED BOLLARD
■	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
■	LUMINAIRE POLE SUSPENDED CAMERA
□	FIBRE PULL BOX
□	COAX PULL BOX
□	FIBRE PULL BOX (EV CHARGING STATION)
⊗	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
VD=X.XX%	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
LOG	LIP OF GUTTER
BOB	BACK OF BARRIER
BOW	BACK OF WALKWAY
FOW	FRONT OF WALKWAY
LUM# -XX CCT -XX N -XX.XX E -XX.XX	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

1 NEW - LIGHTING PLAN
E208 1:500



3 PANEL A - TRENCHING DETAIL
E208 1:250

LIGHTING NOTES:	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
2.	EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
3.	CONTRACTOR TO CONNECT CONTROL WIRE TO EXISTING ASTRONOMICAL CLOCK TO FACILITATE OPERATOR OF CDP-A CONTRACTOR

POWER NOTES:	
1.	IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
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ELECTRICAL GENERAL NOTES	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2.	ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED, DUE TO SITE CONDITIONS, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3.	ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AT PROJECT COMPLETION.
4.	CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
5.	THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION, HYDROVAC ALL CONFLICT POINTS.

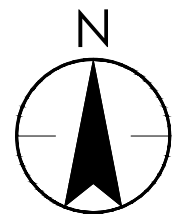
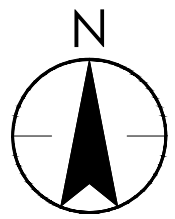
HORIZONTAL UTILITY CLEARANCES	
UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25kV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

NOTE:
1. CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
2. ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PEFICATIONS.

KEY NOTES:	
1	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q6, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
2	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q2, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
3	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q1, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
4	LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE Q8, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.
5	REFER TO DRAWING E-210 FOR ADDITIONAL TRENCHING FOR PARKING LOT SECURITY CAMERAS (COAX & HEATER CABLE) AND CONDUIT DETAILS FOR THE EV CHARGING STATIONS
6	PROVIDE 103mm DB2 SLEEVES FOR ROAD CROSSING. ALLOW 3-35mm HDPE CONDUIT PER 1-103mm DB2 SLEEVE. PROVIDE 1-103mm DB2 SLEEVE AS SPARE.
7	THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION, HYDROVAC ALL CONFLICT POINTS.



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5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/12
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/ Revision	Description/Description	Date/Date

Client/client

**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
RP

Drawn by/Dessiné par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC

MOSES YOUNG/TONY TANG

PWGSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

LIGHTING PLAN 1+950 TO 2+050

Project No./No. du projet

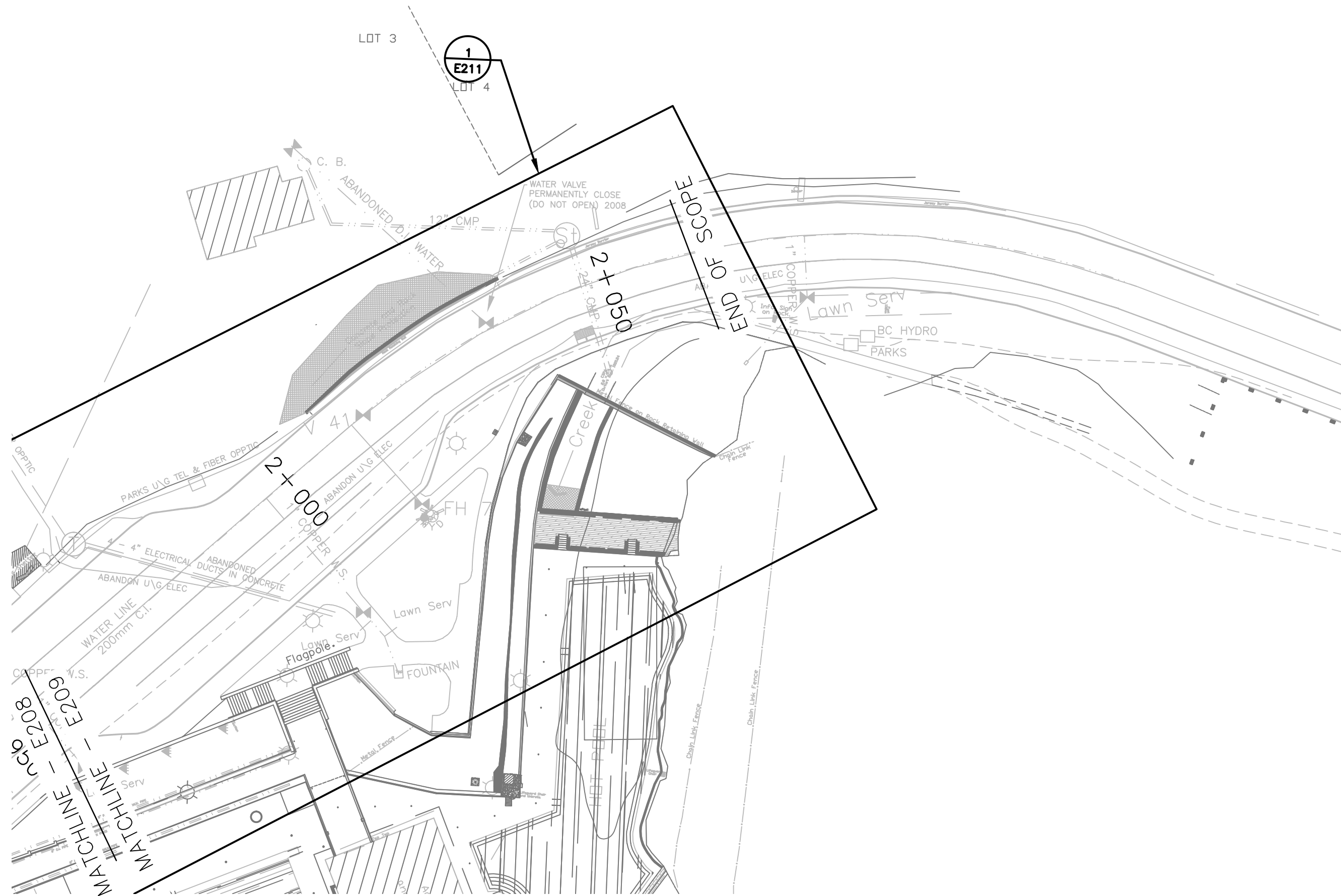
**R.067256.802
WESTERN
PROJECT#
R.079636.001**

Sheet/Feuille

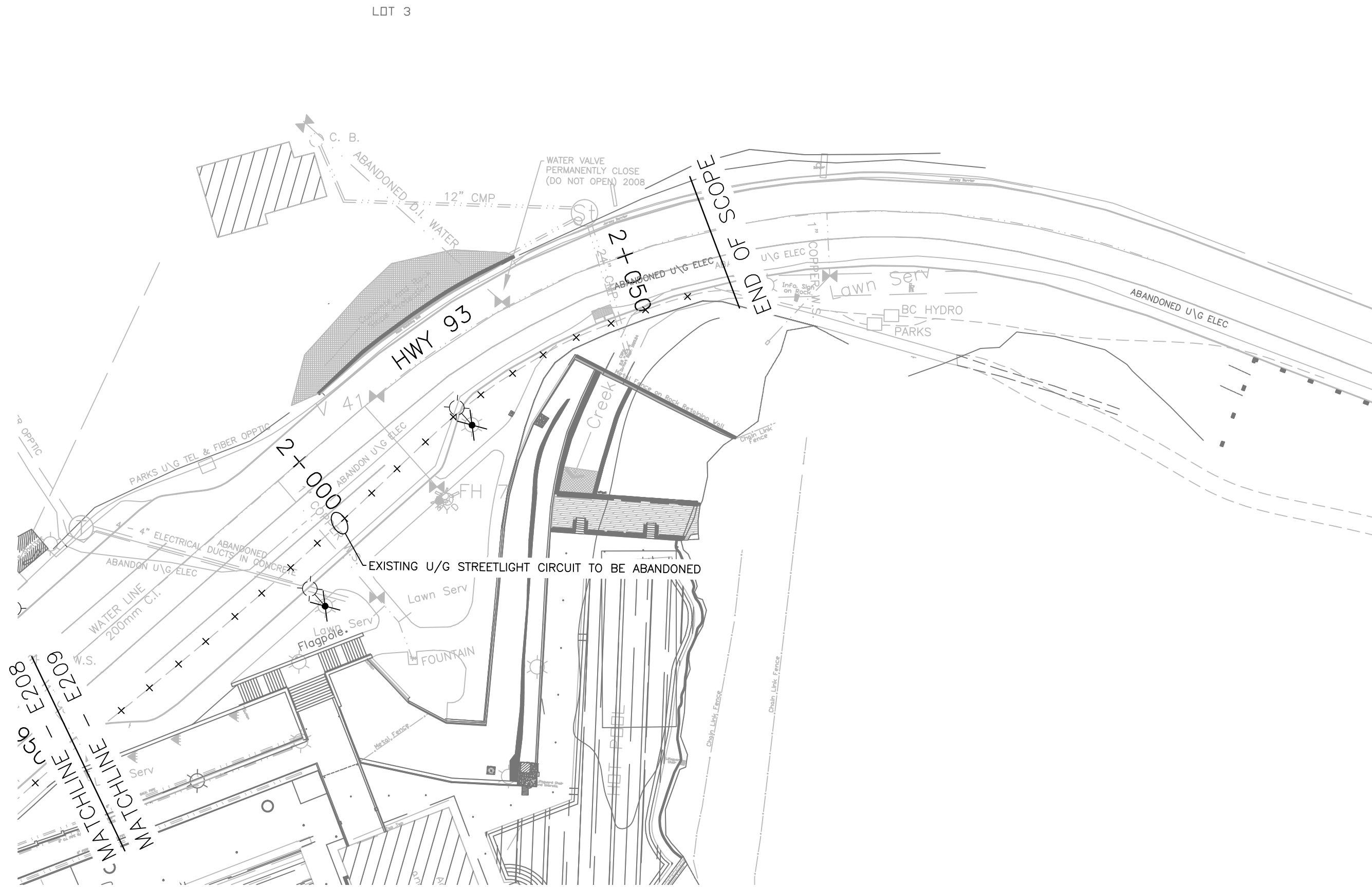
E209

Revision no./
La Révision
no.

6



1
E209 1:500
NEW - LIGHTING PLAN



2
E209 1:500
DEMOLITION - LIGHTING PLAN

DEMOLITION NOTES:

1. DURING DEMOLITION ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND RECYCLING OF ALL EXISTING LUMINAIRES/POLES AND THEIR ASSOCIATED 480V WIRING AND CONDUIT AS PER DEMOLITION PLAN AT BASE LOCATIONS ONLY. CONFIRM REMOVAL PLAN WITH DEPARTMENT REPRESENTATIVE
2. ALL EQUIPMENT & LABOUR REQUIRED TO DISCONNECT THE EXISTING UNDERGROUND CIRCUITS BACK TO THE SOURCE SHALL BE INCLUDED IN THE COST

SYMBOL LEGEND	
---	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
----	NEW U/G STREETLIGHT CIRCUIT
----	NEW U/G FIBRE CABLE
----	COAX AND HEATER CABLE
□	NEW 100A, 347V/600V CDP-A
□	NEW WEATHERPROOF JUNCTION BOX
⊗	EXISTING ELECTRICAL BOX TO BE REMOVED
⊗	EXISTING 347/600V BC HYDRO TRANSFORMER
●	NEW SINGLE DAVIT STREET LIGHT POLE
■	NEW SINGLE POLE MOUNTED LUMINAIRE
■	NEW DOUBLE POLE MOUNTED LUMINAIRE
□	LED BOLLARD
●	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
■	LUMINAIRE POLE SUSPENDED CAMERA
□	FIBRE PULL BOX
□	COAX PULL BOX
□	FIBRE PULL BOX (EV CHARGING STATION)
⊗	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
VD=X.XX%	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
LOG	LIP OF GUTTER
BOB	BACK OF BARRIER
BOW	BACK OF WALKWAY
FOW	FRONT OF WALKWAY
LUM# - XX CCT - XX N - XXXX E - XX.XX	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:

1. ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2. EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

POWER NOTES:

1. IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
2. ELECTRICAL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
3. ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
4. ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
5. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY 'DURATAPE' TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES

1. ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2. ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED, DUE TO SITE CONDITIONS, SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. ELECTRICAL CONTRACTOR TO PROVIDE AS-BUILT DRAWINGS AT PROJECT COMPLETION.
4. CONTRACTOR SHALL REMOVE AND SALVAGE ALL SIGNAGE AS REQUIRED TO FACILITATE THE WORK. RE-ESTABLISH ALL SIGNAGE TO ORIGINAL SPEC TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE
5. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION. HYDROVAC ALL CONFLICT POINTS

**HORIZONTAL UTILITY
CLEARANCES**

UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

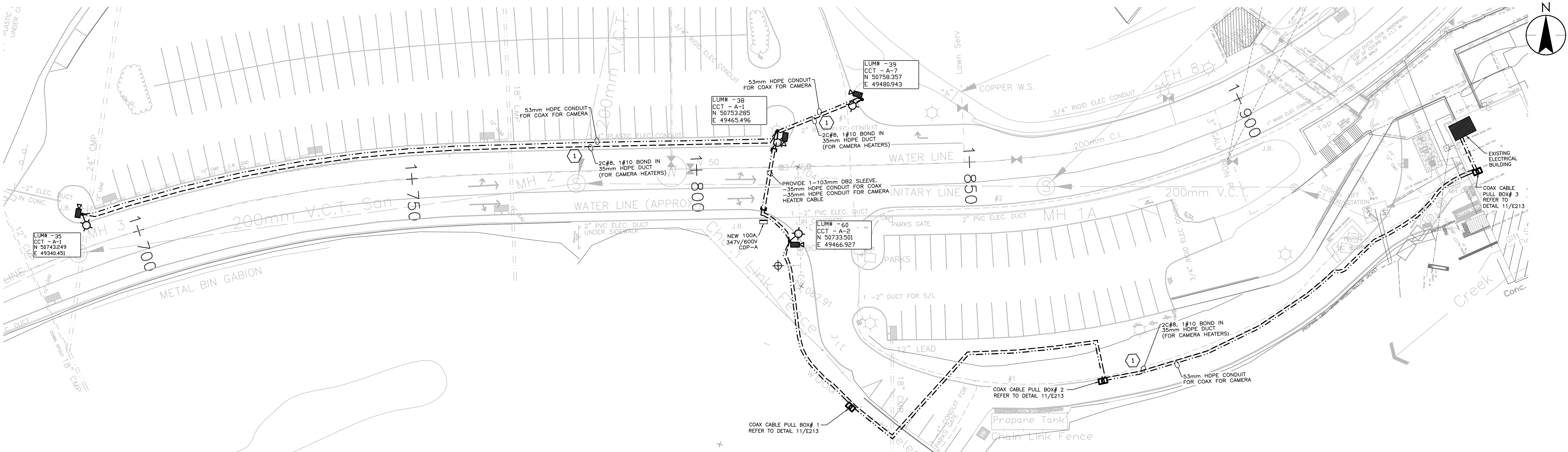
- NOTE:
1. CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
 2. ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m ²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

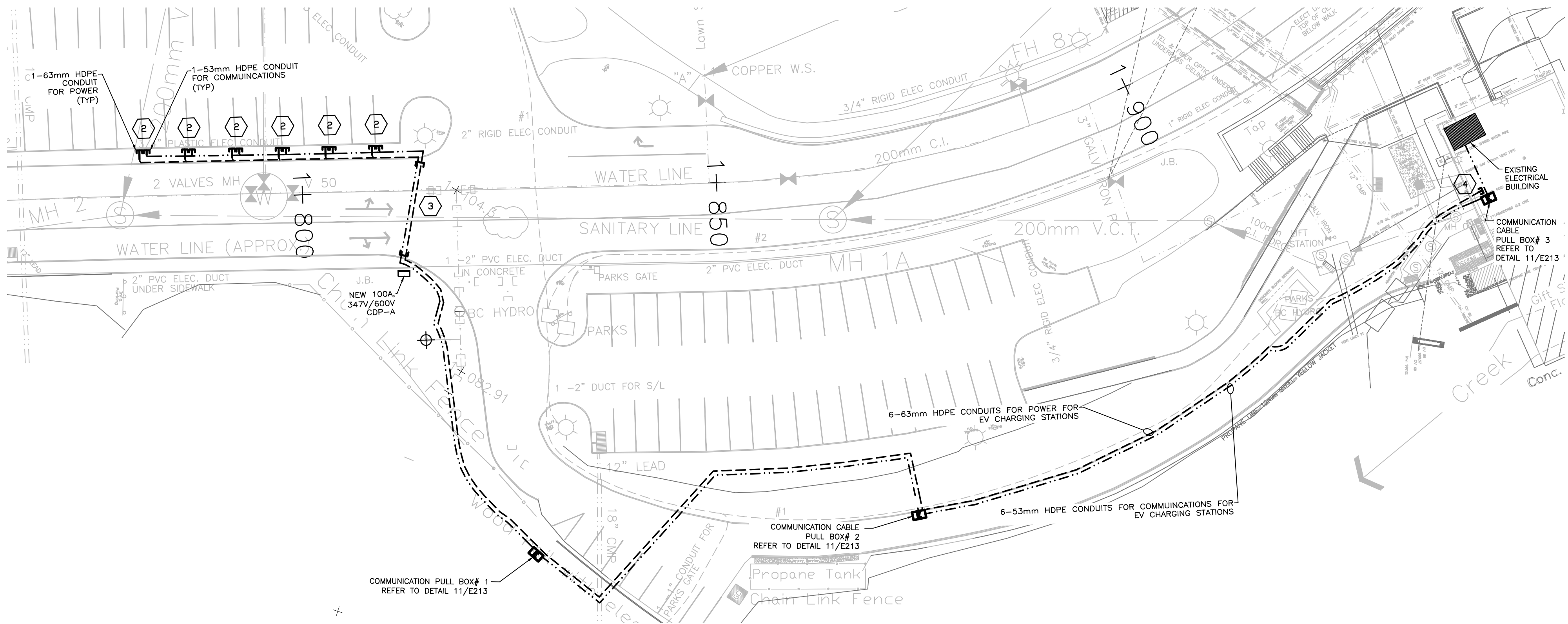
NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PEFICATIONS.

KEY NOTES:

1. LUMINAIRE FIELD ADJUSTABLE OUTPUT SETTING SHALL BE 05, BASED UPON MINIMUM ACCEPTABLE LUMINAIRE.



1 CONDUIT DETAIL - FUTURE PARKING LOT CAMERAS
E210 1:350



2 CONDUIT DETAIL - FUTURE EV CHARGING STATIONS
E210 1:350

SYMBOL LEGEND	
	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
	NEW U/G STREETLIGHT CIRCUIT
	NEW U/G FIBRE CABLE
	COAX AND HEATER CABLE
	NEW 100A, 347V/600V CDP-A
	NEW WEATHERPROOF JUNCTION BOX
	EXISTING ELECTRICAL BOX TO BE REMOVED
	EXISTING 347/600V BC HYDRO TRANSFORMER
	NEW SINGLE DAVIT STREET LIGHT POLE
	NEW SINGLE POLE MOUNTED LUMINAIRE
	NEW DOUBLE POLE MOUNTED LUMINAIRE
	LED BOLLARD
	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
	LUMINAIRE POLE SUSPENDED CAMERA
	FIBRE PULL BOX
	COAX PULL BOX
	FIBRE PULL BOX (EV CHARGING STATION)
	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
VD=X.XX%	VOLTAGE DROP PERCENTAGE, END OF CIRCUIT
LOG	LIP OF GUTTER
BOB	BACK OF BARRIER
BOW	BACK OF WALKWAY
FOW	FRONT OF WALKWAY
LUM# - XX CCT - XX N - XXXX E - XXXX	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
2.	EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.
3.	CONTRACTOR TO CONNECT CONTROL WIRE TO EXISTING ASTRONOMICAL CLOCK TO FACILITATE OPERATOR OF CDP-A CONTRACTOR

POWER NOTES:	
1.	IT IS RECOMMENDED THAT THE ELECTRICAL CONTRACTOR VISITS THE SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
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3.	ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
4.	ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW CIRCUITS.
5.	ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROD "DURATAPE" TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.

ELECTRICAL GENERAL NOTES	
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5.	THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES FOR PARK FACILITIES REMAINING IN OPERATION, HYDROVAC ALL CONFLICT POINTS

HORIZONTAL UTILITY CLEARANCES	
UTILITY	HORIZONTAL CLEARANCE (m)
OVERHEAD ELECTRICAL (25KV OR LESS)	5
UNDERGROUND ELECTRICAL	1
COMMUNICATIONS (TELEPHONE AND CABLE)	1
UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

NOTE:
1. CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
2. ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m ²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PEFICATIONS.

KEY NOTES:	
1	ELECTRICAL CONTRACTOR SHALL USE SPARE 15A BREAKER FROM EXISTING 120/208V PANEL IN POOL BUILDING ELECTRICAL ROOM TO PROVIDE POWER TO ENCLOSURE HEATER FOR CAMERA.
2	ELECTRICAL CONTRACTOR SHALL STUB AND CAP 63mm HDPE CONDUIT FOR POWER AND 53mm HDPE CONDUIT FOR COMMUNICATIONS FOR FUTURE EV CHARGING STATION. CONFIRM EXACT STUB UP LOCATIONS WITH THE OWNERS ENGINEER.
3	PROVIDE 3-103mm DB2 SLEEVES FOR POWER CONDUIT PROVIDE 3-103mm DB2 SLEEVES FOR COMMUNICATION CONDUITS PROVIDE 1-103mm DB2 SLEEVE AS SPARE
4	ELECTRICAL CONTRACTOR SHALL STUB AND CAP 63mm HDPE CONDUIT FOR POWER. CONFIRM EXACT STUB UP LOCATIONS WITH THE OWNERS ENGINEER.

NOTE:	
1.	CAMERA AND CABLES TO BE SUPPLIED BY THE OWNER.



6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	NOT ISSUED	N/A
1	NOT ISSUED	N/A
0	NOT ISSUED	N/A
Revision/	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
RP

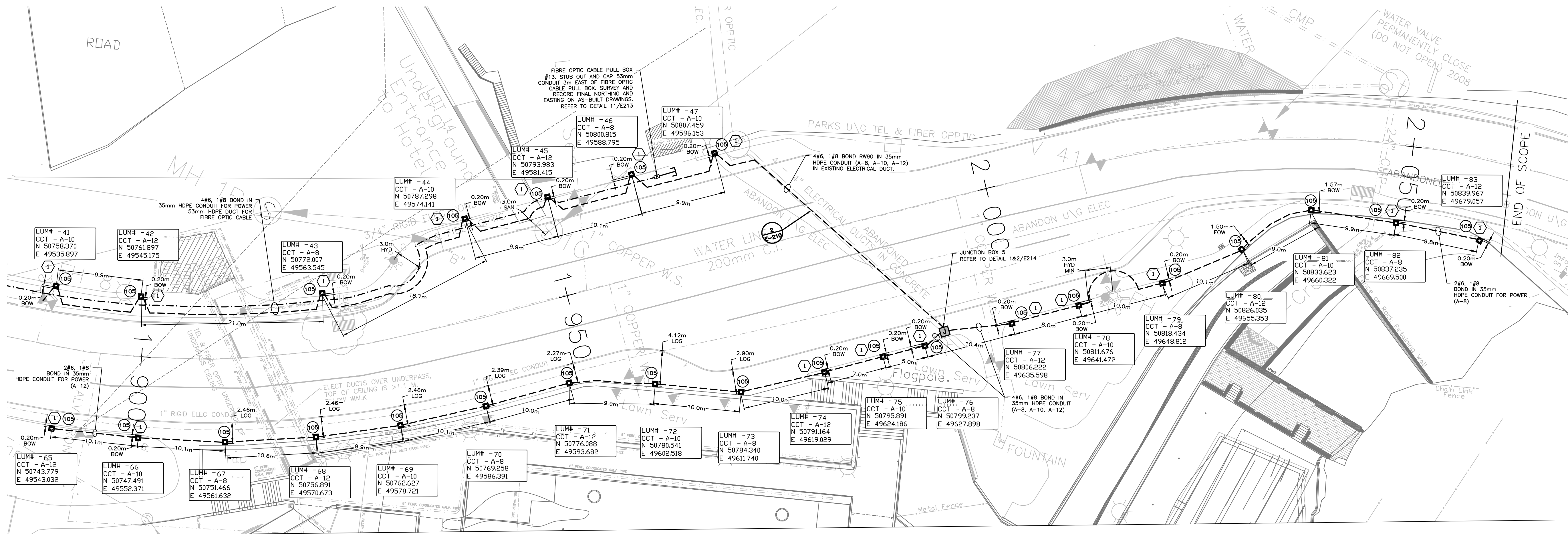
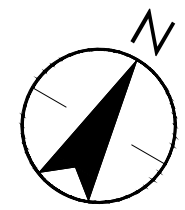
Drawn by/Dessine par
NP

PWSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

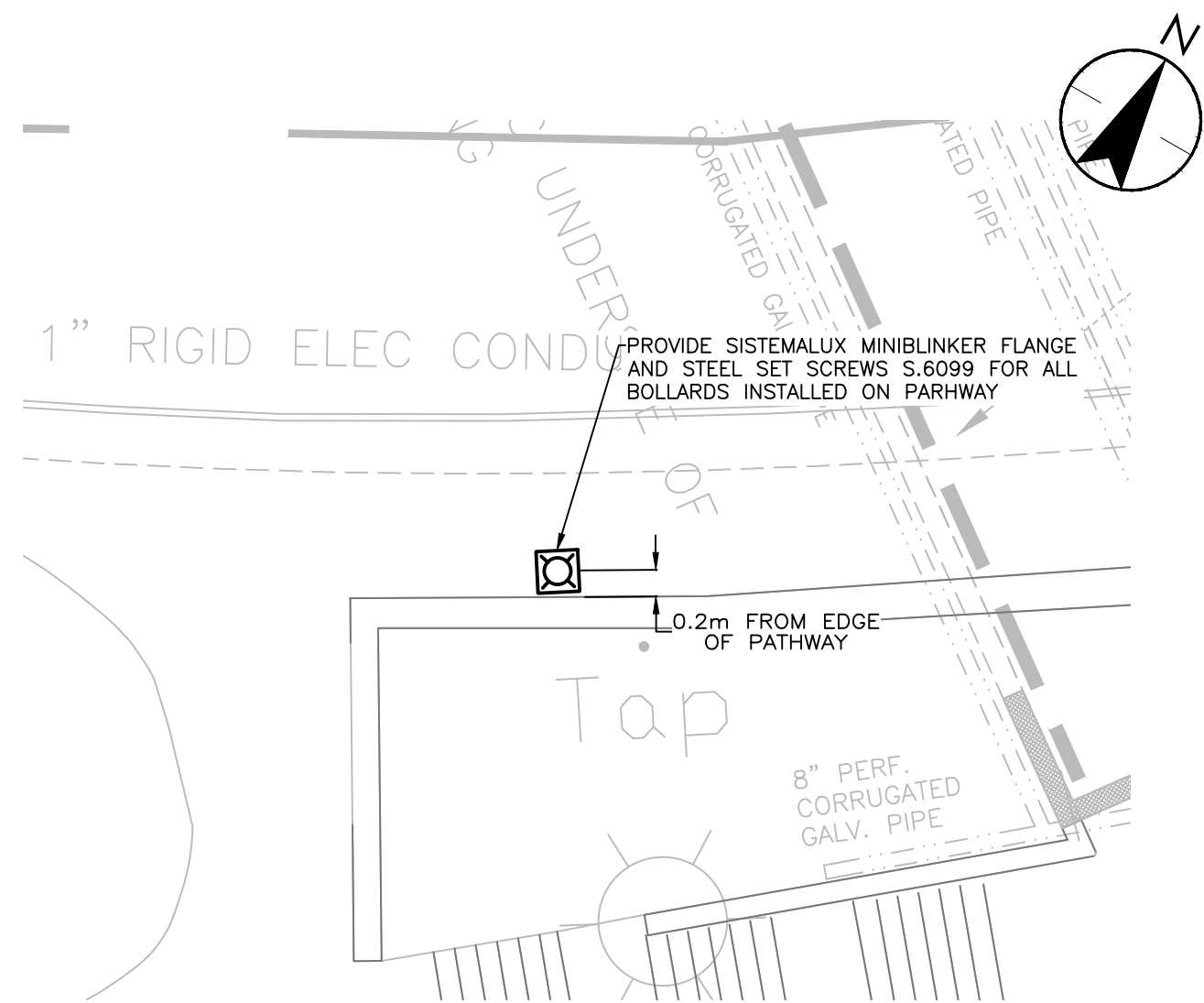
PWSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWSC WESTERN REGION RM

Drawing title/Titre du dessin

**TRENCH DETAIL -
PARKING LOT CAMERAS
& DUCT WORK FOR CHARGING
STATIONS**



1 POOLSIDE SIDEWALK LIGHTING PLAN
E211 1:250



2 TYPICAL PLACEMENT FOR BOLLARD IN PATHWAY
E211 1:100

SYMBOL LEGEND	
	EXISTING U/G STREETLIGHT CIRCUIT TO BE ABANDONED
	NEW U/G STREETLIGHT CIRCUIT
	NEW U/G FIBRE CABLE
	COAX AND HEATER CABLE
	NEW 100A, 347V/600V CDP-A
	NEW WEATHERPROOF JUNCTION BOX
	EXISTING ELECTRICAL BOX TO BE REMOVED
	EXISTING 347/600V BC HYDRO TRANSFORMER
	NEW SINGLE DAVIT STREET LIGHT POLE
	NEW SINGLE POLE MOUNTED LUMINAIRE
	NEW DOUBLE POLE MOUNTED LUMINAIRE
	LED BOLLARD
	NEW POLE FOR PEDESTRIAN BEACON AND PUSH BUTTON
	LUMINAIRE POLE SUSPENDED CAMERA
	FIBRE PULL BOX
	COAX PULL BOX
	FIBRE PULL BOX (EV CHARGING STATION)
	EXISTING SINGLE DAVIT STREETLIGHT POLE TO BE REMOVED
	VOLTAJE DROP PERCENTAGE, END OF CIRCUIT
	LIP OF GUTTER
	BACK OF BARRIER
	BACK OF WALKWAY
	FRONT OF WALKWAY
	LUMINAIRE NUMBER CIRCUIT NUMBER NORTHING COORDINATE EASTING COORDINATE

LIGHTING NOTES:	
1.	ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
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ELECTRICAL GENERAL NOTES	
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UTILITY	HORIZONTAL CLEARANCE (m)
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UNDERGROUND ELECTRICAL	1
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UNDERGROUND FIBER OPTIC	5
NATURAL GAS LOW PRESSURE (690 kPa OR LESS)	1
HIGH PRESSURE LINES (GAS OR OTHER)(> 690 kPa)	5
SEWER LINES (STORM OR SANITARY)	3
WATER MAINS	3
PRIVATE IRRIGATION	0.3

NOTE:
1. CLEARANCES SHOWN ARE SUGGESTED GUIDELINES. CONTRACTOR TO CONTACT RESPECTIVE UTILITIES CONFIRM.
2. ALL DISTANCES ARE TO CENTERLINE OF NEAREST UTILITY.

ROADWAY LIGHTING LEVELS				
AREA	TARGET		DELIVERED	
	AVG	AVG/MIN	AVG	AVG/MIN
VISITOR PARKING LOT > 10 CARS	3.00 LUX HORIZONTAL	3.00	5.30	2.85
MIDBLOCK PEDESTRIAN CROSSING	20 TO 40 LUX VERTICAL	3.00	11.4	2.28
ROADWAY	0.60 cd/m²	3.00	0.61	3.15
POOLSIDE PATHWAY (ILLUMINATED WITH BOLLARDS)	5.00 LUX	3.00	1.83	N/A

NOTE:
TARGET ILLUMINATION LEVELS ARE BASED ON TAC ATC, IESNA RP8 & GSOL PECIFICATIONS.

KEY NOTES:	
1	REFER TO DETAIL 8/214 FOR BASE DETAIL FOR BOLLARDS.

NOTE:	
1.	ALL BOLLARDS SHALL BE INSTALLED SUCH THAT THE LUMINAIRES ARE AIMED AT THE PATHWAY FORMING A 90 DEGREE INTERSECT WITH CURB LINE.

6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	NOT ISSUED	N/A
1	NOT ISSUED	N/A
0	NOT ISSUED	N/A
Revision/	Description/Description	Date/Date

Client/client
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet
**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par
RP

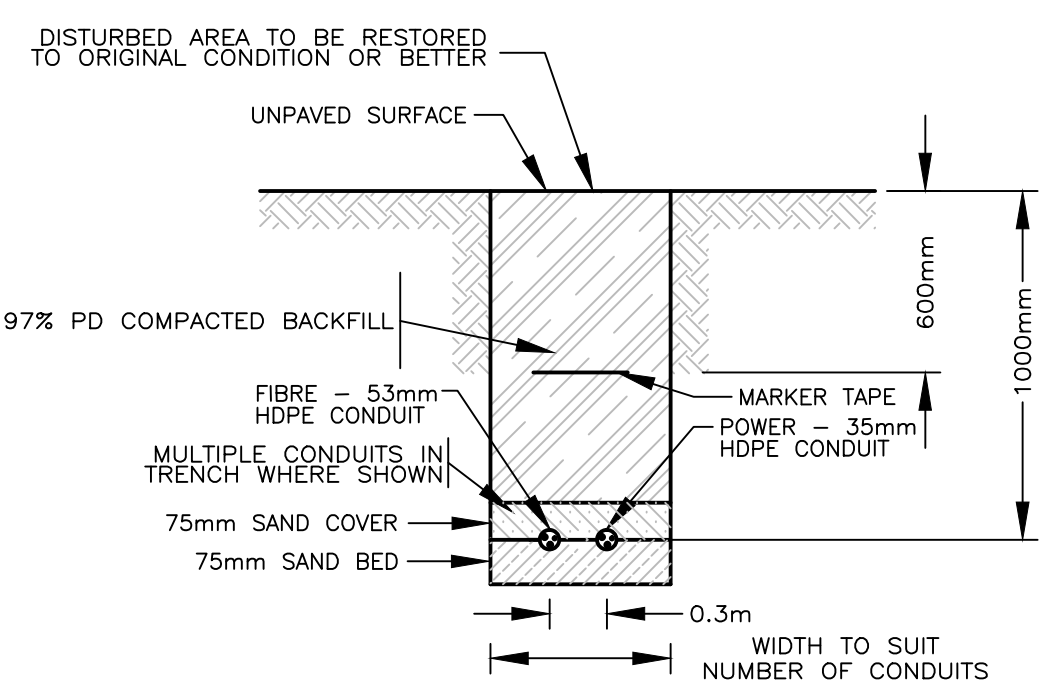
Drawn by/Dessine par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG

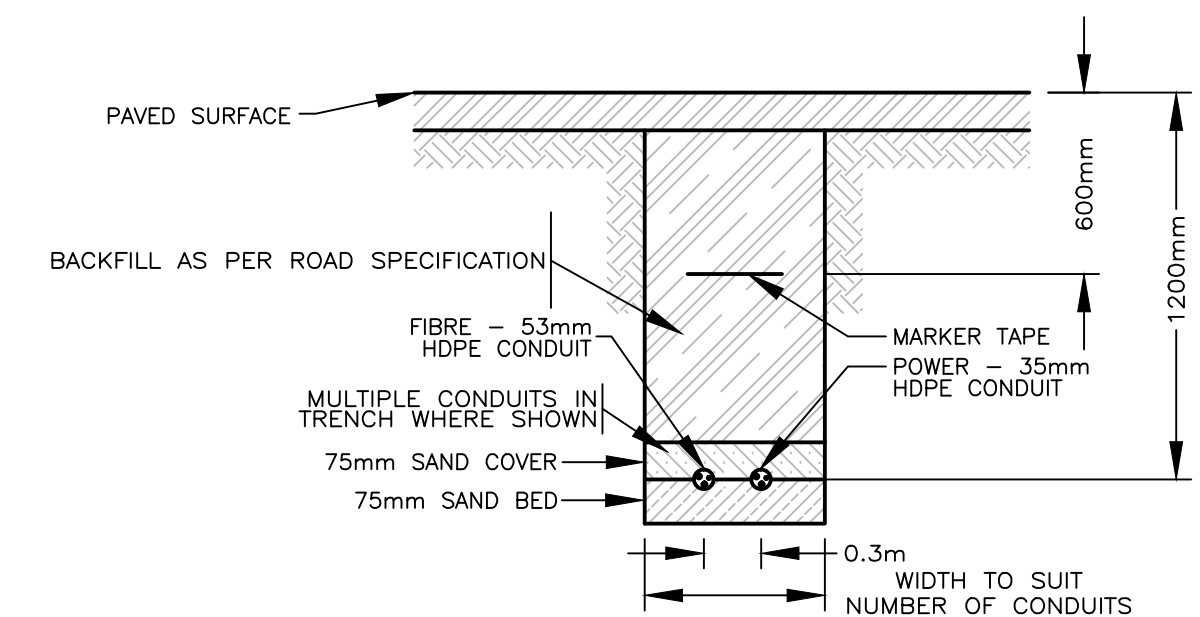
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Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing title/Titre du dessin
POOLSIDE SIDEWALK LIGHTING PLAN

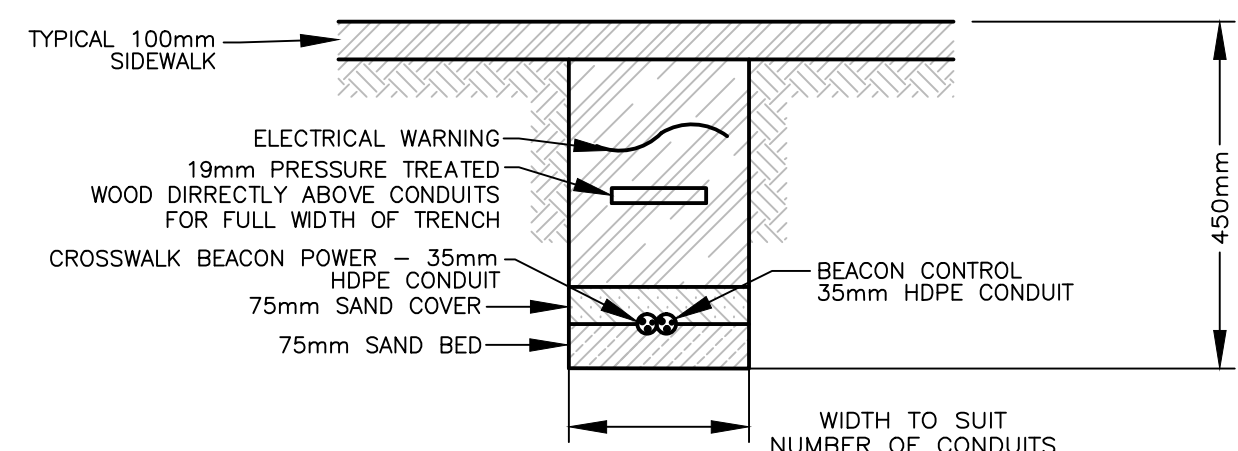
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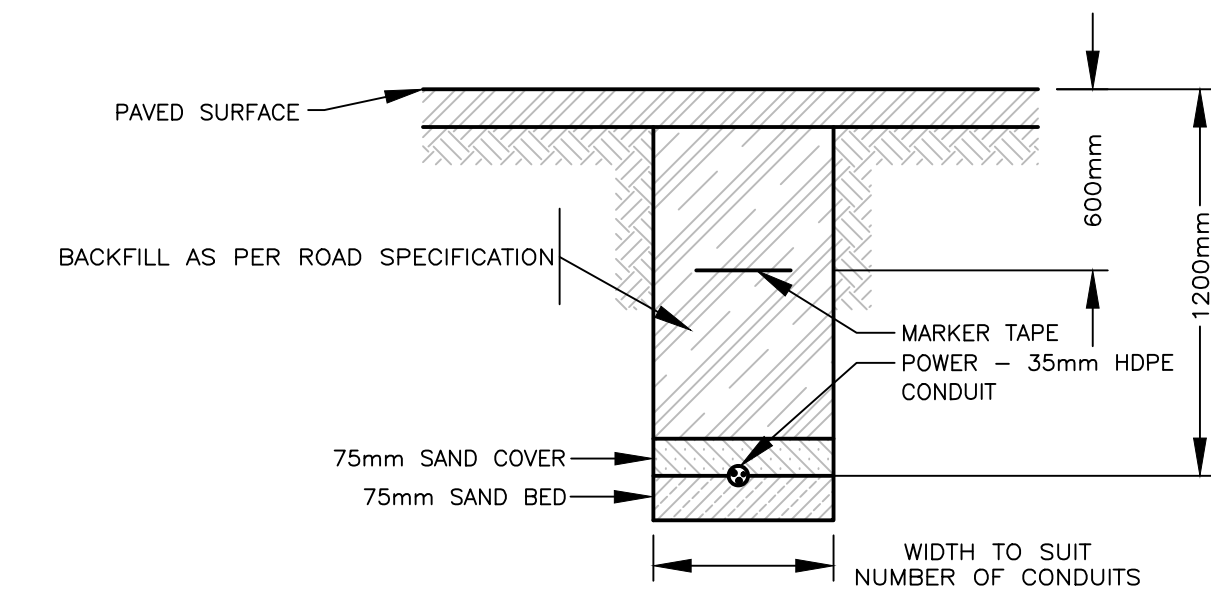
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E211 N.T.S.



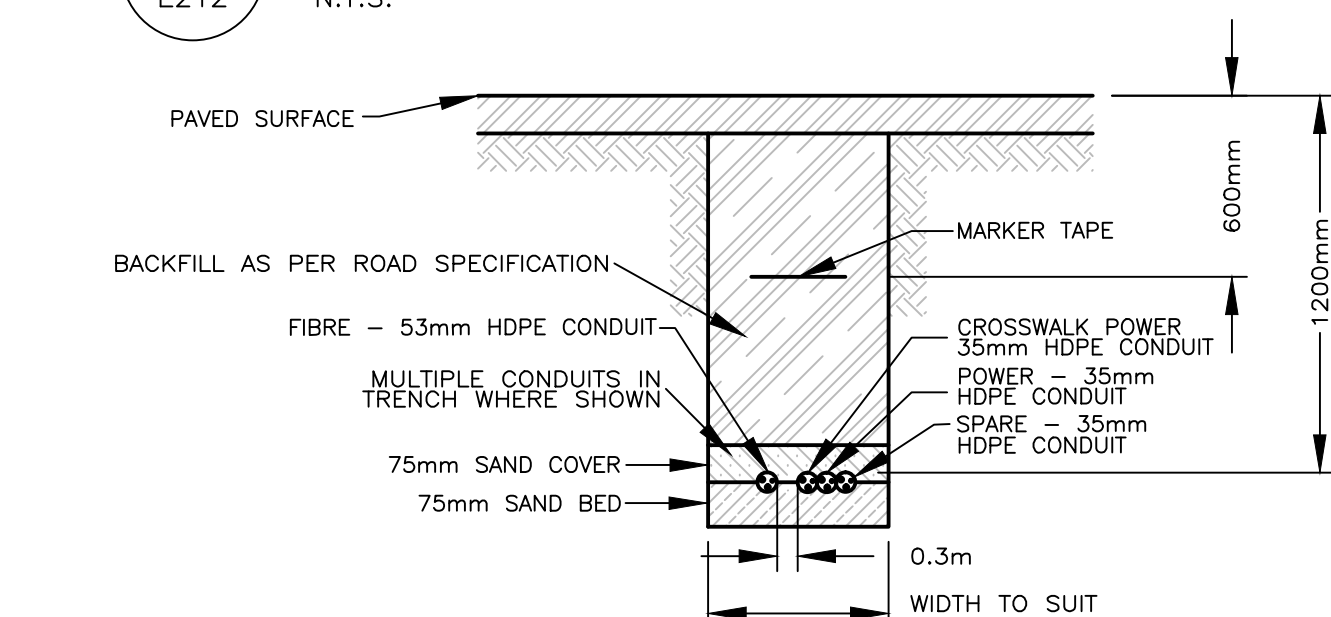
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E212 N.T.S.



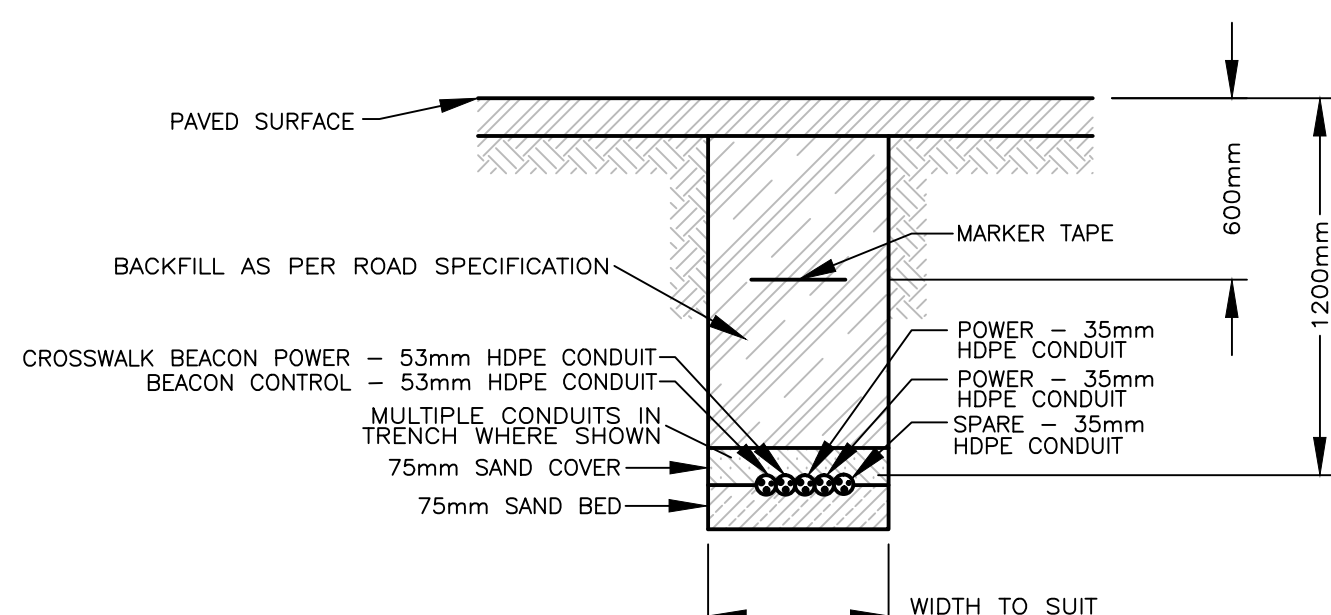
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FOR PAVED SURFACES - CROSSWALK POWER
E212 N.T.S.



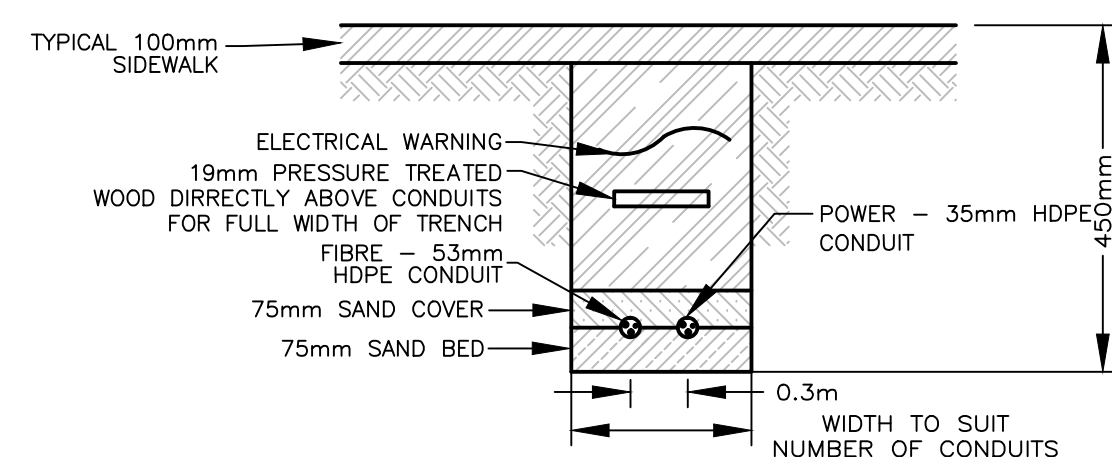
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E212 N.T.S.



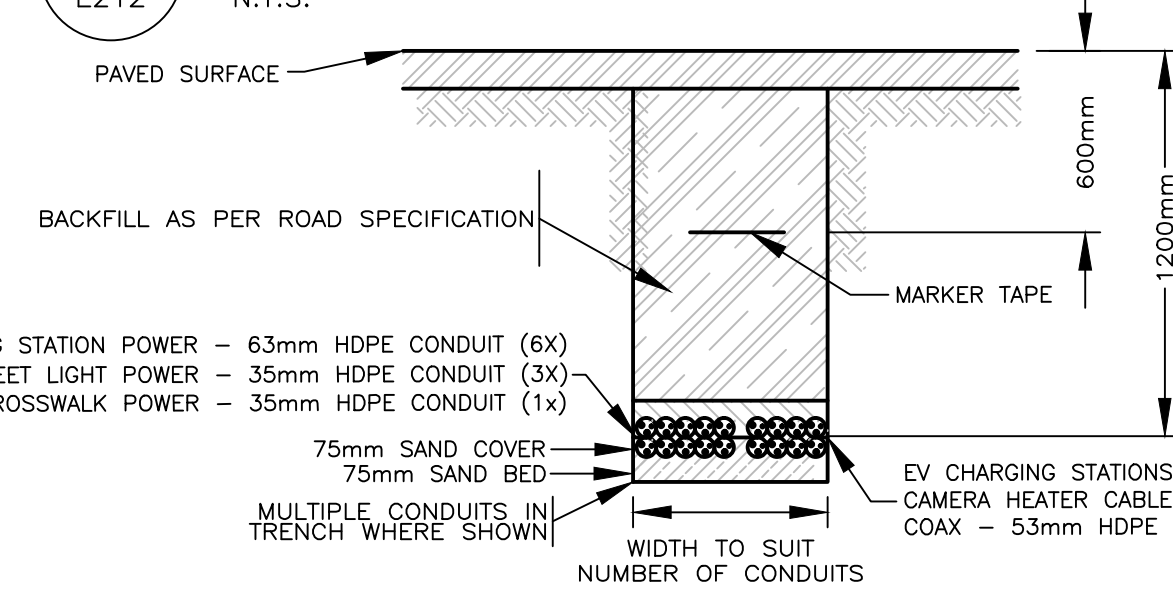
6 CROSSWALK - TRENCH DETAIL
E212 N.T.S.



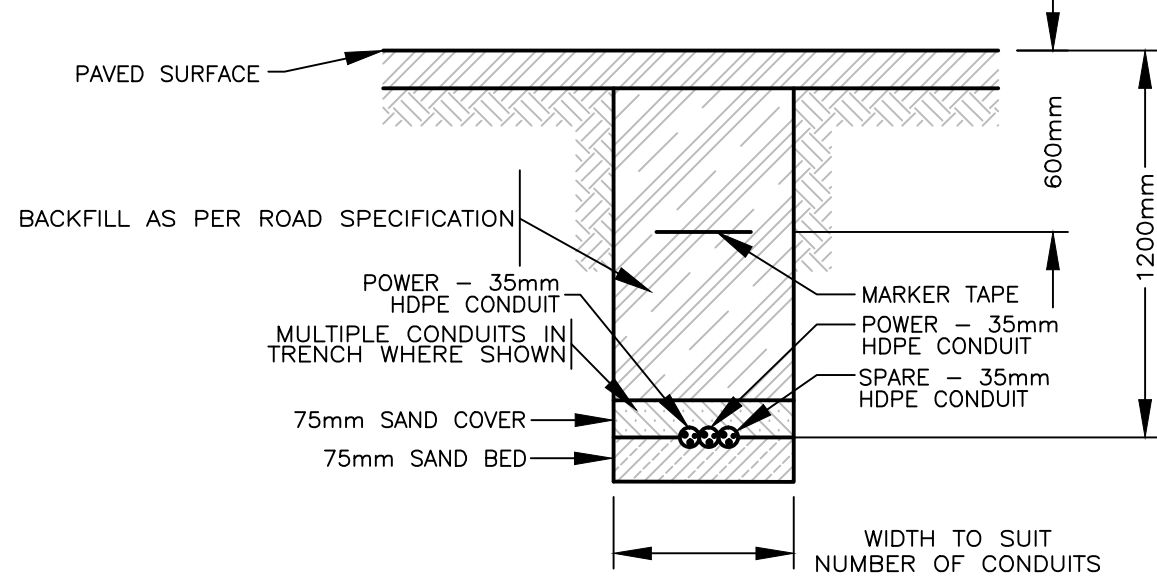
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E212 N.T.S.



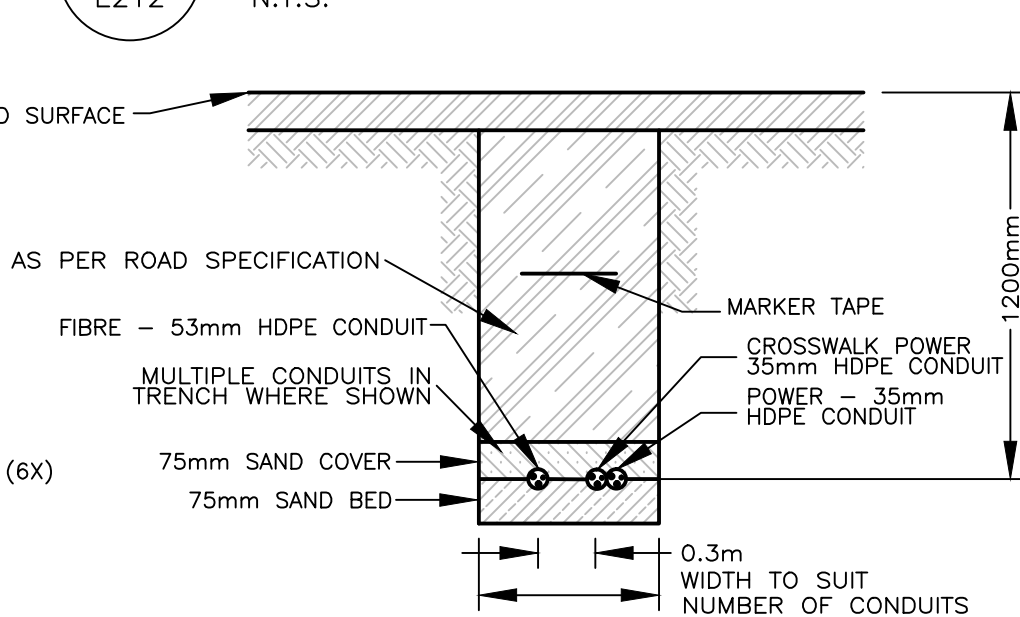
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FOR PAVED SURFACES - POWER & FIBRE
E212 N.T.S.



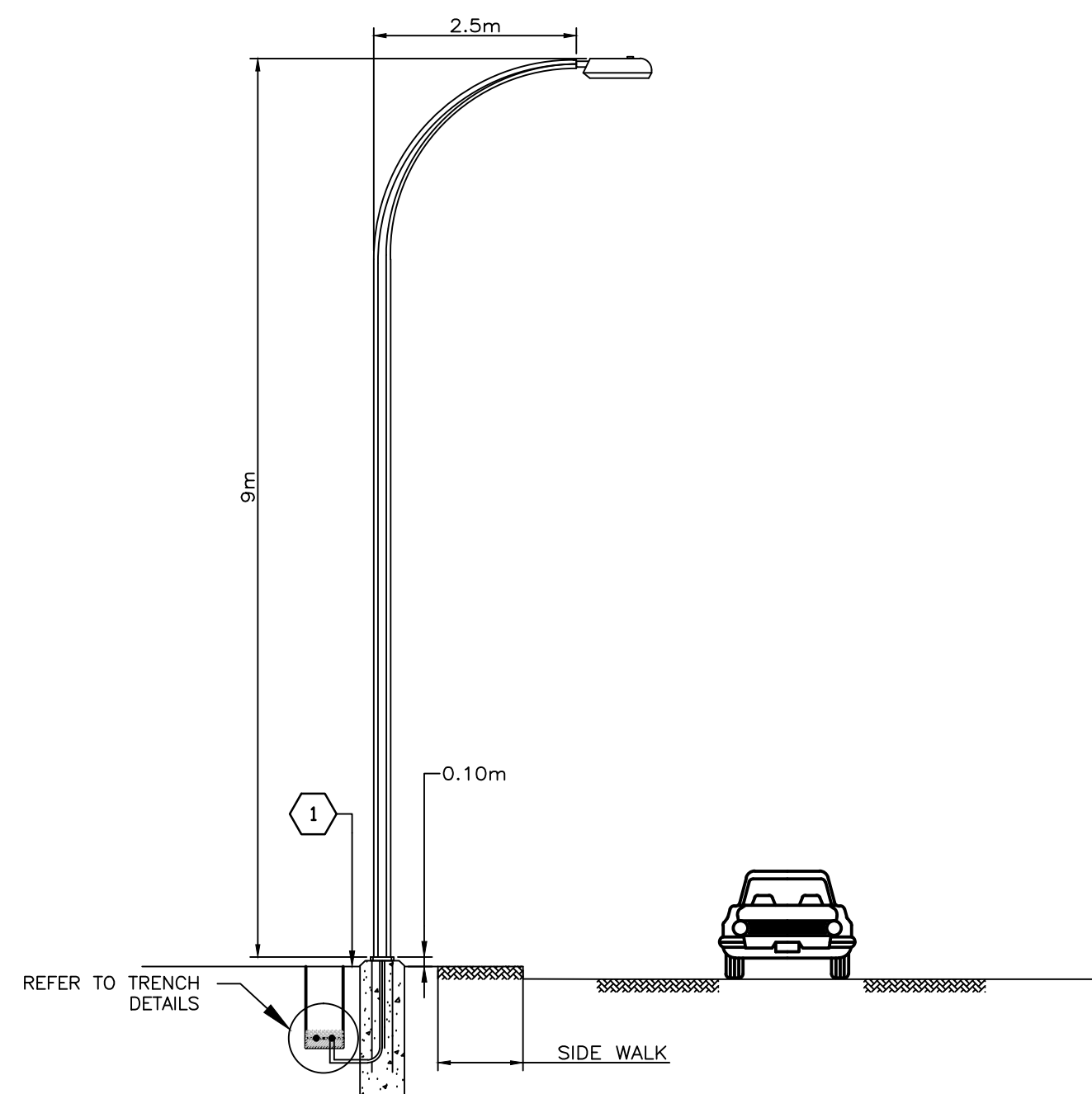
7 TRENCH FOR PAVED SURFACES - POWER & CAMERA CABLES
E212 N.T.S.



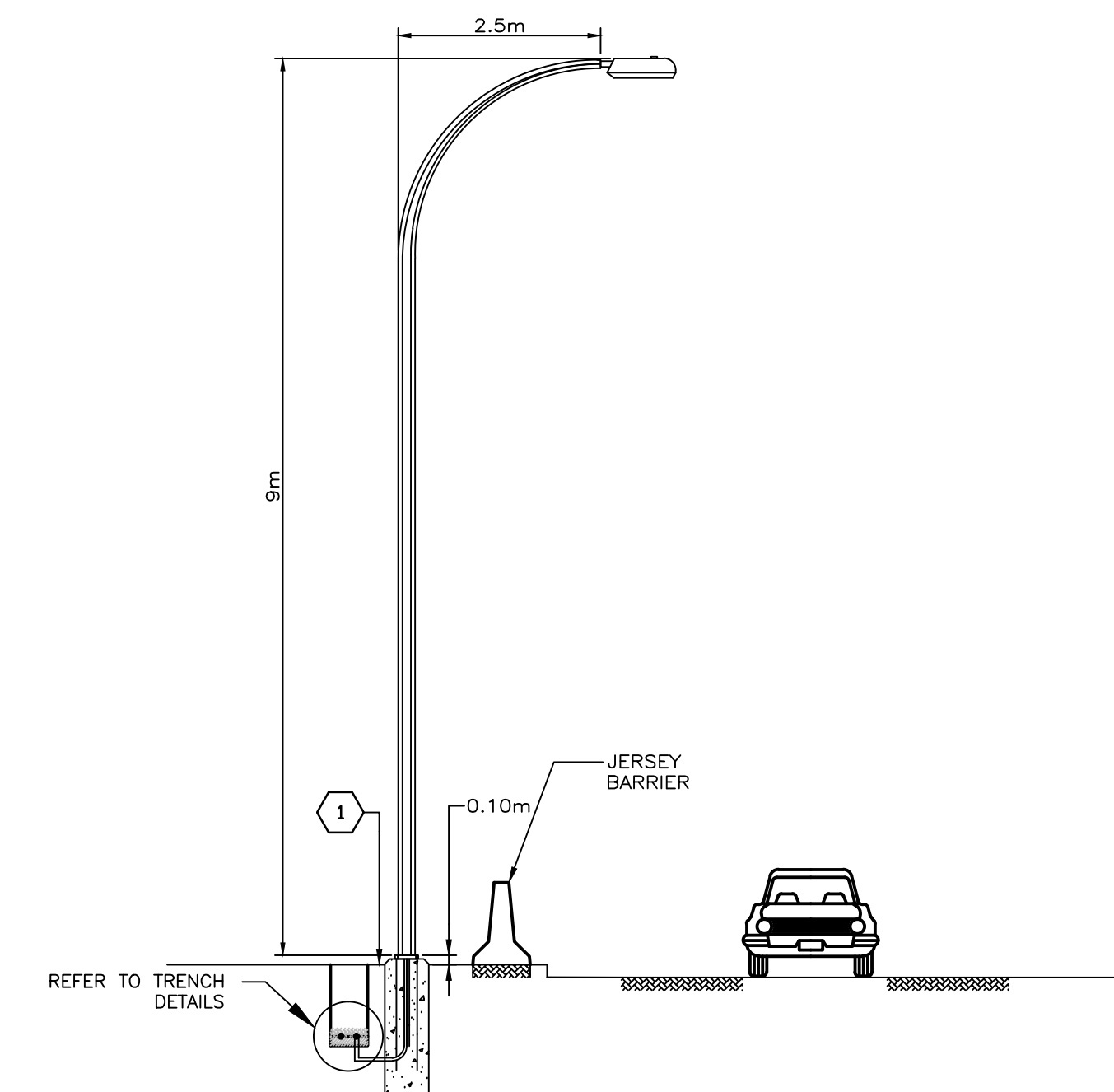
4 TRENCH FOR PAVED SURFACES - POWER (2X)
E212 N.T.S.



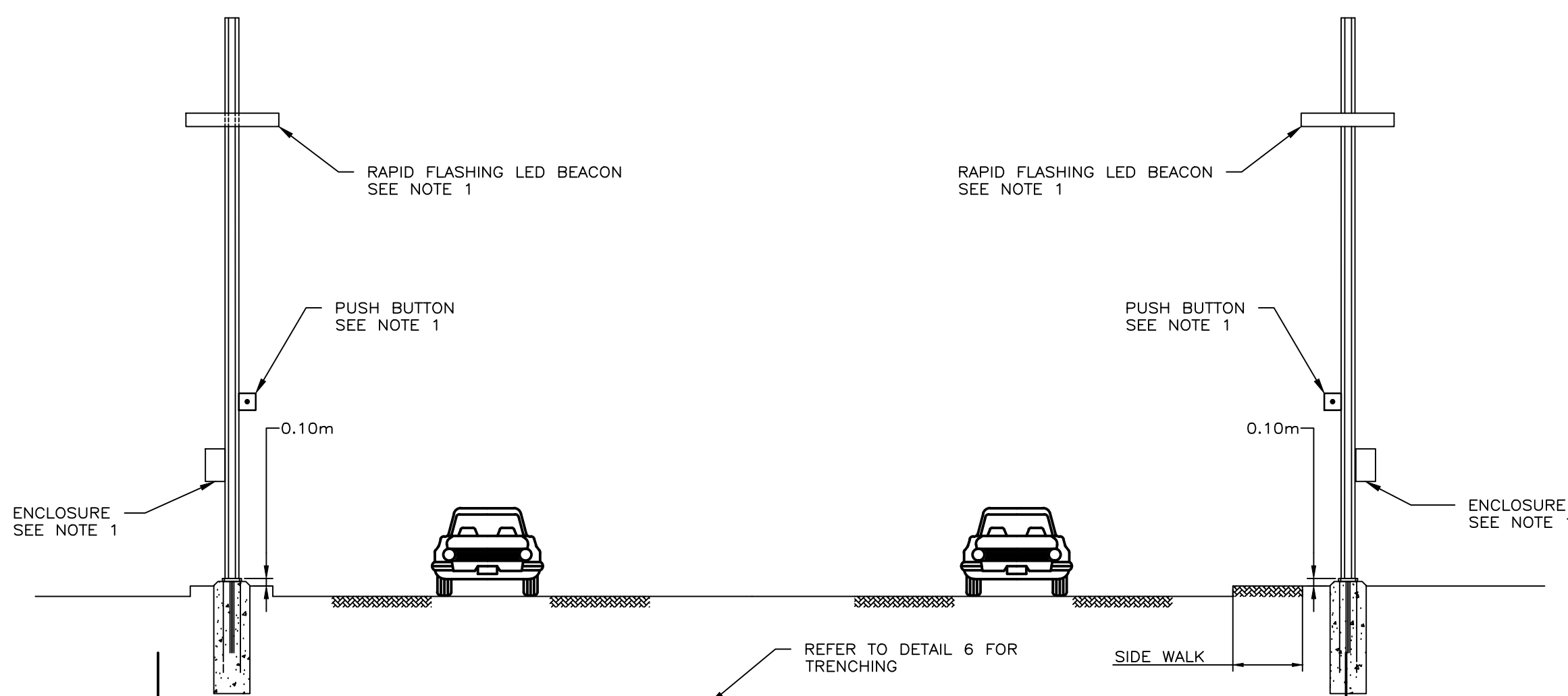
8 TRENCH FOR PAVED SURFACES
E212 N.T.S.



A-A TRENCH DETAIL / SINGLE DAVIT STREET LIGHT
E212 N.T.S.



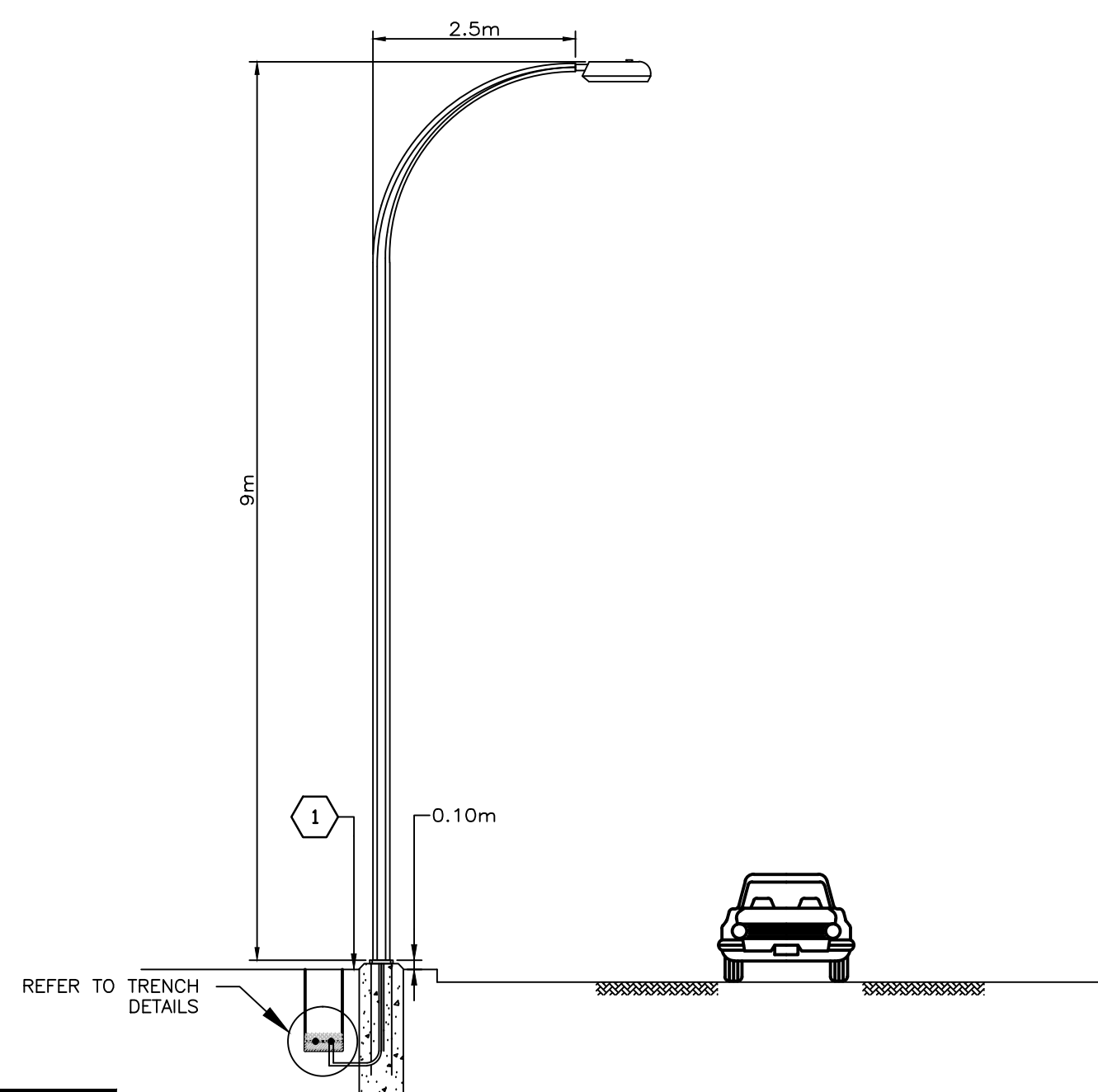
B-B TRENCH DETAIL / SINGLE DAVIT STREET LIGHT
E212 N.T.S.



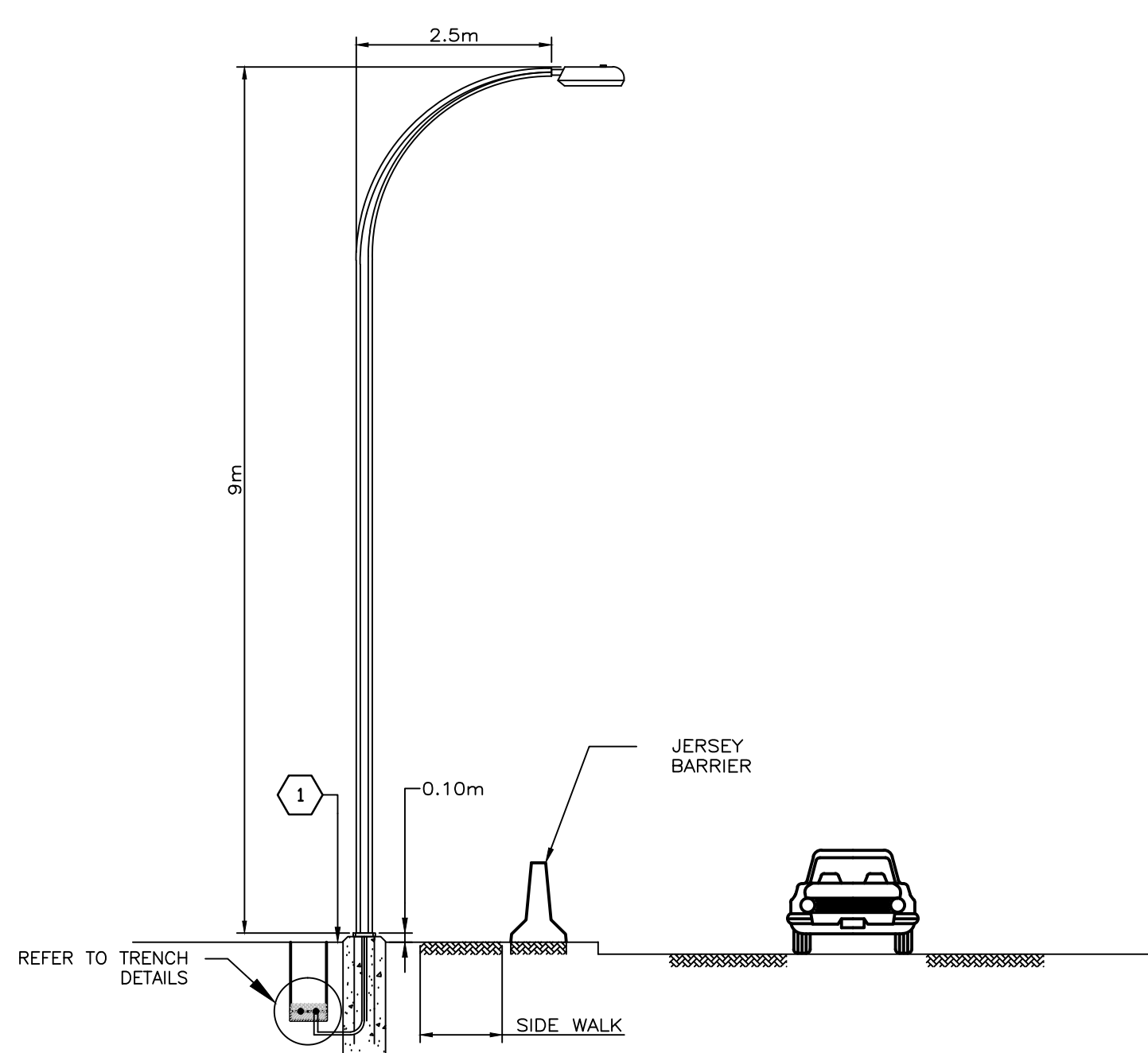
E-E CROSSWALK DETAIL
E212 N.T.S.

NOTE:
1) MINIMUM ACCEPTABLE: CARMANAH SC315 RECTANGULAR RAPID FLASHING BEACON MOUNTED ON 4" ROUND GALVANIZED STEEL POLE. SUPPLY & INSTALL POLE TO SUIT MOUNTING HEIGHTS OF BEACON & SIGNAGE. 120V A/C POWER MODEL, SIDE MOUNTED. C/W PEDESTRIAN ACTIVATED PUSH BUTTON, SIGNAGE, AND MOUNTING BRACKETS TO SUIT THE POLE DIAMETER. SIGNAGE SHALL BE AS PER MUTCD-2014 AND PEDESTRIAN CROSSING CONTROL MANUAL FOR BC. BEACON SHALL BE SUITABLE FOR UNI-DIRECTIONAL CONFIGURATION TOWARDS THE ON-COMING VEHICLE LANE. MOUNTING HEIGHTS FOR BEACON PUSH BUTTON AND SIGNAGE SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS, PROVIDE 347/120V TRANSFORMER FOR BEACON POWER IN SUITABLE NEMA-3R ENCLOSURE MOUNTED ON TO THE PROPOSED POLE.

KEY NOTES:
1) TRENCH ALIGNMENT SHALL FOLLOW MINIMUM HORIZONTAL CLEARANCES REQUIREMENTS FROM THE "HORIZONTAL UTILITY CLEARANCES" TABLE AS PER DRAWINGS



C-C TRENCH DETAIL / SINGLE DAVIT STREET LIGHT
E212 N.T.S.



D-D TRENCH DETAIL / SINGLE DAVIT STREET LIGHT
E212 N.T.S.



6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
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0	ISSUED FOR 60% SUBMISSION	2016/04/29
Revision/	Description/Description	Date/Date

Client/client

PUBLIC WORKS AND
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CANADA

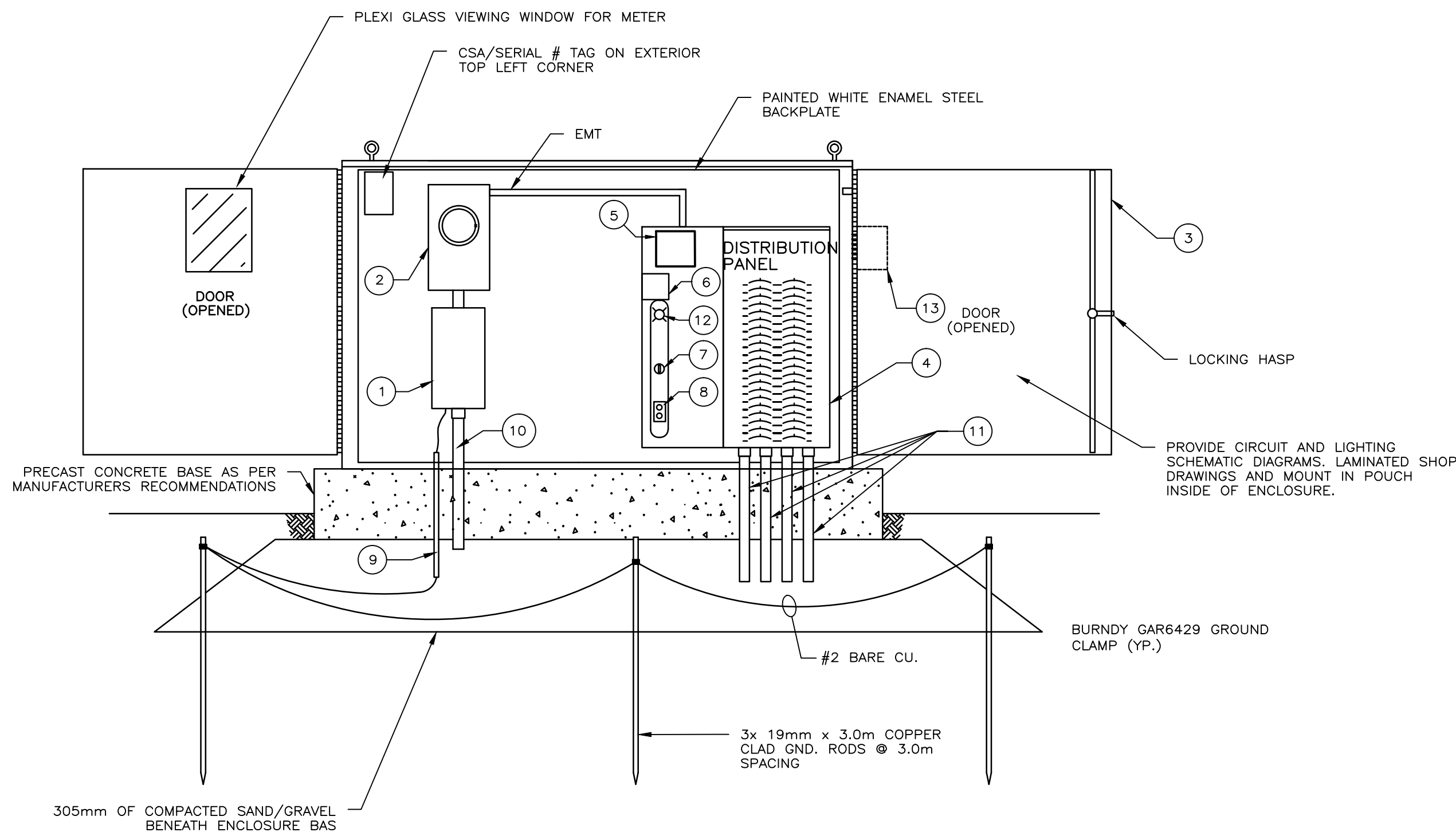
Project title/Titre du projet

SINCLAIR CANYON
SITE REHABILITATION

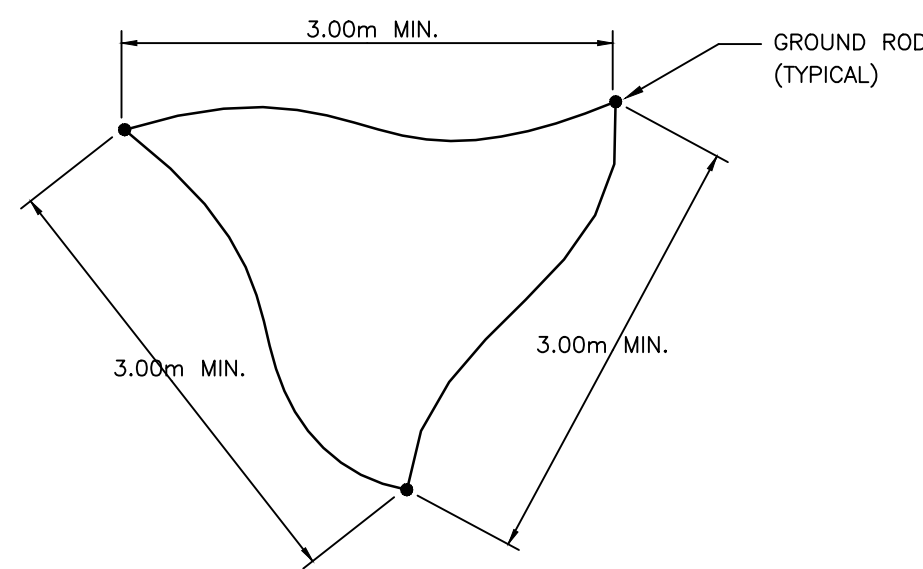
Consultant Signature Box Only

Designed by/Concept par
RP
Drawn by/Dessiné par
NP
PWGSC Project Manager/Administrateur de Projets TPSGC
MOSES YOUNG/TONY TANG
PWGSC Regional Manager/Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSGC
PWGSC WESTERN REGION RM

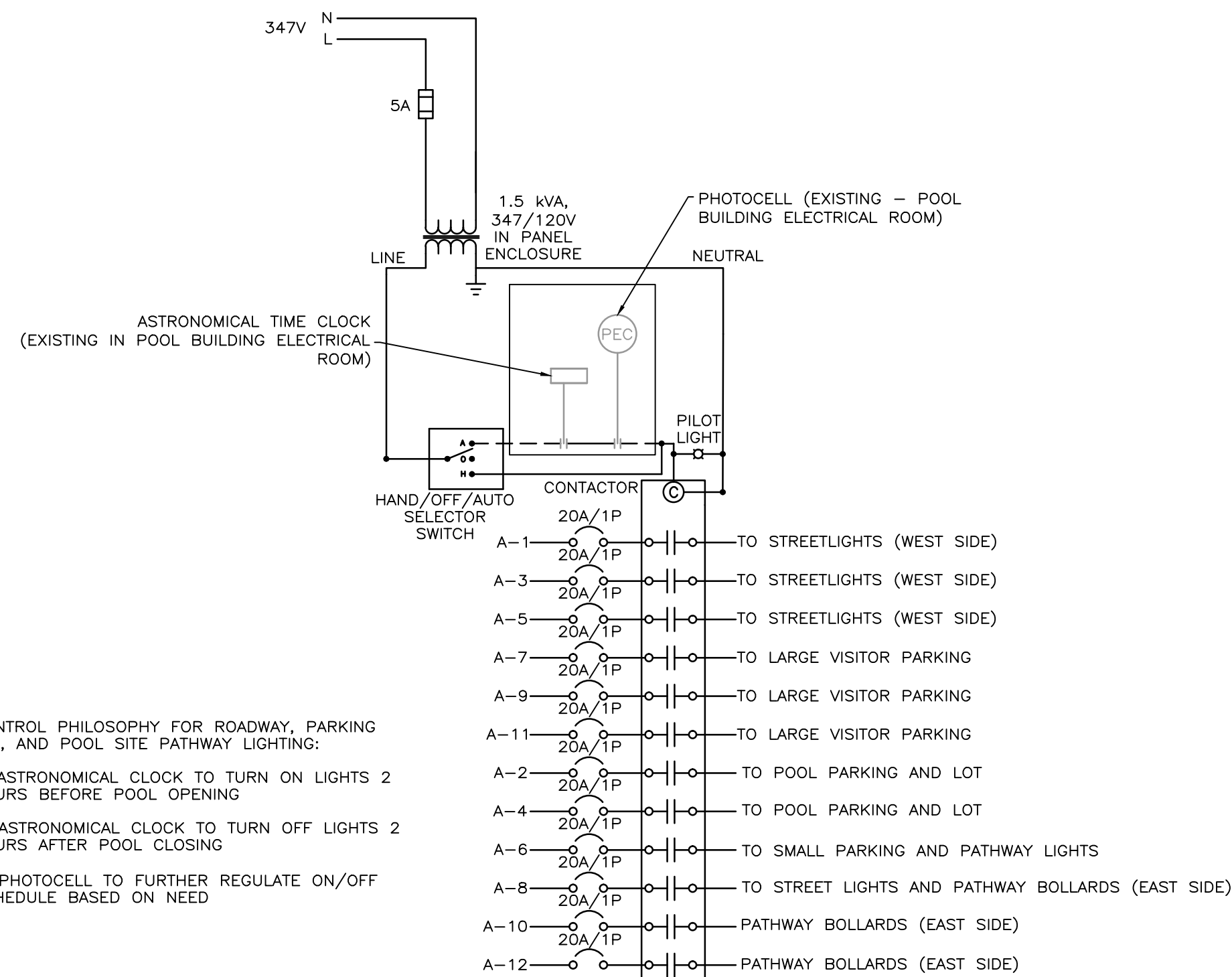
Drawing title/Titre du dessin
TRENCH DETAILS



1 POWER DISTRIBUTION CENTRE ENCLOSURE
E213 N.T.S.

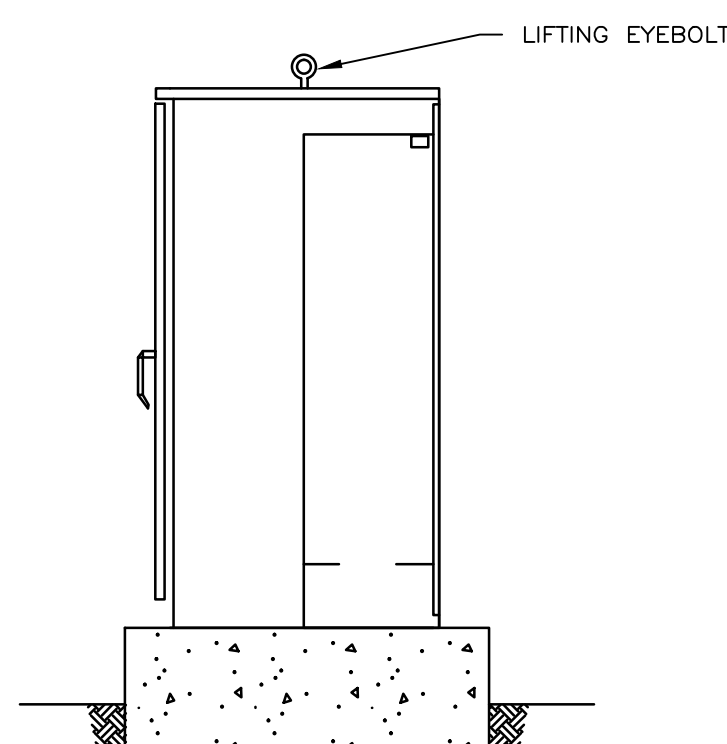


5 TOP VIEW
POWER DISTRIBUTION CENTRE ENCLOSURE GROUNDING
E213 N.T.S.

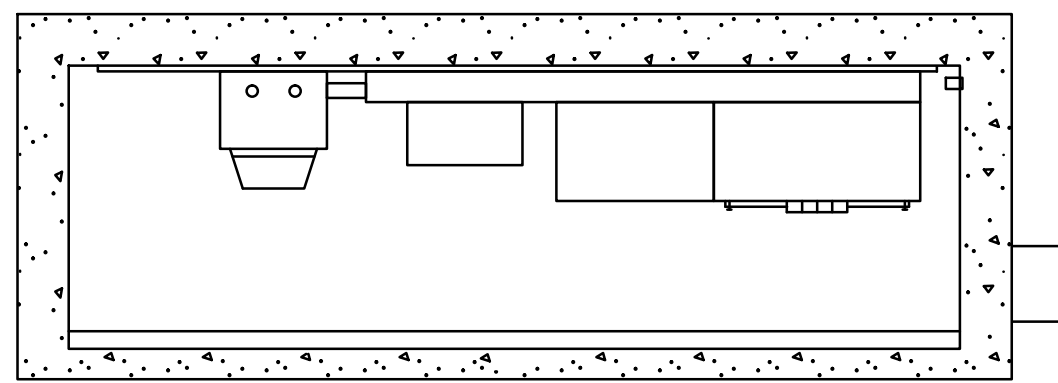


NOTE: — — INDICATES FIELD WIRING

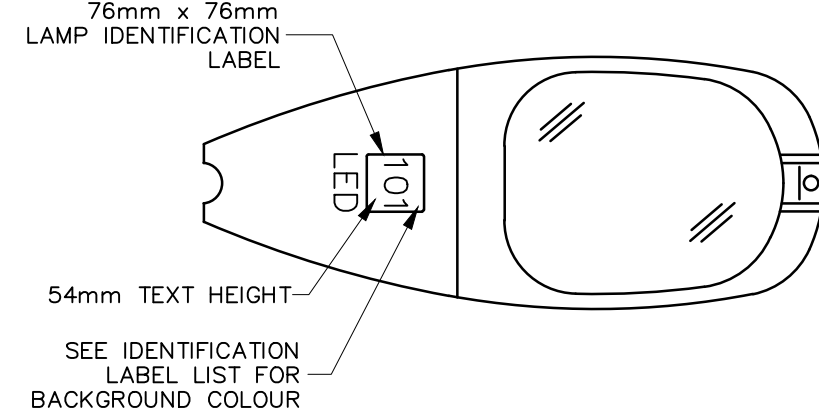
10 LIGHTING CONTROL SCHEMATIC
E213 N.T.S.



2 RT SIDE VIEW
POWER DISTRIBUTION CENTRE ENCLOSURE
E213 N.T.S.



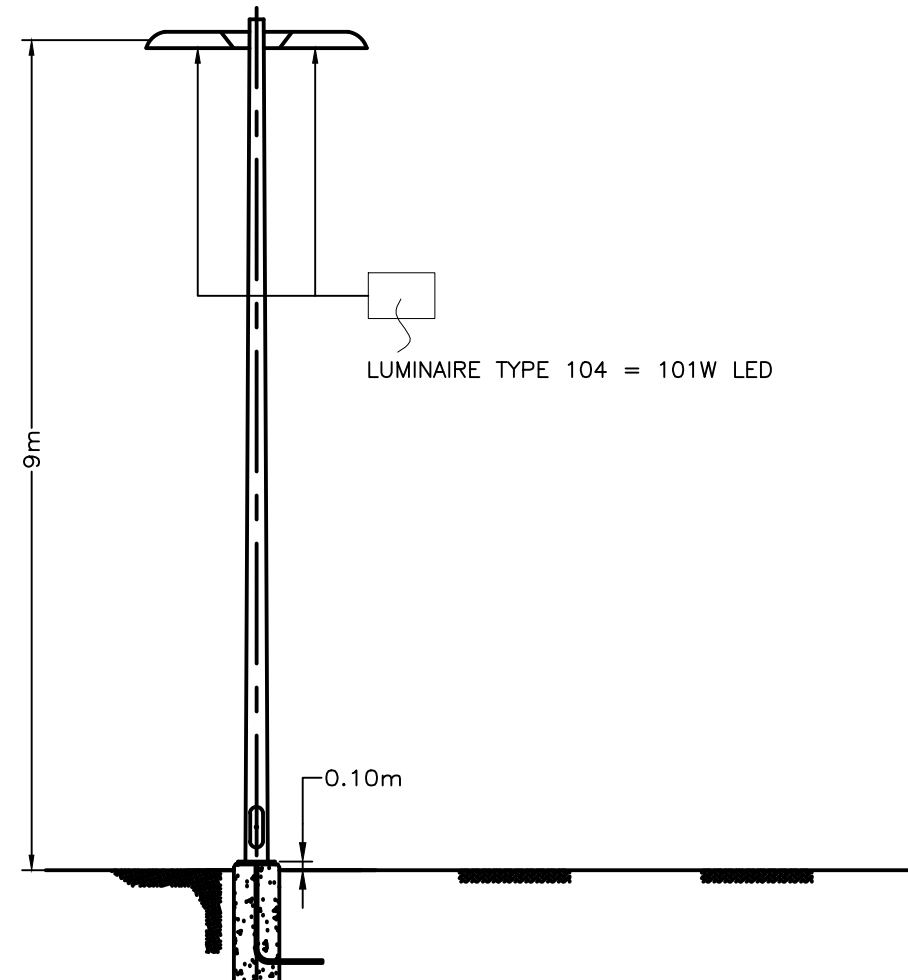
3 TOP VIEW
POWER DISTRIBUTION CENTRE ENCLOSURE
E213 N.T.S.



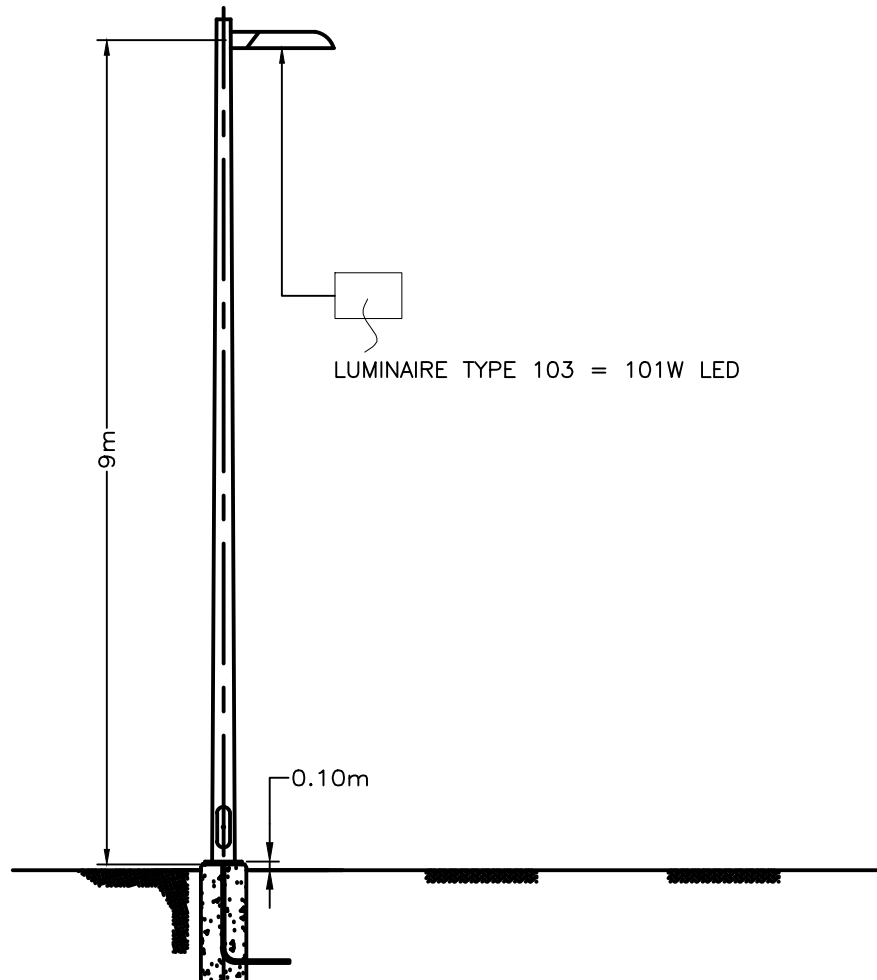
LAMP WATTAGE	TEXT ON LABEL	TEXT COLOUR	BACKGROUND COLOUR
101W LED	101	BLACK	GOLD
37W LED	37	BLACK	GOLD

NOTES:
1. ALL LABELS SHALL BE PERMANENT AND WEATHERPROOF.

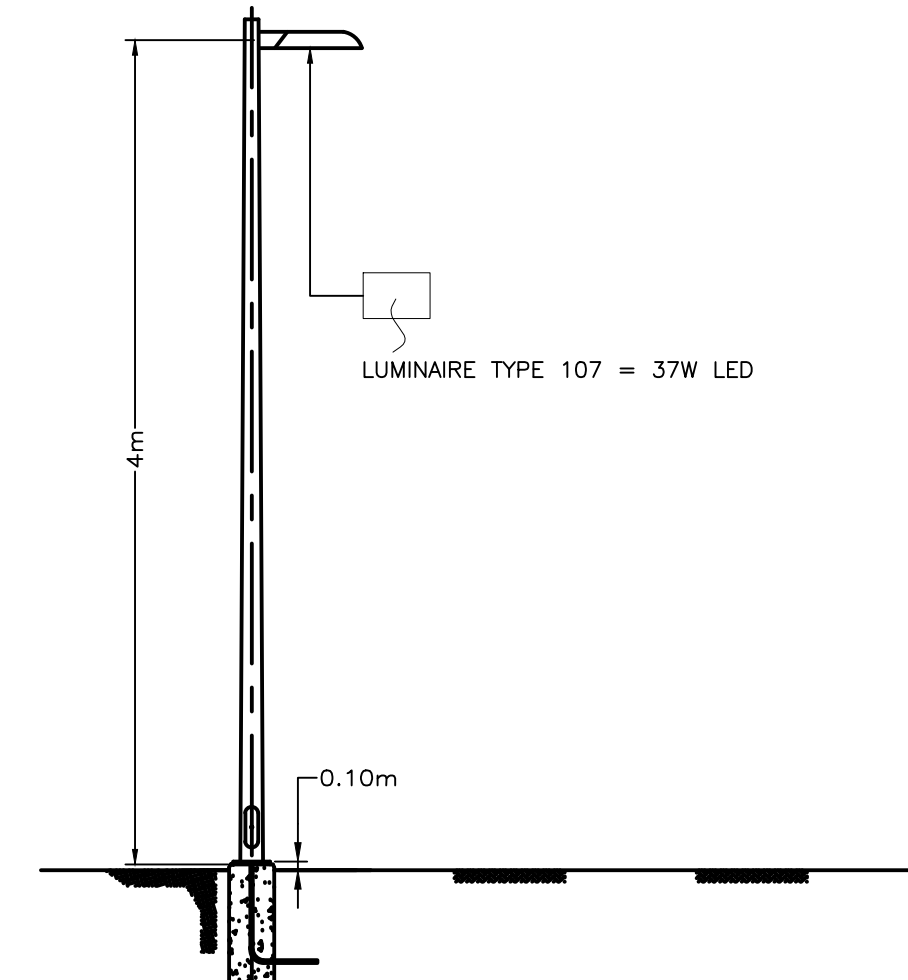
6 LUMINAIRE HEAD IDENTIFICATION
E213 N.T.S.



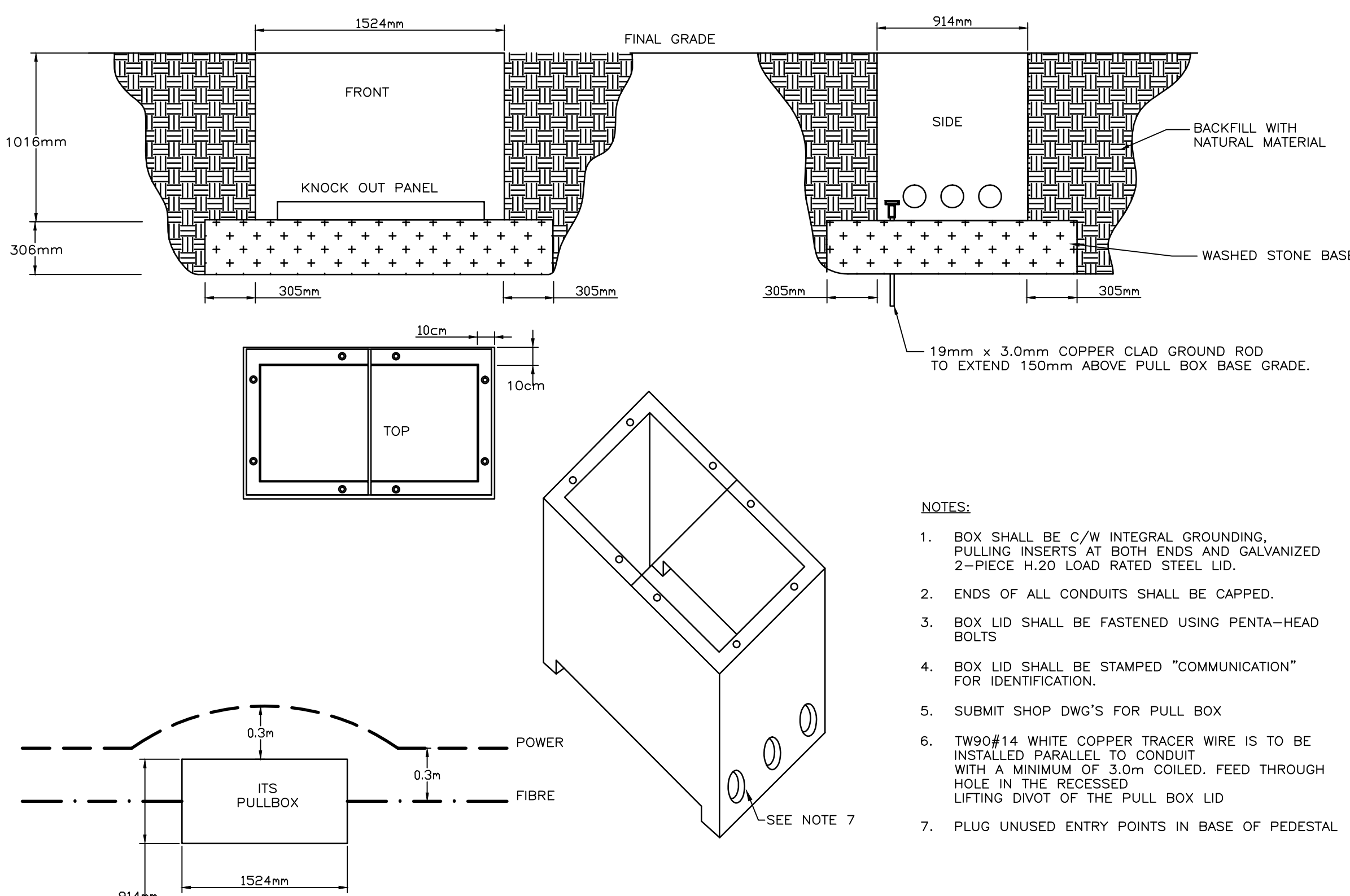
7 STEEL POLE PARKING LOT
E213 N.T.S.



8 STEEL POLE PARKING LOT
E213 N.T.S.



9 STEEL POLE PARKING LOT
E213 N.T.S.



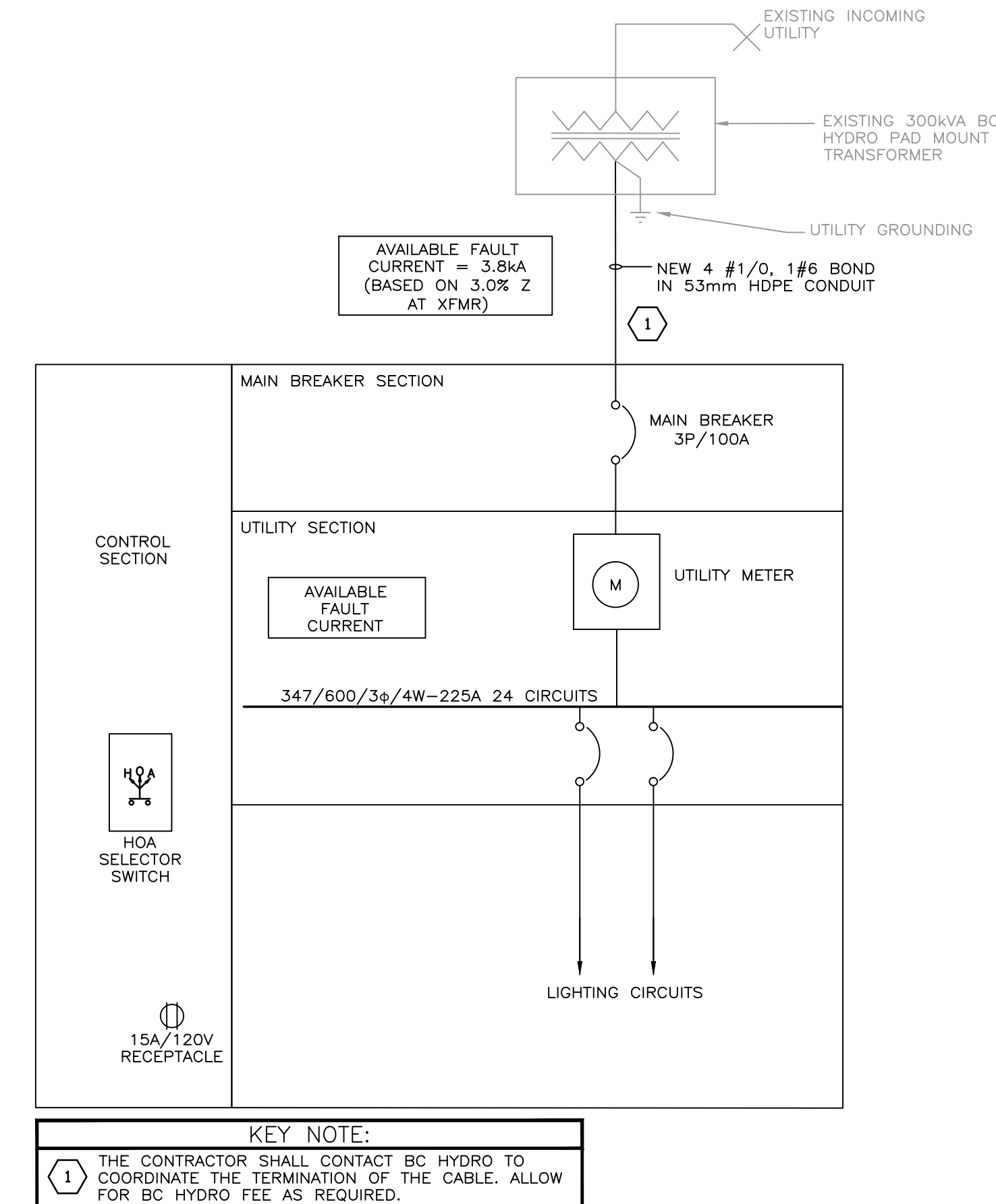
NOTES:
1. BOX SHALL BE C/W INTEGRAL GROUNDING, PULLING INSERTS AT BOTH ENDS AND GALVANIZED 2-PIECE H.20 LOAD RATED STEEL LID.
2. ENDS OF ALL CONDUITS SHALL BE CAPPED.
3. BOX LID SHALL BE FASTENED USING PENTA-HEAD BOLTS
4. BOX LID SHALL BE STAMPED "COMMUNICATION" FOR IDENTIFICATION.
5. SUBMIT SHOP DWG'S FOR PULL BOX
6. TW90#14 WHITE COPPER TRACER WIRE IS TO BE INSTALLED PARALLEL TO CONDUIT WITH A MINIMUM OF 3.0m COILED. FEED THROUGH HOLE IN THE RECESSED LIFTING DIVOT OF THE PULL BOX LID
7. PLUG UNUSED ENTRY POINTS IN BASE OF PEDESTAL

11 TYPICAL ITS/CAMERA PULLBOX DETAIL
E213 N.T.S.

1	MAIN BREAKER	100A, 3 POLE, 22 kA SHORT CIRCUIT RATED IN AN EEMAC 1 ENCLOSURE. PROVIDE LAMICOID LABELLED "MAIN 600V 3P 4W 100A SERVICE DISCONNECT".
2	METER	100A, METER SOCKET, AS PER BC HYDRO SPEC
3	ENCLOSURE	GRADE 304 STAINLESS STEEL NEMA 4 RATED ENCLOSURE. ALL ASSOCIATED HARDWARE MUST BE MADE OF STAINLESS STEEL. PROVIDE A NAMEPLATE IDENTIFYING THE SERVICE SIZE, VOLTAGE, CSA APPROVAL, MANUFACTURER'S NAME AND DATE OF CONSTRUCTION. AFFIX TO AREA INSIDE OF ENCLOSURE AS SHOWN ON DRAWING. NO LABELS TO APPEAR ON OUTSIDE OF ENCLOSURE UNLESS APPROVED BY CONSULTANT.
4	PANELBOARD	24 CIRCUIT, 347/600V, 3ø 4W SURFACE MOUNTED, 225A COPPER BUS c/w LOCKING DOOR. PROVIDE 24 20A SINGLE POLE BREAKERS. PROVIDE A COMPLETED PANEL DIRECTORY.
5	CONTACTOR	100A, 3 POLE, ENCLOSED, EEMAC 1 ENCLOSURE; ELECTRICALLY HELD, ELECTRICALLY OPERATED, 120V COIL, c/w PILOT
6	TRANSFORMER	1.5 kVA, 347/120V DRY TYPE IN NEMA 1 ENCLOSURE. FUSE AT 5A.
7	SELECTOR SWITCH	HAND/OFF/AUTO c/w PILOT LIGHT
8	DUPLEX RECEPTACLE	15A SPECIFICATION GRADE
9	GROUNDING	ROUTE #2 BARE COPPER CONDUCTOR THROUGH 21mm PVC CONDUIT TO MAIN BREAKER ENCLOSURE.
10	SERVICE CABLE	4#1/0 RW90, 1#6 INSULATED BOND IN 53mm HDPE CONDUIT
11	OUTGOING CONDUCTORS	4#6 RW90, 1#8 INSULATED BOND IN 35mm HDPE CONDUIT
12	LIGHT	LED LIGHT EQUIVALENT TO 60W INCANDESCENT LIGHT
13	UTILITY LOCK BOX	

NOTES:
1. REFER TO DETAIL 1/E213 FOR REFERENCE.
2. ALL WIRING BETWEEN COMPONENTS TO BE IN EMT CONDUIT.
3. SEAL BOTTOM OF ENCLOSURE WITH INSULATION OR EXPANDING THE ENCLOSURE.

4 PDC - TABLE OF MATERIAL
E213 N.T.S.



KEY NOTE:
1 THE CONTRACTOR SHALL CONTACT BC HYDRO TO COORDINATE THE TERMINATION OF THE CABLE. ALLOW FOR BC HYDRO FEE AS REQUIRED.

12 SINGLE LINE DIAGRAM
E213 N.T.S.

6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
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Revision/Revision	Description/Description	Date/Date

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project title/Titre du projet

SINCLAIR CANYON
SITE REHABILITATION

Consultant Signature Box Only

Designed by/Concept par
RP

Drawn by/Dessiné par
NP

PWGSC Project Manager/Administrateur de Projets TPSGC

MOSES YOUNG/TONY TANG

PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSGC
PWGSC WESTERN REGION RM

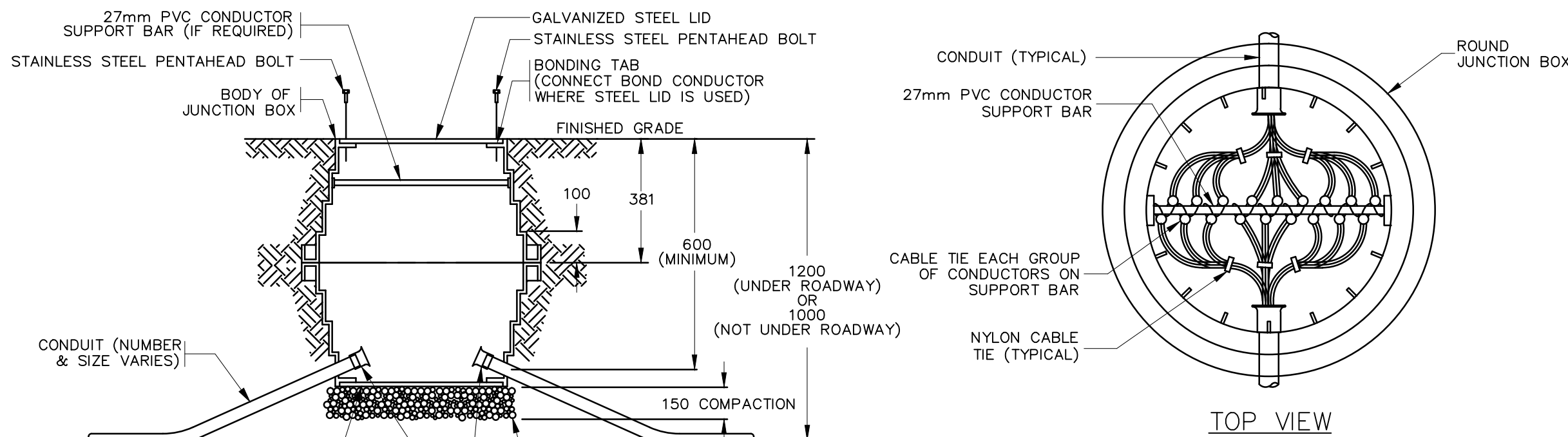
Drawing title/Titre du dessin

PANEL, FIBRE PULL BOX,
AND MISCELLANEOUS
DETAILS

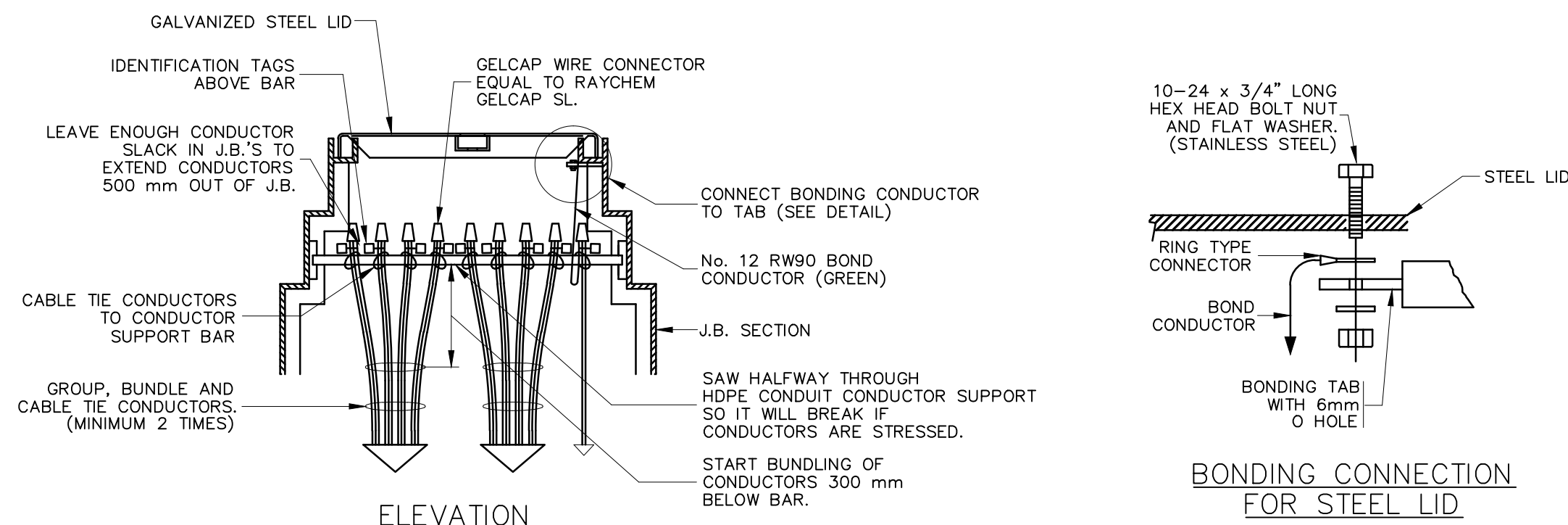
Project No./No. du projet
R.067256.802
WESTERN
PROJECT#
R.079636.001

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E213

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La Révision
no.
6



1 JUNCTION BOX
E214 N.T.S.



4 JUNCTION BOX WIRING
E214 N.T.S.

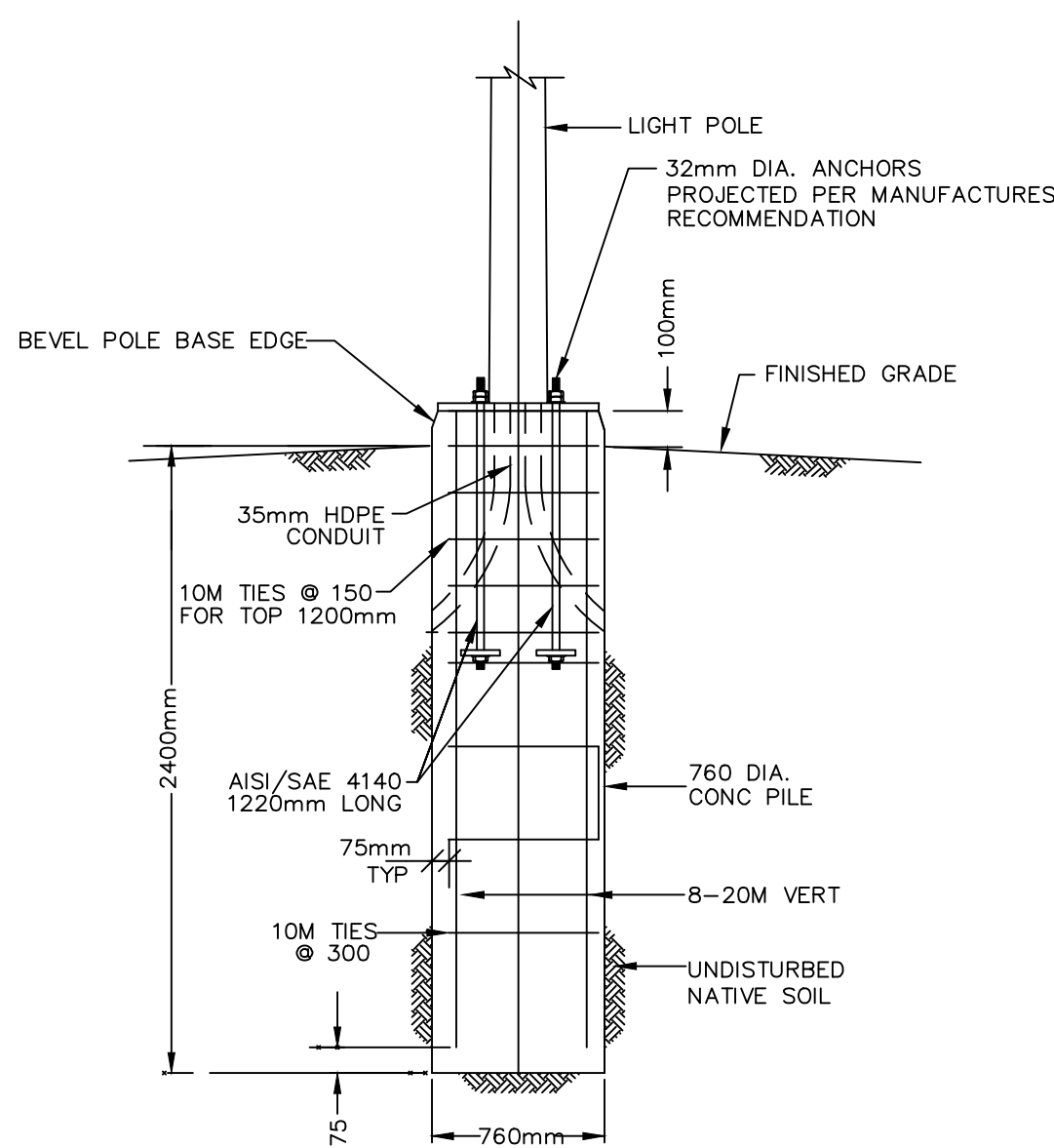
PANEL NUMBER: ODP-A											
Mounting : Surface		VOLTAGE		347/600 v		BUS RAT. :		225 A			
		PHASES		3		MAIN BRKR:		100 A			
Panel Loc: Near Pool Visitor Parking		WIRE		4		INTERRUPT:					
		CIRCUITS		24		CAPACITY :		22 kA			
Print Date: Aug 12, 2016											
03:14 PM											
CCT	LOAD		KVA	BRK	P	BRK	KVA	LOAD		CCT	
No	Type	Description	SIZE	SIZE	H	SIZE	Type	Description	No		
1	LTG.	ROADWAY	1.41	20A	A	20A 0.40	LTG.	SMALL VISITOR PARKING AND PATHWAY LIGHTING	2		
3	LTG.	ROADWAY	1.41	20A	B	20A 0.40	LTG.	SMALL VISITOR PARKING AND PATHWAY LIGHTING	4		
5	LTG.	ROADWAY	1.41	20A	C	20A 0.30	LTG.	SMALL VISITOR PARKING AND PATHWAY LIGHTING	6		
7	LTG.	LARGE VISITOR PARKING	0.70	20A	A	20A 0.20	LTG.	ROADWAY (WEST) & PATHWAY BOLLARDS	8		
9	LTG.	LARGE VISITOR PARKING	0.70	20A	B	20A 0.20	LTG.	ROADWAY (WEST) & PATHWAY BOLLARDS	10		
11	LTG.	LARGE VISITOR PARKING	0.50	20A	C	20A 0.20	LTG.	ROADWAY (WEST) & PATHWAY BOLLARDS	12		
13	SPARE			20A	A	20A 0.10	OTH.	BEACON & ADVANCED WARNING LIGHTING	14		
15	SPARE			20A	B	20A		SPARE	16		
17	SPARE			20A	C	20A		SPARE	18		
19	SPARE			20A	A	20A		SPARE	20		
21	HTR.	PANEL ENCLOSURE HTR		15A	B				22		
23	REC.	PANEL RECEPTACLE		15A	C				24		
CONNECTED LOAD			LOAD TYPE			DIVERSITY FACTOR			DEMAND		
Phase A: 2.8 kVA			LIGHTING			7.83 kVA 1.0			7.8 kVA		
Phase B: 2.7 kVA			RECEPTS			kVA 0.5			kVA		
Phase C: 2.4 kVA			MOTORS			kVA 0.7			kVA		
TOTAL : 7.9 kVA			HEATERS			kVA 0.7			kVA		
Summer Load: 7.9 kVA			OTHERS			0.10 kVA 1.0			0.1kVA		
Winter Load: 7.9 kVA			TOTAL			7.9 kVA			TOTAL DEMAND: 7.9 kVA		
MAXIMUM: 7.9 kVA									Summer 7.9 kVA		
									Winter 7.9 kVA		
									TOTAL DEMAND: 7.9 kVA		

5 PANEL SCHEDULE
E214 N.T.S.

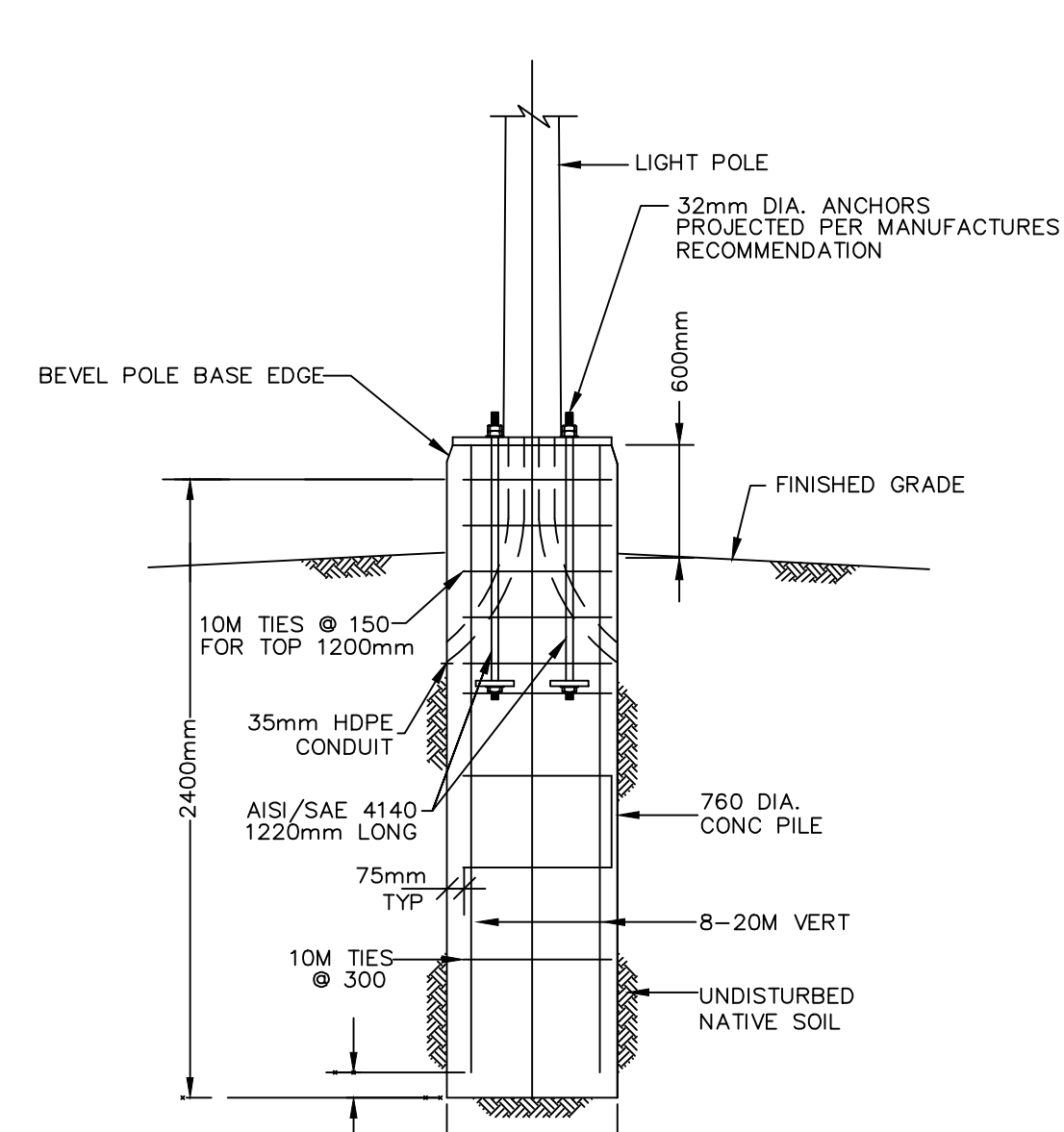
LUMINAIRE SCHEDULE						
SERIES	VOLTAGE	WATTAGE	LAMPS/HEADS	MOUNTING	QUANTITY	REMARKS
101	347V	101W	LED / DOUBLE MODULE	POLE MOUNTING HEIGHT-9m SINGLE DAVIT GALVANIZED STEEL POLE WITH 2.5m ARM LENGTH	6	TYPE II LONG DISTRIBUTION C/W BACKLIGHT CONTROL SHIELD
102	347V	101W	LED / DOUBLE MODULE	POLE MOUNTING HEIGHT-9m SINGLE DAVIT GALVANIZED STEEL POLE WITH 2.5m ARM LENGTH	31	TYPE II MEDIUM DISTRIBUTION C/W BACKLIGHT CONTROL SHIELD
103	347V	101W	LED / DOUBLE MODULE	POLE MOUNTING HEIGHT-9m GALVANIZED STEEL POLE DOUBLE HEADS	7	TYPE III MEDIUM DISTRIBUTION C/W BACKLIGHT CONTROL SHIELD
104	347V	101W	LED / DOUBLE MODULE	POLE MOUNTING HEIGHT-9m GALVANIZED STEEL POLE DOUBLE HEADS	8	TYPE III MEDIUM DISTRIBUTION C/W BACKLIGHT CONTROL SHIELD
105	347V	4X2.5W	ACCENT LED	BOLLARD 0.8m HIGH	22	LED BOLLARD
106	347V	101W	LED / DOUBLE MODULE	POLE MOUNTING HEIGHT-9m SINGLE DAVIT GALVANIZED STEEL POLE WITH 2.5m ARM LENGTH	2	TYPE II MEDIUM DISTRIBUTION
107	347V	37W	LED	POLE MOUNTING HEIGHT-4m STEEL POLE WITH BLACK POWDER COATING	4	TYPE III MEDIUM DISTRIBUTION C/W BACKLIGHT CONTROL SHIELD

LUMINAIRE SCHEDULE NOTES:
1. THE SPECIFIED PRODUCT IS THE MINIMUM ACCEPTABLE STANDARDS AND ALL THE PRODUCTS MEETING OR EXCEEDING THE MINIMUM ACCEPTABLE STANDARDS AND SUPPORTING DESIGN REQUIREMENTS SHALL BE CONSIDERED AS ALTERNATIVES.

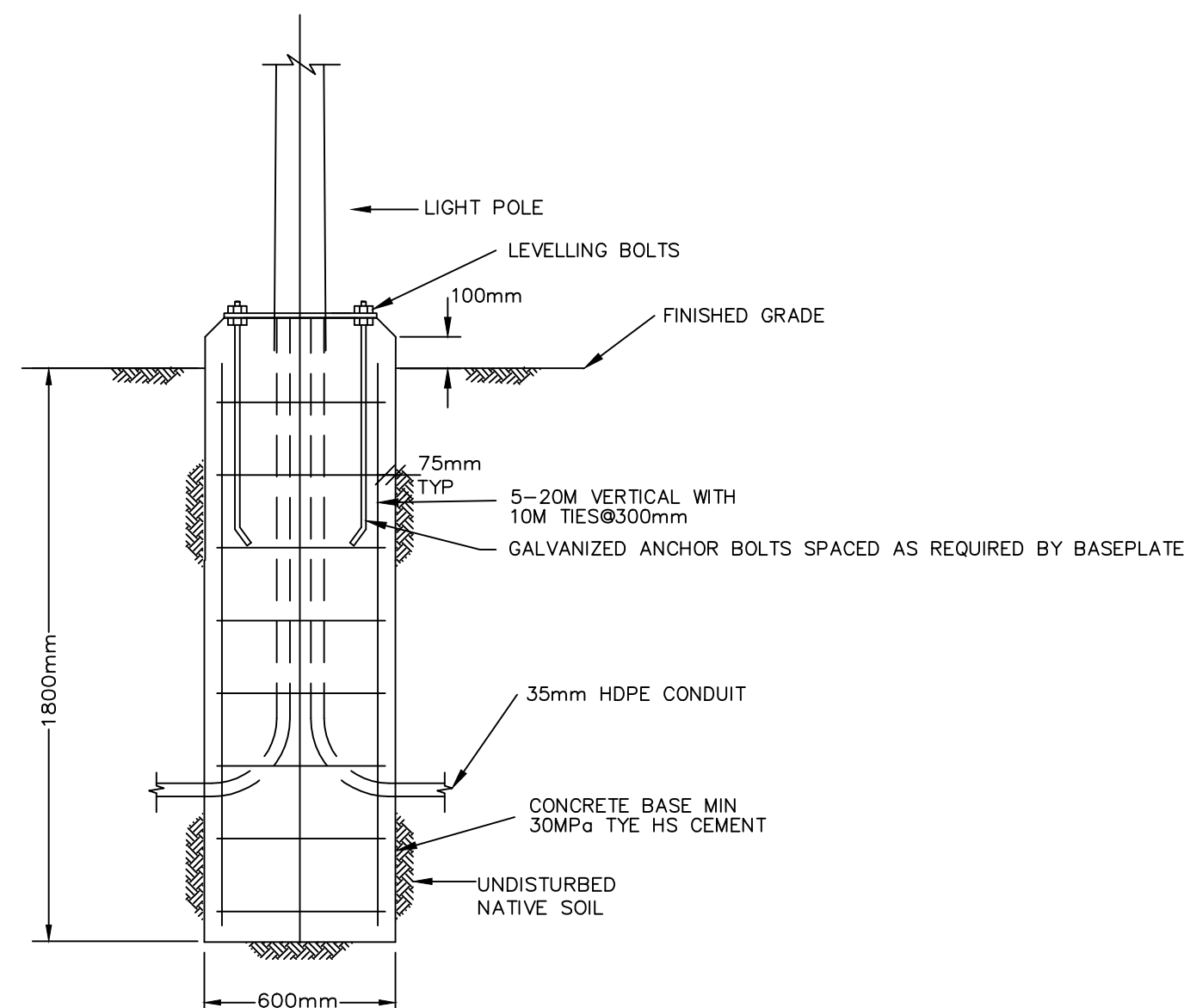
7 LUMINAIRE SCHEDULE
E214 N.T.S.



2 CAST-IN-PLACE POLE BASE FOR 9m SINGLE DAVIT POLE
E214 N.T.S.

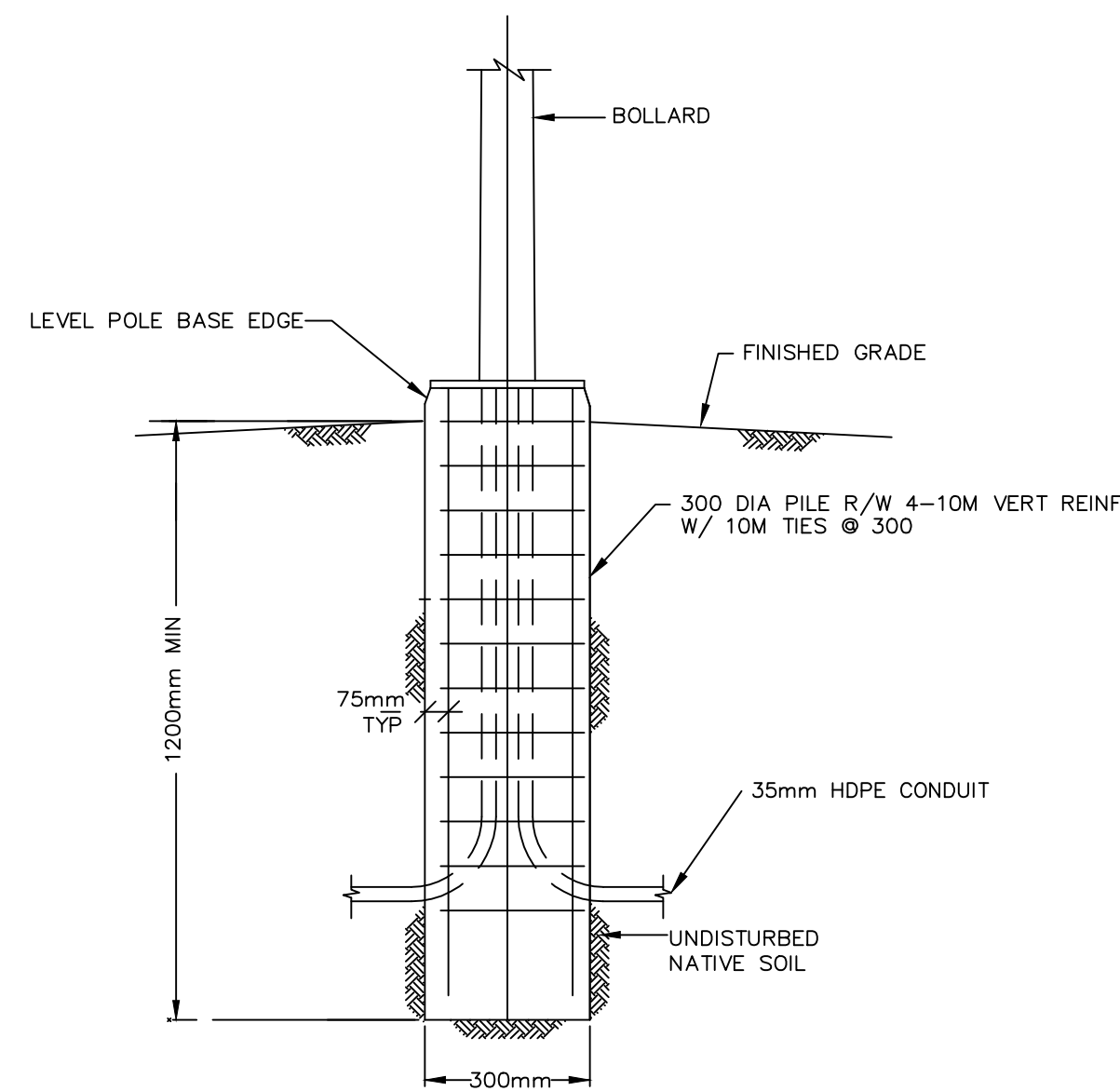


3 CAST-IN-PLACE POLE BASE FOR 9m PARKING LOT POLE
E214 N.T.S.

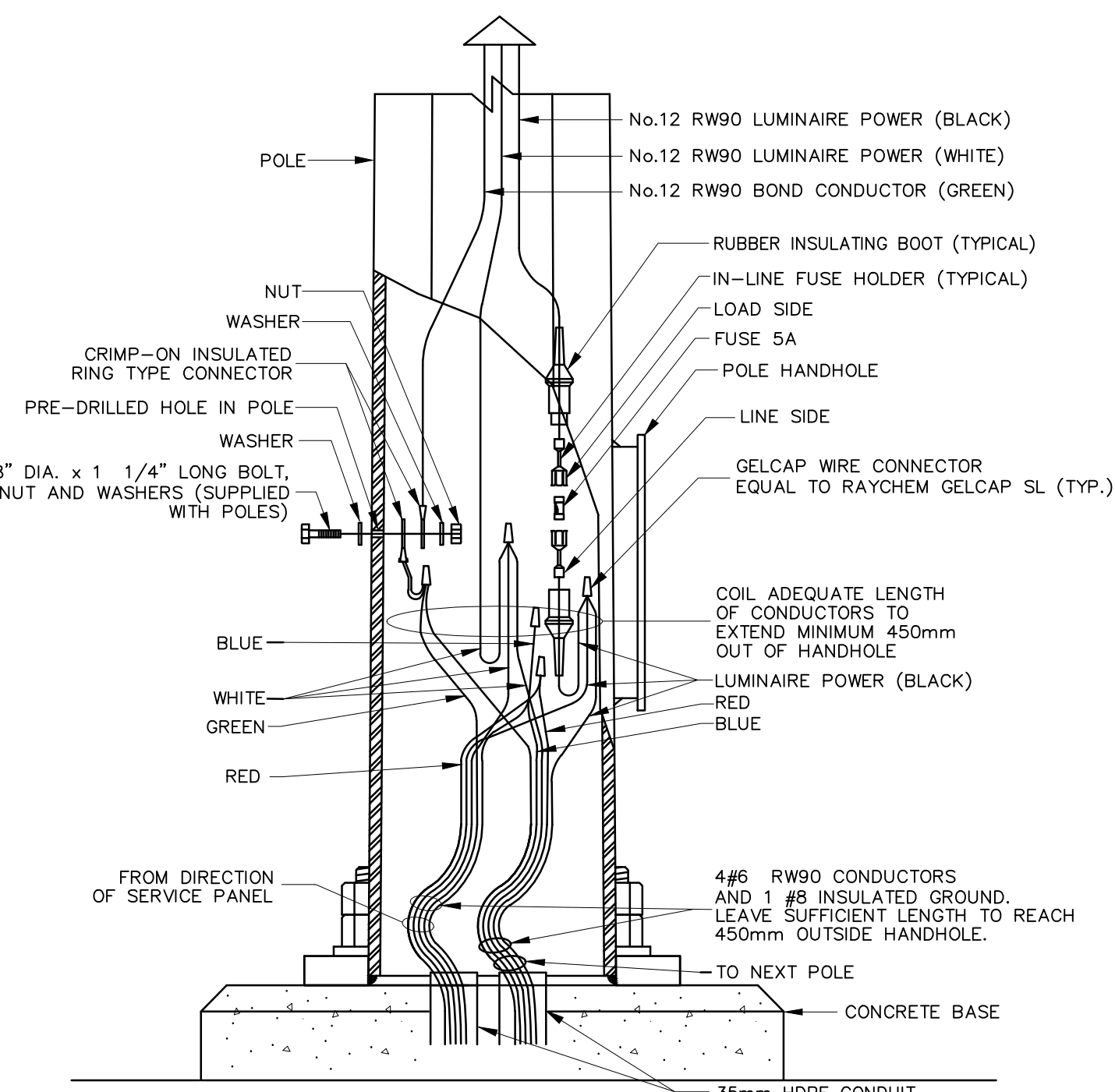


6 CAST-IN-PLACE BASE FOR 4m PARKING LOT POLE/PUSH BUTTON BEACON POLE/ADVANCED WARNING BEACON POLE
E214 N.T.S.

CONCRETE BASE NOTES:
1. EXACT LOCATION OF ANCHOR BOLTS TO BE CONFIRMED WITH POLE SUPPLIER. CONFIRM POLE BGD WITH POLE MANUFACTURER.
2. ANCHOR BOLT SIZE AND QUANTITY TO BE AS PER POLE SUPPLIER REQUIREMENTS. TOP 300mm OF BOLT TO BE HOT DIPPED GALVANIZED.
3. ALLOW SUFFICIENT TIME FOR CONCRETE TO ACHIEVE A STRENGTH OF 20 MPa PRIOR TO INSTALLING LIGHT ON FOUNDATION UNLESS ADEQUATE BRACES ARE PROVIDED.
4. TIES TO HAVE 135° HOOKS AROUND 2 VERT. MIN.
5. REFER TO DRAWINGS S100 FOR STRUCTURAL GENERAL NOTES



8 CAST-IN-PLACE POLE BASE FOR BOLLARD LOCATED OUTSIDE OF PATHWAY
E214 N.T.S.



9 POLE BASE WIRING ON STRUCTURES
E214 N.T.S.



2017-JAN-17

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**PUBLIC WORKS AND
GOVERNMENT SERVICES
CANADA**

Project title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

Consultant Signature Box Only

Designed by/Concept par

RP

Drawn by/Dessiné par

NP

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PWGSC Regional Manager/Architectural and Engineering Services/

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PWGSC WESTERN REGION RM

Drawing title/Titre du dessin

**JUNCTION BOX,
LUMINAIRE SCHEDULE,
PANEL & POLE BASE
DETAIL**

Project No./No. du projet

R.067256.802

WESTERN PROJECT#

R.079636.001

Sheet/Feuille

E214

Revision no./

La Révision

no.

6

GENERAL

1. ALL CODES REFERENCED ARE TO BE THE LATEST VERSION AT THE DATE OF ISSUE.
2. DESIGN IS BASED ON THE BRITISH COLUMBIA BUILDING CODE 2012 AND NATIONAL BUILDING CODE OF CANADA 2010.
3. READ THESE DESIGN NOTES IN CONJUNCTION WITH THE CONTRACT SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS.
4. OBTAIN DEPARTMENTAL REPRESENTATIVE'S APPROVAL BEFORE CUTTING, BORING, OR SLEEVING LOAD-BEARING MEMBERS UNLESS NOTED OTHERWISE.
5. THE STRUCTURAL DRAWINGS ARE FOR THE COMPLETED PROJECT. STABILITY OF THE NEW STRUCTURE DURING CONSTRUCTION REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE CONTRACTOR SHALL SUBMIT RECORD DRAWINGS OF THE AS-BUILT WORKS FOR THE DEPARTMENTAL REPRESENTATIVE'S REVIEW.
7. DESIGN SHALL BE BASED ON THE MOST CURRENT GEOTECHNICAL INVESTIGATION REPORT. ENSURE THAT THE REQUIREMENTS OUTLINED IN THIS REPORT ARE READ AND UNDERSTOOD PRIOR TO COMMENCING DELEGATED DESIGN AND ALL WORK.
8. ALL LEVELS SPECIFIED ARE BASED ON GEODETIC DATUM.
9. REFER TO CIVIL AND ELECTRICAL DRAWINGS FOR SMALL OPENINGS, SLEEVES AND SLOPES NOT INDICATED ON THE STRUCTURAL DRAWINGS.
10. REVIEW ALL DRAWINGS AND CHECK DIMENSIONS PRIOR TO IMPLEMENTING THE WORK. REPORT ANY DISCREPANCIES TO THE CONSULTANT FOR CLARIFICATION BEFORE PROCEEDING.
11. COORDINATE PLACEMENT AND LOCATION OF ITEMS BY SUBSEQUENT TRADES. RELEVANT TRADES SHALL REVIEW PRIOR TO ERECTION AND/OR INSTALLATION.
12. NOTIFY THE DEPARTMENTAL REPRESENTATIVE A MINIMUM OF 48 HOURS PRIOR TO ANY REQUIRED SITE REVIEWS.

EXISTING STRUCTURES

1. THE STRUCTURAL DESIGN IS BASED ON INFORMATION GATHERED FROM LIMITED VISUAL OBSERVATIONS ON SITE.
2. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO IMPLEMENTING AFFECTED WORK.
3. NOTIFY THE DEPARTMENTAL REPRESENTATIVE OF ANY SITE CONDITIONS THAT DIFFER FROM THE CONTRACT DOCUMENTS OR THE RECORD DRAWINGS.
4. SHORE AND UNDERPIN EXCAVATIONS AS REQUIRED TO PREVENT DISTURBANCE TO ADJACENT STRUCTURES, STREETS, SIDEWALKS AND UTILITIES.

DESIGN LOADS

1. UNLESS NOTED OTHERWISE, THE LOADS NOTED IN TABLES AND ON DRAWINGS ARE UNFACTORED.
2. CLIMATIC INFORMATION – REFER TO CLIMATIC INFORMATION TABLE.
3. SITE INFORMATION – REFER TO SITE INFORMATION TABLE.
4. CONSTRUCTION LOADS SHALL NOT EXCEED THE LOADS NOTED ON THE DRAWINGS.

DELEGATED DESIGN

1. PORTIONS OF THE DETAILED DESIGN ARE DELEGATED TO THE CONTRACTOR. RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO COMPLETE THE DESIGN.
2. SUBMIT SHOP DRAWINGS FOR COMPONENTS REQUIRING DELEGATED DESIGN UNDER THE SEAL AND SIGNATURE OF THE ENGINEER RESPONSIBLE FOR THE DESIGN.
3. THE FOLLOWING COMPONENTS REQUIRE DELEGATED DESIGN:
 1. PILES
 2. MORTAR GROUT, AND CONCRETE MIX DESIGNS
4. THE ENGINEER RESPONSIBLE FOR THE DESIGN IS ALSO RESPONSIBLE FOR REVIEW OF FABRICATION AND INSTALLATION OF THE COMPONENTS. UPON COMPLETION OF THE WORK, CERTIFY IN WRITING TO THE CONSULTANT THAT SUCH REVIEW HAS BEEN COMPLETED.
5. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.

FOUNDATION AND GEOTECHNICAL NOTES

1. FOUNDATION DESIGN IS BASED ON THE FOUNDATION INVESTIGATION SOILS REPORT NUMBER 1503019 PREPARED BY STANTEC CONSULTING LTD., TITLED "GEOTECHNICAL INVESTIGATION - SINCLAIR CANYON SITE REHABILITATION", AND DATED JUNE 20, 2016. ENSURE THAT THE REQUIREMENTS OUTLINED IN THE REPORT ARE READ AND UNDERSTOOD PRIOR TO COMMENCING WITH FOUNDATION WORK.
2. REMOVE ALL ORGANIC MATERIAL FROM THE CONSTRUCTION AREA AS OUTLINED IN THE GEOTECHNICAL REPORT.
3. REMOVE ALL LOOSE OR SATURATED MATERIAL AND GROUNDWATER FROM THE BASE OF FOOTING EXCAVATIONS BY APPROVED METHODS PRIOR TO PLACING FOUNDATIONS.
4. PROTECT EXCAVATIONS FOR FOOTINGS FROM RAIN, SNOW, FREEZING TEMPERATURES, STANDING WATER, LOSS OF MOISTURE AND DEGRADATION BY APPROVED METHODS.
5. THE MINIMUM LENGTH OF PILE IS 7.0m TOTAL LENGTH OR 0.0m INTO NATIVE SOIL, WHICHEVER IS LONGER.
6. PILES TO BE INSPECTED IN THE FIELD BY A PROFESSIONAL GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA PRIOR TO PLACING CONCRETE. IMPROVE SUBGRADE AS DIRECTED IN WRITING BY A PROFESSIONAL GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
7. GEOTECHNICAL TESTING AGENCY TO BE APPROVED BY AND RESPONSIBLE TO THE DEPARTMENTAL REPRESENTATIVE AND PAID FOR BY THE DEPARTMENTAL REPRESENTATIVE.
8. GRANULAR BACKFILL MATERIAL – REFER TO GRANULAR AGGREGATE GRADATION TABLE. PARTICLES OF CRUSHED GRAVEL MAY BE RETAINED ON THE PLUS 1.0mm SIEVE AND CONSIST OF DURABLE PARTICLES OF CRUSHED STONE, GRAVEL OR SLAG CAPABLE OF WITHSTANDING THE EFFECTS OF UNWINDING, SPREADING AND COMPACTING WITHOUT DEGRADATION THAT PRODUCES DELETERIOUS FINES, AND AT LEAST 50% BY WEIGHT IS TO HAVE TWO OR MORE FRACTURED FACES.

CONCRETE REINFORCEMENT

1. REINFORCEMENT STEEL TO CONFORM TO CSA-G30.18 GRADE 400.
2. DO NOT WELD REINFORCEMENT UNLESS APPROVED IN WRITING BY THE DEPARTMENTAL REPRESENTATIVE'S. REINFORCEMENT TO BE WELDED TO CONFORM TO CSA-G30.18 GRADE 400W, WELDING ONLY PERMITTED BY AN ORGANIZATION CERTIFIED TO CSA-W186.
3. NOTIFY THE DEPARTMENTAL REPRESENTATIVE PRIOR TO CONCRETE PLACEMENT TO ALLOW FOR REVIEW OF REINFORCEMENT.
4. SUBMIT SHOP DRAWINGS AND DETAILS FOR ALL REINFORCEMENT FOR REVIEW PRIOR TO FABRICATION.
5. CLEAR CONCRETE COVER TO REINFORCEMENT – REFER TO CLEAR CONCRETE COVER TO REINFORCEMENT TABLE.
6. STANDARD END HOOK LENGTHS FOR REINFORCEMENT – REFER TO STANDARD END HOOKS TABLE.
7. REINFORCEMENT SPLICES – REFER TO REINFORCEMENT SPLICES TABLE.
 1. WHERE SPLICES ARE INDICATED ON THE DRAWINGS, SUCH DIMENSIONS SHALL APPLY.
 2. WHERE THE DRAWINGS INDICATE TENSION OR COMPRESSION SPLICES, IT SHALL BE AS INDICATED IN REINFORCEMENT SPLICES TABLE.
 3. WHERE NO SPLICE OR SPLICE TYPE IS INDICATED ON THESE DRAWINGS, IT SHALL BE A TENSION SPLICE EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION SPLICE.
8. EMBEDMENT OF DOWELS – REFER TO REINFORCEMENT SPLICES TABLE.
 1. WHERE EMBEDMENT IS DIMENSIONED ON THE DRAWINGS, SUCH DIMENSIONS SHALL APPLY.
 2. WHERE THE DRAWINGS INDICATE TENSION OR COMPRESSION EMBEDMENT, IT SHALL BE AS NOTED IN THE REINFORCEMENT SPLICES TABLE.
 3. WHERE NO EMBEDMENT OR EMBEDMENT TYPE IS INDICATED ON THESE DRAWINGS, IT SHALL BE A TENSION EMBEDMENT EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION EMBEDMENT.
9. ALL REINFORCEMENT TO BE SUPPORTED AT 900mm MAXIMUM SPACING.

CONCRETE FORMWORK

1. DESIGN, FABRICATION, ERECTION, AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CAN/CSA-S293.3.

GENERAL EXCAVATION

1. ALL ELEVATIONS ARE REFERENCED TO GEODETIC DATUM.
2. THE RETAINING WALL SYSTEM SHALL BE DESIGNED TO SUPPORT SOIL AND ROCK PRESSURES, UTILITY, TRAFFIC AND CONSTRUCTION LOADS AS WELL AS OTHER SURCHARGE LOADS TO ALLOW THE SAFE AND STABLE PERFORMANCE OF THE RETAINING WALL.
3. THE RETAINING WALL SYSTEM IS TO BE DESIGNED FOR ALL CONDITIONS THAT MAY OCCUR DURING CONSTRUCTION. AMONG OTHERS, THESE CONDITIONS INCLUDES: INITIAL CANTILEVER CONDITION, STAGED EXCAVATION AND INSTALLATION OF TIEBACKS. THE RETAINING WALL SYSTEM ELEMENTS CARRYING VERTICAL LOADS ARE TO BE DESIGNED AS STRUCTURES SUBJECTED TO COMBINED AXIAL LOADING AND BENDING. TIEBACK VERTICAL LOAD COMPONENT AND OTHER STRUCTURAL LOADS ARE TO BE INCLUDED IN THE VERTICAL LOADS.
4. THE RETAINING WALL SYSTEM IS TO BE DESIGNED FOR A MAXIMUM HORIZONTAL DEFLECTION OF 49mm.
5. CONTRACTOR TO PROVIDE A FIXED-FEE RATE FOR EXCAVATION AND INSTALLATION OF RETAINING WALL SYSTEM.

LATERAL PRESSURE

1. MINIMUM DESIGN LOADING CONDITIONS ARE TO BE DETERMINED BY SUMMING PRESSURE DIAGRAM FOR SOIL AND ROCK, AND SURCHARGES. DESIGNERS SHALL INCLUDE OTHER SURCHARGE LOADS AS NECESSARY, THAT ARE ANTICIPATED DURING CONSTRUCTION.
2. PRESSURE DIAGRAMS ARE CALCULATED BASED ON THE LATERAL EARTH PRESSURE PARAMETERS SHOWN IN THE LATERAL EARTH PRESSURE PARAMETER TABLE. THE GROUNDWATER LEVEL ASSUMED IN THE CONTRACTOR'S DESIGN TABLE SHALL BE CLEARLY STATED.

TOE STABILITY DESIGN

1. RETAINING WALL EMBEDMENT CALCULATIONS SHALL SHOW THAT STRUCTURAL MEMBERS HAVE SUFFICIENT PENETRATION TO DEVELOP THE NECESSARY PASSIVE RESISTANCE OF THE DENSE GRAVEL OR VERY DENSE GRAVEL BELOW FINAL SUBGRADE. THE PASSIVE LATERAL PRESSURE COEFFICIENT FOR BEDROCK SHOWN IN THE LATERAL EARTH PRESSURES PARAMETERS TABLE ON THE DIAGRAM CORRESPONDS TO A FACTOR OF 1.0. RETAINING WALL ELEMENTS EMBEDMENT LENGTH CALCULATIONS SHALL INCLUDE A MINIMUM FACTOR OF SAFETY OF 1.5 FOR PASSIVE ROCK RESISTANCE. CALCULATIONS FOR THE STRESS IN THE RETAINING WALL ELEMENTS MAY USE A FACTOR OF SAFETY OF 1.0 ON THE PASSIVE ROCK RESISTANCE.
2. TO DETERMINE THE EMBEDMENT DEPTH OF TOE PENETRATION, REQUIRED TO PROVIDE STABILITY, SOLVE FOR THE REQUIRED TOE EMBEDMENT BY MOMENT EQUILIBRIUM (M₀) ABOUT THE LOWEST BRACING LEVEL FOR MULTIPLE LEVELS OF SUPPORT. CONSIDER ONLY THE LATERAL PRESSURE ACTION ON THE PILE BELOW THE LOWEST BRACING LEVEL. CALCULATIONS SHALL INCLUDE A MINIMUM FACTOR OF SAFETY OF 1.5 FOR PASSIVE SOIL OR ROCK RESISTANCE.
3. THE TOE OF THE RETAINING WALL IS TO EXTEND A SUFFICIENT DISTANCE BELOW THE BOTTOM OF THE CRITICAL SURFACE FAILURE TO ENSURE BOTTOM STABILITY AND ADEQUATE VERTICAL LOAD CAPACITY.

CONCRETE PILES

1. PILES ARE STRUCTURAL ELEMENTS WITHIN THE GROUND THAT RELY UPON THE GROUND FOR THEIR PERFORMANCE THROUGH ACTIONS SUCH AS FRICTION, END BEARING, LATERAL SUPPORT, COMPENDMENT, ETC. PILE DESIGN ARE THE RESPONSIBILITY OF THE CONTRACTOR. DESIGN OF CONCRETE PILES SHOWN HEREIN IS INDICATIVE FOR THE CONCRETE ELEMENT ONLY WHICH RELIES UPON THE GROUND FOR ITS PERFORMANCE.
2. PILES ARE CAST IN PLACE SHANT PLACED WITHIN A BORED HOLE AND REINFORCED OVER THEIR FULL HEIGHT AS SHOWN ON THE DRAWINGS.
3. OBTAIN FROM THE GEOTECHNICAL ENGINEER INSTRUCTIONS FOR INSTALLING THE PILES INCLUDING BASE PREPARATION, MINIMUM BEARING DEPTHS, AND OTHER SPECIFICATIONS. DETAILS PROVIDED HERE ARE TO BE USED AS A GUIDE ONLY AND SHALL NOT OVERRULE THE GEOTECHNICAL ENGINEER, OR THE CONTRACTORS PILE DESIGNER.
4. SUBMIT A SHOP DRAWING WITH PROPOSED BASIC CRITERIA TO THE GEOTECHNICAL ENGINEER FOR APPROVAL PRIOR TO DRILLING.
5. FOR DEPTHS OF BASE BEARING LEVEL FOR PILES, REFER TO INSTRUCTIONS FROM THE GEOTECHNICAL ENGINEER.
6. TOLERANCES FOR LOCATION OF PILES TO BE +/- 75mm FROM INTENDED LINE AND POSITION. PROVIDE TO THE DEPARTMENTAL REPRESENTATIVE THE SURVEY OF EXISTING PILE POSITIONS INDICATING ANY VARIATIONS FROM INTENDED POSITION. TOLERANCE FOR PLUMB TO BE 1.5 PERCENT MAXIMUM SLOPE OF SHANT. TO BE INSPECTED AND VERIFIED ON SITE BY THE GEOTECHNICAL ENGINEER. THE CAST-IN-PLACE CONCRETE THE GEOTECHNICAL ENGINEER SHALL PROVIDE OR ARRANGE FOR CONTINUOUS INSPECTION OF THE PILE INSTALLATION UNDER HIS LETTER OF ASSURANCE FOR THE PROJECT.
8. MAINTAIN AND SUBMIT ACCURATE RECORDS OF THE PILE INSTALLATION. PROVIDE TO THE DEPARTMENTAL REPRESENTATIVE WRITTEN CONFIRMATION THAT THE PILES WERE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS, INSTRUCTIONS OF THE GEOTECHNICAL ENGINEER, AND BEST CONSTRUCTION PRACTICES.
9. TESTING OF CONCRETE FOR PILES SHALL CONFORM TO REQUIREMENTS IDENTIFIED IN THE PROJECT SPECIFICATIONS.
10. DESIGN AND TESTING OF PILES FOR COMPRESSION, TENSION OR SHEAR LOADS SHALL BE ACCOMPLISHED AS DIRECTED BY THE GEOTECHNICAL ENGINEER IN ACCORDANCE WITH CSA-A23.1.
11. ALL PILING WORK SHALL BE PERFORMED BY TRAINED PERSONNEL WITH SPECIFIC EXPERIENCE IN THE INSTALLATION OF CONCRETE PILES.

CAST-IN-PLACE REINFORCED CONCRETE

1. CONCRETE MATERIALS, QUALITY, MIXING, PLACING, FORMWORK AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CSA-A23.1.
2. SUPPLY CONTROLLED CONCRETE IN ACCORDANCE WITH CSA-A23.1 WITH PROPERTIES NOTED IN CONTROLLED CONCRETE TABLE.
3. USE TYPE MC CEMENT FOR ALL CONCRETE IN CONTACT WITH NATIVE SOIL.
4. MAXIMUM FLY ASH CONTENT NOT TO EXCEED 40% OF THE TOTAL CEMENTITIOUS MATERIAL, EXCEPT AS FOLLOWS:
 1. LIMIT FLY ASH CONTENT IN FLY ASH TO LESS THAN 12% FOR CONCRETE WITH EXPOSURE CLASSES S-1, S-2, AND S-3.
 2. NOTIFY CONSULTANT 48 HOURS PRIOR TO CONCRETE POURS TO ALLOW FOR REVIEW OF REINFORCEMENT.
 3. DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE.
 4. FIELD AND LABORATORY TESTING OF CONCRETE TO BE COMPLETED BY A THIRD PARTY TESTING AND INSPECTION AGENCY APPROVED BY AND RESPONSIBLE TO THE DEPARTMENTAL REPRESENTATIVE. TESTING AGENCY SHALL BE CERTIFIED TO CSA-A2083 AND TESTING TO BE COMPLETED IN ACCORDANCE WITH CSA-A23.2. TESTING PAID FOR BY CONTRACTOR.

CONCRETE PROTECTION FROM COLD WEATHER

1. CONCRETE SHALL BE PROTECTED, PLACED, FINISHED AND CURED IN ACCORDANCE WITH CSA-A23.1.
2. COLD WEATHER REQUIREMENTS ARE REQUIRED WHEN THE ACTUAL AIR OR FORECASTED TEMPERATURE FALLS BELOW 5°C.
3. DO NOT PLACE CONCRETE AGAINST FROZEN GROUND OR OTHER FROZEN MATERIAL. PROVIDE PROTECTION AND SUPPLEMENTARY HEAT AS REQUIRED TO ENSURE ADEQUATE CURING OF CONCRETE.
4. MAINTAIN CONCRETE TEMPERATURE AT 10°C OR HIGHER FOR A MINIMUM OF 72 HOURS OR UNTIL CONCRETE HAS ATTAINED 40% OF THE SPECIFIED STRENGTH, WHICHEVER IS LONGER.
5. WHERE SUPPLEMENTARY HEAT IS PROVIDED, USE APPROVED CONCRETE HEATERS WITH EXHAUST VENTED AWAY FROM THE SURFACE OF THE CONCRETE.

CLIMATIC INFORMATION

TO BE READ IN CONJUNCTION WITH DESIGN LOADS DESIGN NOTES		
SNOW LOAD (1/50), Ss		2.7 kPa
SNOW LOAD (1/50), Sr		0.2 kPa
ONE DAY RAIN (1/50)		59 mm
HOURLY WIND PRESSURE (1/10)		0.27 kPa
HOURLY WIND PRESSURE (1/50)		0.35 kPa
SEISMIC RESPONSE, Sa(0.2)		0.263
SEISMIC RESPONSE, Sa(0.5)		0.154
SEISMIC RESPONSE, Sa(1.0)		0.074
SEISMIC RESPONSE, Sa(2.0)		0.041
SEISMIC RESPONSE, PGA		0.132

SITE INFORMATION

TO BE READ IN CONJUNCTION WITH DESIGN LOADS DESIGN NOTES	
IMPORTANCE CATEGORY	NORMAL
WIND EXPOSURE TYPE	OPEN TERRAIN
INTERNAL PRESSURE CATEGORY	NA
FOUNDATION SITE CLASS	C

CONTROLLED CONCRETE

TO BE READ IN CONJUNCTION WITH CAST-IN-PLACE CONCRETE DESIGN NOTES						
CONCRETE ELEMENT	CLASS OF EXPOSURE	EXTERIOR CONCRETE				
		MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (MPa)	MINIMUM COMPRESSIVE STRENGTH AT 56 DAYS (MPa)	MAXIMUM AGGREGATE SIZE (mm)	AIR CONTENT CATEGORY	MAXIMUM W/C RATIO
FOOTINGS, GRADE BEAMS	F-1/S-3	25	30	20	1	0.5
PILES	F-1/S-3	25	30	20	1	0.5
BEAMS, GIRDERS, COLUMNS, AND PILES TO TIES / STIRRUPS (EXCEPT AS NOTED BELOW)	C-2	32	NA	20	1	0.45
CURB & GUTTER	C-2	32	NA	20	1	0.45
SITE CONCRETE, (NON-STRUCTURAL)	C-2	32	NA	20	1	0.45

CLEAR CONCRETE COVER TO REINFORCEMENT

TO BE READ IN CONJUNCTION WITH CONCRETE REINFORCEMENT DESIGN NOTES				
EXPOSURE CONDITION	EXPOSURE CLASS			
	N	F-1, F-2, S-1, S-2, S-3	C-XL, C-1, C-2, C-3, A-1, A-2, A-3	
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	-	75 mm	75 mm	
BEAMS, GIRDERS, COLUMNS, AND PILES TO TIES / STIRRUPS (EXCEPT AS NOTED BELOW)	30 mm	40 mm	60 mm	
SLABS, WALLS, JOISTS, SHELLS, AND FOLDED PLATES (EXCEPT AS NOTED BELOW)	20 mm	40 mm	60 mm	
RATIO OF COVER TO NOMINAL BAR DIAMETER	1.0	1.5	2.0	
RATIO OF COVER TO NOMINAL MAXIMUM AGGREGATE SIZE	1.0	1.5	2.0	
NOTE: THE LARGEST COVER REQUIRED FOR ANY ONE ELEMENT SHALL GOVERN.				

REINFORCEMENT SPLICES

TO BE READ IN CONJUNCTION WITH CONCRETE REINFORCEMENT DESIGN NOTES				
BAR SIZE	COMPRESSION SPLICE (mm)	TENSION SPLICE (mm)		
		VERTICAL OR BOTTOM HORIZONTAL BARS		TOP HORIZONTAL BARS*
		UNCOATED BARS		UNCOATED BARS
10M	300	400		500
15M	450	550		750
20M	600	700		900
25M	750	1100		1400
30M	900	1300		1700
35M	1025	1550		2000
NOTE 1: THIS TABLE IS BASED ON NORMAL WEIGHT CONCRETE f _c = 35 MPa AND ON REINFORCING STEEL f _y = 400 MPa.				
NOTE 2: *TOP HORIZONTAL BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 300 mm OF CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.				
NOTE 3: FOR STANDARD EMBEDMENT DEPTH INTO CONCRETE, DIVIDE BASIC TENSION LAP SPLICE NUMBERS BY 1.3.				

STANDARD END HOOKS

TO BE READ IN CONJUNCTION WITH CONCRETE REINFORCEMENT DESIGN NOTES							
BAR SIZE	10M	15M	20M	25M	30M	35M	55M
	180	260	310	400	510	640	1020
	140	180	210	280	390	550	860

LATERAL EARTH PRESSURE PARAMETERS

TO BE READ IN CONJUNCTION WITH LATERAL PRESSURE DESIGN NOTES				
PARAMETER	CLAY TILL	SAND	COMPACT TO DENSE GRAVEL	VERY DENSE GRAVEL
TOTAL UNIT WEIGHT [kN/m ³]	19	19.5	22	22
ANGLE OF INTERNAL FRICTION Ø [°]	30	30	36	40
ACTIVE EARTH PRESSURE COEFFICIENT (K _a)	0.33	0.33	0.26	0.22
AT-REST EARTH PRESSURE COEFFICIENT...	0.5	0.5	0.41	0.36
PASSIVE EARTH PRESSURE COEFFICIENT...	3	3	3.8	4.6

STANDARD STRUCTURAL DRAWING ABBREVIATIONS

AR or A ROD	ANCHOR ROD	EMBED	EMBEDDED	OPNG	OPENING
ADDL	ADDITIONAL	EQ	EQUAL	PERM	PERIMETER
ALT	ALTERNATE	EXIST	EXISTING	PERP	PERPENDICULAR
APPR	APPROVED	EXT	EXTERIOR	PLATE	PLATE
APPROX or ±	APPROXIMATELY	FDTN	FOUNDATION	PLYWD	PLYWOOD
ARCH	ARCHITECT	FTG	FOOTING	POLY	POLYETHYLENE
BOT	BOTTOM	FTS	FULL TENSION SPlice	PROCU	PROCU
BLL	BOTTOM LOWER LAYER	GA	GALVANIZED	QTY	QUANTITY
BM	BEAM	GALV	GALVANIZED	R OR RAD	RADIUS
BRG	BEARING	GR BM	GRADE BEAM	RWN	REINFORCE WITH
BTRWN	BETWEEN	H OR HT	HIGH OR HEIGHT	REINF	REINFORCE
BUL	BOTTOM UPPER LAYER	HIE	HOOK ONE END	REM	REMAINDER
CW	COMPLETE WITH	HZE	HOOK TWO ENDS	REOD	REQUIRED
CIP	CAST IN PLACE	HORIZ	HORIZONTAL	SECT	SECTION
CJ	CONTROL JOINT	HR	HOUR	SIM	SIMILAR
CL or CLR	CENTRELINE	IF	INSIDE FACE	SJ	SAWJOINT JOINT
CLR	CLEAR	INCL	INCLUDING	SOC	SLAB ON GRADE
CONC	CONCRETE	INSUL	INSULATION	SPMOD	STANDARD PROCTOR
CONN	CONNECTION	LG	LONG	SQ	MAXIMUM DRY DENSITY
CONT	CONTINUOUS	LOC	LOCATION	SST	SQUARE
D or DP	DEEP or DEPTH	LL	LIVE LOAD	STD	STANDARD
DET	DETAIL	LLH	LONG LEG HORIZONTAL	STIR	STIRRUP
DIA or Ø	DIAMETER	LLV	LONG LEG VERTICAL	STRUCT	STRUCTURAL
DL	DEAD LOAD	LONGIT	LONGITUDINAL	T&B	TOP & BOTTOM
DWG	DRAWING	MAX	MAXIMUM	THK	THICK
DWL	DOWEL	MID	MIDDLE	TLL	TOP LOWER LAYER
EE	EACH END	MIN	MINIMUM	TOP OF	TOP OF
EF	EACH FACE	MISC	MISCELLANEOUS	TUL	TOP UPPER LAYER
ES	EACH SIDE	N STUD	NELSON STUD	TYP	TYPICAL
EW	EACH WAY	NTS	NOT TO SCALE	UNO	UNLESS NOTED
ELEV	ELEVATION	NOB	NUMBER	US	OTHERWISE
ELEC	ELECTRICAL	OIC	ON CENTER	VERT	VERTICAL
		OD	OUTSIDE DIAMETER	WP	UNDERSIDE
		OP	OUTSIDE FACE	W/	WORKING POINT
		OPP	OPPOSITE	WWM	WELDED WIRE MESH

REAL PROPERTY SERVICES

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6	ISSUED FOR TENDER	2017/01/17
5	RE-ISSUED FOR TENDER	2016/10/07
4	ISSUED FOR TENDER	2016/09/23
3	ISSUED FOR 100% SUBMISSION	2016/09/01
2	ISSUED FOR 99% SUBMISSION	2016/07/04
1	ISSUED FOR 66% SUBMISSION	2016/05/27
0	ISSUED FOR 60% REVIEW	2016/04/15

Revision / Révision	Description / Description	Date / Date
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PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Project Title / Titre du projet

SINCLAIR CANYON SITE REHABILITATION

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Designed by / Conçue par

RS

Drawn by / Dessiné par

DJ

PWGSC Project Manager / Administrateur de Projets / TPSGC

MOSES YOUNG / TONY TANG

PWGSC, Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PWGSC WESTERN REGION RM

Drawing Title / Titre du dessin

NOTES AND TABLES STRUCTURAL

Project No. / No. du projet

R.067256.802
WESTERN
PROJECT#
R.079636.001

Sheet / Feuille

S100

Revision no. / La Révision no.

6



DRAWING NOTE:
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CANADA**

Project Title/Titre du projet

**SINCLAIR CANYON
SITE REHABILITATION**

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PWGSC Project Manager/Administrateur de Projets TPSGC

MOSES YOUNG/TONY TANG

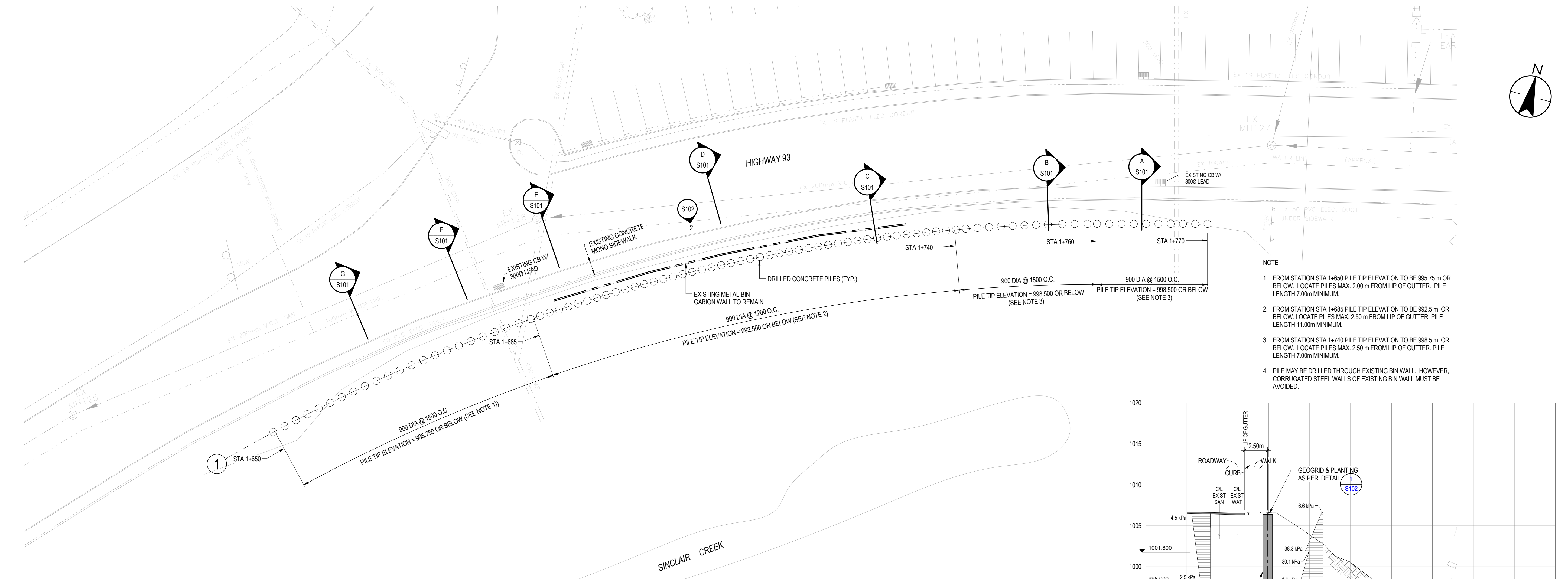
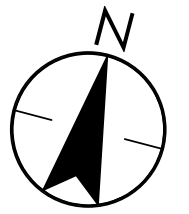
PWGSC, Regional Manager, Architectural and Engineering Services/
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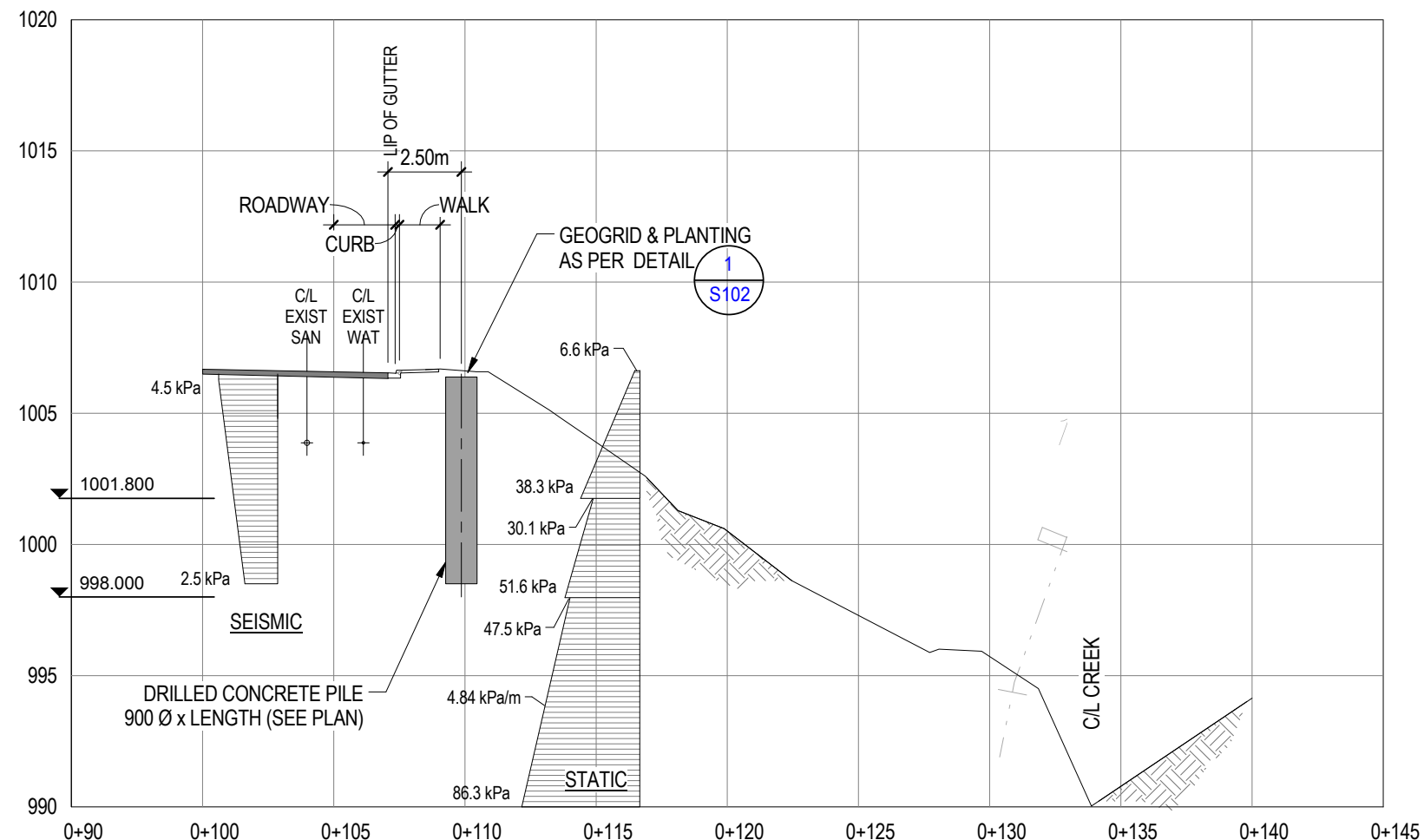
**TANGENT PILE WALL
PLAN & SECTIONS
STRUCTURAL**

Project No./No. du projet	Sheet/Paître	Revision no./ La Révision no.
R.067256.802 WESTERN PROJECT# R.079636.001	S101	6

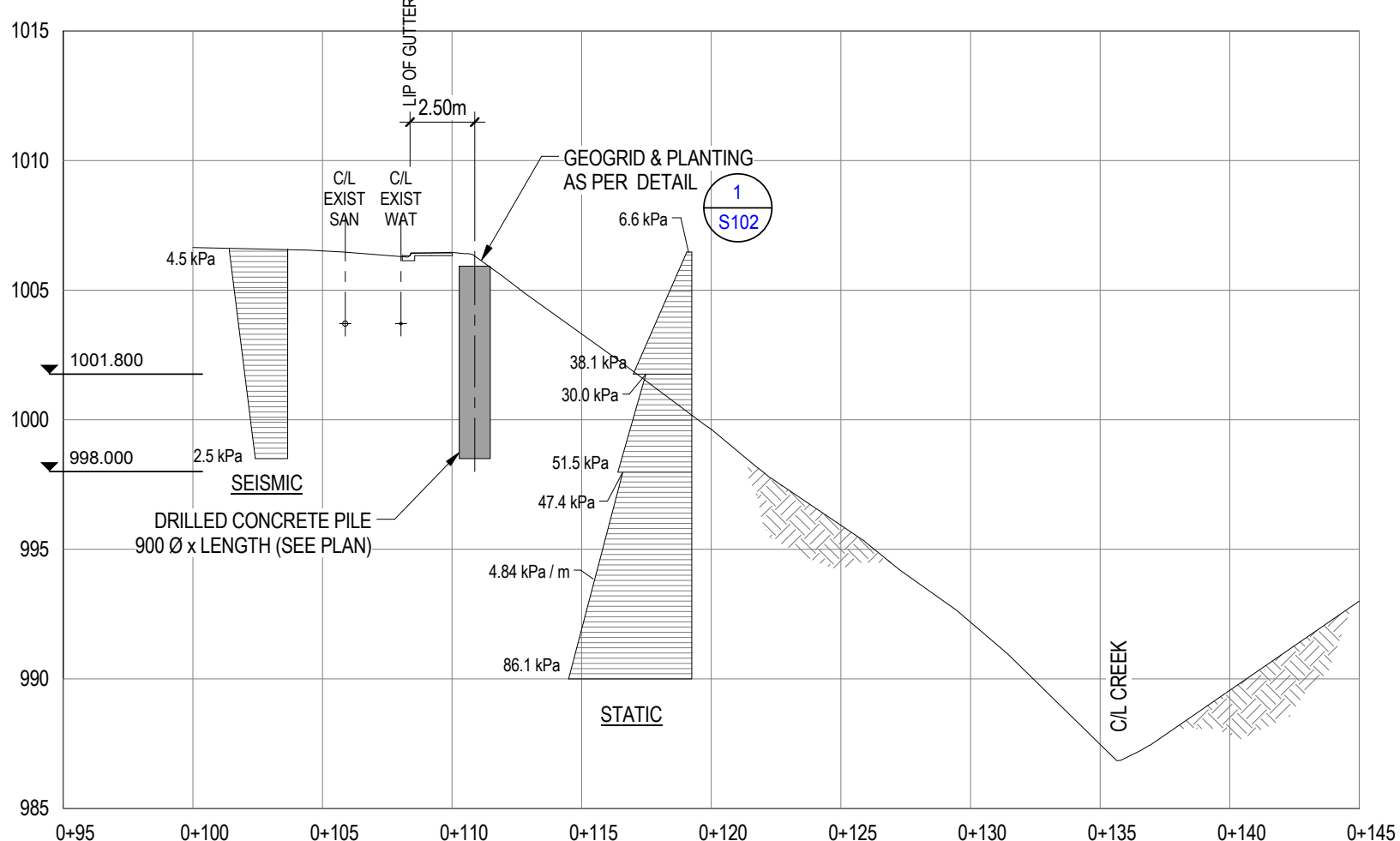
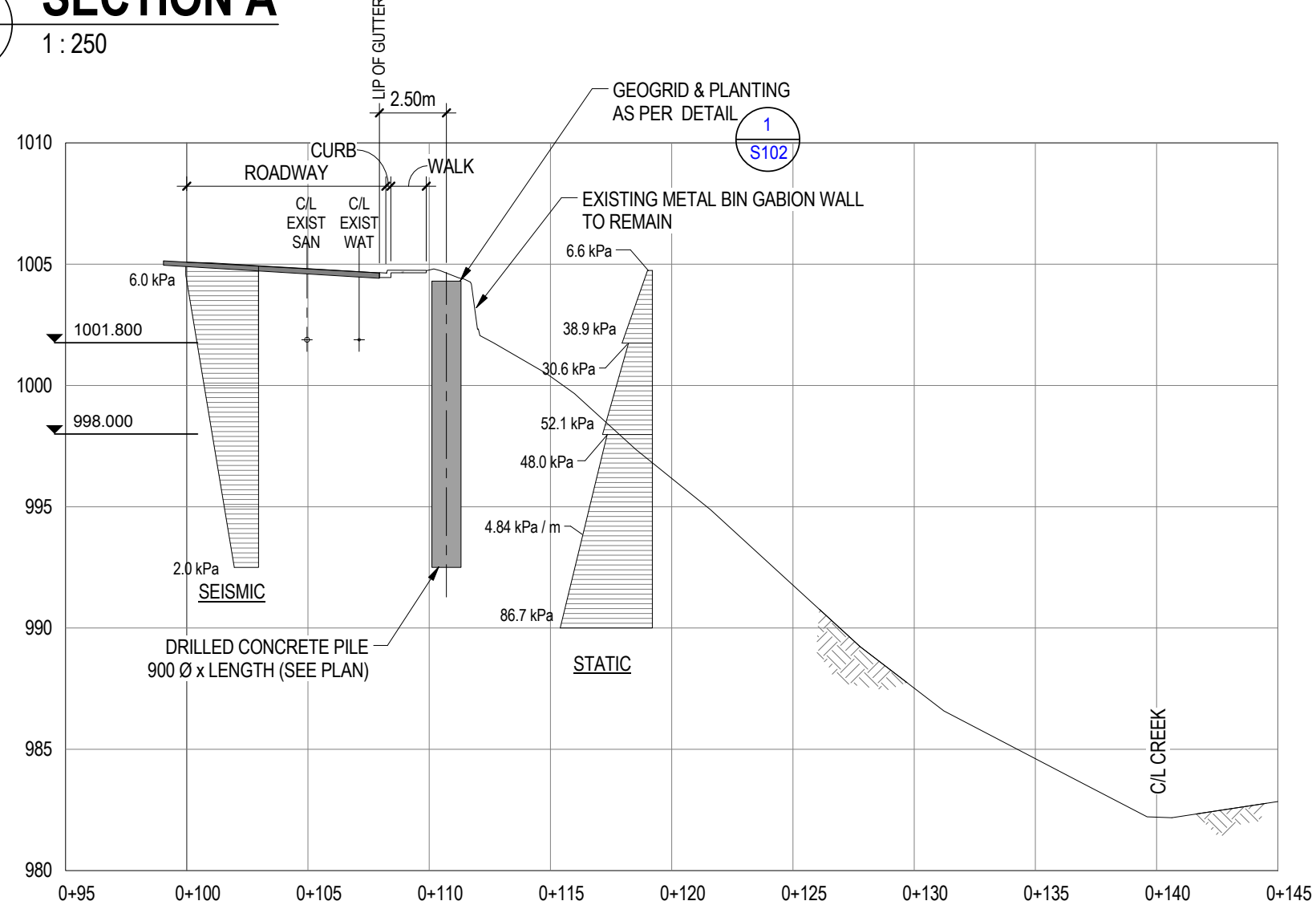


1 PLAN - TANGENT PILE WALL
1 : 250

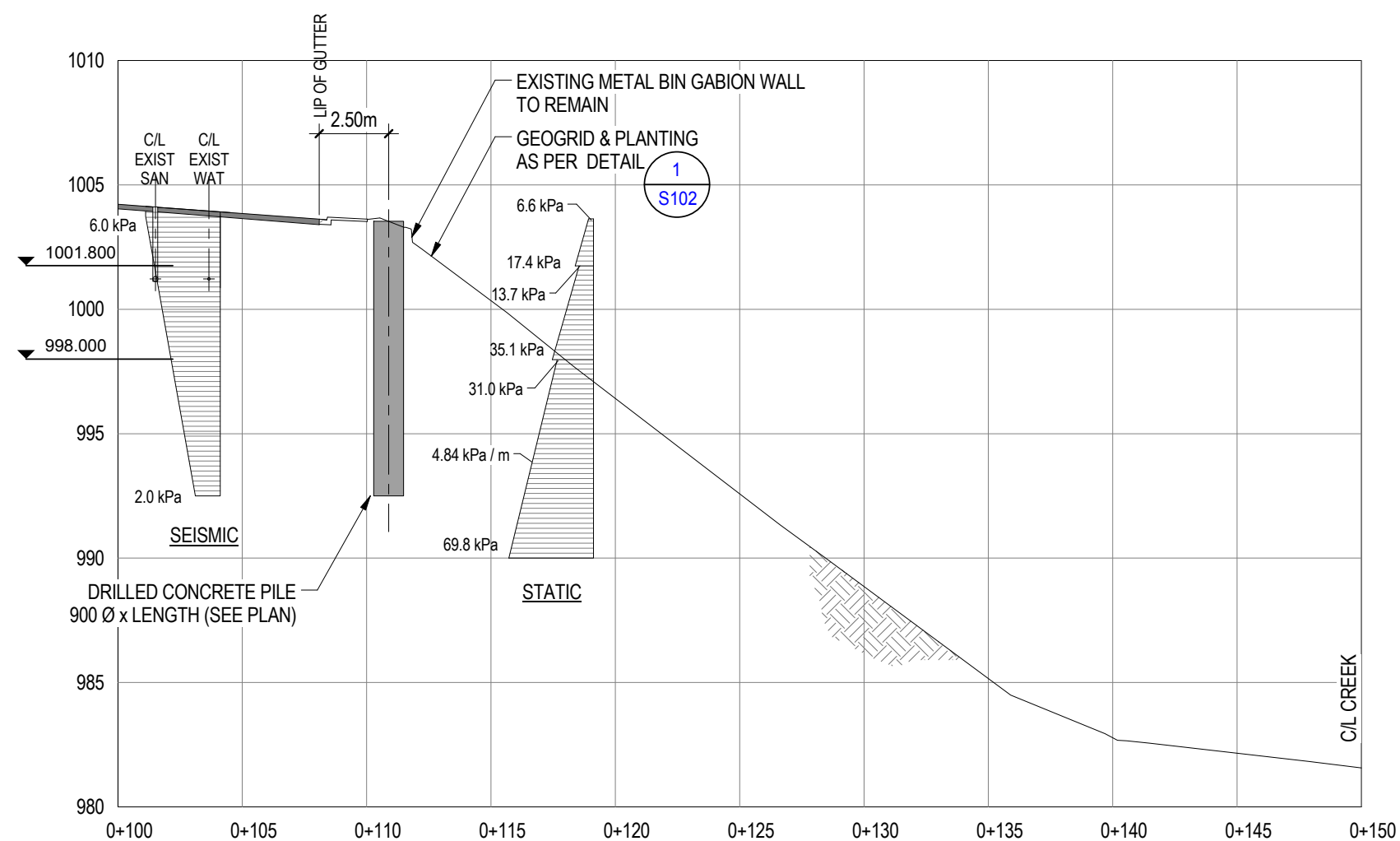
- NOTE
- FROM STATION STA 1+650 PILE TIP ELEVATION TO BE 995.75 m OR BELOW. LOCATE PILES MAX. 2.00 m FROM LIP OF GUTTER. PILE LENGTH 7.00m MINIMUM.
 - FROM STATION STA 1+685 PILE TIP ELEVATION TO BE 992.5 m OR BELOW. LOCATE PILES MAX. 2.50 m FROM LIP OF GUTTER. PILE LENGTH 11.00m MINIMUM.
 - FROM STATION STA 1+740 PILE TIP ELEVATION TO BE 998.5 m OR BELOW. LOCATE PILES MAX. 2.50 m FROM LIP OF GUTTER. PILE LENGTH 7.00m MINIMUM.
 - PILE MAY BE DRILLED THROUGH EXISTING BIN WALL. HOWEVER, CORRUGATED STEEL WALLS OF EXISTING BIN WALL MUST BE AVOIDED.



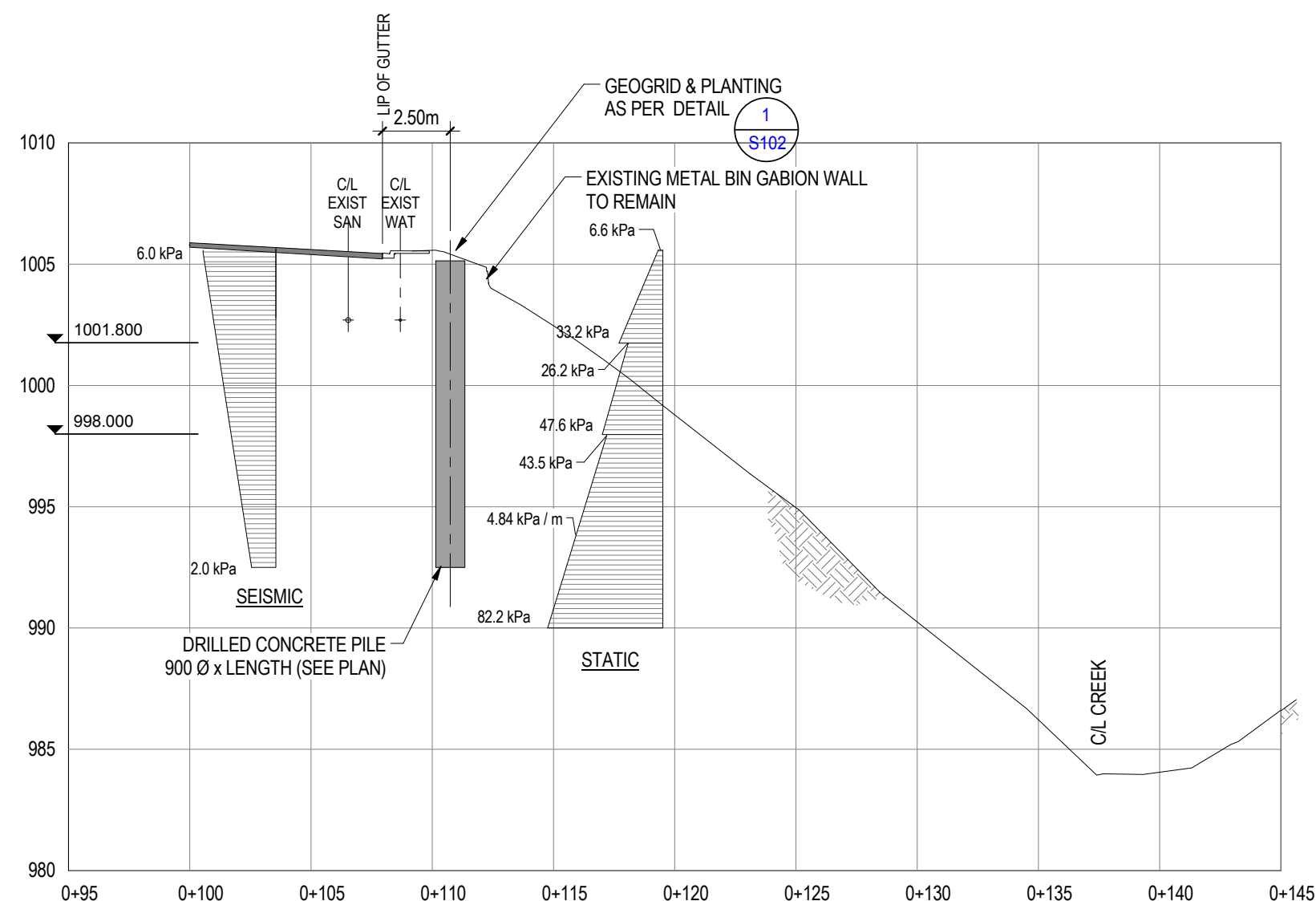
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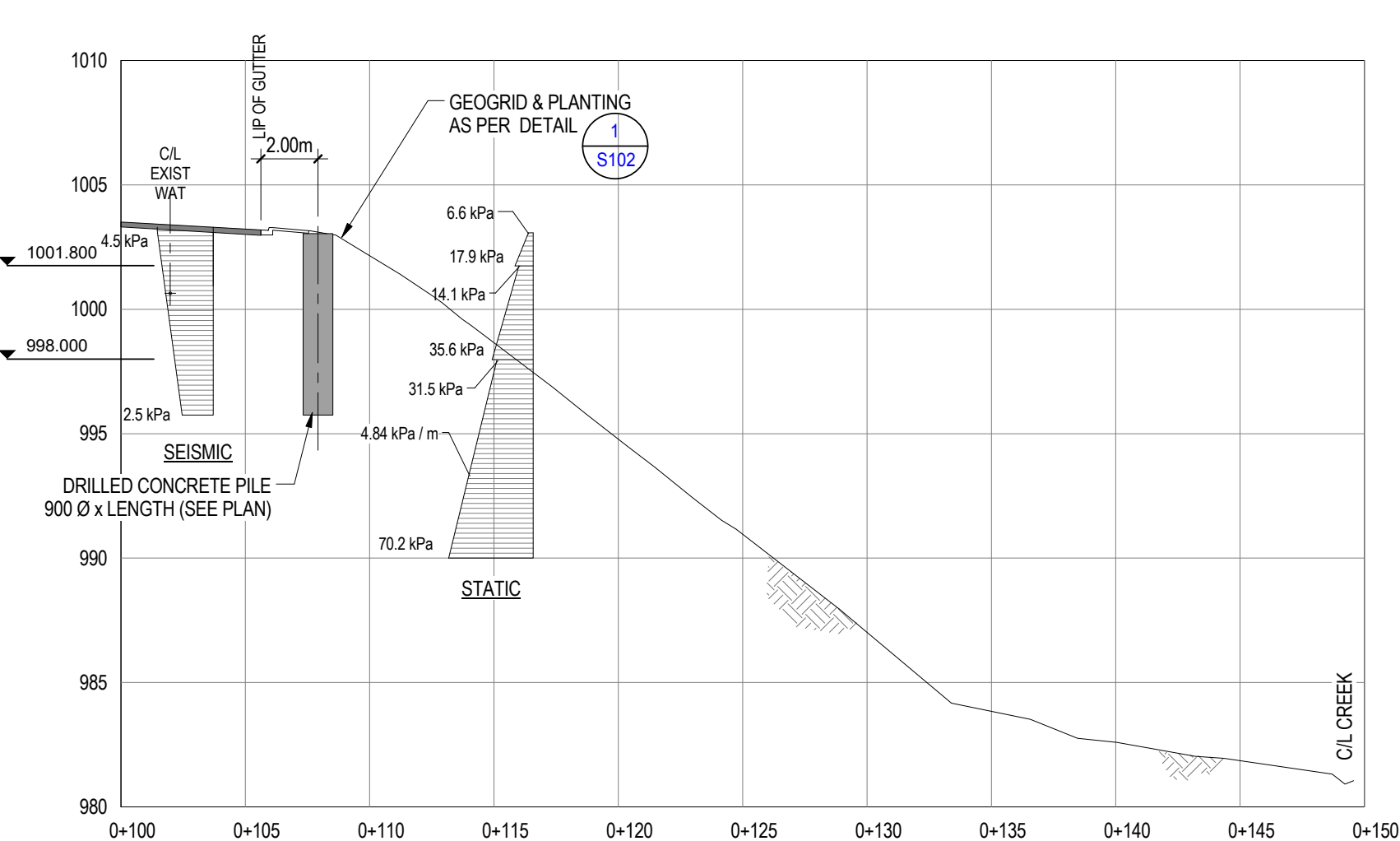
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E SECTION E
1 : 250

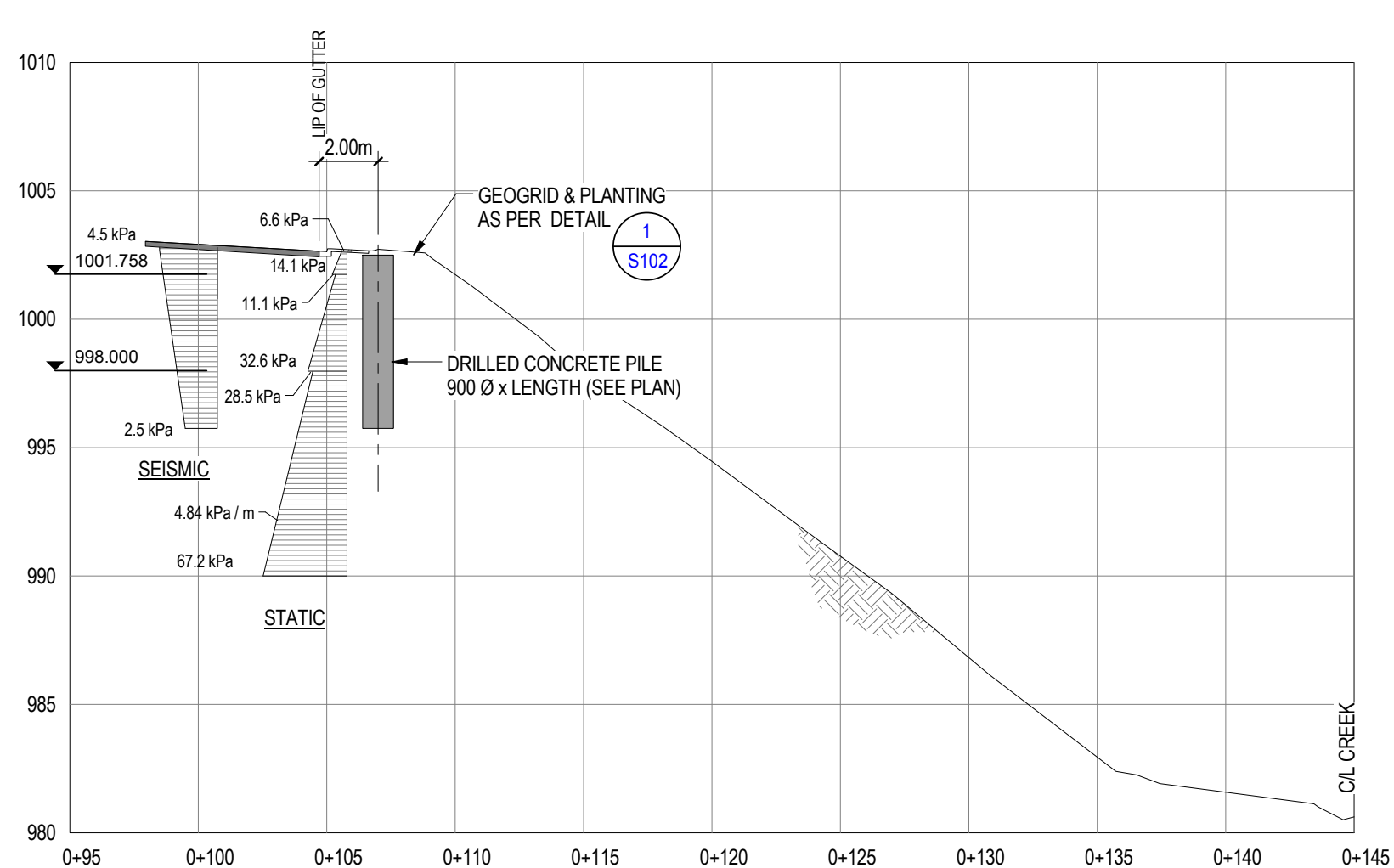


C SECTION C
1 : 250



F SECTION F
1 : 250

D SECTION D
1 : 250

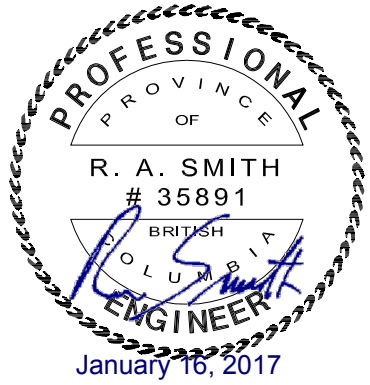


G SECTION G
1 : 250



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GOVERNMENT SERVICES
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SITE REHABILITATION

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RS

Drawn by / Dessiné par

DJ

PWGSC Project Manager / Administrateur de Projets TPSGC

MOSES YOUNG / TONY TANG

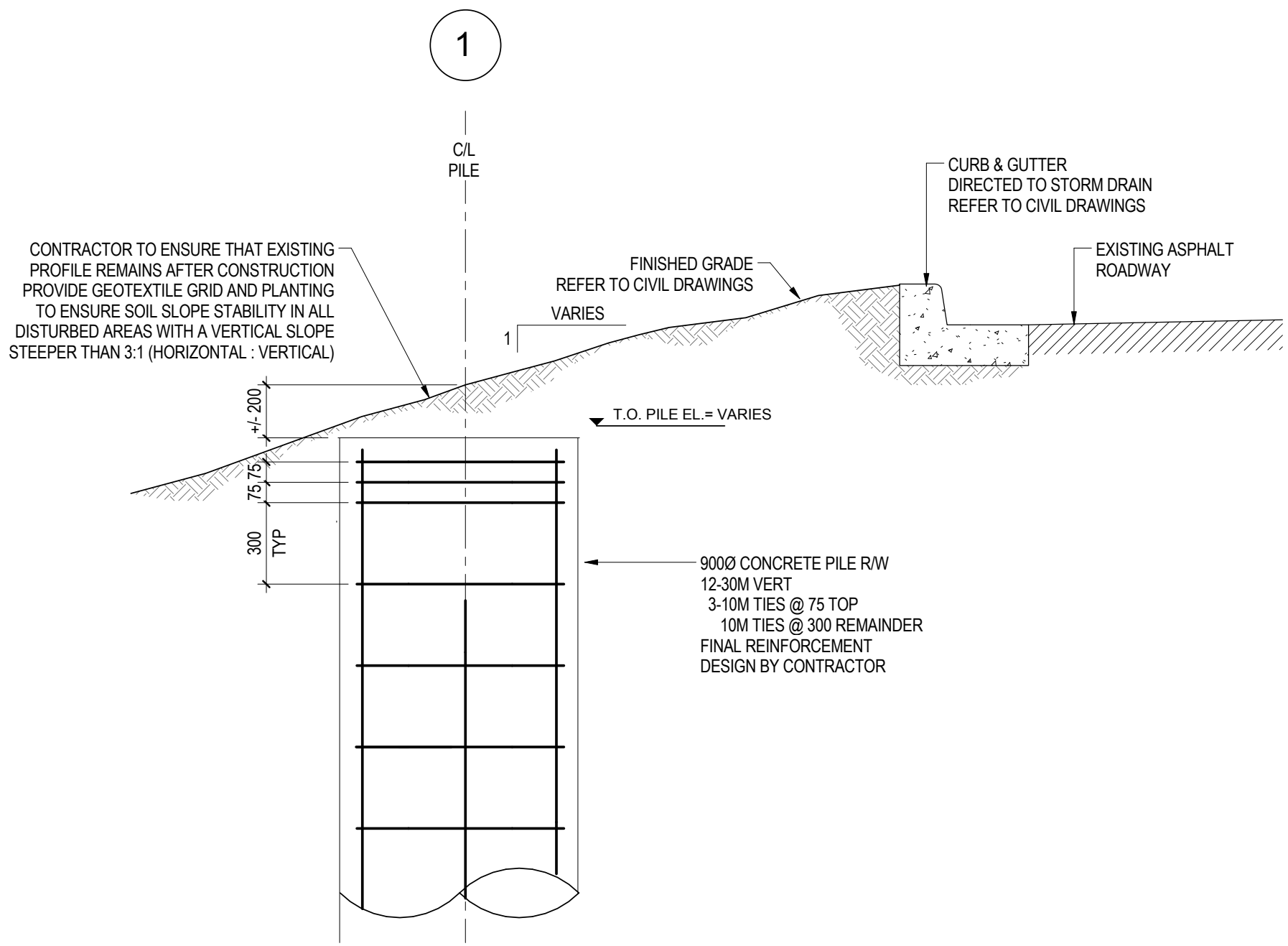
PWGSC, Regional Manager, Architectural and Engineering Services /
Gestionnaire régionale, Services d'architecture et de génie, TPSGC

PWGSC WESTERN REGION RM

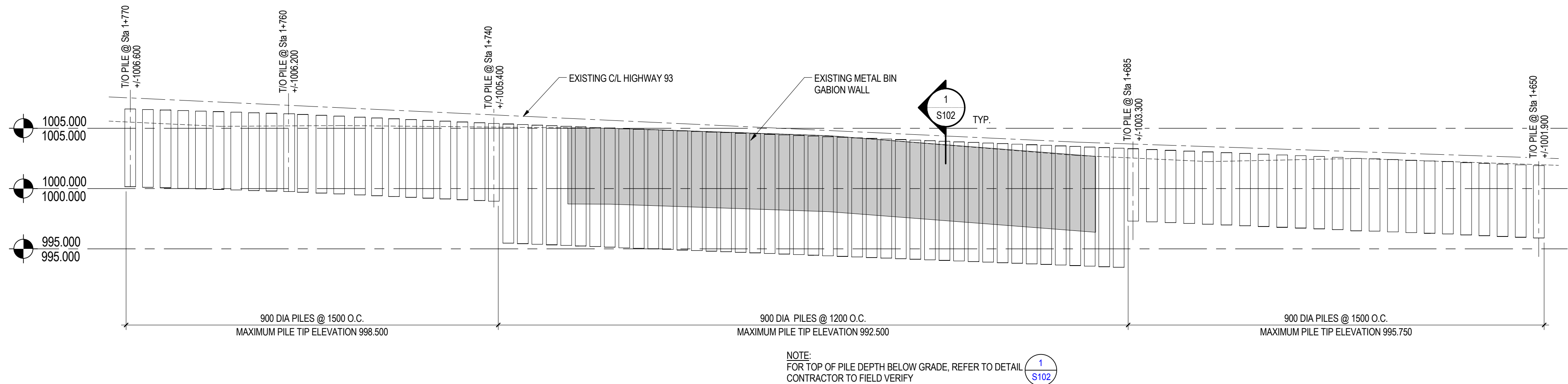
Drawing Title / Titre du dessin

TANGENT PILE WALL &
RETAINING WALL
DETAILS
STRUCTURAL

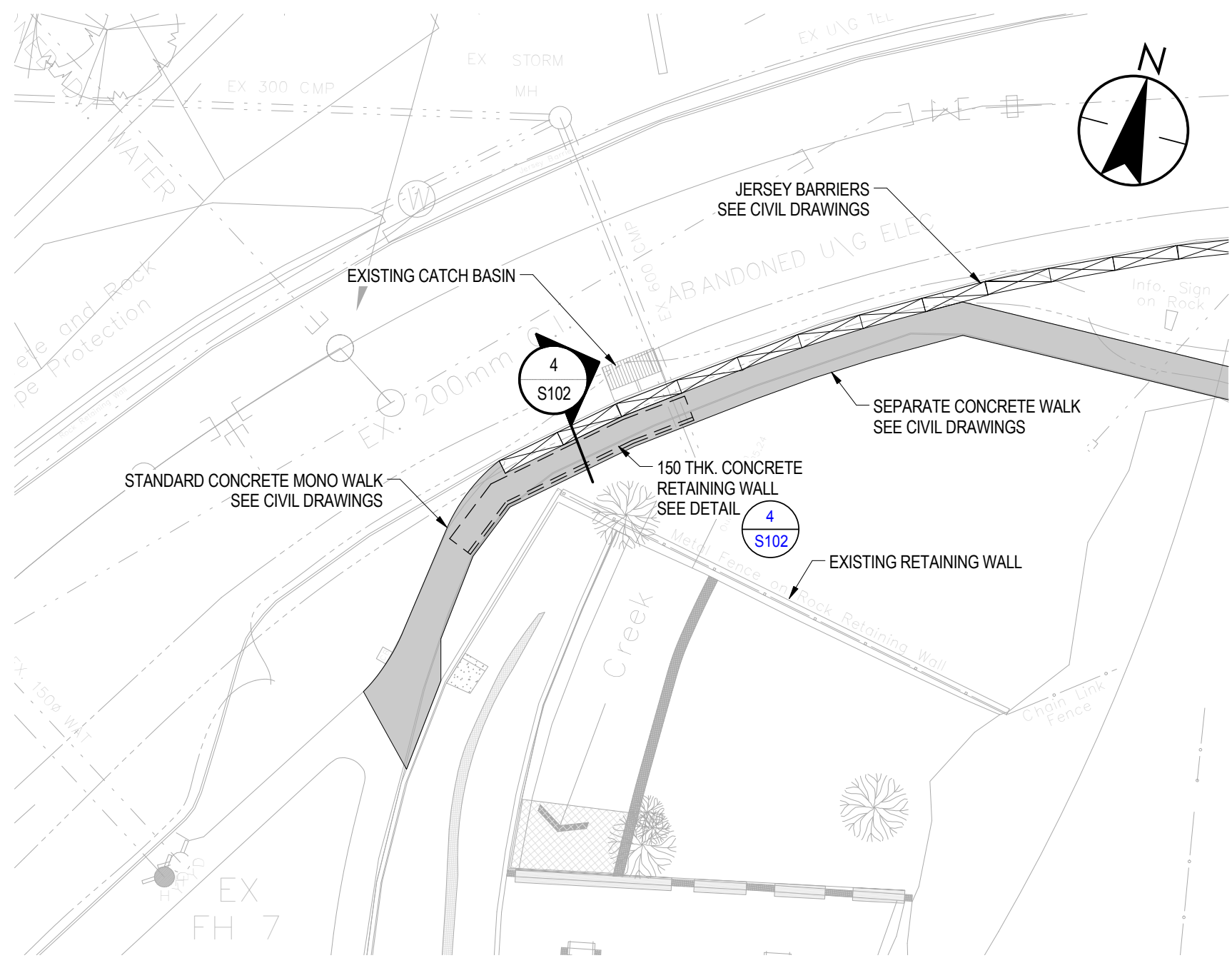
Project No. / No. du projet R.067256.802 WESTERN PROJECT# R.079636.001	Sheet / Feuille S102	Revision no. / La Révision no. 6
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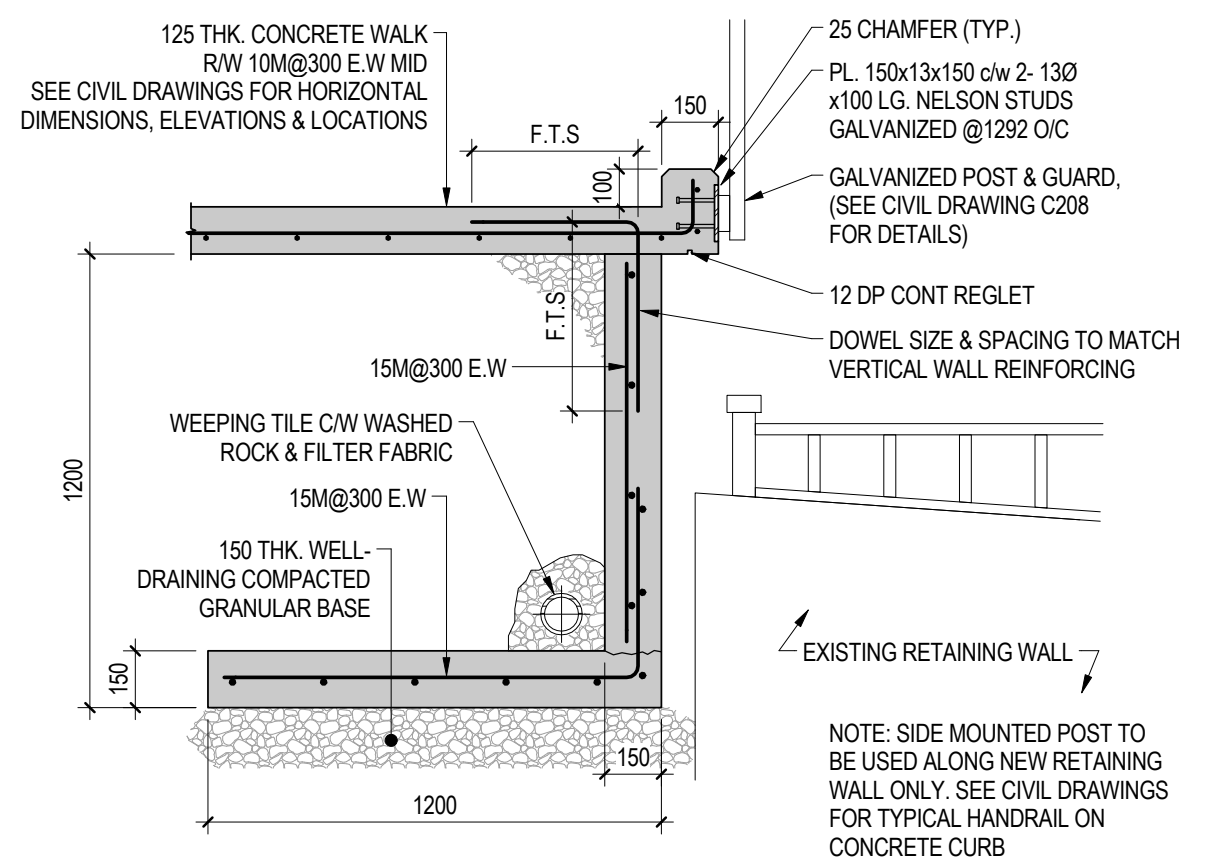
1 SECTION - TANGENT PILE WALL (TYP.)
S102 1:20



2 TANGENT PILE WALL - ELEVATION
S101 | S102 1:250



3 PLAN - RETAINING WALL @ STA 2+050
S102 1:250



4 SECTION - RETAINING WALL @ STA 2+050
SUPPORTING NEW WALK
S102 1:20

REFER TO CIVIL DRAWINGS FOR STATIONING