

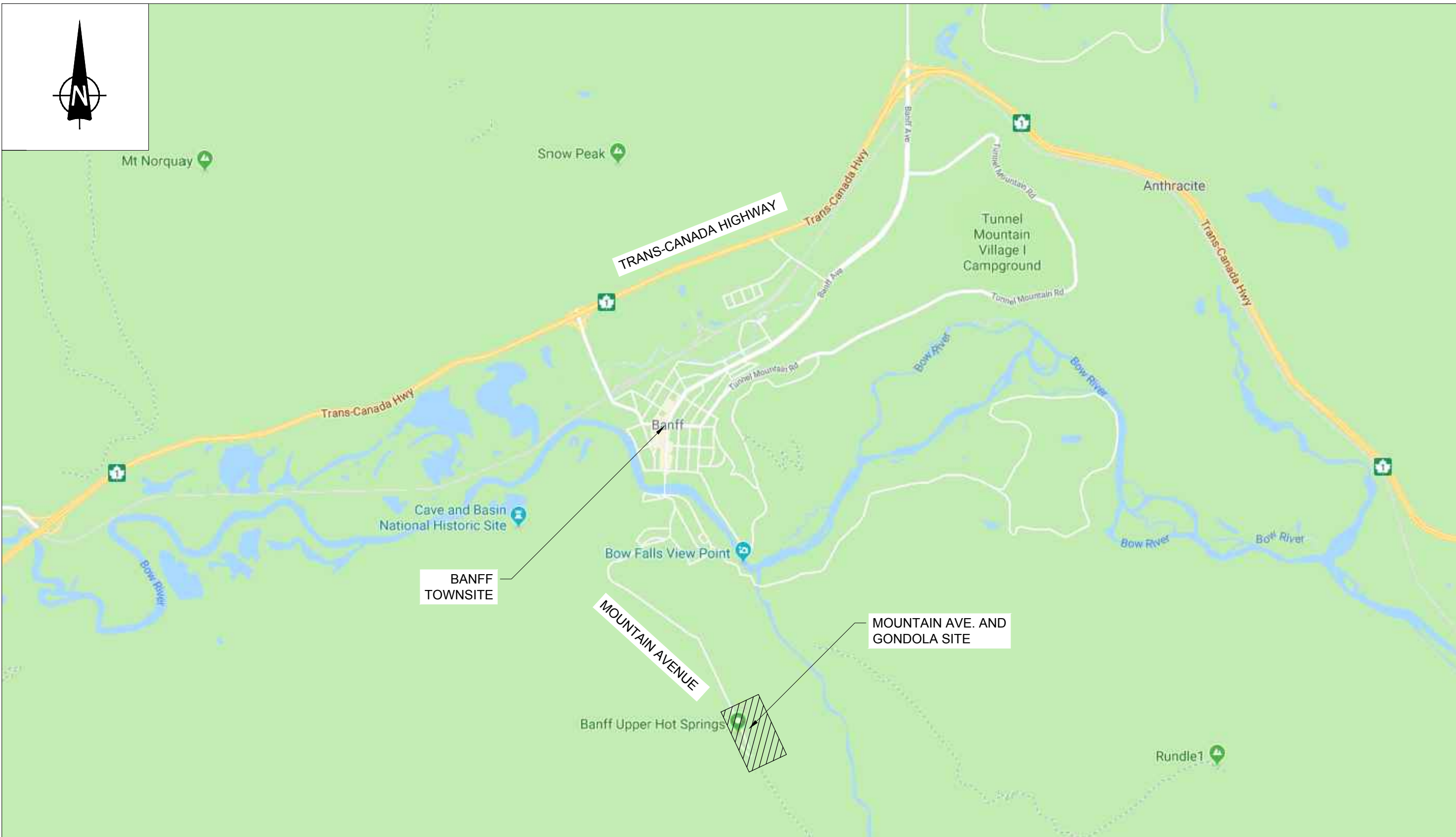
PARKS CANADA AGENCY

MOUNTAIN AVENUE IMPROVEMENTS

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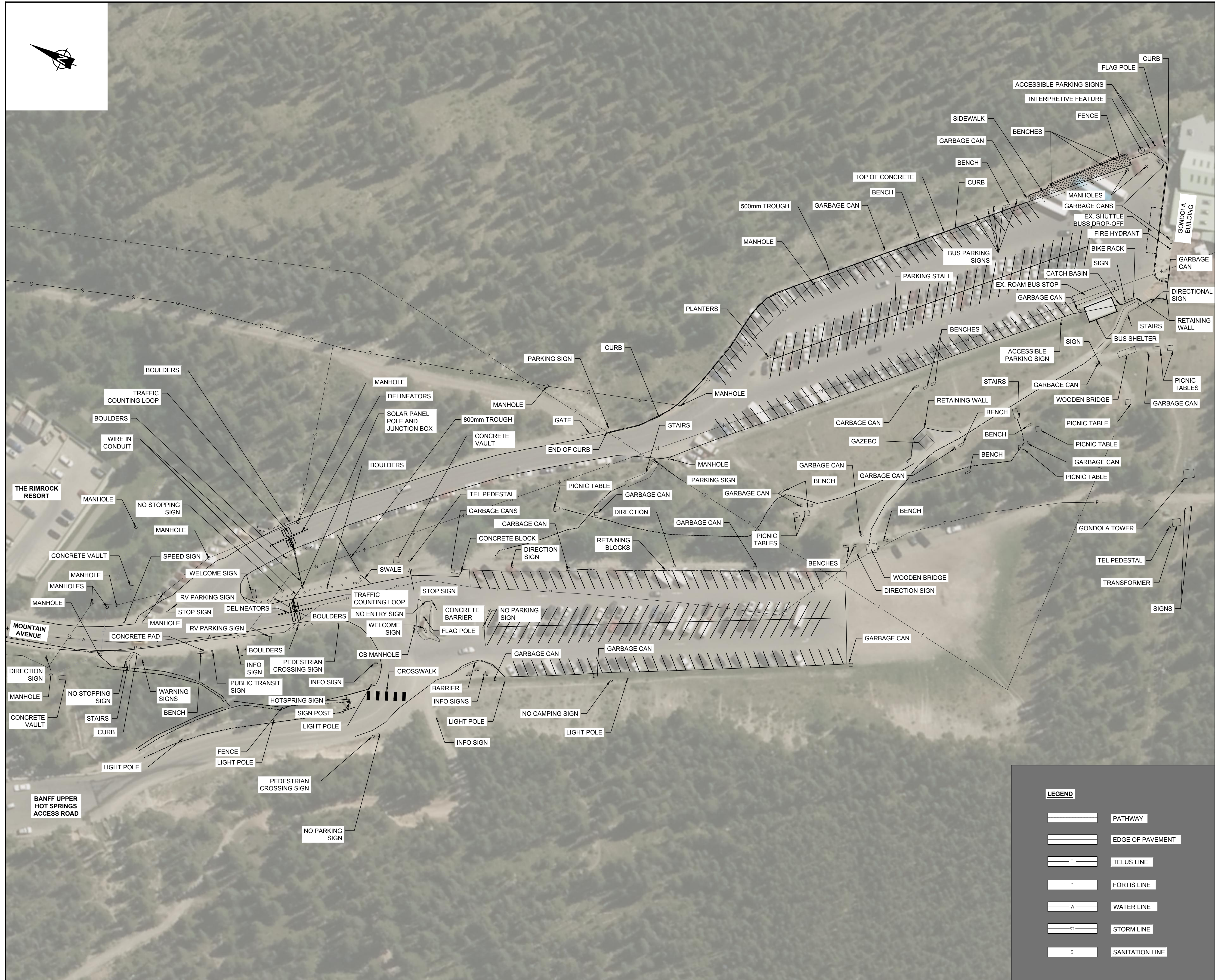
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ISSUE DATE: 2018-08-09



Set No.: _____

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
CT164101	C01	0



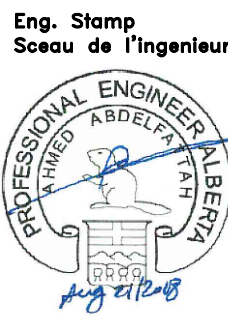
PRELIMINARY NOT FOR CONSTRUCTION

NOTES:

1. CONTRACTOR TO SURVEY EXISTING SEWER AND WATER LINES PRIOR TO CONSTRUCTION.

wood.

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DO NOT SCALE DRAWINGS

0	ISSUED FOR TENDER	18/08/09
revisions	description	date

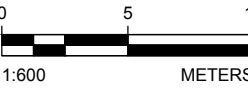
Client
PARKS CANADA AGENCY
BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title
MOUNTAIN AVENUE IMPROVEMENTS

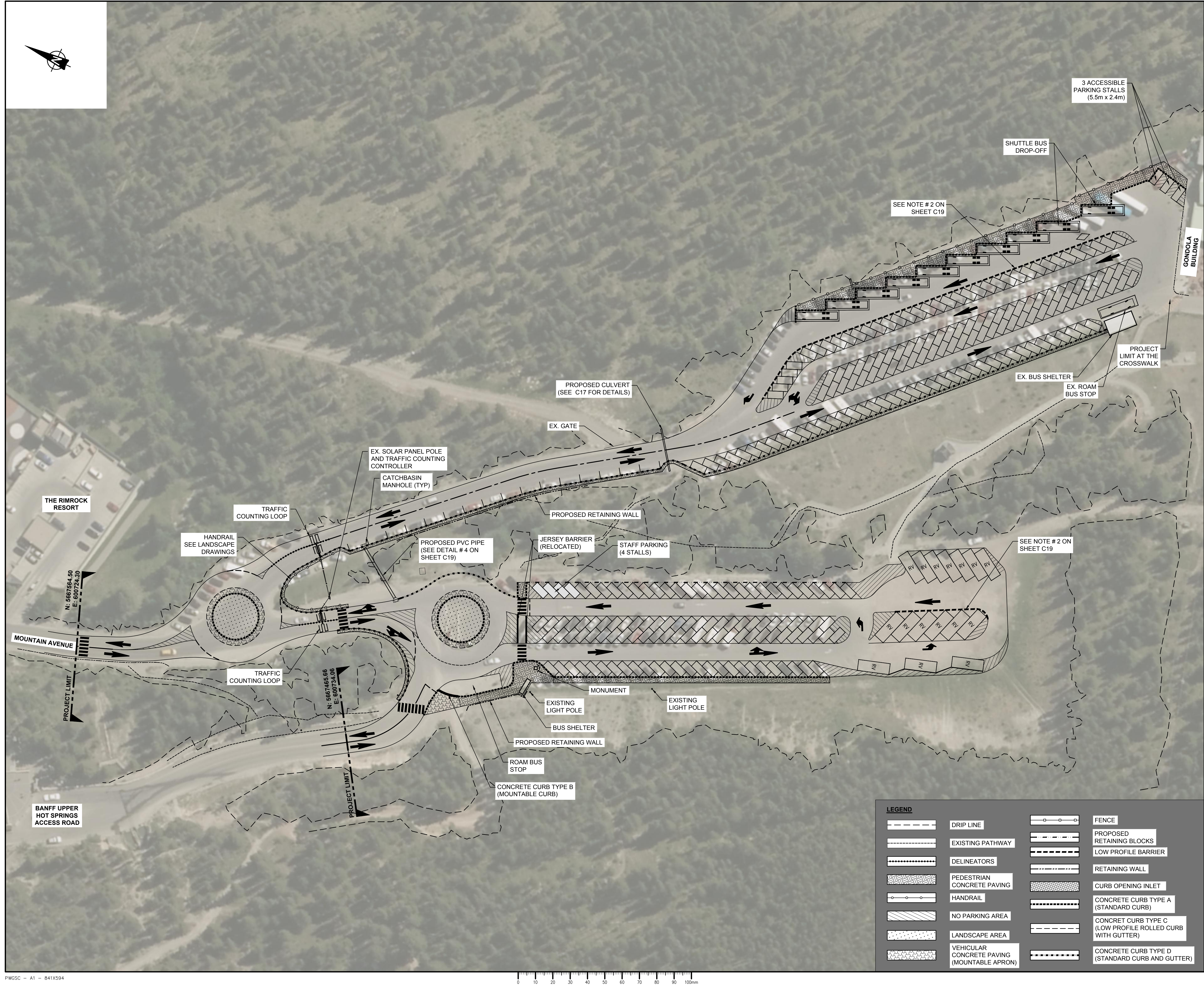
approved by
AA
designed by
MA
drawn by
TW
PWGSC Project Manager
LM
PWGSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

drawing title
EXISTING CONDITIONS LAYOUT



project no.	sheet	revision no.
CT164101	C02	0



PWOSC - A1 - 841X594



LEGEND	
	DRIP LINE
	EXISTING PATHWAY
	DELINEATORS
	PEDESTRIAN CONCRETE PAVING
	HANDRAIL
	NO PARKING AREA
	LANDSCAPE AREA
	VEHICULAR CONCRETE PAVING (MOUNTABLE APRON)
	FENCE
	PROPOSED RETAINING BLOCKS
	LOW PROFILE BARRIER
	RETAINING WALL
	CURB OPENING INLET
	CONCRETE CURB TYPE A (STANDARD CURB)
	CONCRET CURB TYPE C (LOW PROFILE ROLLED CURB WITH GUTTER)
	CONCRETE CURB TYPE D (STANDARD CURB AND GUTTER)

PRELIMINARY

NOT FOR CONSTRUCTION

NOTE:

- FOR PATHWAYS, CONCRETE PAVING, FENCE, HANDRAIL DETAILS AND LANDSCAPE AREAS REFER TO LANDSCAPE DRAWINGS.
- FOR LIGHTING, REFER TO ELECTRICAL DRAWINGS.

Consultant's Name
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Client		

PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE IMPROVEMENTS

approved by
AA

designed by
MA

drawn by
TW

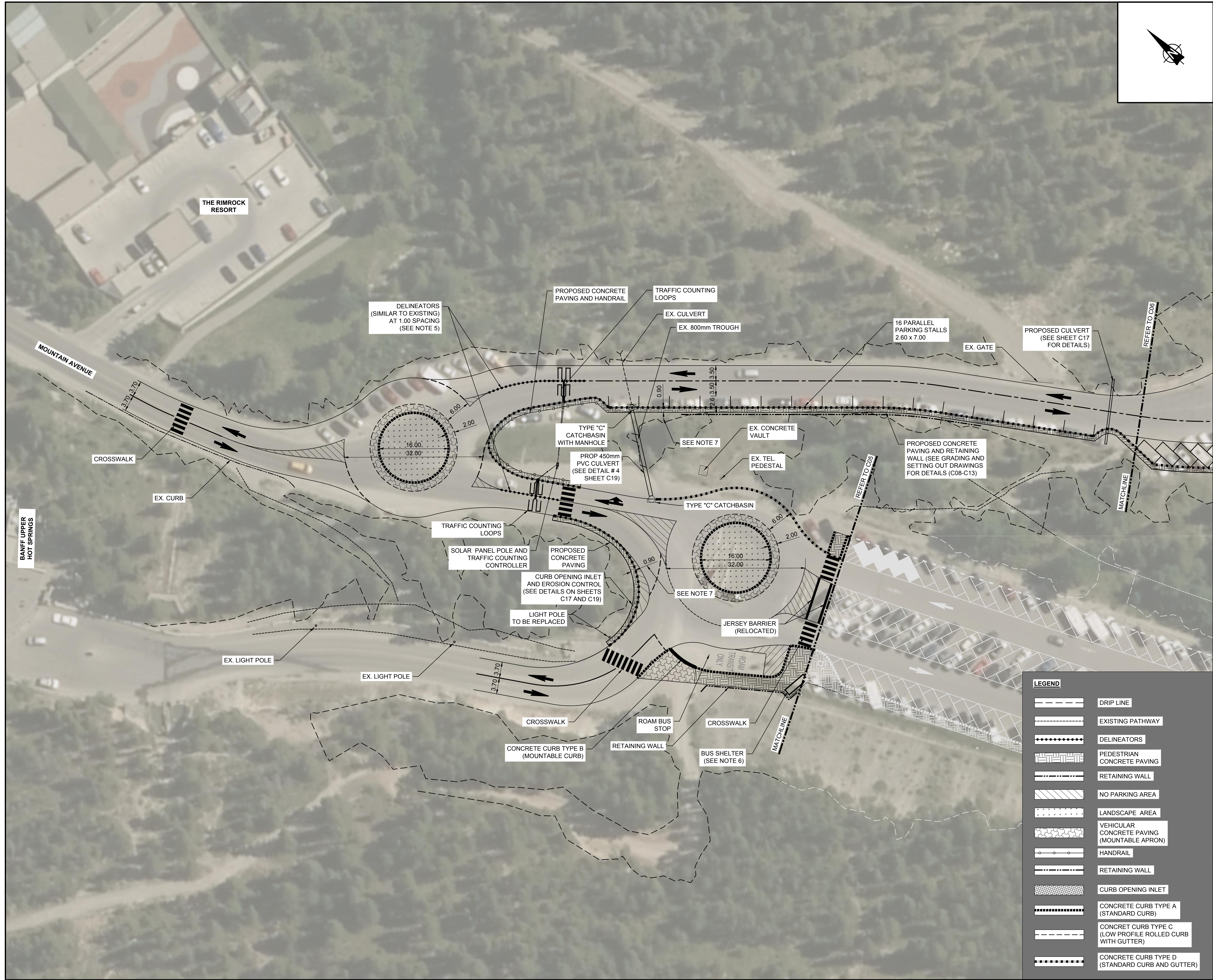
PWOSC Project Manager
LM

PWOSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

drawing title
SITE PLAN

project no.	sheet	revision no.
CT164101	C03	0



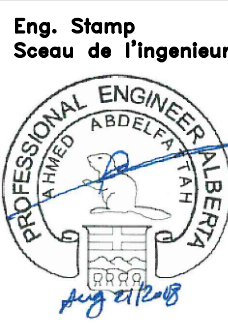
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NOT FOR CONSTRUCTION

- NOTE:
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
 2. FOR PATHWAYS, CONCRETE PAVING DETAILS AND LANDSCAPE AREA, REFER TO LANDSCAPE DRAWINGS.
 3. FOR LIGHTING, REFER TO ELECTRICAL DRAWINGS.
 4. FOR RETAINING WALL DETAILS, REFER TO DETAIL 10 ON SHEET C20.
 5. EXISTING DELINEATOR MOUNTS AND BASES ARE TO BE REMOVED AND RE-INSTALLED/RE-LOCATED IF NOT DAMAGED. DAMAGED DELINEATORS TO BE REMOVED AND DISPOSED.
 6. CONTRACTOR TO ENSURE BUS SHELTER BOUNDARY WILL HAVE SEPARATE SLAB FOR FUTURE INSTALLATION OF SHELTER FOOTING.
 7. 0.90 SIDEWALK WIDTH EXCLUDING CURB WIDTH.

wood.

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BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

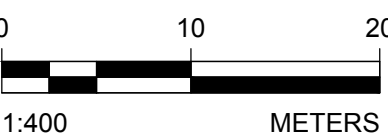
project title

MOUNTAIN AVENUE
IMPROVEMENTS

approved by AA
designed by MA
drawn by TW
PWGSC Project Manager LM
PWGSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

drawing title
ROUNDAABOUTS LAYOUT



project no.	sheet	revision no.
CT164101	C04	0



LEGEND

- DRIP LINE
- EXISTING PATHWAY
- PEDESTRIAN CONCRETE PAVING
- NO PARKING AREA
- LANDSCAPE AREA
- LOW PROFILE BARRIER
- PROPOSED RETAINING BLOCKS
- CONCRETE CURB TYPE A (STANDARD CURB)

PRELIMINARY
NOT FOR CONSTRUCTION

NOTE:

- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
- FOR PATHWAYS, CONCRETE PAVING DETAILS AND LANDSCAPE AREA, REFER TO LANDSCAPE DRAWINGS.
- FOR LIGHTING, REFER TO ELECTRICAL DRAWINGS.
- ALL PARKING STALLS ARE ANGLED TO 45° DEGREES EXCEPT THESE STALLS.

wood.

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PROFESSIONAL ENGINEER
ALBERTA
1980
J. B. B. B.

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revisions	description	date

PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

MOUNTAIN AVENUE
IMPROVEMENTS

approved by

AA

designed by

MA

drawn by

TW

PWOSC Project Manager

LM

PWOSC, Architectural and Engineering Resources Manager

Client

PARKS CANADA AGENCY

drawing title

UPPER PARKING LAYOUT

0 5 10
1:300 METERS

project no.

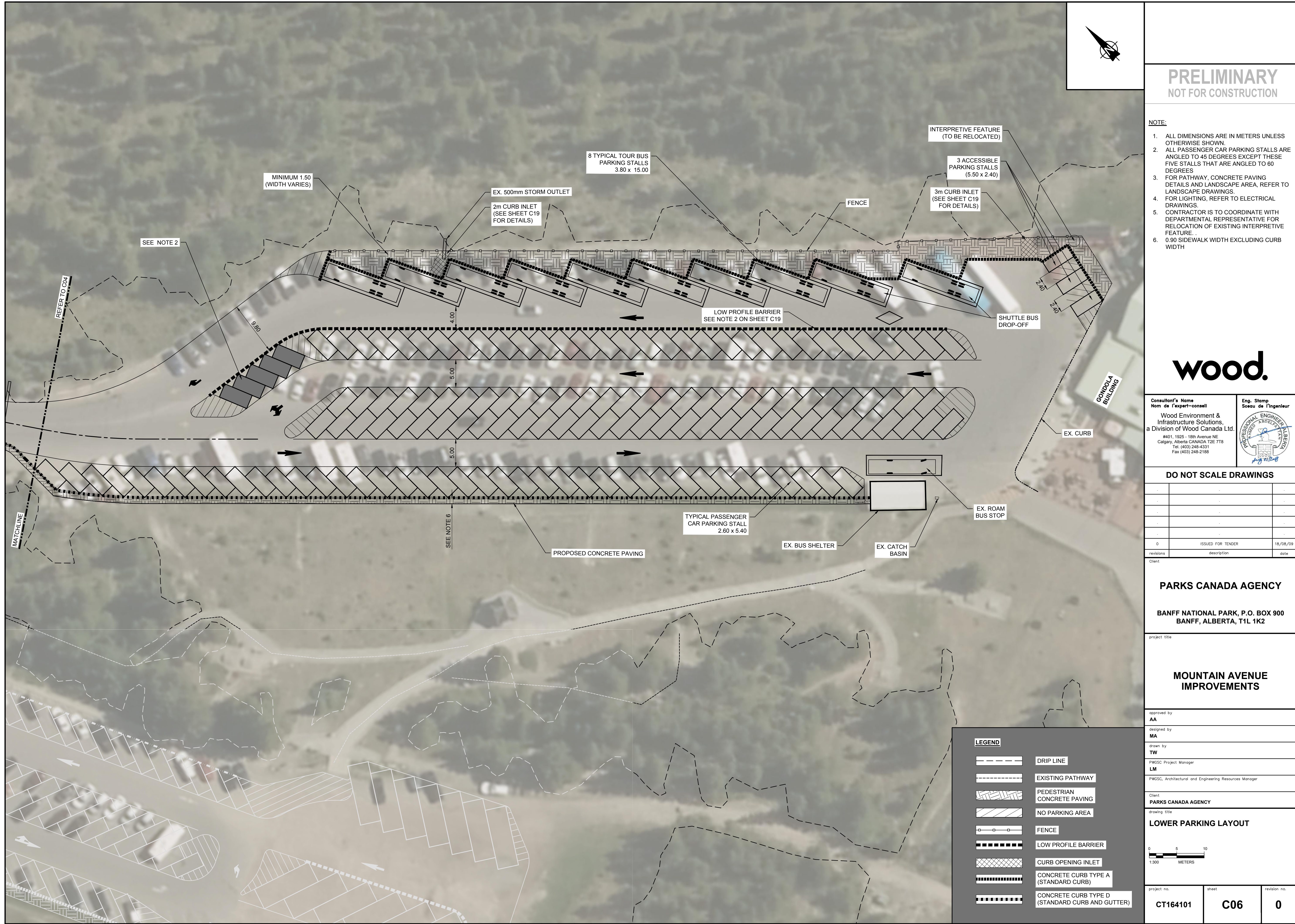
CT164101

sheet

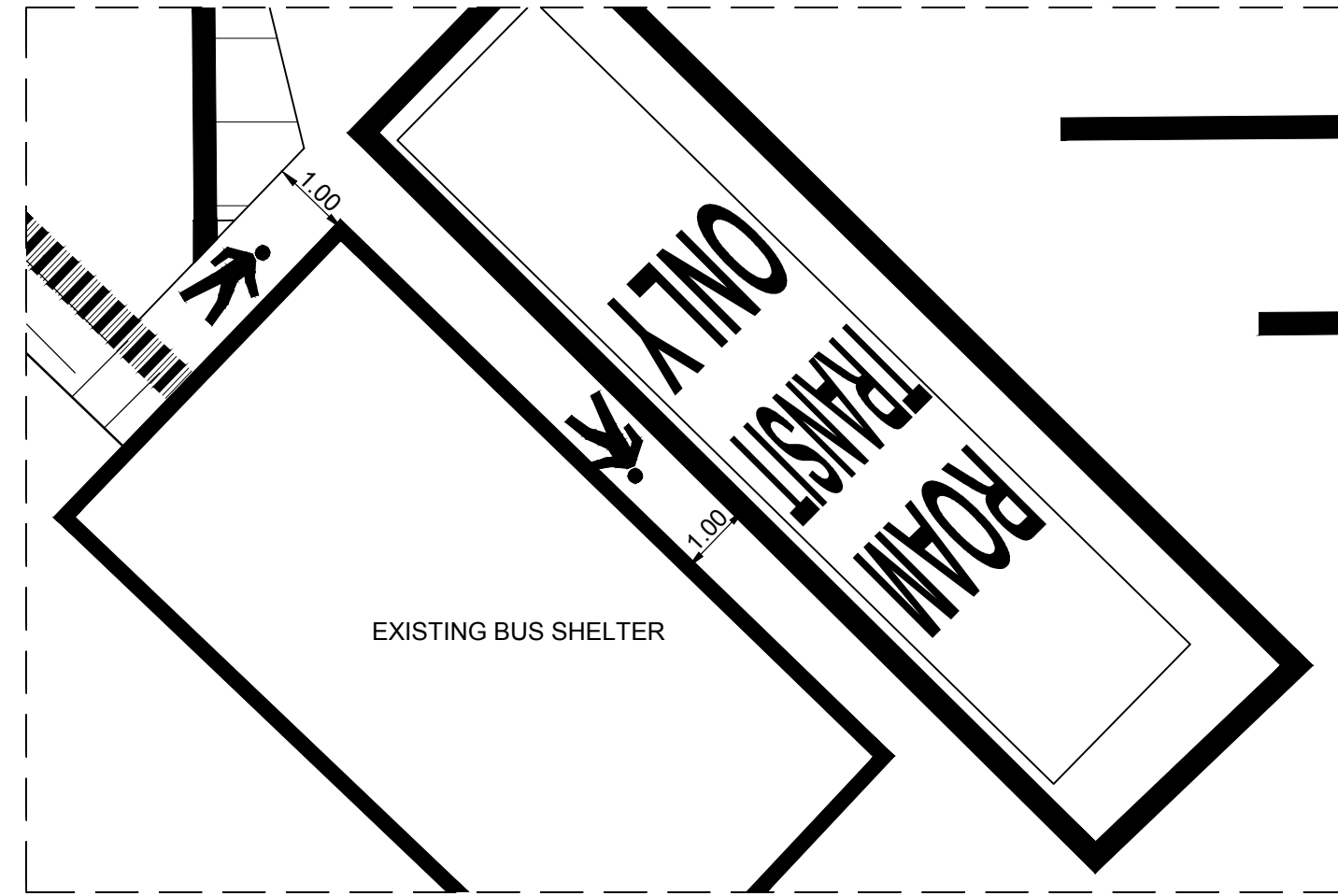
C05

revision no.

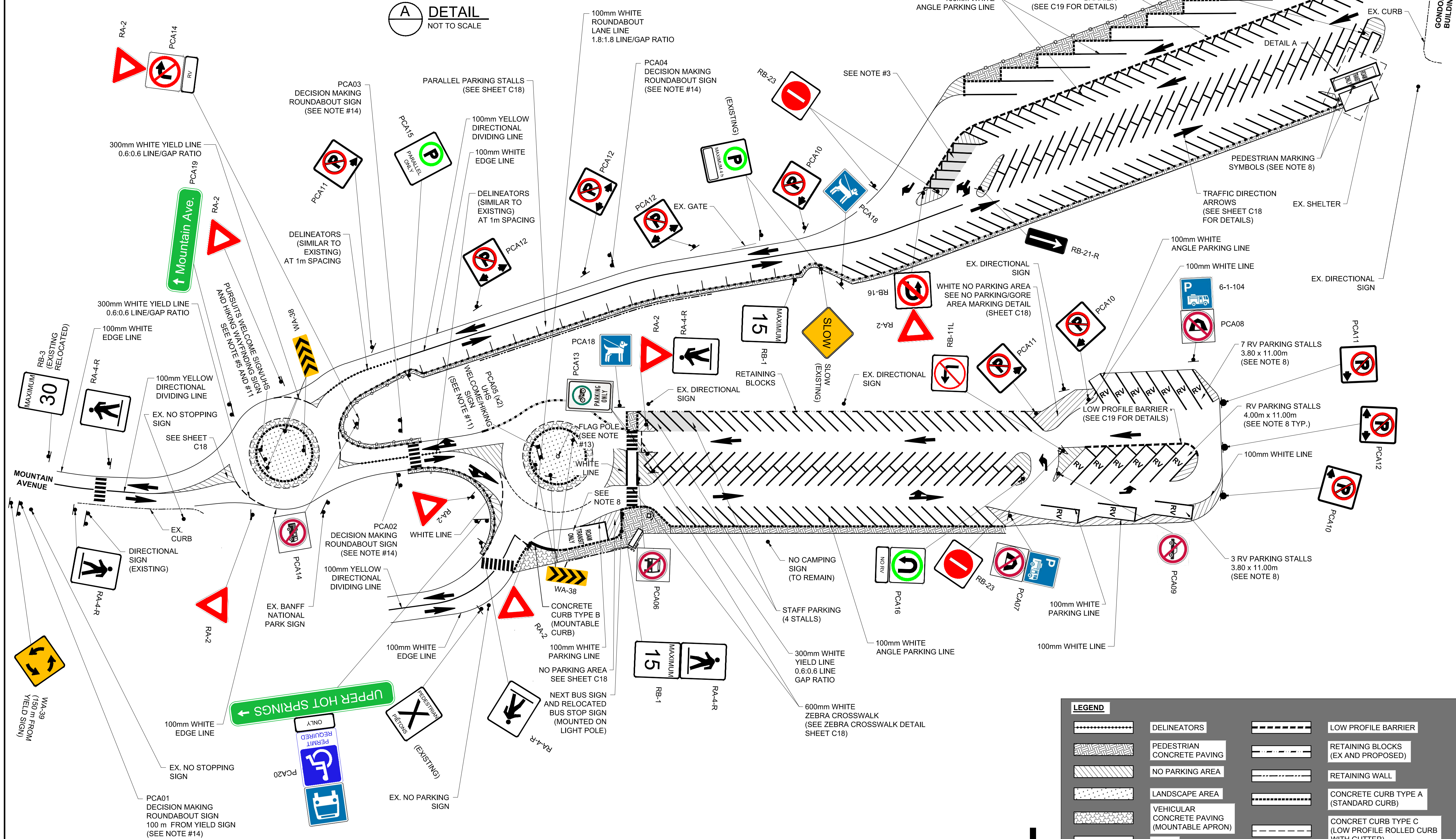
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12. ALL PCA SIGNS, SUPPLIED BY OTHERS, INSTALLED BY CONTRACTOR (PICK UP AT BANFF OPERATIONS COMPOUND).
13. THE CONTRACTOR SHOULD DESIGN THE FLAG POLE BASE AND SUBMIT THE SHOP DRAWINGS TO THE DEPARTMENTAL REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
14. THE CONTRACTOR SHOULD DESIGN THE POSTS AND BASES FOR THE DECISION MAKING SIGNS AND SUBMIT THE SHOP DRAWINGS TO THE DEPARTMENTAL REPRESENTATIVE FOR APPROVAL. THE CONTRACTOR SHOULD REFER TO PARKS CANADA GUIDELINES FOR THE POST INSTALLATION.



A **DETAIL**
NOT TO SCALE



PRELIMINARY
NOT FOR CONSTRUCTION

1. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING C18.
2. ALL SIGNING AND MARKING DETAILS SHALL FOLLOW M.U.T.C.D.C. AND PARKS CANADA GUIDELINES.
3. ALL PASSENGER CAR PARKING STALLS SHALL BE ANGLED BY 45 DEGREES EXCEPT THOSE STALLS TO BE 90 DEGREES.
4. ALL SIGNS WITHIN PAVED AREAS TO BE INSTALLED ON CONCRETE BASES (MOVABLE FOR FLOWING).
5. WELCOME/WAYFINDING SIGN TO BE SUPPLIED AND INSTALLED BY OTHERS. CONTRACTOR SHOULD INSTALL LANDSCAPING IN THE LOWER ROUNDABOUT AFTER INSTALLATION OF THE WELCOME SIGN. SEE LANDSCAPE DRAWINGS.
6. THIS DRAWING SHOWS ONLY SIGNING TO BE PERMANENT UPON PROJECT COMPLETION. FOR EXISTING SIGN REMOVALS SEE SHEET C14.
7. ALL SIGNS ARE TO BE BILINGUAL.
8. THE SHOWN TEXT/SYMBOLS SHALL BE PAINTED ON THE FINISHED GRADE SURFACE.
9. ALL NO PARKING AREA MARKING LINES ARE WHITE.
10. ALL GORE AREA MARKING LINES APPROACHING ROUNDABOUTS ARE YELLOW EXCEPT OTHERWISE NOTED.
11. THE CONTRACTOR SHOULD COORDINATE WITH THE DEPARTMENTAL REPRESENTATIVE ON THE FINAL LOCATION OF THE WELCOME SIGN PRIOR TO INSTALLATION IN BOTH ROUNDABOUTS BASED ON THE FINAL SIGN SIZE. THE CONTRACTOR SHOULD REFER TO PARKS CANADA GUIDELINES FOR THE POST INSTALLATION.

Consultant's Name
Norm de l'expert-consult

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revisions	description	date

PARKS CANADA AGENCY

**BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2**

project title

MOUNTAIN AVENUE IMPROVEMENTS

approved by	
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designed by

drawn by

PWGSC Project Manager

PWGSC, Architectural and Engineering Resources Manager

Client

drawing title

SIGNING AND PAVEMENT MARKING LAYOUT



project no.	sheet	revision no.
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CT164101	C07	0
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CHARGE:	907	6
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ACCESS ROAD POINTS				ROUNDAABOUT POINTS				ROUNDAABOUT POINTS				ROUNDAABOUT POINTS				UPPER ROUNDAABOUT BOTTOM OF CURB			
POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)
AR1	5667515.49	600777.49	1561.084	R1	5667455.69	600782.83	1565.778	R21	5667510.54	600762.16	1561.875	R39	5667494.42	600766.04	1563.153	P1	5667455.41	600754.75	1566.777
AR2	5667513.20	600781.93	1560.957	R2	5667457.79	600786.73	1565.771	R22	5667509.11	600756.84	1562.234	R40	5667498.80	600763.36	1562.744	P2	5667455.12	600756.72	1566.570
AR3	5667510.31	600786.00	1560.836	R3	5667458.00	600791.12	1565.772	R23	5667510.61	600751.75	1562.179	R41	5667506.02	600762.18	1562.221	P3	5667455.04	600758.72	1566.445
AR4	5667506.88	600789.63	1560.732	R4	5667456.13	600795.42	1565.946	R24	5667514.45	600748.16	1561.965	R42	5667512.68	600764.69	1561.578	P4	5667455.22	600760.71	1566.266
AR5	5667503.24	600793.07	1560.646	R5	5667451.93	600798.65	1566.220	R25	5667518.87	600747.01	1561.781	R43	5667515.50	600769.06	1561.274	P6	5667456.37	600764.53	1565.996
AR6	5667495.98	600799.94	1560.370	R6	5667447.55	600799.38	1566.464	R26	5667522.76	600747.70	1561.606	R44	5667516.05	600775.39	1561.098	P6	5667455.67	600762.66	1565.937
AR7	5667488.71	600806.81	1559.984	R7	5667443.29	600798.13	1566.693	R27	5667519.11	600757.01	0.000					P7	5667457.31	600766.29	1565.877
AR8	5667481.44	600813.68	1559.609	R8	5667439.99	600795.17	1566.821	R27	5667495.43	600767.59	1563.116					P8	5667458.48	600767.91	1565.708
AR9	5667474.18	600820.54	1559.210	R9	5667438.31	600791.16	1566.848	R28	5667448.15	600789.39	0.000					P10	5667459.86	600769.36	1565.563
AR10	5667466.91	600827.41	1558.892	R10	5667438.79	600785.88	1566.789	R28	5667499.29	600766.05	1562.662					P11	5667461.41	600770.62	1565.387
AR11	5667459.64	600834.28	1558.609	R11	5667441.90	600781.59	1566.663	R29	5667504.53	600766.46	1562.085					P12	5667463.12	600771.65	1565.238
AR12	5667456.01	600837.72	1558.487	R12	5667446.86	600779.48	1566.386	R30	5667508.45	600768.92	1561.578					P13	5667464.95	600772.45	1565.089
AR13	5667452.37	600841.15	1558.376	R13	5667452.51	600780.41	1566.008	R31	5667510.39	600771.62	1561.216					P14	5667466.87	600773.00	1564.935
AR14	5667448.63	600844.47	1558.249	R14	5667526.12	600749.87	1561.498	R32	5667511.46	600775.65	1561.006					P15	5667468.85	600773.29	1564.724
AR15	5667444.74	600847.60	1558.145	R15	5667528.50	600753.56	1561.517	R33	5667497.10	600770.12	1563.055					P16	5667470.85	600773.32	1564.537
AR16	5667440.70	600850.56	1558.045	R16	5667528.96	600758.75	1561.446	R34	5667499.84	600769.13	-0.150					P17	5667472.84	600773.10	1564.355
AR17	5667436.59	600853.40	1557.968	R17	5667526.62	600763.61	1561.446	R35	5667503.68	600768.91	1562.033					P18	5667475.77	600772.46	1564.165
AR18	5667428.37	600859.09	1557.810	R18	5667523.11	600766.17	1561.439	R36	5667506.77	600770.60	1561.531					P19	5667478.60	600771.48	1563.945
AR20	5667420.14	600864.78	1557.619	R19	5667518.71	600767.00	1561.421	R37	5667507.51	600773.05	1561.152					P20	5667481.29	600770.16	1563.753
AR21	5667411.92	600870.46	1557.363	R20	5667514.38	600765.82	1561.431	R38	5667507.41	600775.89	1560.925					P21	5667483.83	600768.57	1563.565
																P22	5667485.18	600767.68	1563.473



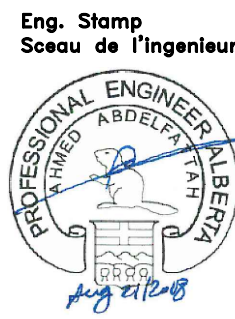
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NOTE:

- ROADSIDE SAFETY TO BE ASSESSED ON SITE IN COORDINATION WITH THE DEPARTMENTAL REPRESENTATIVE.

wood.

Consultant's Name
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0	ISSUED FOR TENDER	18/06/09
revisions	description	date

Client

PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE
IMPROVEMENTS

approved by

AA

designed by

MA

drawn by

TW

PWOSC Project Manager

LM

PWOSC, Architectural and Engineering Resources Manager

Client

PARKS CANADA AGENCY

drawing title

GRADING ROUNDAABOUTS LAYOUT



project no.	sheet	revision no.
CT164101	C08	0

BUS AREA POINTS			
POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)
BS1	5667445.47	600753.95	1567.328
BS2	5667443.51	600755.49	1567.276
BS3	5667440.36	600757.97	1567.264
BS4	5667437.22	600760.44	1567.324
BS5	5667433.11	600763.68	1567.403
BS6	5667429.37	600766.63	1567.474
BS7	5667424.65	600770.34	1567.565
BS8	5667419.20	600774.63	1567.670
BS9	5667417.26	600774.43	1567.710
BS10	5667416.68	600779.84	1567.638
BS11	5667413.16	600781.49	1567.765
BS12	5667409.27	600783.32	1568.097
BS13	5667410.06	600785.00	1568.079
BS14	5667414.34	600786.35	1567.784
BS15	5667419.81	600786.82	1567.622
BS16	5667417.61	600787.26	1567.694
BS17	5667423.31	600784.79	1567.642
BS18	5667425.22	600783.39	1567.564
BS20	5667422.64	600777.49	1567.611
BS21	5667423.39	600775.21	1567.595
BS22	5667426.51	600772.70	1567.535
BS23	5667431.22	600768.98	1567.444
BS24	5667435.01	600766.10	1567.372
BS25	5667440.09	600764.08	1567.277
BS26	5667444.78	600763.90	1567.190
BS27	5667445.60	600758.14	1567.242

LIP OF GUTTER POINTS			
POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)
LOG1	5667445.17	600805.10	1566.508
LOG2	5667447.62	600805.39	1566.404
LOG3	5667454.28	600804.18	1566.160
LOG4	5667460.94	600799.02	1565.796
LOG5	5667465.70	600791.92	1565.385

BUS AREA AND BOTTOM OF CURB POINTS				RV PARKING AREA AND SIDEWALK BOTTOM			
POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)
BS10	5667416.68	600779.84	1567.788	RV5	5667283.74	600883.45	1571.187
BS11	5667413.16	600781.49	1567.915	RV6	5667276.84	600870.07	1571.884
BS12	5667409.27	600783.32	1568.097	RV7	5667275.15	600866.78	1572.069
BS13	5667410.06	600785.00	1568.079	RV8	5667273.04	600855.03	1572.465
BS14	5667414.34	600786.35	1567.784	RV9	5667290.06	600887.33	1570.894
BS15	5667419.81	600788.82	1567.622	RV11	5667278.09	600848.48	1572.265
BS16	5667417.61	600787.26	1567.694	RV12	5667285.75	600844.53	1571.834
FOC1	5667323.97	600825.60	1570.085	RV13	5667298.41	600838.00	1571.122
FOC2	5667334.82	600820.50	1569.883	RV14	5667306.45	600833.86	1570.670
FOC3	5667343.88	600816.25	1569.641	RV15	5667311.25	600832.83	1570.352
FOC4	5667352.93	600812.00	1569.426	RV16	5667312.01	600832.24	1570.254
FOC5	5667361.98	600807.75	1569.220	SW1	5667406.38	600784.68	1568.184
FOC6	5667371.03	600803.49	1569.054	SW2	5667397.33	600788.93	1568.427
FOC7	5667380.08	600799.24	1568.820	SW3	5667388.28	600793.18	1568.659
FOC8	5667389.13	600794.99	1568.641	SW4	5667379.23	600797.43	1568.838
FOC9	5667398.18	600790.74	1568.409	SW5	5667370.18	600801.68	1569.072
FOC10	5667407.23	600786.49	1568.165	SW6	5667361.13	600805.94	1569.239
RV1	5667325.69	600860.82	1569.510	SW7	5667352.08	600810.19	1569.444
RV2	5667318.15	600878.52	1569.803	SW8	5667343.03	600814.44	1569.659
RV3	5667302.61	600884.66	1570.466	SW9	5667333.97	600818.69	1569.902
RV4	5667294.67	600888.83	1570.699	SW10	5667323.11	600823.79	1570.104



PRELIMINARY
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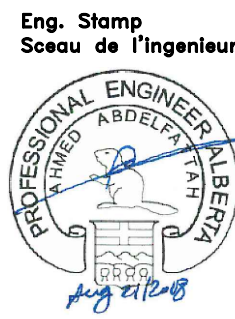
NOTE:

- ROADSIDE SAFETY TO BE ASSESSED ON SITE IN COORDINATION WITH THE DEPARTMENTAL REPRESENTATIVE.

wood.

Consultant's Name
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revisions	description	date

Client
PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

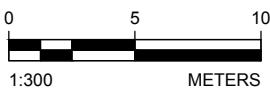
project title

MOUNTAIN AVENUE IMPROVEMENTS

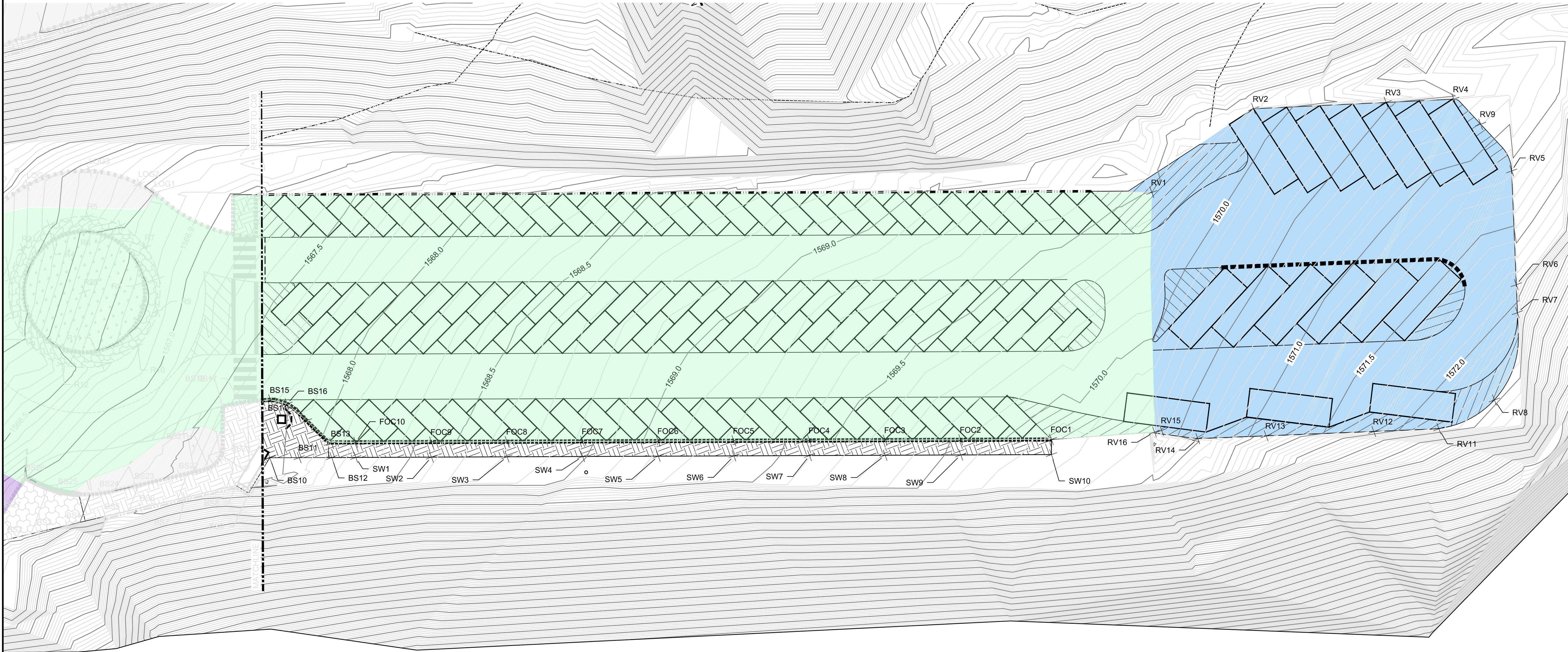
approved by
AA
designed by
MA
drawn by
TW
PWGSC Project Manager
LM
PWGSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

drawing title
GRADING UPPER PARKING LAYOUT

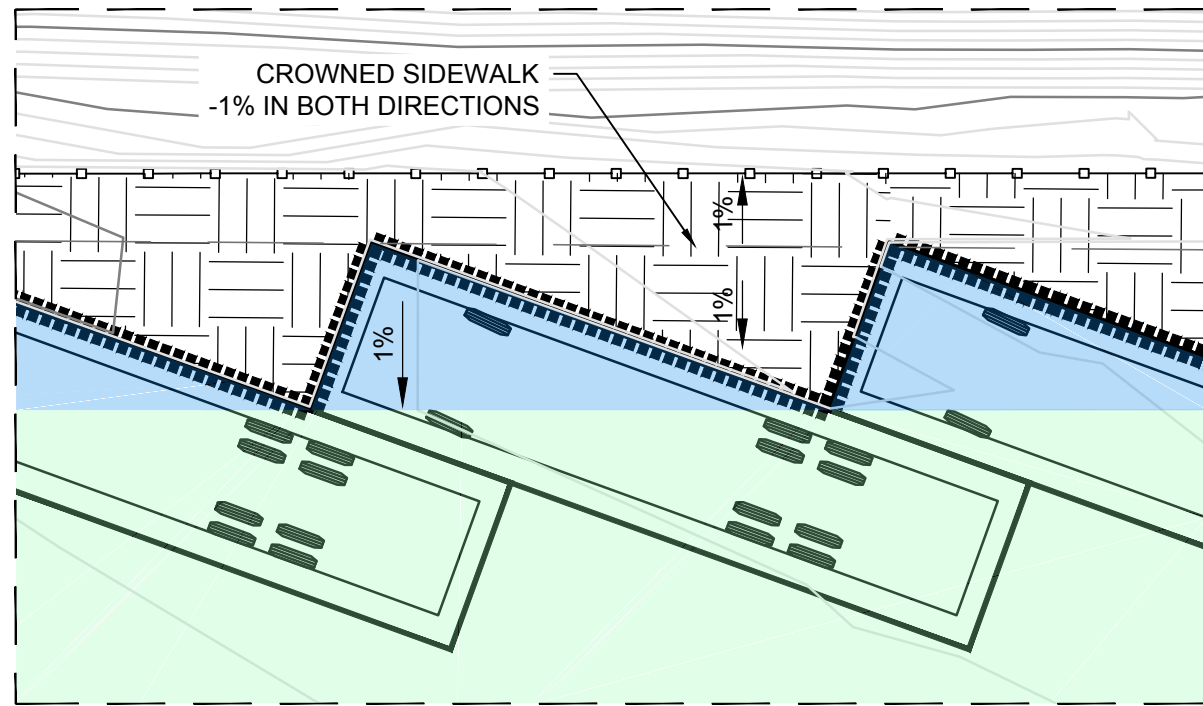
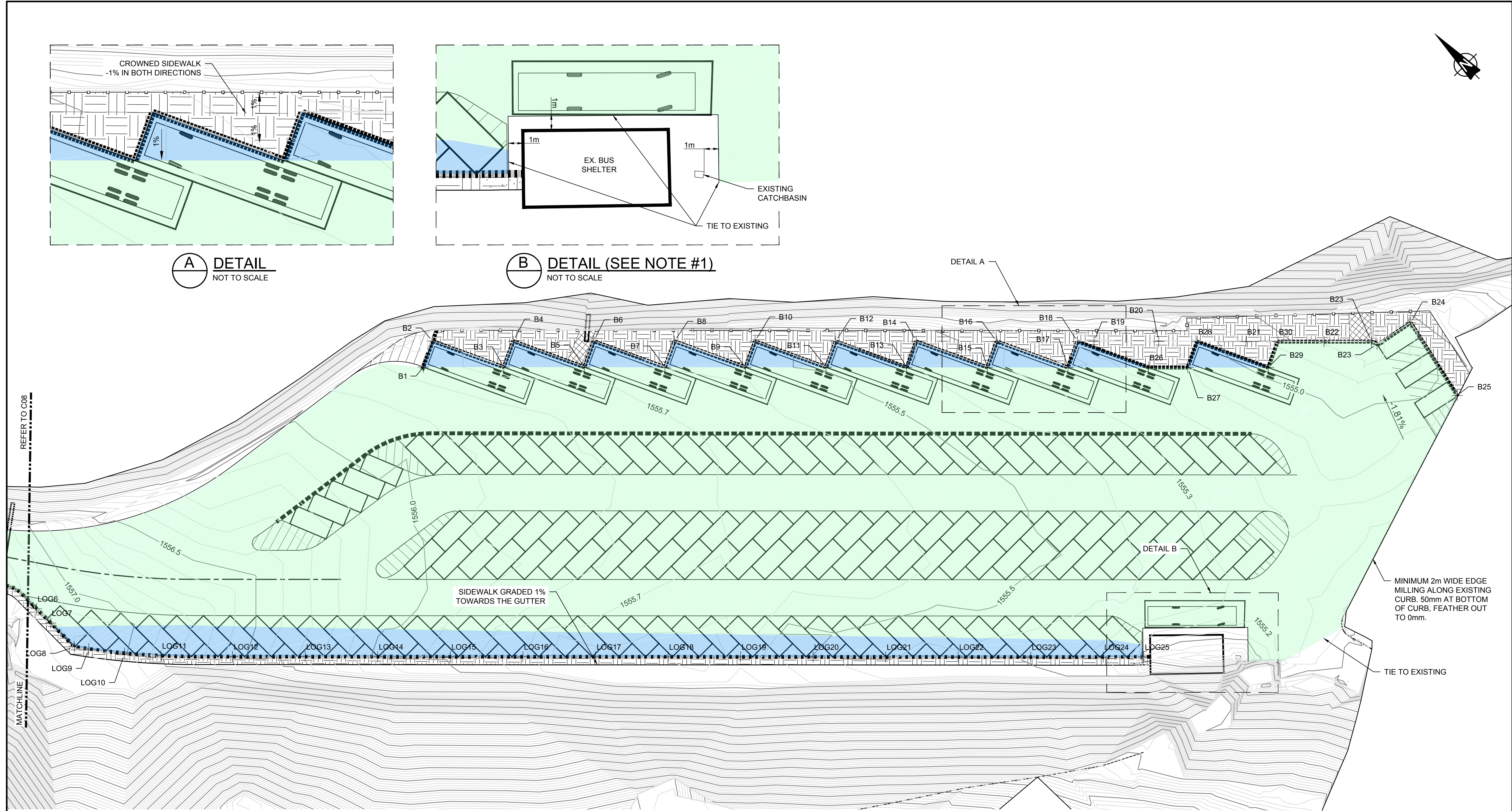


project no. CT164101	sheet C09	revision no. 0
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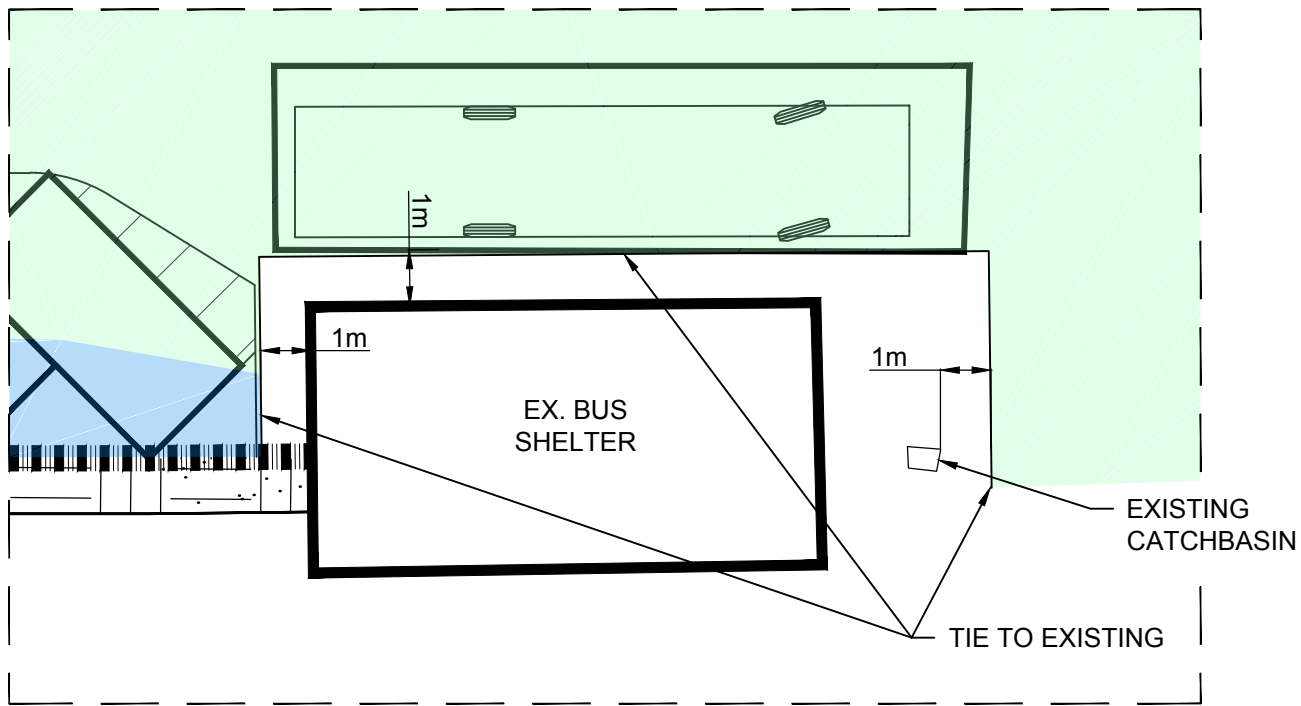


LEGEND

	120mm PAVEMENT OVERLAY
	NEW GRADING (TO BE PAVED)



A DETAIL
NOT TO SCALE



B DETAIL (SEE NOTE #1)
NOT TO SCALE

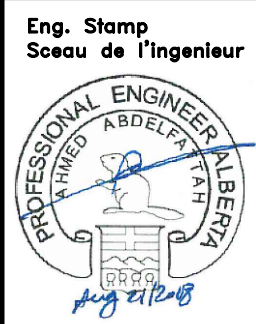
PRELIMINARY
NOT FOR CONSTRUCTION

- NOTE:
1. THE CONTRACTOR IS TO ENSURE THAT THE FINISH GRADE IS DRAINED TOWARDS THE EXISTING CATCH BASIN LOCATED EAST OF THE EXISTING BUS SHELTER.
 2. ROADSIDE SAFETY TO BE ASSESSED ON SITE IN COORDINATION WITH THE DEPARTMENTAL REPRESENTATIVE.

wood.

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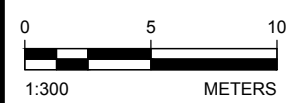
BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE
IMPROVEMENTS

approved by
AA
designed by
MA
drawn by
TW
PWGSC Project Manager
LM
PWGSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY
drawing title
GRADING LOWER PARKING LAYOUT



project no.	sheet	revision no.
CT164101	C10	0

LOWER LOT BUS AREA POINTS				LOWER LOT LIP OF GUTTER POINTS				LOWER LOT LIP OF GUTTER POINTS			
POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)	POINT	NORTHING (m)	EASTING (m)	ELEVATION (m)
B1	5667387.05	600932.04	1555.754	B21	5667310.01	601015.38	1554.936	LOG15	5667355.96	600906.70	1555.850
B2	5667388.68	600935.47	1555.746	B22	5667302.45	601023.05	1554.789	LOG16	5667348.94	600913.83	1555.713
B3	5667379.25	600939.95	1555.638	B23	5667297.07	601028.01	1554.785	LOG17	5667341.91	600920.96	1555.586
B4	5667380.89	600943.38	1555.636	B24	5667297.87	601027.71	1554.765	LOG18	5667334.89	600928.09	1555.556
B5	5667371.46	600947.87	1555.617	B25	5667295.93	601033.39	1554.867	LOG19	5667327.89	600935.21	1555.525
B6	5667373.09	600951.30	1555.614	B26	5667284.29	601030.93	1555.103	LOG20	5667320.87	600942.34	1555.497
B7	5667363.66	600955.79	1555.594	B27	5667316.90	601003.29	1555.181	LOG21	5667313.85	600949.46	1555.411
B8	5667365.30	600959.22	1555.587	B28	5667313.09	601007.16	1555.149	LOG22	5667306.84	600956.59	1555.391
B9	5667355.87	600963.71	1555.536	B29	5667314.72	601010.59	1555.069	LOG23	5667299.82	600963.72	1555.351
B10	5667357.50	600967.14	1555.529	B30	5667305.30	601015.07	1554.883	LOG24	5667292.80	600970.84	1555.280
B11	5667348.07	600971.62	1555.475	LOG6	5667400.69	600870.66	1557.150	LOG25	5667288.90	600974.84	1554.855
B12	5667349.71	600975.05	1555.467	LOG7	5667397.91	600870.68	1557.147				
B13	5667340.28	600979.54	1555.410	LOG8	5667393.27	600870.72	1557.087				
B14	5667341.91	600982.97	1555.399	LOG9	5667391.68	600871.91	1557.079				
B15	5667332.48	600987.46	1555.314	LOG10	5667387.79	600875.03	1557.012				
B16	5667334.12	600990.89	1555.306	LOG11	5667384.03	600878.35	1556.862				
B17	5667324.69	600995.38	1555.248	LOG12	5667377.02	600885.30	1556.563				
B18	5667326.32	600998.81	1555.167	LOG13	5667370.00	600892.44	1556.275				
B19	5667324.72	601000.44	1555.159	LOG14	5667362.98	600899.56	1555.972				
B20	5667318.46	601006.80	1555.130								

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P1	5667471.04	600726.17
P2	5667455.62	600736.16
P3	5667445.59	600753.85
P4	5667444.78	600763.90
P5	5667439.33	600770.33
P6	5667431.01	600777.26
P7	5667425.22	600783.39
P8	5667424.94	600773.93
P9	5667427.98	600778.17
P10	5667432.11	600775.14
P11	5667433.88	600773.99
P12	5667415.57	600786.79
P13	5667410.49	600784.96
P14	5667409.61	600787.40
P15	5667414.69	600789.23
P20	5667419.28	600787.08
P49	5667425.36	600807.95
P50	5667430.44	600809.78
P51	5667429.56	600812.23
P52	5667424.48	600810.40
P53	5667426.49	600808.36
P54	5667426.45	600807.44
P55	5667430.62	600805.48
P56	5667432.88	600810.67
P57	5667429.54	600805.99
P58	5667427.00	600800.58
P59	5667432.05	600804.98
P60	5667429.55	600799.64
P61	5667425.41	600790.83

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P62	5667422.75	600785.16
P63	5667432.65	600785.42
P64	5667429.94	600788.70
P65	5667426.76	600790.20
P66	5667431.00	600799.22
P67	5667434.97	600798.46
P68	5667424.04	600791.47
P69	5667421.82	600792.51
P70	5667420.28	600794.21
P71	5667418.87	600798.12
P72	5667421.31	600799.00
P73	5667422.19	600796.58
P74	5667424.64	600797.44
P75	5667423.22	600801.38
P76	5667423.90	600802.01
P77	5667428.11	600800.14
P78	5667422.81	600802.52
P79	5667420.36	600801.64
P88	5667417.37	600794.61
P89	5667419.82	600795.49
P90	5667417.98	600800.57
P91	5667415.54	600799.68
P108	5667448.15	600789.39
P109	5667460.06	600778.71
P110	5667463.82	600786.13
P111	5667483.45	600773.24
P112	5667458.77	600777.11
P113	5667444.84	600762.90
P114	5667449.65	600763.83

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P115	5667449.76	600761.28
P116	5667449.77	600758.98
P117	5667449.89	600756.49
P118	5667450.71	600751.97
P119	5667462.09	600736.37
P120	5667473.05	600729.28
P121	5667475.06	600732.38
P122	5667466.83	600737.71
P123	5667455.41	600754.75
P124	5667456.01	600752.24
P125	5667445.61	600755.93
P126	5667454.97	600759.48
P127	5667454.95	600764.94
P128	5667459.21	600771.39
P129	5667471.57	600773.26
P130	5667461.22	600778.20
P131	5667456.61	600769.47
P132	5667486.79	600771.05
P133	5667496.90	600764.41
P134	5667497.82	600763.81
P135	5667503.33	600759.62
P136	5667503.95	600762.13
P137	5667506.17	600766.41
P138	5667508.50	600772.05
P139	5667486.02	600767.13
P140	5667490.27	600764.34
P141	5667505.47	600748.65
P142	5667516.28	600741.26
P143	5667529.84	600736.15

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P144	5667535.85	600732.53
P145	5667549.09	600726.12
P146	5667448.86	600721.18
P147	5667571.79	600718.15
P148	5667573.72	600717.64
P149	5667574.69	600721.21
P150	5667564.03	600724.47
P151	5667552.85	600728.66
P151	5667560.29	600725.87
P152	5667531.97	600747.48
P153	5667528.10	600743.77
P154	5667533.40	600740.14
P155	5667560.06	600729.78
P156	5667517.97	600741.05
P157	5667519.11	600757.01
P158	5667560.86	600721.71
P159	5667563.50	600728.74
P167	5667433.51	600804.32
P168	5667435.74	600809.37
P169	5667443.74	600804.77
P170	5667462.15	600797.15
P171	5667470.68	600786.52
P172	5667475.18	600783.10
P173	5667490.91	600772.77
P174	5667495.32	600769.88
P175	5667504.24	600767.87
P176	5667506.07	600761.83
P177	5667499.64	600790.44
P178	5667497.35	600793.32

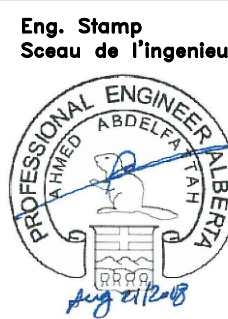
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P179	5667495.11	600794.38
P180	5667492.93	600794.42
P181	5667448.86	600836.08
P182	5667436.94	600845.74
P183	5667407.76	600865.92
P184	5667407.49	600867.39
P185	5667403.56	600870.67
P186	5667401.11	600870.67
P187	5667393.27	600870.72
P188	5667393.29	600873.32
P189	5667398.89	600873.28
P190	5667398.67	600870.68
P191	5667398.92	600873.64
P192	5667403.24	600870.86
P327	5667402.99	600876.64
P328	5667440.41	600850.76
P329	5667453.06	600840.51
P330	5667507.31	600789.22
P331	5667514.66	600779.26
P332	5667515.19	600778.15
P333	5667516.24	600772.74
P334	5667516.35	600772.99
P335	5667528.45	600770.00
P337	5667414.78	600872.74
P338	5667442.40	600853.64
P339	5667455.46	600843.05
P340	5667514.09	600787.63
P341	5667519.21	600780.78
P342	5667535.06	600758.31

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P343	5667553.04	600733.23
P344	5667561.32	600729.64
P345	5667574.43	600725.10
P346	5667575.67	600724.78
P347	5667428.36	600863.96
P348	5667422.76	600868.39
P360	5667432.87	600761.61
P361	5667432.92	600763.44
P362	5667419.11	600774.32
P363	5667416.99	600774.10
P364	5667416.73	600776.58
P373	5667433.03	600810.60
P374	5667409.64	600783.15
P383	5667428.10	600849.91
P384	5667436.03	600844.43
P385	5667447.77	600834.91
P386	5667479.79	600804.64
P387	5667492.49	600793.33
P388	5667489.18	600797.98
P389	5667471.39	600785.89
P390	5667485.06	600776.61
P391	5667484.58	600766.76
P392	5667458.24	600765.70
P393	5667457.30	600763.93
P394	5667456.30	600764.37
P395	5667457.30	600766.29
P396	5667485.18	600767.68
P397	5667482.73	600769.29
P398	5667455.12	600756.71

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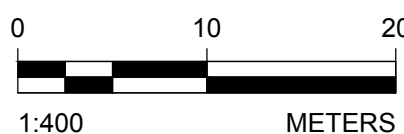
project title

MOUNTAIN AVENUE
IMPROVEMENTS

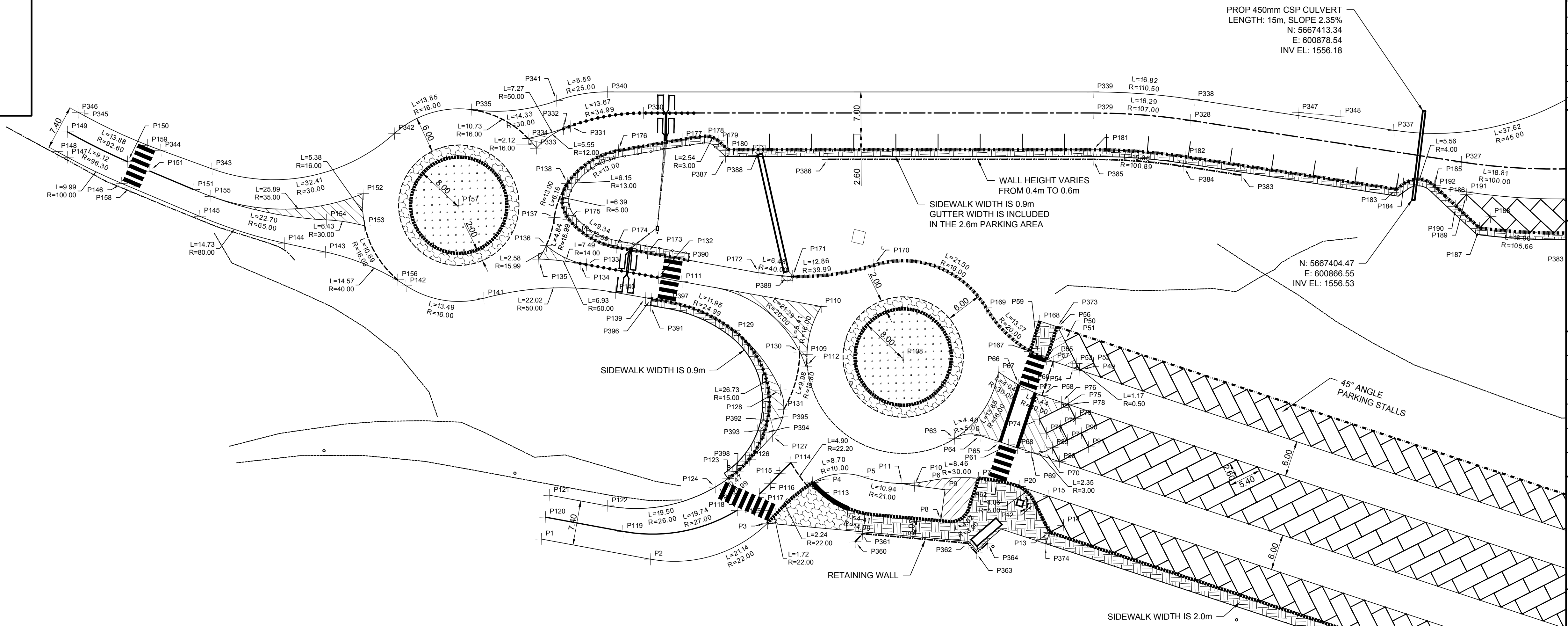
approved by AA
designed by MA
drawn by TW
PWOSC Project Manager LM
PWOSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

drawing title
SETTING OUT ROUNDABOUTS



project no.	sheet	revision no.
CT164101	C11	0

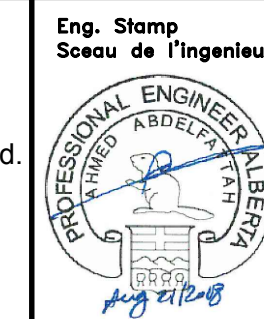


PRELIMINARY
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BANFF NATIONAL PARK, P.O. BOX 900
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project title

MOUNTAIN AVENUE
IMPROVEMENTS

approved by

AA

designed by

MA

drawn by

TW

PWOSC Project Manager

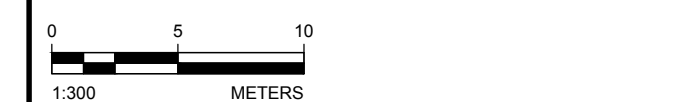
PWOSC, Architectural and Engineering Resources Manager

Client

PARKS CANADA AGENCY

drawing title

SETTING OUT UPPER PARKING



project no.

CT164101

sheet

C12

revision no.

0

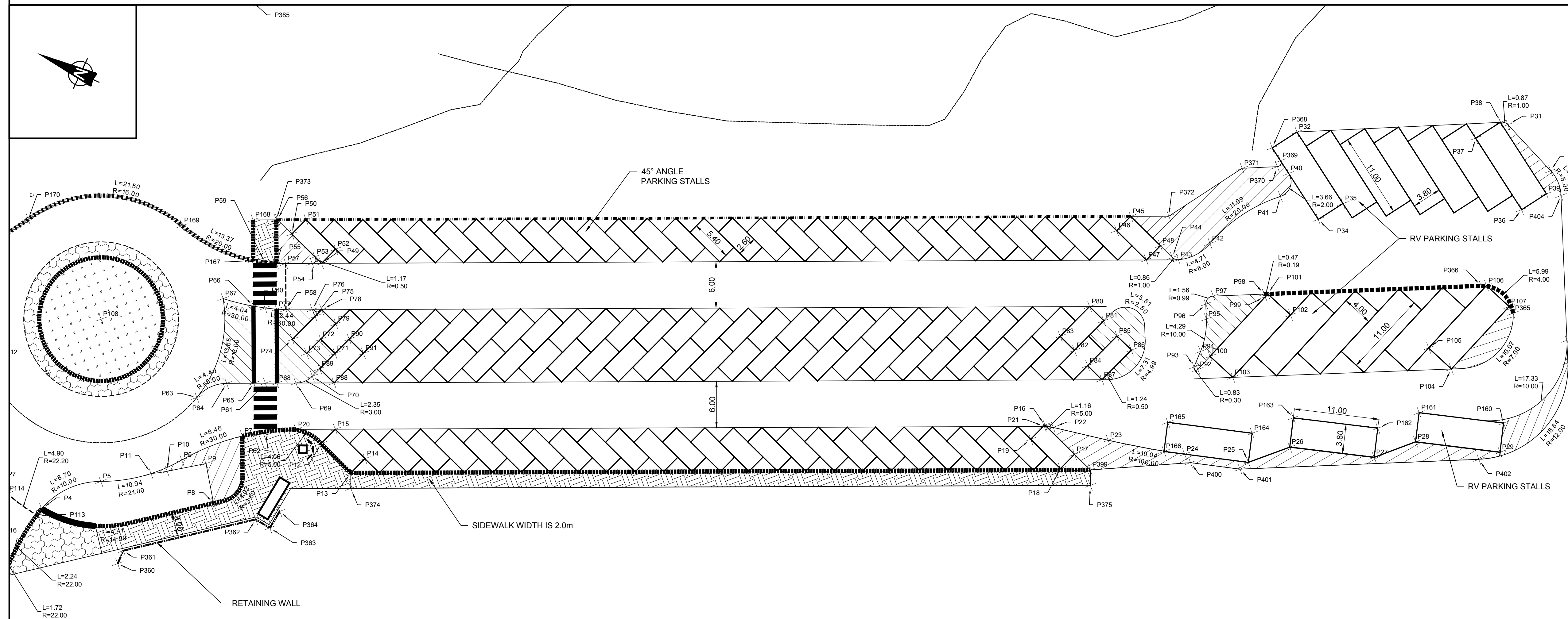
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P5	5667439.33	600770.33
P6	5667431.01	600777.26
P7	5667425.22	600783.39
P8	5667424.94	600773.93
P9	5667427.98	600778.17
P10	5667432.11	600775.14
P11	5667433.88	600773.99
P12	5667415.57	600786.79
P13	5667410.49	600784.96
P14	5667409.61	600787.40
P15	5667414.69	600789.23
P16	5667331.73	600828.41
P17	5667326.65	600826.57
P18	5667327.54	600824.13
P19	5667332.62	600825.96
P20	5667419.28	600787.08
P21	5667331.73	600828.21
P22	5667330.62	600828.58
P23	5667323.48	600830.06
P24	5667313.76	600832.60
P25	5667305.84	600835.10
P26	5667301.82	600839.14
P27	5667291.36	600842.55
P28	5667287.36	600846.62
P29	5667276.89	600850.01
P30	5667273.81	600864.18
P31	5667293.83	600888.87

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P32	5667318.15	600876.52
P34	5667310.89	600867.42
P35	5667308.86	600870.63
P36	5667287.57	600879.64
P37	5667296.87	600885.53
P38	5667294.84	600888.74
P39	5667285.54	600882.85
P40	5667316.87	600871.20
P41	5667316.58	600868.05
P42	5667322.27	600858.69
P43	5667325.09	600855.07
P44	5667325.93	600855.00
P45	5667333.04	600857.57
P46	5667333.92	600855.12
P47	5667328.84	600853.29
P48	5667327.96	600855.73
P49	5667425.36	600807.95
P50	5667430.44	600809.78
P51	5667429.56	600812.23
P52	5667424.48	600810.40
P53	5667426.49	600808.36
P54	5667426.45	600807.44
P55	5667430.62	600805.48
P56	5667432.88	600810.67
P57	5667429.54	600805.99
P58	5667427.00	600800.58
P59	5667432.05	600804.98
P60	5667429.55	600799.64

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P61	5667425.41	600790.83
P62	5667422.75	600785.16
P63	5667432.65	600785.42
P64	5667429.94	600788.70
P65	5667426.76	600790.20
P66	5667431.00	600799.22
P67	5667434.97	600798.46
P68	5667424.04	600791.47
P69	5667421.82	600792.51
P70	5667420.28	600794.21
P71	5667418.87	600798.12
P72	5667421.31	600799.00
P73	5667422.19	600796.56
P74	5667424.64	600797.44
P75	5667423.22	600801.38
P76	5667423.90	600802.01
P77	5667428.11	600800.14
P78	5667422.81	600802.52
P79	5667420.36	600801.64
P80	5667332.95	600844.73
P81	5667330.50	600843.85
P82	5667332.34	600838.77
P83	5667334.78	600839.65
P84	5667329.96	600837.70
P85	5667328.13	600842.78
P86	5667325.68	600841.89
P87	5667327.51	600836.81
P88	5667417.37	600794.61

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P89	5667419.82	600795.49
P90	5667417.98	600800.57
P91	5667415.54	600799.68
P92	5667316.82	600843.25
P93	5667317.41	600843.33
P94	5667317.50	600845.51
P95	5667318.58	600849.63
P96	5667319.46	600851.36
P97	5667319.02	600852.71
P98	5667313.17	600855.71
P99	5667312.88	600855.47
P100	5667316.11	600845.46
P101	5667312.74	600855.93
P102	5667308.93	600854.70
P103	5667312.31	600844.23
P104	5667287.13	600857.12
P105	5667290.94	600858.35
P106	5667287.56	600868.82
P107	5667283.75	600867.59
P108	5667448.15	600789.39
P113	5667444.84	600762.90
P160	5667278.06	600853.62
P161	5667288.52	600850.24
P162	5667292.53	600846.17
P163	5667302.99	600842.78
P164	5667306.98	600838.72
P165	5667317.47	600835.41
P166	5667316.33	600831.79

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P167	5667433.51	600804.57
P168	5667435.74	600809.32
P169	5667443.74	600804.77
P170	5667462.15	600797.15
P360	5667432.87	600761.61
P361	5667432.92	600763.44
P362	5667419.11	600774.32
P363	5667416.99	600774.10
P364	5667416.73	600776.58
P365	5667282.94	600867.01
P366	5667288.18	600868.50
P368	5667320.19	600873.30
P369	5667318.52	600872.25
P370	5667318.56	600871.38
P371	5667322.60	600869.26
P372	5667328.58	600859.66
P373	5667433.03	600810.60
P374	5667409.64	600783.15
P375	5667323.11	600823.79
P399	5667323.97	600825.60
P400	5667312.60	600831.92
P401	5667306.45	600833.86
P402	5667278.98	600848.02

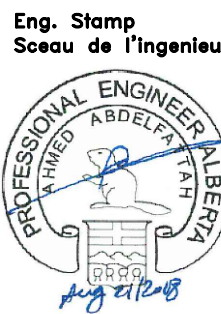


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wood.

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PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

MOUNTAIN AVENUE
IMPROVEMENTS

approved by

AA

designed by

MA

drawn by

TW

PWOSC Project Manager

PWOSC, Architectural and Engineering Resources Manager

Client

PARKS CANADA AGENCY

drawing title

SETTING OUT LOWER PARKING

0 5 10
1:300 METERS

project no.

CT164101

sheet

C13

revision no.

0

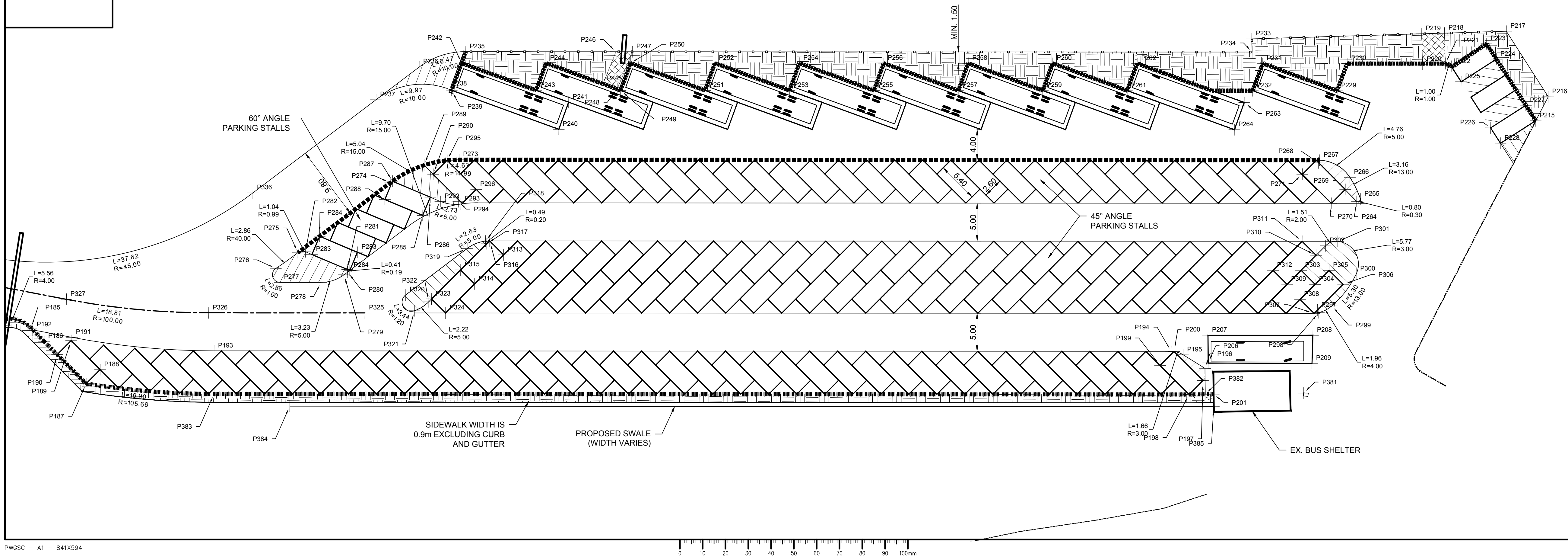
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P184	5667407.49	600867.39
P185	5667403.56	600870.67
P186	5667401.11	600870.67
P187	5667393.27	600870.72
P188	5667393.29	600873.32
P189	5667398.69	600873.28
P190	5667398.67	600870.68
P191	5667398.92	600873.64
P192	5667403.24	600870.66
P193	5667384.54	600885.74
P194	5667296.20	600975.46
P195	5667294.77	600976.27
P196	5667291.49	600977.07
P197	5667290.53	600975.76
P198	5667290.51	600973.16
P199	5667295.91	600973.12
P200	5667295.93	600975.72
P201	5667288.27	600975.50
P206	5667291.70	600977.86
P207	5667294.32	600980.40
P208	5667284.63	600990.23
P209	5667282.09	600987.57
P215	5667284.18	601030.91
P216	5667285.28	601034.30
P217	5667295.28	601036.41
P218	5667300.81	601030.43
P219	5667302.85	601028.23
P220	5667299.91	601025.50
P221	5667297.87	601027.71
P222	5667297.07	601028.01

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P223	5667295.93	601033.39
P224	5667293.59	601032.89
P225	5667294.72	601027.51
P226	5667287.68	601026.03
P227	5667286.54	601031.41
P228	5667285.33	601025.53
P229	5667305.31	601015.06
P230	5667306.95	601018.49
P231	5667314.74	601010.57
P232	5667313.11	601007.14
P233	5667316.05	601011.82
P234	5667316.77	601010.64
P235	5667389.37	600936.91
P236	5667392.21	600931.13
P237	5667393.13	600924.08
P238	5667387.51	600931.81
P239	5667387.05	600932.04
P240	5667373.50	600938.48
P241	5667375.14	600941.91
P242	5667388.68	600935.47
P243	5667379.25	600939.95
P244	5667380.89	600943.38
P245	5667373.69	600946.81
P246	5667375.50	600951.00
P247	5667373.98	600952.53
P248	5667371.88	600947.67
P249	5667371.46	600947.87
P250	5667373.09	600951.30
P251	5667363.66	600955.79
P252	5667365.30	600959.22

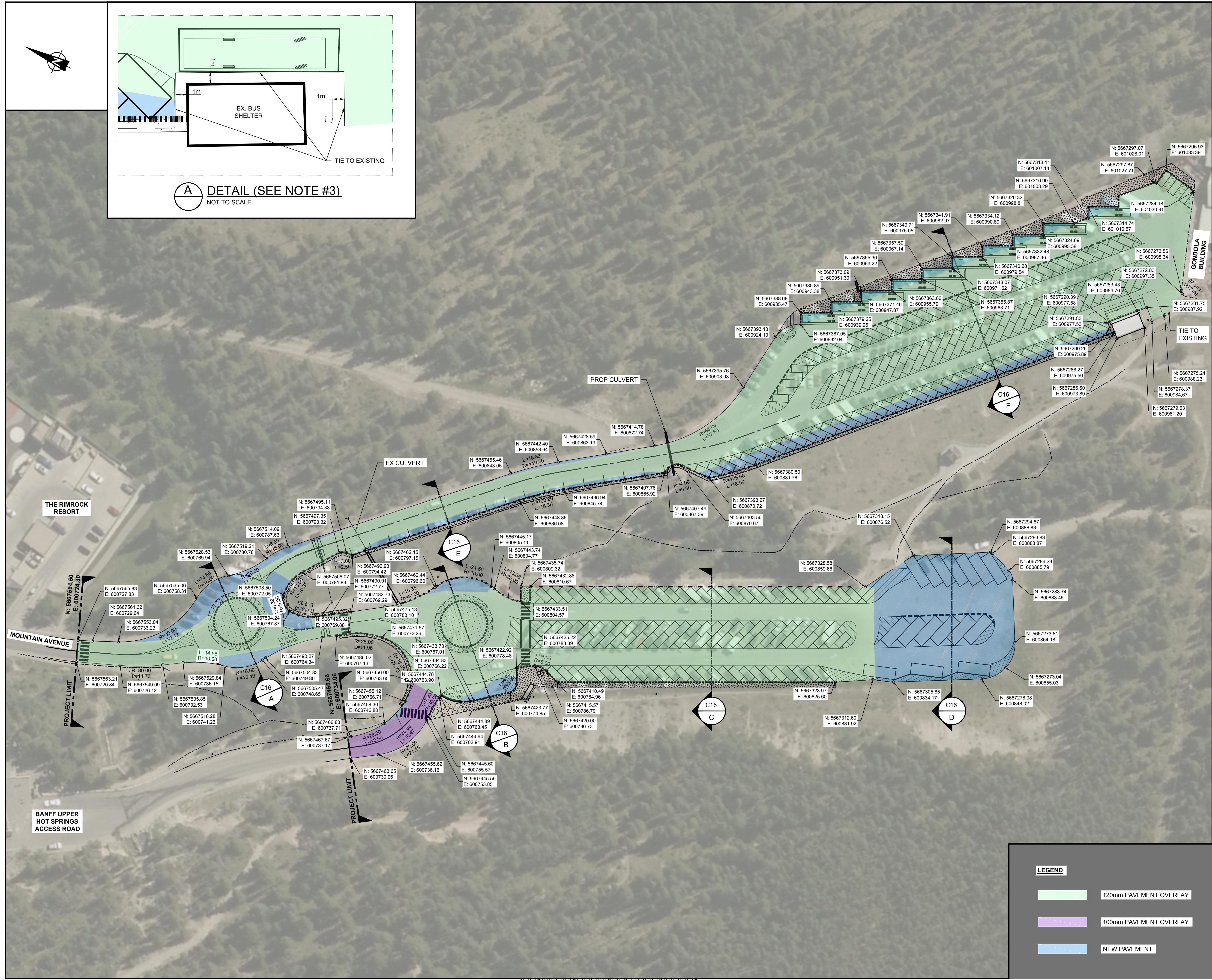
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P253	5667355.87	600963.71
P254	5667357.50	600967.14
P255	5667348.07	600971.62
P256	5667349.71	600975.05
P257	5667340.28	600979.54
P258	5667341.91	600982.97
P259	5667332.48	600987.46
P260	5667334.12	600990.89
P261	5667324.69	600995.38
P262	5667326.32	600998.81
P263	5667312.78	601005.25
P264	5667311.15	601001.82
P264	5667293.14	601006.68
P265	5667293.02	601007.25
P266	5667296.01	601008.25
P267	5667300.42	601007.01
P268	5667300.28	601006.66
P269	5667295.32	601006.73
P270	5667295.30	601004.13
P271	5667300.70	601004.08
P273	5667379.85	600926.33
P274	5667384.04	600917.75
P275	5667386.01	600902.84
P276	5667386.57	600899.12
P277	5667384.88	600898.22
P278	5667381.08	600902.08
P279	5667379.68	600904.94
P280	5667379.60	600905.52
P281	5667379.88	600905.73
P282	5667385.40	600903.44

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P283	5667384.55	600903.79
P283	5667380.56	600908.26
P284	5667385.54	600906.19
P284	5667379.56	600905.86
P285	5667377.99	600917.78
P286	5667378.99	600920.18
P287	5667383.97	600918.11
P288	5667382.98	600915.71
P289	5667382.57	600922.54
P290	5667380.87	600922.56
P292	5667377.66	600920.73
P293	5667375.54	600922.40
P294	5667375.98	600922.41
P295	5667380.89	600925.16
P296	5667375.49	600925.20
P297	5667286.58	600992.98
P298	5667286.21	600992.88
P299	5667285.63	600994.73
P300	5667286.38	600999.95
P301	5667291.14	601001.22
P302	5667291.85	600999.68
P303	5667291.81	600995.11
P304	5667289.20	600995.14
P305	5667289.22	600997.74
P306	5667286.62	600997.76
P307	5667286.58	600992.36
P308	5667286.18	600992.34
P309	5667291.79	600992.51
P310	5667291.84	600997.91
P311	5667294.44	600997.89

LAYOUT TABLE		
POINT	NORTHING (m)	EASTING (m)
P312	5667294.39	600992.49
P313	5667366.83	600921.74
P314	5667366.78	600916.34
P315	5667369.38	600916.32
P316	5667369.43	600921.72
P317	5667369.42	600921.19
P318	5667369.78	600921.31
P319	5667370.78	600918.90
P320	5667372.10	600908.86
P321	5667369.81	600908.23
P322	5667369.34	600910.39
P323	5667369.34	600910.92
P324	5667366.74	600910.94
P325	5667374.18	600903.38
P326	5667388.61	600888.73
P327	5667402.99	600876.64
P336	5667395.76	600903.93
P381	5667280.08	600984.02
P382	5667289.04	600974.71
P383	5667380.51	600881.76
P384	5667372.38	600887.74
P385	5667287.12	600974.39



CT164101 - Removal IFT 

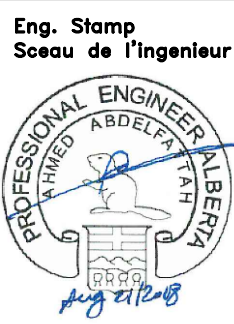


PRELIMINARY
NOT FOR CONSTRUCTION

- NOTES:
1. SEE DRAWING C16 FOR DETAILED CROSS SECTIONS.
 2. SEE DRAWING C19 FOR PAVEMENT STRUCTURE DETAILS.
 3. THE CONTRACTOR IS TO ENSURE THAT THE FINISH GRADE IS DRAINED TOWARDS THE EXISTING CATCH BASIN LOCATED EAST OF THE EXISTING BUS SHELTER.

wood.

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revisions	description	date
Client		

PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE
IMPROVEMENTS

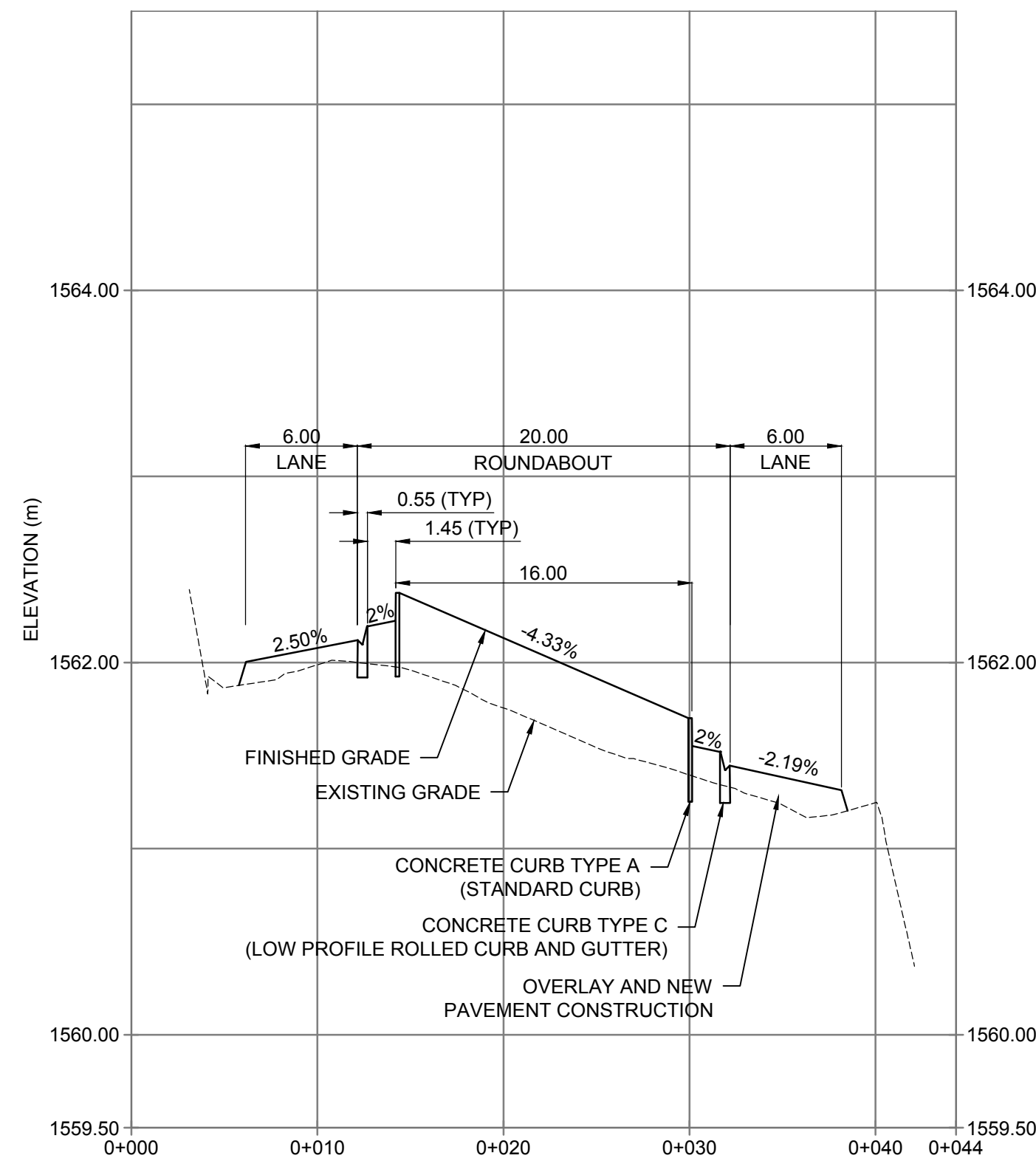
approved by
AA
designed by
MA
drawn by
TW
PWOSC Project Manager
LM
PWOSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

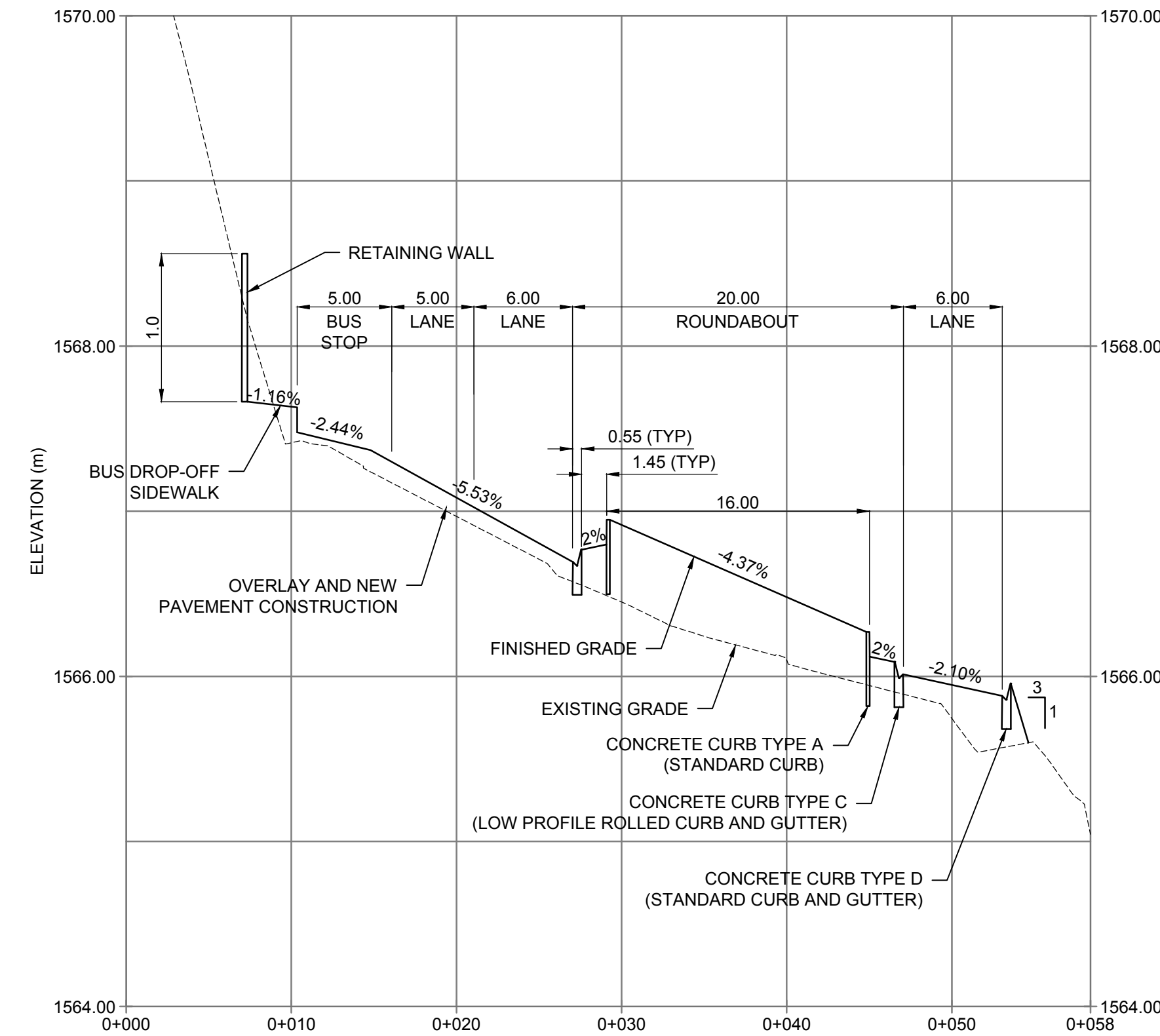
drawing title
PAVEMENT LAYOUT



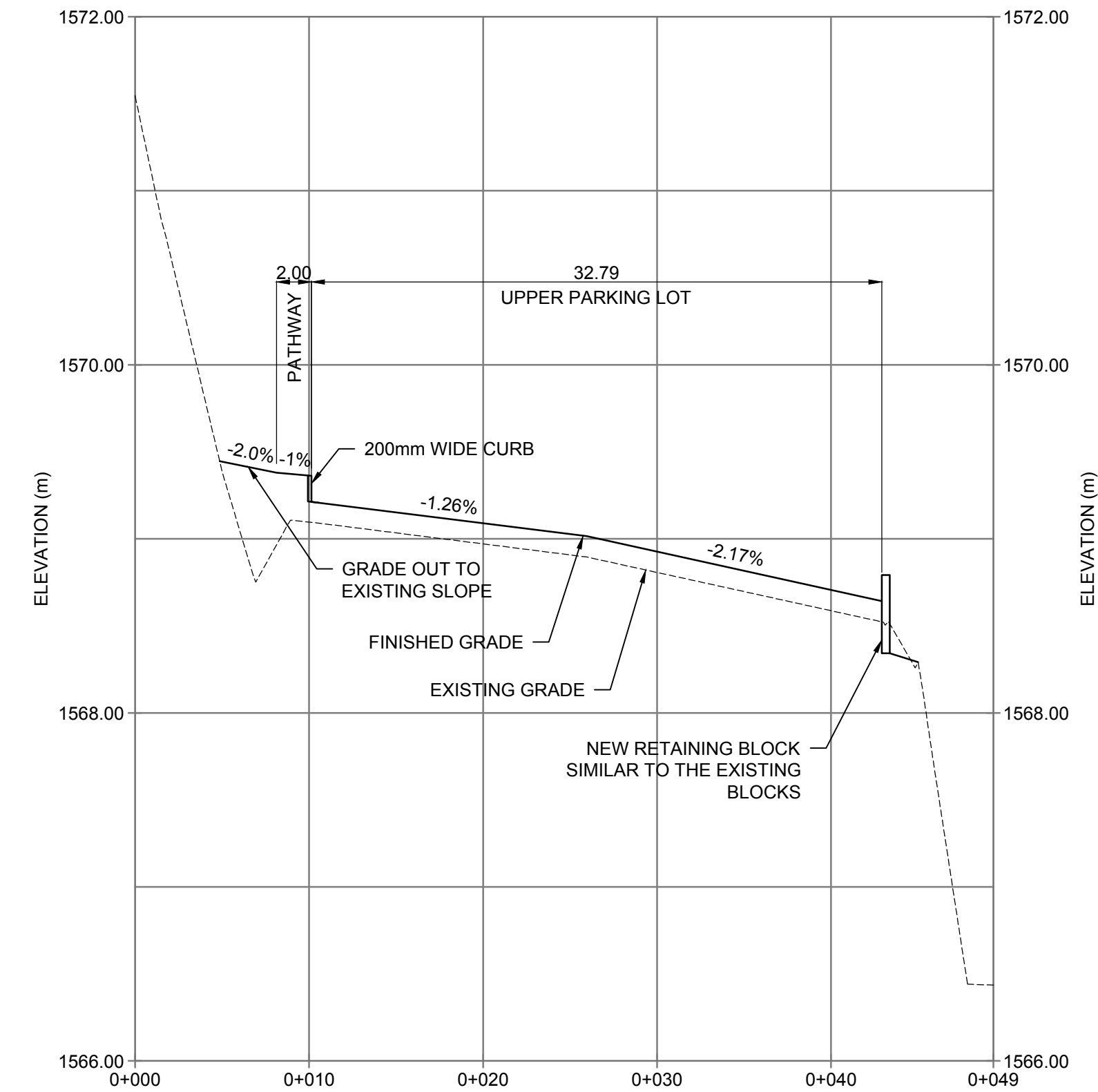
project no.	sheet	revision no.
CT164101	C15	0



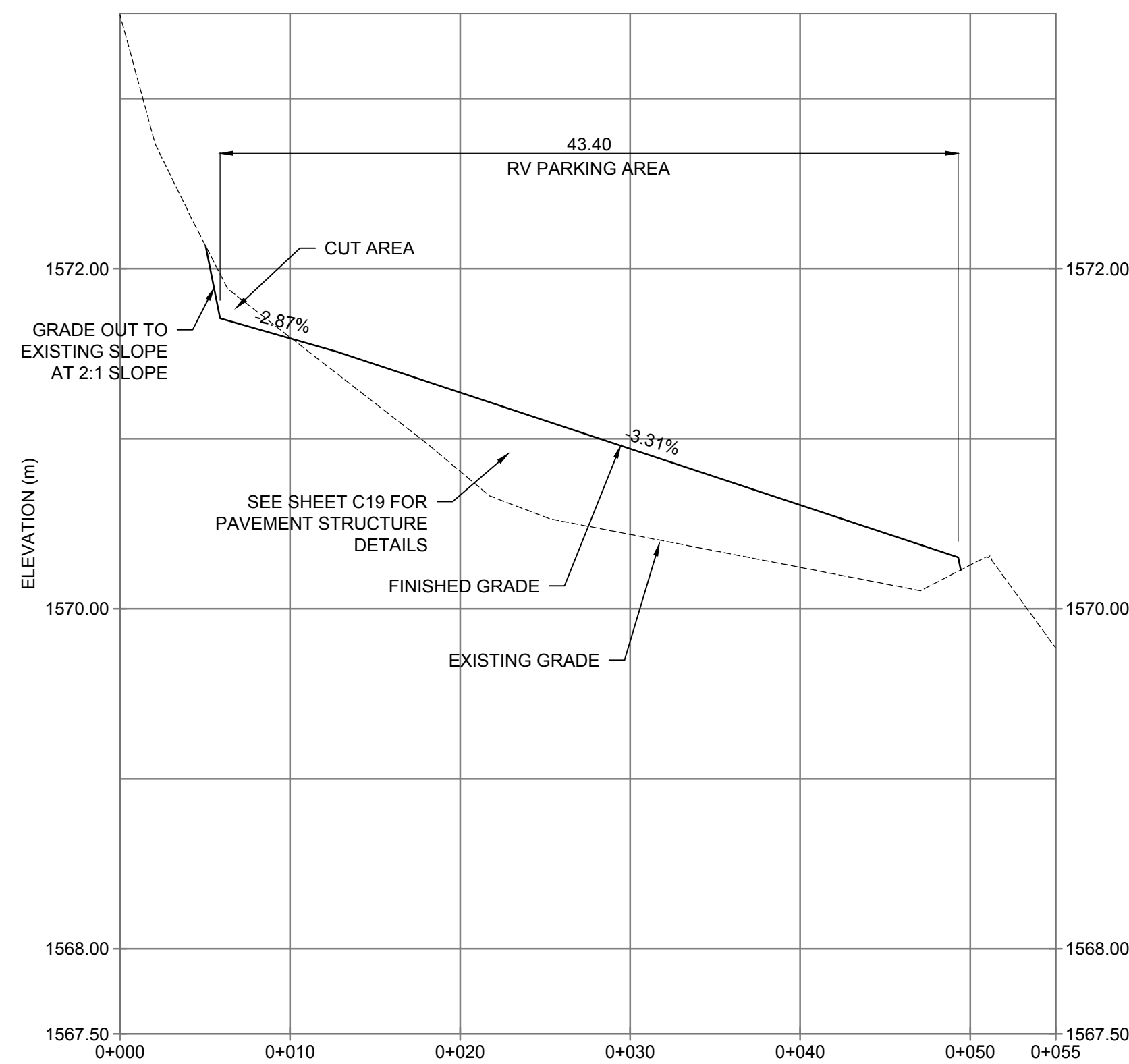
A LOWER ROUNDABOUT
H 1:300 V 1:30



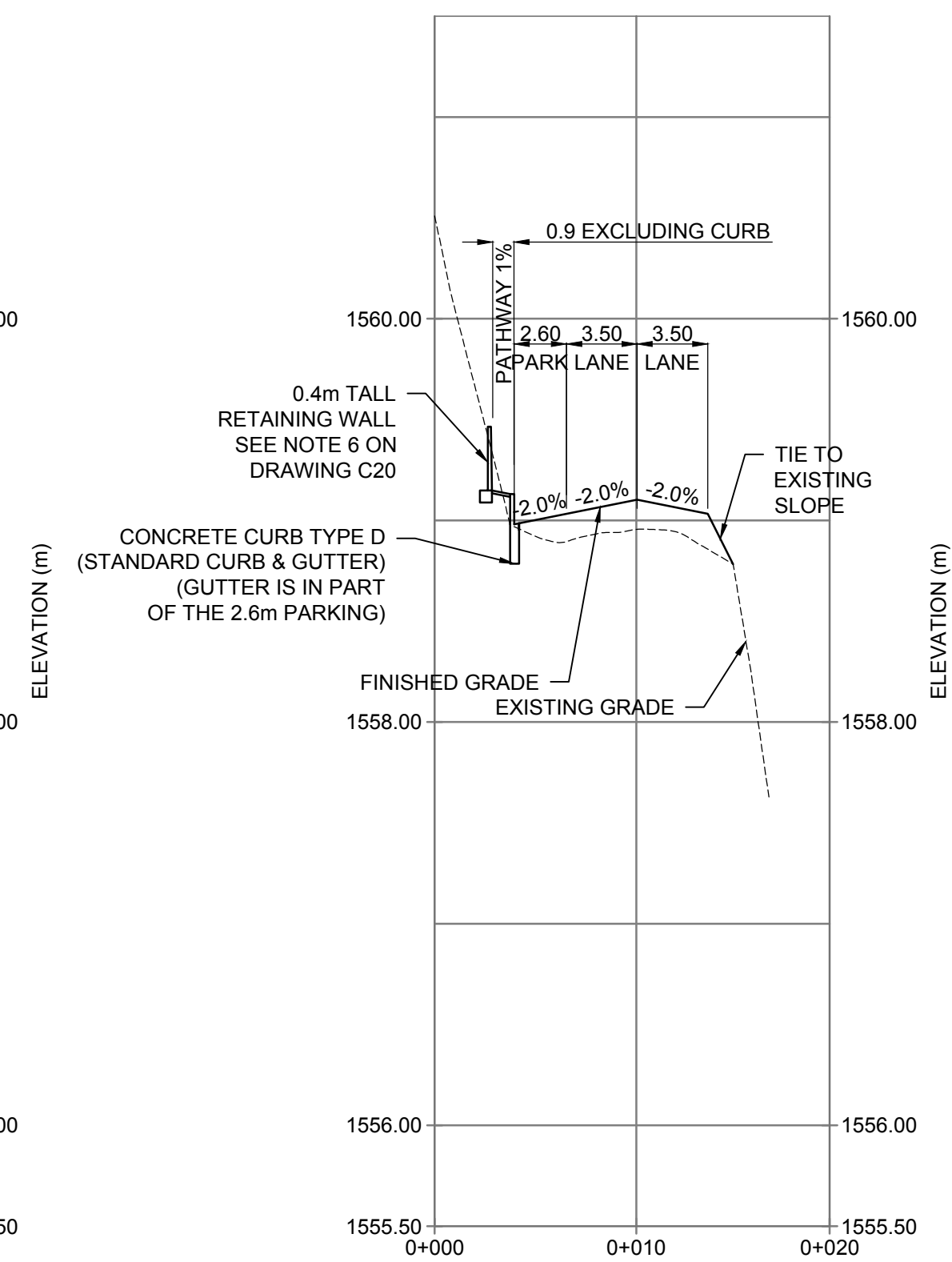
B UPPER ROUNDABOUT
H 1:300 V 1:30



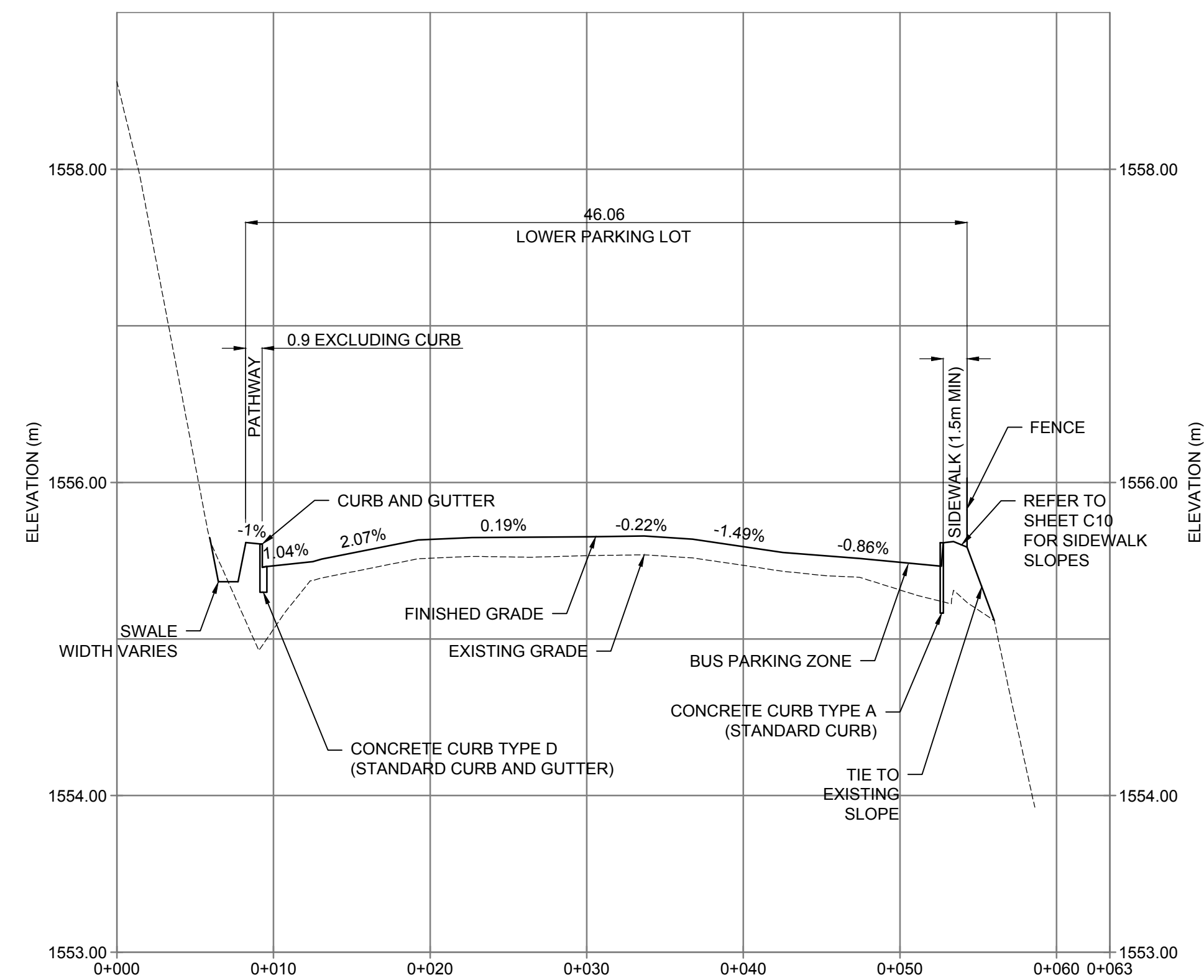
C UPPER PARKING LOT
H 1:300 V 1:30



D UPPER PARKING LOT EXTENSION
H 1:300 V 1:30



E ROAD TO LOWER LOT
H 1:300 V 1:30



F LOWER PARKING LOT
H 1:300 V 1:30

PRELIMINARY
NOT FOR CONSTRUCTION

NOTES:

- FOR THE CROSS SECTIONS LOCATIONS SEE DRAWING C15
- FOR RETAINING WALL DETAILS SEE DRAWING C20
- PAVEMENT SLOPES SHOWN IN THESE CROSS SECTIONS ARE ACCURATE ONLY ON THE SECTION LINE SHOWN IN C15. FOR SLOPES AT OTHER LOCATIONS SEE GRADING PLANS C08, 09 & 10.

wood.

Consultant's Name Nom de l'expert-conseil Wood Environment & Infrastructure Solutions, a Division of Wood Canada Ltd. #401, 1925 - 18th Avenue NE Calgary, Alberta CANADA T2E 7T8 Tel: (403) 248-4331 Fax: (403) 248-2188	Eng. Stamp Sceau de l'ingénieur PROFESSIONAL ENGINEER ALBERTA #401, 1925 - 18th Avenue NE Calgary, Alberta CANADA T2E 7T8 Tel: (403) 248-4331 Fax: (403) 248-2188
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PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE IMPROVEMENTS

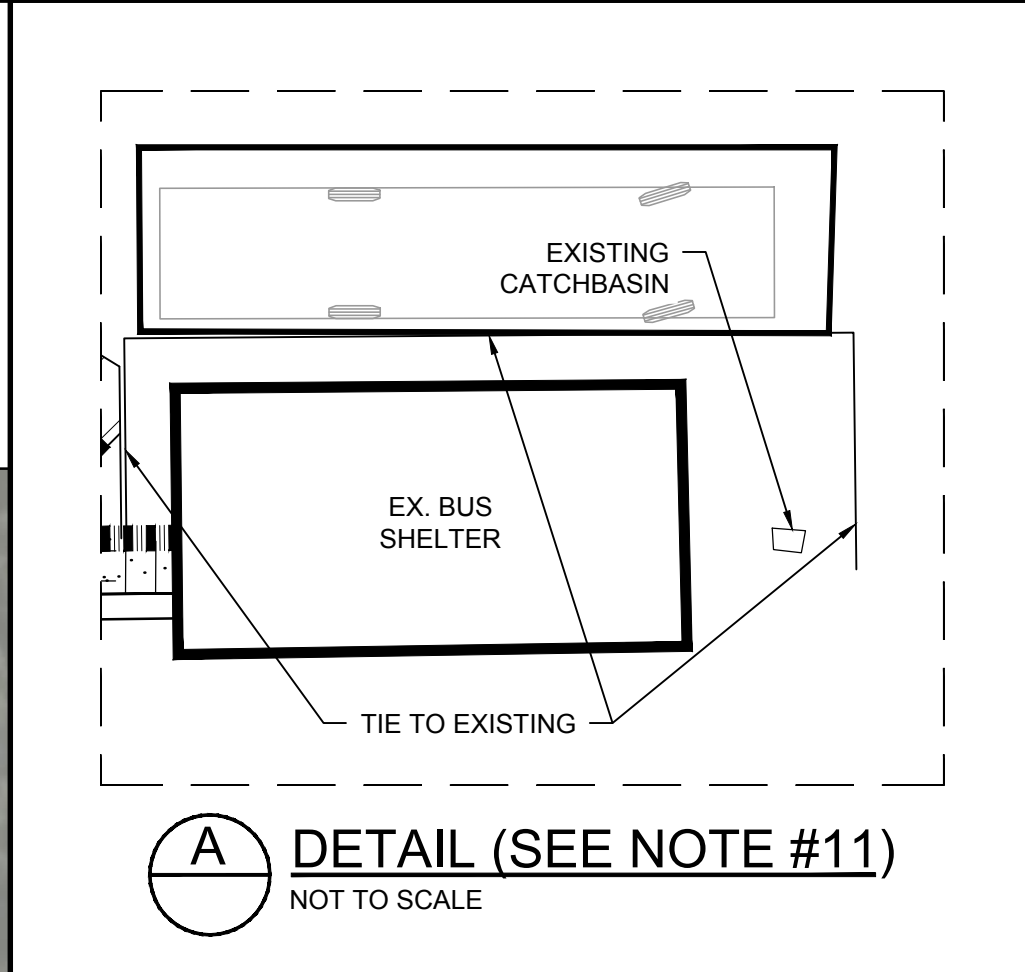
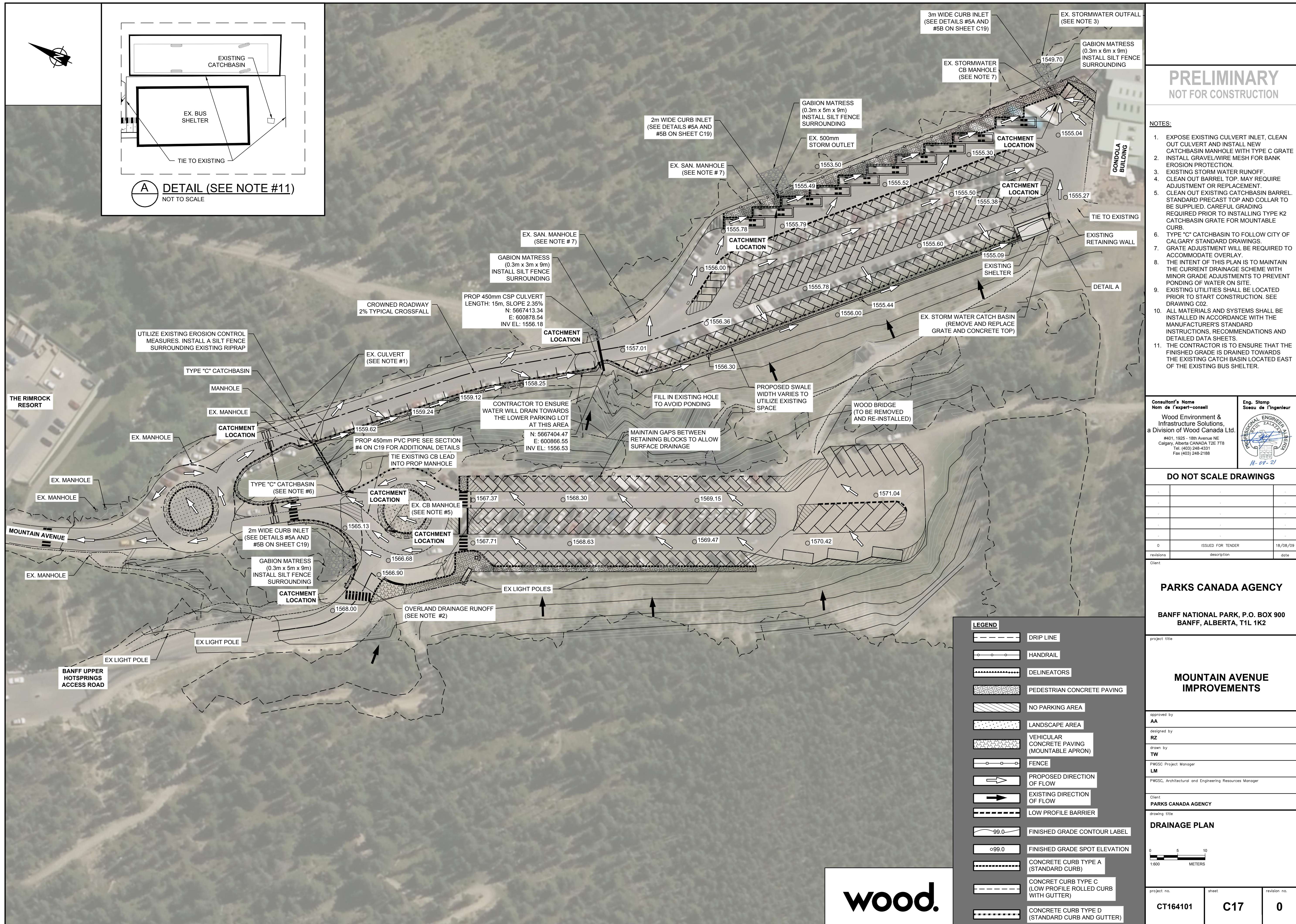
approved by
AA
designed by
MA
drawn by
TW
PWGSC Project Manager
LM
PWGSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

drawing title
PAVEMENT CROSS SECTIONS

NOT TO SCALE

project no.	sheet	revision no.
CT164101	C16	0



PRELIMINARY
NOT FOR CONSTRUCTION

- NOTES:
1. EXPOSE EXISTING CULVERT INLET, CLEAN OUT CULVERT AND INSTALL NEW CATCHBASIN MANHOLE WITH TYPE C GRATE
 2. INSTALL GRAVEL/WIRE MESH FOR BANK EROSION PROTECTION
 3. EXISTING STORM WATER RUNOFF.
 4. CLEAN OUT BARREL TOP. MAY REQUIRE ADJUSTMENT OR REPLACEMENT.
 5. CLEAN OUT EXISTING CATCHBASIN BARREL. STANDARD PRECAST TOP AND COLLAR TO BE SUPPLIED. CAREFUL GRADING REQUIRED PRIOR TO INSTALLING TYPE K2 CATCHBASIN GRATE FOR MOUNTABLE CURB.
 6. TYPE "C" CATCHBASIN TO FOLLOW CITY OF CALGARY STANDARD DRAWINGS.
 7. GRATE ADJUSTMENT WILL BE REQUIRED TO ACCOMMODATE OVERLAY.
 8. THE INTENT OF THIS PLAN IS TO MAINTAIN THE CURRENT DRAINAGE SCHEME WITH MINOR GRADE ADJUSTMENTS TO PREVENT PONDING OF WATER ON SITE.
 9. EXISTING UTILITIES SHALL BE LOCATED PRIOR TO START CONSTRUCTION. SEE DRAWING C02.
 10. ALL MATERIALS AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD INSTRUCTIONS, RECOMMENDATIONS AND DETAILED DATA SHEETS
 11. THE CONTRACTOR IS TO ENSURE THAT THE FINISHED GRADE IS DRAINED TOWARDS THE EXISTING CATCH BASIN LOCATED EAST OF THE EXISTING BUS SHELTER.

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Eng. Stamp
Sceau de l'ingénieur

18-07-21

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revisions	description	date
Client		

PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE IMPROVEMENTS

approved by
AA

designed by
RZ

drawn by
TW

PWOSC Project Manager
LM

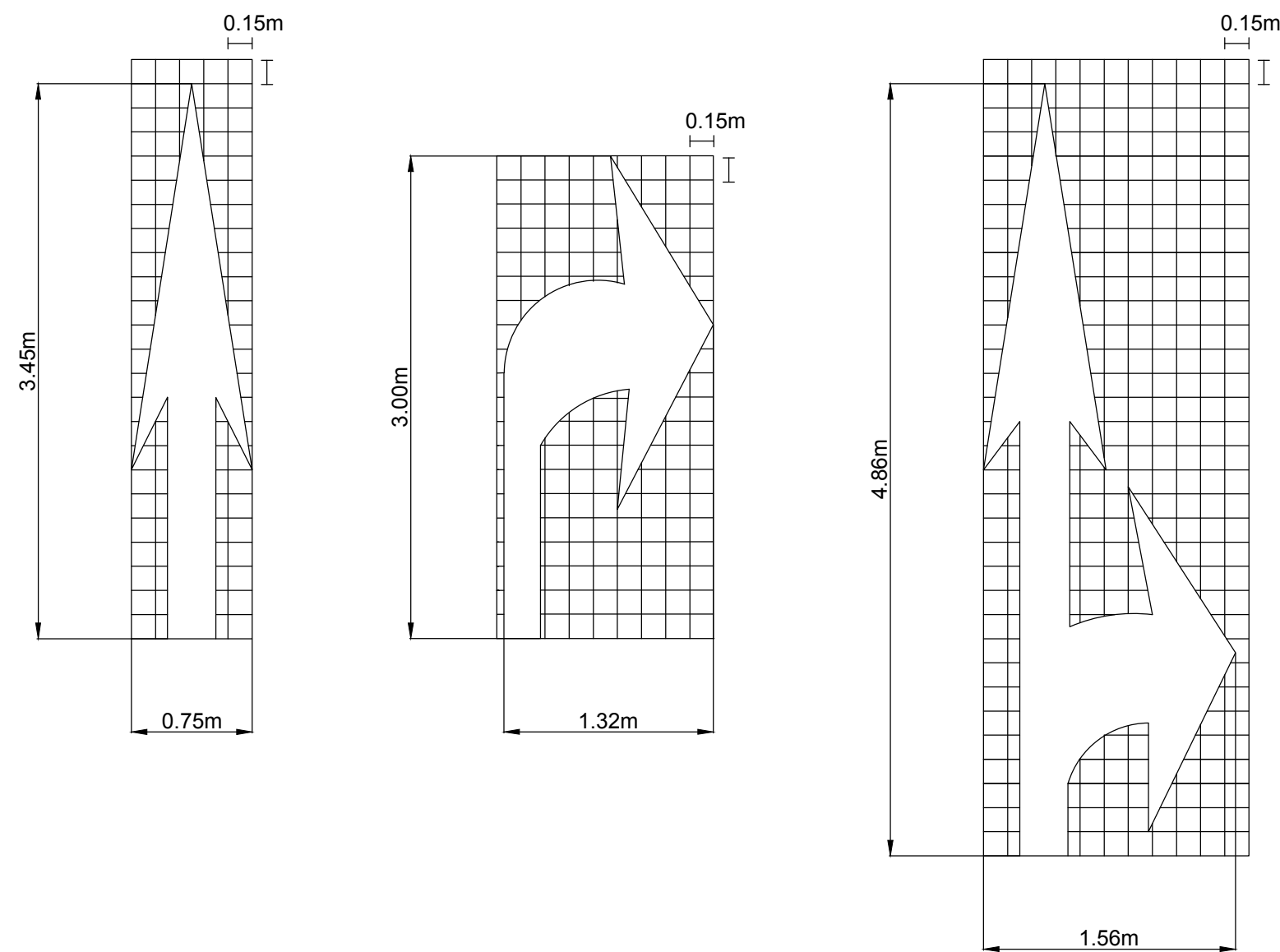
PWOSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

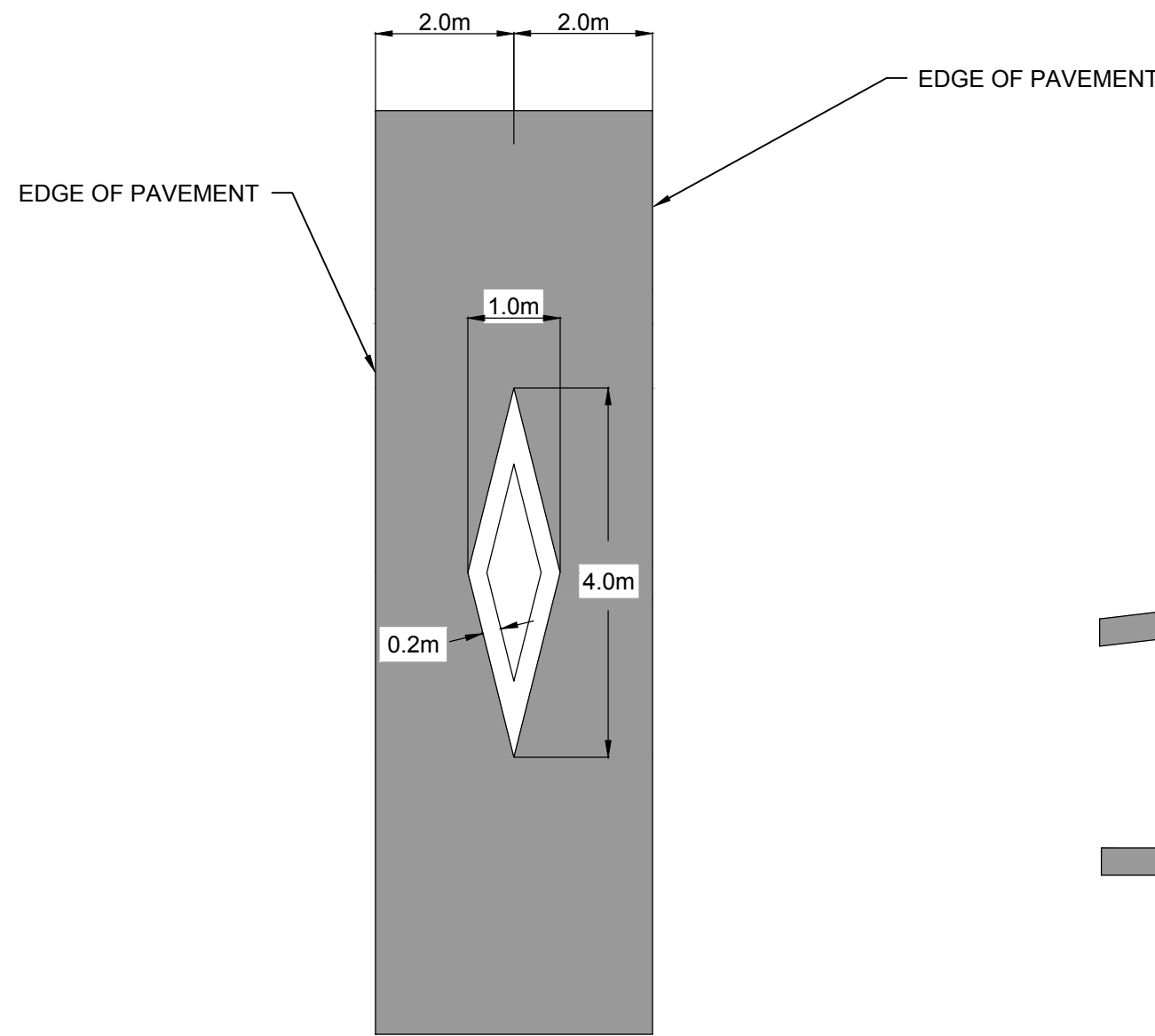
drawing title
DRAINAGE PLAN

0 5 10
1:500 METERS

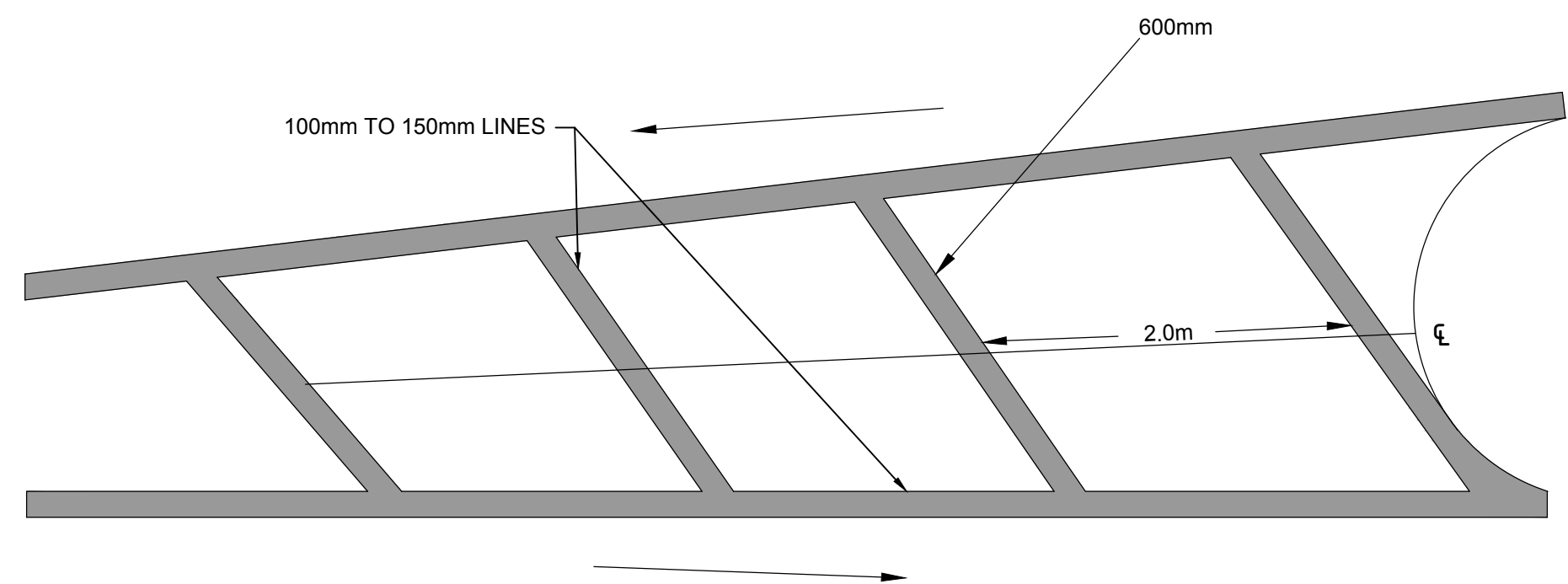
project no.	sheet	revision no.
CT164101	C17	0



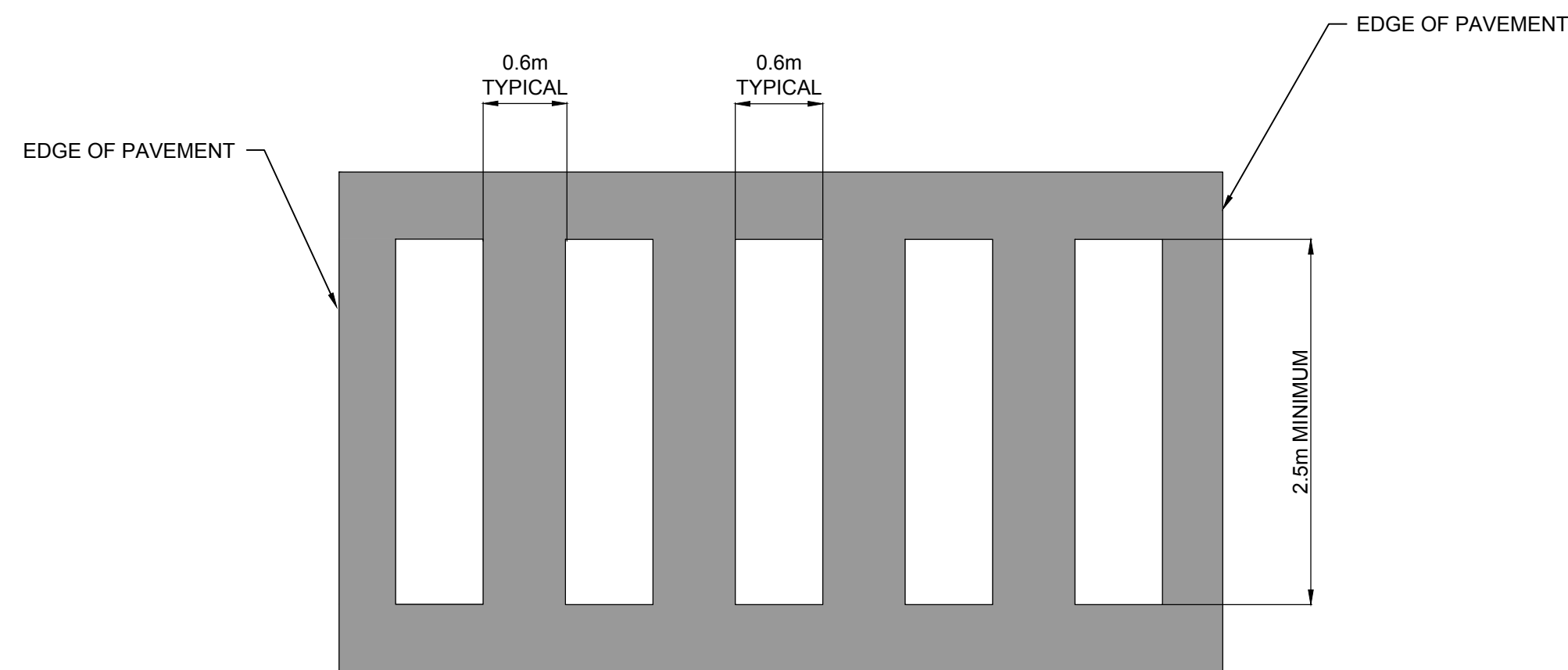
PAVEMENT ARROWS
NOT TO SCALE



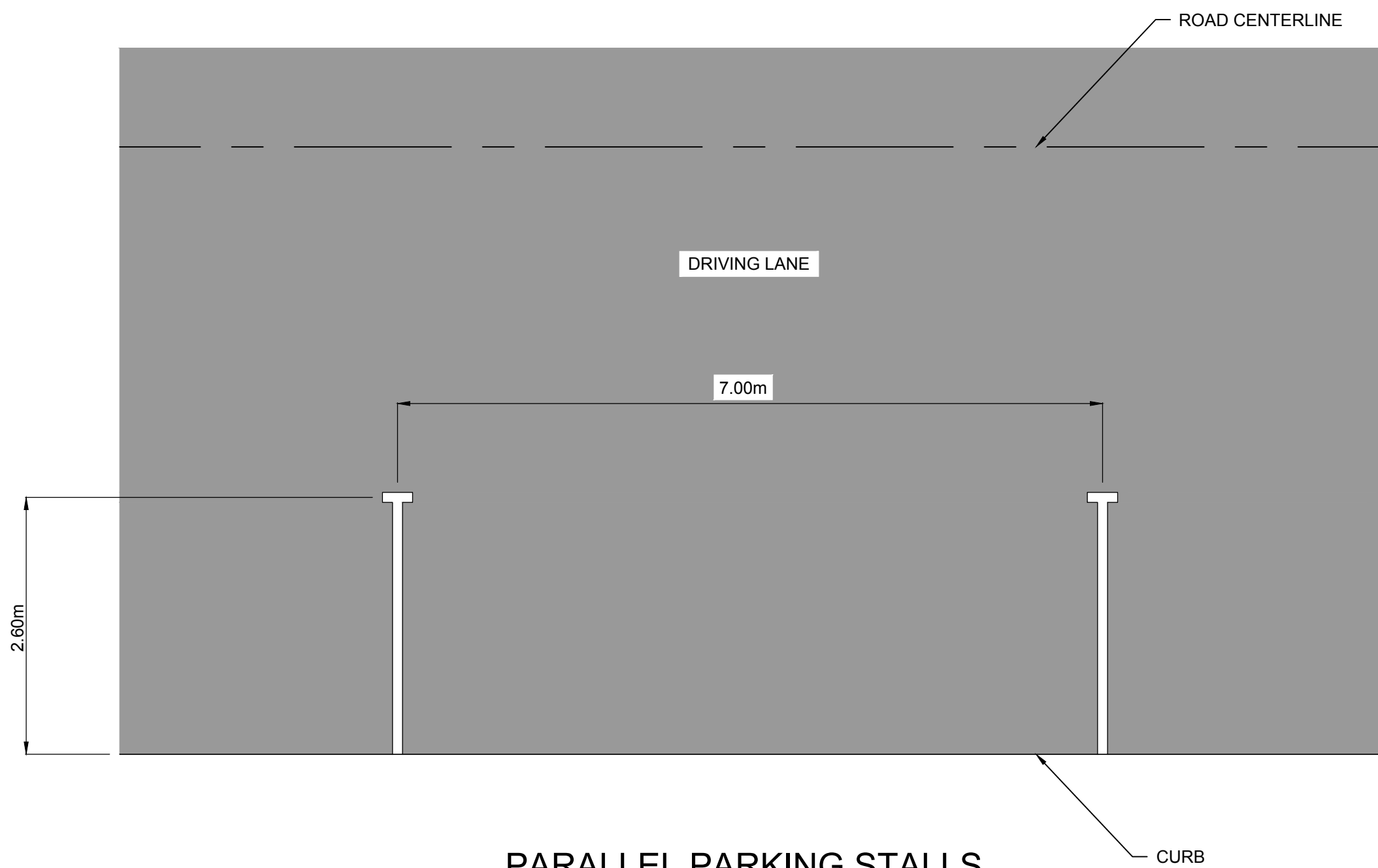
DIAMOND SYMBOL FOR BUSES LANE
NOT TO SCALE



NO PARKING / GORE AREA MARKING
NOT TO SCALE



ZEBRA CROSSWALK
NOT TO SCALE



PARALLEL PARKING STALLS
NOT TO SCALE

PRELIMINARY
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NOTES:
1. ALL MARKING DETAILS TO FOLLOW
MUTCDC.

Consultant's Name
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PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

**MOUNTAIN AVENUE
IMPROVEMENTS**

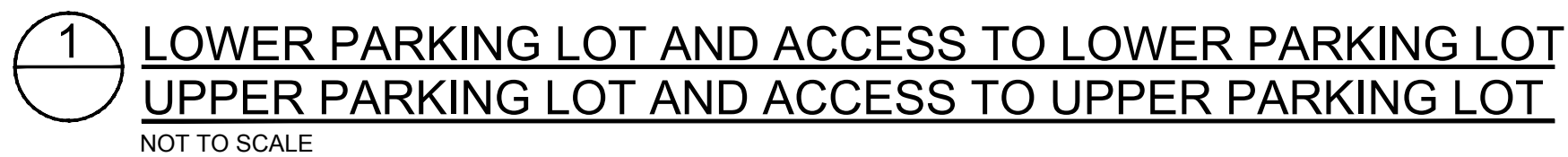
approved by
AA
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MA
drawn by
TW
PWGSC Project Manager
LM
PWGSC, Architectural and Engineering Resources Manager

Client
PARKS CANADA AGENCY

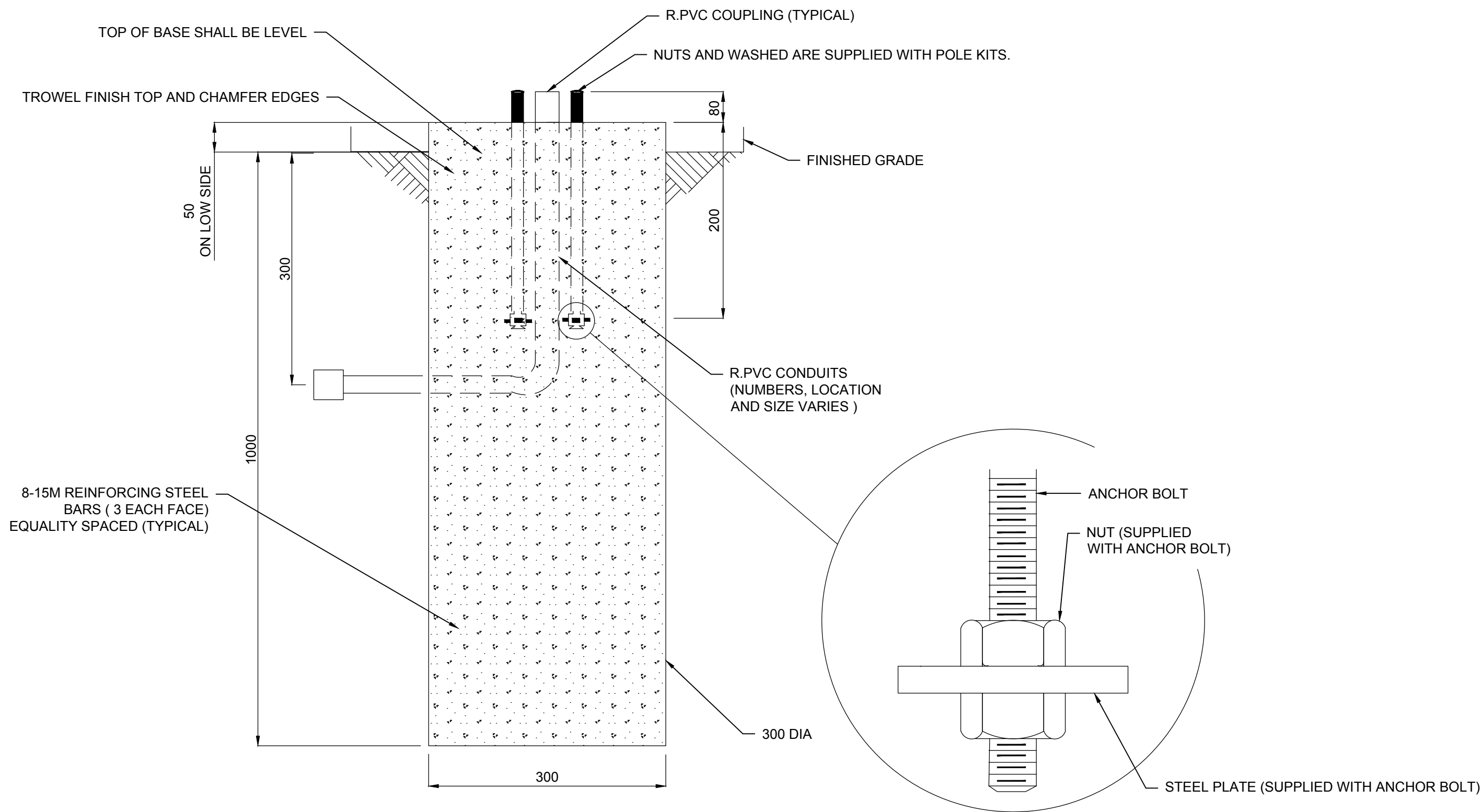
drawing title
**TYPICAL PAVEMENT MARKING
DETAILS**

NOT TO SCALE

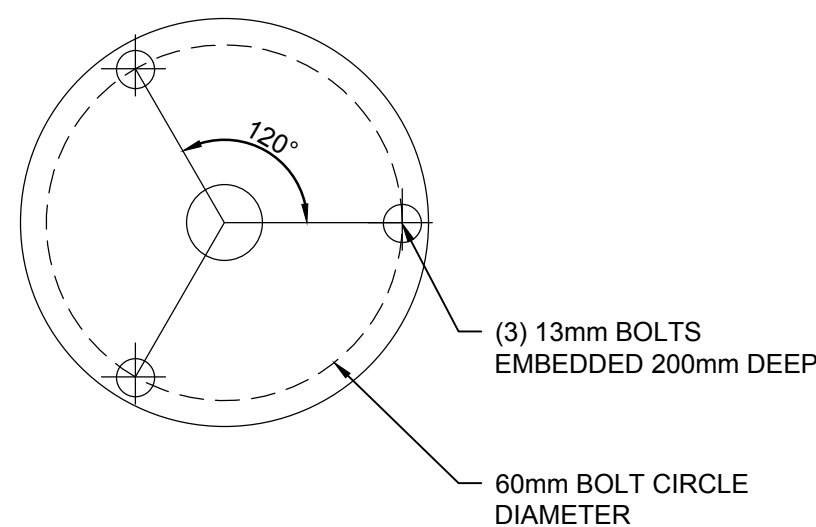
project no.	sheet	revision no.
CT164101	C18	0



project no.	sheet	revision no.
CT164101	C19	0



7
A **BOLLARD CYLINDRICAL SHAPE CONCRETE BASE-ELEVATION**
(0.3m BEYOND CONCRETE PAVING)
NOT TO SCALE

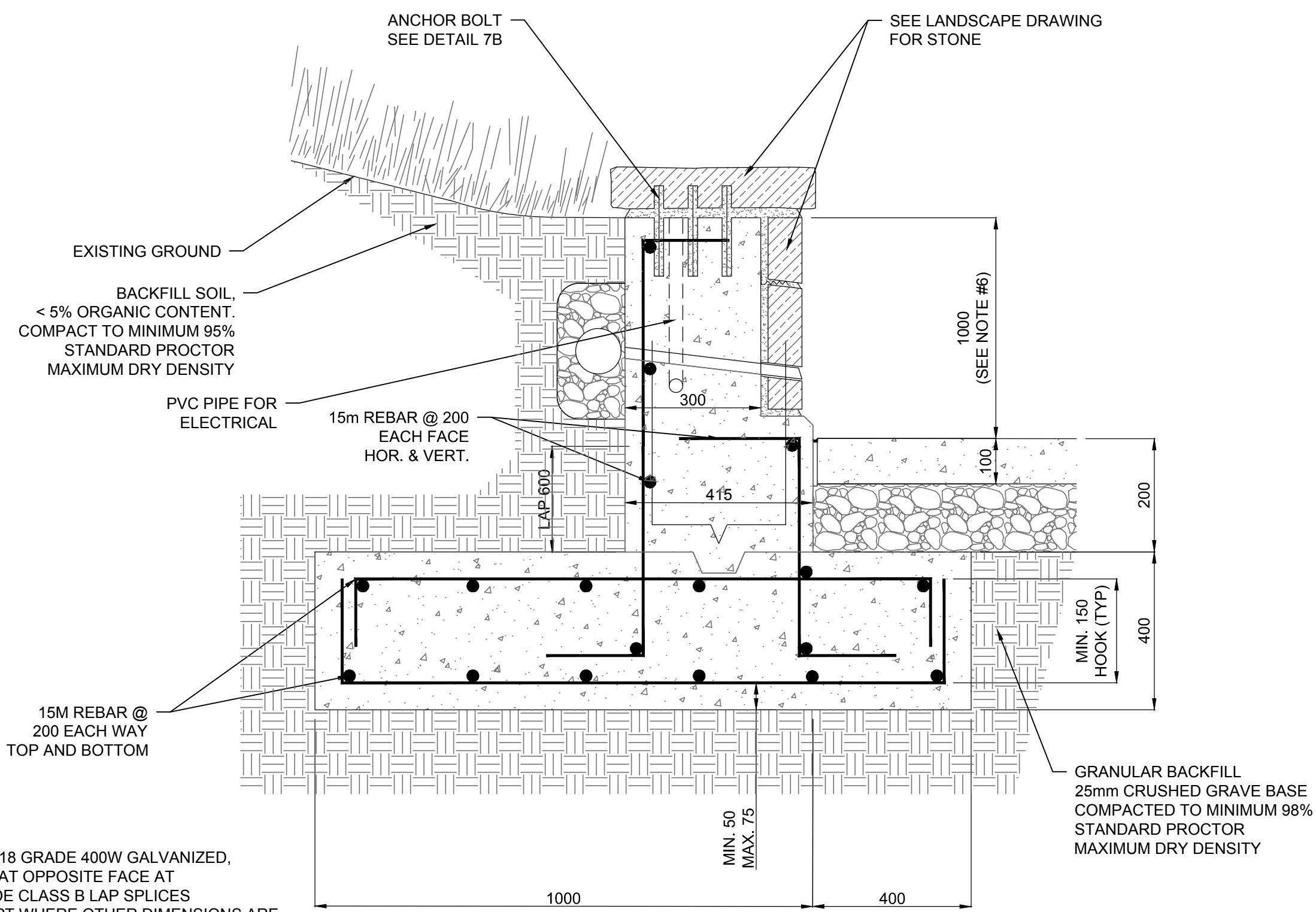


7
B **BOLLARD BASE DETAIL**
NOT TO SCALE

NOTE: REINFORCING STEEL: CSA G30.18 GRADE 400W GALVANIZED, DEFORMED BARS. HOOK BARS AT OPPOSITE FACE AT DISCONTINUOUS ENDS. PROVIDE CLASS B LAP SPLICES THROUGHOUT AS TABLE EXCEPT WHERE OTHER DIMENSIONS ARE SHOWN. TIE & SECURE IN PLACE PRIOR TO PLACING CONCRETE.

LAP SPLICE LENGTH TABLE		
BAR	TOP BARS*	OTHERS
10M	550	420
15M	850	650
20M	1100	850
25M	1750	1350

- * TOP BAR IS DEFINED AS A BAR HAVING A MINIMUM OF 300mm OF CONCRETE BENEATH IT.
- 75mm FOR CONCRETE CAST AGAINST SOIL
- 50mm FOR CONCRETE CAST AGAINST ALL OTHER SURFACES UNLESS SPECIFICALLY NOTED.



8
RETAINING WALL-DETAIL
NOT TO SCALE

NOTES CONTINUED:

- THE CONTRACTOR SHOULD SUBMIT THE SHOP DRAWINGS FOR THE RETAINING WALLS SHOWING THE BOLLARDS INSTALLATION TO BE REVIEWED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE IN COORDINATION WITH THE CONSULTANT PRIOR TO THE PROCUREMENT OF THE BOLLARDS.

PRELIMINARY
NOT FOR CONSTRUCTION

NOTES:

- ALL WORKMANSHIP, COMPONENT DESIGN & MATERIALS SHALL BE TO THE ALBERTA BUILDING CODE 2014 OR BETTER.
- CHECK ALL DIMENSIONS, ELEVATIONS & DETAILS PRIOR TO CONSTRUCTION OR FABRICATION. REPORT ANY DISCREPANCIES OR DESIRED MODIFICATIONS TO DEPARTMENTAL REPRESENTATIVE.
- ALL STRUCTURE CONCRETE EXPOSURE CLASS C-1 TO CAN/CSA A23. ALL CONCRETE TO HAVE 35 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. MAXIMUM X/CM RATIO 0.40. 5-6% ENTRAINED AIR. SEE SPECIFICATION FOR DETAILED REQUIREMENTS. MAX. SLUMP FOR WALLS, FOOTINGS, FOUNDATIONS, SLABS ON GRADE IS 60mm
- PROVIDE 20mm CHAMFER AT ALL EXPOSED CONCRETE EDGES UNLESS OTHERWISE NOTED.
- RETAINING WALLS ARE COVERED BY RUNDLE STONES. REFER TO LANDSCAPE DRAWINGS.
- RETAINING WALL HEIGHT IS 1000mm AT BUS STOP AREA AND VARIES FROM 400mm TO 600mm ALONG THE ACCESS ROAD TO THE LOWER PARKING LOT.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
- FOR CONCRETE PAVING DETAIL, REFER TO LS DRAWINGS. FOR ELECTRICAL CONDUIT LOCATION, REFER TO ELECTRICAL DRAWINGS.

Consultant's Name Nom de l'expert-conseil	Eng. Stamp Sceau de l'ingénieur
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0	ISSUED FOR TENDER	18/08/09
revisions	description	date
Client		

PARKS CANADA AGENCY

BANFF NATIONAL PARK, P.O. BOX 900
BANFF, ALBERTA, T1L 1K2

project title

MOUNTAIN AVENUE IMPROVEMENTS

approved by

AA

designed by

GB

drawn by

TW

PWOSC Project Manager

LM

PWOSC, Architectural and Engineering Resources Manager

Client

PARKS CANADA AGENCY

drawing title

TYPICAL DETAILS AND SECTIONS 2

project no.

CT164101

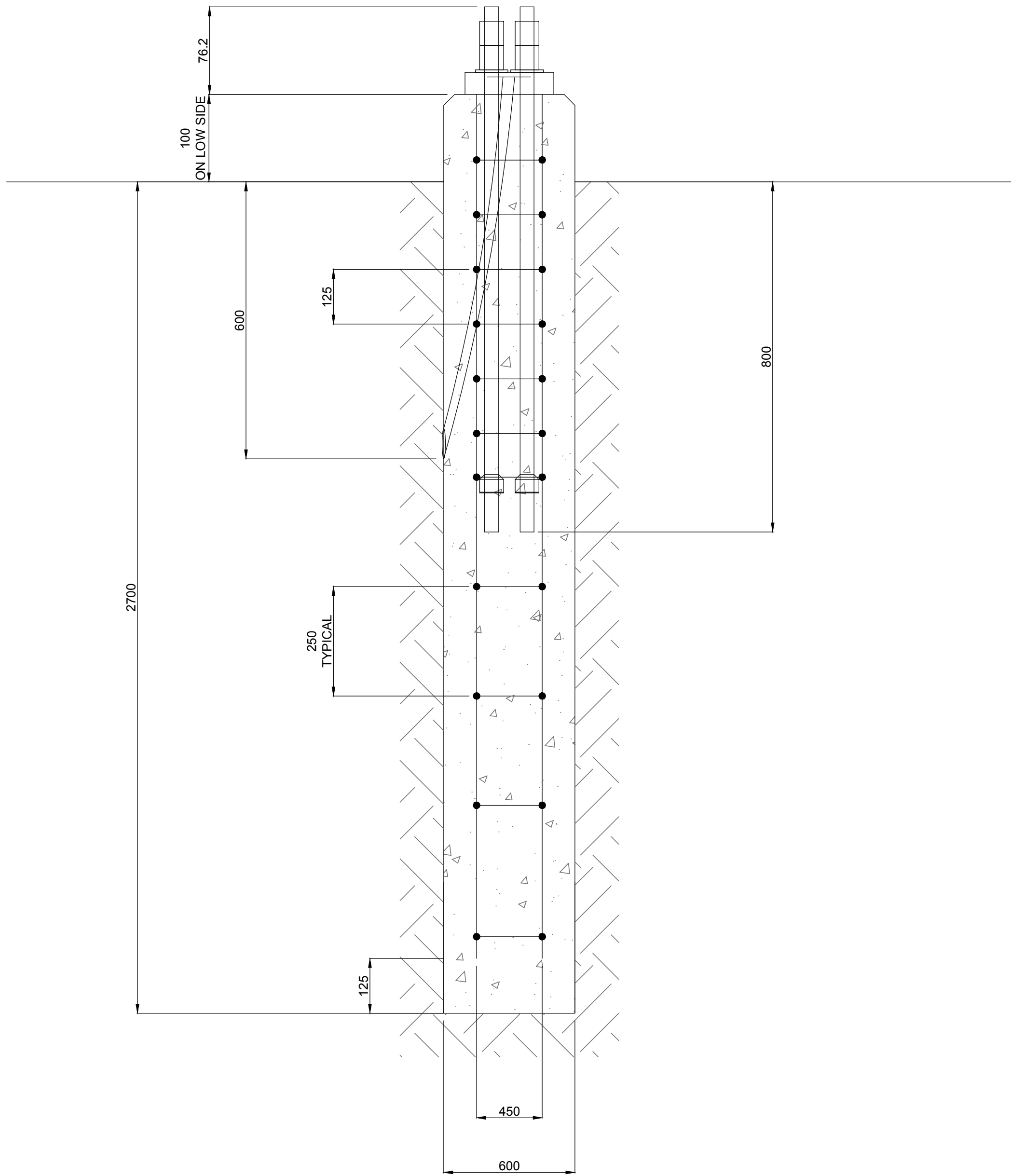
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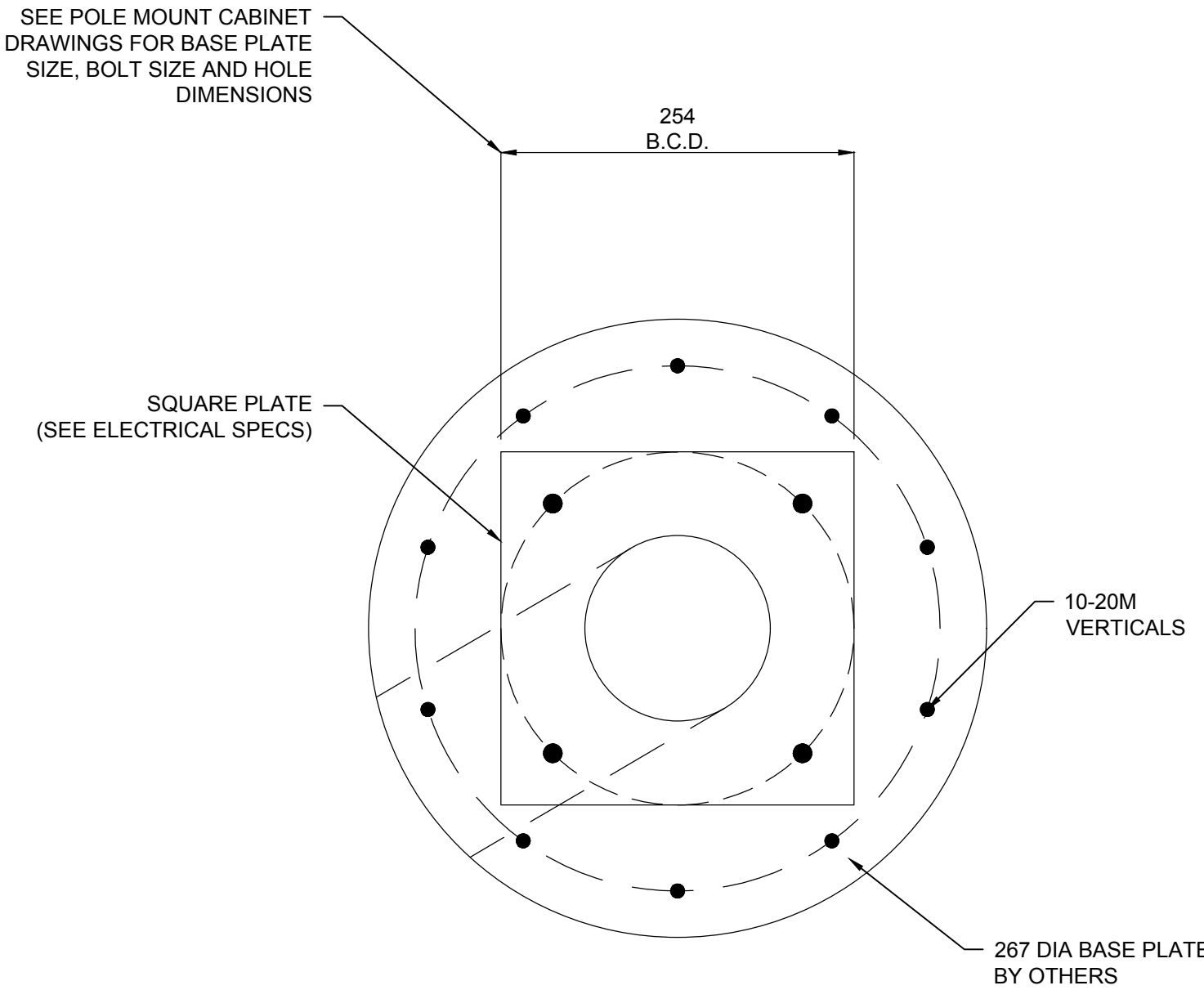
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11
A

FOOTING FOR 7.8m HIGH LIGHT POLE

NOT TO SCALE



11
B

PLAN

NOT TO SCALE

NOTES:

1. MINIMUM CONCRETE COVERAGE OVER WIRE REINFORCEMENT STEEL SHALL BE 75mm.
2. SONOTUBE SHALL BE USED TO FORM THE TOP 600mm OF THE FOUNDATION. FULL LENGTH ONLY REQUIRED IF UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED.
3. THE DUCT SHALL EXTEND 40mm ABOVE THE TOP OF THE FOUNDATION.
4. A 25mm WIDE CHAMFER SHALL BE TROWELLED INTO THE TOP EDGE OF THE FOUNDATION.
5. THE DUCT SHALL EXTEND FROM THE SIDE OF BASE A MINIMUM OF 150mm.
6. THE TOP OF THE FOUNDATION SHALL BE SMOOTH AND LEVEL WITHIN 3mm BETWEEN ANY TWO BOLTS.
7. THE BOLTS SHALL BE PLUMB AND SET TO THE BOLT CIRCLE DIAMETER. THE MAXIMUM DEVIATIONS FROM TRUE DIMENSIONS ON ANY TWO BOLTS SHALL NOT EXCEED 5mm IN TOTAL.
8. THE BOTTOM OF THE FOUNDATIONS SHALL BE PLACED ON UNDISTURBED OR COMPACTED SOIL.
9. REMOVE GROUND WATER ENTERING EXCAVATION BY APPROVED DEWATERING METHODS.
10. STABILITY OF EXISTING AND/OR NEW STRUCTURES DURING CONSTRUCTION REMAINS THE RESPONSIBILITY OF THE CONTRACTOR.
11. NOTIFY THE DESIGN PROFESSIONAL OF ANY SITE CONDITIONS THAT DIFFER FROM DRAWINGS.

REBAR CAGE:

1. TEN 20mm VERTICAL BARS SHALL BE EQUALLY SPACED
2. TEN 10mm TIES SHALL BE 250mm ON CENTRE EXCEPT AS SHOWN AND TACK WELDED.
3. REINFORCING STEEL SHALL BE GRADE 400 DEFORMED BARS.

MATERIAL LIST		
ITEM	QTY	DESCRIPTION
1	4	BOLT - ANCH 25.4mmØ X 460mm GRADE A-325M
2	1	REBAR CAGE
3	1	SONOTUBE 310mm
4	1	DUCT BEND 50mmØ
5	0.9m³	CONCRETE 35.0-MPA
6	4	GALVANIZED ANCHOR NUT 25.4mmØ
7	4	GALVANIZED LOCK NUT 25.4mmØ
8	4	GALVANIZED HEX NUT 25.4mmØ
9	4	GALVANIZED FLAT WASHER 25.4mmØ

PRELIMINARY
NOT FOR CONSTRUCTION

NOTES:

1. ALL WORKMANSHIP, COMPONENT DESIGN & MATERIALS SHALL BE TO THE ALBERTA BUILDING CODE 2014 OR BETTER.
2. CHECK ALL DIMENSIONS, ELEVATIONS & DETAILS PRIOR TO CONSTRUCTION OR FABRICATION. REPORT ANY DISCREPANCIES OR DESIRED MODIFICATIONS TO DEPARTMENTAL REPRESENTATIVE.
3. ALL STRUCTURE CONCRETE EXPOSURE CLASS C-1 TO CAN/CSA A23. ALL CONCRETE TO HAVE 35 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS. MAXIMUM X/CM RATIO 0.40. 5-6%ENTRAINED AIR. SEE SPECIFICATION FOR DETAILED REQUIREMENTS. MAX. SLUMP FOR WALLS, FOOTINGS, FOUNDATIONS, SLABS ON GRADE IS 60mm
4. PROVIDE 20mm CHAMFER AT ALL EXPOSED CONCRETE EDGES UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

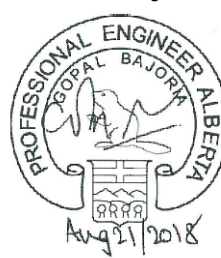
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TYPICAL DETAILS AND SECTIONS 3

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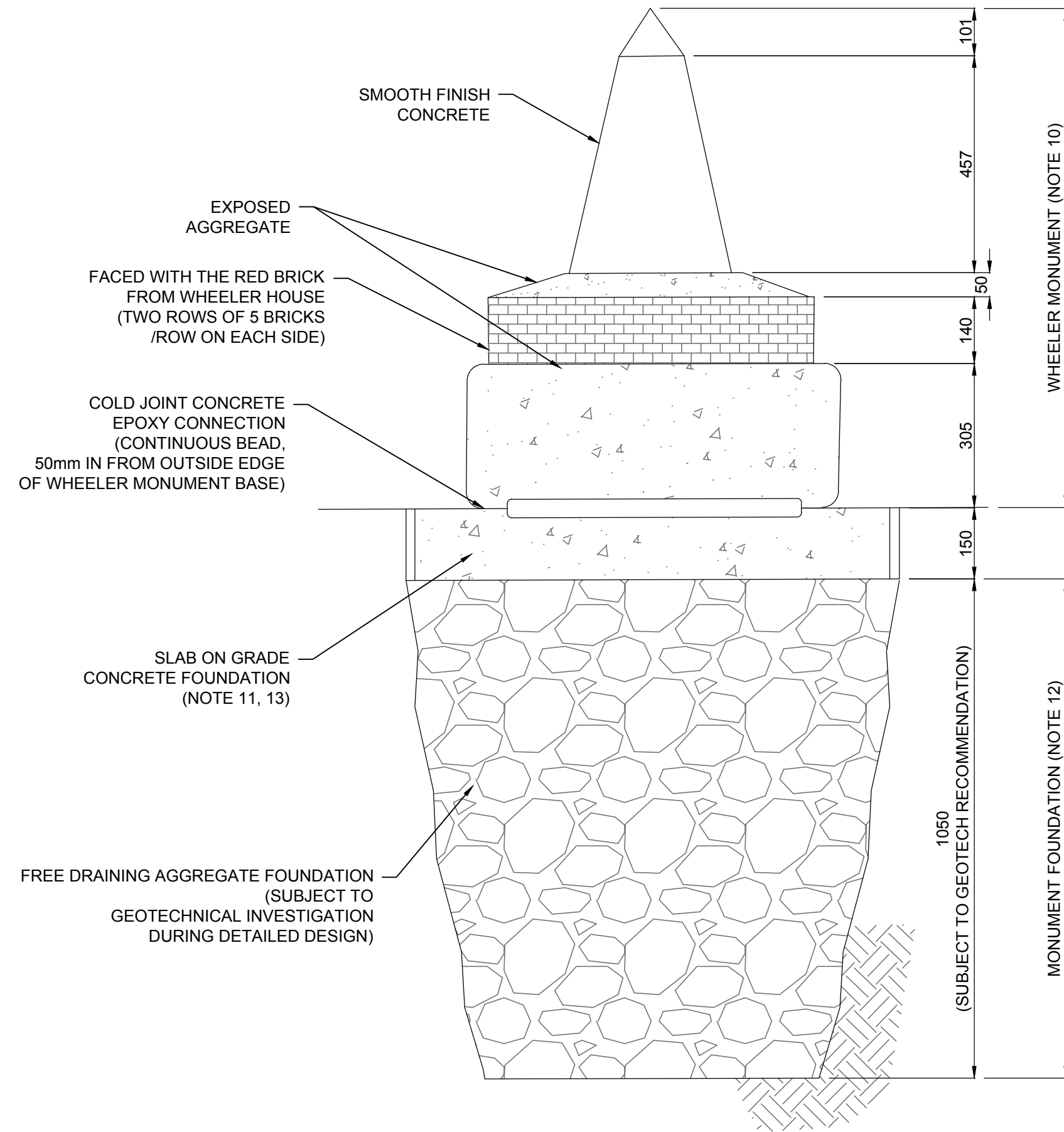
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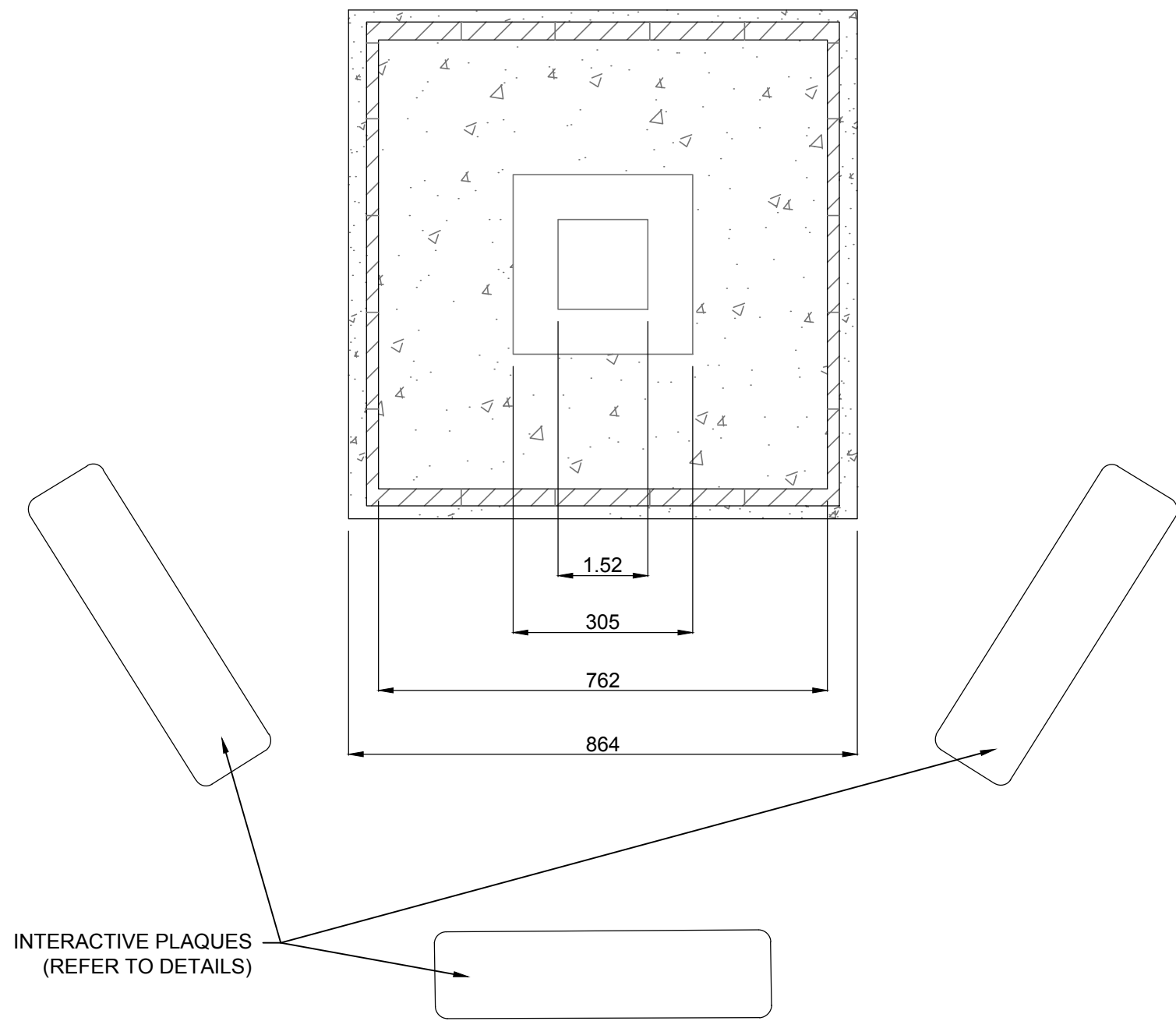
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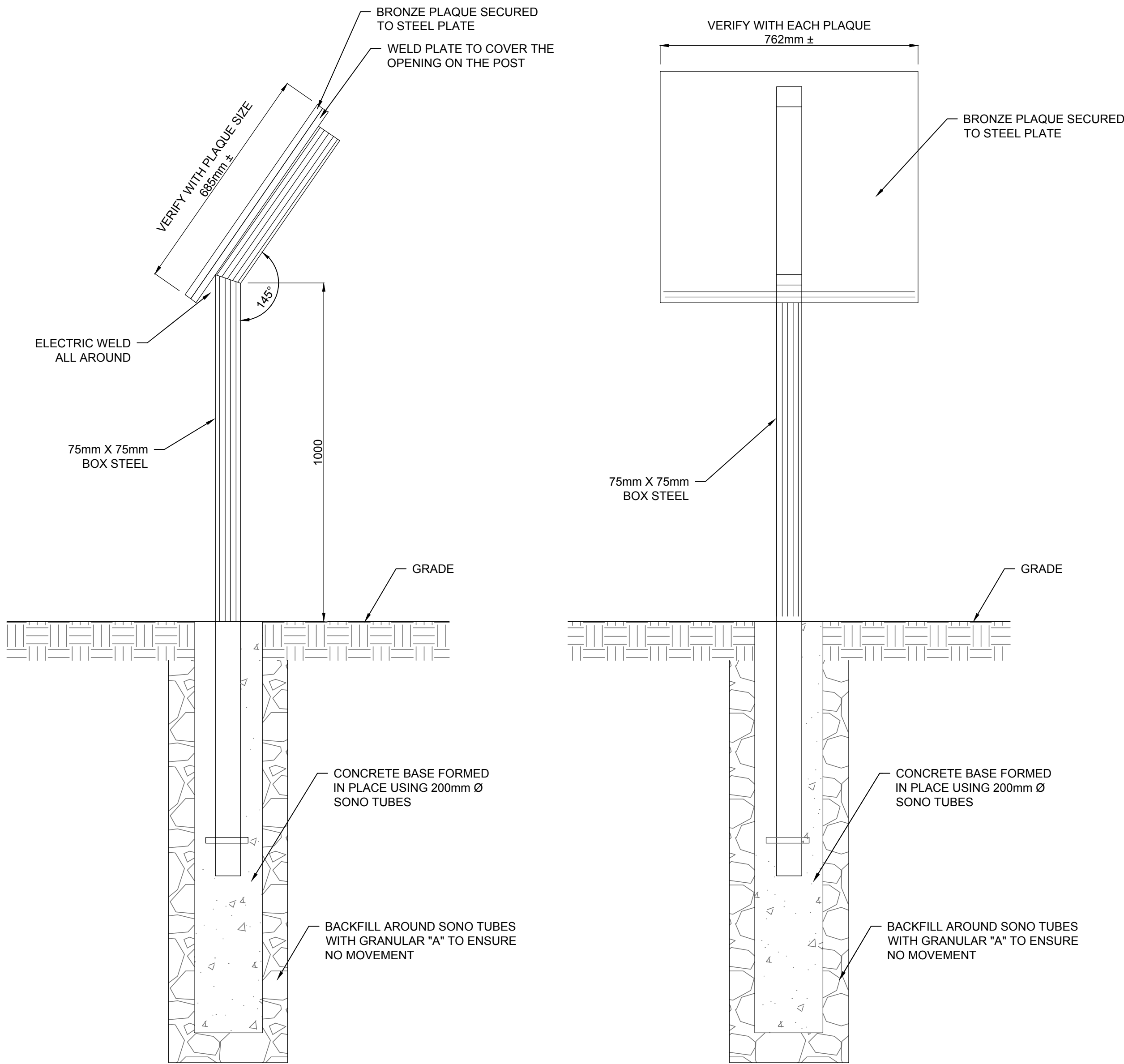
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WHEELER CAIRN
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- NOTES:
1. DRAWING AND DETAILS FOR PLAQUE AND MONUMENT WERE SUPPLIED BY PARKS CANADA AND ARE NOT ENGINEERED DETAILS. THE CONTRACTOR IS RESPONSIBLE TO REVISIT THE DESIGN OF THE FOUNDATION FOR THE MONUMENT AND THE PLAQUES, BASED ON THE FINAL SHAPE PROVIDED BY PARKS CANADA.
 2. OVERALL DIMENSIONS OF STEEL PLATE ARE GENERAL ONLY.
 3. 10mm THICK STEEL PLATE SHOULD BE CUT AND DRILLED TO MATCH EACH SPECIFIC PLAQUE.



STEEL PLAQUE STAND
SCALE 1:10

PRELIMINARY NOT FOR CONSTRUCTION

- SPECIFICATION:
1. STEEL PLATE - CSA 640.21-1976 TYPE 33 W.
 2. STEEL PLATE - CSA 640.20-1973 CLASS H.
 3. SCREWS: COMMERCIAL BRASS OR BRONZE ONLY FLAT HEAD AND MACHINE TO CSA 835.1-1972 SIZE TO SUIT.
 4. INSULATOR MATERIAL: ASPHALTIC PAINT, CLASS H.
 5. PAINT: PRIMER CGSB 1GP-40; 1 COAT/ALL STEEL SURFACES. FINISH CGSB 1GP-59; 2 COATS - BLACK ALL STEEL SURFACES.
 6. THREADED ROD: MILD STEEL/PRIME WITH ZINC RICH PAINT PRIOR TO PAINTING.
 7. CONCRETE: CLASS C/300 P.S.I. @ 28 DAYS 5% AIR ENTRAINMENT, SLUMP MIN. 50mm, MAX. 100mm
 8. INSTALLATION: BORE HOLE FOR FOUNDATION WITH AN AUGER TO ENSURE LEAST POSSIBLE DISTURBANCE TO SITE. USE EXTREME CARE IN THE ALIGNMENT OF ANCHOR RODS TO ENSURE POST IS PLUM IN BOTH DIRECTIONS. TOP OF CONCRETE FOUNDATION TO BE FLUSH WITH SURROUNDING GRASS. RESTORE GROUNDS TO ORIGINAL CONDITION.
 9. BRONZE PLAQUE SUPPLIED BY PARKS CANADA FOR INSTALLATION BY CONTRACTOR.
 10. WHEELER MONUMENT TO BE SUPPLIED BY PARKS CANADA FOR INSTALLATION BY CONTRACTOR.
 11. CONCRETE FOUNDATION TO CONFORM TO CSA A23.1.
 12. ALL DESIGNS ARE SHOWN AS CONCEPTUAL IN NATURE AND SUBJECT TO DETAILED DESIGN.
 13. PRELIMINARY CONCRETE MIX DESIGN (SUBJECT TO GEOTECH REVIEW DURING DETAILED DESIGN):
 - CLASS C-1 CONCRETE
 - W/C: 0.4
 - AIR ENTRAINMENT: 5-8%
 - AGGREGATE SIZE: 19mm (MAX)
 - COVER FOR BARS: 75mm

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PLAQUE AND MONUMENT DETAILS

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