

LAWSON CREEK LIFT STATION REPLACEMENT PROJECT

VOLUME II of II

Contract No. E13-243

File No. 1730



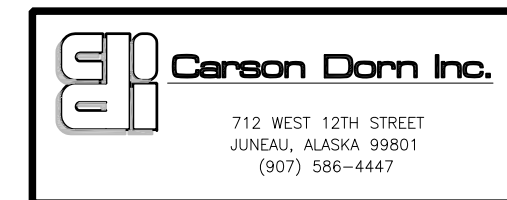
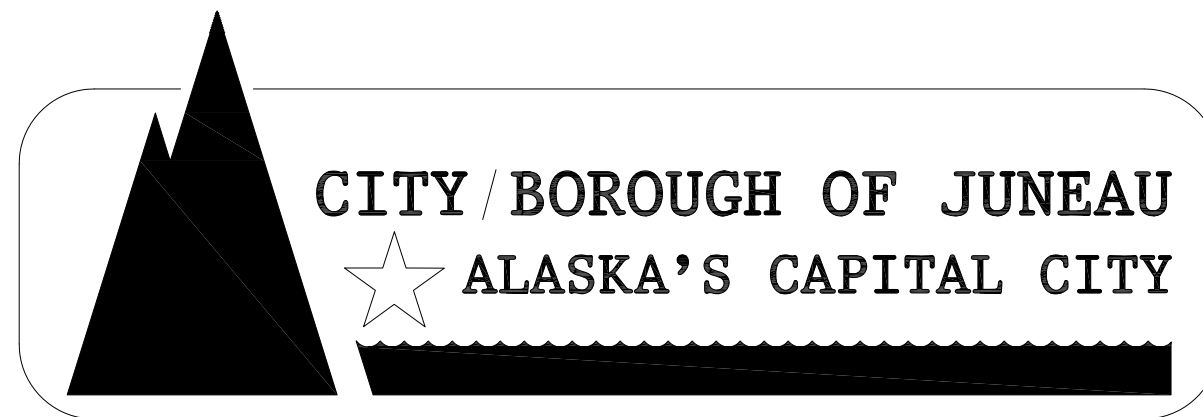
ENGINEERING DEPARTMENT

JUNEAU SEWER SYSTEM

LAWSON CREEK LIFT STATION REPLACEMENT PROJECT

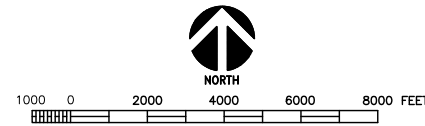
CITY AND
BOROUGH
OF JUNEAU

ENGINEERING
DEPARTMENT



CONTRACT NO. E13-243

E:\G Drive\200d\06\Lawson Creek\G_2.dwg PLOT: March 17, 2013 at: 7:24pm Gary Murdoch

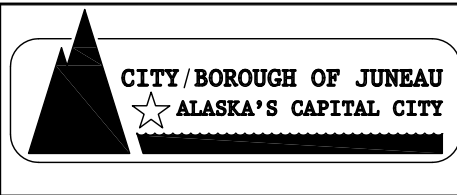


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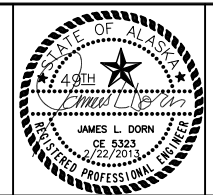
THIS PROJECT

REV	DATE	BY	DESCRIPTION

SCALE GRAPHIC
 DESIGNED JLD
 DRAWN GDM
 CHECKED JLD
 DATE FEB 2013



**JUNEAU LAWSON CREEK
 LIFT STATION REPLACEMENT**
 CONTRACT NO. E13-243



Carson Dorn Inc.
 712 WEST 12TH STREET
 JUNEAU, ALASKA 99801
 (907) 586-4447

LOCATION MAP & DRAWING INDEX

DRAWING
G-2
 SHEET No.
 2 of 18

GENERAL NOTES

1. THE CONTRACTOR SHALL ARRANGE FOR UTILITY LOCATES PRIOR TO ANY EXCAVATION. UNDERGROUND POWER, TELEPHONE AND TELEVISION LINES SHOWN ON THE DRAWINGS INDICATE THEIR EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES. THERE ARE KNOWN T-3 CABLES IN THE VICINITY OF THE WORK. DIAL BEFORE YOU DIG! 586-1333.
2. PRIOR TO DISRUPTION OF WATER OR SEWER SERVICE THE CONTRACTOR SHALL EXCAVATE AND EXPOSE PIPES AND VERIFY THAT THE PIPE AND FITTINGS APPROPRIATE FOR THE NEEDED WORK TO THE UTILITY ARE ON SITE.
3. PROTECT AND MAINTAIN EXISTING WATER SYSTEM AT ALL TIMES. COORDINATE ALL OPERATION OF WATER VALVES WITH THE CBJ UTILITIES DIVISION TO AVOID ANY DISRUPTION OF WATER SERVICE.
4. CONTRACTOR SHALL PROTECT OVERHEAD UTILITIES AND POWER POLES ADJACENT TO TRENCHING OPERATIONS.
5. PROPERTY DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION OR BETTER. UNPAVED ROADS AND DRIVES SHALL BE RESTORED WITH MATERIALS SIMILAR OR BETTER THAN ADJACENT MATERIALS AND ALL BANKS AND SLOPES SHALL BE RECONSTRUCTED TO MATCH ADJACENT BANKS AND SLOPES.
6. CONTRACTOR SHALL INSTALL TEMPORARY FILTRATION DEVICES CONSISTING OF BUT NOT LIMITED TO SILT FENCES, FILTER FABRIC FENCES, SETTLING PONDS, ETC., TO PROHIBIT SILT-LADEN TRENCH DEWATERING EFFLUENT AND OTHER CONSTRUCTION RUNOFF FROM ENTERING LAWSON CREEK OR GASTINEAU CHANNEL.
7. CONTRACTOR IS RESPONSIBLE FOR THE QUALITY OF THE DEWATERING EFFLUENT AND OTHER CONSTRUCTION RUNOFF THAT ENTERS LAWSON CREEK OR GASTINEAU CHANNEL AND IS, THEREFORE, RESPONSIBLE FOR VIOLATIONS AND PENALTIES RESULTING FROM ITS OPERATIONS.
8. CONTRACTOR SHALL SCHEDULE ITS OPERATION TO MAINTAIN CONTINUOUS SEWER SERVICE AT THE EXISTING LAWSON CREEK LIFT STATION. CONTRACTOR SHALL PROVIDE SUCH TEMPORARY PUMPING AS IS REQUIRED TO INSURE SEWAGE DOES NOT FLOOD LOCAL RESIDENCES, BUSINESSES OR OVER FLOW INTO GASTINEAU CHANNEL OR LAWSON CREEK. PROVIDE PUMPING AND BYPASS PLAN AND SCHEDULE FOR REMOVING EXISTING LAWSON CREEK PUMP STATION. PUMPING AND BYPASS PLAN SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.

LEGEND

NEW	EXISTING	
		BUILDING
		CONCRETE
		FENCE
		SILT FENCE
		BRUSHLINE
		DITCH OR STREAM
		CULVERT (SIZE & MATERIAL NOTED)
		EDGE OF TRAVELED WAY
		SIGN
		WATER PIPE
		WATER VALVE
		REDUCER
		FIRE HYDRANT
		TBM or SURVEY PIN
		MONUMENT
		UNDERGROUND POWER
		UTILITY PEDESTAL
		POWER POLE
		GUY
		SOILS TEST HOLE

ABBREVIATIONS

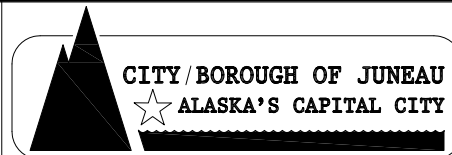
∅	DIAMETER	HORIZ	HORIZONTAL
@	AT	HWY	HIGHWAY
#	NUMBER	IBC	INTERNATIONAL BUILDING CODE
ABAND	ABANDON	INV	INVERT ELEVATION IN FEET
AC	ASPHALTIC CONCRETE	L	LEFT (OF BASIS OF STATIONING)
ALT	ALTERNATE	LAT	LATERAL
APPROX	APPROXIMATELY	LB	POUND(S)
B/H	BULKHEAD	LF	LINEAR FEET
BLDR	BOULDER	LG	LONG
BO	BLOW-OFF HYDRANT ASSEMBLY	MAX	MAXIMUM
BOTT	BOTTOM	MFR'S	MANUFACTURER'S
BV	BUTTERFLY VALVE	MON.	MONUMENT
CBJ	CITY & BOROUGH OF JUNEAU	MH	MANHOLE
C.I.	CAST IRON	MIN	MINIMUM
CIP	CAST IRON PIPE	MJ	MECHANICAL JOINT
CLR	CLEAR	N.	NORTH
CMF	CORRUGATED METAL PIPE	No.	NUMBER
CMU	CONCRETE MASONRY UNIT	NPT	NATIONAL PIPE THREAD
CONC	CONCRETE	NTS	NOT TO SCALE
CONN	CONNECT	O.C.	ON CENTER
CONT	CONTINUOUS	OD	OUTSIDE DIAMETER
CU FT	CUBIC FEET	P	PLATE
Cu	COPPER	PE	PLAIN END
CT	CONTROL TRANSFORMER	PERF	PERFORATED
D.I.P.	DUCTILE IRON PIPE	PP	POWER POLE
DET	DETAIL	PROJ	PROJECTION
DIA	DIAMETER	PSI	POUNDS PER SQUARE INCH
DWG	DRAWING	PVC	POLYVINYLCHLORIDE
E	ELECTRIC	QTY	QUANTITY
EA	EACH	R	R (OF BASIS OF STATIONING)
ECC	ECCENTRIC	RD	ROAD
EL	ELEVATION IN FEET	REQ'D	REQUIRED
ELEV	ELEVATION	RJ	RESTRAINED JOINT
EW	EACH WAY	SCH	SCHEDULE
EXIST	EXISTING	SIM	SIMILAR
EXTEN	EXTENSION	SQ	SQUARE
FCA	FLANGED COUPLING ADAPTER	STA	STATION
F.D.	FLOOR DRAIN	STL	STEEL
FH	FIRE HYDRANT & ASSEMBLY	TBM	TEMPORARY BENCH MARK
FIG.	FIGURE	TOC	TOP OF CONCRETE
FIN.	FINISHED	TYP	TYPICAL
FL	FLANGE, FLANGED	UM/FH	UTILITY MARKER, FIRE HYDRANT
FRP	FIBER REINFORCED PLASTIC	UM/V	UTILITY MARKER, VALVE
GA	GAUGE	VAP	VALVE ACCESS PAD
GALV	GALVANIZE, GALVANIZED	VERT	VERTICAL
GB	GRADE BREAK	w/	WITH
GIP	GALVANIZED IRON PIPE	WR	WATER RESISTANT
GV	GATE VALVE	WV	WATER VALVE
HAP	HYDRANT ACCESS PAD		
HDPE	HIGH DENSITY POLYETHYLENE		

SEQUENCE OF CONSTRUCTION

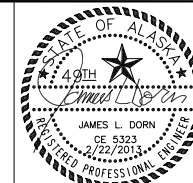
THE FOLLOWING SEQUENCE OF CONSTRUCTION SCHEDULING MUST BE FOLLOWED IN ORDER TO ENSURE THE OWNER CAN ADEQUATELY PROVIDE SEWER SERVICE TO THE DOUGLAS AREA. ALL OTHER WORK CAN BE SCHEDULED AT THE CONTRACTOR'S CONVENIENCE.

1. CONSTRUCT NEW LAWSON CREEK LIFT STATION WITH ASSOCIATED CONTROLS. TEST USING FRESH WATER AND SIMULATING THE DISCHARGE FROM THE LIFT STATION TO THE FORCE MAIN BY ROUTING THE FLOW TO GASTINEAU CHANNEL OR TO THE WET WELL.
2. UPON SUCCESSFUL COMPLETION OF THE TESTING, INSTALL FINAL CONNECTION OF GRAVITY LINE FROM EXISTING LAWSON CREEK LIFT STATION TO THE NEW LAWSON CREEK LIFT STATION. COORDINATE INTERRUPTION OF FLOW FROM THE EXISTING SEWER LINE (STOPPING THE FLOW WITH A SEWER PLUG) WITH CBJ WASTE WATER COLLECTIONS.
3. VERIFY OPERATION OF NEW LIFT STATION FOR A MINIMUM OF 24 HOURS.
4. PROCEED WITH DEMOLITION OF EXISTING LAWSON CREEK LIFT STATION AS NOTED ON DRAWING D-1.

SCALE	GRAPHIC
DESIGNED	JLD
DRAWN	GDM
CHECKED	JLD
DATE	FEB 2013



JUNEAU LAWSON CREEK
LIFT STATION REPLACEMENT
CONTRACT NO. E13-243

















CDI Carson Dorn Inc.
712 WEST 12TH STREET
JUNEAU, ALASKA 99801
(907) 586-4447

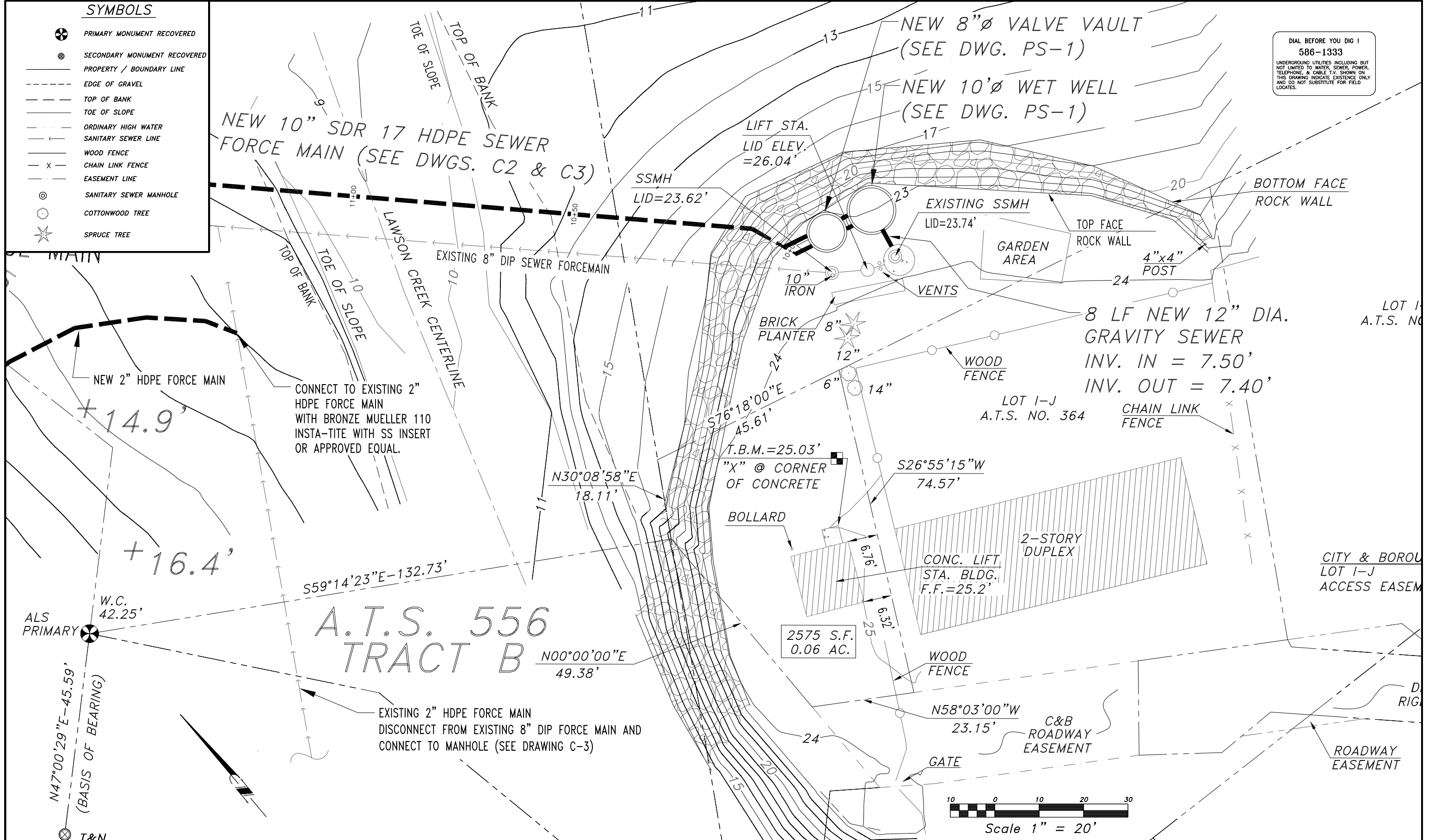
GENERAL NOTES, LEGEND
& ABBREVIATIONS

DRAWING
G-3
SHEET No.
3 of 18

SYMBOLS

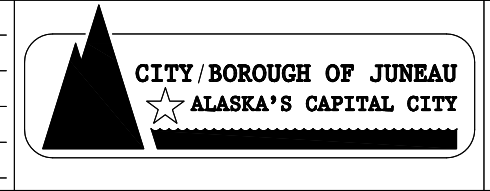
-  PRIMARY MONUMENT RECOVERED
-  SECONDARY MONUMENT RECOVERED
-  PROPERTY / BOUNDARY LINE
-  EDGE OF GRAVEL
-  TOP OF BANK
-  TOE OF SLOPE
-  ORDINARY HIGH WATER
-  SANITARY SEWER LINE
-  WOOD FENCE
-  CHAIN LINK FENCE
-  EASEMENT LINE
-  SANITARY SEWER MANHOLE
-  COTTONWOOD TREE
-  SPRUCE TREE

DIAL BEFORE YOU DIG !
 586-1333
 UNDERGROUND UTILITIES INCLUDING BUT NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, & CABLE TV, SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES.

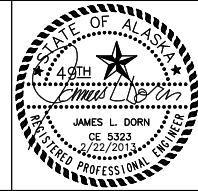


E:\G Drive\2013\117544-Lawson Creek\Replacement.dwg PLOT: March 17, 2013 at: 7:15pm Gary Murdoch

REV	DATE	BY	DESCRIPTION



**JUNEAU LAWSON CREEK
 LIFT STATION REPLACEMENT**
 CONTRACT NO. E13-243



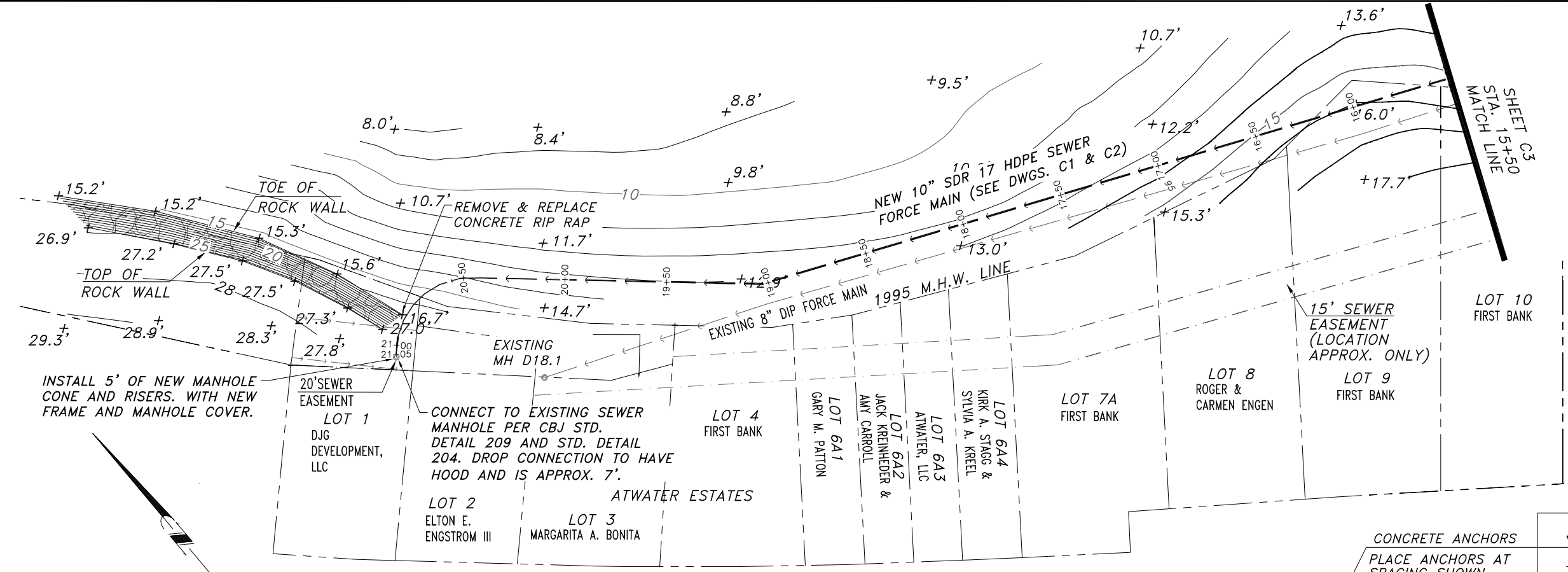

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 JUNEAU, ALASKA 99801
 (907) 586-4447

SITE PLAN
 SHEET No.
4 of 18

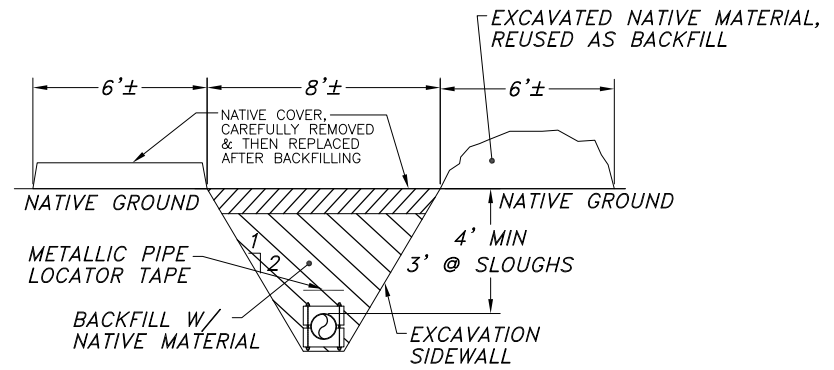
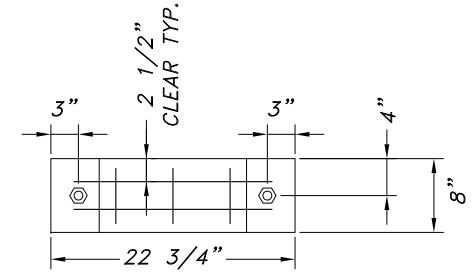
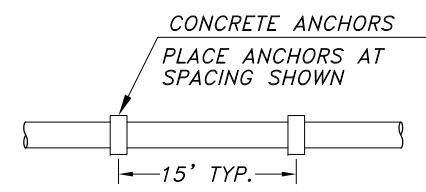
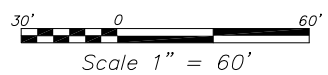
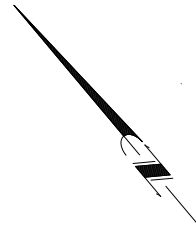
DRAWING
C-1

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586-1333

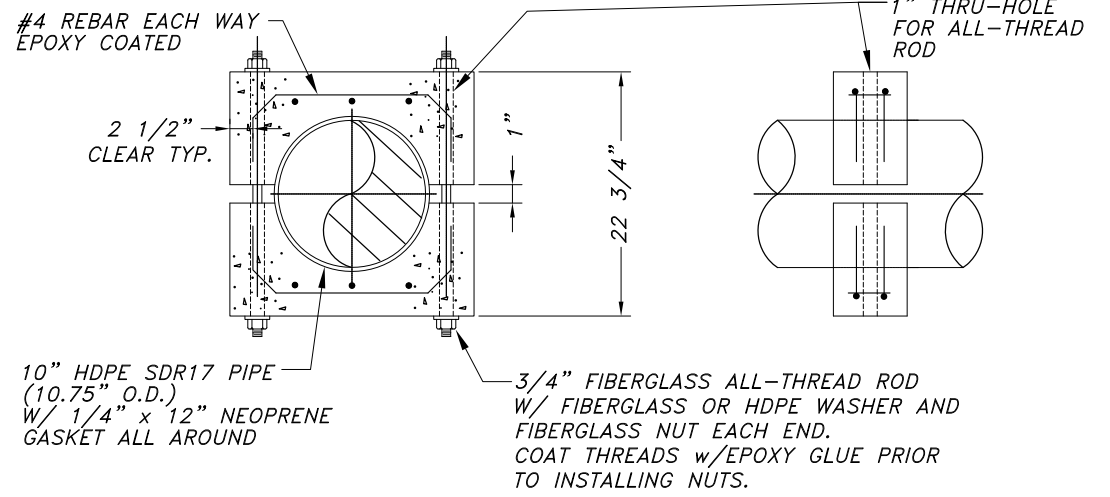
UNDERGROUND UTILITIES INCLUDING BUT NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, & CABLE TV, SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES.



INSTALL 5' OF NEW MANHOLE CONE AND RISERS, WITH NEW FRAME AND MANHOLE COVER.



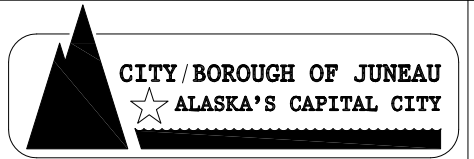
TYPICAL FORCE MAIN TRENCH SECTION
NTS



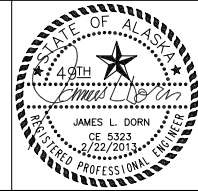
CONCRETE ANCHORS (OR APPROVED EQUAL)
NTS

E:\G Drive\2013\2013\Lawson Creek\11754-Lawson Crk Replacement.dwg PLOT: March 17, 2013 at: 7:18pm Gary Murdoch

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DATE	FEB 2013
REV	DATE BY DESCRIPTION



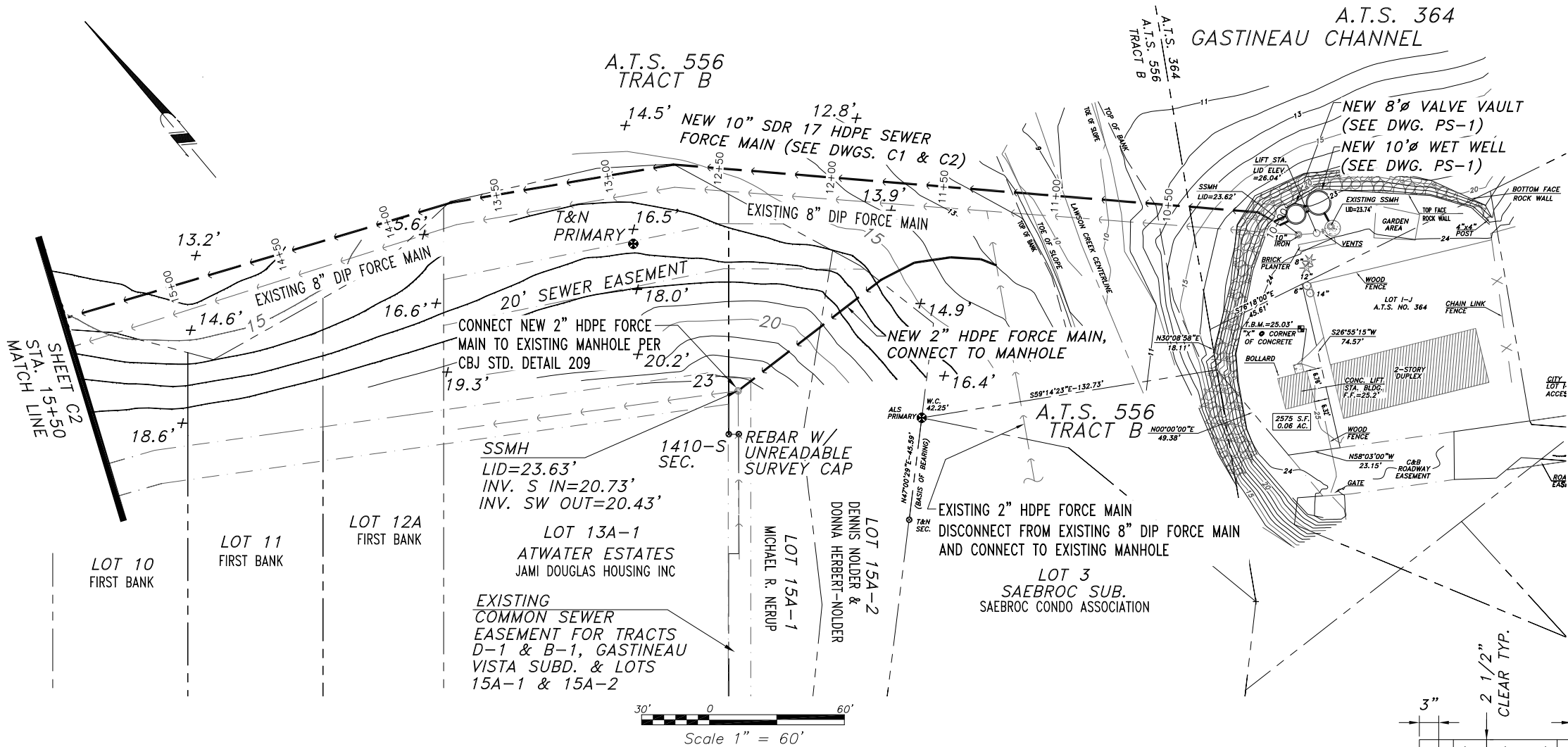
JUNEAU LAWSON CREEK LIFT STATION REPLACEMENT
CONTRACT NO. E13-243



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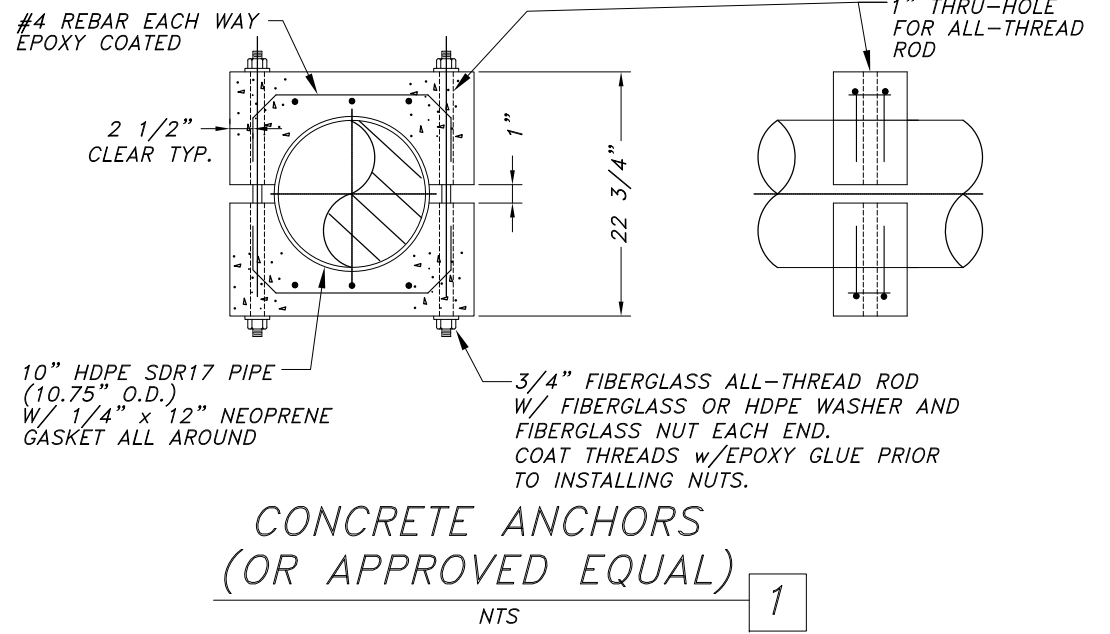
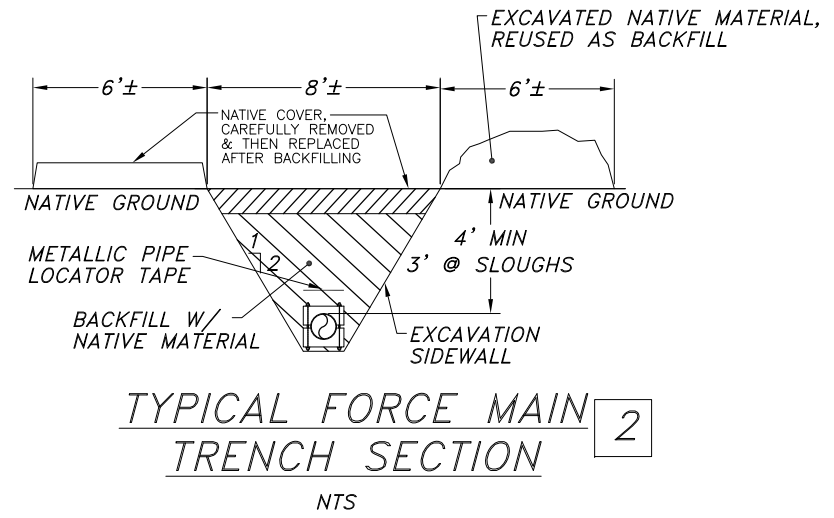
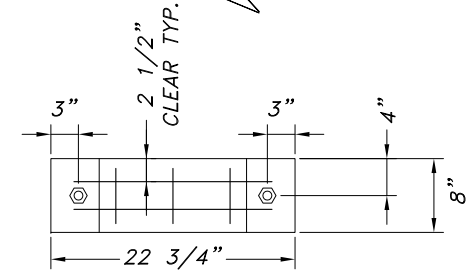
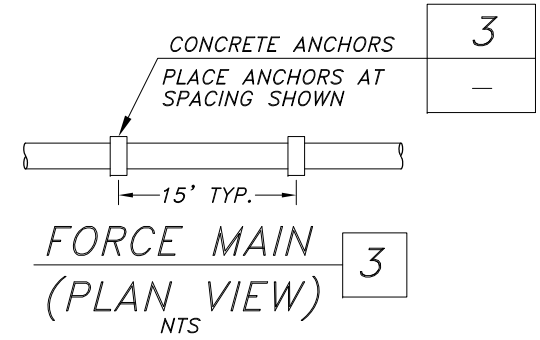
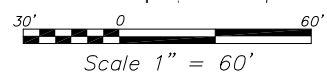
FORCE MAIN PLAN & PROFILE
STA. 15+50 TO STA. 21+00

DRAWING
C-2
SHEET No.
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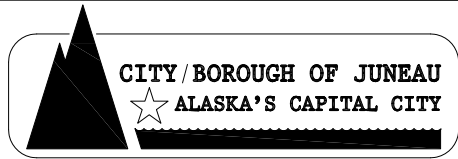
DIAL BEFORE YOU DIG!
586-1333

UNDERGROUND UTILITIES INCLUDING BUT NOT LIMITED TO WATER, SEWER, POWER, TELEPHONE, & CABLE TV, SHOWN ON THIS DRAWING INDICATE EXISTENCE ONLY AND DO NOT SUBSTITUTE FOR FIELD LOCATES.

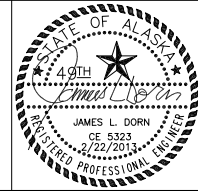


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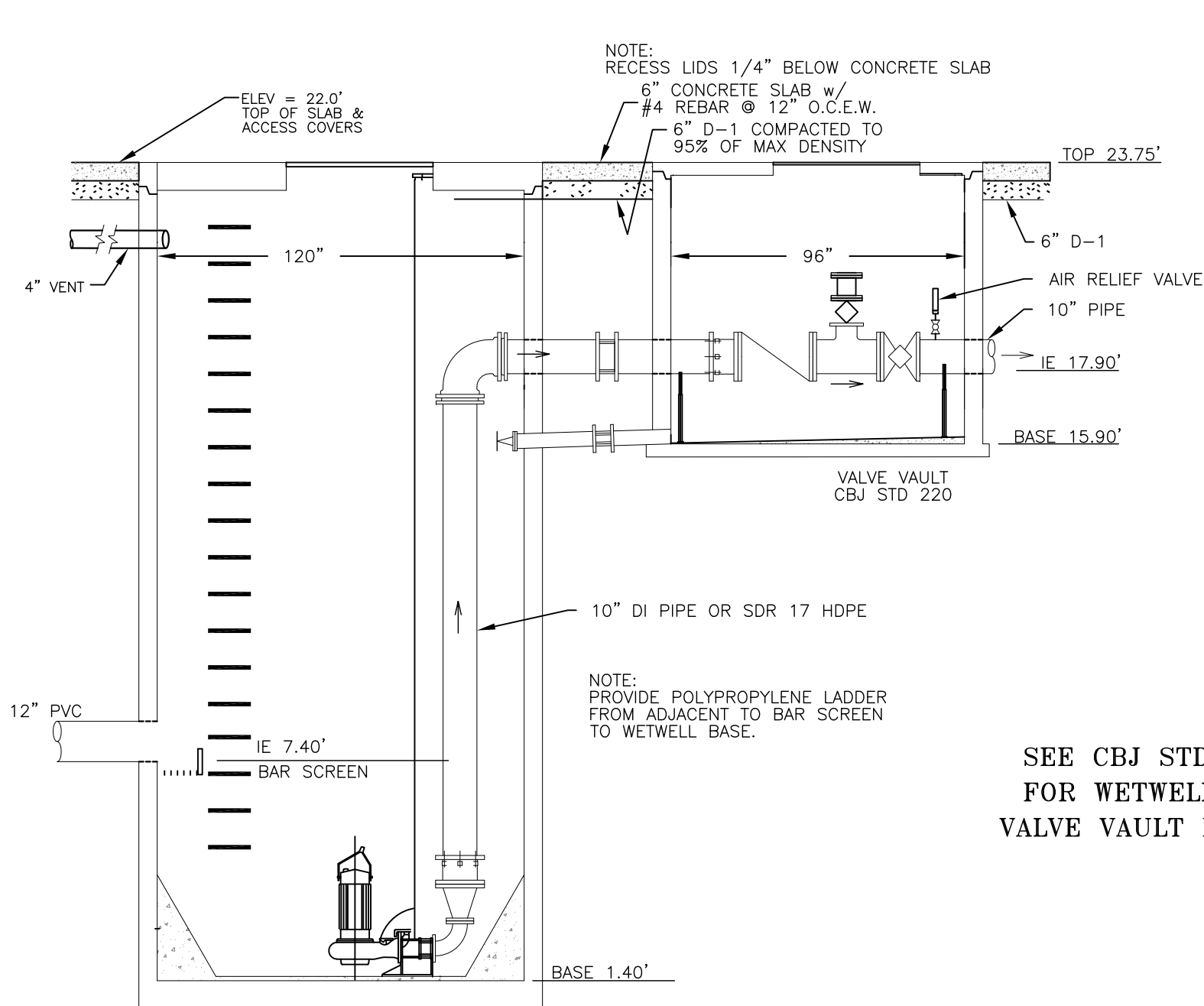


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FORCE MAIN PLAN & PROFILE
STA. 10+00 TO STA. 15+50

DRAWING	C-3
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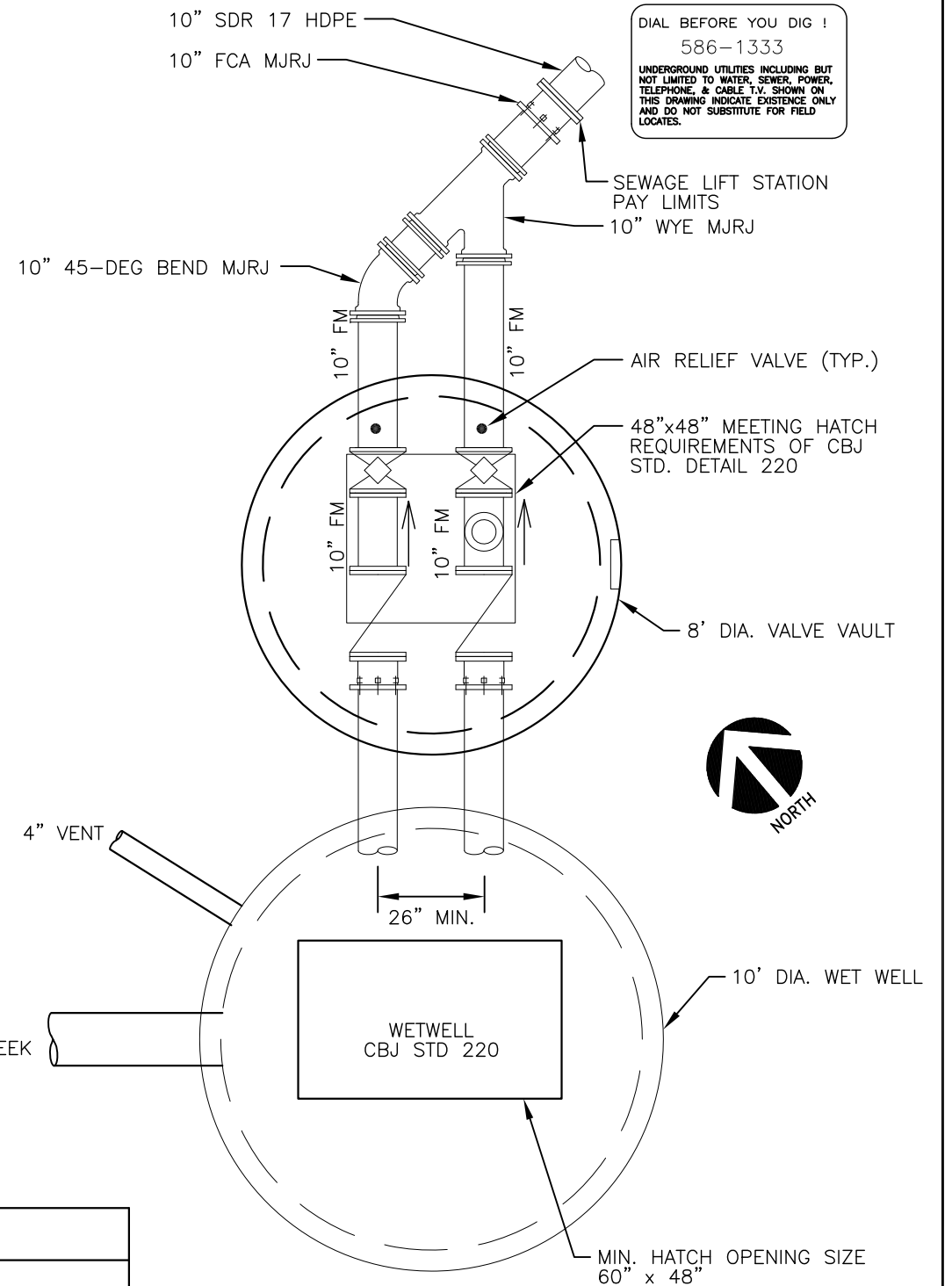
E:\G Drive\2013\cbj\Lawson Creek\LawsonCk_PS_1.dwg PLOT: March 17, 2013 at: 7:27pm Gary Murdoch



SCHMATIC PROFILE 2

SEE CBJ STD. 220
FOR WETWELL AND
VALVE VAULT DETAILS

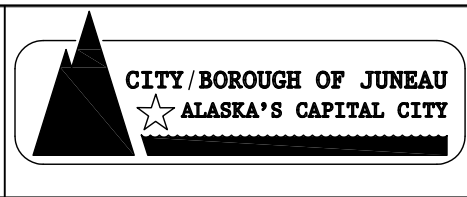
NEW 12" PVC FROM
EXISTING LAWSON CREEK
LIFT STATION



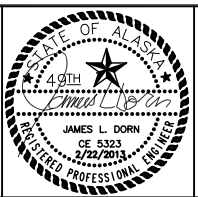
PUMP STATION	WETWELL		FORCE MAIN SIZE / IE	INFLUENT LINES LINE / SIZE / IE	REDUCER SIZES	REFERENCE DRAWING
	BASE	TOP				
LAWSON CREEK LIFT STATION	1.40	23.75'	10" / 17.90'	PVC/12"/7.40'	4x10	

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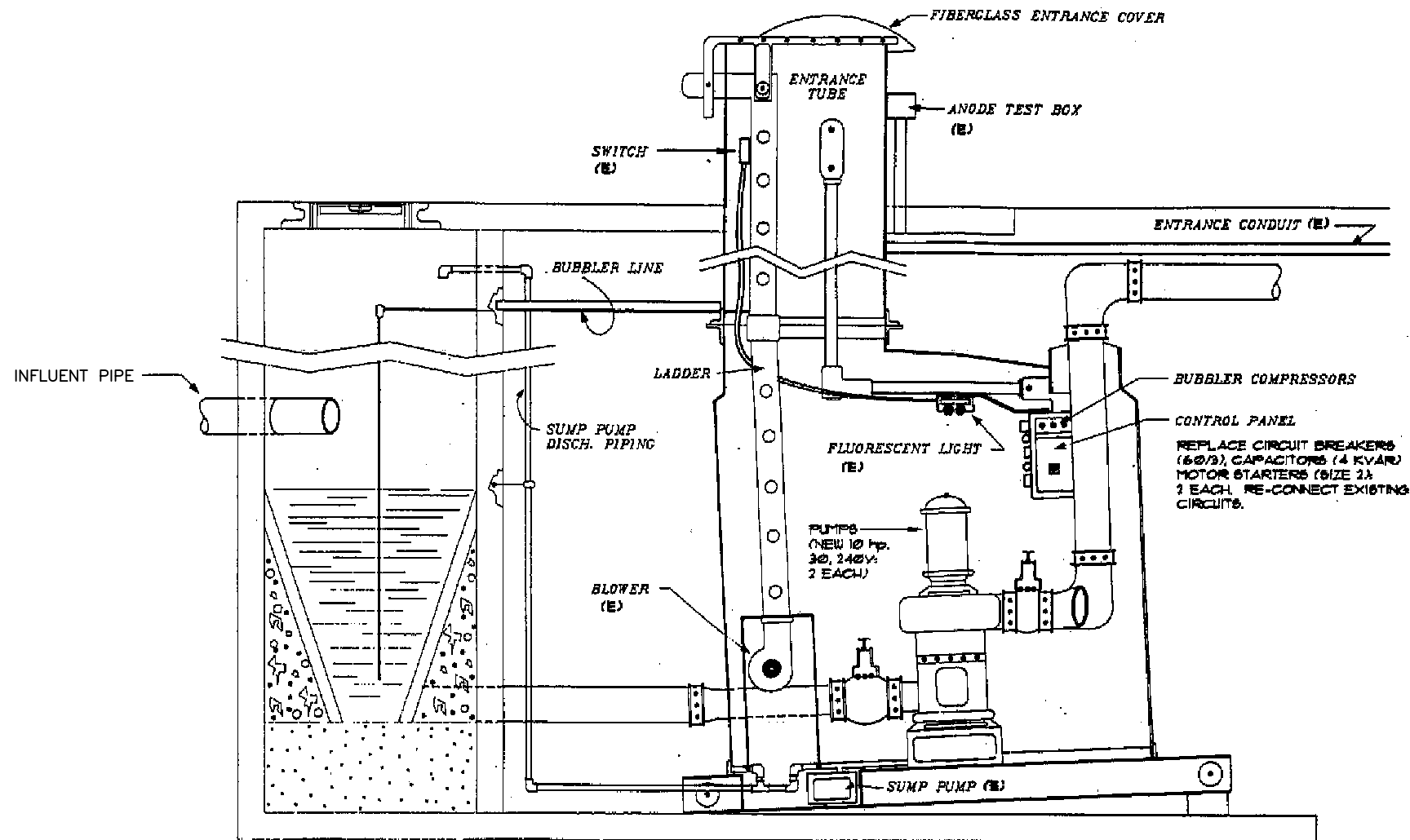


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712 WEST 12TH STREET
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LAWSON CREEK
LIFT STATION DETAILS

DRAWING
PS-1
SHEET No.
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E:\G Drive\2013\Lawson Creek\Lawson Crk Demo Fig1.dwg PLOT: March 17, 2013 at 7:32pm Gary Murdoch

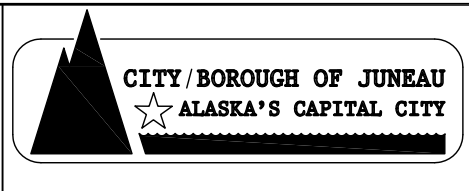


EXISTING LAWSON CREEK LIFT STATION DEMOLITION

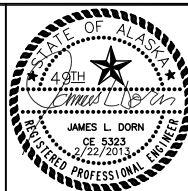
1. DEMOLITION OF THE EXISTING LAWSON CREEK LIFT STATION MAY ONLY BEGIN ONCE THE NEW LIFT STATION IS IN OPERATION AND CONTRACTOR HAS RECEIVED WRITTEN DETERMINATION FROM THE ENGINEER THAT THE NEW LIFT STATION IS OPERATING SATISFACTORILY.
2. CLOSE EXISTING INLET VALVE IN EXISTING LAWSON CREEK WET WELL.
3. CBJ WILL USE THEIR SEWER VACUUM TRUCK TO REMOVE SUBSTANTIALLY ALL SEWAGE AND SOLIDS IN THE EXISTING LAWSON CREEK LIFT STATION WET WELL.
4. FILL THE EXISTING LAWSON CREEK WET WELL WITH PEA GRAVEL TO 6" BELOW EXISTING INLET LINE AND NEW OUTLET LINE TO NEW LAWSON CREEK WET WELL. AND COMPACT WITH VIBRATORY COMPACTOR TAKING CARE NOT TO DAMAGE MANHOLE.
5. POUR NEW CONCRETE INVERT WITH FLOW CHANNEL BETWEEN EXISTING INLET LINE AND NEW OUTLET LINE TO NEW LAWSON CREEK WET WELL. PROTECT FLOW CHANNEL UNTIL CONCRETE CURES.
6. OPEN EXISTING INLET VALVE IN EXISTING LAWSON CREEK WET WELL AND BEGIN OPERATION OF THE NEW LAWSON CREEK LIFT STATION.
7. CLOSE INLET AND OUTLET VALVES IN THE EXISTING LAWSON CREEK PUMP VAULT AND REMOVE PUMPS.
8. DRILL 16 - 1" HOLES THROUGH THE BOTTOM OF THE EXISTING PUMP VAULT TO ENSURE IT DRAINS.
9. REMOVE AND DISPOSE OF ALL PUMPS, LIGHTS, ELECTRICAL CONTROLS, VENTS, FANS, HEATERS, CONDUIT, FLOAT SWITCHES ETC. IN THE EXISTING LAWSON CREEK LIFT STATION AND ADJACENT WET WELL (SEE FIGURE 1 EXISTING LAWSON CREEK LIFT STATION THIS SHEET).
10. REMOVE ABOVE GRADE PORTION OF LIFT STATION TO APPROXIMATELY 1' BELOW GRADE.
11. FILL THE VALVE VAULT WITH PEA GRAVEL AND COMPACT WITH VIBRATORY COMPACTOR.
12. FINISH SITE WITH 6" D-1 COMPACTED TO 95% OF MAX DENSITY.


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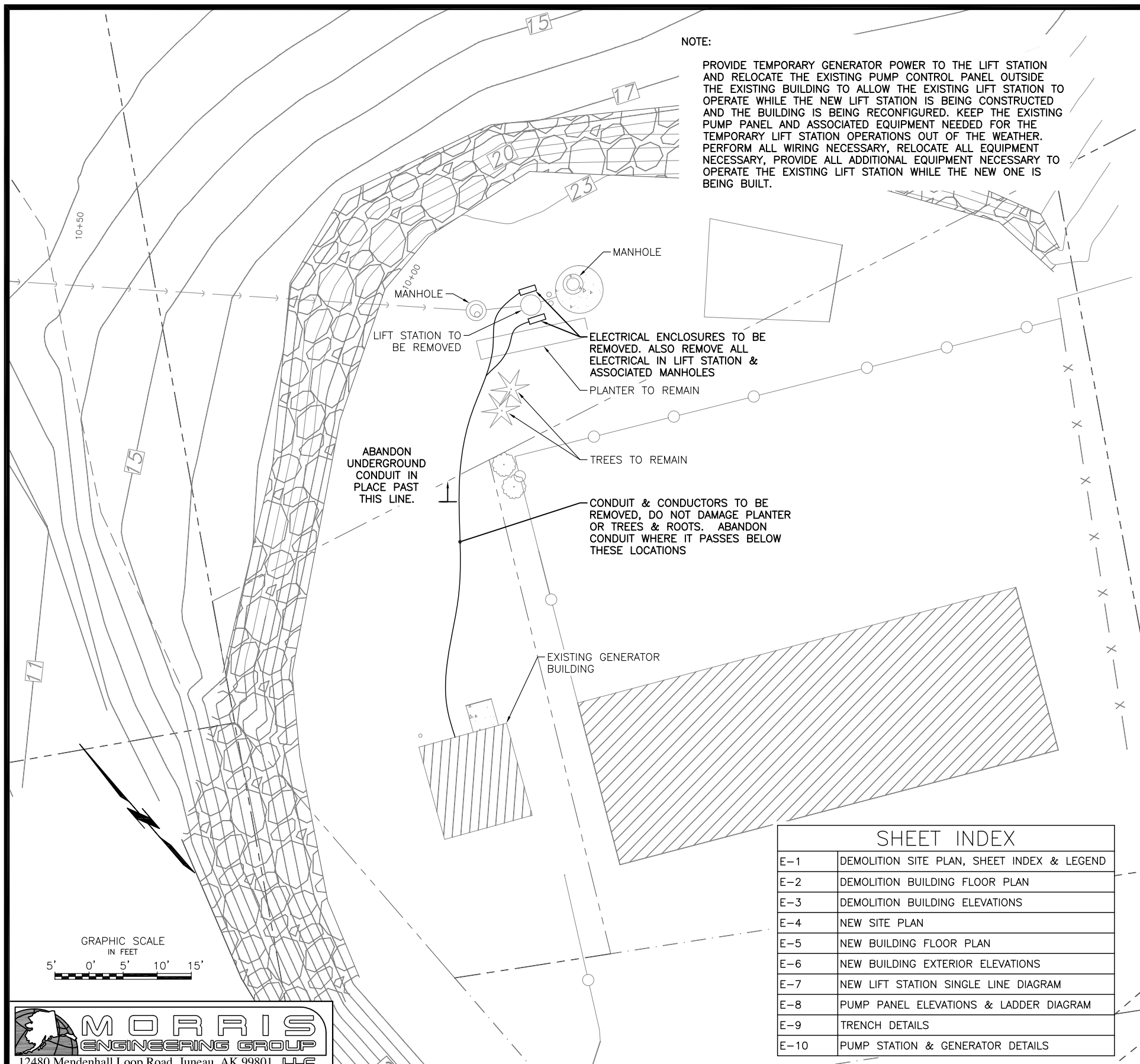
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**DEMOLITION
EXISTING LAWSON CREEK
LIFT STATION**

DRAWING	D-1
SHEET No.	8 of 18



ELECTRICAL LEGEND

	CAPACITOR
	CIRCUIT BREAKER (AMPS/POLES)
	CONDUIT WITH CONDUCTORS. SEE PLANS FOR SIZE AND QUANTITY.
	CONTACTOR
	DUPLEX RECEPTACLE
	ELECTRIC MOTOR
	FLEXIBLE CONDUIT
	FLUORESCENT LUMINAIRE
	FUSE
	FUSED DISCONNECT
	GROUND
	GENERATOR
	HOME RUN (PANEL-CKT)
	HAND OFF AUTO SWITCH
	INDUSTRIAL CONTROL RELAY. NUMBER OR LETTER INDICATES RELAY NUMBER.
	JUNCTION BOX
	MAIN LUG
	METER/MAIN
	NORMALLY CLOSED CONTACT. NUMBER INDICATES RELAY NUMBER.
	NORMALLY OPEN CONTACT. NUMBER INDICATES RELAY NUMBER.
	PUSH TO TEST INDICATING LIGHT. LETTER INDICATES COLOR.
	PUSHBUTTON
	SPECIAL USE RECEPTACLE
	SHUNT TRIP COIL
	SINGLE POLE SWITCH
	TELEPHONE JACK
	THERMOSTAT
	TRANSFORMER
	WALLMOUNT LUMINAIRE

ELECTRICAL LEGEND

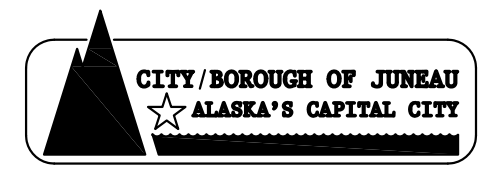
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C/B	CIRCUIT BREAKER
CKT	CIRCUIT
EXTG	EXISTING
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND OFF AUTO
HP	HORSE POWER
J-BOX	JUNCTION BOX
KA	KILOAMPERES
KVA	KILOVOLTAMPERES
KW	KILOWATT
LTG	LIGHTING
MDP	MAIN DISTRIBUTION PANEL
NEC	NATIONAL ELECTRICAL CODE
N.I.D.	NETWORK INTERFACE DEVICE
PF	POWER FACTOR
REC	RECEPTACLE
SS	STAINLESS STEEL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION DEVICE
TYP-#	TYPICAL OF # (TYP-2 = TYPICAL OF 2)
WP	WEATHERPROOF
W/	WITH
2 NO. 8	2 CONDUCTOR NUMBER 8 AWG
3φ, 4W	3 PHASE, 4 WIRE

SHEET INDEX

E-1	DEMOLITION SITE PLAN, SHEET INDEX & LEGEND
E-2	DEMOLITION BUILDING FLOOR PLAN
E-3	DEMOLITION BUILDING ELEVATIONS
E-4	NEW SITE PLAN
E-5	NEW BUILDING FLOOR PLAN
E-6	NEW BUILDING EXTERIOR ELEVATIONS
E-7	NEW LIFT STATION SINGLE LINE DIAGRAM
E-8	PUMP PANEL ELEVATIONS & LADDER DIAGRAM
E-9	TRENCH DETAILS
E-10	PUMP STATION & GENERATOR DETAILS



SCALE	GRAPHIC		
DESIGNED	MGM		
DRAWN	EJV		
CHECKED	MGM		
DATE	FEB 2013		
REV	DATE	BY	DESCRIPTION



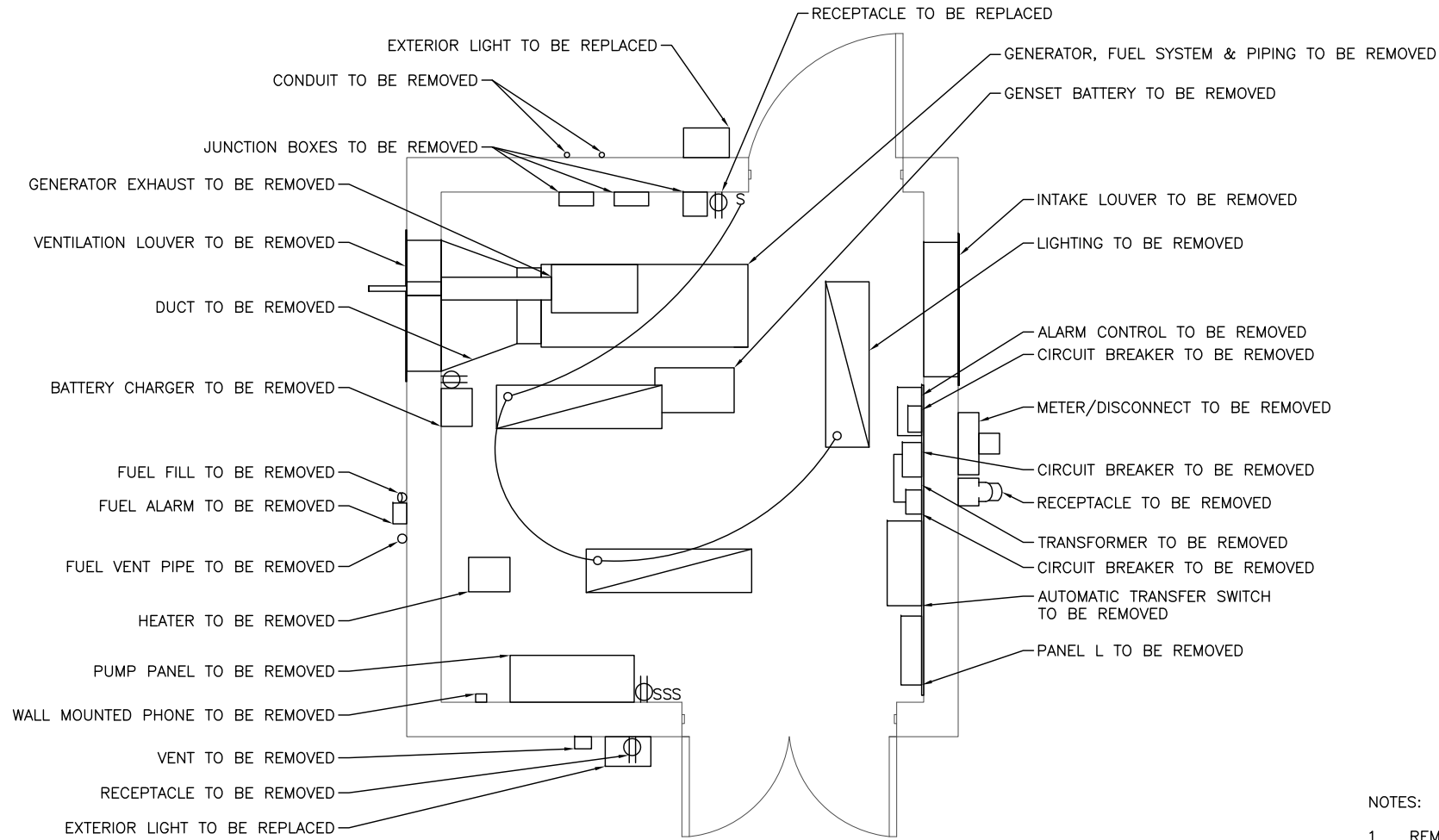
CITY AND BOROUGH OF JUNEAU
 LAWSON CREEK
 LIFT STATION
 CONTRACT NO. E13-243



DEMOLITION SITE PLAN
 SHEET INDEX & LEGEND

NOTES:

1. REMOVE SERVICE, MAIN C/B, PUMP CONTROL PANEL, CONDUIT AND CABLES TO PUMPS IN WETWELL, GENERATOR AND ASSOCIATED EQUIPMENT, FUEL SYSTEM AND PIPING, EXHAUST SYSTEM, VENTILATION LOUVERS WITH OPERATORS, BATTERY, BATTERY CHARGER, STANDBY GENSET RECEPTACLE AND C/B, LIGHTS AND CONVENIENCE RECEPTACLES AND ALL OTHER EQUIPMENT EXCEPT BUILDING PANEL. REMOVE ALL CONDUIT AND CONDUCTORS ASSOCIATED WITH EQUIPMENT TO BE REMOVED. DELIVER ANY EQUIPMENT THAT OWNER REQUESTS TO THE MENDENHALL TREATMENT PLANT SHOP UNDAMAGED.
2. FILL ALL OPENINGS IN WALL WITH CMU BLOCK AFTER EQUIPMENT IS REMOVED. PATCH OPENINGS SMALLER THAN 3" DIAMETER WITH NON-SHRINKING GROUT. SEAL BLOCK AND PAINT TO MATCH.
3. SEE SHEET E-1 FOR WORK OUTSIDE THIS AREA.

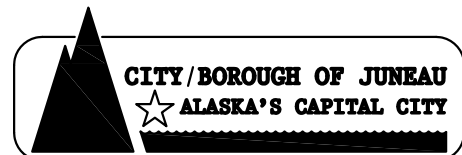


EXTG PANEL L		SIZE	VOLTS, PHASE					MOUNTING	MAIN	LOCATION
EXTG CONFIGURATION		225A	120/208V, 3 ϕ , 4W					SURFACE	50A MAIN	LIFT STATION
CKT NO.	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO.
			CKT	A ϕ	B ϕ	C ϕ	CKT			
1	EXTG	20/1					20/1	EXTG	2	
3	EXTG	20/1					20/1	EXTG	4	
5	SPARE	20/1					20/1	EXTG	6	
7	SPARE *	50/3					20/1	EXTG	8	
9	---	---						SPACE	10	
11	---	---						SPACE	12	
13							90/3	PUMP PANEL *	14	
15							---	---	16	
17							---	---	18	
19									20	
21									22	
23									24	

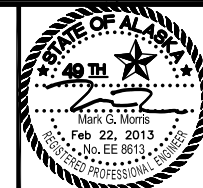
NOTES:

1. REMOVE CIRCUITING FOR EQUIPMENT TO BE REMOVED. RELOCATE EXISTING CIRCUITING TO REMAIN PER PANEL SCHEDULE ON SHEET E-5.
- * CIRCUIT BREAKERS TO BE REMOVED

GENERATOR BLDG DEMOLITION FLOOR PLAN



CITY AND BOROUGH OF JUNEAU
LAWSON CREEK
LIFT STATION
CONTRACT NO. E13-243



CD Carson Dorn Inc.
712 WEST 12TH STREET
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(907) 586-4447

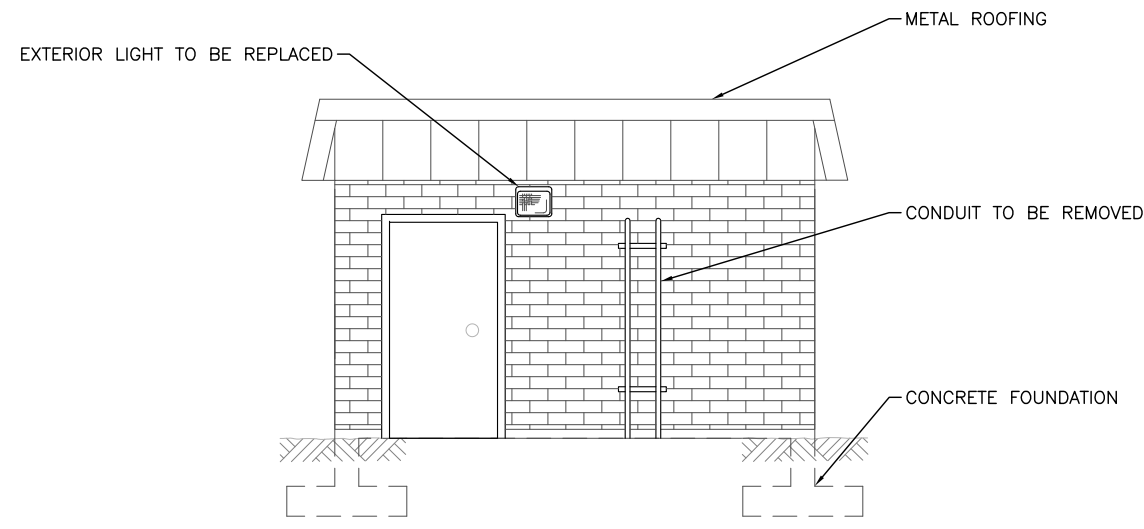
DEMOLITION BUILDING FLOOR PLAN

DRAWING
E-2

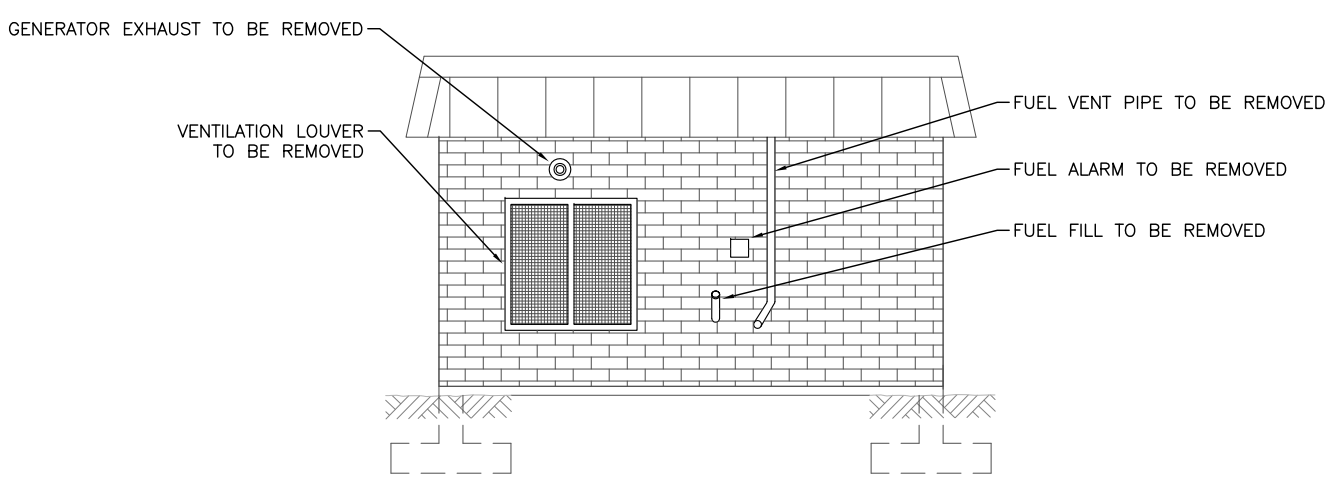
SHEET No.
10 of 18

REV	DATE	BY	DESCRIPTION

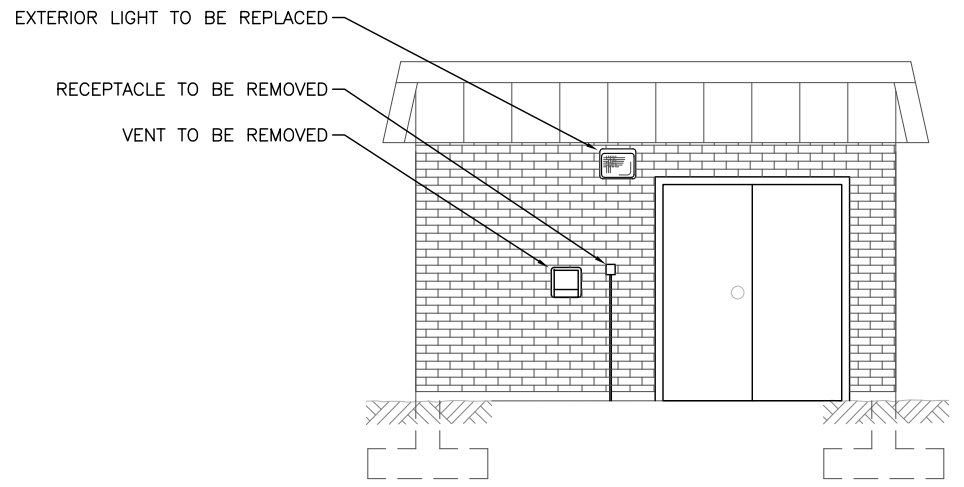
SCALE GRAPHIC
DESIGNED MGM
DRAWN EJW
CHECKED MGM
DATE FEB 2013



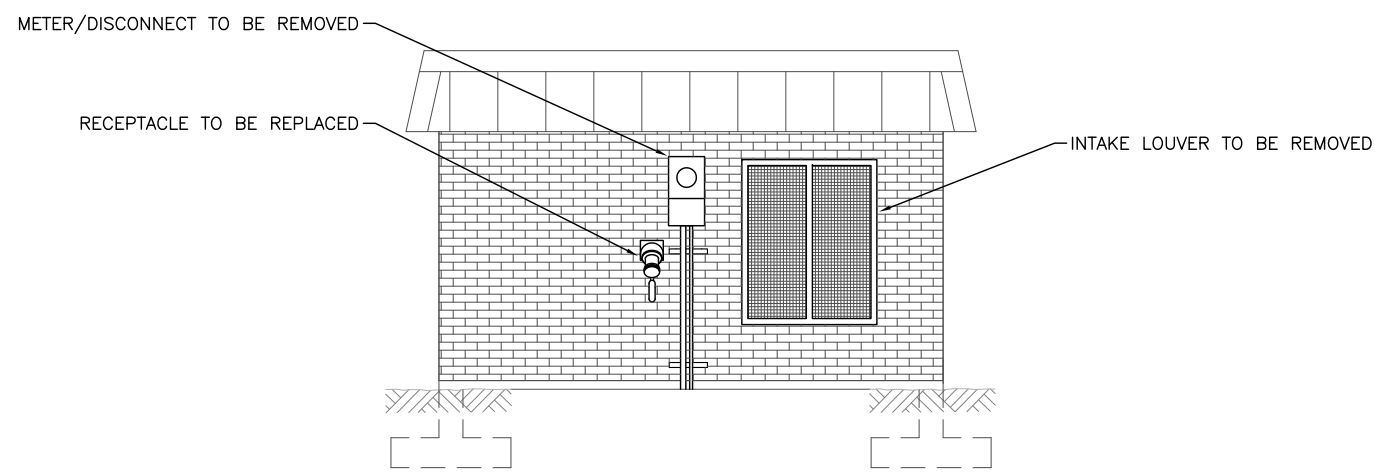
**GENERATOR BLDG -
NORTH ELEVATION**



**GENERATOR BLDG -
WEST ELEVATION**

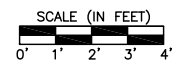


**GENERATOR BLDG -
SOUTH ELEVATION**



**GENERATOR BLDG -
EAST ELEVATION**

GENERATOR BUILDING DEMOLITION ELEVATIONS



MORRIS
ENGINEERING GROUP
12480 Mendenhall Loop Road, Juneau, AK 99801 LLC

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	MGM
DRAWN	EJV
CHECKED	MGM
DATE	FEB 2013

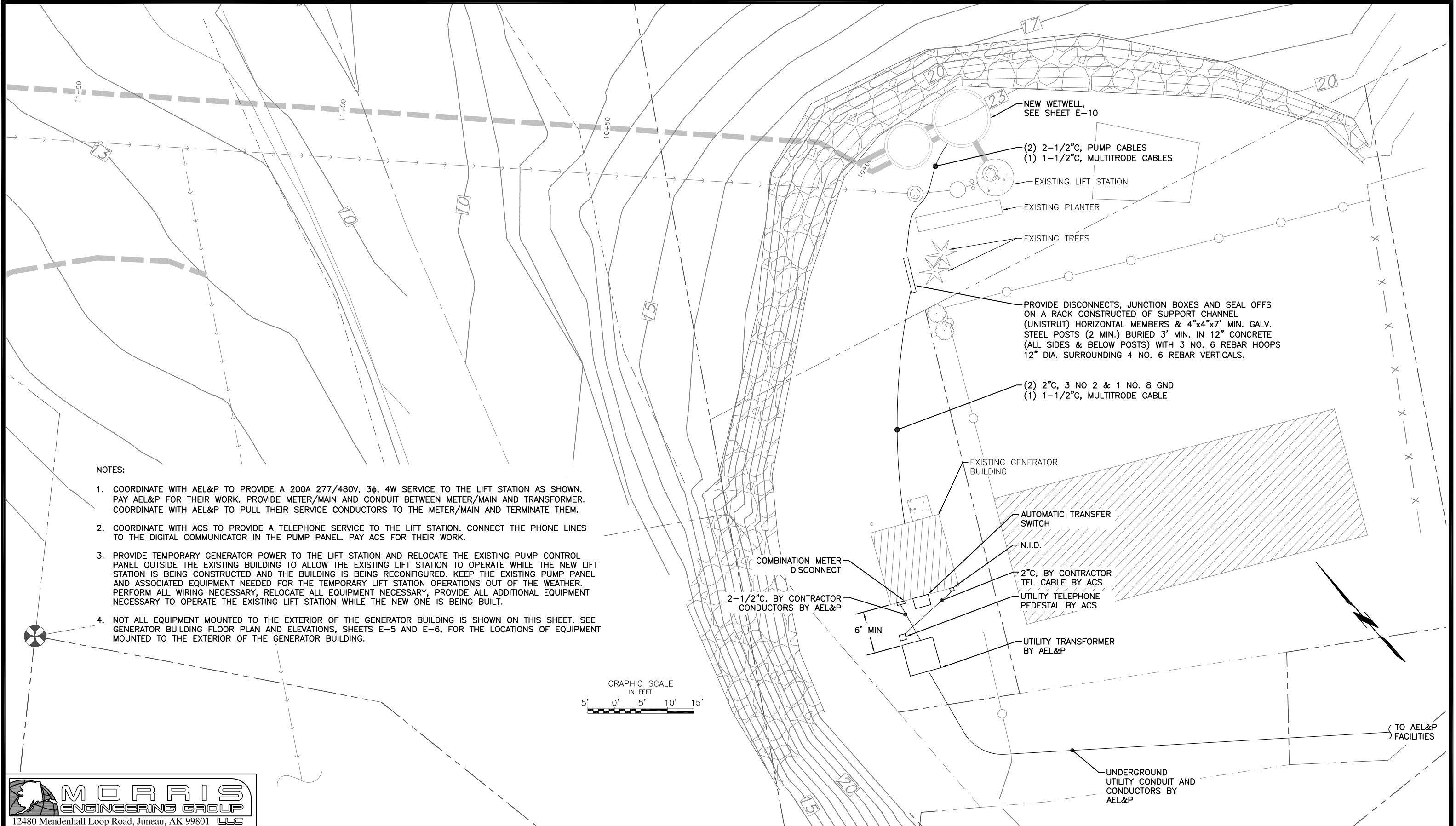
CITY/BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

CITY AND BOROUGH OF JUNEAU
LAWSON CREEK
LIFT STATION
CONTRACT NO. E13-243

CD Carson Dorn Inc.
712 WEST 12TH STREET
JUNEAU, ALASKA 99801
(907) 586-4447

**DEMOLITION BUILDING
ELEVATIONS**

DRAWING
E-3
SHEET No.
11 of 18



NOTES:

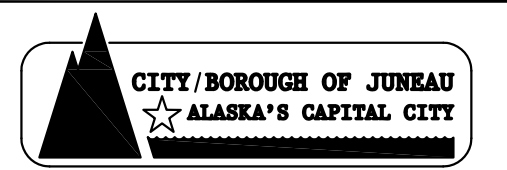
1. COORDINATE WITH AEL&P TO PROVIDE A 200A 277/480V, 3 ϕ , 4W SERVICE TO THE LIFT STATION AS SHOWN. PAY AEL&P FOR THEIR WORK. PROVIDE METER/MAIN AND CONDUIT BETWEEN METER/MAIN AND TRANSFORMER. COORDINATE WITH AEL&P TO PULL THEIR SERVICE CONDUCTORS TO THE METER/MAIN AND TERMINATE THEM.
2. COORDINATE WITH ACS TO PROVIDE A TELEPHONE SERVICE TO THE LIFT STATION. CONNECT THE PHONE LINES TO THE DIGITAL COMMUNICATOR IN THE PUMP PANEL. PAY ACS FOR THEIR WORK.
3. PROVIDE TEMPORARY GENERATOR POWER TO THE LIFT STATION AND RELOCATE THE EXISTING PUMP CONTROL PANEL OUTSIDE THE EXISTING BUILDING TO ALLOW THE EXISTING LIFT STATION TO OPERATE WHILE THE NEW LIFT STATION IS BEING CONSTRUCTED AND THE BUILDING IS BEING RECONFIGURED. KEEP THE EXISTING PUMP PANEL AND ASSOCIATED EQUIPMENT NEEDED FOR THE TEMPORARY LIFT STATION OPERATIONS OUT OF THE WEATHER. PERFORM ALL WIRING NECESSARY, RELOCATE ALL EQUIPMENT NECESSARY, PROVIDE ALL ADDITIONAL EQUIPMENT NECESSARY TO OPERATE THE EXISTING LIFT STATION WHILE THE NEW ONE IS BEING BUILT.
4. NOT ALL EQUIPMENT MOUNTED TO THE EXTERIOR OF THE GENERATOR BUILDING IS SHOWN ON THIS SHEET. SEE GENERATOR BUILDING FLOOR PLAN AND ELEVATIONS, SHEETS E-5 AND E-6, FOR THE LOCATIONS OF EQUIPMENT MOUNTED TO THE EXTERIOR OF THE GENERATOR BUILDING.



MORRIS ENGINEERING GROUP
 12480 Mendenhall Loop Road, Juneau, AK 99801

REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	MGM
DRAWN	EJV
CHECKED	MGM
DATE	FEB 2013



CITY AND BOROUGH OF JUNEAU
LAWSON CREEK LIFT STATION
 CONTRACT NO. E13-243



Carson Dorn Inc.
 712 WEST 12TH STREET
 JUNEAU, ALASKA 99801
 (907) 586-4447

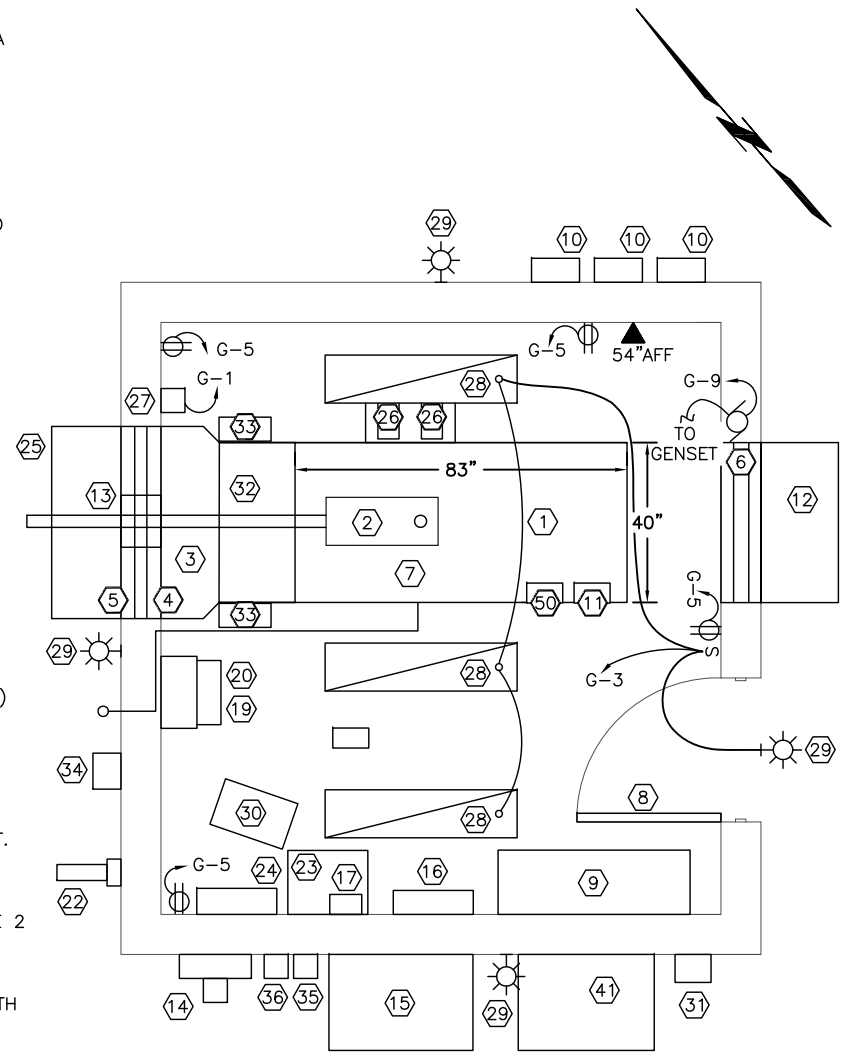
NEW SITE PLAN
 SHEET No. **12 of 18**

DRAWING **E-4**

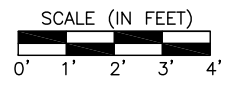
EQUIPMENT SCHEDULE

- ① GENERATOR: 60 KW AT 0.8PF, 277/480V, 3φ, 4 WIRE, TIER 3. PROVIDE WITH 40 KW AUTOMATIC LOAD BANK W/ 5KW LOAD STEPS. PROVIDE THE GENERATOR WITH THREE CUSTOMER CONFIGURABLE RELAYS TO CONTROL THE LOAD BANK AFTER THE GENERATOR HAS RUN FOR 3 MINUTES AND DURING THE COOL DOWN CYCLE. MOUNT LOAD BANK CIRCUIT BREAKER NEXT TO GENERATOR CIRCUIT BREAKER ON THE SIDE OF THE GENERATOR. PROGRAM THE LOAD BANK TO OPERATE WHENEVER GENERATOR IS RUNNING EXCEPT DURING COOL DOWN. RUN CONTROL CONDUCTORS TO GENERATOR RELAYS TO DUMP LOAD BANK DURING COOL DOWN. PROVIDE CTS IN AUTOMATIC TRANSFER SWITCH (ATS) AND ALL NECESSARY CONTROL WIRING TO ATS AND GENERATOR TO START THE LOAD BANK AUTOMATICALLY WHEN THE GENERATOR HAS BEEN RUNNING FOR 3 MINUTES. PROVIDE AUTOMATIC LOAD LEVELING TO MAINTAIN A 35 KW LOAD ON THE GENERATOR WHEN THE LOAD BANK IS ON. DISCONNECT THE LOAD BANK FROM THE GENERATOR DURING THE GENERATOR COOL DOWN. PROVIDE 15 MINUTES MINIMUM OF GENERATOR COOL DOWN INCLUDING COOL DOWN OF LOAD BANK ELEMENTS. PROVIDE ALL CONDUIT, WIRING, AND PROGRAMMING REQUIRED. MOUNT ON (4 MIN) ISOLATION PADS. BOLT TO PAD WITH EARTHQUAKE ANGLE STOPS. CUMMINS GENSET (FOOTPRINT IS 40"W X 83"L) DSFAD SERIES.
- ② GENSET SILENCER AND EXHAUST PIPE. SIZE PIPE AND SILENCER PER GENSET MANUFACTURER'S REQUIREMENTS. PROVIDE RESIDENTIAL GRADE SILENCER. SEE DETAIL SHEET E-10.
- ③ EXHAUST COOLING AIR DUCT. MOUNT ONE END TO ENGINE RADIATOR. MOUNT THE OTHER END TO THE BACKDRAFT DAMPER AND FIXED LOUVER.
- ④ BACKDRAFT EXHAUST DAMPER. 48"Hx48"W. MOUNT BASE AT 30". SEE DETAIL SHEET E-10. PROVIDE EXTRUDED ALUMINUM INSULATED BLADES IN AN ALUMINUM FRAME. THE DAMPER SHALL HAVE A MINIMUM R VALUE OF 2.25. TAMCO SERIES 8000. BLADE TYPE PB.
- ⑤ FIXED BLADE EXHAUST LOUVER. 48"Hx48"W. TAMCO SERIES 3000.
- ⑥ MOTORIZED INTAKE LOUVER 40"Hx40"W. PROVIDE WITH EXTRUDED ALUMINUM INSULATED BLADES IN AN ALUMINUM FRAME. THE LOUVER SHALL HAVE A MINIMUM R VALUE OF 2.25. TAMCO SERIES 9000 WITH SEVERE COLD OPTION. THE LOUVER SEALS SHALL NOT STICK DURING FREEZING CONDITIONS. PROVIDE WITH MOTORIZED ACTUATOR. PROVIDE A 120V MOTOR TO OPERATE THE LOUVER. THE LOUVER SHALL BE SPRING LOADED TO BE OPENED WITH LOSS OF POWER. PROVIDE A NORMALLY CLOSED CONTACT AND INTERPOSING RELAY IF NECESSARY TO POWER THE LOUVER CLOSED WHEN THE GENERATOR IS NOT RUNNING. PROVIDE A NORMALLY CLOSED CONTACT IN THE GENERATOR CONTROL PANEL.
- ⑦ SUBBASE FUEL TANK WITH SPILL CONTAINMENT AND DRAIN VALVE. (SIZE FOR 24 HOURS AT FULL LOAD) PROVIDE WITH TANK QUANTITY INDICATOR, LOW FUEL ALARM CONTACTS, AND VENT PIPING. VENT TANK TO OUTSIDE AT 8' AFG. USE BLACK IRON PIPE FOR VENT PIPING. SIZE PER MANUFACTURER RECOMMENDATIONS. PAINT WITH RUST-PROOF PAINT. ROUTE ACROSS FLOOR ON UNISTRUT. FUEL TANK SHALL BE MANUFACTURED BY GENSET MANUFACTURER FOR THE MODEL OF GENSET PROVIDED.
- ⑧ FIBERGLASS SOLID CORE INSULATED DOOR WITH FIBERGLASS FRAME AND STAINLESS STEEL THRESHOLD. PROVIDE STAINLESS STEEL HEADER. CUT OPENING IN BUILDING AS REQUIRED TO INSTALL DOOR. DOOR HARDWARE SHALL BE SCHLAGE STAINLESS STEEL COMMERCIAL RATING. SEAL AND INSULATE AROUND DOOR FRAME.
- ⑨ PUMP CONTROL PANEL. MOUNT TOP AT 72" AFF. PROVIDE WIRING AND EQUIPMENT TO ALLOW (2) 30 HP PUMPS TO BE POWERED AT A FUTURE DATE. CURRENTLY, (2) 15 HP PUMPS WILL BE POWERED. PROVIDE NO. 2 AWG ON PUMP CIRCUITS AS SHOWN.
- ⑩ STAINLESS STEEL NEMA 4X JUNCTION BOX. 12" X 12" X 6" MIN. SIZE AS REQUIRED. SPLICE CABLES ON POWER DISTRIBUTION BLOCKS IN JUNCTION BOX SQUARE D CLASS 9080 TYPE LB, WITH CLEAR COVERS. LABEL COVERS FOR EACH PUMP AND MULTITRODE CABLES WITH PREPRINTED LABELS.
- ⑪ LOAD BANK CIRCUIT BREAKER. MOLDED CASE CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 60 AMPS, 3 POLE AT 480V. COORDINATE SIZE WITH LOAD BANK MANUFACTURER. MOUNT ON GENSET NEXT TO GENSET MAIN CIRCUIT BREAKER.
- ⑫ INTAKE AIR SHROUD WITH BIRD SCREEN. SEE DETAIL SHEET E-10.
- ⑬ EXHAUST THIMBLE. SEE DETAIL SHEET E-10.
- ⑭ COMBINATION METER DISCONNECT, MOUNT TOP AT 72" AFG.
- ⑮ AUTOMATIC TRANSFER SWITCH, MOUNT TOP AT 72" AFG, 225 AMP ONAN BTPC SERIES.

- ⑯ PANEL MDP, MOUNT TOP AT 72" AFG, SQUARE D NF SERIES. 277/480V, 3φ, 4W, 250A, 30 CKT W/ 200A MAIN.
- ⑰ TRANSIENT VOLTAGE SURGE SUPPRESSION DEVICE (TVSS). MOUNT TOP AT 60" AFF. 80KA SURGE CURRENT (8x20ms) PER PHASE, PROTECTION MODES: L-N, L-L, N-G, L-G. LIEBERT AII277Y111RKE. PROVIDE LED INDICATORS AND ALARM CONTROLS.
- ⑱ NOT USED
- ⑲ GENERATOR SELECTOR SWITCH. MOUNT TOP AT 72" AFF. DOUBLE THROW, 200A, 3 POLE W/ NEUTRAL AND GROUND BUSES.
- ⑳ PORTABLE GENERATOR CIRCUIT BREAKER. MOUNT AT 48" AFF. MOLDED CASE CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 200 AMPS, 3 POLE AT 480V. SQUARE D JDL36200 CIRCUIT BREAKER IN J250DS ENCLOSURE OR EQUAL.
- ㉑ NOT USED
- ㉒ STYLE 2, PORTABLE GENERATOR RECEPTACLE. CROUSE HINDS AREA204226S22 WITH BACK BOX, ANGLE ADAPTER, AND REVERSE SERVICE INSULATORS. MOUNT AT 48" AFG.
- ㉓ STEP DOWN TRANSFORMER. 480VΔ:120/208VY, 3φ, 4W, 15 KVA. FLOOR MOUNT WITH COPPER WINDINGS. SQUARE D EE 15T3H.
- ㉔ PANEL G. MOUNT TOP AT 72" AFF. SQUARE D NQOD SERIES. 120/280V, 3φ, 4W, 100A, 18 CKT MIN.
- ㉕ EXHAUST AIR SHROUD, SEE SHEET E-10.
- ㉖ GENSET BATTERY. 12V. PROVIDE SIZE TO CRANK ENGINE FOR 30 MINUTES CONTINUOUSLY.
- ㉗ 12V, 10A, AUTOMATIC BATTERY CHARGER.
- ㉘ FLUORESCENT WRAPAROUND LUMINAIRE. LITHONIA LB 332120GEB. PROVIDE WITH ELECTRONIC BALLAST, (3) 32W T8 LAMPS, CRI 80 MIN., 3500K. PROVIDE ONE LUMINAIRE WITH EMERGENCY BALLAST.
- ㉙ WALLMOUNT EXTERIOR LUMINAIRE, 35W HIGH PRESSURE SODIUM WITH DEEP SHIELD REFLECTOR. RUUD E8503-1HP. PROVIDE WITH PHOTOCCELL AND HIGH POWER FACTOR BALLAST. MOUNT AT 8' AFG. POLYCARBONATE LENS.
- ㉚ CEILING MOUNT UNIT HEATER, 480V, 3φ, 3.7 KW, BUILT-IN TWO POLE THERMOSTAT WITH THERMAL CUTOUT. AIR FLOW CAN BE ADJUSTED DOWNWARD. QMARK MUH SERIES WITH OPTIONS MT-2 AND MMB-5.
- ㉛ 2 LINE TELEPHONE N.I.D. BY UTILITY (ACS). ROUTE BOTH LINES TO THE DIGITAL COMMUNICATOR IN THE PUMP CONTROL PANEL. ROUTE ONE LINE FROM THE COMMUNICATOR TO THE TELEPHONE JACK. PROVIDE 2 PAIR CABLE IN 1/2" CONDUIT FOR TELEPHONE WIRING. PROVIDE RJ11 TELEPHONE JACK ON WALL WHERE SHOWN.
- ㉜ RADIATOR MOUNTED 40 KW AUTOMATIC LOAD BANK. PROVIDE WITH AUTOMATIC LOAD LEVELING. PROVIDE WITH 5 KW STEPS. SIMPLEX LBD-40A OR EQUAL. MOUNT IN EXHAUST DUCT. PROGRAM TO MAINTAIN 35KW ON GENERATOR. DISCONNECT LOAD DURING GENERATOR COOL DOWN CYCLE.
- ㉝ AUTOMATIC LOAD BANK CONTROL PANEL. SIMPLEX LBD SERIES. COORDINATE WITH MANUFACTURER TO PROVIDE ONE PANEL ON SIDE SHOWN FOR ADEQUATE WORKING CLEARANCE.
- ㉞ GENERATOR EMERGENCY STOP. ACTIVATES GENSET MAIN C/B SHUNT TRIP. MOUNT AT 48" AFG.
- ㉟ REMOTE GENERATOR ALARM STROBE LIGHT AT 7' AFG. PROVIDE POWER TO STROBE LIGHT FROM PANEL G WITH AN INTERPOSING RELAY IN A NEMA 1 ENCLOSURE ON WALL. CONNECT TO GENERATOR CONTROL PANEL TO ENERGIZE LIGHT WITH GENERATOR ALARM.
- ㊱ PUMP PANEL ALARM STROBE LIGHT. MOUNT AT 7' AFG.



GENERATOR BLDG FLOOR PLAN



- NOTES:
1. FOR EQUIPMENT NUMBERS 37-51, SEE SINGLE LINE DIAGRAM, SHEET E-7.
 2. ALL EQUIPMENT SHALL BE SURFACE MOUNTED. ALL CONDUIT SHALL BE SURFACE MOUNTED.
 3. THE GENERATOR BUILDING LAYOUT IS VERY TIGHT. ALL NEC CLEARANCE REQUIREMENTS ARE MET WITH THE EQUIPMENT SHOWN. IF SUBSTITUTIONS ARE MADE FOR THE EQUIPMENT SHOWN, VERIFY THAT THE NEW EQUIPMENT SIZE WILL ALLOW COMPLIANCE WITH NEC CLEARANCE REQUIREMENTS.

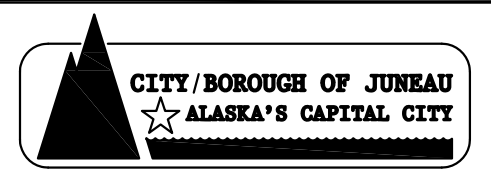
PANEL G		SIZE	VOLTS, PHASE				MOUNTING	MAIN	LOCATION
		100A	120/208V, 3φ, 4W				SURFACE	50A MAIN	LIFT STATION
CKT NO.	DESCRIPTION	C/B SIZE	KVA				C/B SIZE	DESCRIPTION	CKT NO.
			CKT	Aφ	Bφ	Cφ			
1	BATTERY CHARGER	20/1	0.2	0.2		0.0	30/2	SPARE	2
3	LIGHTING		0.4		0.4	0.0			4
5	RECEPTACLES		0.8			0.9	20/1	FUEL TANK & GEN. CONTROLS	6
7	GEN. PANEL LIGHT		0.1	0.2		0.1	20/1	WATER JACKET HEATER	8
9	INTAKE LOUVER		0.1		0.1			SPACE	10
11	SPARE								12
13									14
15									16
17									18
TOTAL CONNECTED LOAD = 1.8 KVA/5 AMPS			0.4	0.5	0.9				

PANEL MDP*		SIZE	VOLTS, PHASE				MOUNTING	MAIN	LOCATION
		250A	277/480V, 3φ, 4W				SURFACE	200A MAIN	LIFT STATION
CKT NO.	DESCRIPTION	C/B SIZE	KVA				C/B SIZE	DESCRIPTION	CKT NO.
			CKT	Aφ	Bφ	Cφ			
1	PANEL G	25/3	0.4	2.4		2.0	150/3	PUMP CONTROL PANEL	2
3	---	---	0.5		2.5	2.0	---	---	4
5	---	---	0.9			2.9	2.0	---	6
7	TVSS	30/3	0.1	1.4		1.3	30/3	HEATER	8
9	---	---	0.1		1.4	1.3	---	---	10
11	---	---	0.1		1.4	1.3	---	---	12
13	SPACE							SPACE	14
15									16
17									18
TOTAL CONNECTED LOAD = 12 KVA/14.4 AMPS			3.8	3.9	4.3				

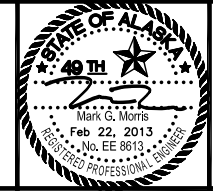
* PANEL MDP IS A 30 CIRCUIT PANEL (ONLY 18 SHOWN)



SCALE	GRAPHIC
DESIGNED	MGM
DRAWN	EJV
CHECKED	MGM
DATE	FEB 2013

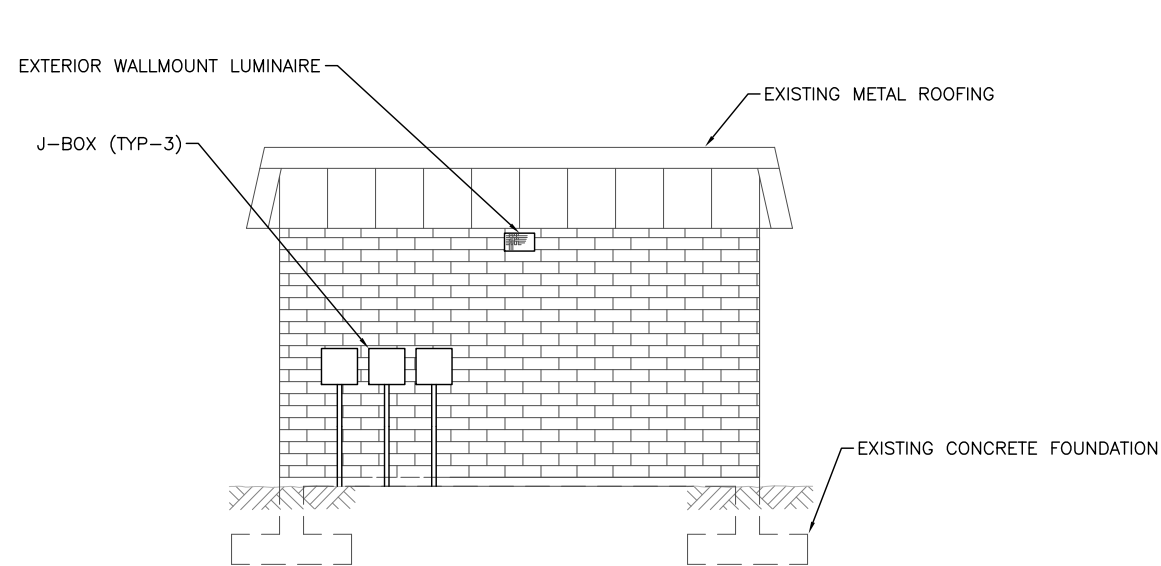


CITY AND BOROUGH OF JUNEAU
**LAWSON CREEK
 LIFT STATION**
 CONTRACT NO. E13-243

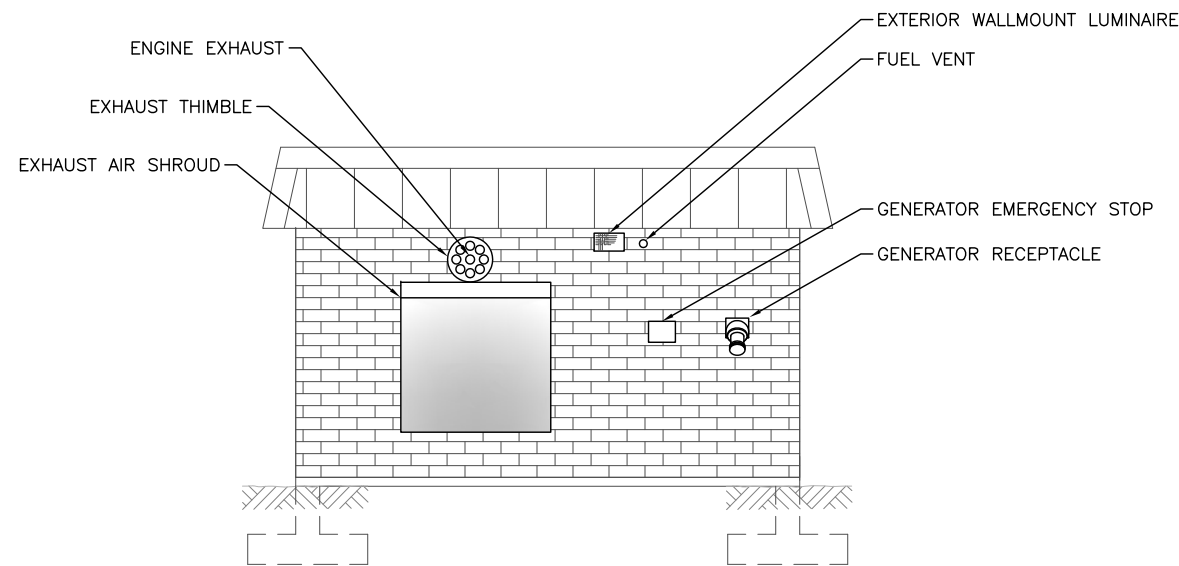


Carson Dorn Inc.
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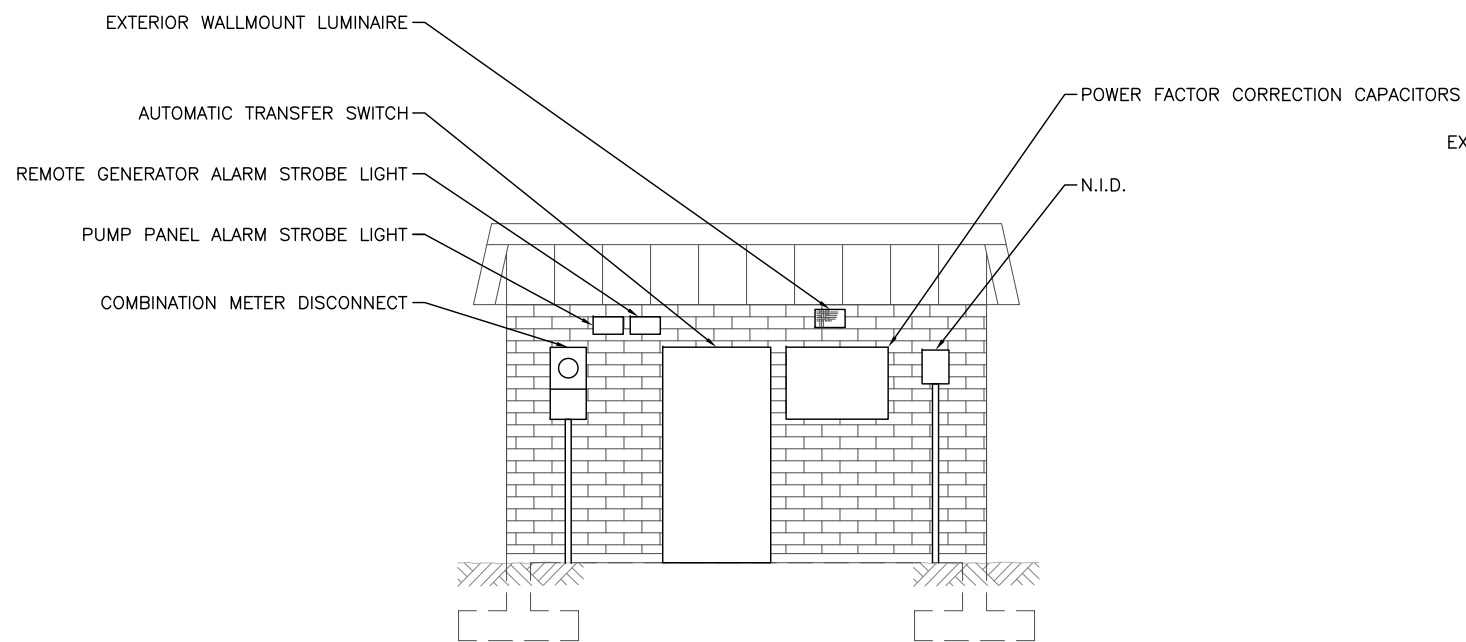
**NEW BUILDING
 FLOOR PLAN**
 DRAWING E-5
 SHEET No. 13 of 18



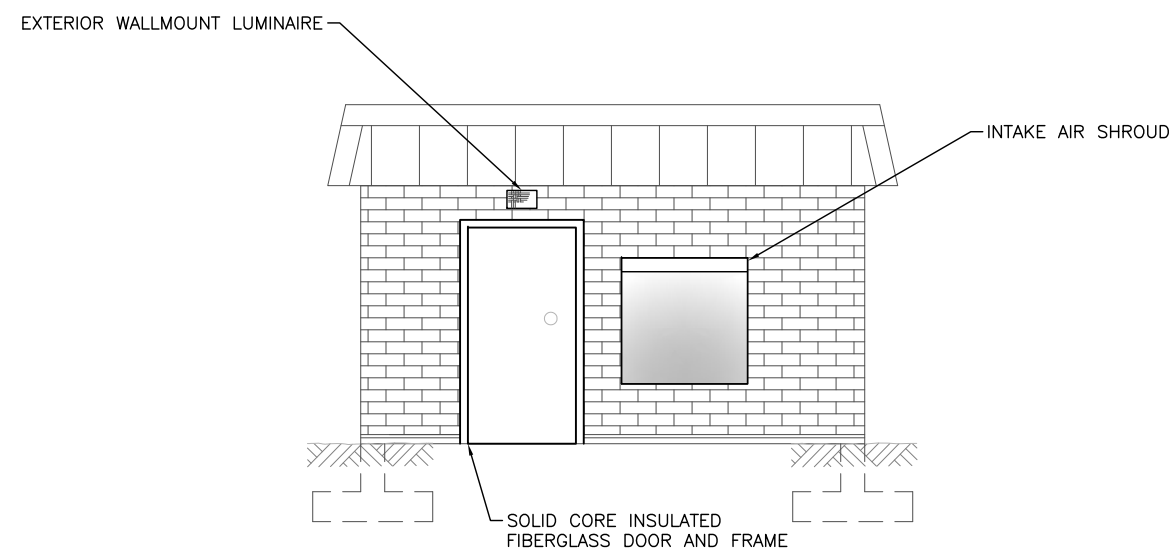
**GENERATOR BLDG -
NORTH ELEVATION**



**GENERATOR BLDG -
WEST ELEVATION**

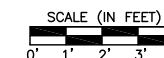


**GENERATOR BLDG -
SOUTH ELEVATION**



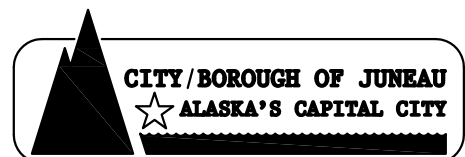
**GENERATOR BLDG -
EAST ELEVATION**

GENERATOR BUILDING ELEVATIONS

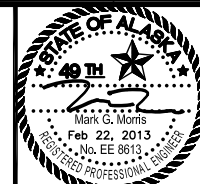


REV	DATE	BY	DESCRIPTION

SCALE	GRAPHIC
DESIGNED	MGM
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CHECKED	MGM
DATE	FEB 2013



CITY AND BOROUGH OF JUNEAU
LAWSON CREEK
LIFT STATION
CONTRACT NO. E13-243



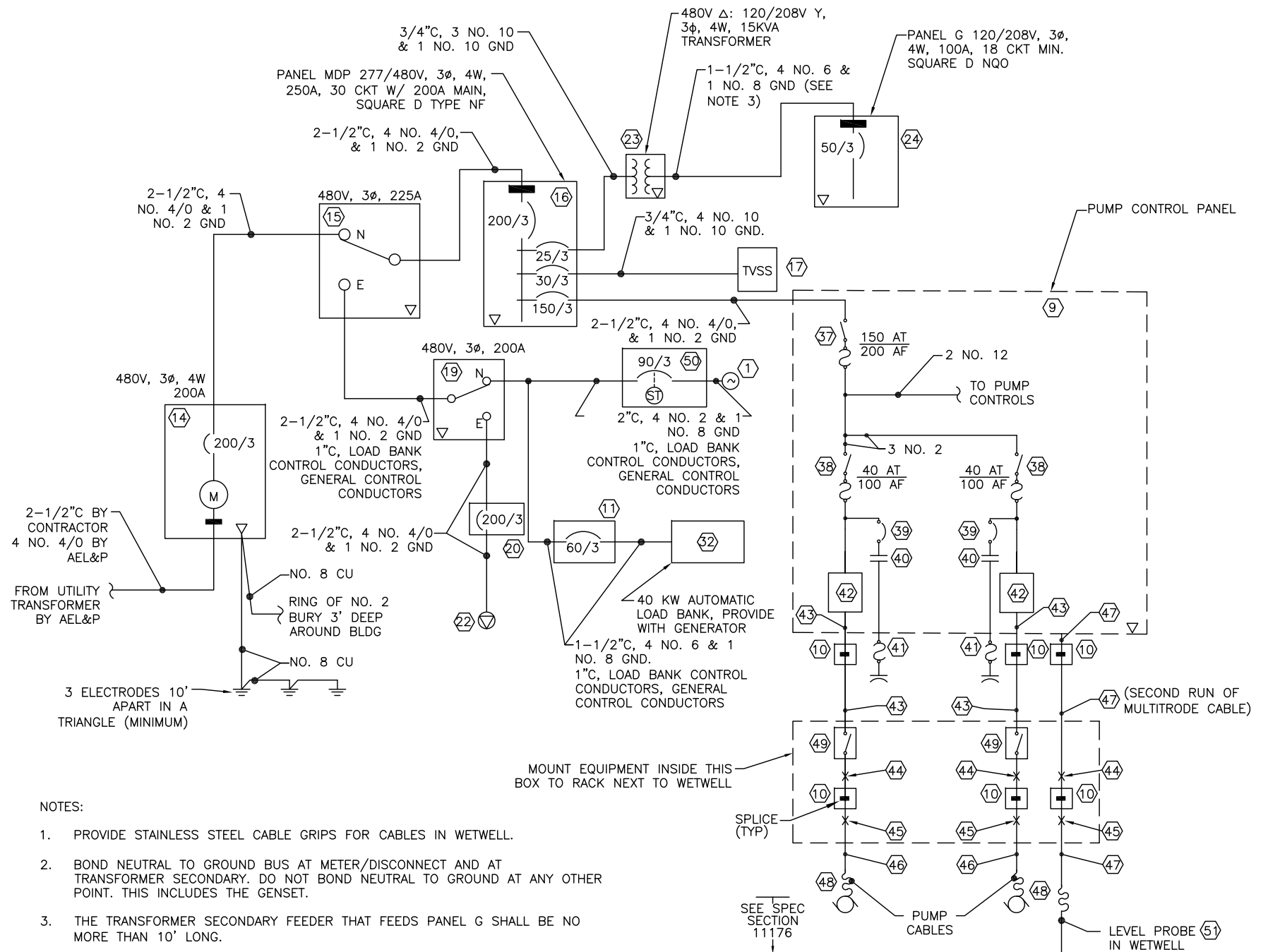
CD Carson Dorn Inc.
712 WEST 12TH STREET
JUNEAU, ALASKA 99801
(907) 586-4447

**NEW BUILDING
EXTERIOR ELEVATIONS**

DRAWING
E-6
SHEET No.
14 of 18

EQUIPMENT SCHEDULE (CONT)

- 37 DISCONNECT: 200A NEMA STYLE DOOR MOUNTED FUSE DISCONNECT SWITCH (6" HANDLE). SQUARE D D10 SERIES OR EQUAL. PROVIDE WITH CLASS RK1 DUAL ELEMENT/TIME DELAY FUSE. BUSSMANN LOWPEAK OR EQUAL.
- 38 DISCONNECT: 100A NEMA STYLE DOOR MOUNTED FUSE DISCONNECT SWITCH (6" HANDLE). SQUARE D D10 SERIES OR EQUAL. PROVIDE WITH CLASS RK1 DUAL ELEMENT/TIME DELAY FUSE. BUSSMANN LOWPEAK OR EQUAL. PROVIDE 100 AMP FRAME FUSE HOLDER WITH FUSE CLIPS TO ALLOW THE 40 AMP FUSE TO BE INSTALLED.
- 39 20 AMP, 3 POLE CIRCUIT BREAKER.
- 40 CAPACITOR CONTACTOR. NEMA SIZE 3, 3 POLE, WITH 120V COIL. SQUARE D CLASS 8502 OR EQUAL.
- 41 POWER FACTOR CORRECTION CAPACITOR W/ FUSES AND FAILED FUSE INDICATORS. 6 KVAR, SQUARE D CLASS 5810, MODEL PFCD4006RF OR EQUAL. PROVIDE IN A NEMA 3R ENCLOSURE. MOUNT TO OUTSIDE OF BUILDING.
- 42 REDUCED VOLTAGE MOTOR STARTER WITH LINE TRANSIENT VOLTAGE PROTECTION MODULE, ISOLATION CONTACTS, AND PUMP CONTROL WITH NEMA 1 ENCLOSURE. PROVIDE WITH DOOR MOUNTED HUMAN INTERFACE MODULE (H.I.M.). ALLEN BRADLEY SMC-FLEX SERIES 150B-F43NBDB-8L-HC3. THIS UNIT IS RATED FOR A FUTURE 30 HP MOTOR. SET OVERLOADS FOR 15 HP MOTOR.
- 43 CONDUIT WITH CABLES (MOTOR FEEDERS). 2" C, 3 NO. 2, AND 1 NO. 8 GND.
- 44 CROUSE HINDS EYS CONDUIT SEAL. THE WETWELL IS A CLASS 1, DIV 1 AREA.
- 45 SPLIT CASE STYLE SEAL OFF. CROUSE HINDS EYSR SERIES. THE WETWELL IS A CLASS 1, DIV 1 AREA.
- 46 2-1/2" C, WITH PUMP CABLE.
- 47 1-1/2" C, WITH MULTITRODE CABLE. PROVIDE A SECOND LENGTH OF MULTITRODE CABLE TO ROUTE BETWEEN THE TWO 12" STAINLESS STEEL JUNCTION BOXES AND BACK TO PUMP CONTROL PANEL.
- 48 SEWAGE LIFT PUMP, 15 HP, 480V, 3φ.
- 49 100A, 3 POLE, 600V, HEAVY DUTY 316L STAINLESS STEEL SAFETY SWITCH. MOUNT ON RACK NEXT TO WETWELL.
- 50 GENSET MAIN CIRCUIT BREAKER WITH SHUNT TRIP MECHANISM: MOLDED CASE CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, 90 AMPS, 3 POLE AT 480V. COORDINATE SIZE WITH MANUFACTURER. ACTIVATE THE SHUNT TRIP WITH A REMOTE MOUNTED, RED MUSHROOM HEAD PUSH BUTTON INSIDE A NEMA 4X ENCLOSURE WITH A HINGED CLEAR COVER AND A PADLOCK HASP. MOUNT THE PUSH BUTTON IN A NEMA 3R JUNCTION BOX INSIDE THE NEMA 4X ENCLOSURE SO THAT THERE IS NO ACCESS TO THE PUSH BUTTON WITHOUT REMOVING A PADLOCK (OWNER SUPPLIED) AND OPENING THE COVER. THE PUSH BUTTON SHALL BE A NEMA 4X, 30 MM, OIL-TIGHT/WATERTIGHT/CORROSION RESISTANT, ALLEN BRADLEY BULLETON 800 SERIES. MOUNT THE PUSH BUTTON ON THE OUTSIDE OF THE BUILDING WHERE SHOWN.
- 51 MULTITRODE 2.5 METER PROBE, 10 SENSOR, 30 METER CORD. PART NO. 2.5/10-30. PROVIDE SECOND CORD TO RUN BETWEEN PUMP PANEL INSIDE BUILDING TO THE JUNCTION BOX ON OUTSIDE OF BUILDING THEN TO JUNCTION BOX ON RACK OR USE CONDUCTORS WITH XHHW INSULATION. SIZE AND QUANTITY AS REQUIRED. COORDINATE WITH MANUFACTURER.



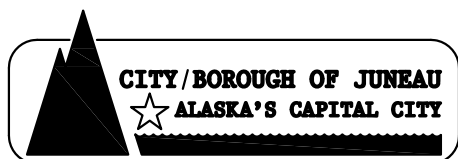
NOTES:

1. PROVIDE STAINLESS STEEL CABLE GRIPS FOR CABLES IN WETWELL.
2. BOND NEUTRAL TO GROUND BUS AT METER/DISCONNECT AND AT TRANSFORMER SECONDARY. DO NOT BOND NEUTRAL TO GROUND AT ANY OTHER POINT. THIS INCLUDES THE GENSET.
3. THE TRANSFORMER SECONDARY FEEDER THAT FEEDS PANEL G SHALL BE NO MORE THAN 10' LONG.
4. SEE EQUIPMENT SCHEDULE ON SHEET E-5 FOR EQUIPMENT NUMBERS 1-36.

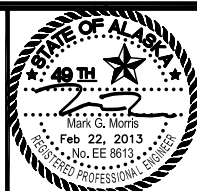
LAWSON CREEK LIFT STATION SINGLE LINE DIAGRAM
 480V, 3φ, 15 HP PUMPS
 NO SCALE



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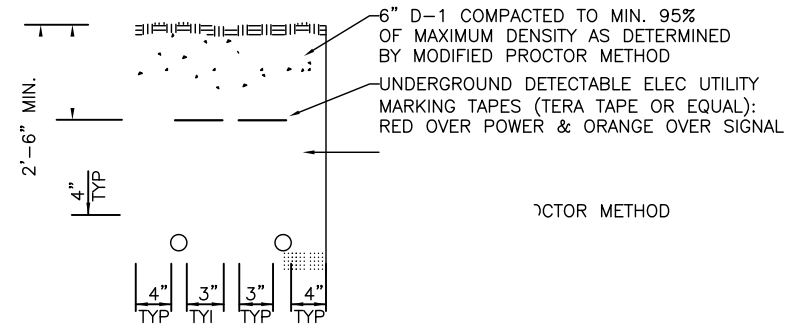
CITY AND BOROUGH OF JUNEAU
LAWSON CREEK LIFT STATION
 CONTRACT NO. E13-243



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 712 WEST 12TH STREET
 JUNEAU, ALASKA 99801
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NEW LIFT STATION SINGLE LINE DIAGRAM

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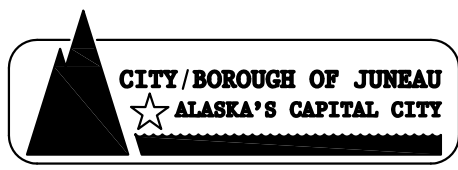
TRENCH DETAILS - NON-PAVED AREAS

NOTES:

1. ALL DIMENSIONS ARE MINIMUM.
2. THE LOCATION OF ALL EXISTING PIPING, CONDUIT, ETC. MAY NOT BE WHERE SHOWN AND MAY NOT BE SHOWN. ALL LOCATIONS THAT ARE SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED. OBTAIN UTILITY LOCATES PRIOR TO DIGGING. DIG WITH CAUTION. AVOID WATER, SEWER, DRAINAGE PIPES AND OTHER CONFLICTS.
3. MAINTAIN 12 INCHES MINIMUM SEPARATION (ALL DIRECTIONS) BETWEEN CONDUITS AND ALL OTHER EXISTING CONDUITS, PIPES, ETC.
4. CUT AND REPLACE EXISTING ASPHALT, CONCRETE, CONCRETE CURB, GUTTER, SIDEWALK, ETC. AS NECESSARY.
5. ALL TRENCHES SHALL BE 18" WIDE MINIMUM COMPACT BACKFILL TO 95%. TOP 6" OF MATERIAL SHALL BE D-1 PER CBJ STANDARDS.
6. POWER UTILITY CONDUITS SHALL BE BURIED AT A MINIMUM OF 3'-6" AND SHALL BE SEPARATED FROM TELEPHONE AND TELEVISION CONDUITS BY 12" MINIMUM. BURY CONDUITS DEEPER WHERE REQUIRED TO AVOID OTHER PIPES AND STRUCTURES.



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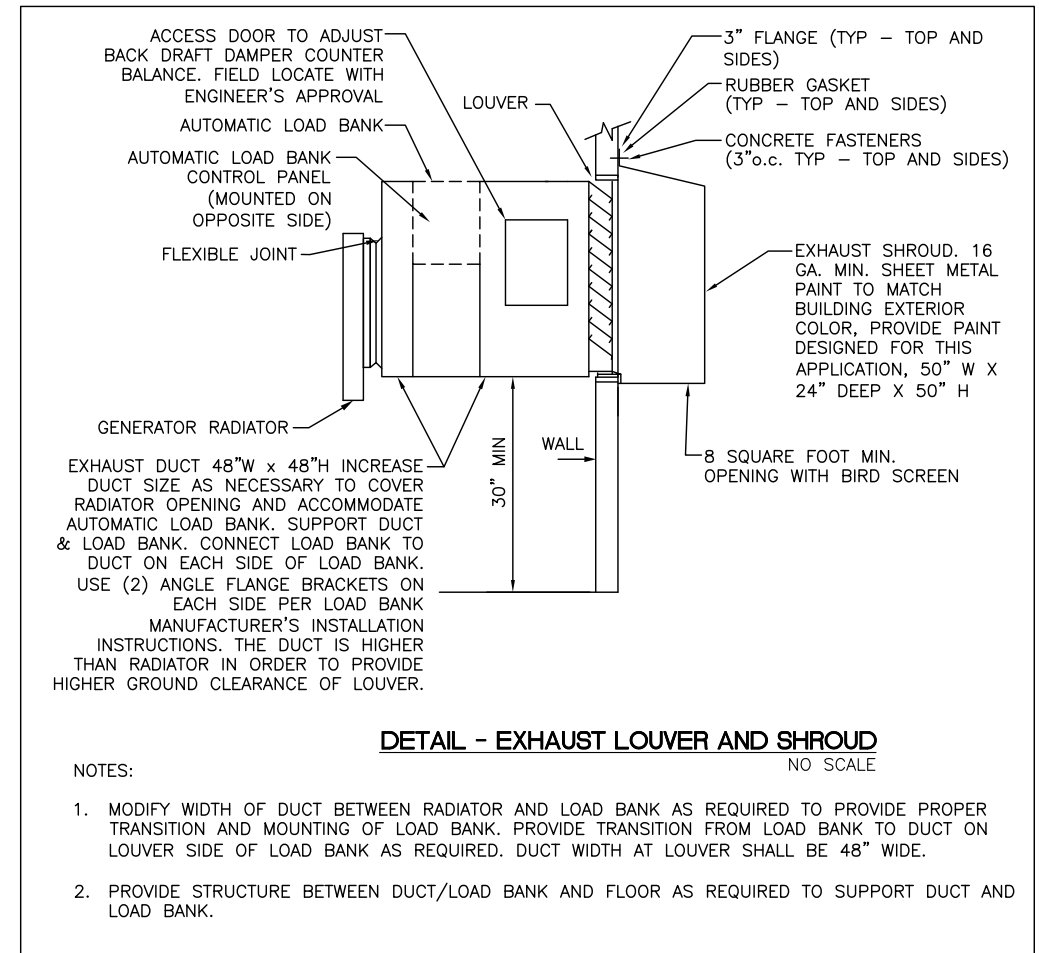
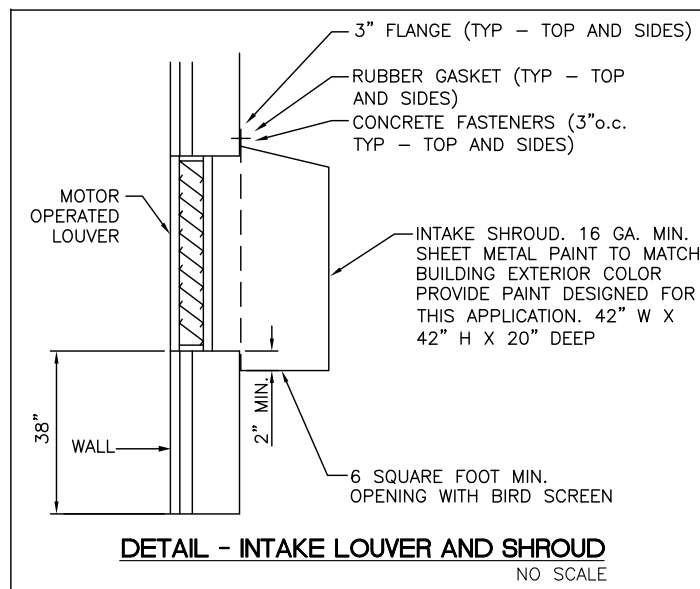
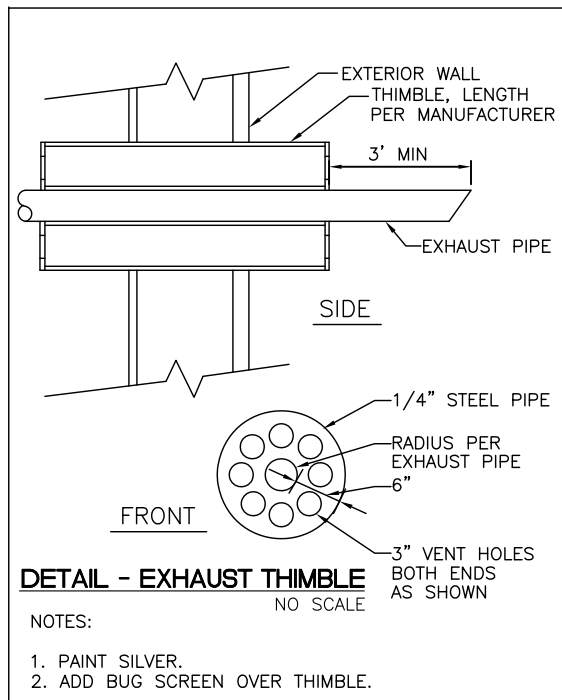
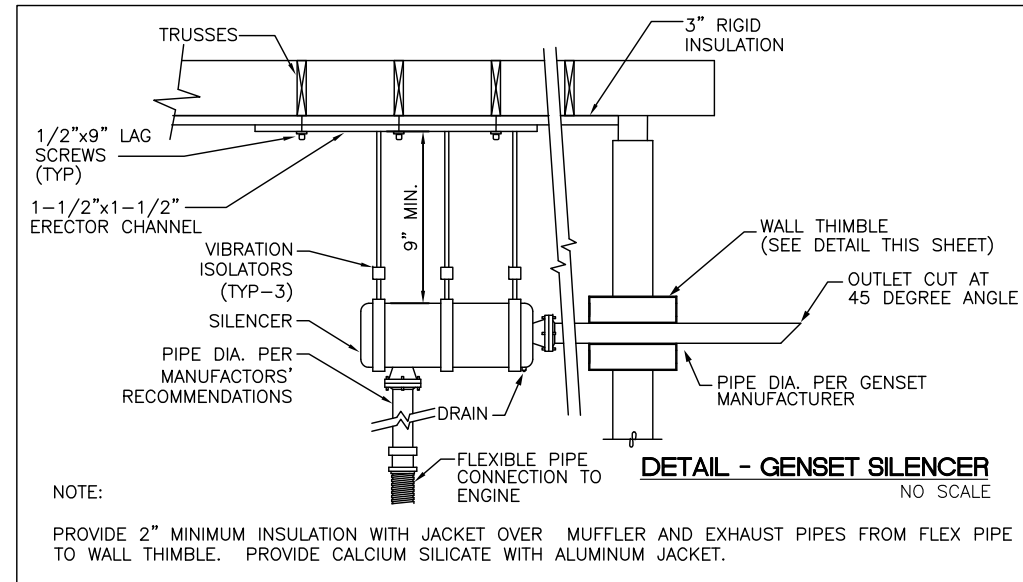
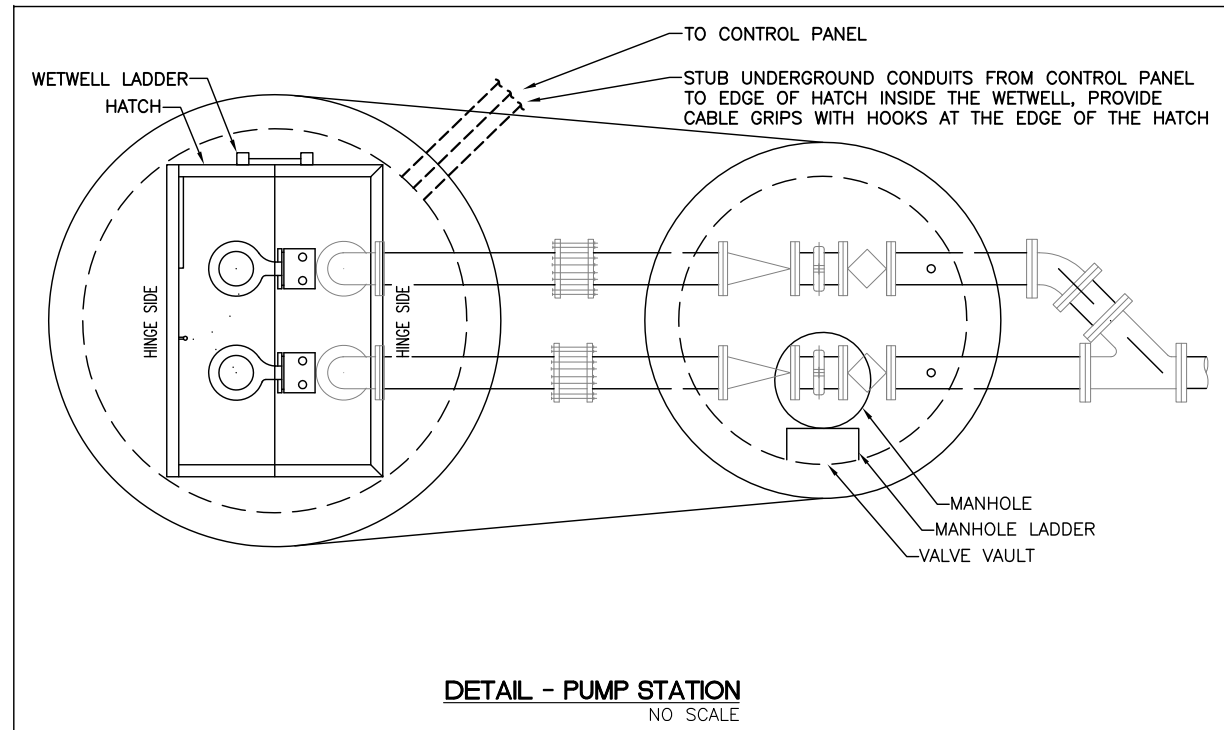
CITY AND BOROUGH OF JUNEAU
**LAWSON CREEK
 LIFT STATION**
 CONTRACT NO. E13-243



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TRENCH DETAILS

DRAWING
E- 9
 SHEET No.
17 of 18



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