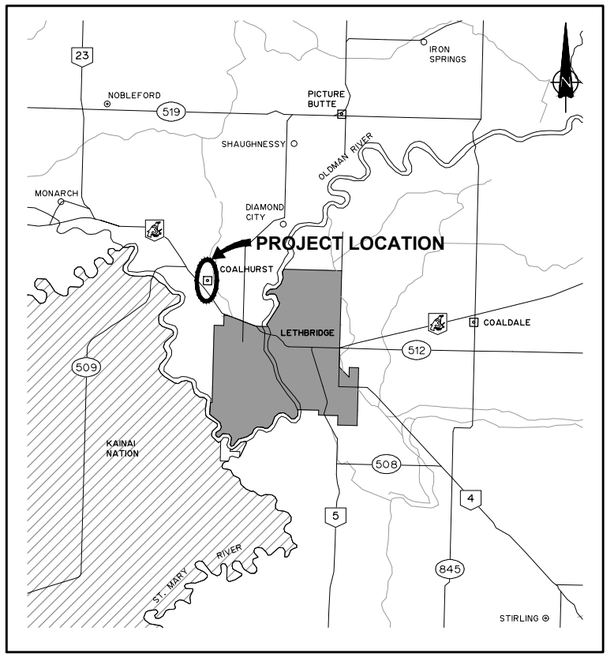
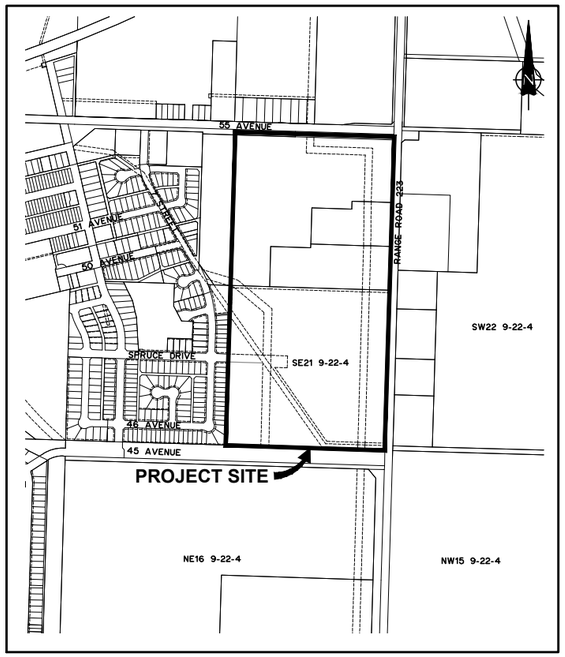
SET _____



LOCATION PLAN



SITE PLAN

Town of Coalhurst
A Place to Call Mine

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND

FOR CONSTRUCTION

1450-087-00

MPE Engineering Ltd.

LIST OF DRAWINGS

GENERAL

--	TITLE PAGE
G0.1	LIST OF DRAWINGS

CIVIL

C0.1	CIVIL LEGEND
C0.2	CIVIL ABBREVIATIONS
C1.1	OVERALL SITE PLAN
C1.2	MAIN WETLAND UNDERGROUND SITE PLAN
C1.3	LAFARGE WETLAND UNDERGROUND SITE PLAN
C2.1	UNDERGROUND PLAN PROFILE LAFARGE WETLAND TO MAIN WETLAND STATION 0+000 TO STATION 0+180
C2.2	UNDERGROUND PLAN PROFILE LAFARGE WETLAND TO MAIN WETLAND STATION 0+180 TO STATION 0+360
C2.3	UNDERGROUND PLAN PROFILE LAFARGE WETLAND INLET
C2.4	UNDERGROUND PLAN PROFILE MAIN WETLAND WEST INLET
C2.5	UNDERGROUND PLAN PROFILE MAIN WETLAND SOUTH WEST INLET
C2.6	UNDERGROUND PLAN PROFILE MAIN WETLAND OUTLET
C3.1	MAIN WETLAND GRADING PLAN
C3.2	LAFARGE WETLAND GRADING PLAN
C3.3	MAIN WETLAND CROSS SECTIONS 1 OF 3
C3.4	MAIN WETLAND CROSS SECTIONS 2 OF 3
C3.5	MAIN WETLAND CROSS SECTIONS 3 OF 3
C3.6	LAFARGE WETLAND CROSS SECTIONS 1 OF 2
C3.7	LAFARGE WETLAND CROSS SECTIONS 2 OF 2
C3.8	DRAINAGE SWALE SITE PLAN
C3.9	RV SANITARY DISPOSAL SITE PLAN
C4.1	MAIN WETLAND RESTORATION SITE PLAN
C4.2	LAFARGE WETLAND RESTORATION SITE PLAN
C4.3	MAIN WETLAND VEGETATION RESTORATION PLAN
C4.4	LAFARGE WETLAND VEGETATION RESTORATION PLAN
C4.5	VEGETATION RESTORATION TABLE
C5.1	ST VAULT 8 STRUCTURE DETAILS
C5.2	TYPICAL STRUCTURE DETAILS
C5.3	METER VAULT DETAIL
C5.4	RV SANITARY DISPOSAL SITE CONCRETE PAD DETAIL
C5.5	MAIN WETLAND PEDESTRIAN BRIDGE DETAIL
C5.6	DRAINAGE SWALE PEDESTRIAN BRIDGE DETAIL
C5.7	TYPICAL DETAILS 1 OF 4
C5.8	TYPICAL DETAILS 2 OF 4
C5.9	TYPICAL DETAILS 3 OF 4
C5.10	TYPICAL DETAILS 4 OF 4

ARCHITECTURAL

A1.1	ELEVATIONS
A2.1	PLAN
A2.2	ROOF PLAN
A3.1	SECTION
A3.2	SECTIONS AND DETAILS
A4.1	DETAILS

ELECTRICAL

E0.1	ELECTRICAL LEGEND
E1.1	OVERALL SITE PLAN
E1.2	ELECTRICAL SITE PLAN 1 OF 2
E1.3	ELECTRICAL SITE PLAN 2 OF 2
E1.4	COMMUNICATION ARCHITECTURE DEMOLITION
E1.5	COMMUNICATION ARCHITECTURE PROPOSED
E1.6	SINGLE LINE DIAGRAM
E1.7	ELECTRICAL BUILDING LAYOUT
E1.8	LIGHTING JUNCTION BOX
E1.9	CONTROL BUILDING PLC IO
E1.10	SCHEDULES
E1.11	DETAILS 1 OF 2
E1.12	DETAILS 2 OF 2
E2.1	MAIN LIFT STATION COMMUNICATION AND CONTROL
E3.1	DISTRIBUTION PUMPING STATION COMMUNICATION AND CONTROL
E4.1	SUNDANCE RIDGE COMMUNICATION AND CONTROL
E5.1	METER VAULT COMMUNICATION

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature _____
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LIST OF DRAWINGS

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	
DATE	JULY 2022	DRAWING	G0.1

PROPOSED	LEGAL SURVEY AND CONTROL	EXISTING
	ALBERTA SURVEY CONTROL MONUMENT	ASCM No.
	CONTROL POINT	CP No.
	IRON PIN	IP
	PROPERTY LINE	
	UTILITY RIGHT OF WAY EASEMENT	

PROPOSED	SURFACE FEATURES	EXISTING
XXX / XXX.XX	ABBREVIATION ELEVATION	XXX / XXX.XX
	ASPHALT SWALE	
	BOLLARD	
	BOREHOLE	
	BUSH	
	BUS PAD	BP
	BUS SHELTER	BS
	CONCRETE SWALE	
	CURB AND GUTTER	
	DRAINAGE DITCH	
	DRAINAGE SWALE	
	DRAINAGE SWALE BACKFILLED	
	EDGE OF PAVEMENT	
ET	ELECTRICAL TRANSFORMER	ET
	FENCE BARBED WIRE	
	FENCE CHAIN LINK	
	FENCE TO BE REMOVED	
GW	GUY WIRE	GW
	GRADE BREAK	
LS	LIGHT STANDARD	LS
	MAIL BOX	
	MONOLITHIC SIDEWALK	
PED	PEDESTAL	PED
PP	POWER POLE	PP
	RAILWAY	
	ROAD MARKING DELINEATION	
	ROAD RECONSTRUCTION	
	SEPARATE SIDEWALK	
	SIGN	
	SILT FENCE	
TS	TRAFFIC SIGNAL	TS
	TREE	

PROPOSED	SHALLOW UTILITIES	EXISTING
C	CABLE	C
FO	FIBRE OPTIC	FO
G	GAS	G
	GAS ABANDONED	G
OH	OVERHEAD POWER	OH
T	TELEPHONE	T
UG	UNDERGROUND POWER	UG

PROPOSED	FITTINGS	EXISTING
	BELLxBELL ADAPTER	
	BELLxFLANGE ADAPTER	
	COUPLER	
	CROSS	
	ELBOW 90°	
	ELBOW 45°	
	LOT SERVICE	
	MANHOLE	
	PLUG	
	REDUCER	
	TEE	
	VAULT	

PROPOSED	WATERWORKS	EXISTING
	BUTTERFLY VALVE	
	GATE VALVE	
	HYDRANT	
	CURB STOP	
W 150	WATER MAIN	W 150
	WATER MAIN ABANDONED	

PROPOSED	SEWERS	EXISTING
	CATCH BASIN	
	CULVERT	
	CLEANOUT	
	INLET STRUCTURE	
	LANDSCAPE CATCH BASIN	
	OUTFALL STRUCTURE	
	PLUG VALVE	
S 200	SANITARY	S 200
S 200	SANITARY ABANDONED	S 200
ST 200	STORM	ST 200
ST 200	STORM ABANDONED	ST 200
TD 100	TILE DRAIN	TD 100

NOTES:

1. ALL ELEVATIONS AND STATIONS IN METERS. PIPE LENGTHS, PIPE SIZES AND DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.

UTM 12 NAD 83
COORDINATES

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
CIVIL LEGEND

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	
DATE	JULY 2022	DRAWING	C0.1

ABANDONED	AB
ACRE	AC
AIR RELEASE MANHOLE	AR
ALBERTA SURVEY CONTROL MONUMENT	ASCM
ASBESTOS CEMENT	AC
ASPHALTIC CONCRETE PAVEMENT	ACP
AT	@
AVENUE	AVE
BACK OF WALK	BOW
BEDDING	BED
BEGINNING OF CURVE	BC
BEGINNING OF VERTICAL CURVE	BVC
BENCH MARK	BM
BLOCK	BLK
BOTTOM	BTM
BOTTOM OF PIPE	BOP
BOUNDARY	BDY
BOULEVARD	BLVD
BUILDING	BLDG
CABLE	C
CANADIAN NATIONAL RAILWAY	CNR
CANADIAN PACIFIC RAILWAY	CPR
CANADIAN STANDARDS ASSOCIATION	CSA
CAPACITY	CAP
CAST IRON	CI
CATCH BASIN	CB
CATHODIC PROTECTION	CP
CENTRE LINE	CL
CERTIFICATE OF TITLE	C OF T
CHAIN LINK FENCE	CLF
CHECK VALVE IN MANHOLE	CVM
CLASS	CL
CLEAN OUT	CO
COMMUNITY RESERVE	COMM RES
COMPLETE WITH	C/W
CONCRETE	CONC
CONDUIT	COND
CORRUGATED METAL PIPE	CMP
CORRUGATED STEEL PIPE	CSP
COUPLING	CPLG
CREEK	CRK
CRESCENT	CRES
CROSSFALL	X-FALL
CROSS SECTION	X-SEC
CUBIC METRE PER SECOND	m^3/s
CULVERT	CULV
CURB AND GUTTER	C&G
CURED IN PLACE PIPE	CIPP
CURVE TO SPIRAL	CS
DEGREE	°
DELTA	Δ
DIAMETER	ϕ
DIMENSION RATIO	DR
DRAWING	DWG
DRIVEWAY	DWY
DUCTILE IRON	DI
DWELLING	DWLG
EAST	E
EDGE OF GRAVEL	EOG
EDGE OF PAVEMENT	EOP
EDGE OF ROAD	EOR
ELECTRICAL TRANSFORMER	ET
ELEVATION	ELEV
ENCASEMENT	ENC
END OF CURVE	EC
END OF VERTICAL CURVE	EVC
ENGINEER	ENG
ENVIRONMENTAL RESERVE	ER
EXTERIOR DROP	EXT DROP
EXISTING GROUND	EG

FACE OF CURB	FOC
FACE OF WALK	FOW
FIBRE OPTIC	FO
FINISHED GRADE	FG
FINISHED LANDSCAPE GRADE	FLG
FLANGE	FLG
FLAPPER GATE	FP
FLOOD PLAIN	FLD PLN
FLOOD WAY	FLD WY
FLOOR	FLR
FLOW RATE	Q
FOOTING	FTG
FORCE MAIN	FM
GALVANIZED	GALV
GALVANIZED IRON	GI
GAS	G
HECTARE	ha
HEIGHT	H
HIGH DENSITY POLYETHYLENE	HDPE
SANITITE HIGH PRESSURE	HP
HIGHWAY	HWY
HORIZONTAL	HOR OR H
HOSPITAL	HOSP
HYDRANT	HYD
INLET CHAMBER	IC
INLET CONTROL DEVICE	ICD
INLET/OUTLET STRUCTURE (DRY POND)	I/O
INSIDE DIAMETER	ID
INTERSECTION	INT
INVERT	INV
IRON PIN	IP
KILOGRAM	kg
KILOMETRES	km
KILOMETRES PER HOUR	km/h
RATE OF CURVATURE	K
LANDSCAPE CATCH BASIN	LSCB
LENGTH	L
LENGTH OF CURVE	LC
LENGTH OF VERTICAL CURVE	LVC
LIFT STATION	LS
LIP OF GUTTER	LG
LIP OF GUTTER RADIUS	LGR
LONG RADIUS	LR
LONG TANGENT	LT
LOW POINT	LP
LOW PROFILE CURB AND GUTTER	LPC&G
MANHOLE	MH
MANHOLE CATCH BASIN	MHCB
MAXIMUM	MAX
MEDIAN	MED
METRE	m
METRES PER SECOND	m/s
METER CHAMBER	MC
MIDDLE ORDINATE DISTANCE (VERTICAL SEPARATION FROM PI)	M
MILLIMETRE	mm
MINIMUM	MIN
MINUTES	'
MONOLITHIC SIDEWALK	MONO
MUNICIPAL RESERVE	MR
NORTH	N
NORTH EAST	NE
NORTH WEST	NW
NOT TO SCALE	NTS
NUMBER	No.
ON CENTRE	OC
OUTLET CHAMBER	OC
OUTSIDE DIAMETER	OD
OVERHEAD POWER	OH

PER	/
PERCENT	%
POINT OF INTERSECTION	PI
POLYETHYLENE	PE
POLYVINYL CHLORIDE	PVC
POWER POLE	PP
POUNDS PER SQUARE INCH	PSI
PRESSURE REDUCING MANHOLE	PRVM
PROPERTY LINE	PL
PULL BOX	PB
PUMP STATION	PS
RADIUS	R
RANGE	RGE
RAW WATER	RW
REDUCER	RED
REGISTERED PLAN	REG'D PL
REINFORCED	RE
REINFORCED CONCRETE	RC
RELOCATION	RELO
RESERVOIR	RES
RIGHT OF WAY	ROW
ROAD	RD
ROLLED CURB AND GUTTER	RCG
RUBBER GASKET	RG
SANITARY	S
SECOND	"
SHOULDER	SHLD
SLOPE	S
SOUTH	S
SOUTH EAST	SE
SOUTH WEST	SW
SPIRAL TO CURVE	SC
SPIRAL TO TANGENT	ST
SQUARED	SQ
STANDARD	STD
STAINLESS STEEL	SST
STATION	STA
STEEL	ST
STREET	ST
STORM	ST
TANGENT	TAN
TANGENT TO SPIRAL	TS
TAPPING VALVE	TV
TELEPHONE	T
THRUST BLOCK	TB
TOP OF ASPHALT	TOA
TOP OF CURB	TOC
TOP OF PIPE	TOP
TOP OF RAIL	TOR
TOWNSHIP	TWP
TRAFFIC SIGNAL	TS
TYPICAL	TYP
UNDERGROUND POWER	UG
UTILITY RIGHT OF WAY	URW
VALVE	V
VALVE CHAMBER	VC
VELOCITY	VEL
VERTICAL	VER OR V
VERTICAL BEND DOWN	VBD
VERTICAL BEND UP	VBU
VERTICAL CURVE	VC
VERTICAL POINT OF INTERSECTION	VPI
VITRIFIED CLAY TILE	VCT
WATER	W
WEST	W
WEEPING TILE DRAIN	WTD
WHEEL CHAIR RAMP	WCR
WIDTH	W

OVERLAND STORM WATER FLOW FORMULA ABBREVIATIONS

DEPTH OF FLOW IN 1 IN 5 YEAR STORM EVENT	$D_{1:5}$
DEPTH OF FLOW IN 1 IN 100 YEAR STORM EVENT	$D_{1:100}$
FLOW RATE FOR A 1 IN 5 YEAR STORM EVENT	$Q_{1:5}$
FLOW RATE FOR A 1 IN 100 YEAR STORM EVENT	$Q_{1:100}$
VELOCITY FOR A 1 IN 5 YEAR STORM EVENT	$V_{1:5}$
VELOCITY FOR A 1 IN 100 YEAR STORM EVENT	$V_{1:100}$

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

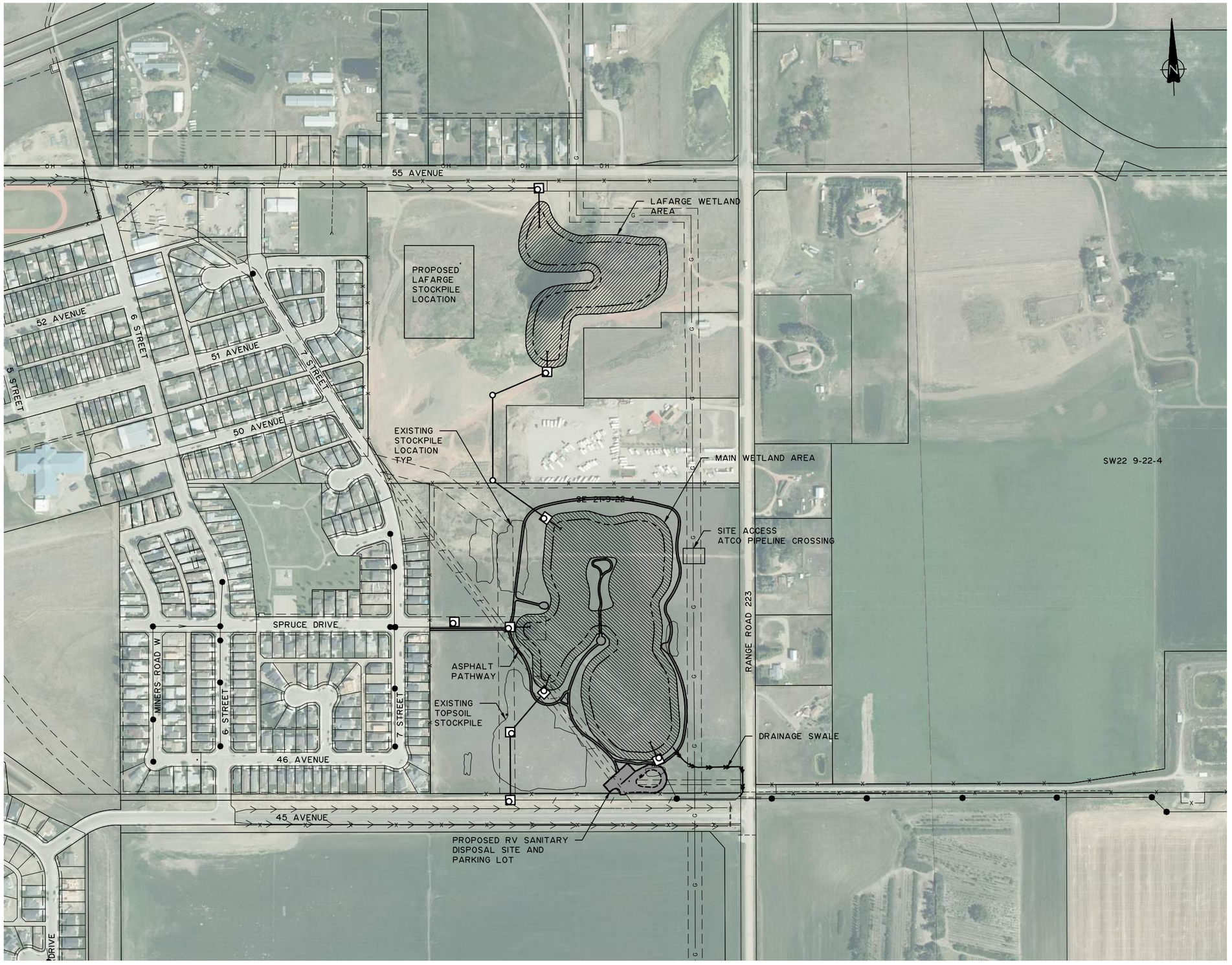
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
CIVIL ABBREVIATIONS

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	
DATE	JULY 2022	DRAWING	C0.2



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

LAFARGE WETLAND AREA

1:100 YEAR STORAGE 37,300m^3

MAIN WETLAND AREA

1:100 YEAR STORAGE 87,300m^3

2. CONFIRM EXISTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY CONFLICTS.
3. APPROXIMATE LOCATIONS OF EXISTING STOCKPILES SHOWN. CONTRACTOR TO UTILIZE STOCKPILED TOPSOIL AS REQUIRED. CONTRACTOR TO MODIFY WASTE EXCAVATION STOCKPILES AS REQUIRED TO COMPLETE THE WORK.
4. CONTRACTOR TO COORDINATE AND PROVIDE ACCESS REQUIRED BY OTHERS FOR REMOVAL OF STOCKPILED WASTE EXCAVATION MATERIALS FROM SITE THROUGHOUT CONSTRUCTION.
5. CONTRACTOR RESPONSIBLE FOR STRIPPING AND STOCKPILING TOPSOIL AT MATERIAL STOCKPILE LOCATIONS. CONTRACTOR TO REPLACE TOPSOIL AND SEED.
6. CONTRACTOR REQUIRED TO STOCKPILE EXCAVATED MATERIALS MEETING CLASSIFICATION OF DIFFERENT ZONES IN SEPARATE STOCKPILES. PARTICULARLY MATERIAL SUITABLE FOR CLAY LINER SHALL BE STOCKPILED SEPARATELY. COORDINATE WITH OWNER'S REPRESENTATIVE.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

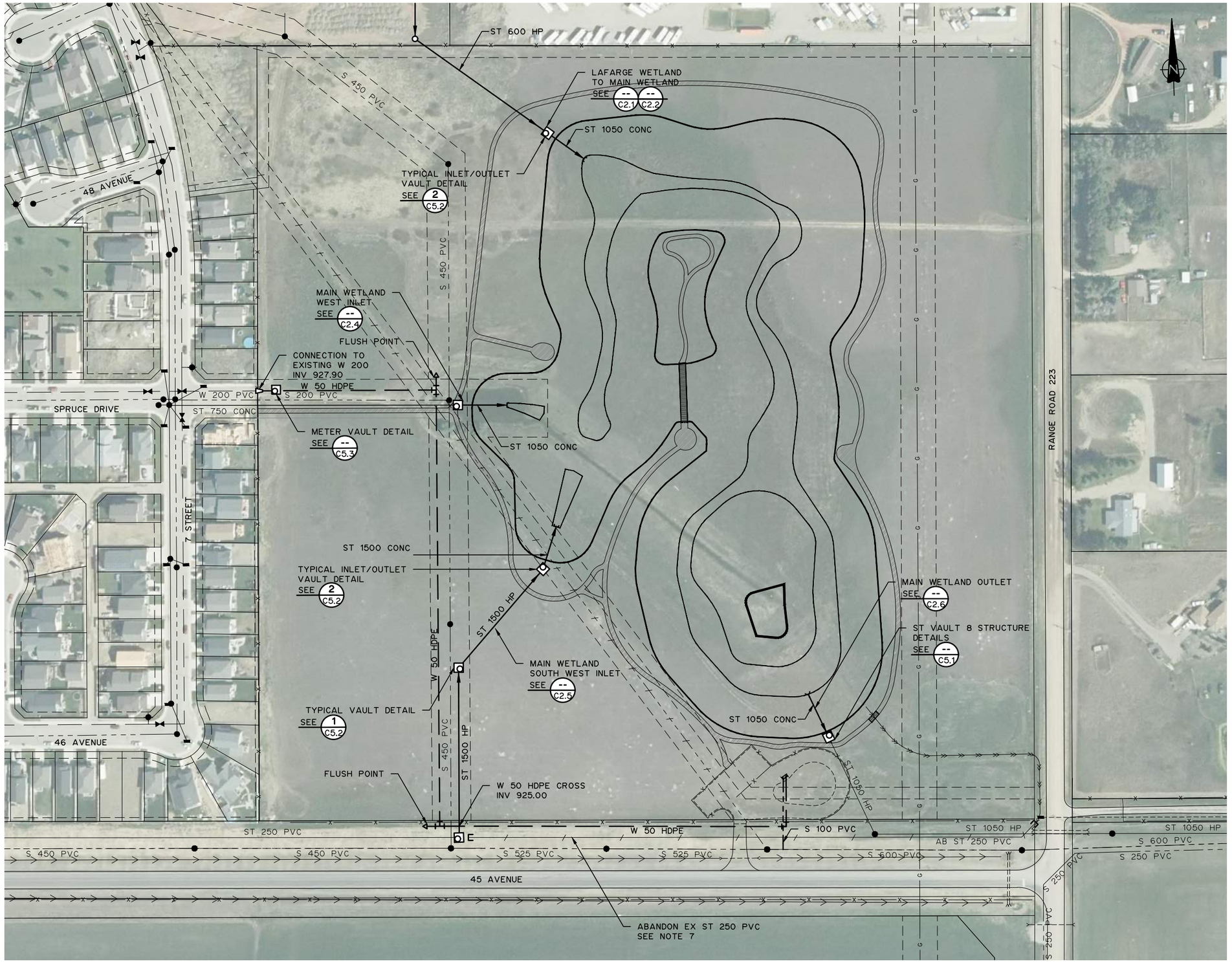
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND OVERALL SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:5000
DATE	JULY 2022	DRAWING	C1.1



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONTRACTOR TO LOCATE, EXPOSE, SURVEY AND PROTECT ALL EXISTING UTILITIES PRIOR TO AND THROUGHOUT CONSTRUCTION.
3. CONTRACTOR TO COORDINATE CONNECTION TO EXISTING UTILITIES WITH OWNER'S REPRESENTATIVE AND THE OWNER.
4. COORDINATE INSTALLATION OF UTILITIES WITH OTHER DISCIPLINES TO AVOID CONFLICTS.
5. MAIN WETLAND AREA PREVIOUSLY EXCAVATED BY OTHERS. CONTRACTOR MAY UTILIZE STOCKPILED MATERIAL AS REQUIRED FOR BACKFILLING AND GRADE REQUIREMENTS.
6. CONTRACTOR TO COORDINATE AND NOTIFY ATCO OF ALL WORK IN PROXIMITY AND ADJACENT TO THEIR PIPELINE. CROSSING OF THE PIPELINE MUST ONLY TAKE PLACE AFTER NOTIFYING ATCO AND MEETING THE CONDITIONS OF THE AGREEMENT.
7. ABANDON EXISTING ST 250 PVC DURING VAULT INSTALLATION. CAP AND GROUT AT IDENTIFIED LOCATIONS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

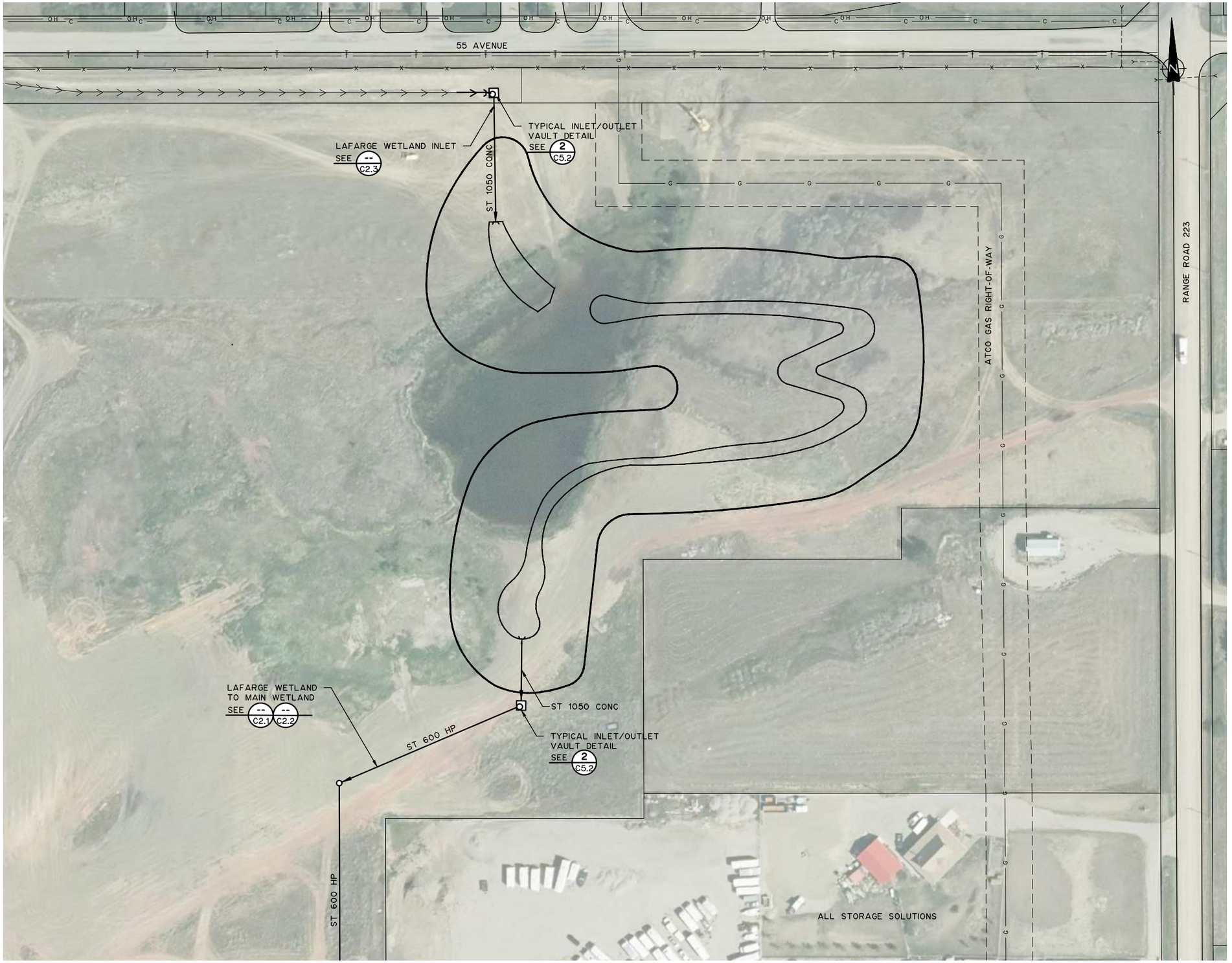
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMM
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND UNDERGROUND
SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:2000
DATE	JULY 2022	DRAWING	C1.2



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONTRACTOR TO LOCATE, EXPOSE, SURVEY AND PROTECT ALL EXISTING UTILITIES PRIOR TO AND THROUGHOUT CONSTRUCTION.
3. CONTRACTOR TO COORDINATE CONNECTION TO EXISTING UTILITIES WITH OWNER'S REPRESENTATIVE AND THE OWNER.
4. COORDINATE INSTALLATION OF UTILITIES WITH OTHER DISCIPLINES TO AVOID CONFLICTS.
5. MAIN WETLAND AREA PREVIOUSLY EXCAVATED BY OTHERS. CONTRACTOR MAY UTILIZE STOCKPILED MATERIAL AS REQUIRED FOR BACKFILLING AND GRADE REQUIREMENTS.
6. CONTRACTOR TO COORDINATE AND NOTIFY ATCO OF ALL WORK IN PROXIMITY AND ADJACENT TO THEIR PIPELINE. CROSSING OF THE PIPELINE MUST ONLY TAKE PLACE AFTER NOTIFYING ATCO AND MEETING THE CONDITIONS OF THE AGREEMENT.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

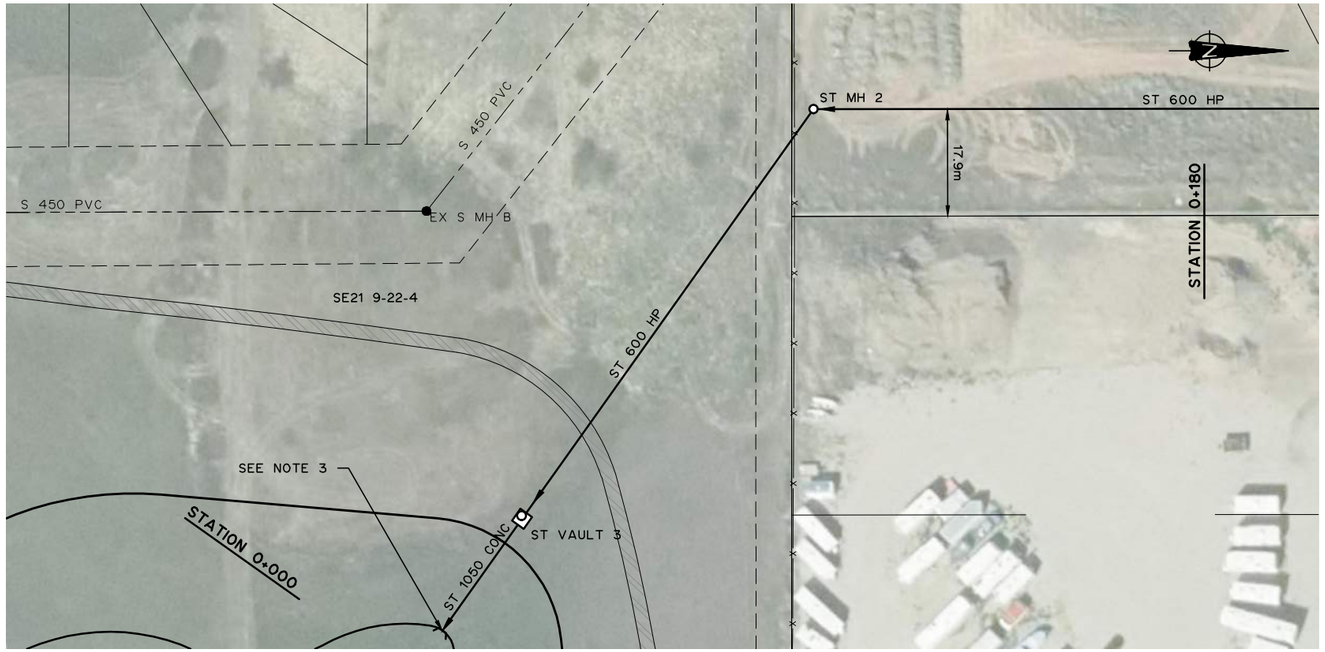
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

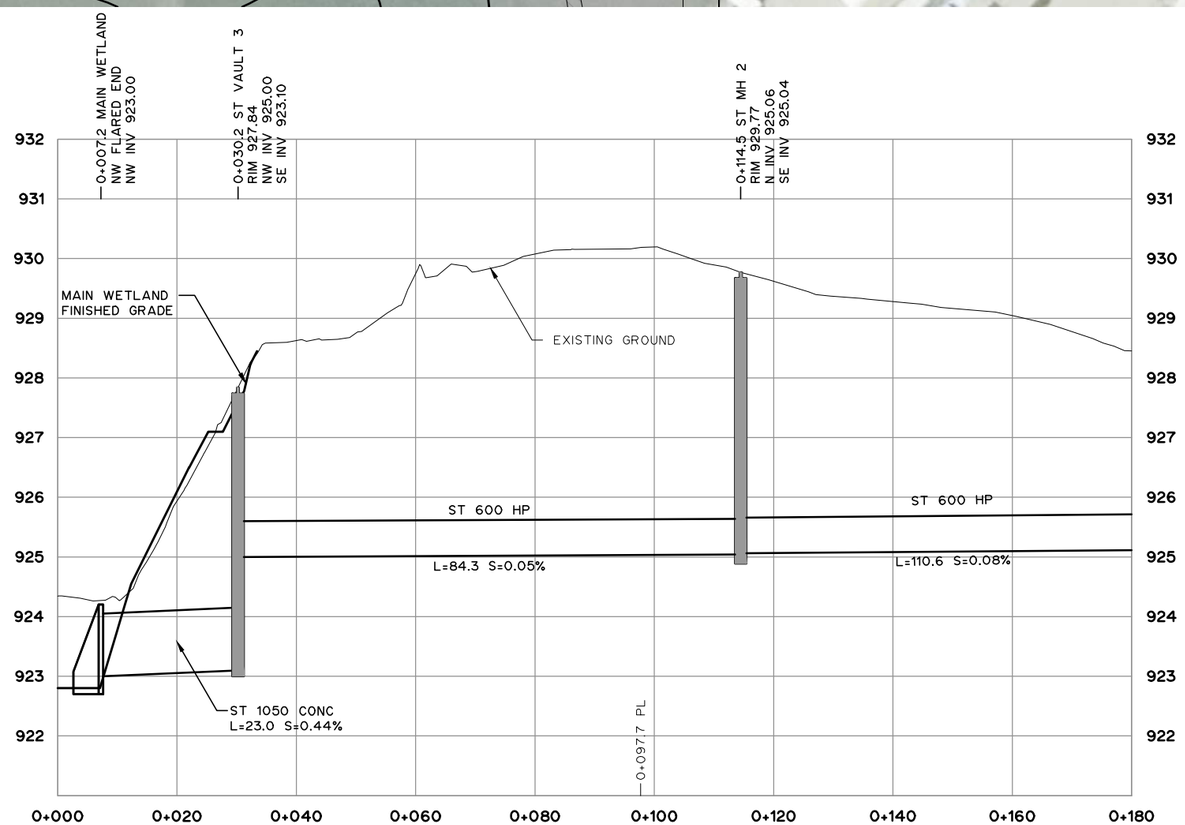
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LAFARGE WETLAND UNDERGROUND
SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:1500
DATE	JULY 2022	DRAWING	C1.3





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONFIRM ALL UTILITY CROSSINGS AND EXISTING INVERTS PRIOR TO CONSTRUCTION.
3. ALL SUBMERGED POND INLETS AND OUTLETS TO BE INSTALLED COMPLETE WITH PRECAST FLARED END TREATMENT. SEE DRAWING C5.7 FOR DETAIL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

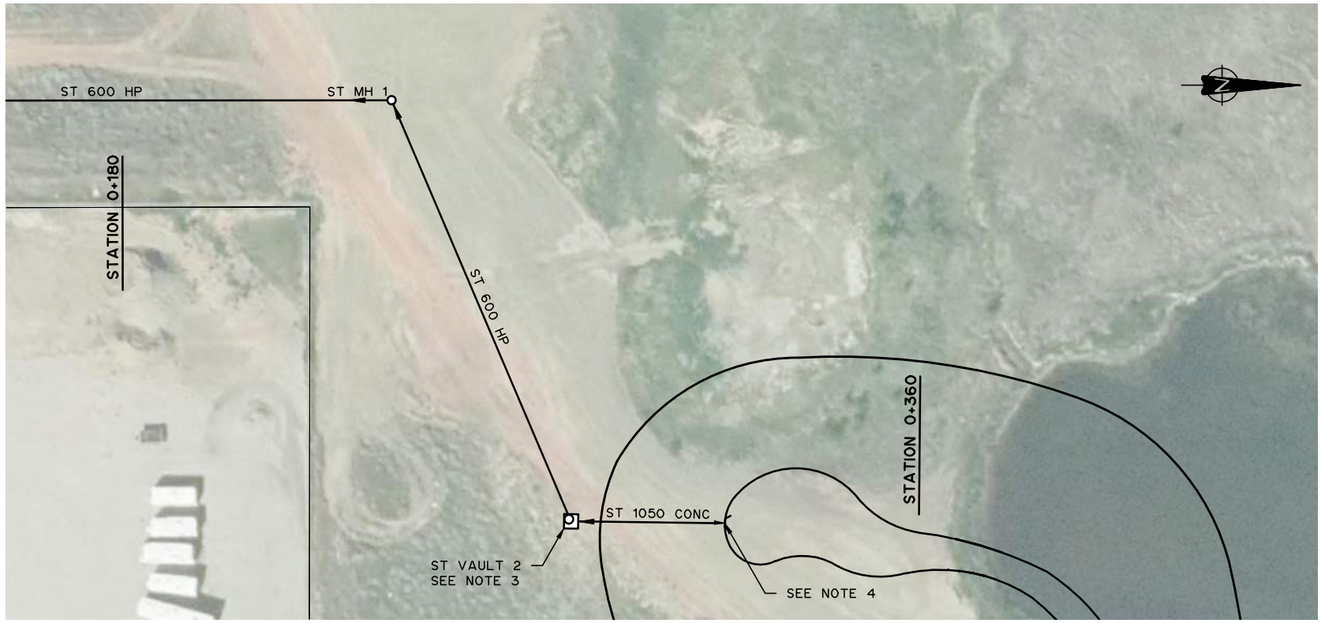
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 19755
JULY 25, 2022

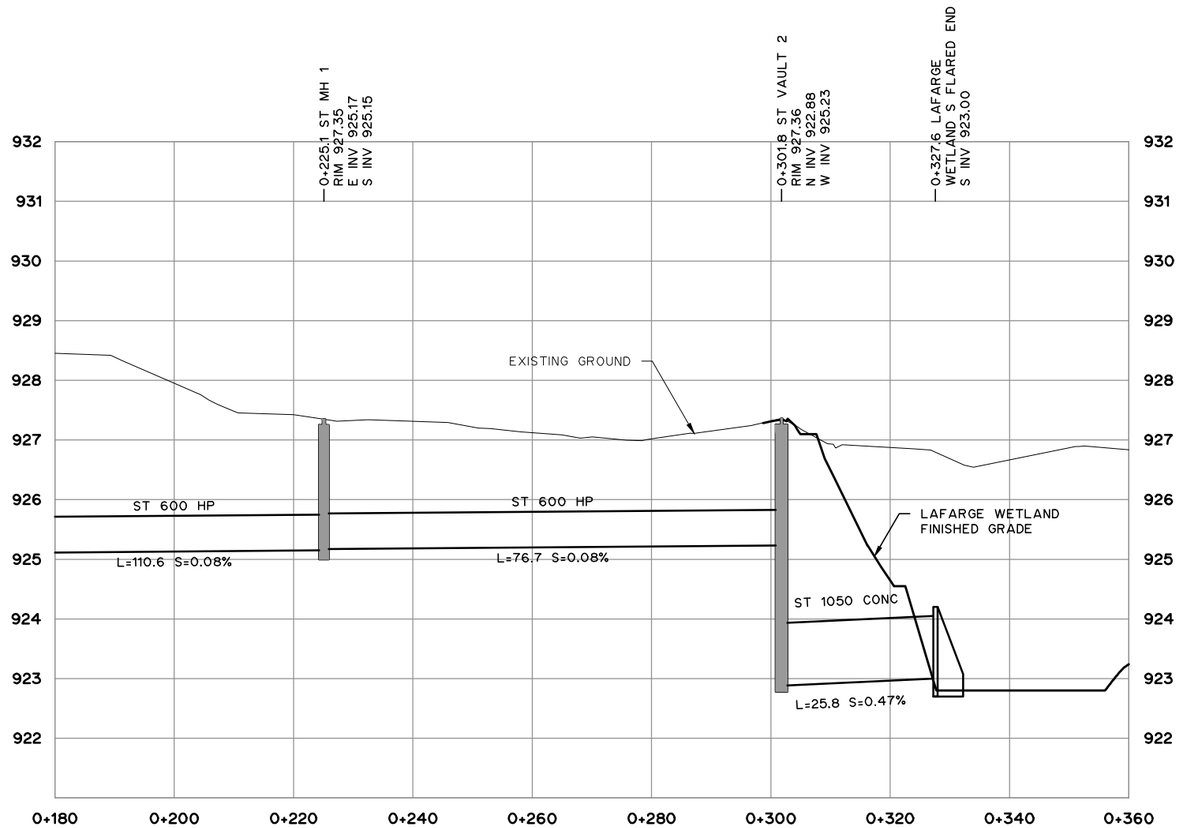
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND UNDERGROUND PLAN PROFILE LAFARGE WETLAND TO MAIN WETLAND STATION 0+000 TO STATION 0+180

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	H:1:1000 V:1:100
DATE	JULY 2022	DRAWING	C2.1





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONFIRM ALL UTILITY CROSSINGS AND EXISTING INVERTS PRIOR TO CONSTRUCTION.
3. ST VAULT 2 TO HAVE A 700x700 ORBINOX MU STAINLESS STEEL SLIDE GATE C/W ALL MOUNTING HARDWARE AND OPERATING COMPONENTS MOUNTED TO THE WEST INSIDE FACE OF VAULT.
4. ALL SUBMERGED POND INLETS AND OUTLETS TO BE INSTALLED COMPLETE WITH PRECAST FLARED END TREATMENT. SEE DRAWING C5.7 FOR DETAIL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

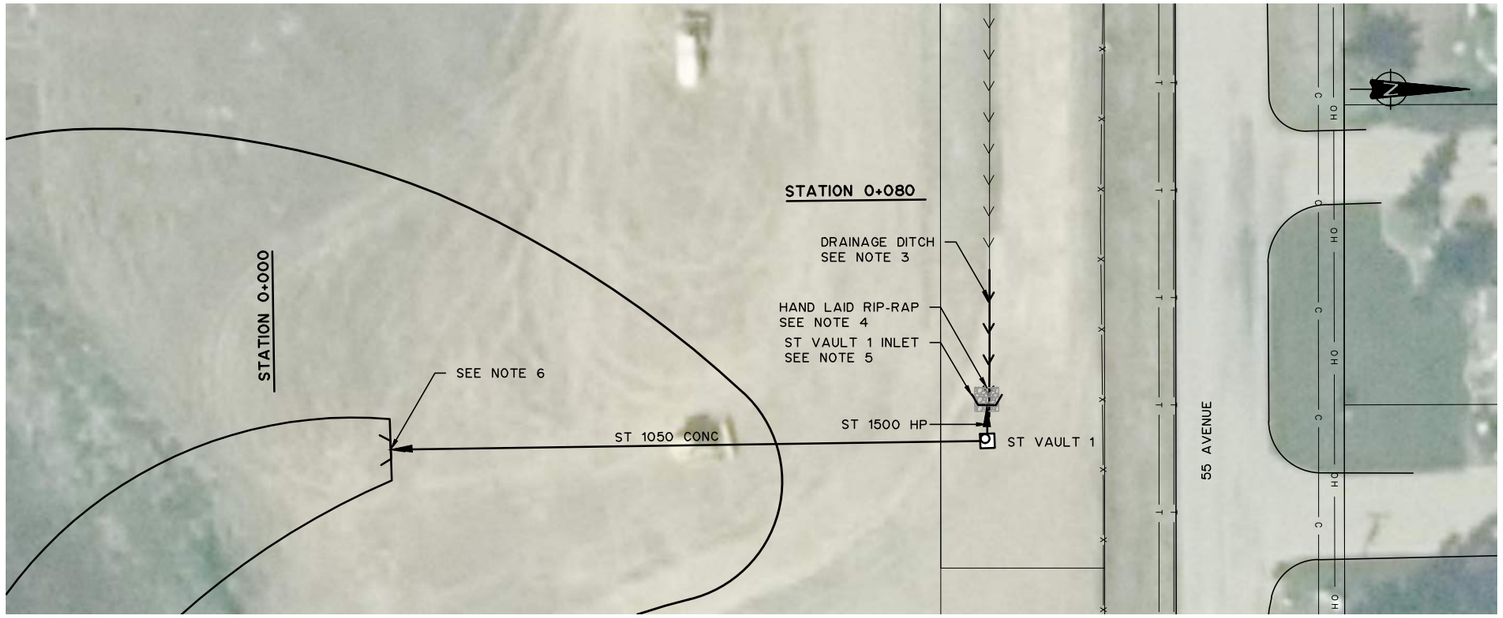
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. MUMM
ID 119755
JULY 25, 2022

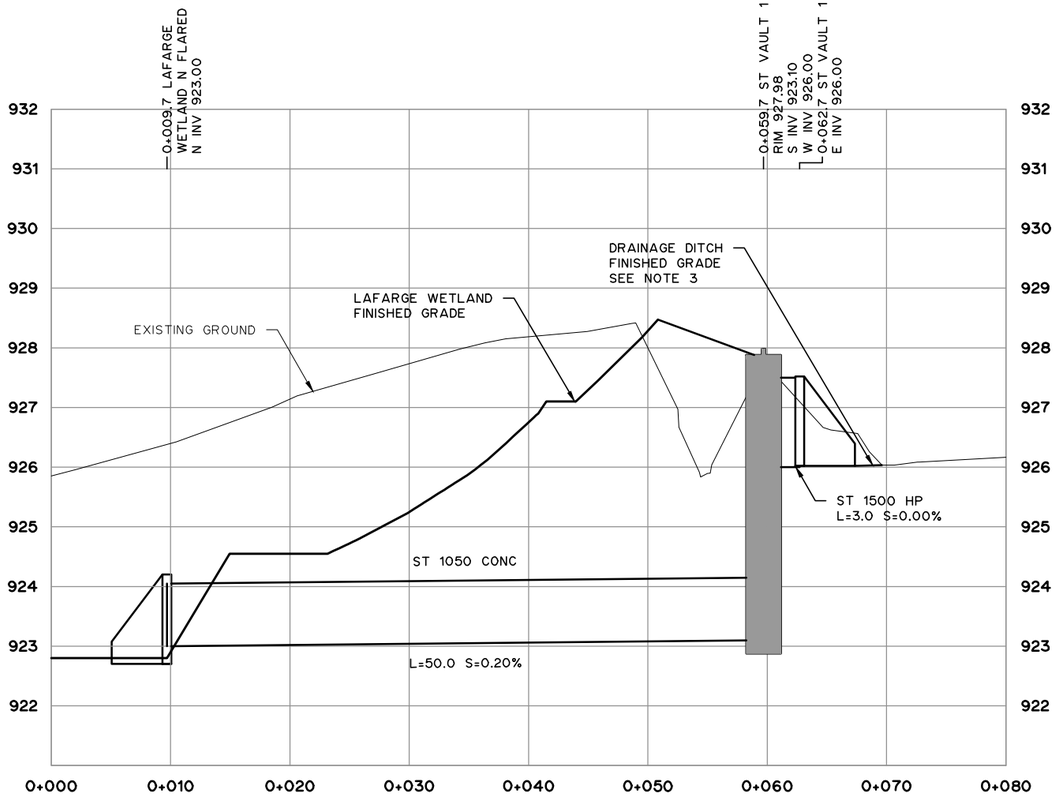
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
UNDERGROUND PLAN PROFILE
LAFARGE WETLAND TO MAIN WETLAND
STATION 0+180 TO STATION 0+360

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	H:1:1000 V:1:100
DATE	JULY 2022	DRAWING	C2.2





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONFIRM ALL UTILITY CROSSINGS AND EXISTING INVERTS PRIOR TO CONSTRUCTION.
3. RE-GRADE EXISTING DITCH TO MAINTAIN POSITIVE DRAINAGE INTO NEW PRECAST CONCRETE INLET.
4. RIP-RAP INSTALLATION:
   - WASTE EXCAVATION
   - 150mm ZONE 5 GRANULAR MATERIAL
   - 300mm OF 150mm RIP-RAP MATERIAL
5. ST VAULT 1 INLET COMPLETE WITH RODENT GUARD AND TRASH RACK. PROVIDE SHOP DRAWINGS FOR INLET PRECAST CONCRETE STRUCTURE, RODENT GUARD AND TRASH RACK PRIOR TO MANUFACTURING.
6. ALL SUBMERGED POND INLETS AND OUTLETS TO BE INSTALLED COMPLETE WITH PRECAST FLARED END TREATMENT. SEE DRAWING C5.7 FOR DETAIL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

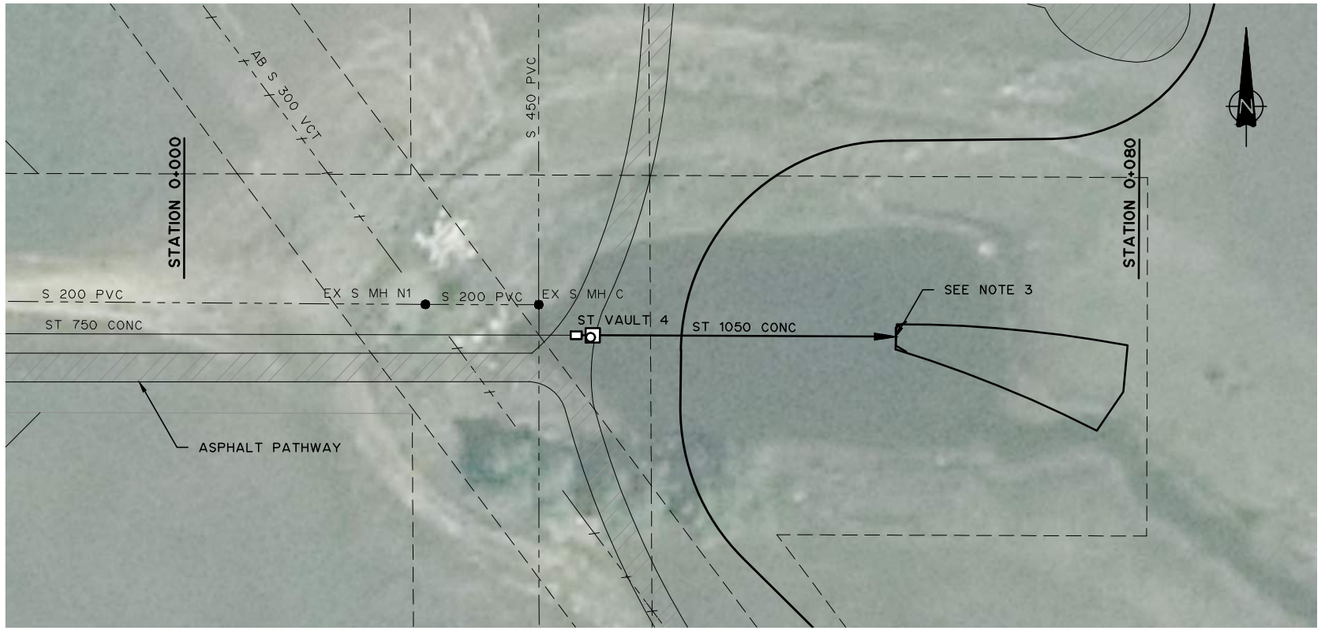
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. AUMMI
ID 119755
JULY 25, 2022

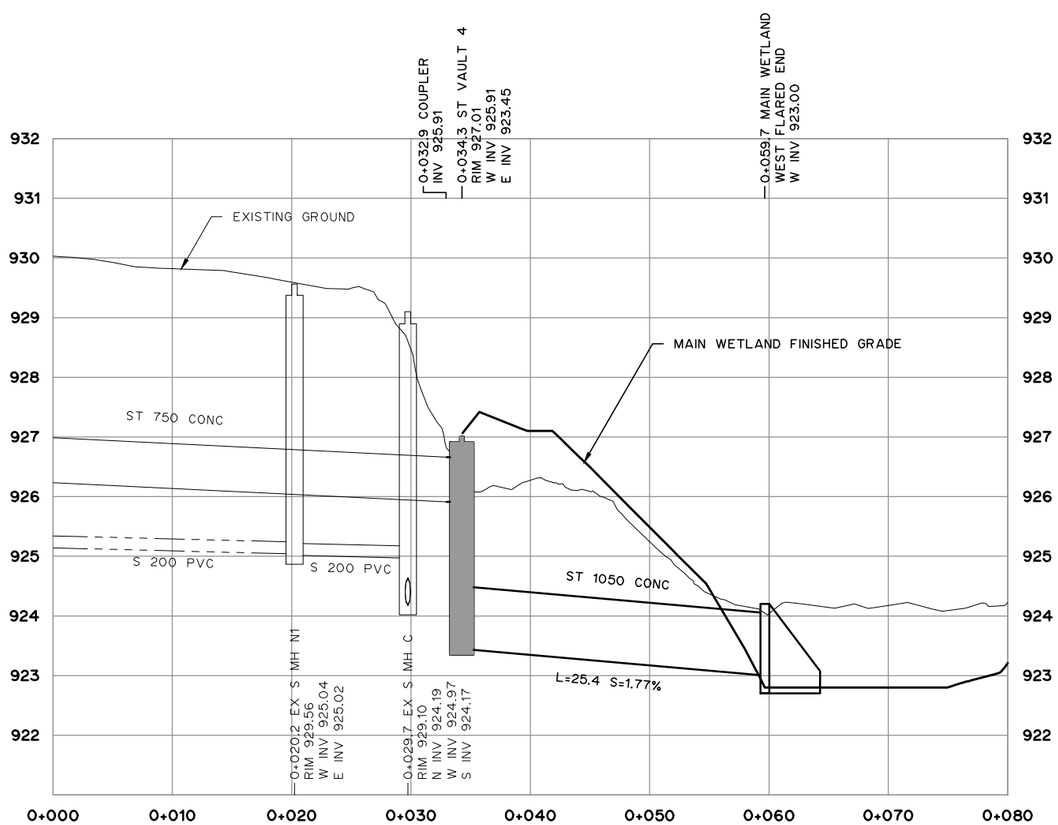
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND UNDERGROUND PLAN PROFILE LAFARGE WETLAND INLET

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	H:1:500 V:1:100
DATE	JULY 2022	DRAWING	C2.3





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONFIRM ALL UTILITY CROSSINGS AND EXISTING INVERTS PRIOR TO CONSTRUCTION.
3. ALL SUBMERGED POND INLETS AND OUTLETS TO BE INSTALLED COMPLETE WITH PRECAST FLARED END TREATMENT. SEE DRAWING C5.7 FOR DETAIL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

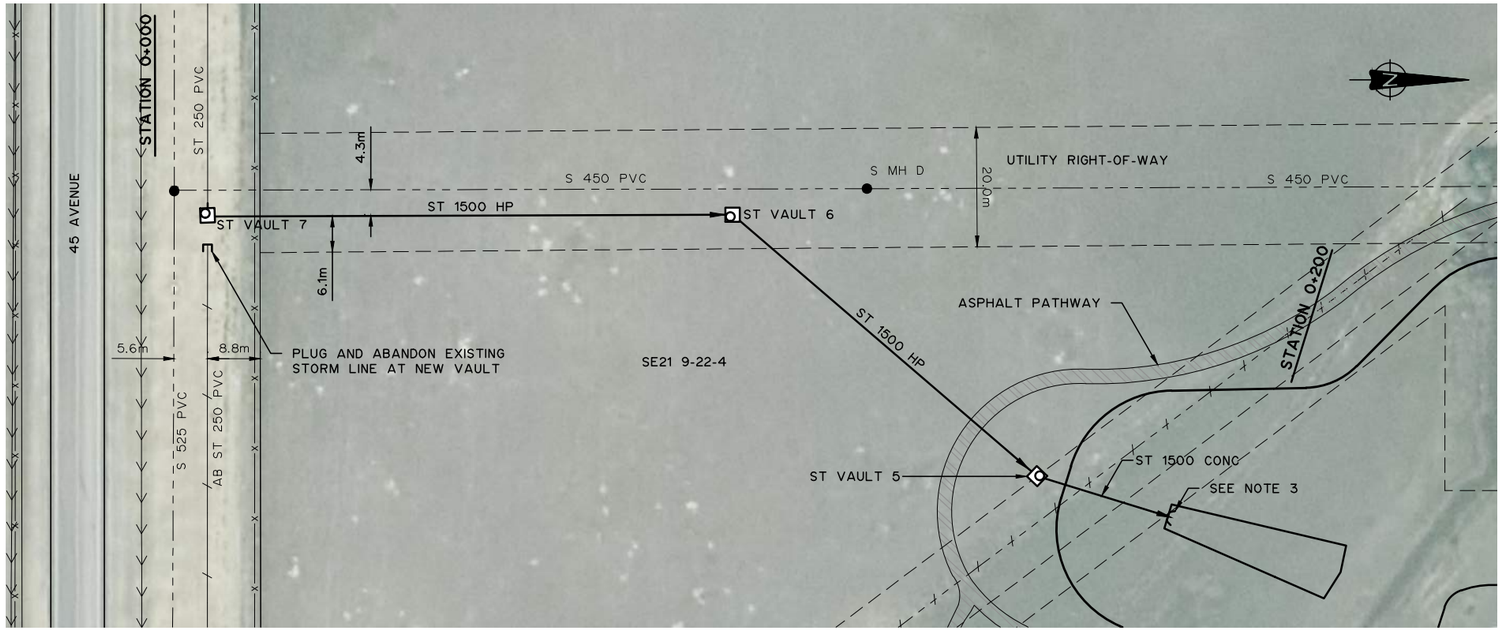
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMM
ID 119755
JULY 25, 2022

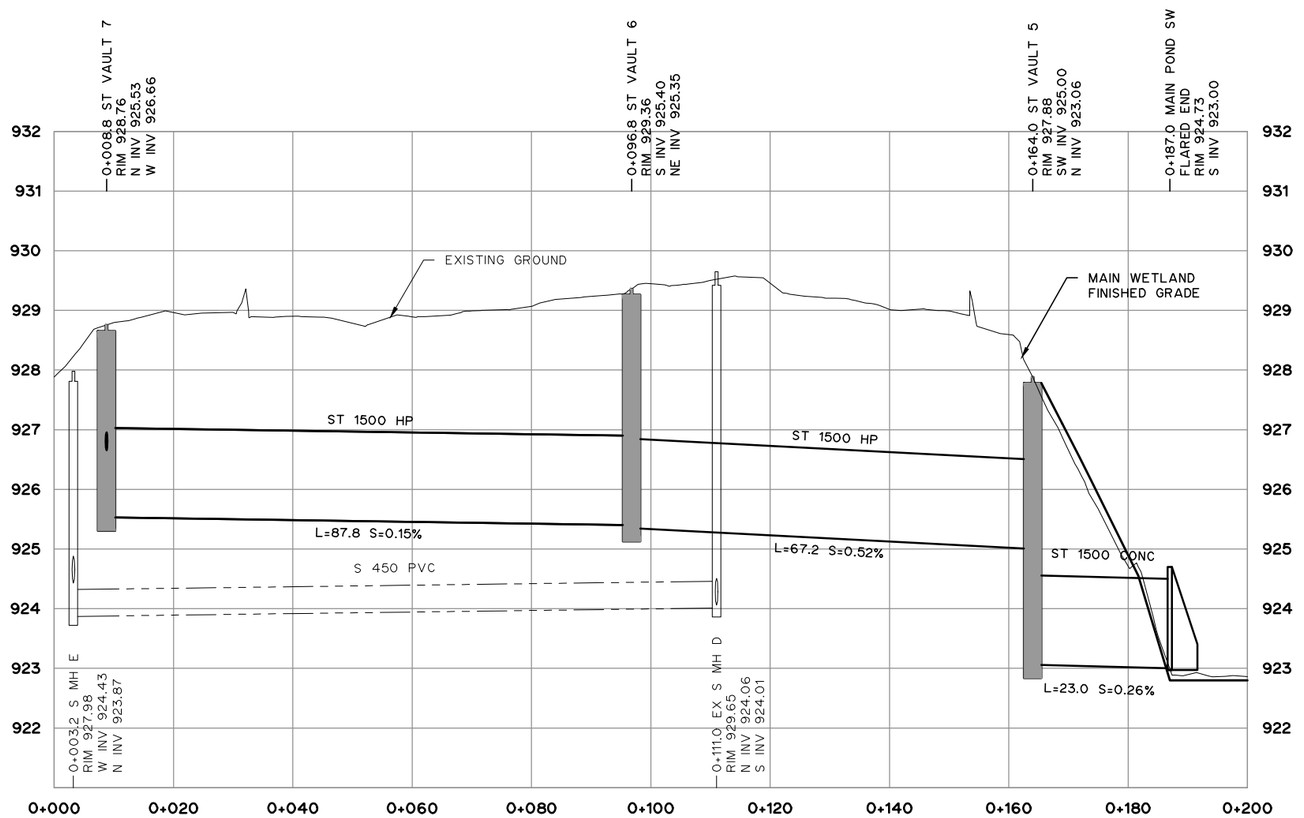
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND UNDERGROUND PLAN PROFILE MAIN WETLAND WEST INLET

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	H:1:500 V:1:100
DATE	JULY 2022	DRAWING	C2.4





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONFIRM ALL UTILITY CROSSINGS AND EXISTING INVERTS PRIOR TO CONSTRUCTION.
3. ALL SUBMERGED POND INLETS AND OUTLETS TO BE INSTALLED COMPLETE WITH PRECAST FLARED END TREATMENT. SEE DRAWING C5.7 FOR DETAIL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

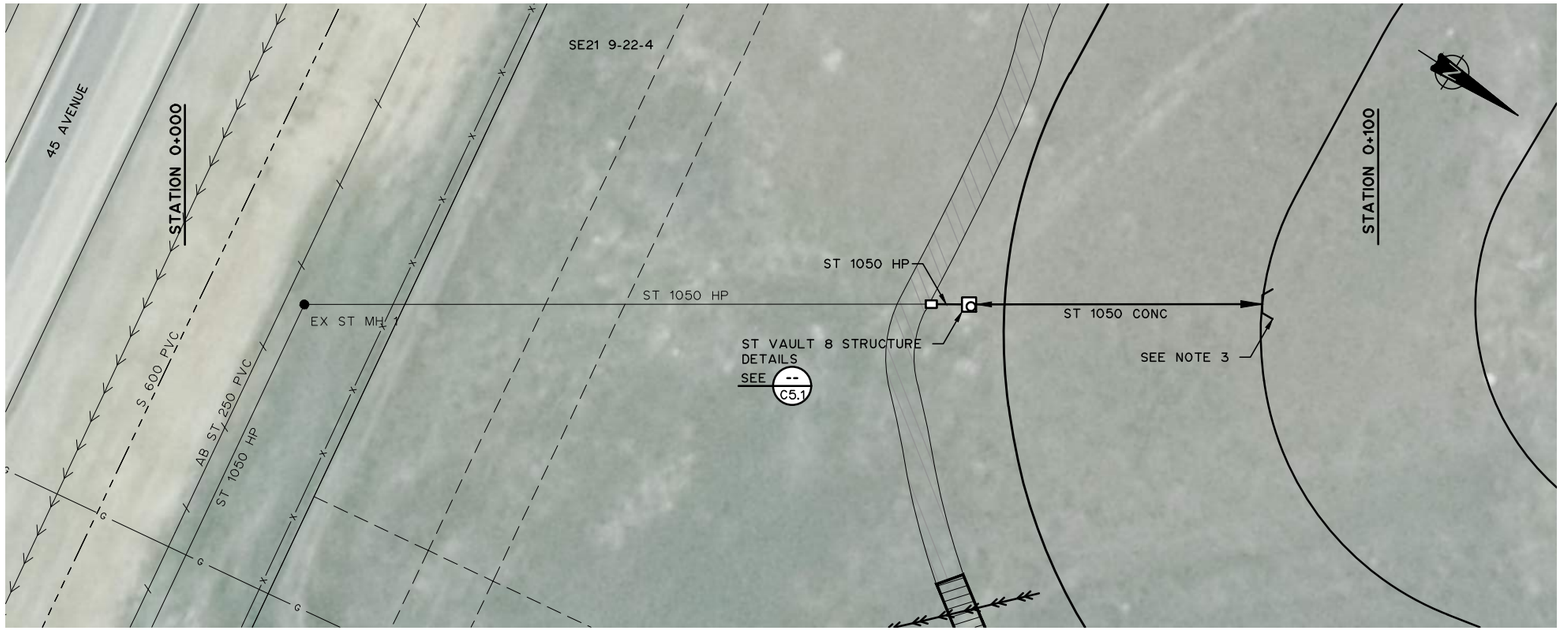
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMY
ID 119755
JULY 25, 2022

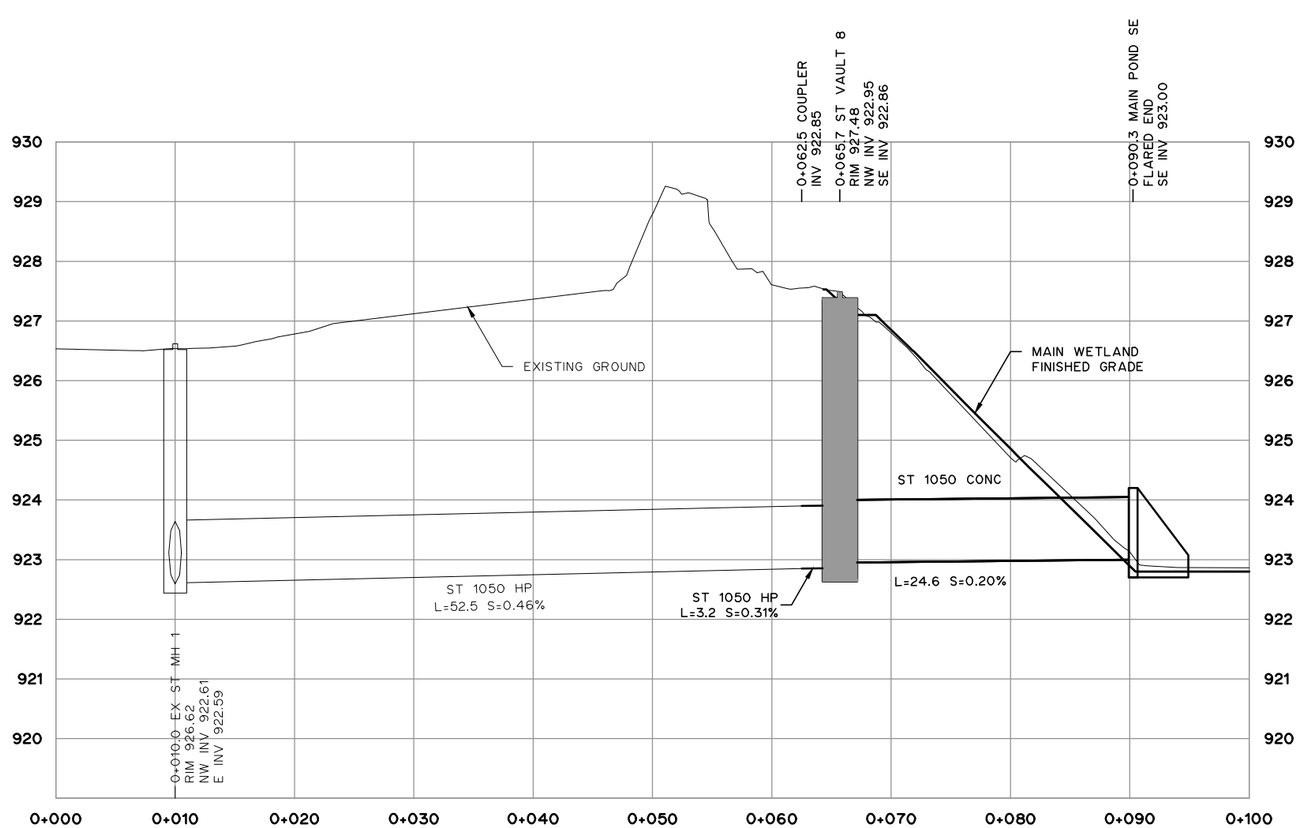
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
UNDERGROUND PLAN PROFILE
MAIN WETLAND SOUTH WEST INLET

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	H:1:1000 V:1:100
DATE	JULY 2022	DRAWING	C2.5





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONFIRM ALL UTILITY CROSSINGS AND EXISTING INVERTS PRIOR TO CONSTRUCTION.
3. ALL SUBMERGED POND INLETS AND OUTLETS TO BE INSTALLED COMPLETE WITH PRECAST FLARED END TREATMENT. SEE DRAWING C5.7 FOR DETAIL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

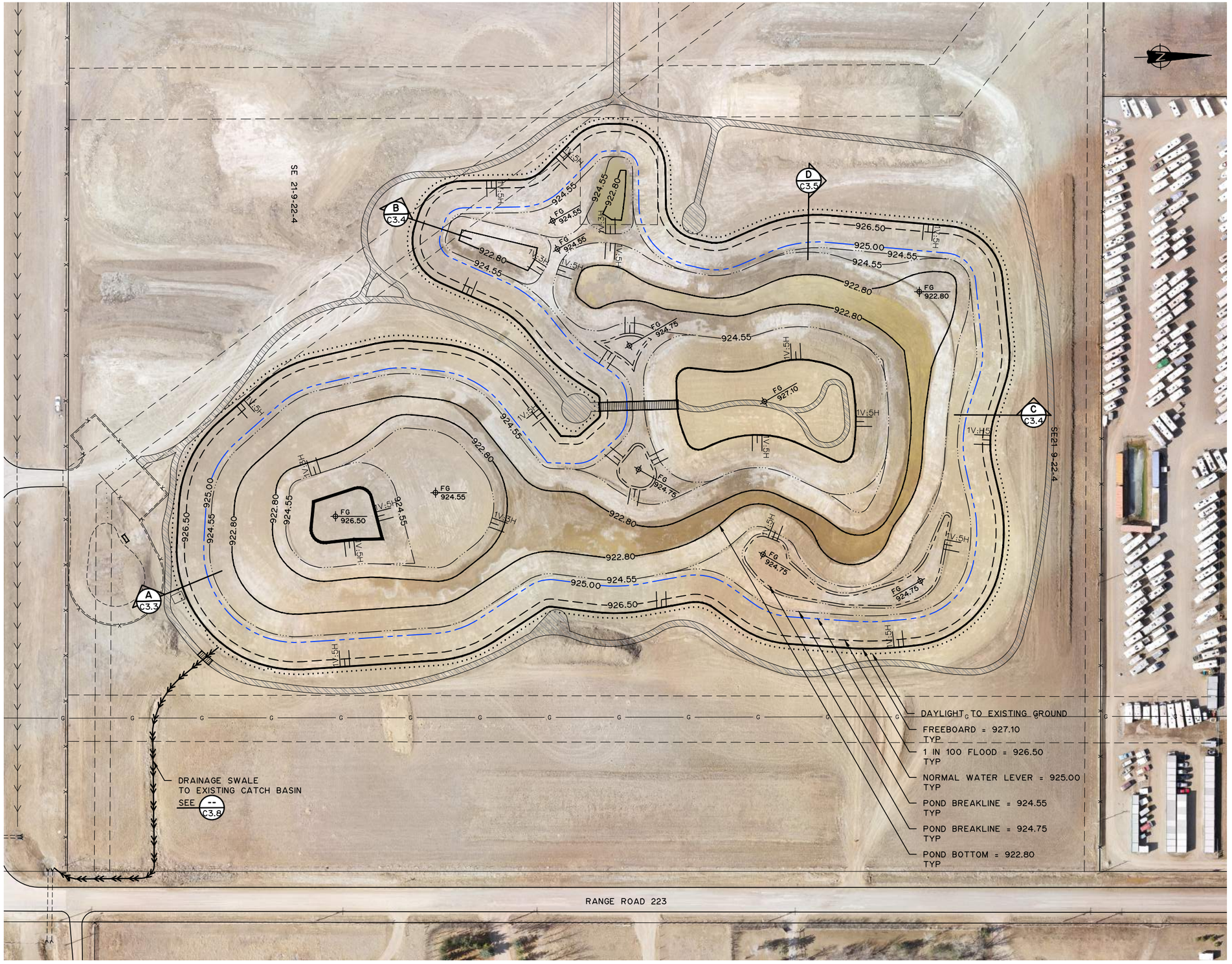
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMM
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
UNDERGROUND PLAN PROFILE
MAIN WETLAND OUTLET

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	H:1:500 V:1:100
DATE	JULY 2022	DRAWING	C2.6



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. ALL EXCAVATION TO STAY MINIMUM 5.0m FROM ATCO GAS PIPELINE RIGHT-OF-WAY.
3. UNDERGROUND UTILITIES NOT SHOWN FOR CLARITY.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

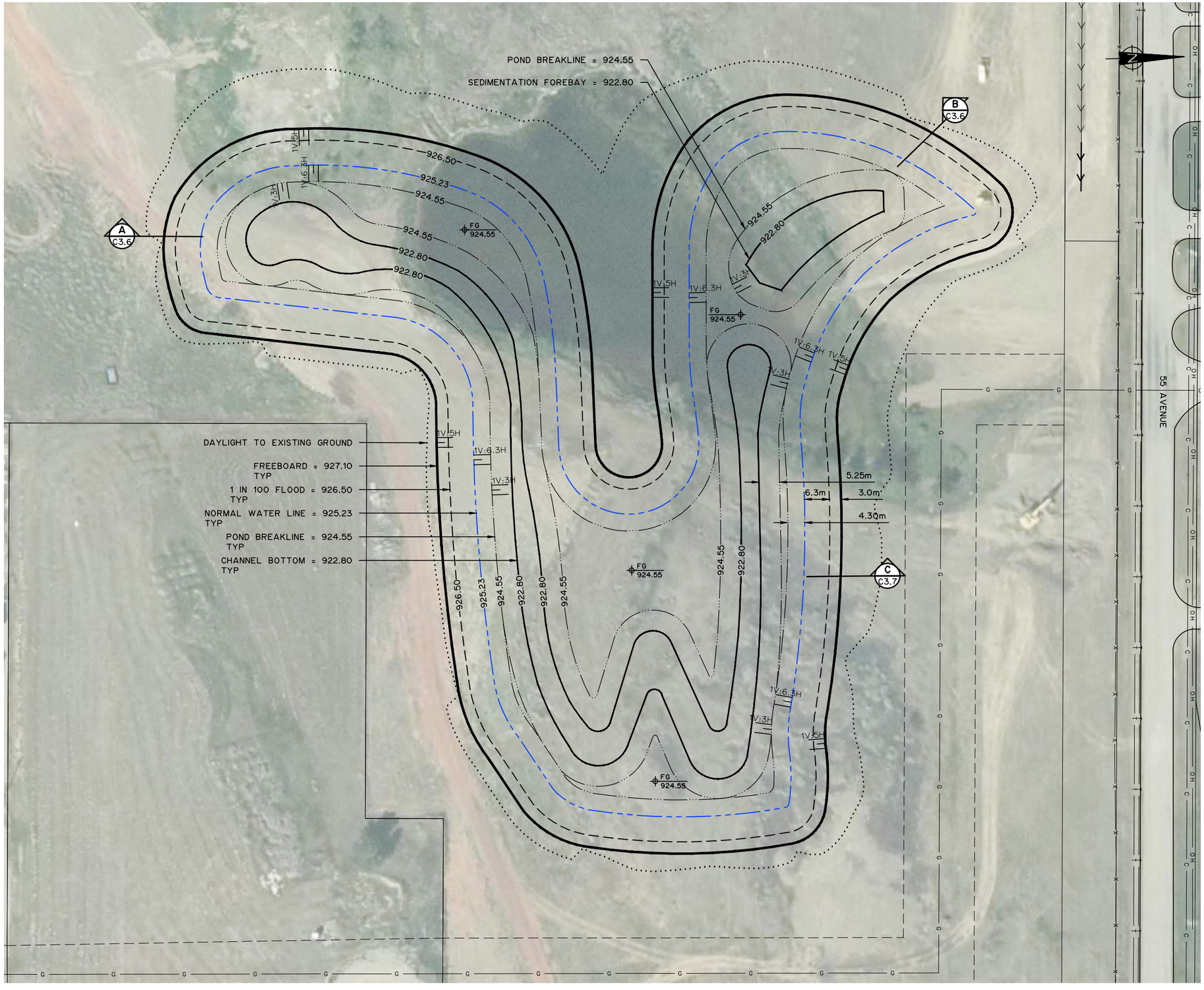
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND GRADING PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:1500
DATE	JULY 2022	DRAWING	C3.1



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. ALL EXCAVATION TO STAY MINIMUM 5.0m FROM ATCO GAS PIPELINE RIGHT-OF-WAY.
3. UNDERGROUND UTILITIES NOT SHOWN FOR CLARITY.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

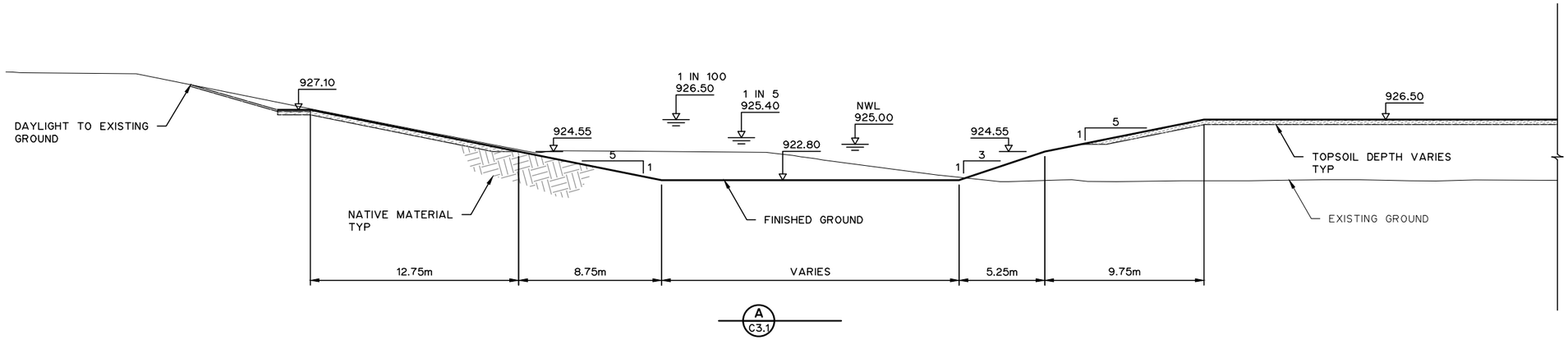
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. MUMM
ID 119755
JULY 25, 2022

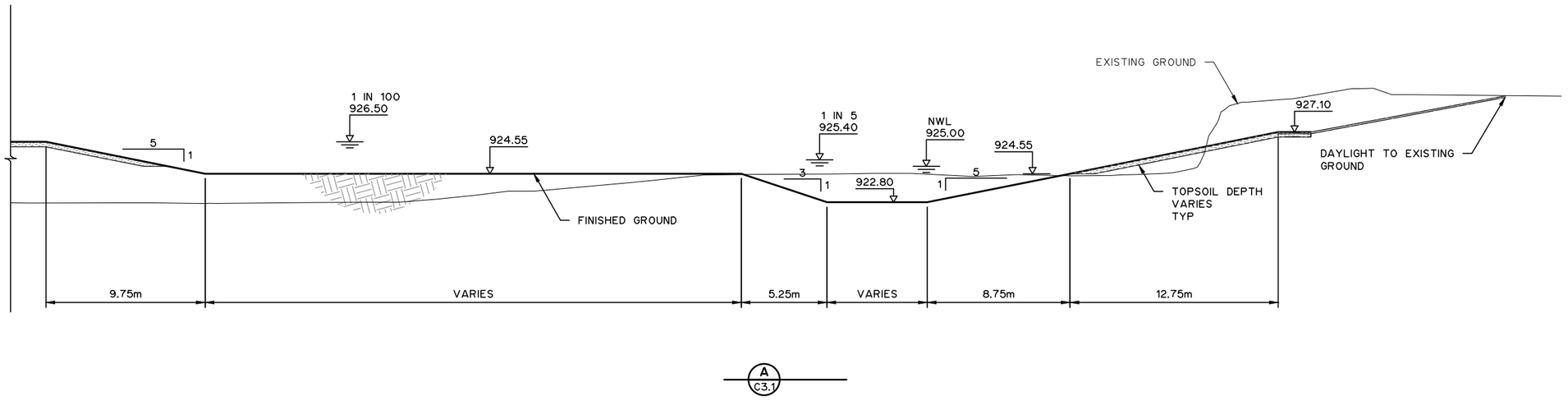
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LAFARGE WETLAND GRADING PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:1000
DATE	JULY 2022	DRAWING	C3.2





NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

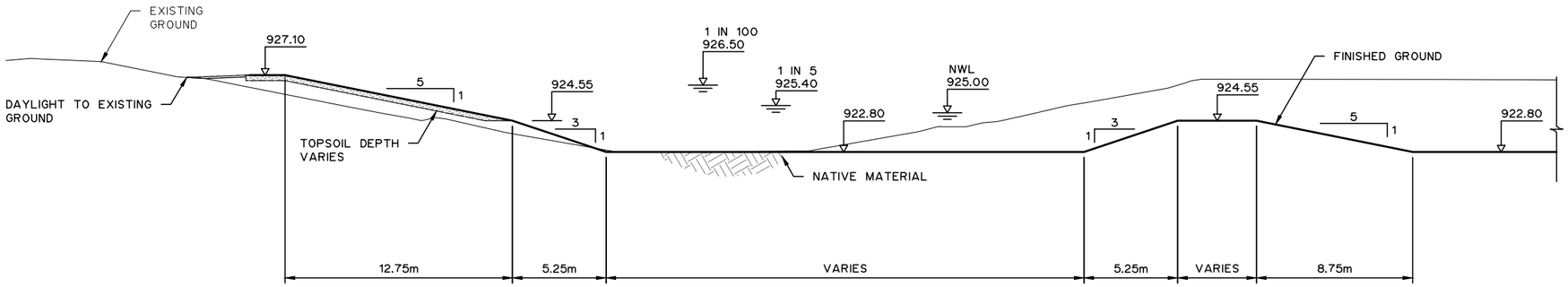
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

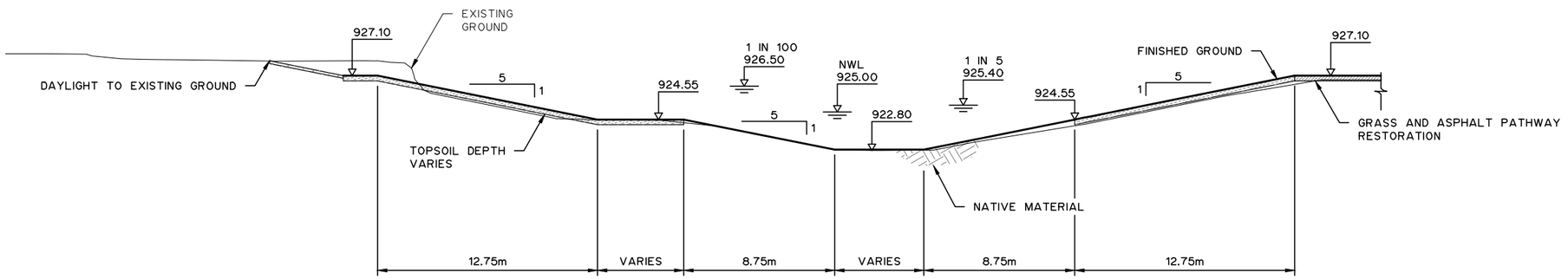
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND CROSS SECTIONS
1 OF 3

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:300
DATE	JULY 2022	DRAWING	C3.3



B
C3.1



C
C3.1

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

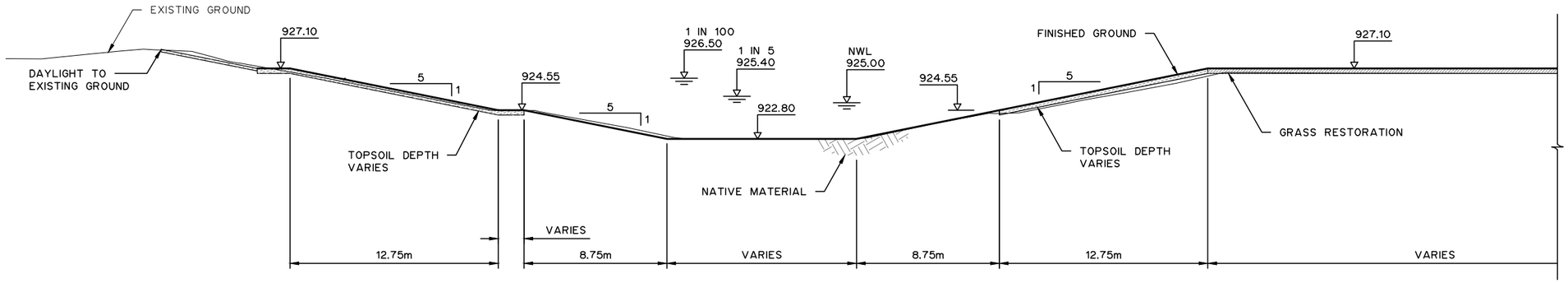
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

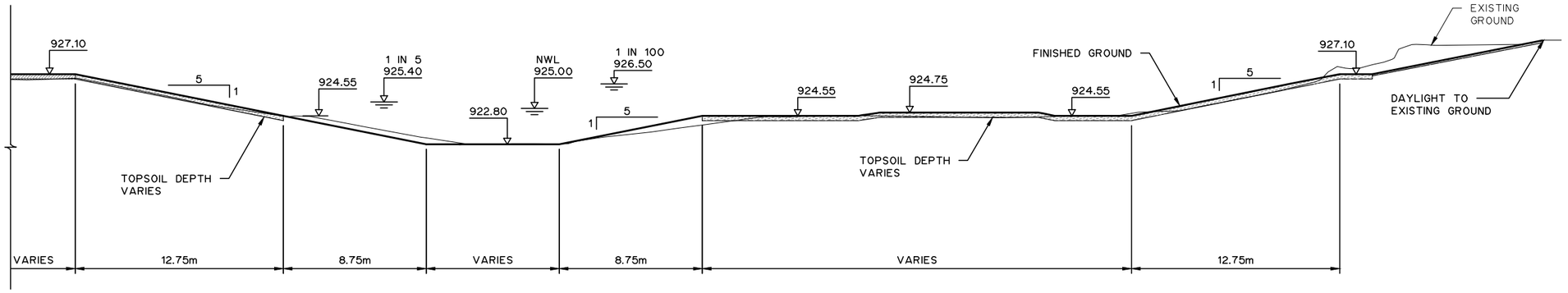
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND CROSS SECTIONS
2 OF 3

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:300
DATE	JULY 2022	DRAWING	C3.4



D
C3.1



D
C3.1

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

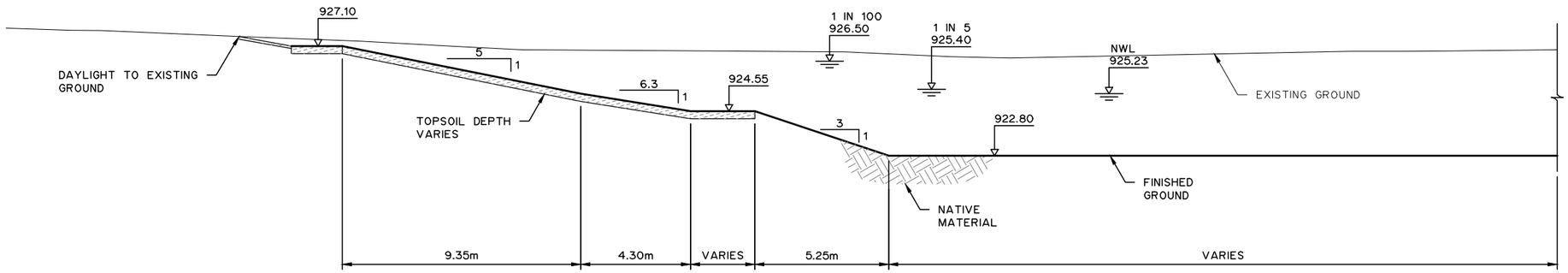
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMEL
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

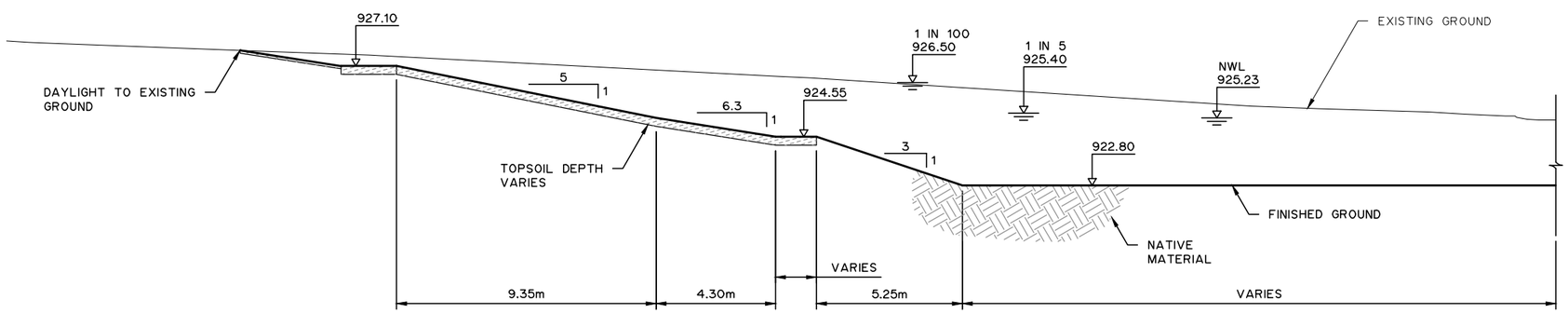
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND CROSS SECTIONS
3 OF 3

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:200
DATE	JULY 2022	DRAWING	C3.5



A
C3.2



B
C3.2

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

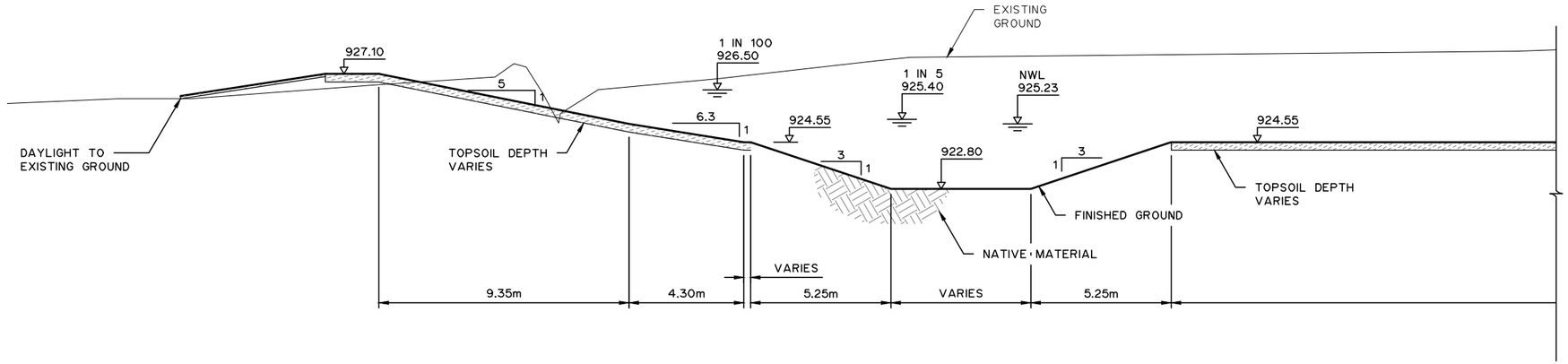
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LAFARGE WETLAND CROSS SECTIONS
1 OF 2

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:200
DATE	JULY 2022	DRAWING	C3.6



C
C3.2

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

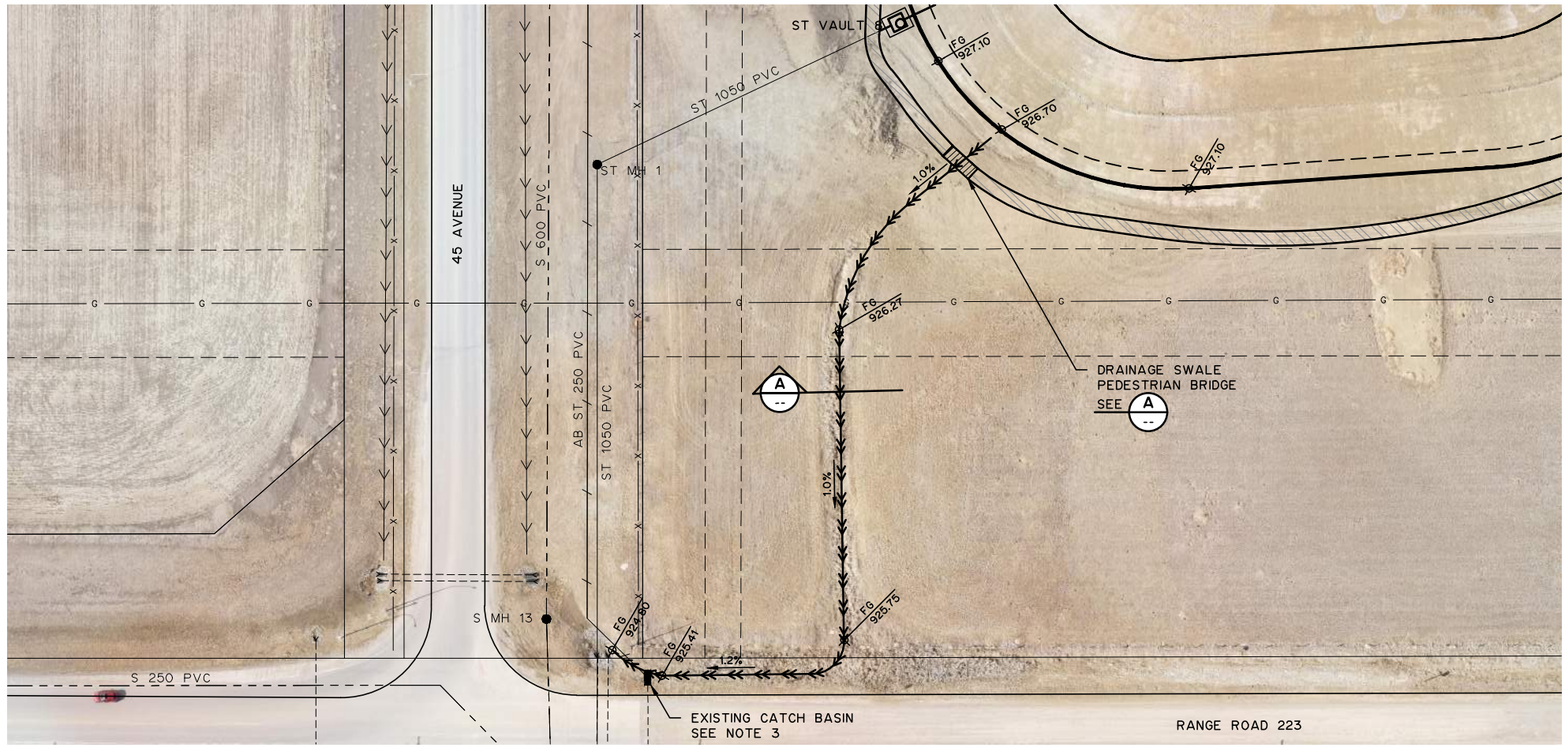
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMEL
ID 119755
JULY 25, 2022

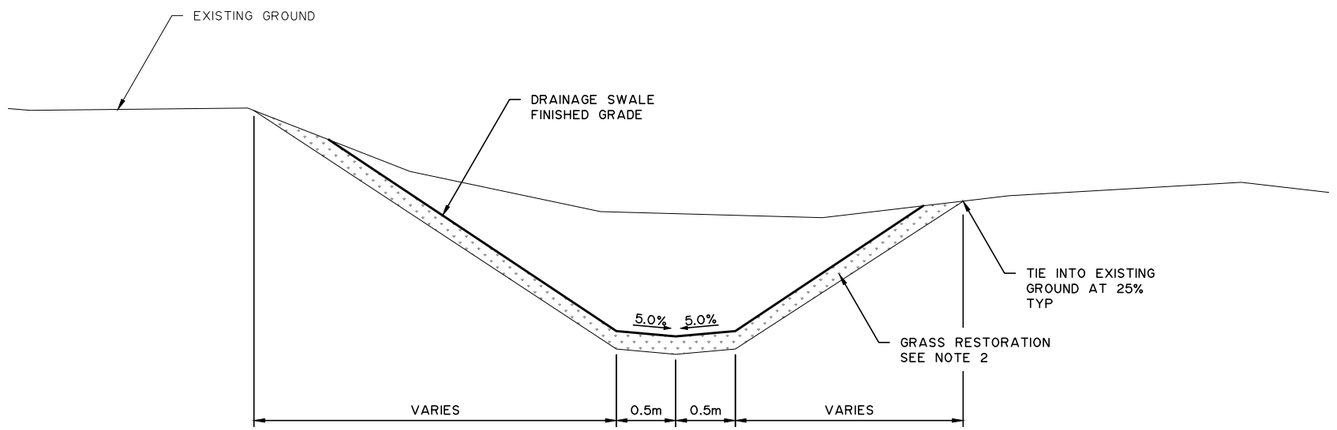
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LAFARGE WETLAND CROSS SECTIONS
2 OF 2

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:200
DATE	JULY 2022	DRAWING	C3.7





DRAINAGE SWALE CROSS SECTION

A -- NTS

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. GRASS RESTORATION:
   - 150mm OF TOPSOIL PLACEMENT
   - DRYLAND SEED
   - HYDROMULCH
3. REMOVE EXISTING CATCH BASIN. PLUG END OF EXISTING ST 250 PVC WITH NON-SHRINK GROUT

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

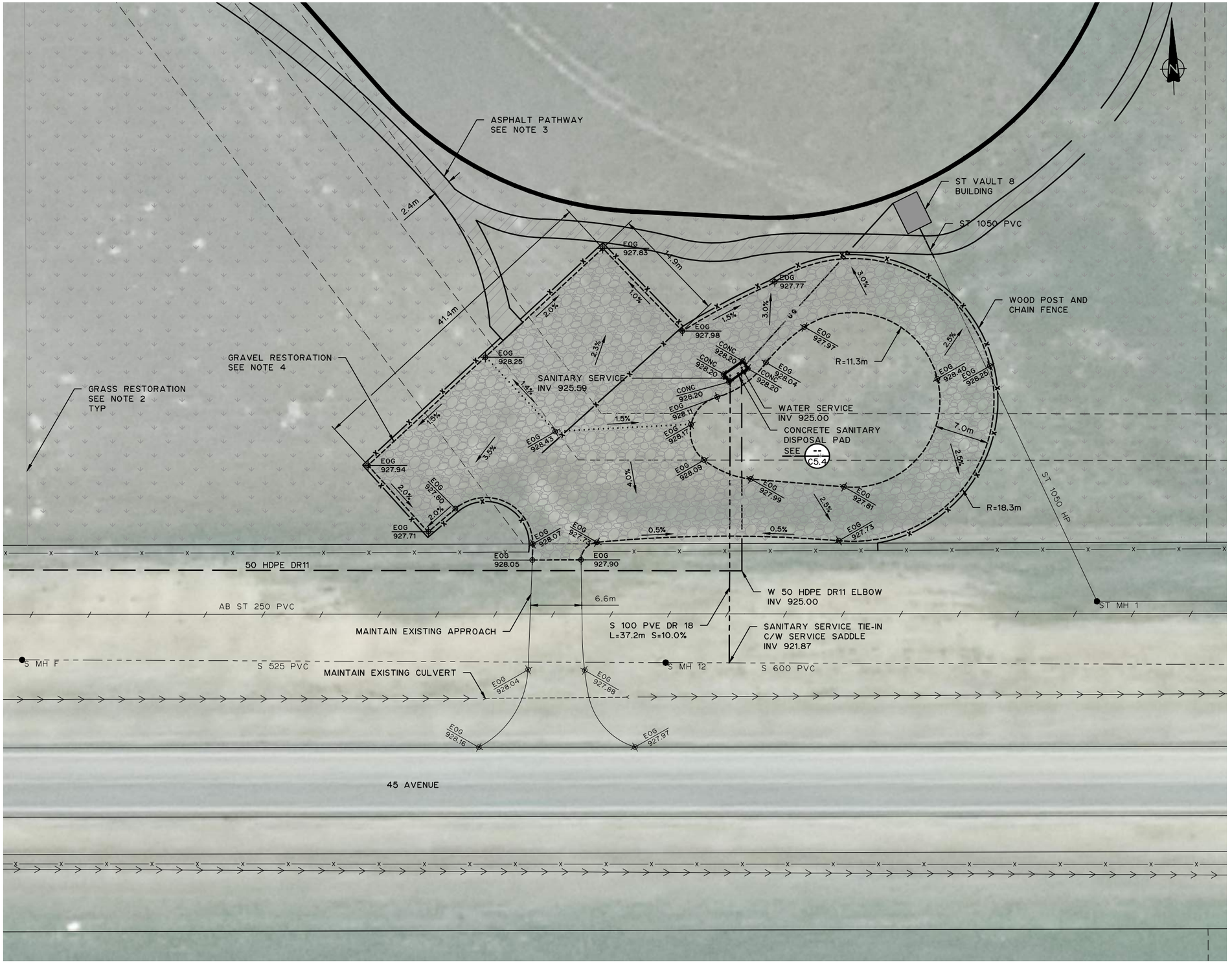
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND DRAINAGE SWALE SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:1000
DATE	JULY 2022	DRAWING	C3.8



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. GRASS RESTORATION:
   - 150mm OF TOPSOIL PLACEMENT
   - DRYLAND SEED
   - HYDROMULCH
3. ASPHALT PATHWAY:
   - 300mm SUBGRADE PREPARATION
   - 150mm BASE GRANULAR MATERIAL
   - 75mm TYPE 3 HOT MIX ASPHALT
4. GRAVEL RESTORATION:
   - 300mm SUBGRADE PREPARATION
   - 250mm BASE GRANULAR MATERIAL
5. CONFIRM ALL RESTORATION LIMITS WITH OWNER OR OWNER'S REPRESENTATIVE.
6. COORDINATE CIVIL WORK WITH ELECTRICAL CONTRACTOR FOR CABLE AND LIGHTING INSTALLATIONS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

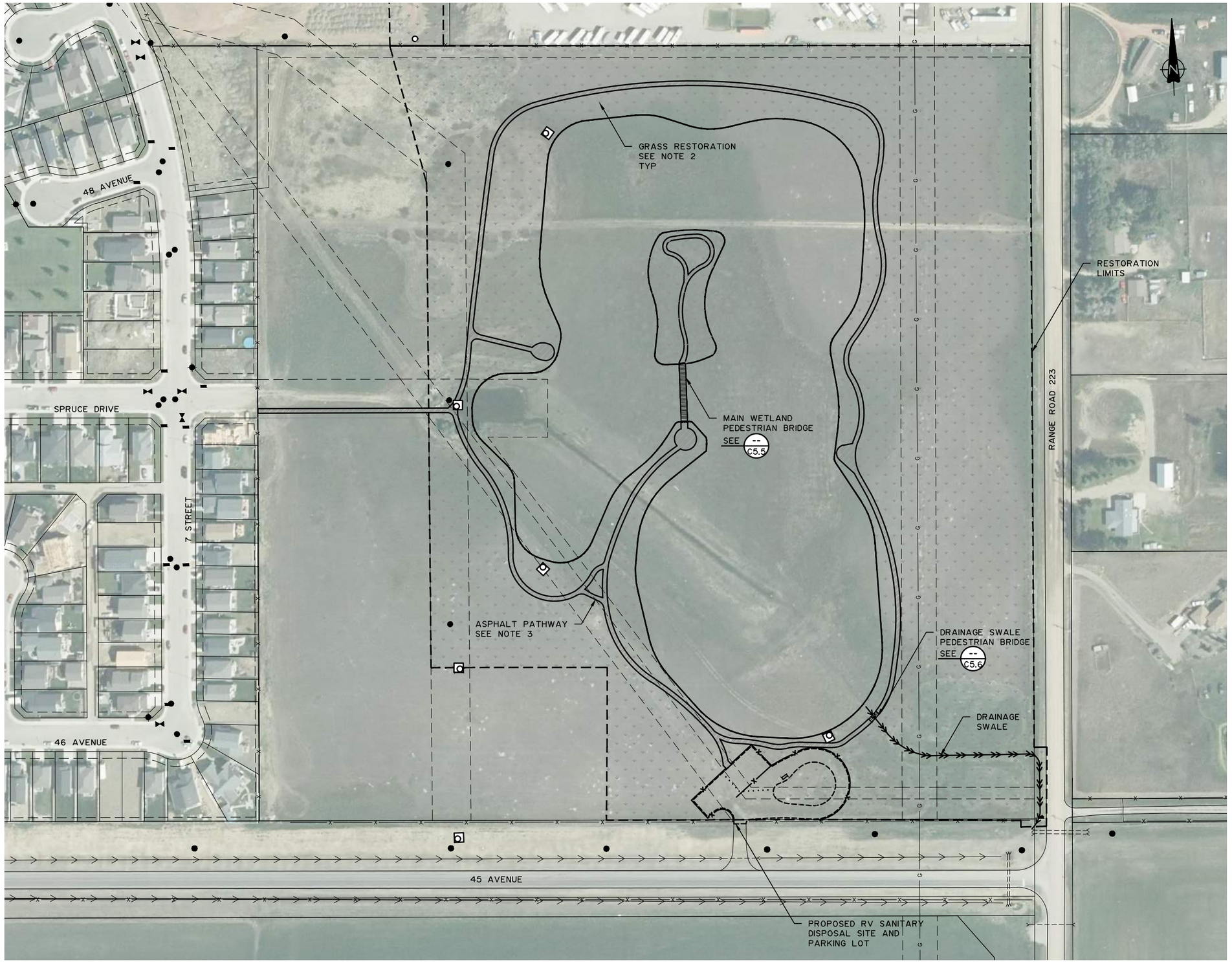
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMEL
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
RV SANITARY DISPOSAL SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:500
DATE	JULY 2022	DRAWING	C3.9



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. GRASS RESTORATION:
   - 150mm OF TOPSOIL PLACEMENT
   - DRYLAND SEED
   - HYDROMULCH
3. ASPHALT PATHWAY:
   - 300mm SUBGRADE PREPARATION
   - 150mm BASE GRANULAR MATERIAL
   - 75mm TYPE 3 HOT MIX ASPHALT
4. SEE DRAWINGS C4.3 AND C4.5 FOR WETLAND VEGETATION RESTORATION.
5. CONFIRM ALL RESTORATION LIMITS WITH OWNER OR OWNER'S REPRESENTATIVE.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND RESTORATION
SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:2000
DATE	JULY 2022	DRAWING	C4.1

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. GRASS RESTORATION:
   - 150mm OF TOPSOIL PLACEMENT
   - DRYLAND SEED
   - HYDROMULCH
3. SEE DRAWINGS C4.4 AND C4.5 FOR WETLAND VEGETATION RESTORATION.
4. CONFIRM ALL RESTORATION LIMITS WITH OWNER OR OWNER'S REPRESENTATIVE.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

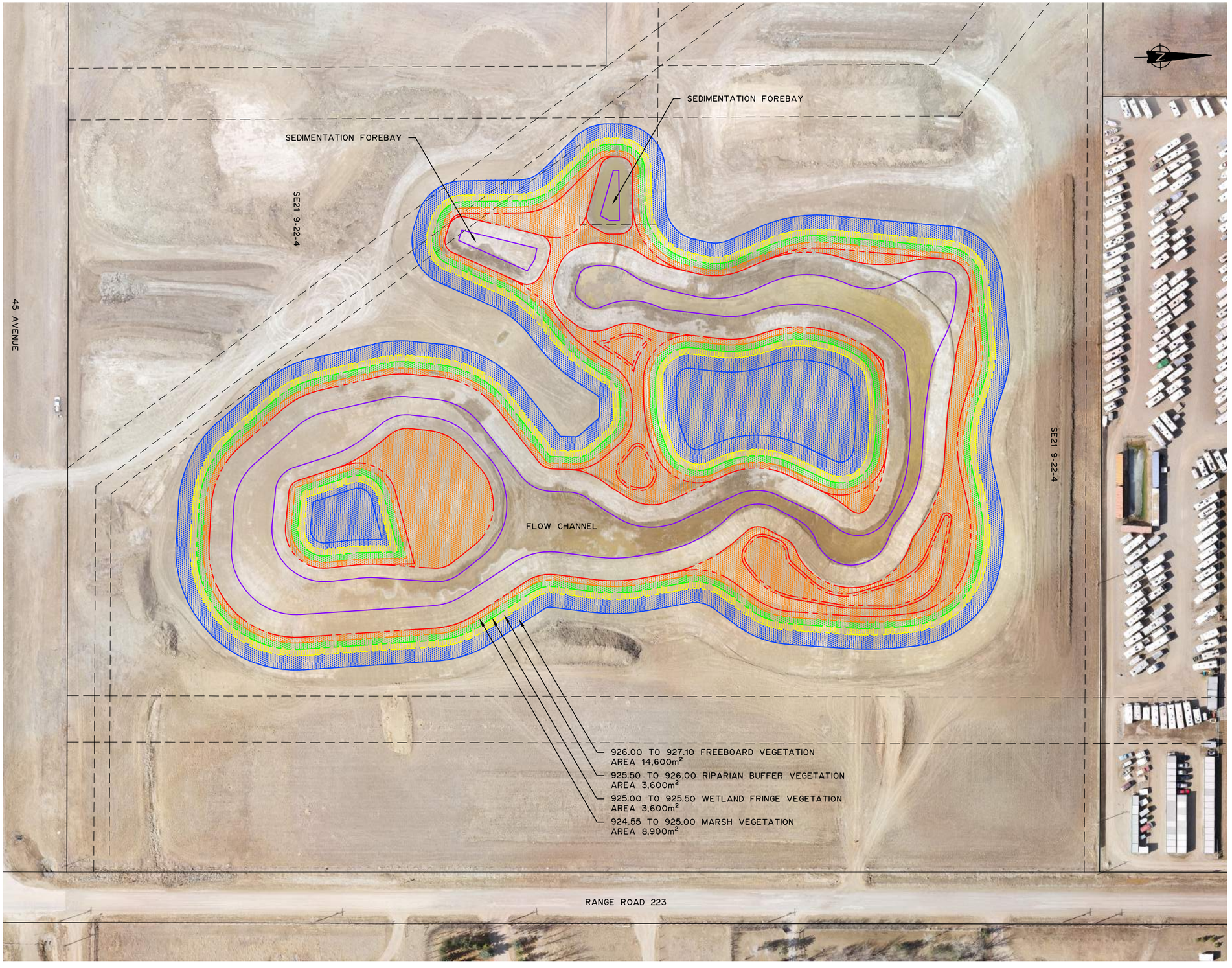
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LAFARGE WETLAND RESTORATION
SITE PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:2000
DATE	JULY 2022	DRAWING	C4.2



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. REFER TO C3.1 FOR GRADING AND GRADE BREAK DELINEATIONS.
3. REFER TO C4.5 FOR PLANTING BREAKDOWN FOR EACH RESTORATION ZONE.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

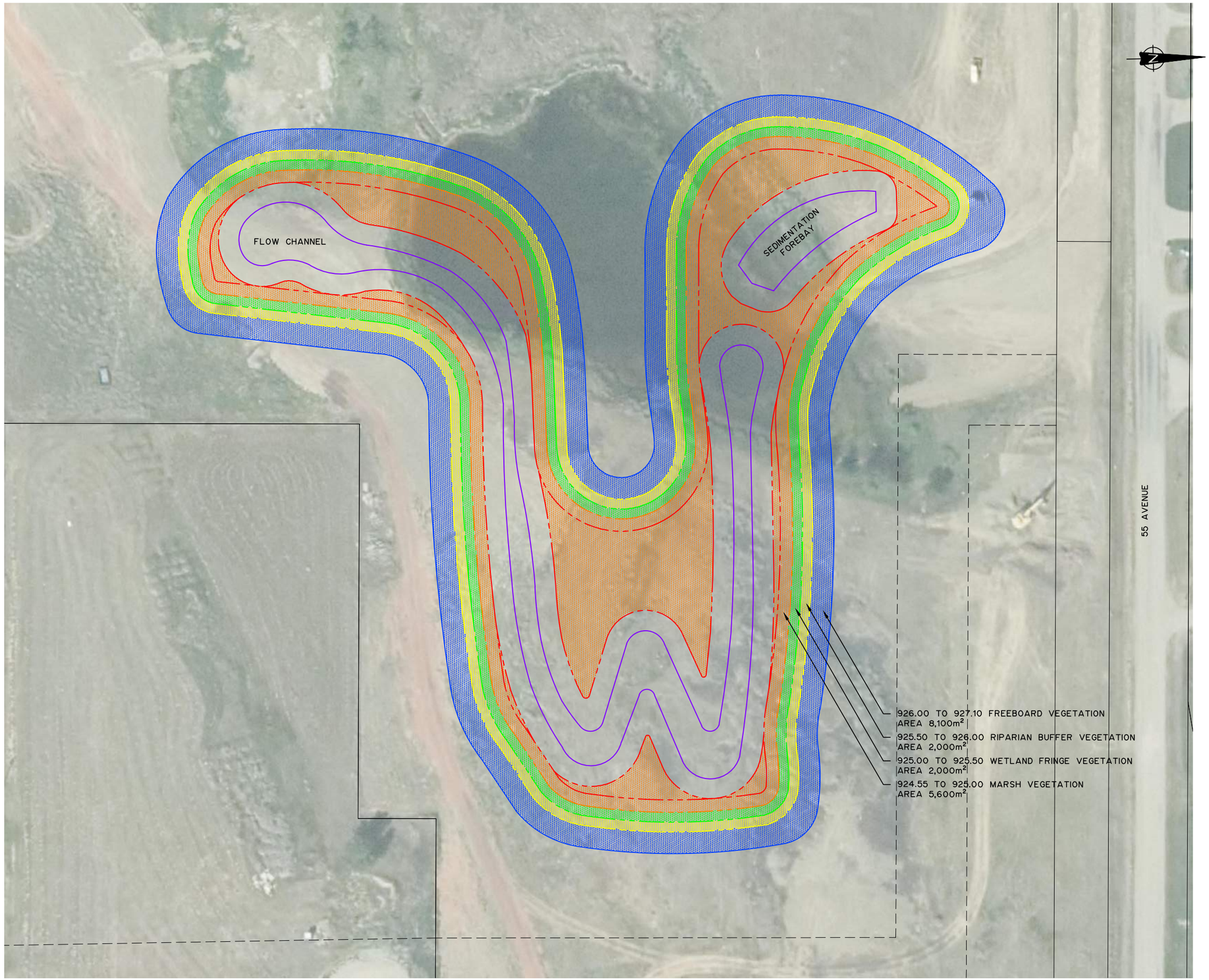
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMM
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND
VEGETATION RESTORATION PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:1500
DATE	JULY 2022	DRAWING	C4.3



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. REFER TO C3.2 FOR GRADING AND GRADE BREAK DELINEATIONS.
3. REFER TO C4.5 FOR PLANTING BREAKDOWN FOR EACH RESTORATION ZONE.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMM
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
LAFARGE WETLAND
VEGETATION RESTORATION PLAN

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:1000
DATE	JULY 2022	DRAWING	C4.4

WETLAND VEGETATION PLANTING PRESCRIPTION PLAN					
PLANTING ZONE AND DESCRIPTION		1 (MARSH)	2 (WETLAND FRINGE)	3 (RIPARIAN BUFFER)	4 (FREEBOARD)
ELEVATION (m)		924.5 TO 925.0	925.0 TO 925.5	925.5 TO 926.0	926.0 TO 927.10
EXPECTED WATER DEPTH (m)		0.5 TO 0.0 (BELOW NWL)	0.0 TO 0.5 (ABOVE NWL)	0.5 TO 1.0 (ABOVE NWL)	1.0 TO 2.1 (ABOVE NWL)
TOPSOIL THICKNESS (mm)		300	300	150	150
MAIN WETLAND TOTAL AREA (m^2)		8,900	3,600	3,600	14,600
LAFARGE WETLAND TOTAL AREA (m^2)		5,600	2,000	2,000	8,100
PLANTS (%) - SEE NOTE 3					
AQUATIC					
SUBMERGENT					
ELEOCHARIS PALUSTRIS	CREEPING SPIKE RUSH				
ALOPECURUS AEQUALIS	WATER FOX TAILS				
POLYGONUM AMPHIBIUM	WATER SMARTWEED				
GLYCERIA STRIATA	FOWL MANNA GRASS				
EMERGENT					
CAREX AQUATILLIS	AWNED SEDGE	25	20		
JUNCUS BALTICUS	BALTIC RUSH	25	20		
CICUTS MACULATA	WATER HEMLOCK	20			
RORIPPA PALUSTRIS	YELLOW CRESS	20			
POLEMONIUM ACUTIFLORUM	JACOBS LADDER	10			
ANEMONE CANADENSIS	CANADA ANEMONE		5		
RANUNCULUS SCELERATUS	CURSED CRAWFOOT		5		
NATIVE GRASSES					
LOW LYING (MOIST CONDITIONS)					
CAREX LANUGINOSA	WOOLLY SEDGE		10		
DESCHAMPSIA CESPITOSA	TUFFED HAIR GRASS		20		
AGROPYRON SMITHII	WESTERN WHEATGRASS		10		
DISTICHLIS STRICTA	SALT GRASS		10		
RIPARIAN BUFFER (MOIST CONDITIONS)					
HELICTOTRICHON HOOKERI	HOOKERS OATS GRASS			25	
POA PRATENSIS	KENTUCKY BLUEGRASS			25	
STIPA CURISETA	WESTERN PORCUPINE GRASS			25	
VULPIA	SIX-WEEKS FESCUE			25	
BERM (DRY CONDITIONS)					
AGROPYRON DASYSTACHYUM	NORTHERN WHEATGRASS				25
ELYMUS CANADENSIS	CANADIAN WILD RYE				25
FESTUCA HILLII	PLAINS ROUGH FESCUE				25
STIPA VIRIDULA	GREEN NEEDLE GRASS				25
NATIVE SHRUBS					
LOW LYING (MOIST CONDITIONS)					
PRUNUS VIRGINIANA	CHOKE CHERRY		5	5	
SALIX EXIGUA	SANDBAR WILLOW		5	5	
RIPARIAN BUFFER (MOIST CONDITIONS)					
SALIX LUCIDA	SHINING WILLOW			5	
SYMPHORICARPOS ALBUS	SNOWBERRY			5	
BERM (DRY CONDITIONS)					
ELAEAGNUS COMMUTATA	WOLF WILLOW				5
ROSA WOOSII	WILD ROSE				5

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. EXPECTED WATER DEPTHS ARE BASED ON THE EXPECTED WETLAND ELEVATIONS.
3. WITHIN THE MARSH PLANTING ZONE SUGGESTED SPECIES LISTED MAY COLONIZE DEEPER AREAS NATURALLY. CONSIDERATION WILL BE GIVEN TO EXPLORING OPPORTUNITIES TO INCREASE PLANT DIVERSITY IN THESE ZONES.
4. VEGETATION SPECIES LISTED ARE SUBJECT TO AVAILABILITY AND FORM (SEED VS SEEDLING).
5. SUBSTITUTION PLANT SPECIES SUBJECT TO APPROVAL BY OWNER'S REPRESENTATIVE.
6. TOTAL RESTORATION AREA PROVIDED. LANDSCAPE CONTRACTOR RESPONSIBLE FOR DETERMINING MINIMUM PLANTING AREA REQUIRED TO ESTABLISH FULL COVERAGE AFTER 3 YEARS.
7. MAINTENANCE AND MONITORING OF ALL PLANTING TO BE COMPLETED BY LANDSCAPE CONTRACTOR.
8. CONTRACTOR RESPONSIBLE FOR TOPSOIL PLACEMENT AND PREPARATION PRIOR TO PLANTING AND SEEDING. CONTRACTOR TO COORDINATE COMPLETION OF TOPSOIL PLACEMENT AND PREPARATION WITH LANDSCAPE CONTRACTOR.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

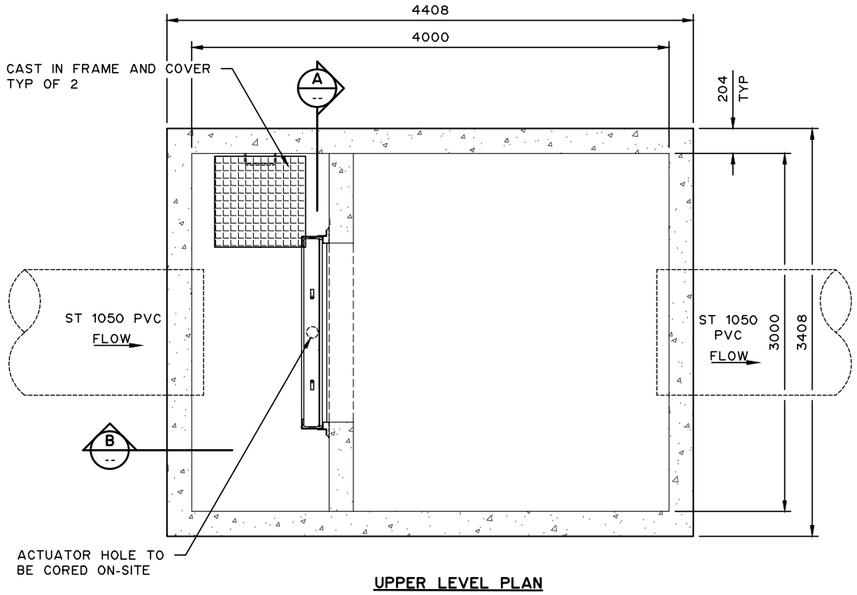
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

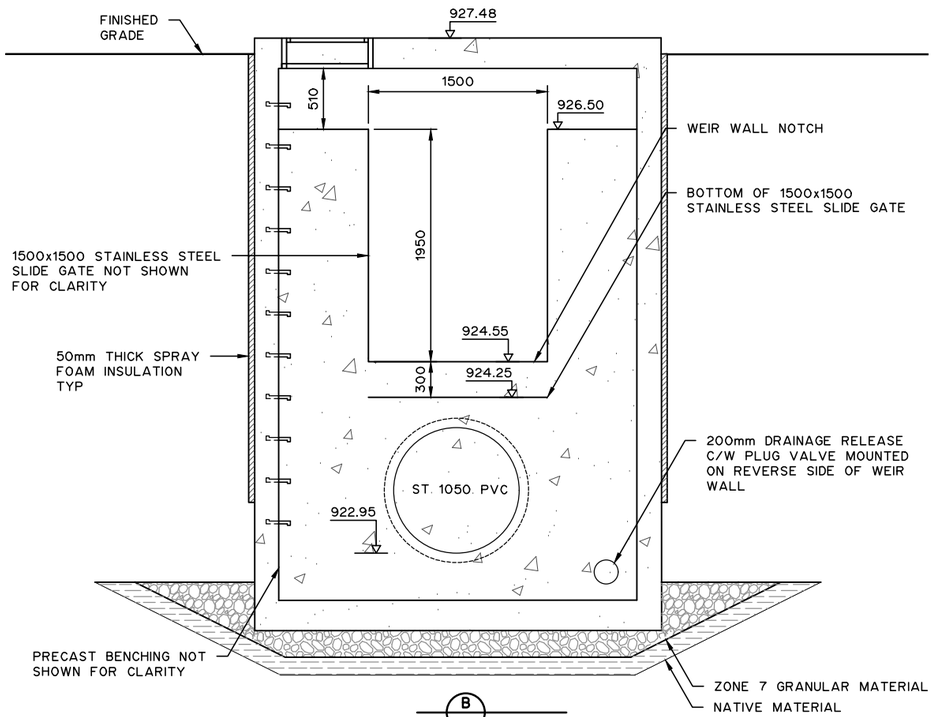
TOWN OF COALHURST

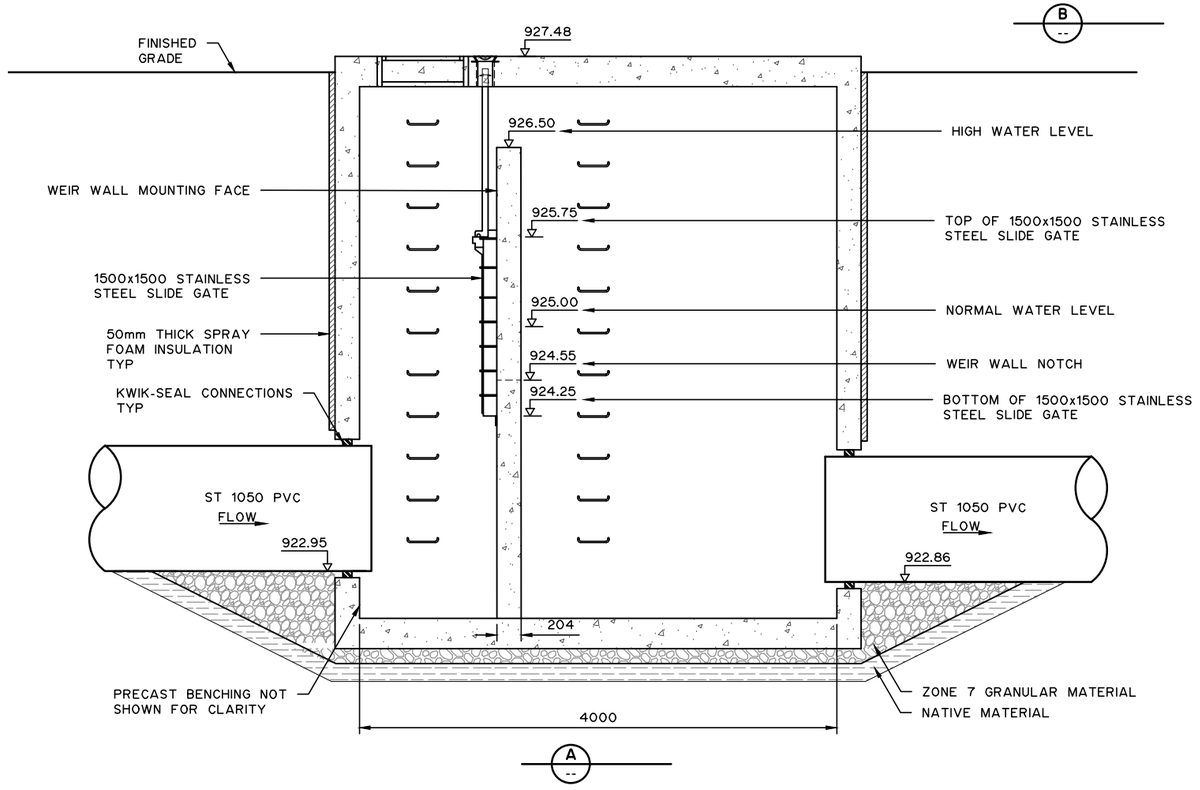
MAIN CONSTRUCTED WETLAND VEGETATION RESTORATION TABLE

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	
DATE	JULY 2022	DRAWING	C4.5



UPPER LEVEL PLAN





NOTES:

1. 1500x1500 STAINLESS STEEL SLIDE GATE C/W NON RISING STEM, ALL MOUNTING HARDWARE AND OPERATING COMPONENTS MOUNTED TO INSIDE FACE OF WEIR WALL. GATE OPENING TO BE AT AN ELEVATION OF 924.25. TOP OF GATE TO BE AT AN ELEVATION OF 925.75. SUBMIT SHOP DRAWINGS AND PRODUCT DATA PRIOR TO COMMENCEMENT OF FABRICATION. STAINLESS STEEL SLIDE GATE TO COME COMPLETE WITH ELECTRIC ACTUATOR. APPROVED SUPPLIER IS SUMMIT VALVE AND CONTROLS INC. ALTERNATIVES SUBJECT TO REVIEW AND APPROVAL BY OWNER.
2. GATE RAILS WILL REQUIRE MODIFICATIONS TO BE MOUNTED ON WEIR WALL. MODIFICATION WILL LIMIT THE GATES OPENING SPAN.
3. APPROVED STAINLESS STEEL SLIDE GATE AND ACTUATOR MODEL:
   - 1524 x 1524 GOLDEN HARVEST MODEL GH-46 SS SLIDE GATE.
   - ROTORK IQS35A ACTUATOR.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

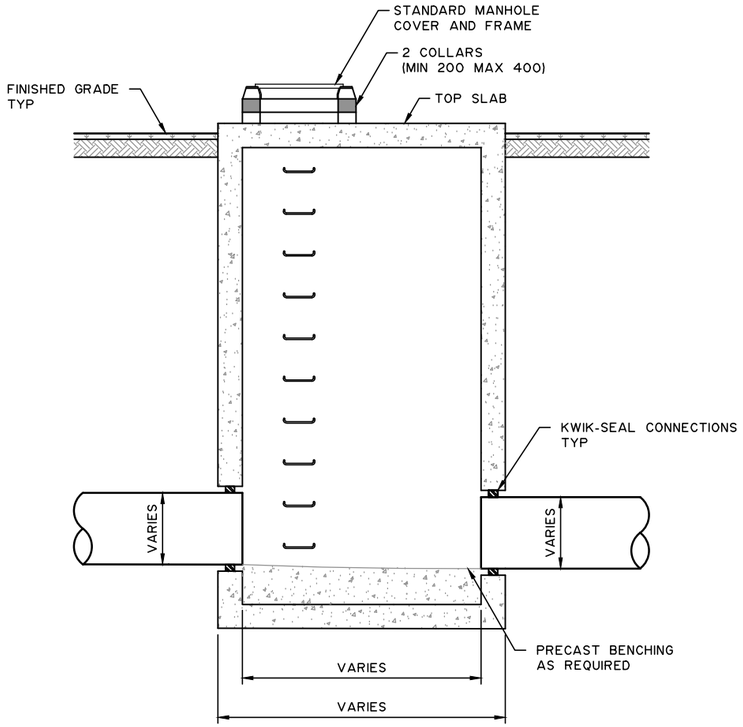
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

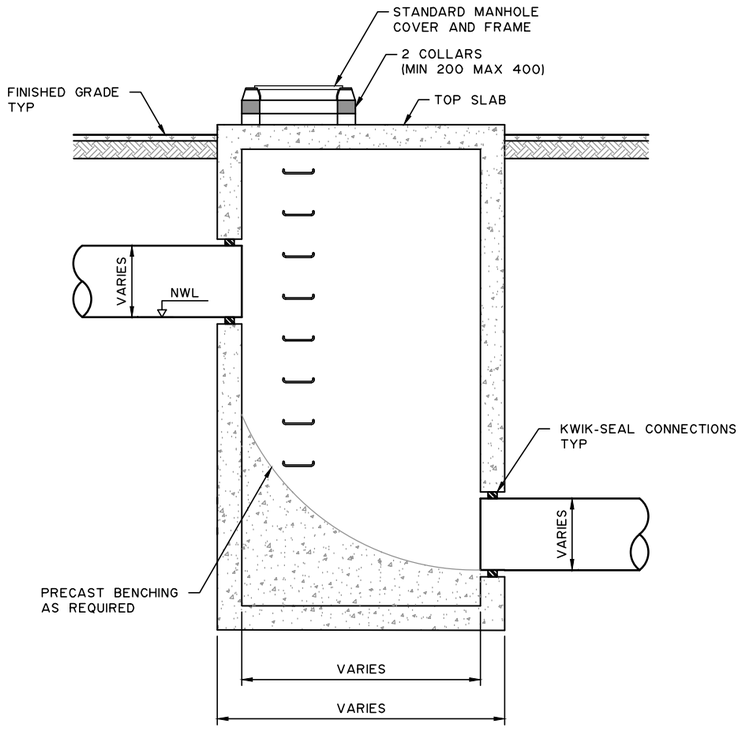
MAIN CONSTRUCTED WETLAND
ST VAULT 8 STRUCTURE DETAILS

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	C5.1



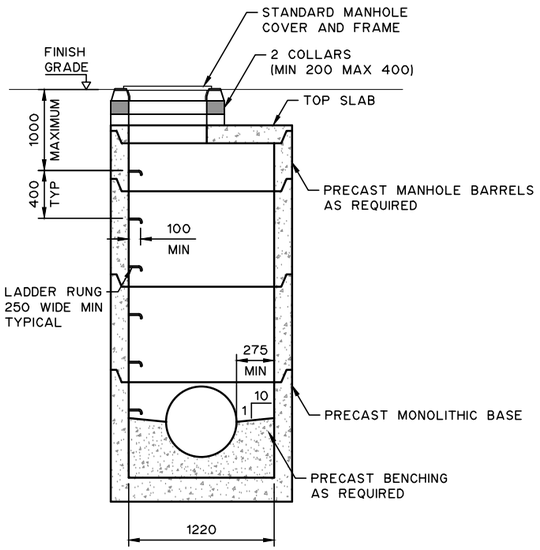
TYPICAL VAULT DETAIL

1 C1.2 1:50



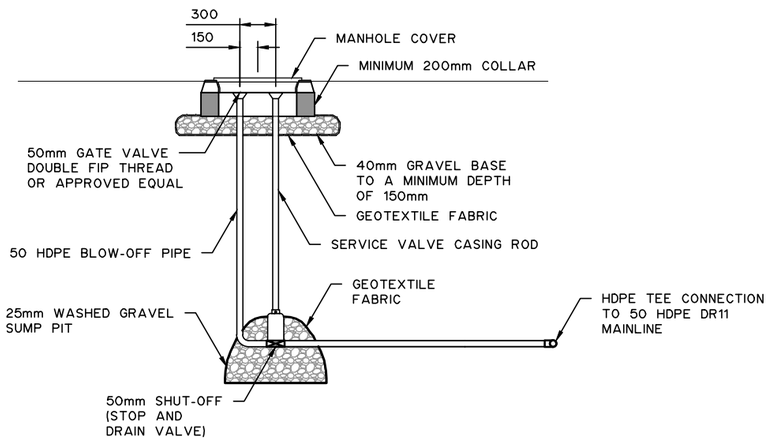
TYPICAL INLET/OUTLET VAULT DETAIL

2 C1.2 2 C1.3 1:50



STANDARD PRECAST MANHOLE FOR 600mm PIPE OR SMALLER

NTS



FLUSH POINT DETAIL

1:50

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

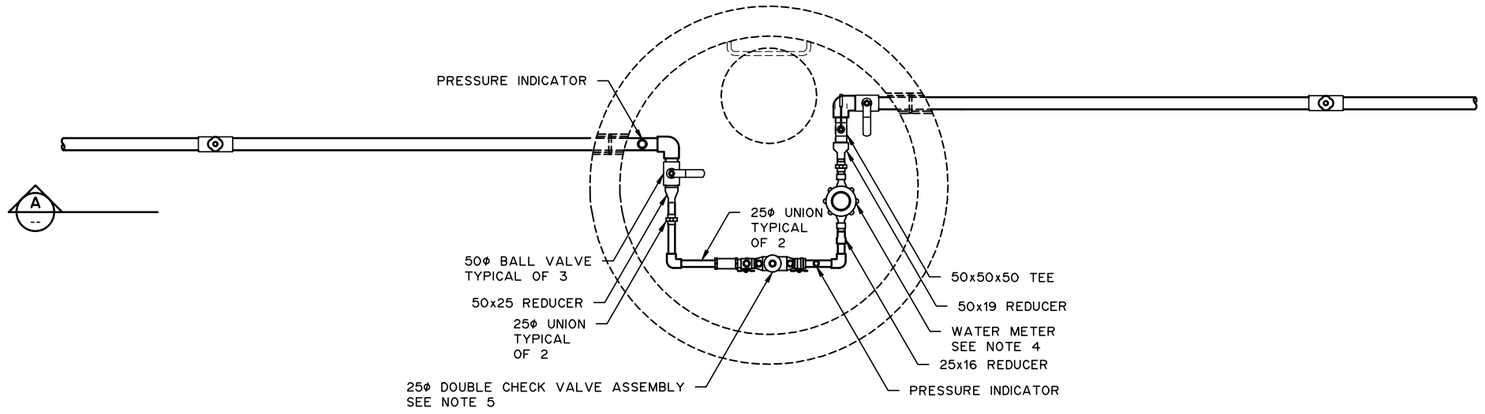
PROFESSIONAL ENGINEER ALBERTA GAVIN B. NIMMI ID 119755
JULY 25, 2022

MPE Engineering Ltd.

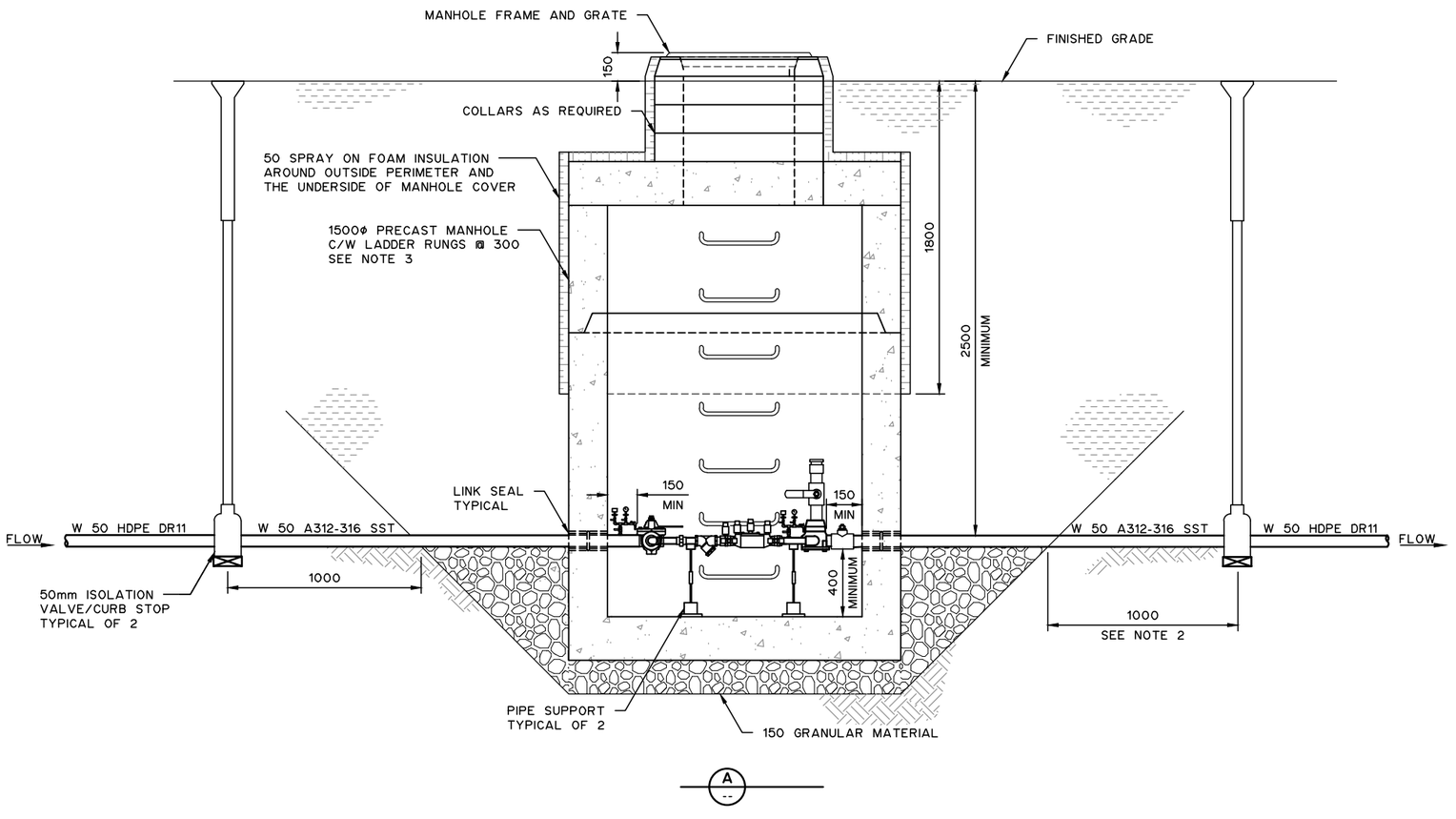
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
TYPICAL STRUCTURE DETAILS

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	AS SHOWN
DATE	JULY 2022	DRAWING	C5.2



PLAN



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. TRANSITION COUPLER LOCATED SUCH THAT STAINLESS STEEL PIPE EXTENDS 1000mm INTO UNDISTURBED GROUND.
3. PROVIDE RISER WRAP ON ALL MANHOLE JOINTS INCLUDING COLLARS, RINGS AND FRAME.
4. WATER METER MODEL:
   - 5/8"x3/4" NEPTUNE T-10 METER WITH E-CODER R900i REGISTER
5. DOUBLE CHECK VALVE ASSEMBLY:
   - WATTS MODEL LF007M1QT-S
6. PRESSURE REDUCING/SUSTAINING VALVE MODEL
   - SINGER 106-PR-R PRESSURE REDUCING AND PRESSURE SUSTAINING VALVE
   - PRESSURE SUSTAINING PILOT SET TO 40 PSI
   - PRESSURE REDUCING PILOT SET TO 25 PSI
7. STAINLESS STEEL PIPE BACKFILL FOR HAUNCHING AND INITIAL BACKFILL WITHIN THE PIPE ZONE:

SIEVE SIZE	% PASSING BY WEIGHT
10mm	100
2mm	65-95
1.25mm	42-86
0.16mm	2-19
0.08mm	0-5

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

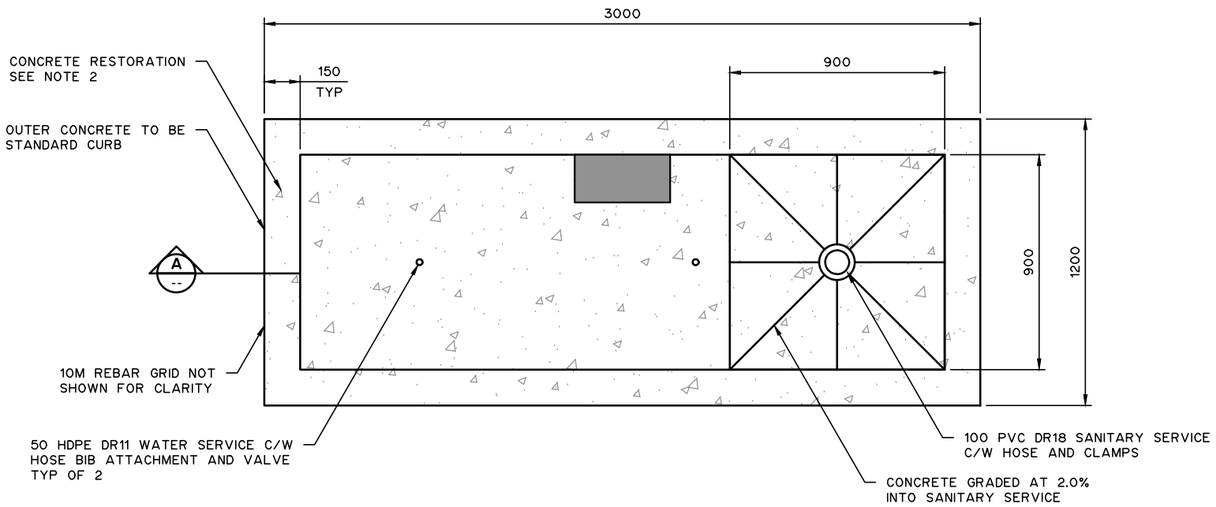
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMEL
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

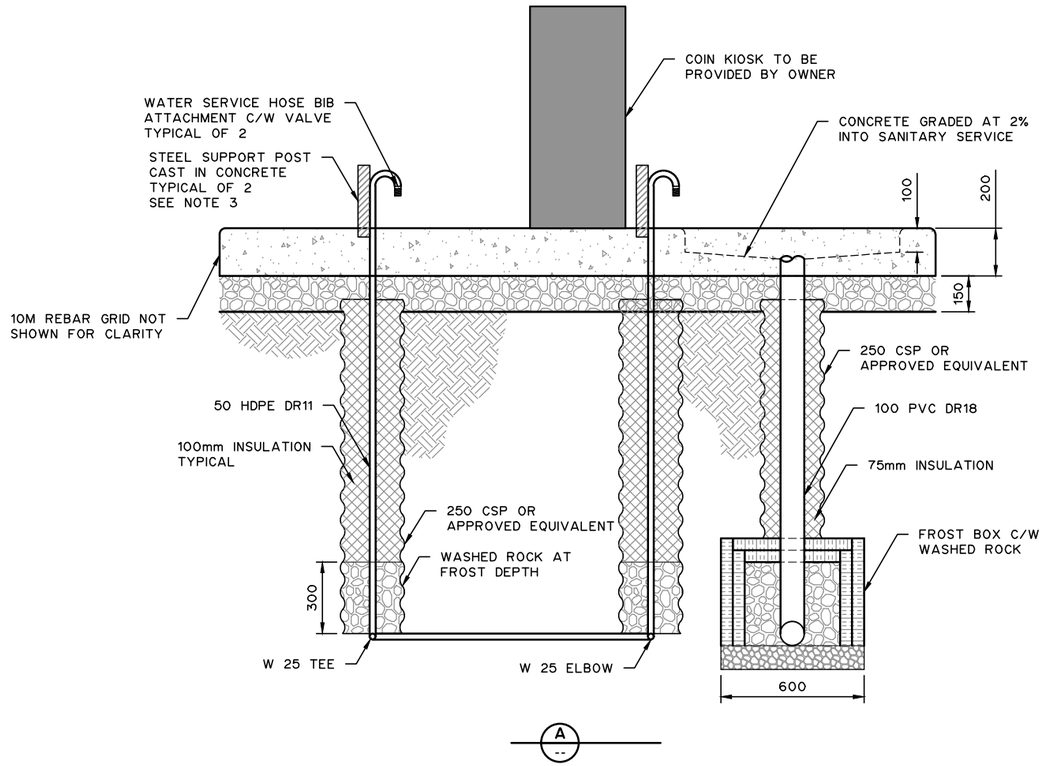
MAIN CONSTRUCTED WETLAND
METER VAULT DETAIL

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	NTS
DATE	JULY 2022	DRAWING	C5.3



RV SANITARY DISPOSAL SITE CONCRETE PAD DETAIL

--
C3.9



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. CONCRETE RESTORATION:
   - 300mm SUBGRADE PREPARATION
   - 150mm BASE GRANULAR MATERIAL
   - 200mm THICK CONCRETE SLAB C/W 10M REBAR GRID AT 300mm OC
3. STEEL SUPPORT POSTS TO BE 100x100 HSS POSTS WITH END CAPS. STEEL SUPPORT POSTS TO EXTEND 900mm ABOVE CONCRETE PAD AND TO BE EMBEDDED INTO CAST-IN-PLACE CONCRETE. STEEL POTS TO EXTEND 300mm BELOW TOP OF CONCRETE COMPLETE WITH WELDED SUPPORT PLATES ON TWO SIDES LOCATED 100mm BELOW TOP OF CONCRETE. STEEL POSTS TO BE POWDER COATED PARKS GREEN.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

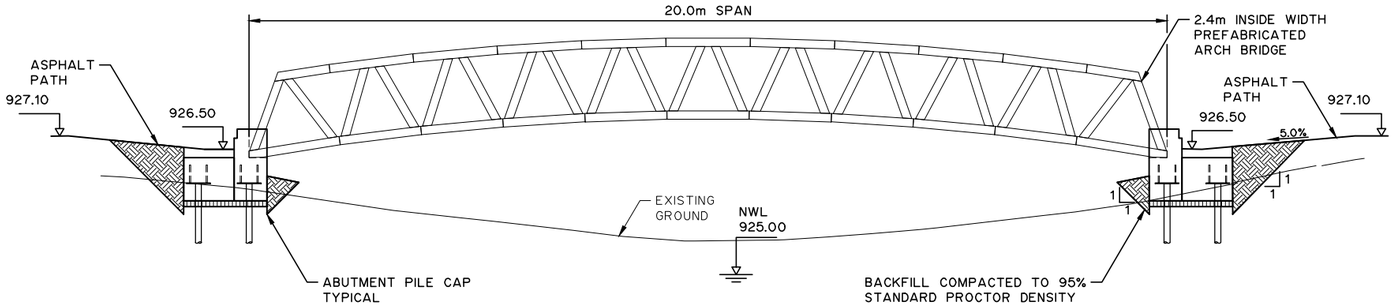
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
RV SANITARY DISPOSAL SITE
CONCRETE PAD DETAIL

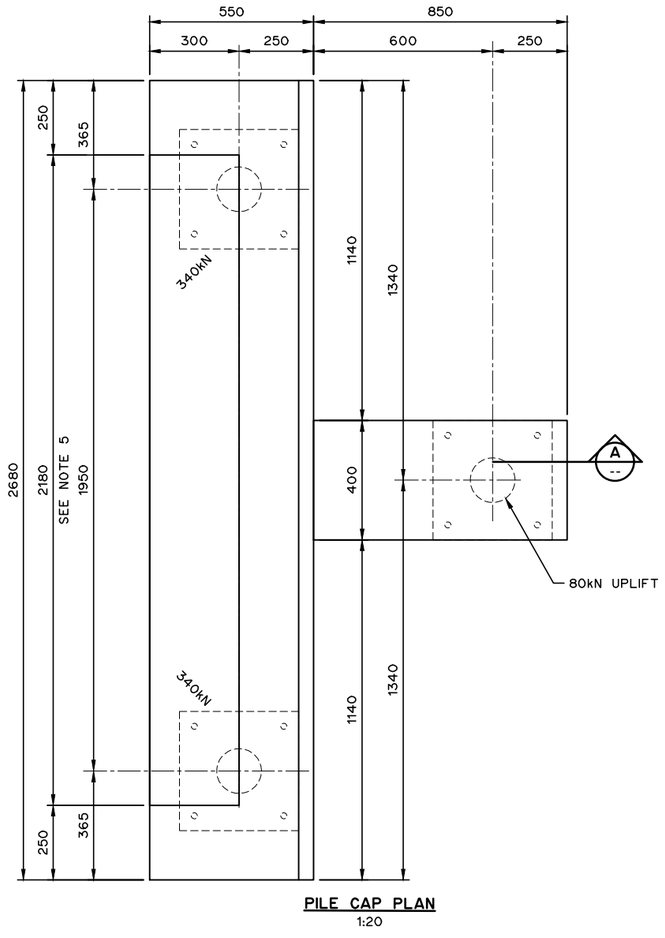
DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	1:25
DATE	JULY 2022	DRAWING	C5.4



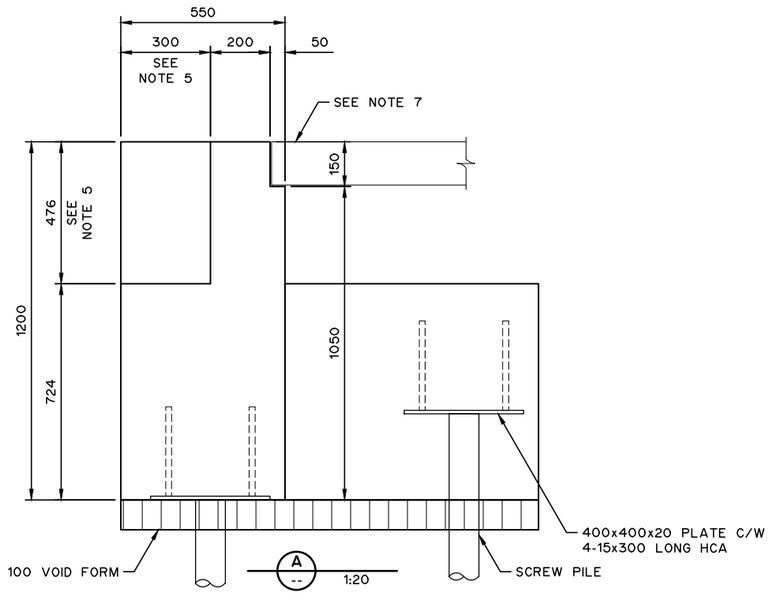
MAIN WETLAND PEDESTRIAN BRIDGE
NTS

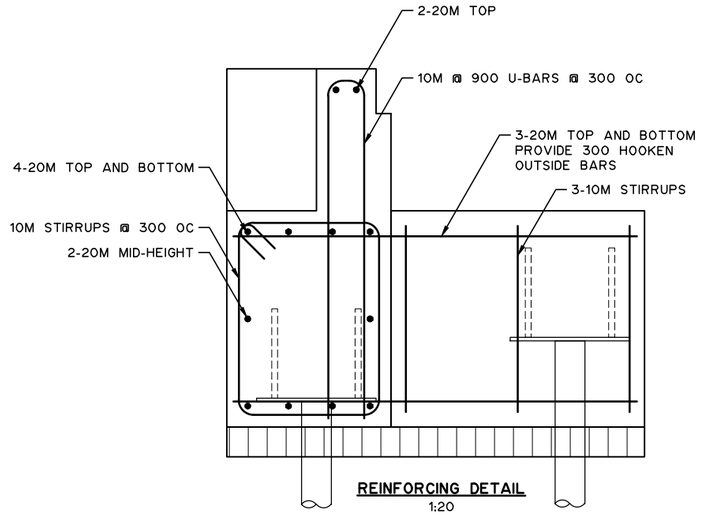
NOTES:
1. ALL DIMENSIONS AND ELEVATIONS TO BE CONFIRMED BY CONTRACTOR WITH ENGINEERS.
2. ORIENTATION OF ABUTMENTS TO BE CONFIRMED AND COORDINATED WITH CONTRACTOR AND BRIDGE SUPPLIER.
3. ABUTMENT BEARING PLATFORM TO BE SKEWED AS REQUIRED FOR BRIDGE BEARING PERPENDICULAR TO ABUTMENT BOTH ENDS.
4. ENGINEERED, STAMPED SHOP DRAWINGS TO BE SUBMITTED FOR REVIEW. CONTRACTOR TO COORDINATE FINAL DIMENSIONS AND FOUNDATION REQUIREMENTS WITH THE BRIDGE SUPPLIER.

NOTES:
5. CONTRACTOR TO CONFIRM DEPTH AND WIDTH WITH BRIDGE DESIGNER. SUBMIT FINAL DIMENSIONS FOR REVIEW.
6. BRIDGE FASTENING DETAILS TO BE REVIEWED AND VERIFIED BY BRIDGE DESIGNER. SUBMIT FINAL PLANS FOR REVIEW.
7. TIE-IN TO ADJACENT PATH TO BE APPROVED BY THE BRIDGE DESIGNER AND OWNER'S REPRESENTATIVE.
8. ALL BOLTS TO BE GALVANIZED AND CONFORM TO ASTM A325.
9. ALL TIMBER TO BE PRESSURE TREATED LUMBER.
10. DESIGN IN ACCORDANCE WITH THE CANADIAN HIGHWAY BRIDGE DESIGN CODE CAN/CSA-S6-06.
11. UNIFORM LIVE LOAD -4.0 kPa. MAXIMUM VEHICLE RATING LOADING = 45 kN.
12. ALBERTA BUILDING CODE 2014 1/50 REFERENCE WIND PRESSURE 0.68 kPa.
13. ALL HOLLOW STRUCTURAL SHAPES TO CONFORM TO CSA G40.21-M 350W CLASS C OR ASTM A500-03A GRADE C/B. ALL OTHER STRUCTURAL MEMBERS TO BE CSA G40.21-350W OR ASTM A572 GR50-07, ASTM A992-06A, ASTM A709 GR50-60A.
14. WELDING TO CONFORM TO CSA W59-03 AND BE PREFORMED BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.2-03 (2003)
15. ALL STEEL COMPONENTS TO BE POWDER COATED, OR FINISHED WITH ONE COAT OF EXTERIOR ALKYD PRIMER FOLLOWED BY TWO COATS OF EXTERIOR ALKYD ENAMEL PAINT (COLOUR TO BE DETERMINED).
16. CONTRACTOR TO COORDINATE ALL DISCIPLINES AS REQUIRED INCLUDING ENGINEERING AND SURVEYING.



PILE CAP PLAN
1:20





REINFORCING DETAIL
1:20

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

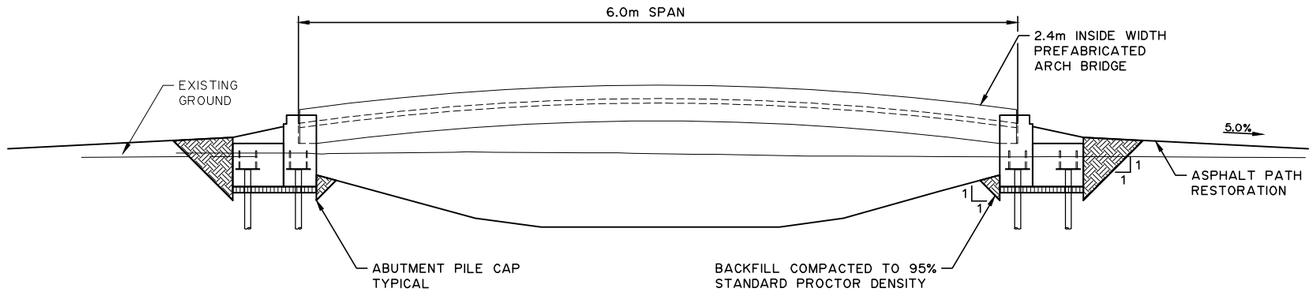
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
MAIN WETLAND PEDESTRIAN BRIDGE DETAIL

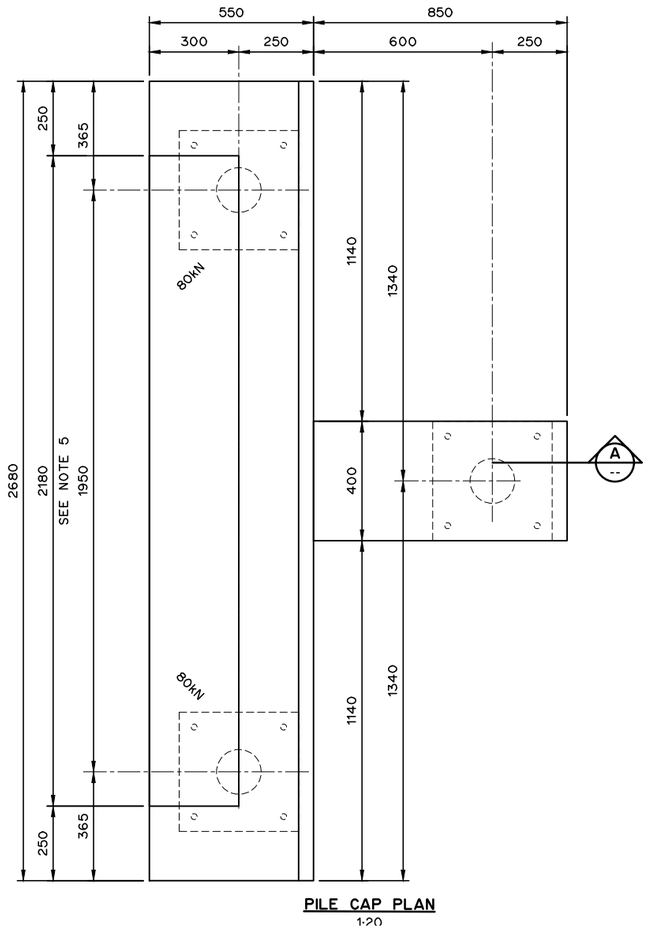
DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	AS SHOWN
DATE	JULY 2022	DRAWING	C5.5



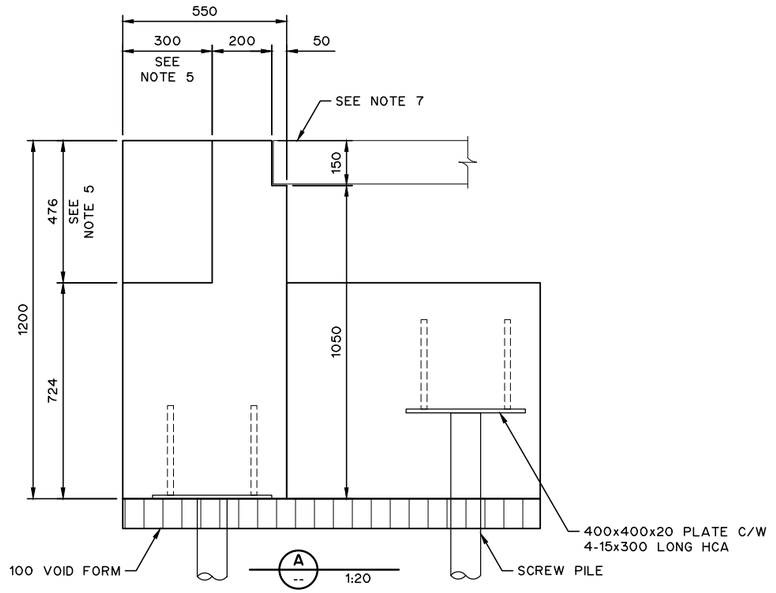
DRAINAGE SWALE PEDESTRIAN BRIDGE
NTS

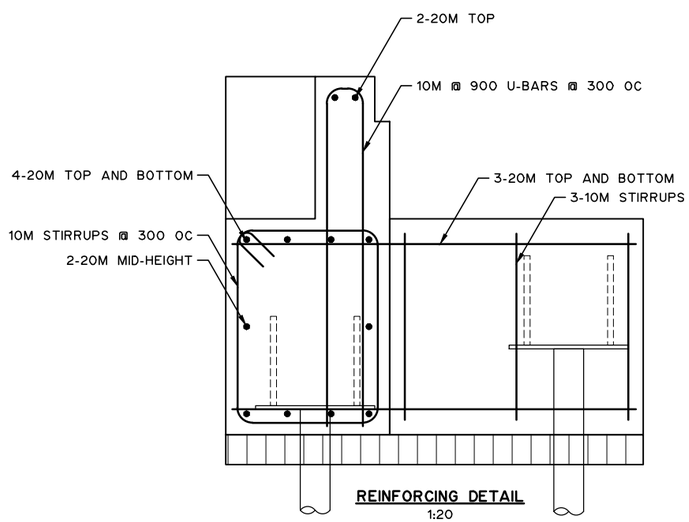
NOTES:
1. ALL DIMENSIONS AND ELEVATIONS TO BE CONFIRMED BY CONTRACTOR WITH ENGINEERS.
2. ORIENTATION OF ABUTMENTS TO BE CONFIRMED AND COORDINATED WITH CONTRACTOR AND BRIDGE SUPPLIER.
3. ABUTMENT BEARING PLATFORM TO BE SKEWED AS REQUIRED FOR BRIDGE BEARING PERPENDICULAR TO ABUTMENT BOTH ENDS.
4. ENGINEERED, STAMPED SHOP DRAWINGS TO BE SUBMITTED FOR REVIEW. CONTRACTOR TO COORDINATE FINAL DIMENSIONS AND FOUNDATION REQUIREMENTS WITH THE BRIDGE SUPPLIER.

NOTES:
5. CONTRACTOR TO CONFIRM DEPTH AND WIDTH WITH BRIDGE DESIGNER. SUBMIT FINAL DIMENSIONS FOR REVIEW.
6. BRIDGE FASTENING DETAILS TO BE REVIEWED AND VERIFIED BY BRIDGE DESIGNER. SUBMIT FINAL PLANS FOR REVIEW.
7. TIE-IN TO ADJACENT PATH TO BE APPROVED BY THE BRIDGE DESIGNER AND OWNER'S REPRESENTATIVE.
8. ALL BOLTS TO BE GALVANIZED AND CONFORM TO ASTM A325.
9. ALL TIMBER TO BE PRESSURE TREATED LUMBER.
10. DESIGN IN ACCORDANCE WITH THE CANADIAN HIGHWAY BRIDGE DESIGN CODE CAN/CSA-S6-06.
11. UNIFORM LIVE LOAD -4.0 kPa. MAXIMUM VEHICLE RATING LOADING = 45 kN.
12. ALBERTA BUILDING CODE 2014 1/50 REFERENCE WIND PRESSURE 0.68 kPa.
13. ALL HOLLOW STRUCTURAL SHAPES TO CONFORM TO CSA G40.21-M 350W CLASS C OR ASTM A500-03A GRADE C/B. ALL OTHER STRUCTURAL MEMBERS TO BE CSA G40.21-350W OR ASTM A572 GR50-07, ASTM A992-06A, ASTM A709 GR50-60A.
14. WELDING TO CONFORM TO CSA W59-03 AND BE PREFORMED BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.2-03 (2003)
15. ALL STEEL COMPONENTS TO BE POWDER COATED, OR FINISHED WITH ONE COAT OF EXTERIOR ALKYD PRIMER FOLLOWED BY TWO COATS OF EXTERIOR ALKYD ENAMEL PAINT (COLOUR TO BE DETERMINED).
16. CONTRACTOR TO COORDINATE ALL DISCIPLINES AS REQUIRED INCLUDING ENGINEERING AND SURVEYING.



PILE CAP PLAN
1:20





REINFORCING DETAIL
1:20

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

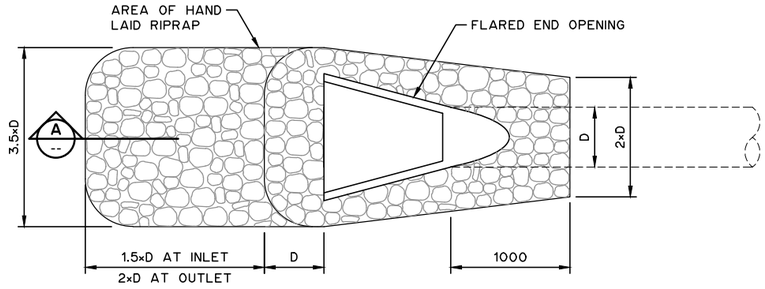
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. SUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
DRAINAGE SWALE PEDESTRIAN BRIDGE DETAIL

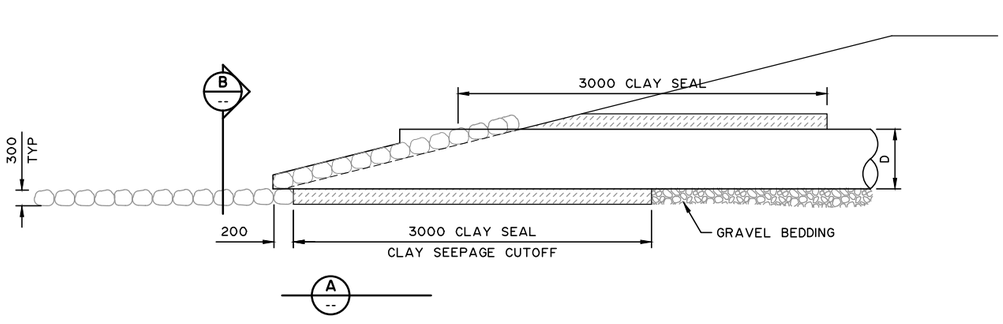
DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	AS SHOWN
DATE	JULY 2022	DRAWING	C5.6

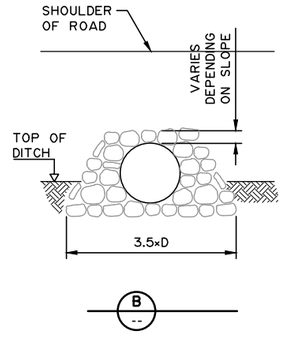


PLAN

PIPE DIAMETER (D)	AREA OF ONE END EXCLUDING APRON (m^2)	AREA OF ONE END INCLUDING INLET APRON (m^2)	AREA OF ONE END INCLUDING OUTLET APRON (m^2)
500	3	4	5
600	4	6	7
700	5	7	8
800	6	9	10
900	7	11	12
1000	8	13	15
1100	10	15	18
1200	11	18	21
1400	13	22	27
1500	15	26	31

*RIPRAP SURFACE AREAS SHOWN IN THIS TABLE ESTIMATES ONLY AND MAY VARY





CONCRETE FLARED END TREATMENT

NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.
2. FLARED END TREATMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND TO BE COMPLETE WITH A 3.0m CLAY PLUG COMPACTED TO 98% SPMDD, WITH A MOISTURE CONTENT LIMITS OF OPTIMUM TO +2%.
3. FLARED ENDS TO BE FINISHED WITH 300mm CLASS 1M RIP RAP END TREATMENT.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

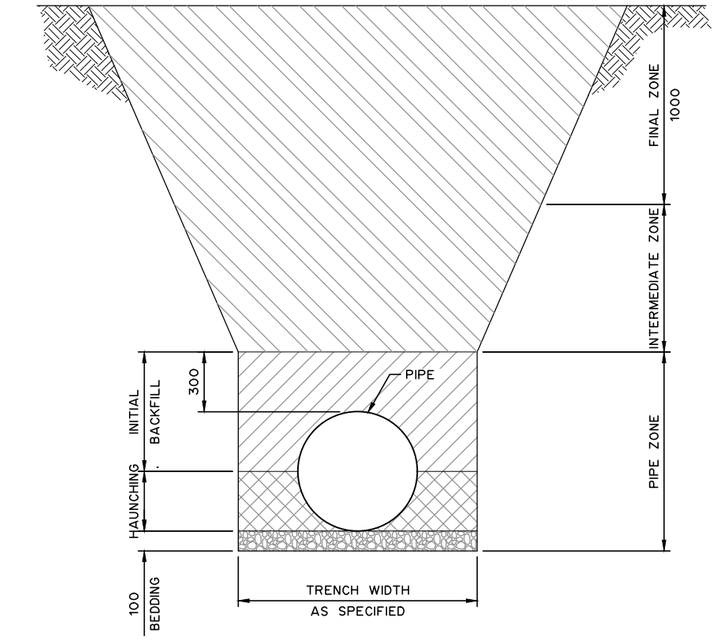
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMEL
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

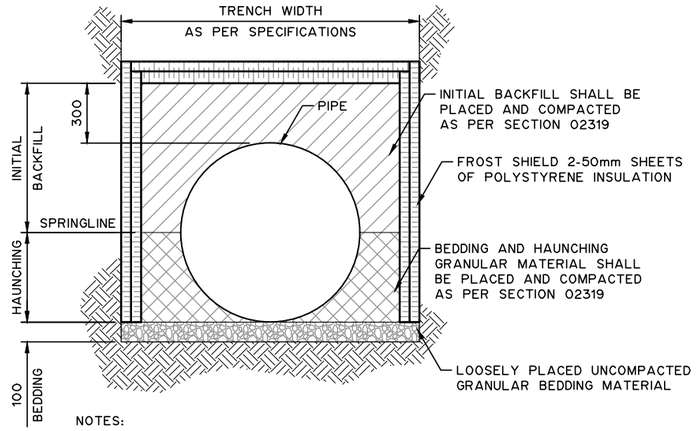
MAIN CONSTRUCTED WETLAND
TYPICAL DETAILS 1 OF 4

DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	
DATE	JULY 2022	DRAWING	C5.7



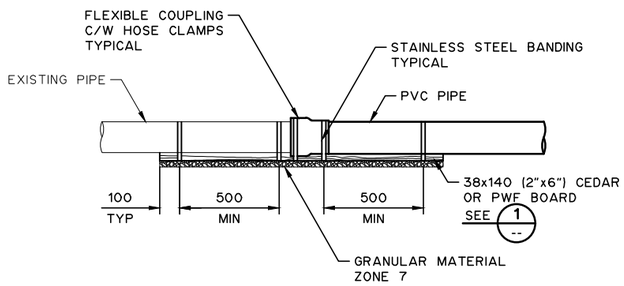
NOTES:
1. REFER TO SECTION 02319 - BACKFILLING SCHEDULE FOR: FILL MATERIAL, MAXIMUM LIFT THICKNESS, MINIMUM COMPACTION AND MOISTURE CONTENT REQUIREMENTS.

TYPICAL TRENCH BEDDING AND BACKFILL REQUIREMENTS
NTS

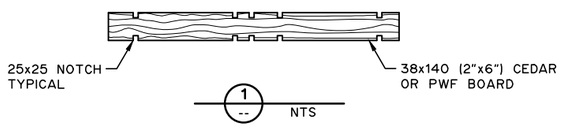


NOTES:
1. STAGGER JOINTS OF INSULATION BETWEEN UPPER AND LOWER SHEETS.

RIGID FROST SHIELD FOR MAINS AND SERVICES
NTS

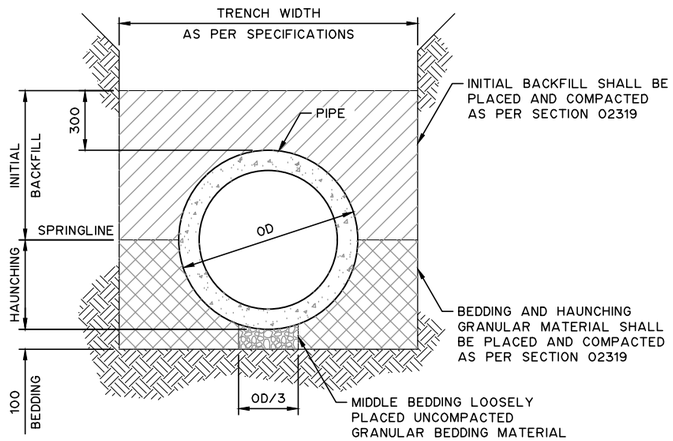


SECTION
NTS NTS



NOTE:
1. MATCH INVERTS AND REPAIR SECTION TO EXISTING PIPE.

EXISTING MAIN RECONNECTION
NTS



CLASS B BEDDING AND HAUNCHING FOR RIGID PIPE (CONCRETE)
NTS

NOTES:
1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

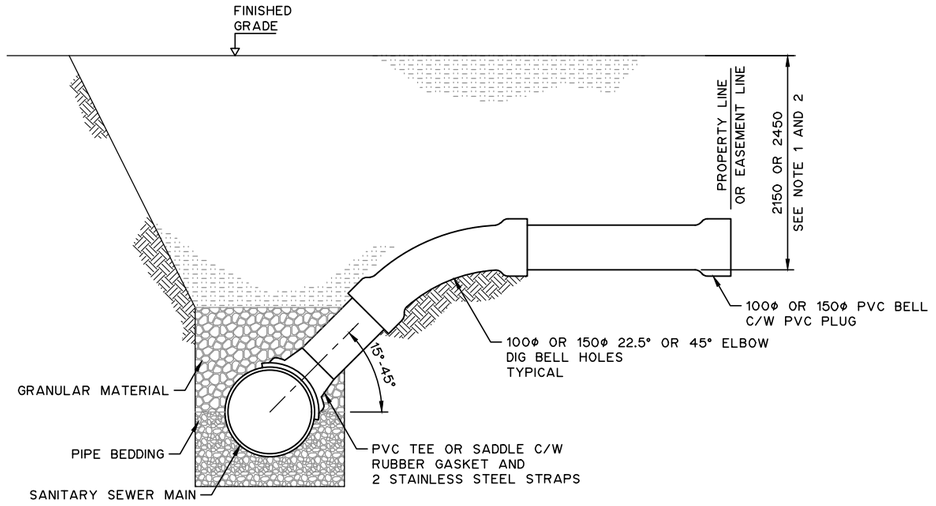
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
TYPICAL DETAILS 2 OF 4

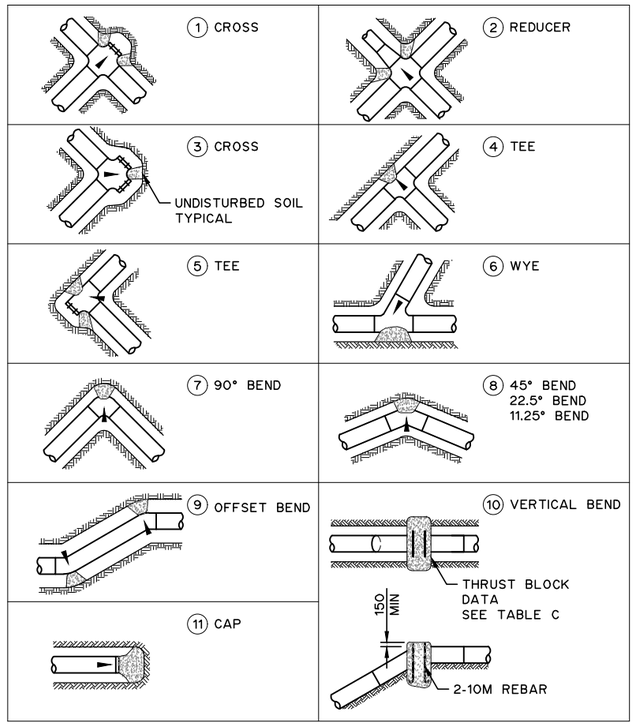
DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	NTS
DATE	JULY 2022	DRAWING	C5.8



NOTES:
1. WHEN LOT SLOPES FROM BACK TO FRONT, THE DEPTH TO BE 2.15m AT PROPERTY LINE.
2. WHEN LOT SLOPES FROM FRONT TO BACK, THE DEPTH TO BE 2.45m AT PROPERTY LINE.
3. SEWER SERVICES MUST TERMINATE WITH A BELL END.
4. SADDLES TO BE A MINIMUM OF 400mm APART.

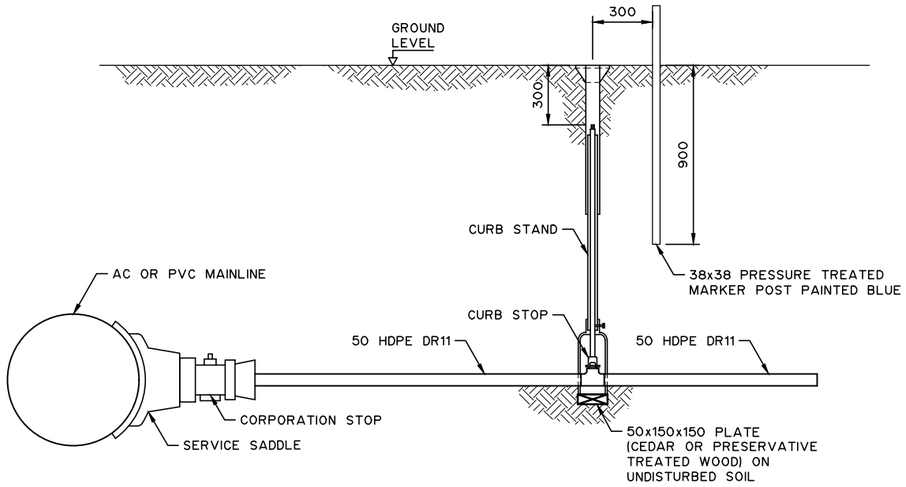
PVC SANITARY SERVICE CONNECTION FOR SANITARY MAINS LESS THAN 3.7m DEEP

NTS



THRUST BLOCK LOCATIONS

NTS



NOTES:
1. CORPORATION STOPS TO BE STAGGERED AND AT LEAST 400mm APART.
2. CORPORATION STOPS TO BE 300mm MINIMUM FROM END OF PIPE SECTION.
3. USE AWWA THREAD FOR ALL DIRECT TAPS.
4. FOR CONNECTIONS IN EXISTING AREAS, HORIZONTAL GOOSENECK TO BE FORMED IF DEPTH IF LESS THAN 1500mm.
5. USE SERVICE SADDLE FOR ALL AC, PVC AND HDPE MAINLINE CONNECTIONS.

50mm WATER SERVICE CONNECTION

NTS

TABLE 'A'

THRUST BLOCK FACE AREA IN SQ METRES AT FITTING FOR CL 150 PIPE @ 1000 kPa AND SOIL BEARING CAPACITY OF 100 kPa

PIPE SIZE IMPERIAL	PIPE SIZE METRIC	DEAD ENDS OR TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4"	100	0.12	0.17	0.10	0.10	0.10
6"	150	0.25	0.35	0.19	0.10	0.10
8"	200	0.43	0.60	0.33	0.17	0.10
10"	250	0.70	0.99	0.54	0.27	0.14
12"	300	1.00	1.40	0.75	0.39	0.19
14"	350	1.35	1.90	1.03	0.52	0.26
16"	400	1.75	2.47	1.34	0.68	0.34
18"	450	2.24	3.15	1.72	0.87	0.44
20"	500	2.77	3.90	2.12	1.07	0.54
24"	600	4.00	5.64	3.07	1.55	0.78
30"	750	6.26	8.83	4.81	2.44	1.22
36"	900	9.03	12.70	7.58	3.51	1.76

TABLE 'B'

SOIL TYPE	SAFE BEARING LOAD kPa
SOFT CLAY, LOOSE SAND	50
MEDIUM SOFT CLAY, DENSE SAND	100
DENSE CLAY TILL AND GRAVEL	150
HARD SHALE	500

TABLE 'C'

DEAD WEIGHT REQUIREMENTS FOR VERTICAL BENDS CUBIC METRES OF CONCRETE (m^3)

TYPE OF BEND	SIZE (mm)						
	100	150	200	250	300	350	400
90° BEND	0.75	1.50	2.75	4.25	6.00	8.50	11.00
45° BEND	0.50	1.00	1.50	2.25	3.50	4.75	6.00
22.5° BEND	0.25	0.50	0.75	1.25	1.50	2.25	3.00
11.25° BEND	0.25	0.25	0.50	0.75	1.00	1.25	1.50

THRUST BLOCK DATA

NTS

NOTES:
1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

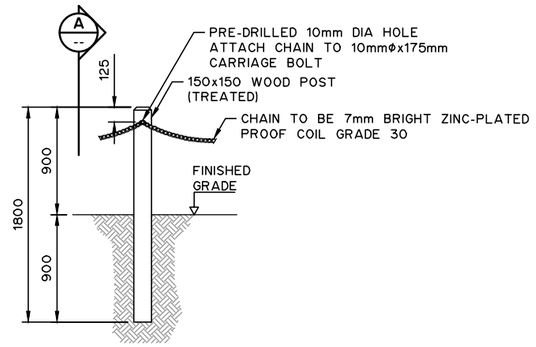
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. AUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
TYPICAL DETAILS 3 OF 4

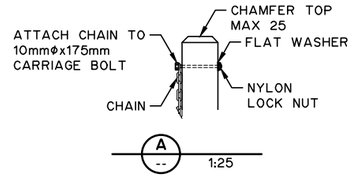
DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	
DATE	JULY 2022	DRAWING	C5.9

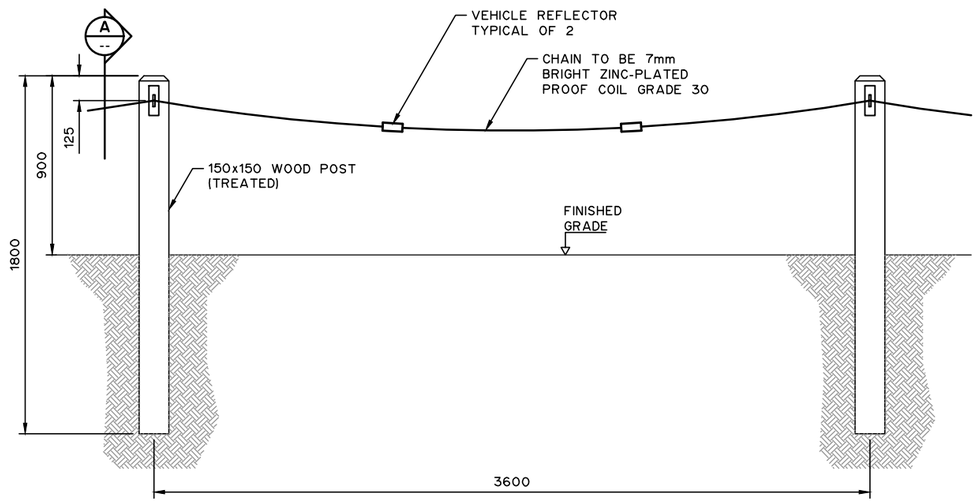


NOTES:

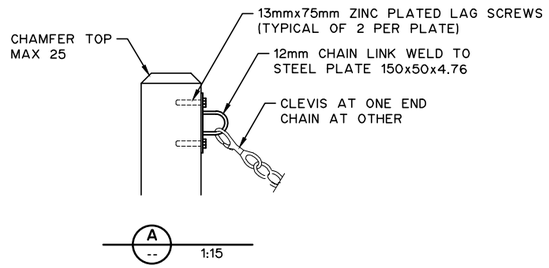
1. BACKFILL AND COMPACT SOIL AROUND POST TO SECURE IN PLACE
2. OPEN SPACE WOOD POST SPACING @ 3.0m O.C. MAXIMUM.
3. VEHICULAR ACCESS WOOD POST SPACING @ 3.6m O.C. MAXIMUM.
4. CHAIN SAG TO BE 150 MAX AND 100 MIN.
5. ALL BOLTS AND FASTENERS TO BE ZINC-PLATED
6. ALL WOOD POSTS TO BE TREATED WITH ACQ PRESERVATIVE OR APPROVED EQUIVALENT.
7. BOLTS NOT TO EXCEED 2 THREADS BEYOND POST. EXCESS LENGTH TO BE CUT AND PEENED OR FILED.
8. CROSS BRACING WITH 100x100 REQUIRED AT TERMINAL POSTS, DIRECTIONAL CHANGE IN FENCE AND AT GATES.

TYPICAL WOOD POST AND CHAIN FENCE
1:50





TYPICAL WOOD POST AND CHAIN VEHICLE ACCESS GATE
1:30



NOTES:

1. FOR INFORMATION REGARDING GENERAL NOTES, UTILITIES, SYMBOLS AND ABBREVIATIONS REFER TO THE LEGEND AND ABBREVIATIONS DRAWINGS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

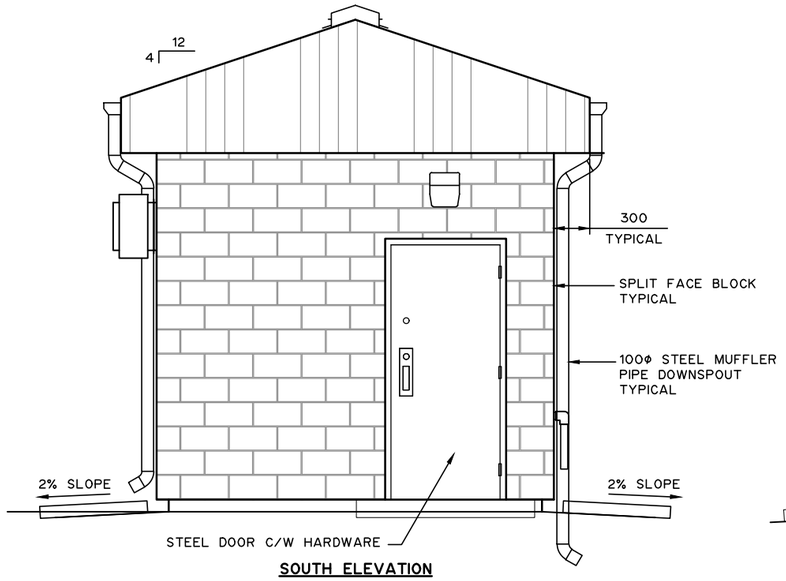
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. HUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

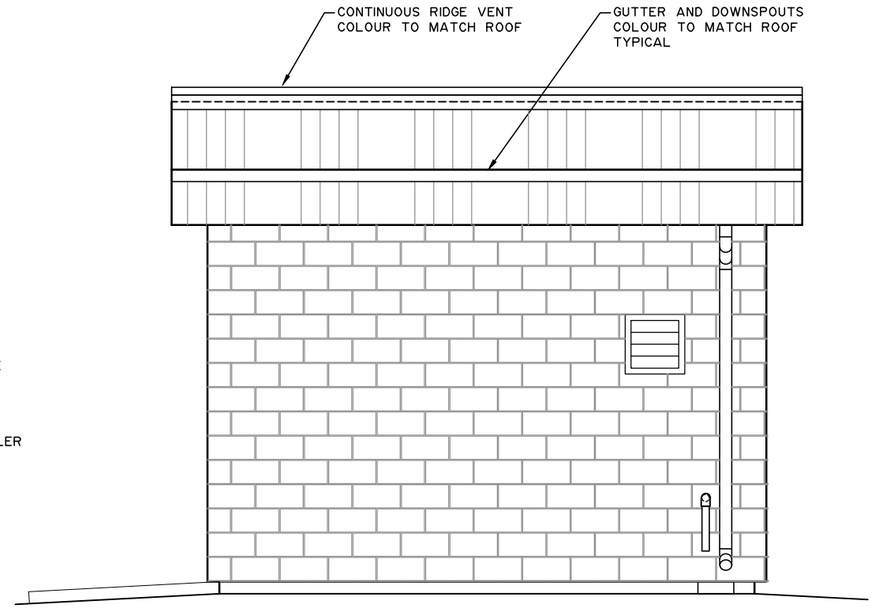
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
TYPICAL DETAILS 4 OF 4

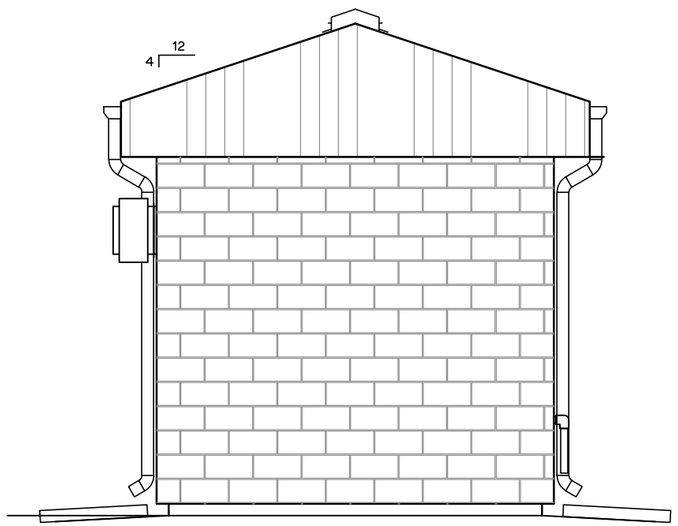
DESIGNED	C.W.H., T.S.H.	JOB	1450-087-00
DRAWN	C.W.H.	SCALE	AS SHOWN
DATE	JULY 2022	DRAWING	C5.10



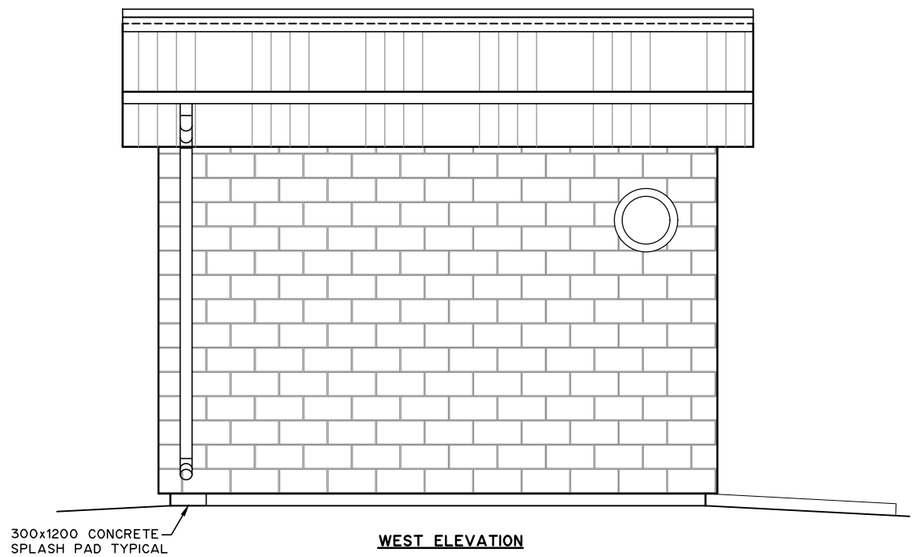
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

NOTES:

1. SUPPLIED AND INSTALLED PRE-FINISHED METAL ROOF SYSTEM COMPLETE WITH ALL REQUIRED FLASHING, EDGE, END AND CORNER DETAILS TO PROVIDE A WATER TIGHT ROOF SYSTEM.
2. SUPPLIED AND INSTALLED MAN DOOR AND FRAME COMPLETE WITH FINISH HARDWARE AS SPECIFIED IN SECTION 08700.
3. DOOR AND FRAME PAINTED TO MATCH ROOF COLOUR.
4. CLADDING AND LINER COLOUR SELECTED BY OWNER FROM STANDARD COLOUR SAMPLES.
5. CONTRACTOR COORDINATED SIZE AND LOCATION OF PENETRATIONS WITH MECHANICAL.
6. SEE CIVIL DRAWINGS FOR GRADING DETAILS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

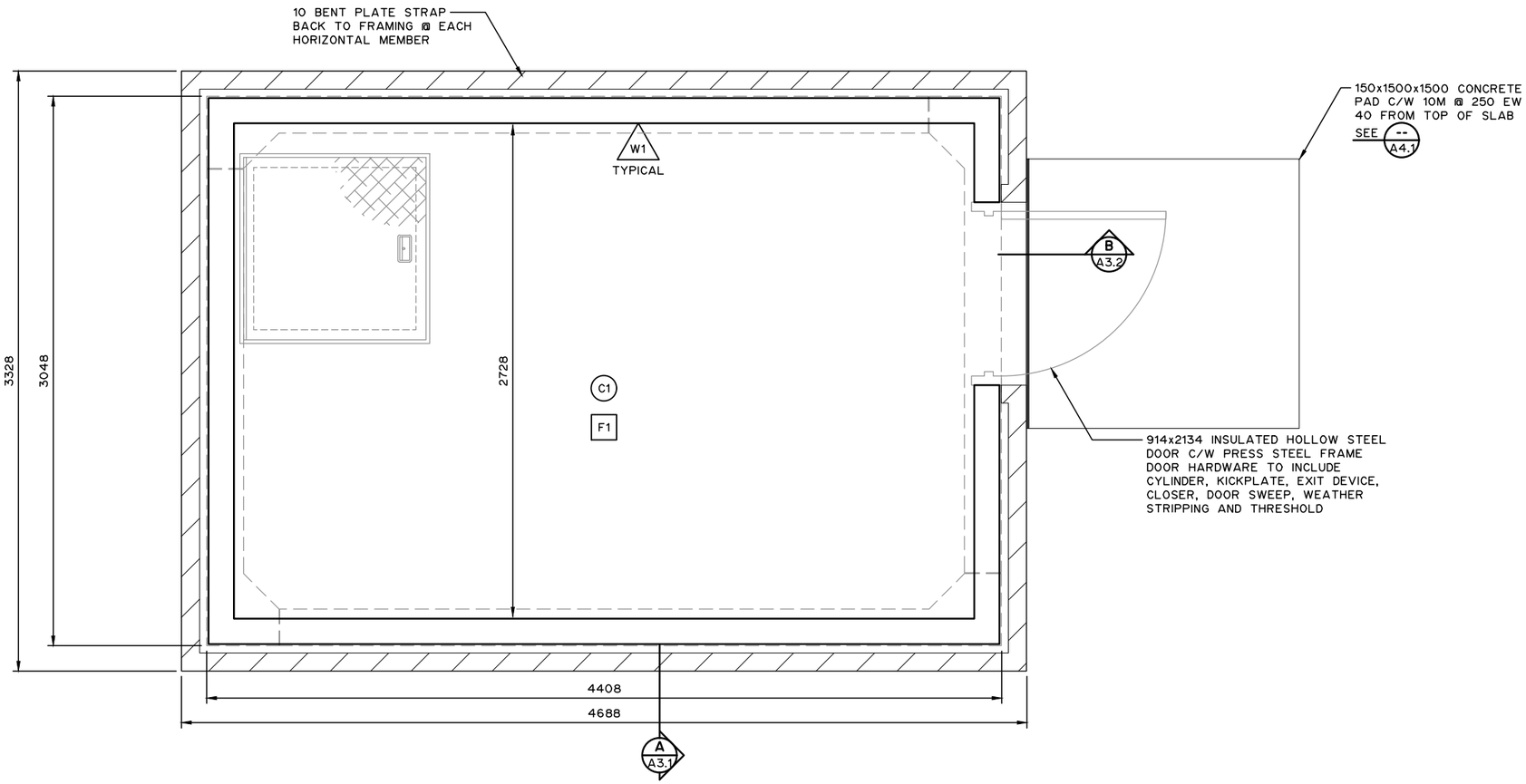
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. NUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND ARCHITECTURAL ELEVATIONS

DESIGNED	C.P.V.	JOB	1450-087-00
DRAWN	C.G.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	A1.1



NOTES:

1. BUILDING TO BE CONSTRUCTED TO THE LATEST EDITION OF THE NATIONAL BUILDING CODE - POST DISASTER.
2. COORDINATE EQUIPMENT PAD AND PUMP BASES SIZE AND LOCATIONS WITH PROCESS, MECHANICAL AND ELECTRICAL.
3. 20 CHAMFER ALL EXPOSED CONCRETE EDGES.

CODE REVIEW (NATIONAL BUILDING CODE 2010)

BUILDING CLASSIFICATION:
GROUP F, DIVISION 3 UP TO 2 STORIES
LOW HAZARD INDUSTRIAL
MAJOR OCCUPANCY

AREA: 20m²
STREETS FACING: ONE (1)
CONSTRUCTION: COMBUSTIBLE, NON-SPRINKLERED
SECTION 3.2.2.83
1 STORY
POST-DISASTER BUILDING

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA GAVIN B. NUMMI ID 19755
JULY 25, 2022

MPE Engineering Ltd.

W1 WALL SCHEDULE
29 GAUGE PRE-FINISHED STEEL LINER (1/8" PROFILE)
19 PLYWOOD SHEATHING
150 MICROMETRE (6 MIL) VAPOUR BARRIER
R22 BATT INSULATION
38x140 WOOD STUDS @ 400 OC
10 PLYWOOD SHEATHING
BUILDING PAPER OR TYVEK AIR BARRIER
40 AIR SPACE
100x200x400 BLOCK WALL SPLIT FACE C/W
BLOCK SEALER

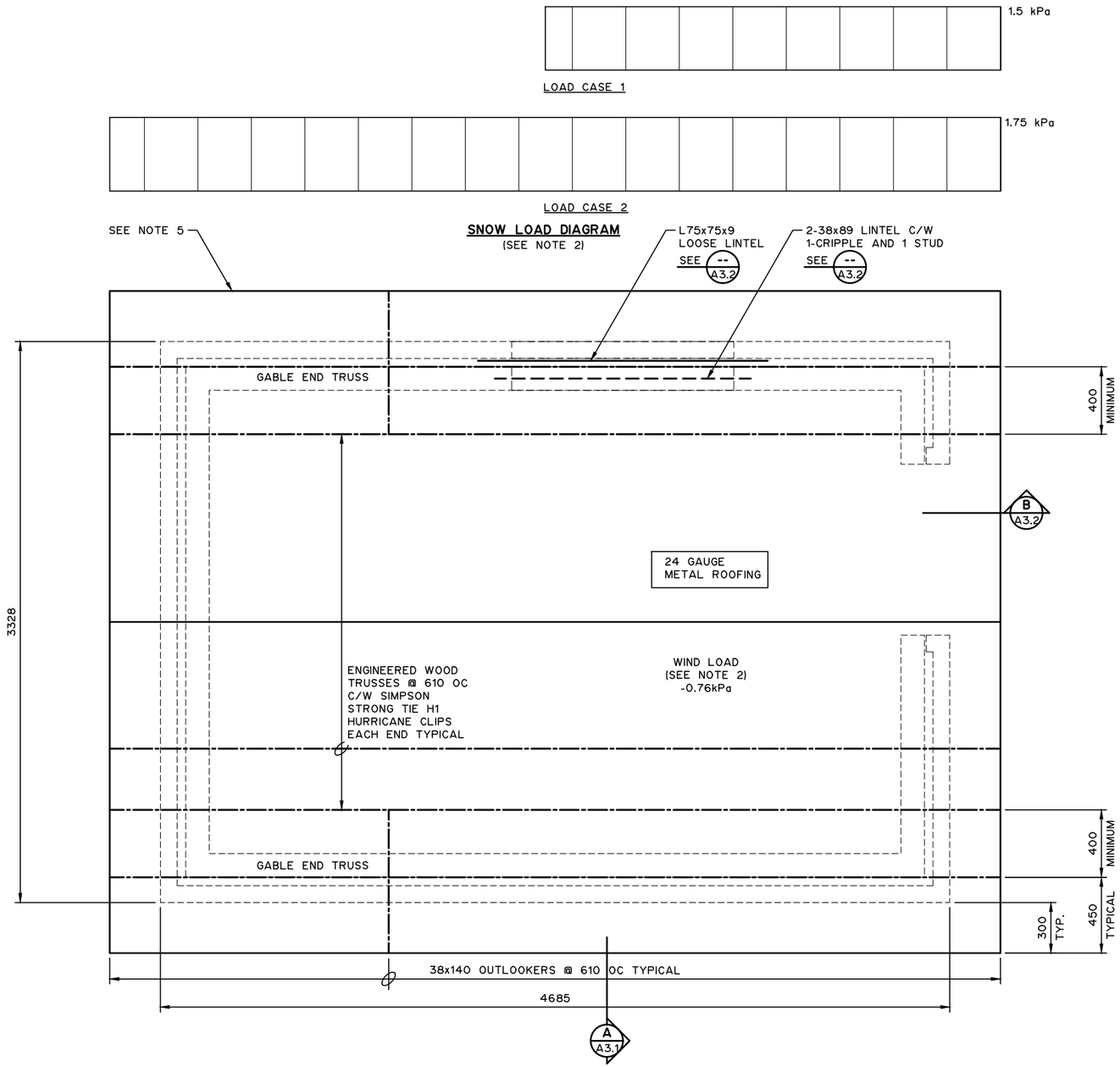
F1 FLOOR SCHEDULE
EPOXY COATED FLOOR

C1 CEILING SCHEDULE
24 GAUGE METAL ROOFING
12.5 PLYWOOD SHEATHING C/W H-CLIPS
PRE-ENGINEERED WOOD TRUSSES
R40 BATT (OR BLOWN) INSULATION
150 MICROMETRE (6 MIL) POLY VAPOUR BARRIER
10 PLYWOOD SHEATHING
29 GAUGE PRE-FINISHED STEEL LINER

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND ARCHITECTURAL PLAN

DESIGNED	C.P.V.	JOB	1450-087-00
DRAWN	C.G.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	A2.1



NOTES:

1. BUILDING CONSTRUCTED TO THE LATEST EDITION OF THE ALBERTA BUILDING CODE (POST-DISASTER).
2. SNOW AND WIND LOADS INDICATED ARE UNFACTORED AND DO NOT INCLUDE IMPORTANCE FACTOR FOR POST-DISASTER BUILDING.
3. DEAD LOADS INDICATED DO NOT INCLUDE SELF-WEIGHT OF TRUSS.
4. COORDINATED EXACT LOCATION OF ANTENNA MAST WITH CONTROL.
5. PROVIDE FOR ADDITIONAL WIND LOAD OF -1.2kPa AT GABLE ENDS.

ROOF LOAD TABLE - UNFACTORED LOADS (kPa)		
	LIVE LOAD	DEAD LOAD
TOP CHORD	SEE DIAGRAM	0.2
BOTTOM CHORD		0.53
WIND LOAD		-0.96

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

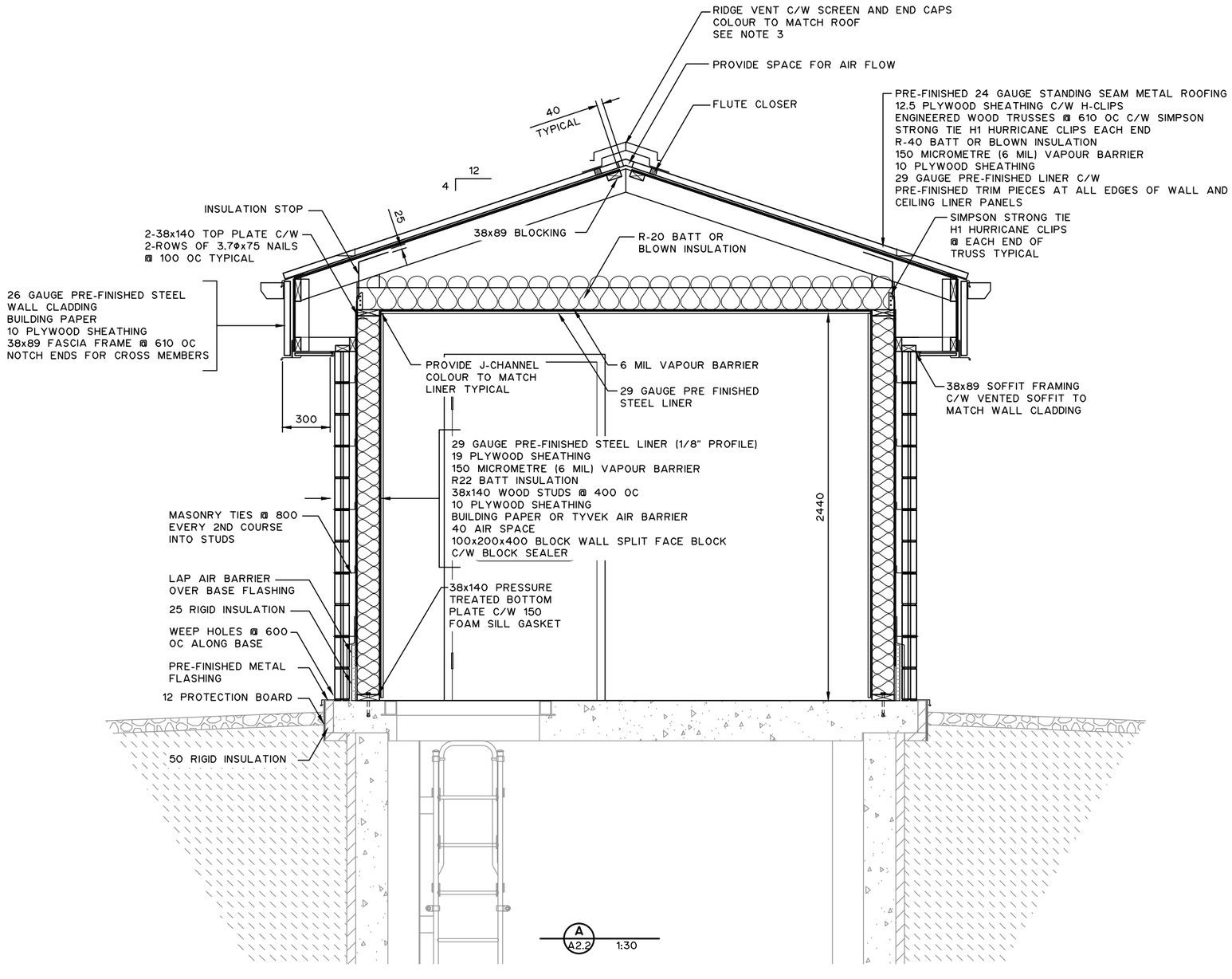
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. NUMMI
ID 19755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ARCHITECTURAL
ROOF PLAN

DESIGNED	C.P.V.	JOB	1450-087-00
DRAWN	C.G.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	A2.2



NOTES:

1. CONTRACTOR TO TIE WALL AND CEILING VAPOUR BARRIER TOGETHER TO ENSURE MOISTURE CANNOT PASS.
2. RIDGE VENT TO WITHSTAND WIND SPEEDS OF 140 km/hr.
3. COORDINATE ANCHOR BOLTS WITH MECHANICAL.
4. 20 CHAMFER ALL EXPOSED CONCRETE EDGES.
5. SNOW AND WIND LOADS INDICATED ARE UNFACTORED AND DO NOT INCLUDE IMPORTANCE FACTOR (I=1.25) FOR POST-DISASTER BUILDING.
6. DEAD LOADS INDICATED DO NOT INCLUDE SELF-WEIGHT OF TRUSS. IN ADDITION,
7. CONTRACTOR TO CONFIRM DIMENSIONS OF PRECAST TOP SLAB FOR PRECAST MANUFACTURER.
8. ALLOW TOTAL LOAD = 4.8 kPa FOR TOP SLAB OF PRECAST VAULT.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

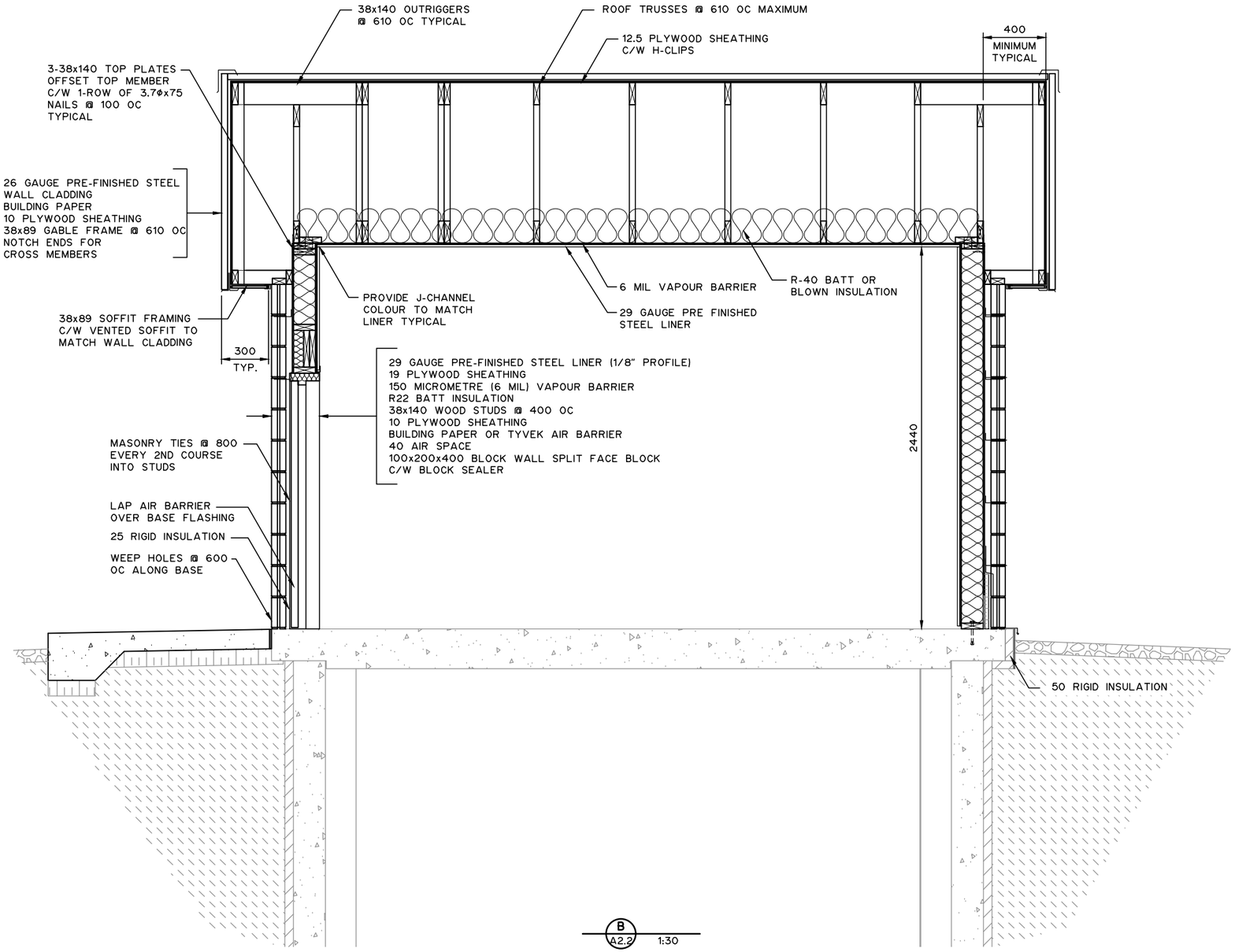
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. KUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ARCHITECTURAL
SECTION

DESIGNED	C.P.V.	JOB	1450-087-00
DRAWN	C.G.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	A3.1



NOTES:

1. BUILDING CONSTRUCTED TO THE LATEST EDITION OF THE ALBERTA BUILDING CODE - POST DISASTER.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

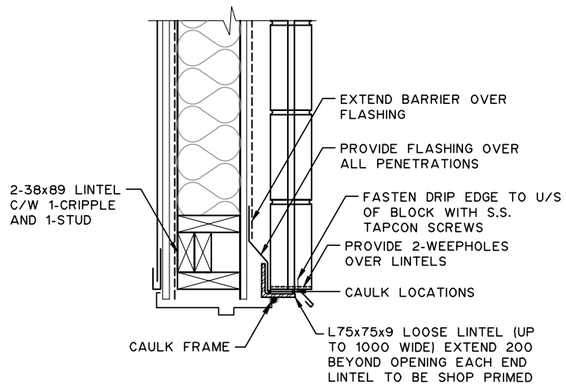
PROFESSIONAL ENGINEER ALBERTA
GAVIN B. NIMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

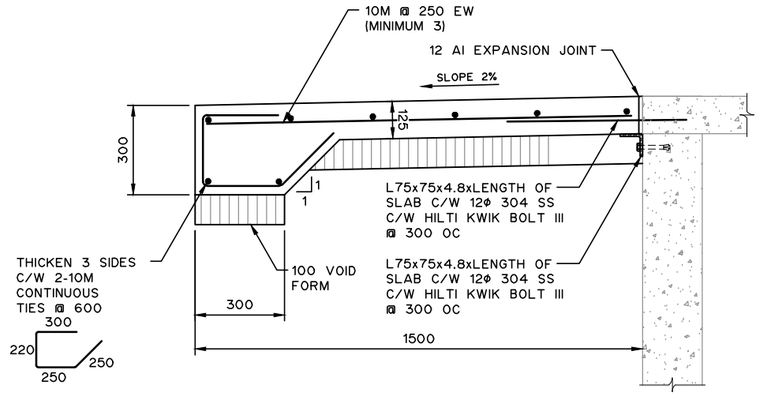
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ARCHITECTURAL
SECTIONS AND DETAILS

DESIGNED	C.P.V.	JOB	1450-087-00
DRAWN	C.G.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	A3.2



TYPICAL WALL PENETRATION AND DOOR HEADER
NTS



TYPICAL EXTERIOR DOOR SLAB AT PRECAST BUILDING
1:20

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
GAVIN B. CUMMI
ID 119755
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ARCHITECTURAL
DETAILS

DESIGNED	C.P.V.	JOB	1450-087-00
DRAWN	C.G.H.	SCALE	1:50
DATE	JULY 2022	DRAWING	A4.1

DISTRIBUTION

- CONDUIT IDENTIFICATION TAG
- LIGHTING/POWER PANEL
- DATA PANEL
- INTERCOM PANEL
- FIRE ANNUNCIATOR PANEL
- GROUND BAR
- PLYWOOD BACKBOARD
- EXTERIOR TRANSFORMER
- DRY TYPE TRANSFORMER
- METERING CABINET GREATER THAN 200A
- UTILITY METER PLAN
- POWER METER
- ELECTRIC UTILITY METER 200A AND LESS
- WATER METER
- GAS METER
- SPLITTER
- ELECTRICAL CENTRAL DISTRIBUTION PANEL (CDP)
- ELECTRICAL MOTOR CONTROL CENTRE (MCC)
- ELECTRICAL MAIN DISTRIBUTION BOARD
- TRANSFER SWITCH WITH BY-PASS
- TRANSFER SWITCH
- LVT 120/24V LOW VOLTAGE TRANSFORMER
- WEATHER HEAD

LIGHTING

- SURFACE MOUNTED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE WITH END PLATES
- SURFACE MOUNTED STRIP LIGHT FIXTURE
- UNDER CABINET/VALENCE STRIP LIGHT FIXTURE
- WALL MOUNTED CUBED LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE ON EMERGENCY
- TRACK LIGHT C/W PENDANT HEADS
- TRACK LIGHT C/W ADJUSTABLE HEADS
- BOLLARD LIGHT FIXTURE
- POLE MOUNTED LIGHT FIXTURE (ONE HEAD SHOWN)
- WALL MOUNTED HID LIGHT FIXTURE

POWER

- DUPLEX RECEPTACLE
- SPLIT FEED RECEPTACLE
- FOURPLEX RECEPTACLE
- SWITCHED DUPLEX RECEPTACLE
- 20A T-SLOT RECEPTACLE (KITCHEN)
- TWISTLOCK RECEPTACLE
- 208 VOLT 1PH RECEPTACLE
- 208 VOLT 3PH RECEPTACLE
- WALL MOUNTED USB PORT
- PEDESTAL DUPLEX RECEPTACLE
- SB - WALL MOUNTED MULTI-GANG BOX
- WALL MOUNTED PUSH BUTTON
- SPD WALL MOUNTED SURGE PROTECTIVE DEVICE (SPD OR TVSS)
- VFD WALL MOUNTED VARIABLE FREQUENCY DRIVE (VFD)
- CEILING MOUNTED DUPLEX RECEPTACLE
- CEILING MOUNTED FOURPLEX RECEPTACLE
- CEILING MOUNTED 208 VOLT 1PH RECEPTACLE
- CEILING MOUNTED 208 VOLT 3PH RECEPTACLE
- R AUXILIARY RELAY
- P CEILING MOUNTED POWER ZONE BOX
- REEL DOWN RECEPTACLE
- PACK POLE
- No. FLOOR MOUNTED DUPLEX RECEPTACLE (No. of OUTLETS)
- No. FLOOR MOUNTED FOURPLEX RECEPTACLE (No. of OUTLETS)
- No. FLOOR MOUNTED 208 VOLT 1PH RECEPTACLE
- No. FLOOR MOUNTED 208 VOLT 3PH RECEPTACLE
- SB - FLOOR MOUNTED MULTI-GANG BOX
- MOTOR
- MOTOR WITH DISCONNECT SWITCH
- MOTOR WITH FUSIBLE DISCONNECT SWITCH
- MOTOR WITH COMBINATION DISCONNECT SWITCH

POWER CONTINUED

- MAGNETIC MOTOR STARTER
- HOME RUN WITH WIRE COUNT
- WAP WIRELESS ACCESS POINT
- ELECTRICAL HEATING
- HEAT TRACING
- PIN AND SLEEVE CONNECTOR (FEMALE)
- PIN AND SLEEVE CONNECTOR (MALE)

SWITCHES AND JUNCTIONS BOXES

- LINE VOLTAGE SWITCH
- P SWITCH C/W PILOT LIGHT
- 2 TWO POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- M MANUAL MOTOR PROTECTION SWITCH C/W PILOT LIGHT
- K KEY OPERATED SWITCH - CYLINDER TYPE
- T TIMER SWITCH
- D DIMMER SWITCH - SLIDER TYPE
- L INTERNALLY ILLUMINATED LIGHT SWITCH
- R LOW VOLTAGE SWITCH
- 2 GANG SWITCH
- 3 GANG SWITCH
- 4 GANG SWITCH
- 5 GANG SWITCH
- WALL MOUNTED PHOTOCELL
- WALL MOUNTED JUNCTION BOX
- FLOOR MOUNTED JUNCTION BOX
- J SQUARE CEILING MOUNTED JUNCTION BOX
- T THERMOSTAT
- NON-FUSEABLE DISCONNECT SWITCH
- FUSEABLE DISCONNECT SWITCH
- COMBINATION MAGNETIC HOA STARTER
- O/H DOOR PUSH BUTTON
- PB PULL BOX

LIFE SAFETY

- CEILING MOUNTED EXIT LIGHT SINGLE FACE
- CEILING MOUNTED EXIT LIGHT DOUBLE FACE
- CEILING COMBINATION EXIT SIGN AND EMERGENCY LIGHT C/W BATTERY
- WALL MOUNTED EXIT LIGHT SINGLE FACE
- WALL MOUNTED EXIT LIGHT DOUBLE FACE
- WALL COMBINATION EXIT SIGN AND EMERGENCY LIGHT C/W BATTERY
- EXIT LIGHT DIRECTIONAL ARROW
- WALL MOUNTED EMERGENCY LIGHTING BATTERY PACK
- CEILING MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE HEAD
- CEILING MOUNTED EMERGENCY LIGHTING RECESSED REMOTE HEAD
- WALL MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE HEAD
- SMOKE DETECTOR
- A SMOKE ALARM - 120V

POWER EQUIPMENT

- DELTA WYE TRANSFORMER
- DISTRIBUTION TRANSFORMER
- POTENTIAL TRANSFORMER
- FUSE DRAW OUT TYPE
- CIRCUIT BREAKER DRAW OUT TYPE
- 3 PHASE GENERATOR (GROUNDED)
- THERMAL OVERLOAD PROTECTION
- I INTERLOCK
- CAPACITOR
- A CURRENT METER
- CONTACTOR
- FUSE
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- XXX XXX XXX CIRCUIT BREAKER — FRAME SIZE, TRIP RATING, POLE
- ETM ELAPSED TIME METER

POWER EQUIPMENT CONTINUED

- GROUND ROD
- GROUND ROD C/W WELL
- GROUND ROD WITHOUT WELL
- GH GATE HOIST
- x kw HEATER C/W KILOWATT RATING
- XXX MOTOR CONTROL IDENTIFICATION TAG
- TRANSFER SWITCH

COMMUNICATIONS

- WALL MOUNTED TELEPHONE OUTLET
- WALL MOUNTED DATA OUTLET
- WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET
- WALL MOUNTED TELEVISION OUTLET
- WALL MOUNTED CHIME OR BUZZER
- CEILING MOUNTED TELEPHONE OUTLET
- CEILING MOUNTED COMBINATION TELEPHONE/DATA OUTLET
- CEILING MOUNTED TELEVISION OUTLET
- CEILING MOUNTED DATA OUTLET (No. OF OUTLETS)
- No. FLOOR MOUNTED DATA OUTLET (No. OF OUTLETS)
- No. FLOOR MOUNTED TELEPHONE OUTLET (No. OF OUTLETS)
- No. FLOOR MOUNTED TELEVISION OUTLET (No. OF OUTLETS)
- No. FLOOR MOUNTED COMBINATION TELEPHONE/DATA OUTLET (No. OF OUTLETS)
- RADIO LINK

CONTROL PANEL EQUIPMENT

- RESET PUSH BUTTON (NO)
- RESET PUSH BUTTON (NC)
- MUSHROOM HEAD STOP
- H A O A O ON OFF H — 3 POSITION SELECTOR SWITCH
- OFF ON — 2 POSITION SELECTOR SWITCH
- H A O — HAND-OFF-AUTO SELECTOR SWITCH
- U D O — UP-OFF-DOWN SELECTOR SWITCH
- RESET PUSH BUTTON
- A AMBER PILOT LIGHT
- G GREEN PILOT LIGHT
- R RED PILOT LIGHT
- DUPLEX RECEPTACLE
- SINGLE PHASE PLUG
- MCP MAIN CONTROL PANEL FUSED TERMINAL BLOCK
- FTB AUXILIARY FUSED TERMINAL BLOCK
- CIRCUIT BREAKER
- MAIN CONTROL PANEL TERMINAL BLOCK
- PLC/RTU TERMINAL
- AUXILIARY TERMINAL BLOCK
- MCC/VFD TERMINAL BLOCK
- DEVICE TERMINAL BLOCK
- R 1000 DRY CONTACT RELAY
- S TDR 1000 B — TIME DELAY RELAY
- M MAGNETIC CONTACTOR
- SOLENOID
- DRY CONTACT RELAY (NC)
- DRY CONTACT RELAY (NO)
- VARIABLE RESISTOR
- RESISTOR
- TH THERMISTOR
- DIODE
- MOV METAL OXIDE VARISTOR

INSTRUMENTATION EQUIPMENT

- LEVEL SWITCH (OPEN ON RISING LEVEL)
- LEVEL SWITCH (OPEN ON FALLING LEVEL)
- FLOW SWITCH (OPEN ON RISING FLOW)
- FLOW SWITCH (OPEN ON FALLING FLOW)
- PRESSURE SWITCH (OPEN ON RISING PRESSURE)
- PRESSURE SWITCH (OPEN ON FALLING PRESSURE)
- TEMPERATURE SWITCH (OPEN ON RISING TEMPERATURE)
- TEMPERATURE SWITCH (OPEN ON FALLING TEMPERATURE)
- LIMIT SWITCH (NC)
- LIMIT SWITCH (NO)
- TIME DELAY RELAY (NC)
- TIME DELAY RELAY (NO)
- XXX xxx INSTRUMENTATION IDENTIFICATION TAG

PLC I/O

- PLC DI PLC/RTU DIGITAL INPUT
- PLC DO PLC/RTU DIGITAL OUTPUT
- PLC AI PLC/RTU ANALOG INPUT
- PLC AO PLC/RTU ANALOG OUTPUT

MISCELLANEOUS AND LABELS

- REVISION NUMBER
- FIXTURE TYPE
- MECHANICAL EQUIPMENT IDENTIFICATION TAG
- KITCHEN EQUIPMENT TAG
- KEY NOTES
- SINGLE LINE BREAK
- DOUBLE LINE BREAK
- CAPPED OFF LINE OR CONDUIT
- CONDUIT BREAK
- CABLE TRAY
- DW DISH WASHER
- F FRIDGE
- R RANGE
- M MICROWAVE
- G GARBURATOR
- D DRYER
- W WASHER
- NL NIGHT LIGHT
- TP TAMPER PROOF
- GFCI GROUND FAULT CIRCUIT INTERRUPTER
- IG ISOLATED GROUND
- EM EMERGENCY
- AF AMP FRAME
- AT AMP TRIP
- WP WEATHER PROOF
- XP EXPLOSION PROOF
- E EXISTING DEVICE TO REMAIN
- X EXISTING DEVICE TO BE REMOVED
- ER EXISTING DEVICE TO BE RELOCATED
- RD RELOCATED DEVICE
- WIRE COUNT
- CONDUIT RUN UP
- CONDUIT RUN DOWN
- OH OVERHEAD POWER
- UG UNDERGROUND POWER
- CONDUCTOR/CONDUIT
- UNDERGROUND CONDUCTOR/CONDUIT
- FLEXIBLE CONDUIT
- EXISTING EQUIPMENT
- NEW EQUIPMENT
- EQUIPMENT TO BE REMOVED

NOTES:

1. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA — PETER GOERTZEN — ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
ELECTRICAL LEGEND

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E0.1

NOTES:

1. ALL BOLD LOCATIONS INDICATE WHERE WORK IS TO BE DONE.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

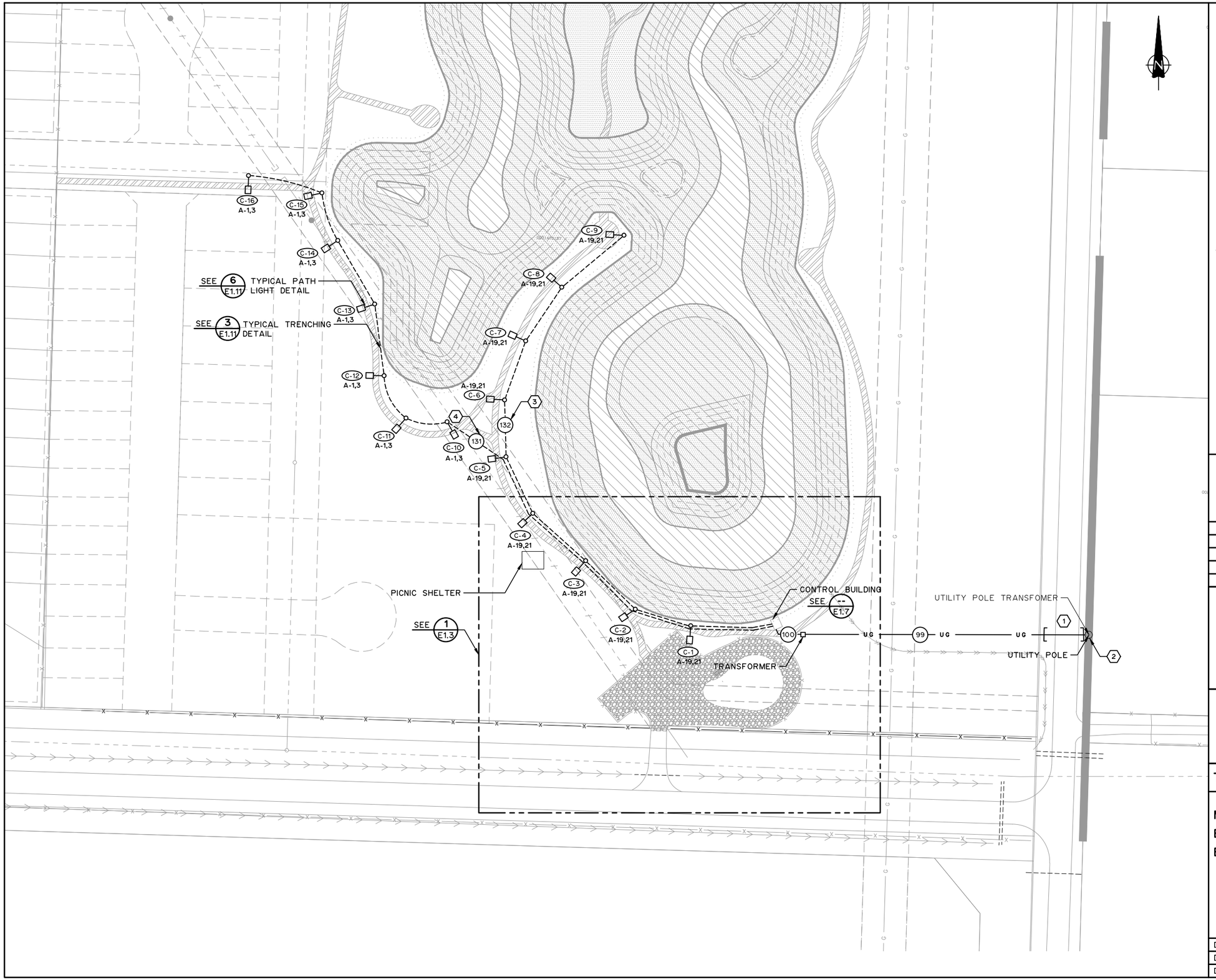
PROFESSIONAL ENGINEER ALBERTA
M.T. FARRELL GOERTZEN
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
OVERALL SITE PLAN

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	1:20,000
DATE	JULY 2022	DRAWING	E1.1



NOTES:

1. SEE CONDUIT AND CABLE SCHEDULE ON E1.10.
2. APPROXIMATE LOCATIONS OF LIGHTING SHOWN.
3. INSTALLATION OF SERVICE SHALL CONFORM TO FORTIS SERVICE AND METERING GUIDE AND CEC.
4. UNIT PRICE ARRANGEMENT SHALL APPLY FOR SOME BID ITEMS. REFER TO SPECIFICATION 01280 "MEASUREMENT AND PAYMENT SCHEDULE" FOR METHOD OF PAYMENT FOR ALL SCOPES OF WORK.
5. FIXTURE LEGEND:

C-XX
FIXTURE NUMBER
FIXTURE TYPE

(--) KEY NOTES:

1. 103ø SDR11 HDPE PUSHED CONDUIT ACROSS ROADWAY.
2. COORDINATE WITH FORTIS AND STUB CONDUIT UP AT BASE OF SELECTED POLE.
3. ALL INTERCONNECTIONS BETWEEN LIGHTING JB TO C-1 AND C-1 TO C-9 TO BE TYPICAL. SEE CABLE AND CONDUIT SCHEDULE E1.10.
4. ALL INTERCONNECTIONS BETWEEN LIGHTING JB TO C-10 AND C-10 TO C-16 TO BE TYPICAL. SEE CABLE AND CONDUIT SCHEDULE E1.10.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
MICHAEL FRANCIS GOERTZEN
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
ELECTRICAL SITE PLAN 1 OF 2

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	1:2000
DATE	JULY 2022	DRAWING	E1.2

SEE DRAWING E1.2
FOR PATH LIGHTING

1
A-23
A-25
PICNIC SITE 1

GROUND GRID
SEE 10 E1.12

CONTROL BUILDING

103

140

130

ELECTRIC VEHICLE CHARGING
STATION PEDESTAL
(FUTURE) 3 4

A-4
A-5,7

5 141

A-5
A-5,7

142

A-1
A-5,7

141 5

2

TRANSFORMER

100

UG

TO UTILITY
POLE

TYPICAL
TRENCHING DETAIL
SEE 3 E1.11

TYPICAL FORTIS
TRENCHING DETAIL
SEE 4 E1.11

A-5,7
A-2

4 PULL BOX

A-6
A-5,7

SEE 7 E1.11
TYPICAL PARKING
LOT LIGHT DETAIL

5 141

A-3
A-5,7

A-5,7
A-7

NOTES:

1. COORDINATE INSTALLATION OF SERVICE CONDUIT. TRANSFORMER VAULT GROUNDING, AND EQUIPMENT CONNECTIONS WITH FORTIS.
2. SERVICE SHALL ADHERE TO ALL FORTIS REQUIREMENTS INCLUDING FORTIS "SERVICE AND METERING GUIDE" AND "PRE-CAST BASE, GROUNDING, AND DUCTING PROCESS.
3. REFER TO DRAWING E1.2 FOR PATH LIGHTING.
4. FIXTURE LEGEND:

A-XX
FIXTURE NUMBER
FIXTURE TYPE

(--) KEY NOTES:

1. PROVIDE 2 15A WP, GFCI RECEPTACLES WITH IN-USE COVER AT PICNIC SHELTER. COORDINATE LOCATION ON SITE. CONTRACTOR TO SUPPLY AND INSTALL JUNCTION BOX WITH SPLITTER BLOCKS TO DROP FROM 6 AWG TO 12 AWG WIRE.
2. SUPPLY AND INSTALL PRIMARY DUCT, PRECAST TRANSFORMER PAD AND TRANSFORMER GROUNDING.
3. CONTRACTOR TO ROUTE CONDUIT FOR FUTURE ELECTRIC VEHICLE CHARGING STATION AND PICNIC SHELTER THROUGH PULL BOX.
4. CONTRACTOR TO SUPPLY AND INSTALL PULL BOX TO PROTECT ROUGHED IN CONDUIT. PULL BOX TO BE A HUBBELL PG1118BA12 C/W COVER PG1118CAOO OR EQUIVALENT.
5. ALL INTERCONNECTIONS OF PARKING LOT LIGHTS (A-1 TO A-7) TO BE TYPICAL. SEE CONDUIT AND CABLE SCHEDULE E1.10.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

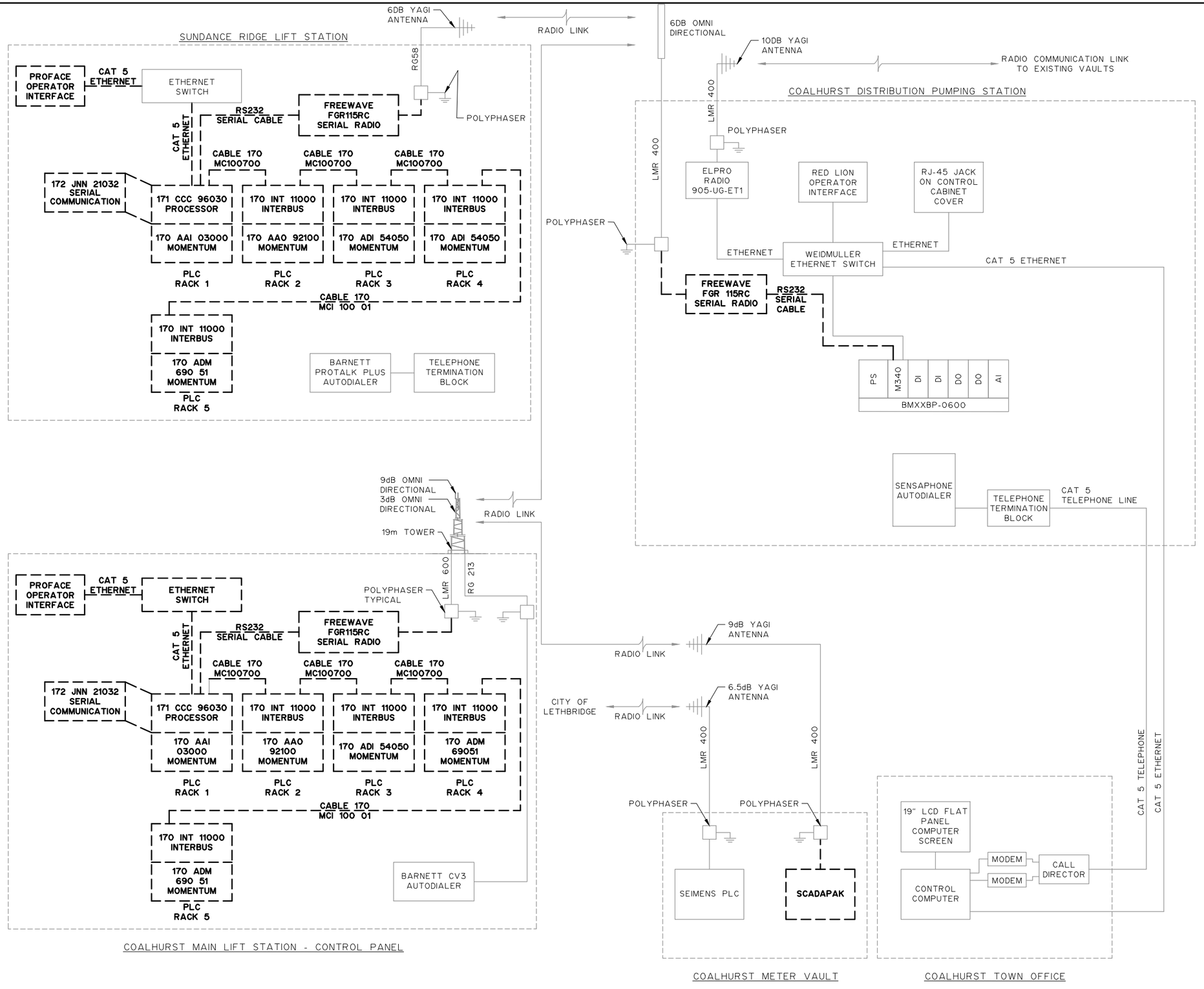
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
ELECTRICAL SITE PLAN 2 OF 2

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	1:1000
DATE	JULY 2022	DRAWING	E1.3



NOTES:

1. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

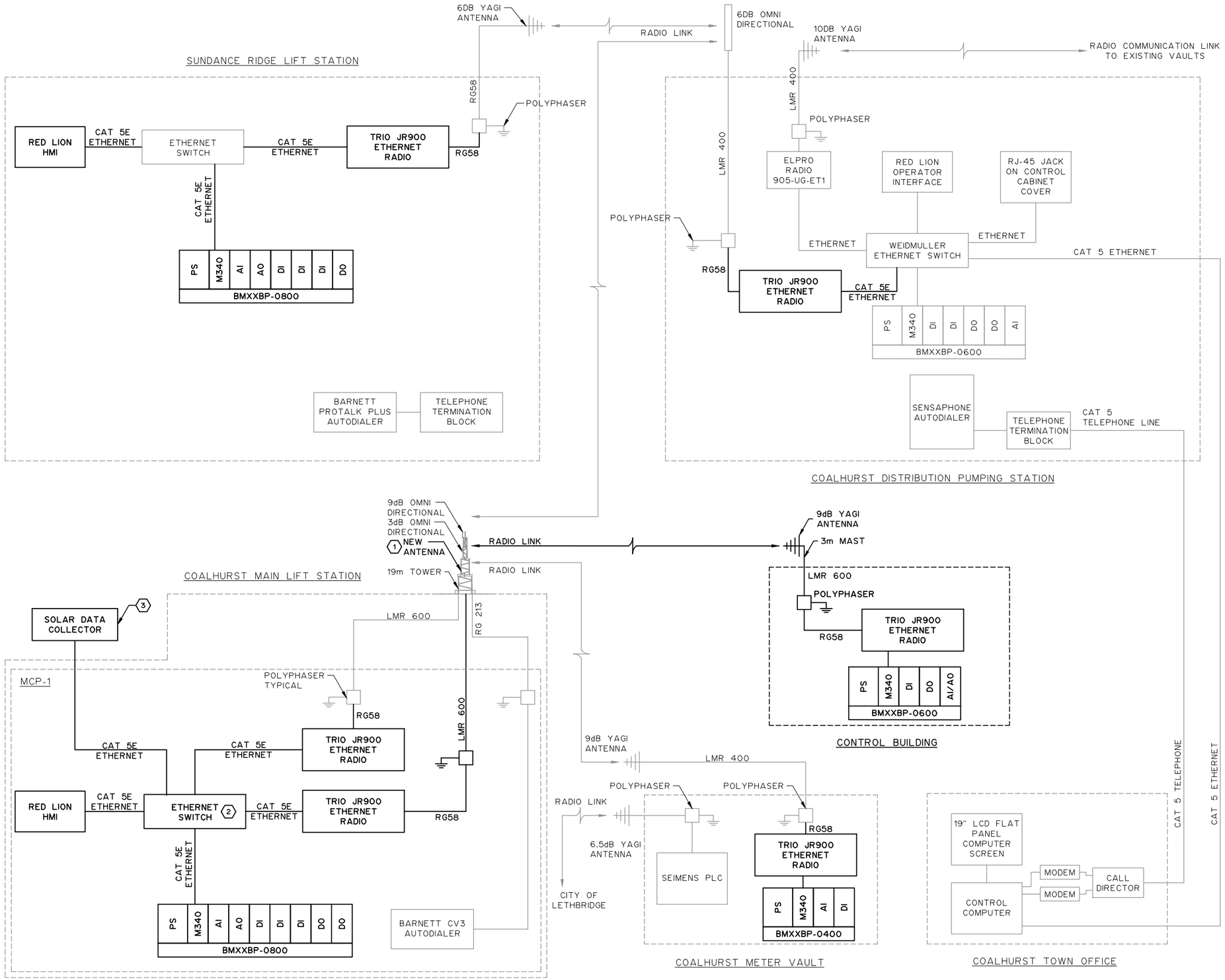
PROFESSIONAL ENGINEER ALBERTA
PROFESSIONAL GOERTZEN
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
COMMUNICATION ARCHITECTURE
DEMOLITION

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.4



NOTES:

1. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
2. ALL CABLES TO BE MINIMUM CAT 5E UNLESS OTHERWISE NOTED.

KEY NOTES:

1. NEW ANTENNA TO BE INSTALLED ON EXISTING 19m MAST. ANTENNA TO BE A 9dB OMNI DIRECTIONAL ANTENNA MOUNTED AT 10m.
2. REPLACE EXISTING ETHERNET SWITCH 8 PORT ETHERNET SWITCH.
3. INTEGRATE SOLAR DATA COLLECTOR WITH SCADA SYSTEM.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

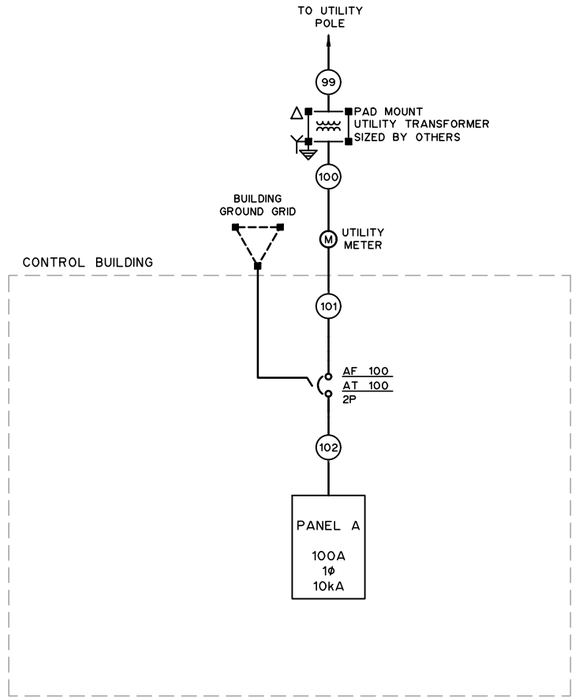
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND ELECTRICAL COMMUNICATION ARCHITECTURE PROPOSED

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.5



	PANEL: A LOCATION: CONTROL BUILDING 120/240VAC, 1PH, 3 WIRE, 100A							
DESCRIPTION	TRIP A	POLES	BRK. NO.	PHASE	BRK. NO.	POLES	TRIP A	DESCRIPTION
PATH LIGHTING (C-10 TO C-16)	15	2	A-1	A	A-2	1	15	INTERIOR LIGHTS
--			A-3	B	A-4	2	30	ELECTRIC UNIT HEATER (EUH-1)
PARKING LOT LIGHTS	15	2	A-5	A	A-6			--
--			A-7	B	A-8	1	15	INTERIOR RECEPTACLES
RV DUMP KIOSK AND LIGHTS	15	1	A-9	A	A-10	1	15	EXTERIOR RECEPTACLES
SPARE	15	1	A-11	B	A-12	1	15	SPARE
EV CHARGER (FUTURE/SPARE)	60	2	A-13	A	A-14	1	15	ACTUATOR POWER
--			A-15	B	A-16	1	15	CONTROL PANEL POWER
EXHAUST FAN AND DAMPERS	15	1	A-17	A	A-18	1	15	EXTERIOR LIGHT
PATH LIGHTING (C-1 TO C-9)	15	2	A-19	B	A-20	1	15	LIGHTING JUNCTION BOX
--			A-21	A	A-22			
PICNIC SITE 1	15	1	A-23	B	A-24			
PICNIC SITE 1	15	1	A-25	A	A-26			
			A-27	B	A-28			
			A-29	A	A-30			
			A-31	B	A-32			
			A-33	A	A-34			
			A-35	B	A-36			
			A-37	A	A-38			
			A-39	B	A-40			
			A-41	A	A-42			

NOTES:

1. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

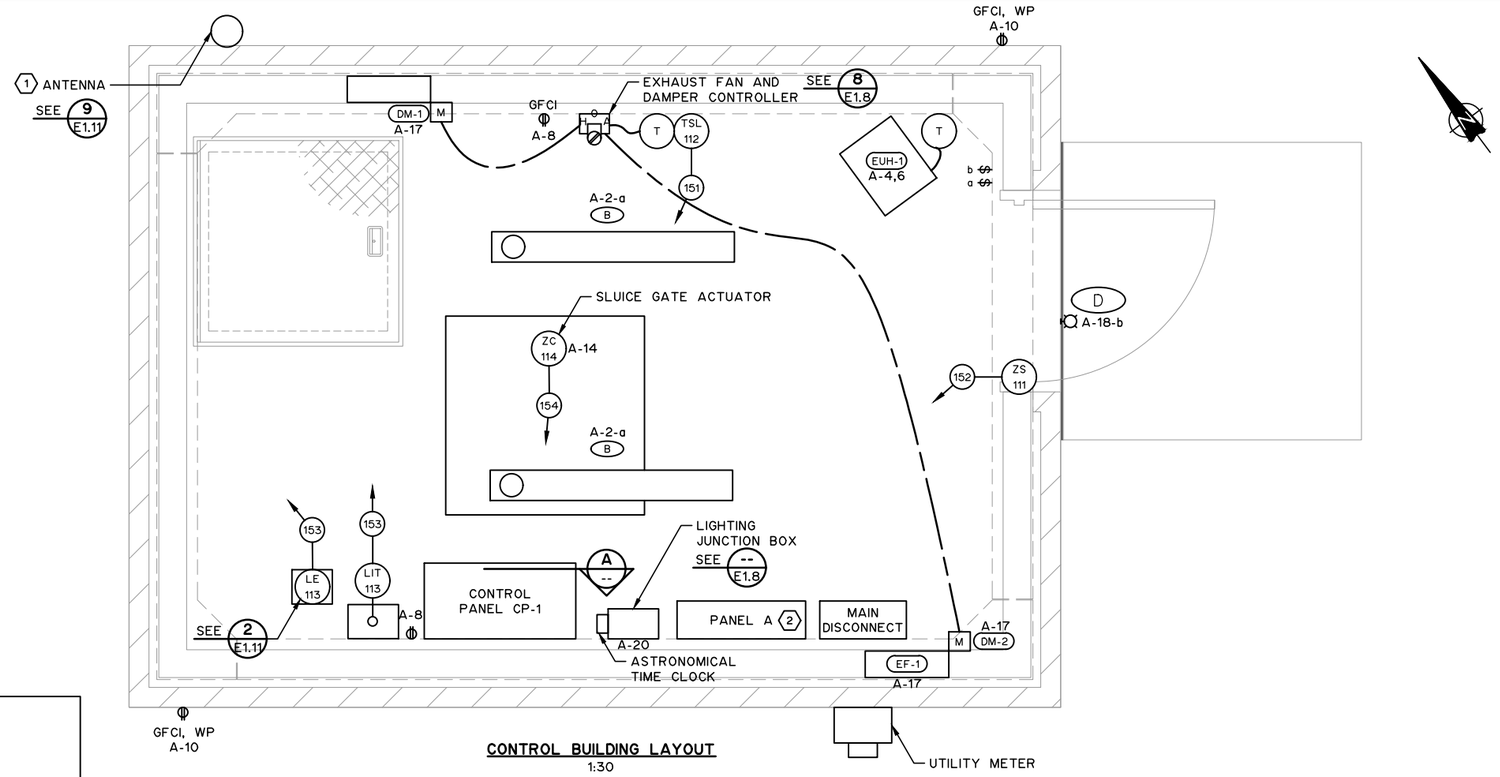
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

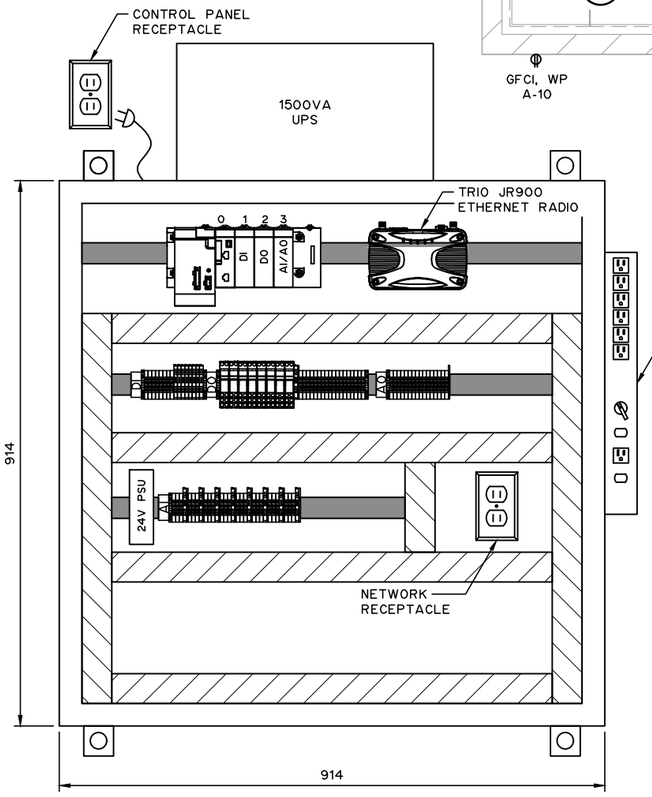
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
SINGLE LINE DIAGRAM

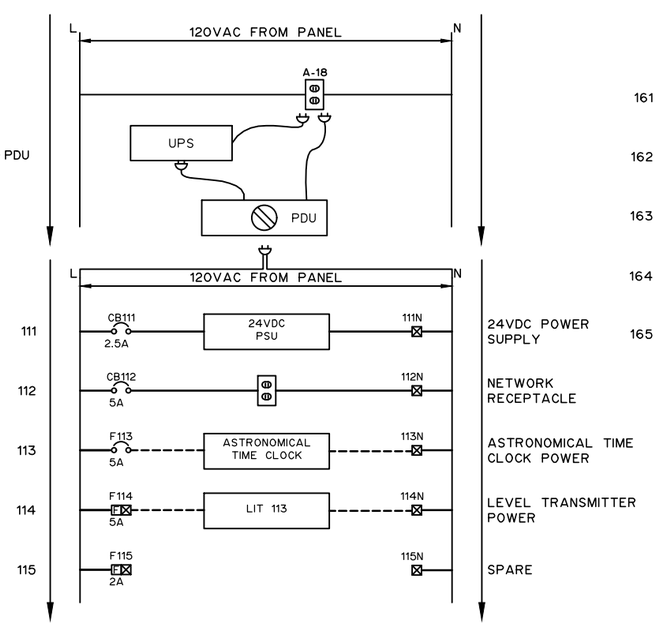
DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.6



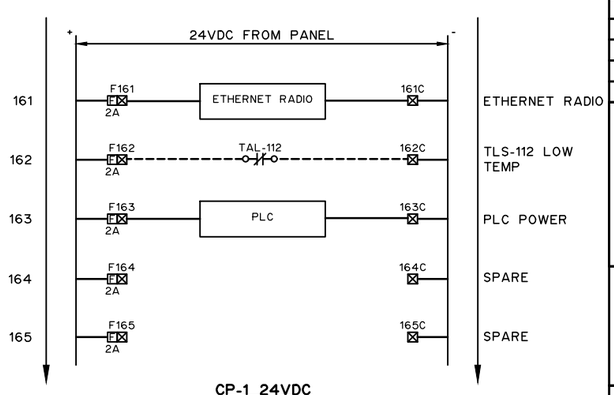
CONTROL BUILDING LAYOUT
1:30



CP-1 INTERIOR
A -- NTS



CP-1 120VAC



CP-1 24VDC

NOTES:
1. SEE CONDUIT AND CABLE SCHEDULE ON DRAWING E1.10.
2. THERMOSTATS FOR EXHAUST FAN SYSTEM SUPPLIED BY MECHANICAL CONTRACTOR. INSTALLATION BY ELECTRICAL CONTRACTOR.
3. ——— CONDUIT AND WIRING FOR MECHANICAL CONTROL EQUIPMENT. ALL WIRING OF MECHANICAL EQUIPMENT BY ELECTRICAL CONTRACTOR.
4. —— WIRING INTEGRAL TO PANEL.
5. ---- FIELD WIRING.
6. CONTROL PANEL POWER CORD TO BE LONG ENOUGH TO PLUG INTO UPS AND CONTROL PANEL RECEPTACLE.

-- KEY NOTES:
1. SUPPLY AND INSTALL 3m MAST WITH ANTENNA.
2. INCLUDE SPARE 2 POLE 240V BREAKER AND CONDUIT FOR FUTURE ELECTRIC VEHICLE CHARGING STATION.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

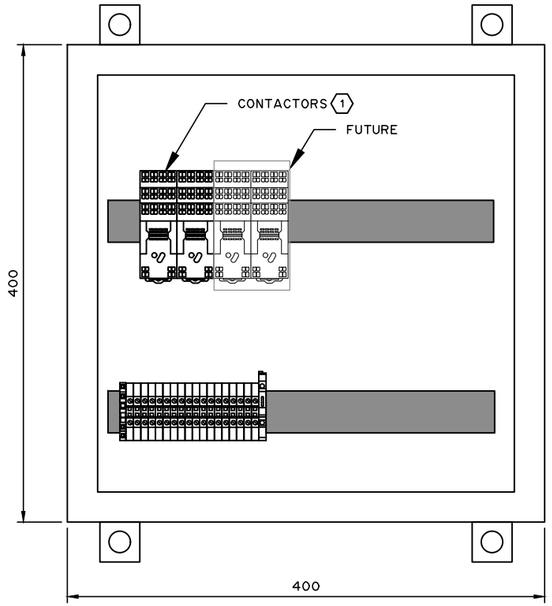
PROFESSIONAL ENGINEER ALBERTA
PETER GOERTZEN
ID 68504
JULY 25, 2022

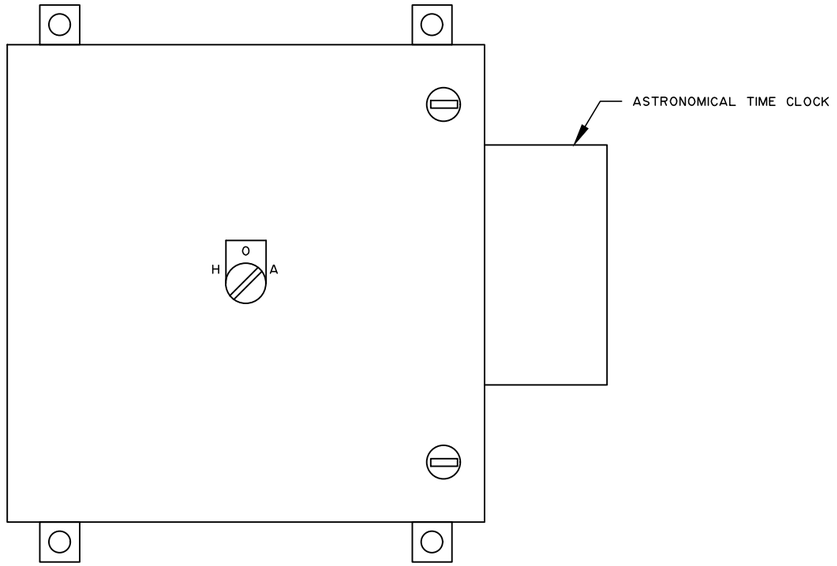
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
ELECTRICAL BUILDING LAYOUT

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.7



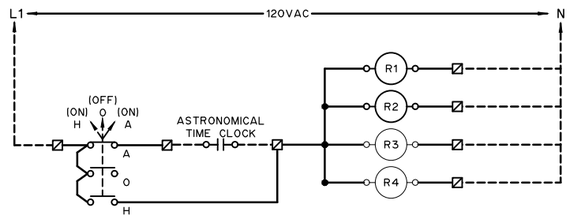


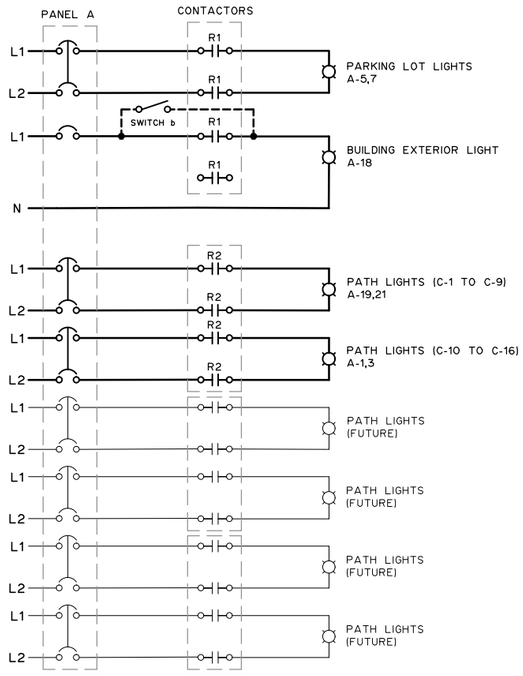
NOTES:

1. EXTERIOR LIGHTING TO BE CONTROLLED BY A LOCAL HAND/OFF/AUTO SWITCH. ASTRONOMICAL TIME CLOCK TO PROVIDE CONTROL WHILE IN AUTO.

KEY NOTES:

1. MUST BE 4 POLE CONTACTORS.





LIGHTING JUNCTION BOX WIRING DIAGRAM
NTS

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

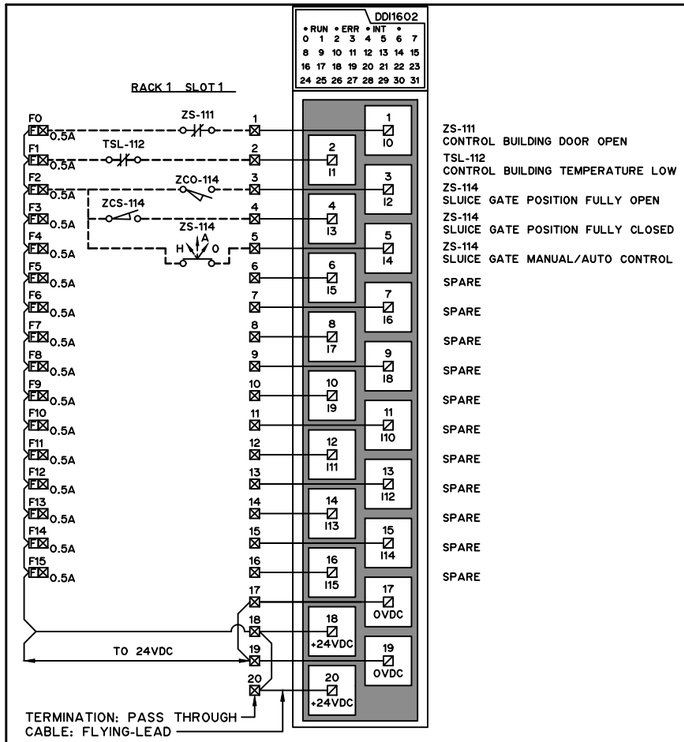
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

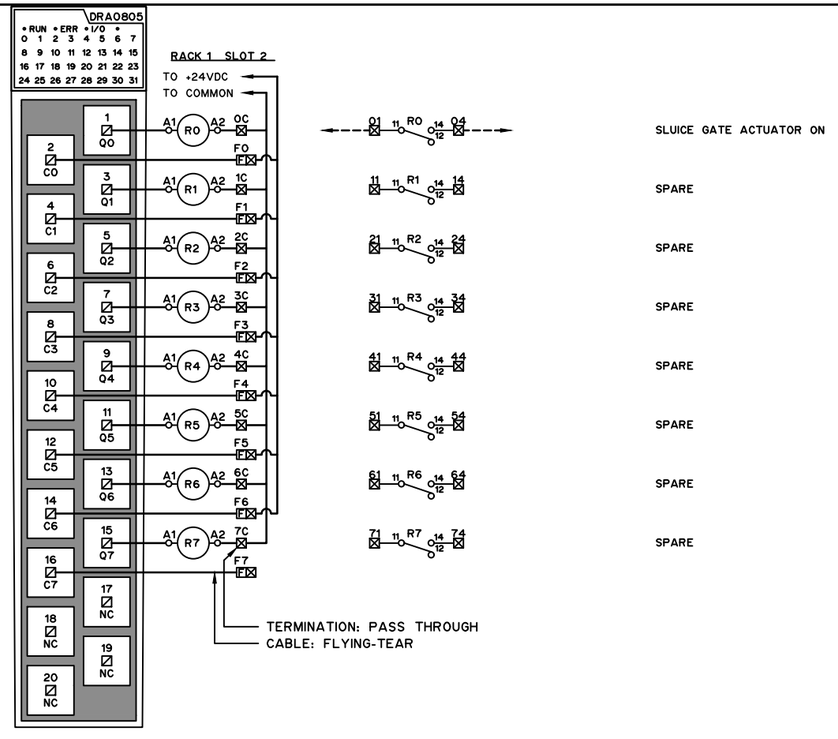
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
LIGHTING JUNCTION BOX

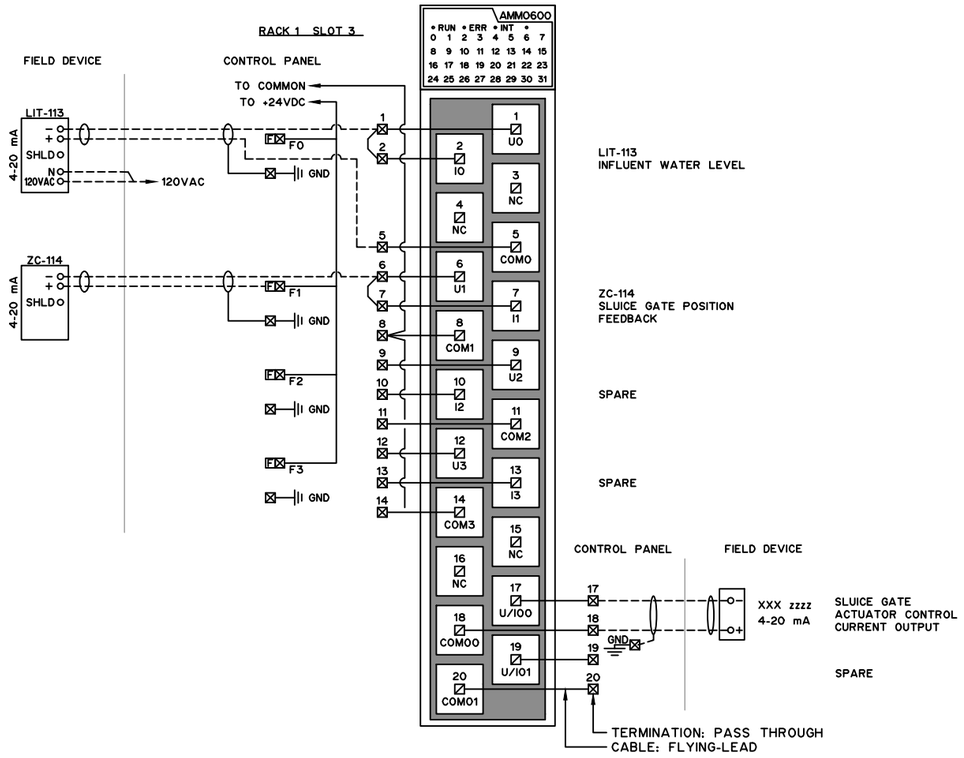
DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.8

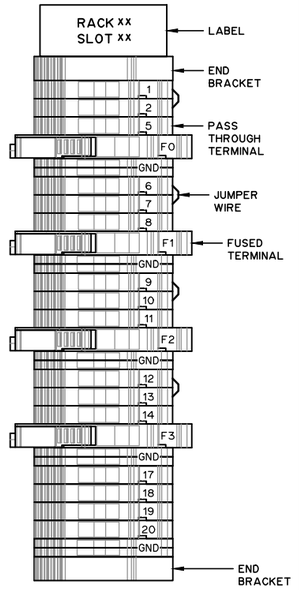




NOTES:

1. ——— WIRING INTEGRAL TO PANEL.
2. – – – FIELD WIRING.
3. CONTRACTOR TO CONFIRM POLARITY AND WIRING REQUIREMENTS OF INSTRUMENTATION EQUIPMENT PRIOR TO INSTALLATION.





TYPICAL AMM0600 TERMINAL LAYOUT

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
CONTROL BUILDING PLC IO

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.9

CONDUIT AND CABLE SCHEDULE

COND. No.	COND. TAG	DESCRIPTION	LOCATION	CONDUIT SIZE AND TYPE	TAG / FROM	TO	WIRE TYPE	No. OF WIRES	WIRE SIZE	REMARKS
99	A	UTILITY POWER	UTILITY POWER POLE	1-103ø DB2 DUCT	UTILITY POLE	TRANSFORMER	--	--	--	C/W PULL STRING
100	A	UTILITY POWER	UTILITY POWER POLE	1-53ø RPVC	TRANSFORMER	UTILITY METER	RW90	3	3 AWG	120/240VAC 100A
101	A	UTILITY POWER	CONTROL BUILDING	1-53ø RPVC	UTILITY METER	MAIN DISCONNECT	RW90	3	3 AWG	120/240VAC 100A
102	A	PANEL A	CONTROL BUILDING	1-53ø RPVC	MAIN DISCONNECT	PANEL A	RW90	3	3 AWG	120/240VAC 100A
103	A	GROUND GRID	CONTROL BUILDING	1-21ø RPVC	GROUND GRID	MAIN DISCONNECT	BARE	1	6 AWG	3 - 3m COPPER GROUND RODS
130	A	PICNIC SHELTER	WETLAND SOUTH POND	1-27ø RPVC	PANEL A	PICNIC SHELTER 1	RW90	3	6 AWG	TWO CIRCUITS
131	A	PATH LIGHTS	WETLAND SOUTH POND	--	LIGHTING JUNCTION BOX	PATH LIGHTS	TECK90	2	8 AWG	LIGHTING JB TO C-10 TO C-16
132	A	PATH LIGHTS	WETLAND SOUTH POND	--	LIGHTING JUNCTION BOX	PATH LIGHTS	TECK90	2	12 AWG	LIGHTING JB TO C-1 TO C-9
140	A	EV CHARGER (FUTURE)	WETLAND PARKING LOT	1-27ø RPVC	PANEL A	PARKING LOT	--	--	--	FUTURE EV CHARGING STATION
141	A	PARKING LOT LIGHTS	WETLAND PARKING LOT	1-27ø RPVC	LIGHTING JUNCTION BOX	PARKING LOT	RW90	2	12 AWG	
142	A	RV DUMP KIOSK	WETLAND PARKING LOT	1-27ø RPVC	PANEL A	PARKING LOT	RW90	2	12 AWG	240VAC POWER
	B			1-27ø RPVC	CP-1	PARKING LOT	--	--	--	120VAC CONTROL C/W PULLSTRING
151	A	BUILDING LOW TEMPERATURE	CONTROL BUILDING	1-21ø RPVC	CP-1	TSL-112	RW90	2	14 AWG	24VDC STATUS
152	A	DOOR SENSOR	CONTROL BUILDING	1-21ø RPVC	CP-1	ZS-111	RW90	3	14 AWG	24VDC POWER AND STATUS
153	A	LEVEL INDICATING TRANSMITTER	CONTROL BUILDING	1-21ø RPVC	LIT-113	LE-113	PRE-MANUFACTURED CABLE			
	B			1-21ø RPVC		CP-1	RW90	2	14 AWG	120VAC POWER
	C			1-21ø RPVC		CP-1	BELDEN	1-PAIR	18 AWG	ANALOG STATUS
154	A	SLUICE GATE ACTUATOR	CONTROL BUILDING	1-21ø RPVC	ZC-114	CP-1	BEDLEN	2-PAIR	18 AWG	ANALOG STATUS AND CONTROL
	B			1-21ø RPVC			RW90	5	14 AWG	DISCRETE STATUS / CONTROL
	C			1-21ø RPVC			RW90	2	14 AWG	120V ACTUATOR POWER

MECHANICAL SCHEDULE

TAG	DESCRIPTION	LOCATION	LOAD	VOLTAGE	PHASE	FEEDER	STARTER	CCT BRK (AMPS)	CCT NO.	CONTROL	INTERLOCKS	REMARKS
EUH-1	ELECTRIC UNIT HEATER	CONTROL BUILDING	4KW	240	1	2C 10AWG	N/A	2P30	A-4,6	T-STAT	NONE	
EF-1	EXHAUST FAN	CONTROL BUILDING	50W	120	1	2C 12AWG	N/A	1P15	A-17	T-STAT	NONE	
DM-1	DAMPER 1	CONTROL BUILDING		120					A-17			
DM-2	DAMPER 2	CONTROL BUILDING		120					A-17			

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	VOLTAGE	LUMENS	LAMP TYPE	COLOR TEMP	MOUNTING	REMARKS
A	PARKING LOT LIGHTS	GE CURRENT	EALS030F4AF7440DDD1BLCK	240V	15000 lm	LED	4000 K	POLE	PARKING LOT LIGHTS MOUNTED AT 25', DARK BRONZE
B	INDUSTRIAL STRIP LIGHT	COLUMBIA	MPS4-40ML-CW-EDU	120V	4556 lm	LED	4000 K	SURFACE	
C	PATH LIGHTS	GE CURRENT	EPTT01007DA40APBLCKL	240V	6880 lm	LED	4000 K	POLE	PATH LIGHTS MOUNTED AT 12', DARK BRONZE
D	EXTERIOR WALL CUBE	COLUMBIA	CWM2-40VWSM-FRFP-EDU	120V	1660 lm	LED	3500 K	WALL	MOUNT AT 2500 A.F.F.

NOTES:

1. CONCEAL ALL CONDUITS IN WALLS, FLOOR SLAB, OR CEILING WHEN POSSIBLE. EXPOSED CONDUIT LEAVING SURFACE MOUNTED ENCLOSURES OR EQUIPMENT SHALL RUN VERTICALLY INTO FLOOR SLAB OR CEILING SPACE.
2. RUN CONDUITS IN SLAB TO INSTRUMENTATION LOCATED IN CENTRE OF FLOOR PLAN.
3. ALL FIELD WIRING TO BE INSTALLED IN CONDUIT UNLESS OTHERWISE SPECIFIED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA — MICHAEL T. F. GOERTZEN — ID 68504

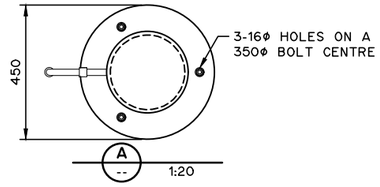
JULY 25, 2022

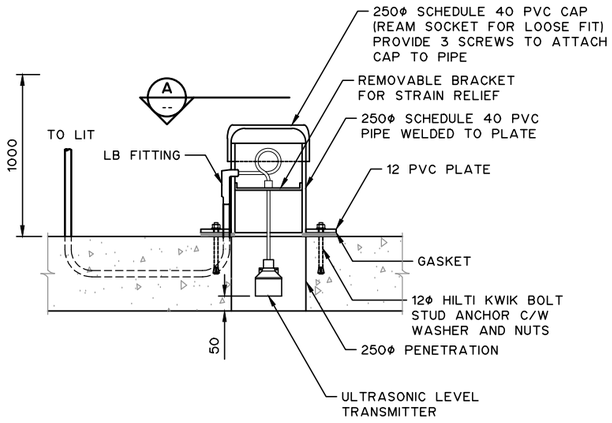
MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
SCHEDULES

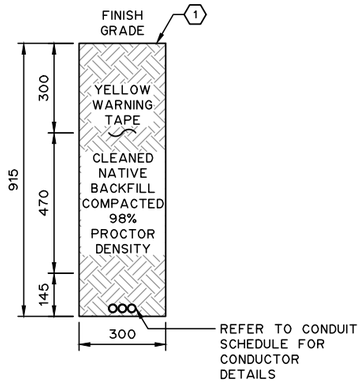
DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.10





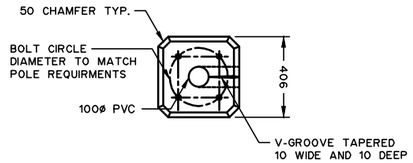
LEVEL TRANSDUCER MOUNTING

2 -- 1:20



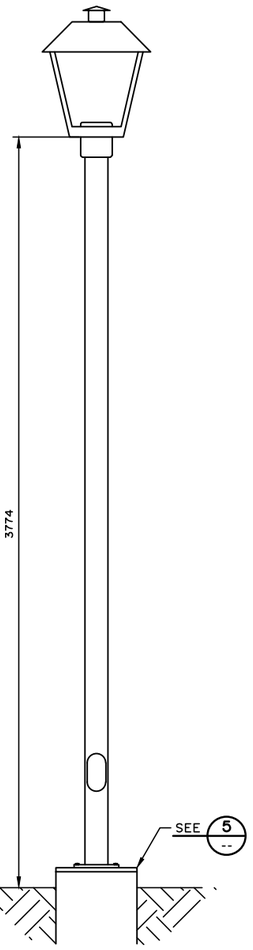
TYPICAL DIRECT BURIED CABLE TRENCHING DETAIL

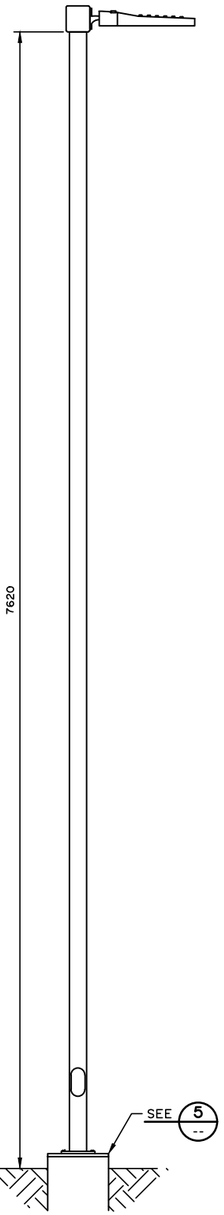
3 -- 1:20



TOP VIEW

B -- NTS





NOTES:

1. SEE FORTIS ALBERTA SERVICE AND METERING GUIDE FOR SERVICE REQUIREMENTS. COORDINATE SERVICE INSTALLATION WITH FORTIS.

-- KEY NOTES:

1. RESTORE SURFACE TO EXISTING CONDITIONS OR BETTER.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

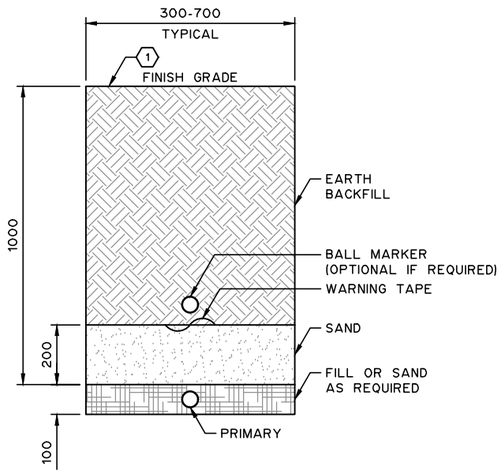
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

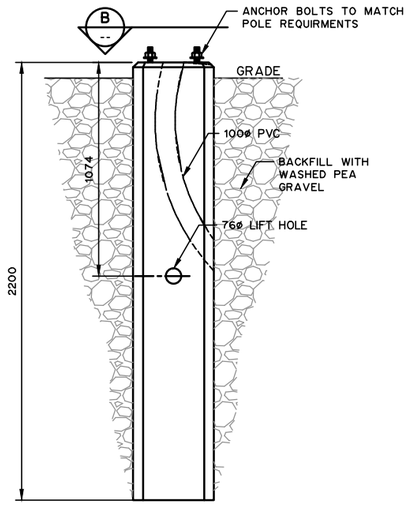
MAIN CONSTRUCTED WETLAND
ELECTRICAL
DETAILS 1 OF 2

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.11



FORTIS TRENCHING DETAIL

4 -- NTS



PRECAST LIGHT POLE BASE

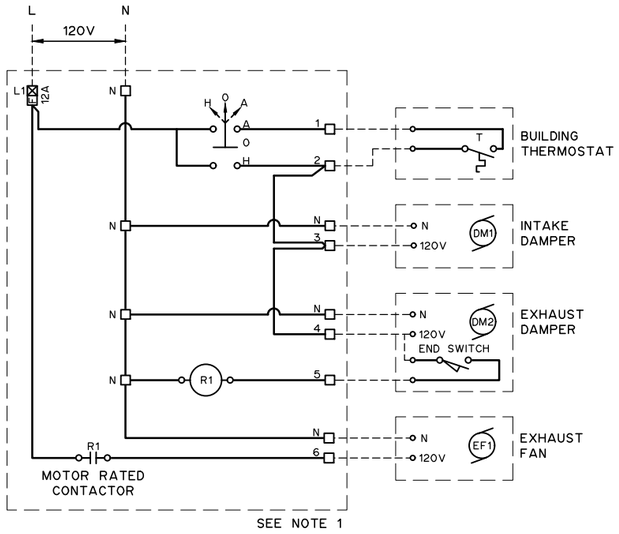
5 -- NTS

TYPICAL PATH LIGHT DETAIL

6 E1.1 NTS

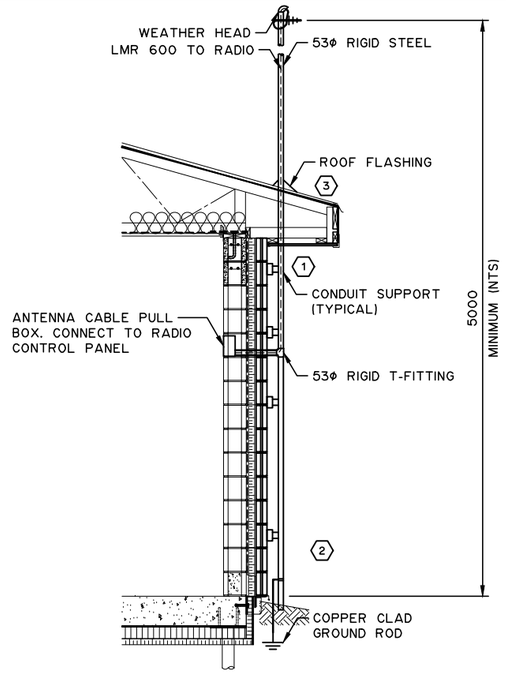
TYPICAL PARKING LOT LIGHT DETAIL

7 E1.1 NTS



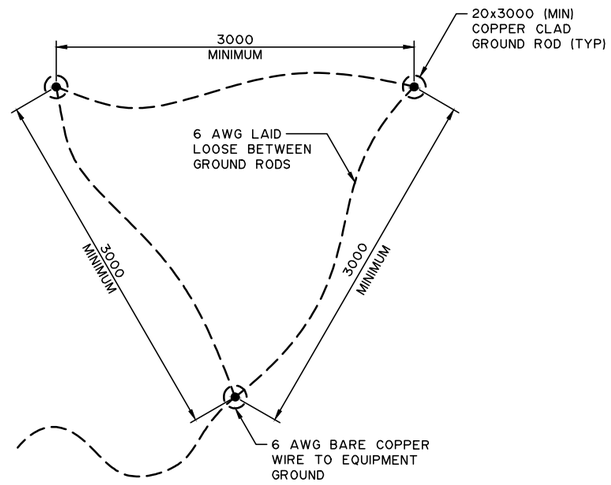
EXHAUST FAN AND DAMPER CONTROLLER

8 / E1.7 NTS



ANTENNA MOUNTING DETAIL

9 / E1.7 NTS



TYPICAL GROUND GRID

10 / E1.3 1:50

NOTES:

1. INSTALL EXHAUST FAN AND DAMPER CONTROLS IN A NEMA 4 ENCLOSURE C/W HINGED COVER. INSTALL HAND/OFF/AUTO SWITCH ON THE FRONT OF THE CONTROL BOX.

KEY NOTES:

1. PROVIDE SUITABLE BACKING FOR MAST SUPPORTS. COORDINATE INSTALLATION AND SEALING OF PENETRATIONS WITH STRUCTURAL.
2. ATTACH No. 6 AWG LIGHTNING GROUND CABLE TO MAST AT 100 ABOVE GRADE AND RUN TO SEPARATE GROUND ROD, INTERCONNECT GROUND ROD AND BUILDING GROUND GRID AS A REQUIRED BY CEC.
3. PROVIDE SUITABLE ROOF PENETRATION FLASHING TO SEAL ROOF AROUND CONDUIT. COORDINATE INSTALLATION WITH STRUCTURAL.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA ID 68504
JULY 25, 2022

MPE Engineering Ltd.

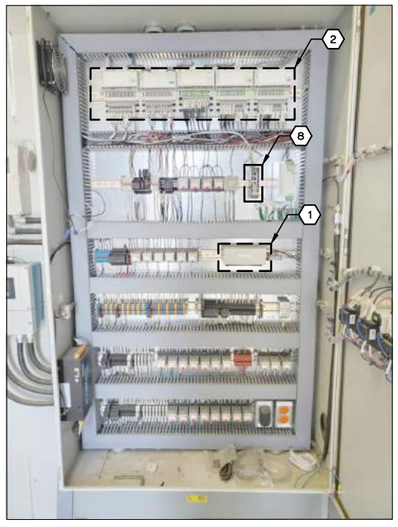
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
DETAILS 2 OF 2

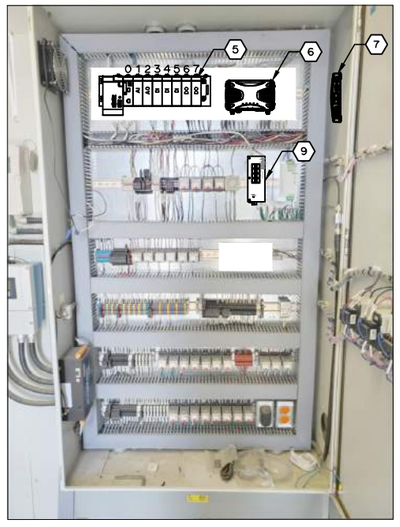
DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E1.12

MAIN LIFT STATION CONTROL PANEL EXTERIOR DEMOLITION
NTS

MAIN LIFT STATION CONTROL PANEL EXTERIOR PROPOSED
NTS



MAIN LIFT STATION CONTROL PANEL INTERIOR DEMOLITION
NTS



MAIN LIFT STATION CONTROL PANEL INTERIOR PROPOSED
NTS

NOTES:

1. RECORD DRAWINGS FOR EXISTING CONTROL PANEL WILL BE PROVIDED TO SUCCESSFUL BIDDER. CONTRACTOR SHALL VERIFY RECORD DRAWINGS MATCH EXISTING CONDITIONS PRIOR TO CHANGE OVER. I/O LIST WITH ASSIGNMENTS FOR CONNECTING TO NEW MODULES WILL BE PROVIDED.
2. FOLLOWING PLC REPLACEMENT ASSIST WITH TESTING PLC AND ALL CONNECTED DEVICES.

⟨-⟩ KEY NOTES:

1. DEMOLISH EXISTING FREEWAVE RADIO AND SALVAGE TO OWNER.
2. DEMOLISH EXISTING PLC AND SALVAGE TO OWNER.
3. DEMOLISH EXISTING HMI AND SALVAGE TO OWNER.
4. SUPPLY AND INSTALL RED LION G310R210 HMI IN EXISTING DOOR, MODIFY OPENING TO ACCOMMODATE EQUIPMENT AS REQUIRED.
5. SUPPLY AND INSTALL NEW M340 PLC. REFER TO SPECIFICATION 13317 FOR PLC CARD NUMBERS. REPLACE WIRING WITHIN CONTROL PANEL FROM PLC TO FIRST TERMINAL AS NEEDED, AND LABEL NEW WIRING TO MATCH EXISTING.
6. SUPPLY AND INSTALL NEW TRIO JR900 RADIO, MODIFY OR REPLACE WIRING TO CONNECT TO NEW RADIO AS NEEDED.
7. SUPPLY AND INSTALL NEW TRIO JR900 RADIO.
8. DEMOLISH EXISTING 4 PORT ETHERNET SWITCH AND SALVAGE TO OWNER.
9. SUPPLY AND INSTALL NEW 8 PORT ETHERNET SWITCH. REPLACE WIRING WITHIN CONTROL PANEL AS NEEDED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

ISSUE	YY-MM-DD	REVISION
2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

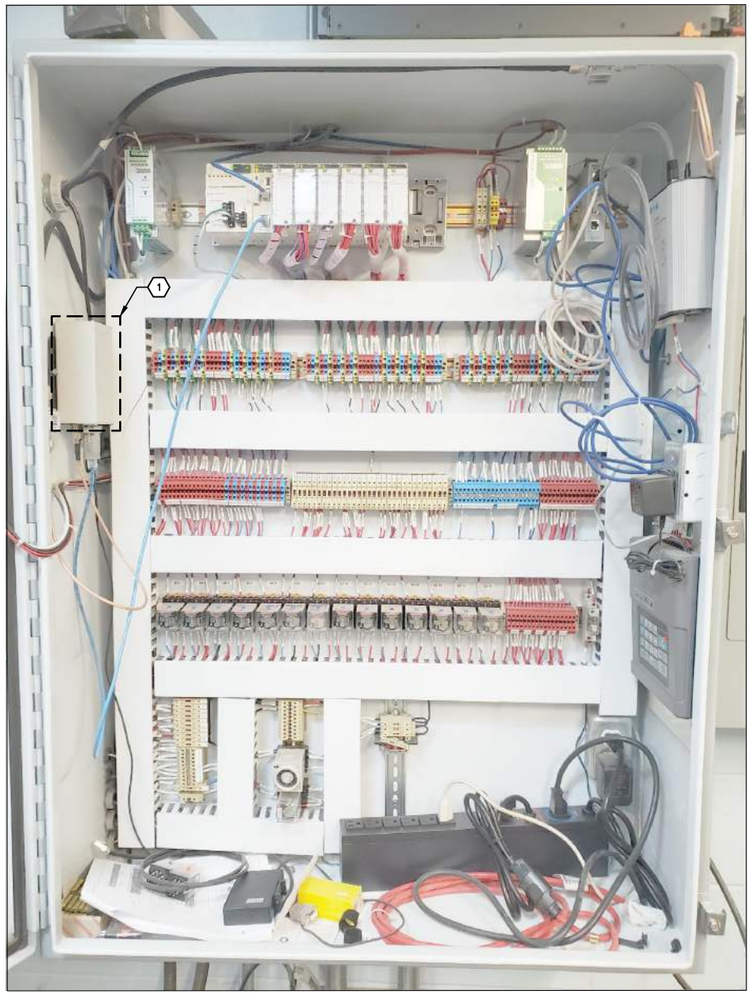
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

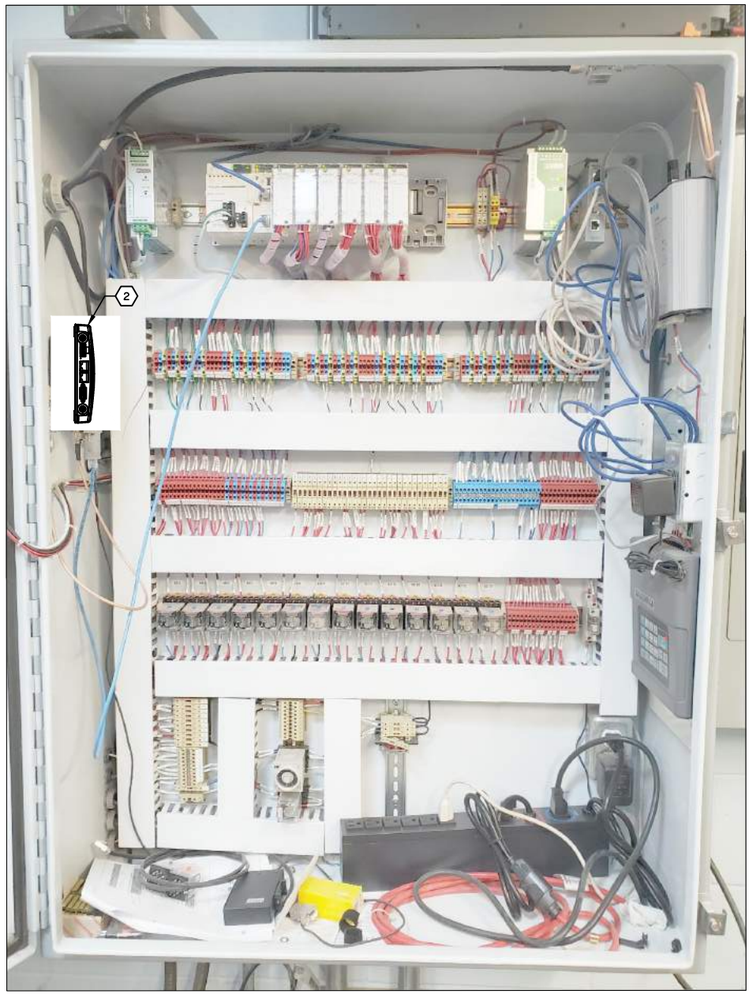
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
MAIN LIFT STATION COMMUNICATION AND CONTROL

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E2.1



DISTRIBUTION PUMPING STATION CONTROL PANEL INTERIOR DEMOLITION
NTS



DISTRIBUTION PUMPING STATION CONTROL PANEL INTERIOR PROPOSED
NTS

NOTES:
1. RECORD DRAWINGS FOR EXISTING CONTROL PANEL WILL BE PROVIDED TO SUCCESSFUL BIDDER. CONTRACTOR SHALL VERIFY RECORD DRAWINGS MATCH EXISTING CONDITIONS PRIOR TO CHANGE OVER.
2. REFER TO SPECIFICATION 00800 "SUPPLEMENTARY CONDITIONS" FOR CHANGE OVER REQUIREMENTS.

⟨--⟩ KEY NOTES:
1. DEMOLISH EXISTING FREEWAVE RADIO AND SALVAGE TO OWNER.
2. SUPPLY AND INSTALL NEW TRIO JR900 RADIO, MODIFY OR REPLACE WIRING TO CONNECT NEW RADIO AS NEEDED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

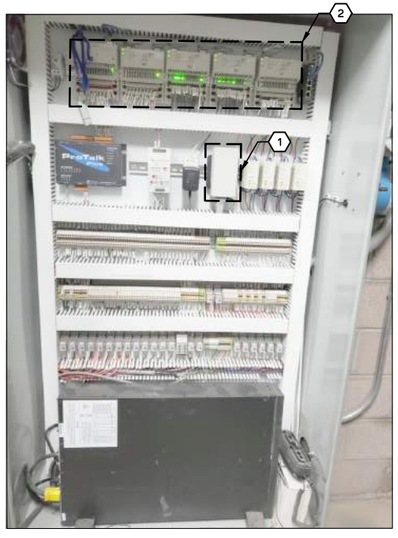
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
DISTRIBUTION PUMPING STATION
COMMUNICATION AND CONTROL

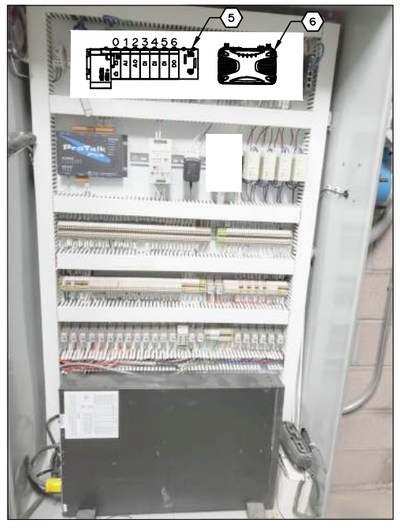
DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E3.1

SUNDANCE RIDGE LIFT STATION CONTROL PANEL EXTERIOR DEMOLITION
NTS

SUNDANCE RIDGE LIFT STATION CONTROL PANEL EXTERIOR PROPOSED
NTS



SUNDANCE RIDGE LIFT STATION CONTROL PANEL INTERIOR DEMOLITION
NTS



SUNDANCE RIDGE LIFT STATION CONTROL PANEL INTERIOR PROPOSED
NTS

NOTES:

1. RECORD DRAWINGS OR IO LIST FOR EXISTING CONTROL PANEL WILL BE PROVIDED TO SUCCESSFUL BIDDER. CONTRACTOR SHALL VERIFY RECORD DRAWINGS MATCH EXISTING CONDITIONS PRIOR TO CHANGE OVER. I/O LIST WITH ASSIGNMENTS FOR CONNECTING TO NEW MODULES WILL BE PROVIDED.
2. FOLLOWING PLC REPLACEMENT ASSIST WITH TESTING PLC AND ALL CONNECTED DEVICES.
3. REFER TO SPECIFICATION 00800 "SUPPLEMENTARY CONDITIONS" FOR CHANGE OVER REQUIREMENTS.

(--) KEY NOTES:

1. DEMOLISH EXISTING FREEWAVE RADIO AND SALVAGE TO OWNER.
2. DEMOLISH EXISTING PLC AND SALVAGE TO OWNER.
3. DEMOLISH EXISTING HMI AND SALVAGE TO OWNER.
4. SUPPLY AND INSTALL RED LION G310R210 HMI IN EXISTING DOOR, MODIFY OPENING TO ACCOMMODATE EQUIPMENT AS REQUIRED.
5. SUPPLY AND INSTALL NEW M340 PLC. REFER TO SPECIFICATION 13317 FOR PLC CARD NUMBERS. REPLACE WIRING WITHIN CONTROL PANEL FROM PLC TO FIRST TERMINAL AS NEEDED, AND LABEL NEW WIRING TO MATCH EXISTING.
6. SUPPLY AND INSTALL NEW TRIO JR900 RADIO, MODIFY OR REPLACE WIRING TO CONNECT TO NEW RADIO AS NEEDED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

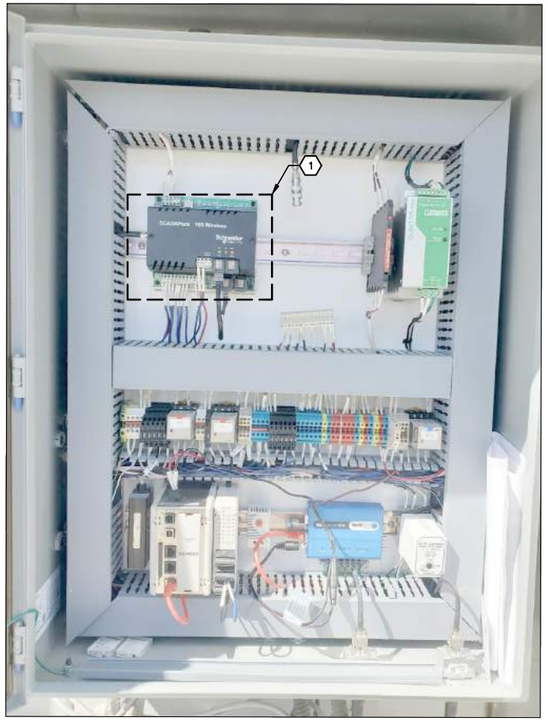
PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

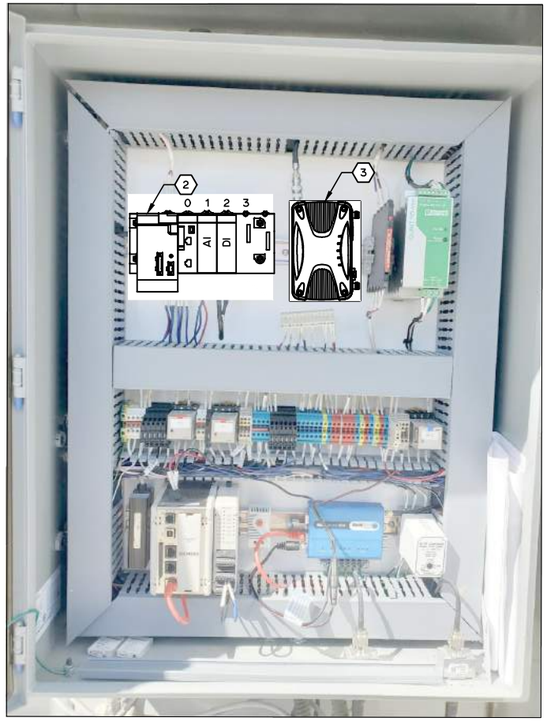
TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
SUNDANCE RIDGE COMMUNICATION AND CONTROL

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E4.1



METER VAULT CONTROL PANEL INTERIOR DEMOLITION
NTS



METER VAULT CONTROL PANEL INTERIOR PROPOSED
NTS

NOTES:

1. RECORD DRAWINGS OR IO LIST FOR EXISTING CONTROL PANEL WILL BE PROVIDED TO SUCCESSFUL BIDDER. CONTRACTOR SHALL VERIFY RECORD DRAWINGS MATCH EXISTING CONDITIONS PRIOR TO CHANGE OVER. I/O LIST WITH ASSIGNMENTS FOR CONNECTING TO NEW MODULES WILL BE PROVIDED.
2. FOLLOWING PLC REPLACEMENT ASSIST WITH TESTING PLC AND ALL CONNECTED DEVICES.
3. REFER TO SPECIFICATION 00800 "SUPPLEMENTARY CONDITIONS" FOR CHANGE OVER REQUIREMENTS.

⟨--⟩ KEY NOTES:

1. DEMOLISH EXISTING SCADA PACK AND SALVAGE TO OWNER.
2. SUPPLY AND INSTALL NEW M340 PLC. REFER TO SPECIFCATION 13317 FOR PLC CARD NUMBERS. REPLACE WIRING WITHIN CONTROL PANEL FROM PLC TO FIRST TERMINAL AS NEEDED, AND LABEL NEW WIRING TO MATCH EXISTING.
3. SUPPLY AND INSTALL NEW TRIO JR900 RADIO, MODIFY OR REPLACE WIRING TO CONNECT TO NEW RADIO AS NEEDED.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS

2	22-07-25	FOR CONSTRUCTION
1	22-05-18	FOR TENDER
ISSUE	YY-MM-DD	REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature
APEGA ID 75829
Date JULY 25, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

PROFESSIONAL ENGINEER ALBERTA
ID 68504
JULY 25, 2022

MPE Engineering Ltd.

TOWN OF COALHURST

MAIN CONSTRUCTED WETLAND
ELECTRICAL
METER VAULT COMMUNICATION

DESIGNED	M.T.F., P.P.G.	JOB	1450-087-00
DRAWN	M.T.F.	SCALE	
DATE	JULY 2022	DRAWING	E5.1