GENERAL STRUCTURAL NOTES

GENERAL
THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY. USE DETAIL MARKED "TYPICAL" WHEREVER APPLICABLE. CHANGES, OMISSIONS OR SUBSTITUTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER. REFER TO THE SPECIFICATIONS FOR FURTHER REQUIREMENTS. DO NOT SCALE THE DRAWINGS.

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2018 EDITION OF THE INTERNATIONAL BUILDING CODE.

THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC., IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR, AND HAS NOT BEEN CONSIDERED BY THE ENGINEER OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO ITS COMPLETION. THE CONTRACTOR SHALL PROVIDE THE NECESSARY BRACING TO PROVIDE STABILITY PRIOR TO THE COMPLETION OF THE STRUCTURE.

THE GENERAL NOTES APPLY TO ALL STRUCTURES UNLESS NOTED OTHERWISE (U.N.O.). LOCATION AND SIZE OF ANCHOR BOLTS FOR SPECIFIC EQUIPMENT SHALL BE SPECIFIED BY THE VENDOR. CONTRACTOR SHALL COORDINATE LOCATIONS OF STRUCTURAL OPENINGS, PENETRATIONS AND EMBEDDED ITEMS WITH THE MECHANICAL, ARCHITECTURAL, ELECTRICAL, PLUMBING AND VENTILATION SECTIONS OF THE DRAWINGS AND WITH SUPPLIERS AND SUBCONTRACTORS AS MAY BE REQUIRED.

SPECIAL INSPECTION & TESTING
SPECIAL INSPECTIONS SHALL MEET THE REQUIREMENTS OF IBC CHAPTER 17.
OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS.

FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND ENGINEER. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION; THEN, IF NOT CORRECTED, TO THE BUILDING OFFICIAL AND ENGINEER. SUBMIT A FINAL REPORT STATING THE WORK WAS IN CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF IBC.

SPECIAL INSPECTION REQUIRED:
STEEL: IN ACCORDANCE WITH SECTION 1705.2 AND TABLE 1705.2.3
CONCRETE: IN ACCORDANCE WITH SECTION 1705.3 AND TABLE 1705.3
MASONRY: IN ACCORDANCE WITH SECTION 1705.4
SOIL: IN ACCORDANCE WITH SECTION 1705.6 AND TABLE 1705.6

SHOP DRAWINGS
SHOP DRAWINGS, WHERE REQUIRED, SHALL BE CHECKED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING FOR ENGINEER REVIEW. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW OF DESIGN INTENT, PRIOR TO FABRICATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND COORDINATION OF DIMENSIONS AND DETAILS FOR EACH SUBCONTRACTOR.

DESIGN LOADS
ROOF SNOW LOAD:
GROUND SNOW LOAD,Pg..... 20 PSF

ROOF LIVE LOAD:, Lr..... 20 PSF

WIND DESIGN DATA:
ULTIMATE WIND SPEED (3-SECOND GUST), Vult..... 115 MPH
NOMINAL WIND SPEED, Vasd..... 89 MPH
RISK CATEGORY..... III
WIND EXPOSURE..... C

EARTHQUAKE DESIGN DATA
MAPPED SPECTRAL RESPONSE ACCELERATIONS
Ss..... 1.282 g
S1..... 0.441 g
SITE CLASS..... D
SPECTRAL RESPONSE COEFFICIENT
Sds..... 1.025 g
Sd1..... 0.547 g
SEISMIC IMPORTANCE FACTOR, Ie..... 1.25
RISK CATEGORY..... III
SEISMIC DESIGN CATEGORY..... D

FOUNDATION DATA PER GEOTECHNICAL REPORT BY PanGEO, INC., DATED JULY 14, 2020.

ALLOWABLE BEARING PRESSURE:.....2000 PSF

ABOVE ARE ASSUMED PER DATA PROVIDED,
CONTRACTOR MUST VERIFY IN FIELD.

EXTEND ALL EXTERIOR FOOTINGS 2'-0" MINIMUM BELOW FINISHED GRADE. UNO (UNLESS NOTED OTHERWISE), BOTTOM OF ALL FOOTINGS TO BEAR ON A MINIMUM OF 18" COMPACTED STRUCTURAL FILL EXTENDING A MINIMUM OF 18" HORIZONTALLY BEYOND THE EDGE OF THE FOOTINGS OVER NATIVE, INORGANIC, UNDISTURBED SOIL. NO FOOTING SHALL BEAR HIGHER THAN 1 VERTICAL TO 1.5 HORIZONTAL SLOPE ABOVE ANY EXCAVATION, EXISTING OR PLANNED. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING TO PREVENT MOVEMENT OF WALLS IF BACKFILL IS PLACED BEFORE FLOOR SYSTEM IS IN PLACE. THERE SHALL BE 95% COMPACTION (ASTM D1557 MODIFIED PROCTOR DENSITY) OF ALL BACKFILL SOIL UNDER SLABS ON GRADE.

MASONRY
SPECIFIED COMPRESSIVE STRENGTH OF MASONRY ASSEMBLY: f'm=1500 PSI.
CONCRETE MASONRY UNITS: ASTM C90, GRADE N-TYPE I, MEDIUM WEIGHT RUNNING BOND.
MORTAR: ASTM C270, TYPE S, MIN. COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. GROUT: ASTM C476 WITH A MIN. COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. FILL ALL CELLS CONTAINING REINFORCING WITH GROUT IN LIFTS NOT EXCEEDING 4'-0" IN HEIGHT. FILL OTHER CELLS WITH GROUT AS INDICATED ON DRAWINGS. ALL REINFORCEMENT SHALL BE IN PLACE PRIOR TO GROUTING WITH VERTICAL BARS HELD AT TOP, BOTTOM AND 192 DIAMETERS MAXIMUM ON CENTERS. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR MASONRY WALLS, AS REQUIRED, UNTIL CONNECTIONS TO FLOOR AND/OR ROOF DIAPHRAGMS ARE COMPLETED.

CAST-IN-PLACE CONCRETE
CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:
28-DAY STRENGTH f'c=4,000 PSI
AIR ENTRAINMENT: 5%-7%
MAXIMUM SLUMP: 3" FOR SLABS FOOTINGS, 4" FOR WALLS, COLUMNS AND BEAMS. CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 318.

SUBMIT MIX DESIGN FOR REVIEW AND PROVIDE NOT LESS THAN 6 SACKS OF CEMENT PER CUBIC YARD FOR ALL CONCRETE WITH MAXIMUM W/C=0.45.

REINFORCING STEEL
WELDED WIRE FABRIC (W.W.F.): ASTM A82 AND A185
DEFORMED BARS: ASTM A615, GRADE 60 (GRADE 40 FOR #3).
UNLESS OTHERWISE NOTED ON THESE DRAWINGS, MINIMUM CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:
- CONCRETE CAST AGAINST SOIL=3".
- FORMED CONCRETE AGAINST SOIL=2".
- WALLS, COLUMNS AND BEAMS EXPOSED TO WATER, SEWAGE & WEATHER=2".
- WALLS, COLUMNS AND BEAMS DRY CONDITION=1 1/2".

PROVIDE 2-#5 MIN. U.N.O. TRIM BARS AROUND ALL OPENINGS IN CONCRETE WALLS OR SLAB EXTENDING 2'-6" PAST CORNERS, TYP. AT TIME OF CONCRETE PLACEMENT, REINFORCING SHALL BE FREE OF MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT MAY DECREASE BOND.

WELDING OF REINFORCING BARS SHALL CONFORM TO ANSI/AWS D1.4.
WHERE PERMITTED, LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS. SPECIAL INSPECTION IS REQUIRED FOR ALL FIELD WELDING.

SUBMIT SHOP DRAWINGS OF REINFORCING STEEL FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION. REINFORCING SHALL BE DETAILED IN ACCORDANCE WITH ACI 315 AND 318 (LATEST EDITION).

STRUCTURAL STEEL AND MISCELLANEOUS METALS
CHANNELS, ANGLES, PLATES, AND BARS: ASTM A36, FY=36 KSI.
W-SHAPES: ASTM A992, Fy=50 KSI.

ALL BOLTS FOR CONNECTIONS IN SUBMERGED CONDITION SHALL BE: ASTM F593C OR F593D STAINLESS STEEL (SS) BOLTS. ALL OTHERS SHALL BE GALVANIZED ASTM A325-N BOLTS HIGH STRENGTH BOLTS (H.S.B.), U.N.O. AS ASTM A307 MACHINE BOLTS (M.B.). WHERE HIGH STRENGTH BOLTS ARE USED, THEY SHALL BE INSTALLED WITH LOAD INDICATOR DEVICES (LOAD INDICATOR WASHERS OR SNAP-OFF HEADS).
ADHESIVE ANCHORS: HILTI HIT-HY 270 OR APPROVED EQUAL, U.N.O. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

HEADED ANCHOR STUDS (H.A.S.): ASTM A108, FY=50 KSI, END WELDED PER MANUFACTURER'S RECOMMENDATIONS. ALL ANCHOR BOLTS AND THREADED RODS: ASTM F1554, U.N.O. ALL ANCHOR BOLTS MUST BE ACCURATELY PLACED IN THEIR FINAL LOCATION PRIOR TO POURING CONCRETE, "WET STICKING" OF ANCHOR BOLTS IS NOT ALLOWED.

WELDING ELECTRODES OR WIRES: AWS A5.1 OR A5.5, E70XX; AWS A5.17, E70S-X; AWS A5.20, E7XT-X.
FOR ALL SHOP WELDS AND FIELD WELDS OF ALL LATERAL RESISTING ELEMENTS, ELECTRODES SHALL BE E70 WITH A MINIMUM SPECIFIED CVN OF 20 FT-LBS AT -20 DEGREES FAHRENHEIT. ALL WELDS SHALL BE 3/16" MINIMUM U.N.O.

ERECTION AND FABRICATION IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS."
WELDING SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE - STEEL". ALL WELDING SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS.

ALL COLUMNS AND BEAMS TO BE FROM UNSPLICED LENGTHS U.N.O. ON THE DRAWINGS. SUBMIT SHOP DRAWINGS SHOWING SIZES, DIMENSIONS AND REQUIRED CONNECTION DETAILS FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.

STEEL DECK
PAINTED STEEL DECKING SHALL CONFORM TO ASTM A1008 GRADE 33 OR HIGHER. GALVANIZED STEEL DECKING SHALL CONFORM TO ASTM A653 GRADE 33 OR HIGHER, WITH G60 COATING. INDIVIDUAL SHEET LENGTH SHALL BE CONTINUOUS FOR 3 OR MORE SPANS. SUBMIT SHOP DRAWINGS SHOWING LAYOUT FOR REVIEW BY THE ENGINEER.

BUILDING PROJECT DATA

CODES:

IBC 2018 INTERNATIONAL BUILDING CODE
IMC 2018 INTERNATIONAL MECHANICAL CODE
IFC 2018 INTERNATIONAL FIRE CODE
WSEC 2018 WASHINGTON STATE ENERGY CODE

PROJECT DESCRIPTION:

A SINGLE STORY CMU ADDITION TO EXISTING CMU BUILDING CONTAINING ELECTRICAL ROOM, AND RE-ROOFING OF ENTIRE STRUCTURE.

OCCUPANCY

F-1 ELECTRICAL ROOM

TYPE OF CONSTRUCTION:

TYPE - V.B.

GENERAL BUILDING AREA NOTES:

1. ALLOWABLE AREA (TABLE 506.2) = 8,500 SF
   PROPOSED AREA = 295 SF

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

APPROVED
BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
The City will not be responsible for errors and/or omissions on these plans.
Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB

No.	REVISION	DATE	APPD
	PERMIT SET		

MYRON J. BASDEN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
GENERAL STRUCTURAL NOTES

SHEET: S-1
OF: 8
JOB NO.: 20503
DWG:S_STND

SPECIAL INSPECTION SCHEDULE

VERIFICATION AND INSPECTION	CI	PI	REMARKS/REFERENCES
CONCRETE:			
REINFORCING STEEL INCLUDING PLACEMENT	–	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1–26.6.3
ANCHOR RODS, EMBEDDED BOLTS AND INSERTS	X	–	PRIOR TO AND DURING PLACEMENT OF CONCRETE
USE OF REQUIRED DESIGN MIX	–	X	ACI 318: CH. 19, 26.4.3, 26.4.4
CONCRETE SLUMP, AIR CONTENT, TEMPERATURE AND TEST SPECIMENS	X	–	WHILE MAKING SPECIMENS FOR STRENGTH TESTS
CONCRETE AND SHOTCRETE PLACEMENT	X	–	ACI 318: 26.5
CONCRETE CURING	–	X	ACI 318: 26.5.3–26.5.5
CONCRETE FORMWORK FOR SHAPE, LOCATIONS AND DIMENSIONS	–	X	ACI 318: 26.11.1.2(6)
MASONRY:			
PROVISIONS OF CONSTRUCTION DOCUMENTS AND SUBMITTALS	–	X	
VERIFICATION OF F'm and F'aac	–	X	PRIOR TO CONSTRUCTION
SLUMP FLOW AND VSI	X	–	
SITE–PREPARED MORTAR AND MORTAR JOINTS	–	X	BEGINS & PRIOR CONSTRUCTION
LOCATION OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES	–	X	AS MASONRY CONSTRUCTION BEGINS
SIZE AND LOCATION OF STRUCTURAL ELEMENTS	–	X	DURING CONSTRUCTION
ANCHOR TYPE, SIZE AND LOCATION	–	X	DURING CONSTRUCTION
SIZE, GRADE AND TYPE OF REINFORCEMENT, BOLTS AND ANCHORAGES	–	X	DURING/PRIOR CONSTRUCTION
HOT/COLD WEATHER CONSTRUCTION	–	X	DURING CONSTRUCTION
GROUT SPACE	–	X	PRIOR TO GROUTING
STEEL:			
MATERIAL VERIFICATION OF HIGH–STRENGTH BOLTS, NUTS AND WASHERS:			
MANUFACTURER'S CERTIFICATE	–	X	
INSPECTION OF HIGH–STRENGTH BOLTING:	–	X	AISC 360, SECTION N5.6
MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD–FORMED STEEL DECK:	–	X	
IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	–	X	AISC 360, N5.7
INSPECTION OF WELDING:			SHOP AND FIELD
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	X	–	AWS D1.1
MULTIPASS, SINGLE–PASS FILLET WELDS > 5/16", PLUG AND SLOT WELDS	X	–	AWS D1.1
SINGLE–PASS FILLET WELDS < 5/16", FLOOR AND ROOF DECK WELDS	–	X	AWS D1.3
REINFORCING STEEL	X	–	AWS D1.4, ACI 318: SECTION 26.6.4
SOILS:			
VERIFY DESIGN BEARING CAPACITY	–	X	
VERIFY EXCAVATIONS	–	X	
CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	–	X	
USE OF MATERIALS, DENSITIES AND LIFT THICKNESSES	X	–	DURING PLACEMENT AND COMPACTION
OBSERVE SUBGRADE AND SITE PREPARED PROPERLY	–	X	PRIOR TO PLACEMENT OF COMPACTED FILL

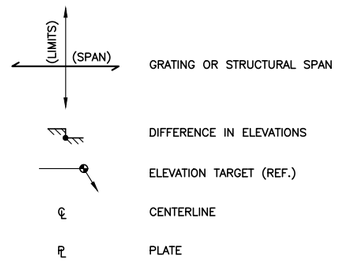
INSPECTION SCHEDULE NOTES

1. ITEMS MARKED WITH AN "X" REQUIRE INSPECTION BY A SPECIAL INSPECTOR APPROVED BY THE BUILDING OFFICIAL.
2. ITEMS MARKED "NA" ARE NOT APPLICABLE TO THIS PROJECT.
3. CI = CONTINUOUS INSPECTION DURING PROGRESS OF WORK BY SPECIAL INSPECTOR.
4. PI = PERIODIC INSPECTION BY SPECIAL INSPECTOR AS REQUIRED TO CONFIRM CONFORMANCE OF WORK.
5. TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER, BUILDING OFFICIAL AND CONTRACTOR.
6. OWNER WILL CONTRACT FOR SPECIAL INSPECTION SERVICES.

SUPPLEMENTAL STRUCTURAL ABBREVIATIONS:

AFF	ABOVE FINISH FLOOR	FRM'G	FRAMING	T	TOP
AL	ALUMINUM	FS	FAR SIDE	TN	TOE NAIL
APPRX	APPROXIMATE	FTG	FOOTING	TO	TOP OF
ARCH	ARCHITECTURAL	GA	GAUGE	TOS	TOP OF SLAB
@	AT	HAS	HEADER ANCHOR STUDS	TRANS	TRANSVERSE
BEL	BELOW	HDR	HEADER	TYP	TYPICAL
BM	BEAM	HGR	HANGER	UNO	UNLESS NOTED OTHERWISE
BN	BOUNDRY NAIL	IBC	INTERNATIONAL BUILDING CODE	VFY	VERIFY
BO	BOTTOM OF	IF	INSIDE FACE	WP	WORK POINT
BOS	BOTTOM OF SLAB	INT	INTERIOR		
BOT	BOTTOM	JST	JOIST		
BRG	BEARING	LAT	LATERAL		
CDF	CONTROLLED DENSITY FILL	LDGR	LEDGER		
CIP	CAST IN PLACE	LLH	LONG LEG HORIZONTAL		
CJ	CONTROL JOINT	LLV	LONG LEG VERTICAL		
CONST	CONSTRUCTION	LS	LAG SCREW		
CONT	CONTINUOUS	MAS	MASONRY		
CTSK	COUNTERSINK	MAT'L	MATERIAL		
D	DEPTH	MFR	MANUFACTURER		
d	PENNY (NAILS)	MTL	METAL		
DBL	DOUBLE	(N)	NEW MEMBER		
DIAPH	DIAPHRAGM	NS	NEAR SIDE		
do	DITTO (DO OVER)	OH	OVERHANG		
DWG	DRAWING	ORNT	ORIENTATE (ION)		
DWL	DOWEL	PAR	PARALLEL		
EA	EACH	PERP	PERPENDICULAR		
EF	EACH FACE	PT	PRESSURE TREAT(ED)		
EJ	EXPANSION JOINT	QTY	QUANTITY		
EMBD	EMBED(MENT)	REF	REFERENCE		
EN	EDGE NAIL	REINF	REINFORCEMENT		
ENG	ENGINEER	SHT	SHEET		
EQ	EQUAL	SHTG	SHEATHING		
ES	EACH SIDE	SIM	SIMILAR		
EXIST	EXISTING MEMBER	SPC	SPACING		
EXT	EXTERIOR	SS	STAINLESS STEEL		
FFE	FINISHED FLOOR ELEVATION	STGR	STAGGER		
FN	FACE NAIL	STIRR	STIRRUP		
FND	FOUNDATION	STRUC	STRUCTURE(AL)		
FO	FACE OF	SYM	SYMMETRICAL		

STRUCTURAL LEGEND



City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP

APPROVED
DATE: _____

EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB

No.	REVISION	DATE	APPD
	PERMIT SET		

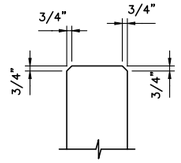
MYRON J. BASDEN — STATE OF WASHINGTON — 24931 — REGISTERED PROFESSIONAL STRUCTURAL ENGINEER

CITY OF PUYALLUP
WASHINGTON
PIERCE COUNTY
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
SPECIAL INSPECTION SECHEDULE, SUPPLEMENTAL STRUCTURAL ABBREVIATIONS, AND STRUCTURAL LEGEND

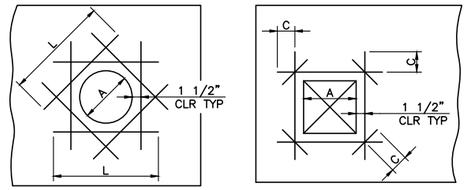
SHEET: S-2
OF: 8
JOB NO.: 20503
DWG:S_STND

REINF	LAP
#4	2'–4"
#5	3'–0"
#6	3'–6"
#7	4'–3"
#8	4'–10"
#9	5'–3"
#10	6'–6"
#11	8'–0"

1 TYP — **TYP. LAP SCHEDULE**
NOT TO SCALE



2 TYP — **TYP. CHAMFER DETAIL**
NOT TO SCALE



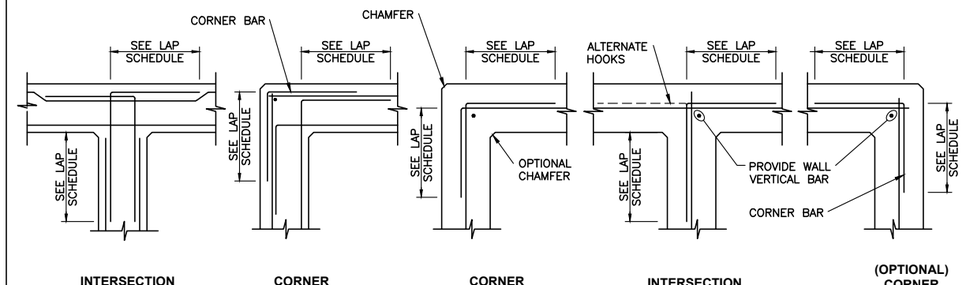
TYPE I **TYPE II**

	TYPE I		TYPE II	
OPENING SIZE (A)	MINIMUM BAR LENGTH (L)	BAR SIZE	(C)	BAR SIZE
0" – 12"	3' – 9"	#5	1' – 0"	MATCH VERTICAL BARS OR LARGEST BAR IN SLABS OR WALKWAYS
13" – 18"	4' – 9"	#6	1' – 3"	
19" – 24"	6' – 9"	MATCH VERTICAL BARS OR LARGEST BAR IN SLABS OR WALKWAYS	2' – 6"	
25" – 36"	7' – 9"		2' – 6"	
36" →	8' – 9"		2' – 6"	

NOTE:

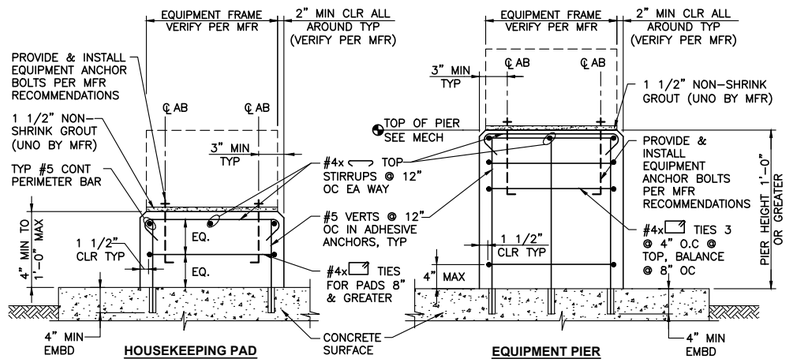
ALL BARS, EACH FACE. USE THESE BAR SIZES UNLESS OTHERWISE NOTED.

3 TYP — **TYP PENETRATION REINFORCING DETAIL**
NOT TO SCALE



DOUBLE CURTAIN **SINGLE CURTAIN**

4 TYP — **TYP REINFORCING @ WALL INTERSECTION DETAIL**
NOT TO SCALE

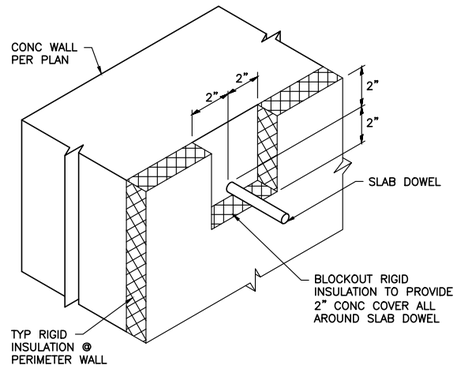


NOTES:

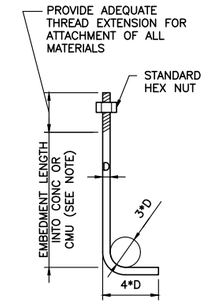
1. CHAMFER ALL EXPOSED CORNERS OF HOUSEKEEPING PADS AND EQUIPMENT PIERS.

2. FOR PIER HEIGHT LESS THAN 1'–0" SEE HOUSEKEEPING PAD DETAIL

5 TYP — **TYP HOUSEKEEPING PAD & EQUIPMENT PIER DETAILS**
NOT TO SCALE



6 TYP — **TYP CONCRETE COVER @ SLAB REINF & INSULATION DETAIL**
NOT TO SCALE

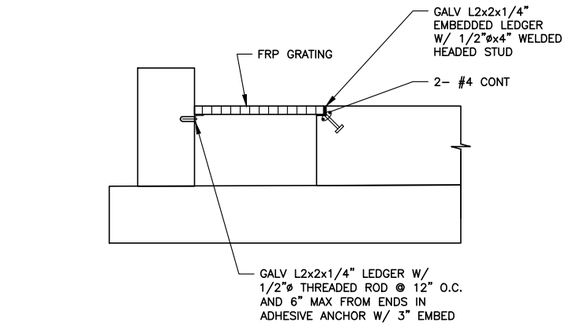


BOLT DIA. "D"	MINIMUM EMBEDMENT	
	ANCHOR BOLTS IN HORIZ. SURFACE	ANCHOR BOLTS IN VERT. SURFACE
1/2"	8"	7"
5/8"	8"	7"
3/4"	12"	7"
7/8"	12"	8"
1"	14"	9"
1 1/8"	14"	10"

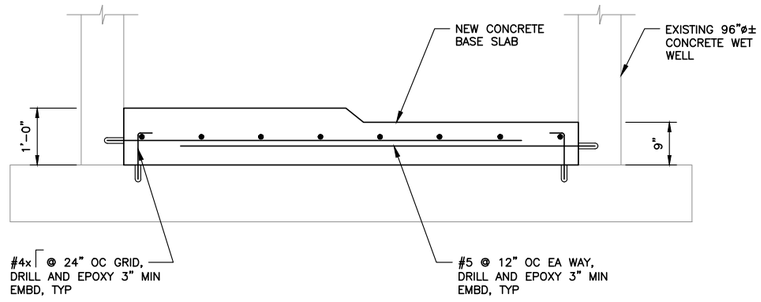
NOTE:

ANCHOR BOLT EMBEDMENT IN VERTICAL SURFACE APPLIES TO CONCRETE ONLY.

7 TYP — **TYP ANCHOR BOLT DETAIL**
NOT TO SCALE



8 TYP — **SUMP PUMP GRATING SUPPORT DETAIL**
NOT TO SCALE



NOTE:
SEE M–SHEETS FOR BALANCE OF INFORMATION.

9 TYP — **WET WELL BASE SLAB DETAIL**
NOT TO SCALE

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021 | DRAWN: RAH | CHECKED: AQ | APPROVED: MJB

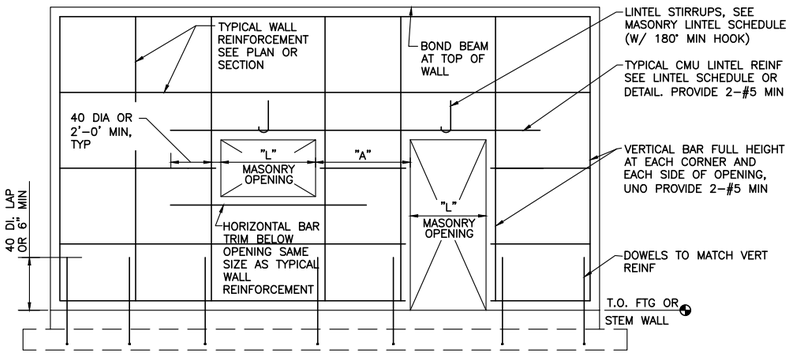
PERMIT SET

No.	REVISION	DATE	APPD

MYRON J. BASDEN — STATE OF WASHINGTON — 46534 — REGISTERED STRUCTURAL ENGINEER — PROFESSIONAL

CITY OF PUYALLUP
WASHINGTON
PIERCE COUNTY
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
TYPICAL STRUCTURAL DETAILS

SHEET: S-3
OF: 8
JOB NO.: 20503
DWG:S_STND

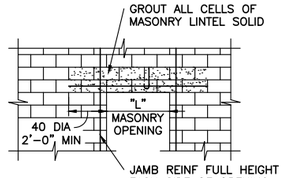


NOTES:

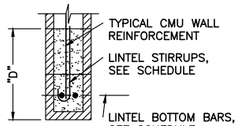
1. WHERE DISTANCE "A" IS BETWEEN 1'–4" AND 2'–0", PROVIDE #3 ⌐¬ TIES AT 8" OC FULL HEIGHT OF THE SMALLER OF THE TWO OPENINGS.
2. DISTANCE "A" SHALL NOT BE LESS THAN 1'–4".
3. PROVIDE CONTINUOUS BOND BEAM W/2–#5 MIN AT ALL LEDGERS, UNO.

1 TYP — TYPICAL CMU WALL REINFORCEMENT PLACEMENT
NOT TO SCALE

LINTEL SCHEDULE			
MASONRY OPENING "L"	DEPTH "D"	REINFORCEMENT BOTTOM BARS	REINFORCEMENT STIRRUPS
LESS THAN 4'–0"	16"	2–#5	#3 @ 16" OC



ELEVATION

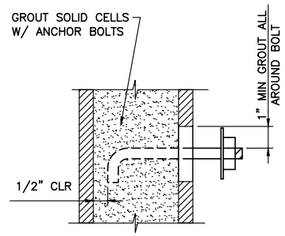


SECTION

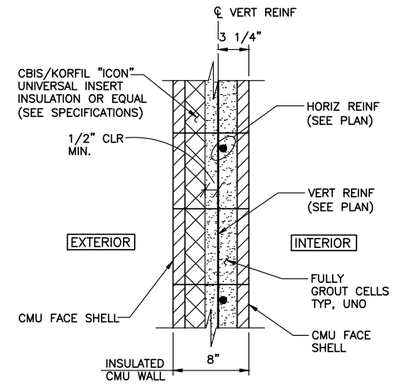
NOTE:

MASONRY CONTROL JOINT WHERE REQUIRED SHALL NOT BE LOCATED CLOSER THAN 5'–0" TO JAMB

2 TYP — TYP CMU LINTEL SCHEDULE AND DETAIL
NOT TO SCALE



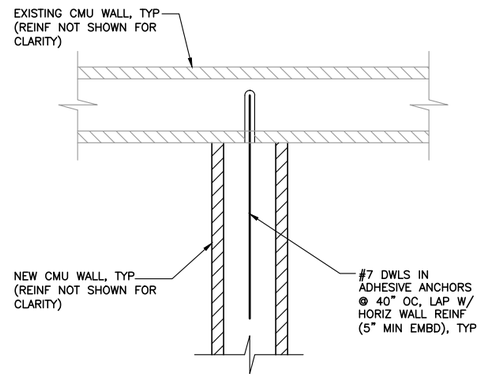
3 TYP — TYP CMU WALL ANCHOR BOLT DETAIL
NOT TO SCALE



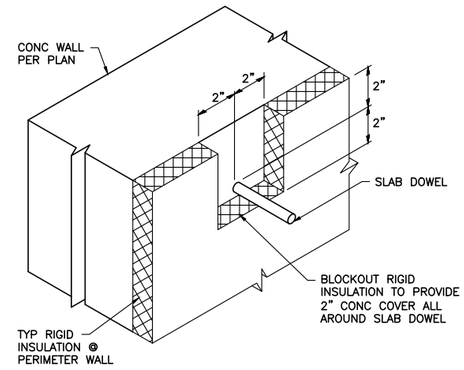
4 TYP — TYPICAL 8" INSULATED CMU WALL DETAIL
SCALE: 1 1/2"=1'–0"

1 1/2"x 18 GA TYPE B GALVANIZED METAL DECK	I MIN = 0.302 IN^4 Fy = 50 KSI +S MIN = 0.314 IN^3 –S MIN = 0.331 IN^3	
LOCATION	CONNECTION	REMARKS
END BRG'S AND INTERMEDIATE SUPPORTS	36" WIDE DECK SHEETS 7 MIN–HILTI X–ENP19, OR EQUAL	MINIMUM END LAP – 2" MIN
SIDE LAPS	VERCO SIDELAP CONNECTION (VSC2) @ 12" OC, OR EQUAL	
PANEL EDGES ALONG MARGINAL SUPPORTS	1/2 @ 8" OC, TYP UNO LEDGER ANGLE	

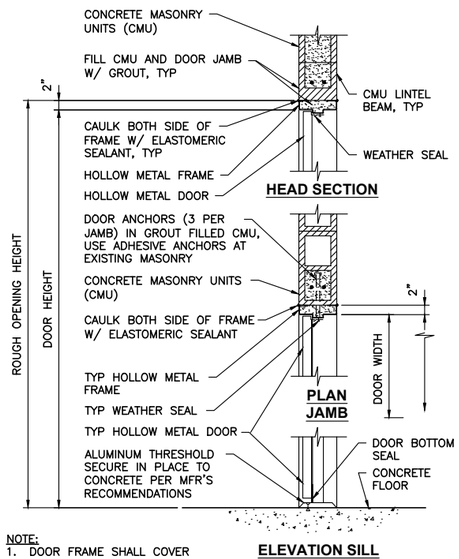
5 TYP — TYP ROOF METAL DECK ATTACHMENT SCHEDULE
NOT TO SCALE



6 TYP — TYPICAL NEW CMU WALL TO EXISTING CMU WALL CONNECTION PLAN DETAIL
SCALE: 1 1/2"=1'–0"

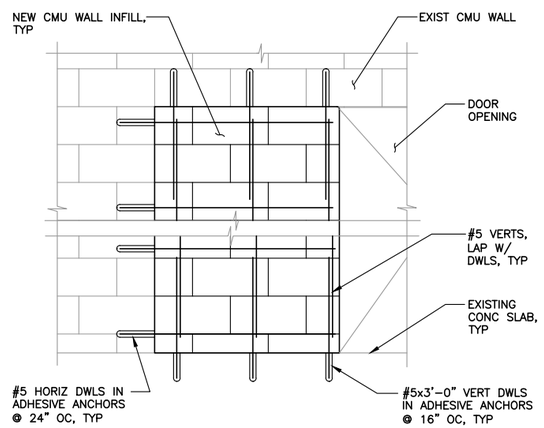


7 TYP — TYP CONCRETE COVER @ SLAB REINF & INSULATION DETAIL
NOT TO SCALE

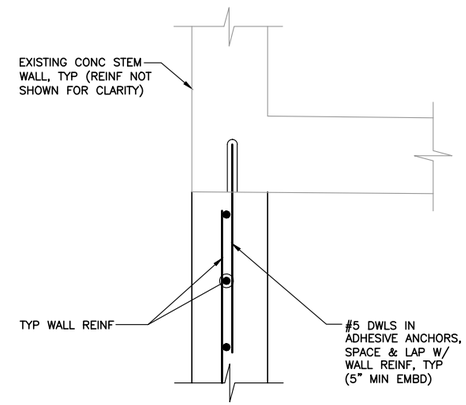


NOTE:
1. DOOR FRAME SHALL COVER FULL WIDTH OF MASONRY WALL.

8 TYP — METAL DOOR FOR CMU WALL DETAIL
SCALE: 3/4"=1'–0"



9 TYP — CMU WALL INFILL DETAIL
NOT TO SCALE



10 TYP — TYPICAL NEW STEM WALL TO EXISTING STEM WALL CONNECTION PLAN DETAIL
SCALE: 1 1/2"=1'–0"

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB

PERMIT SET

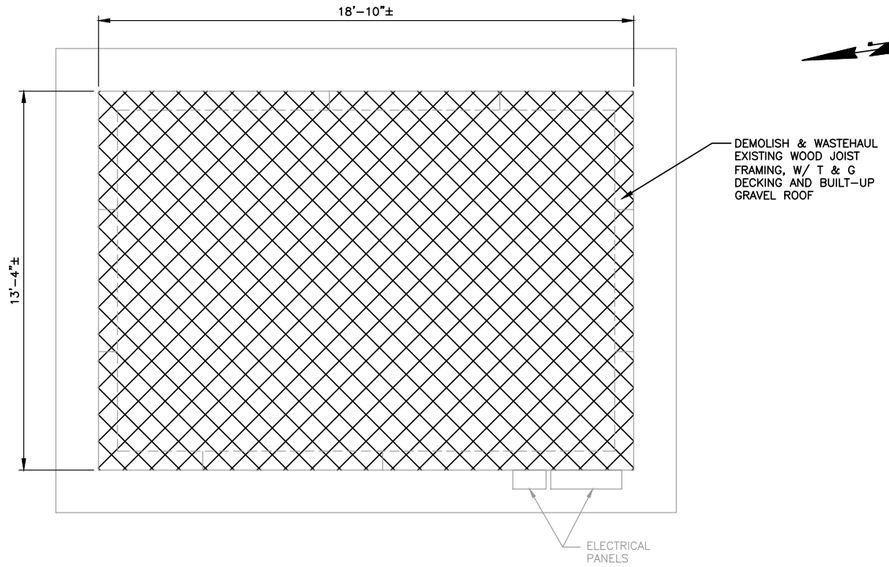
No.	REVISION	DATE	APPD

MYRON J. BASDEN — STATE OF WASHINGTON — 24148 — REGISTERED PROFESSIONAL ENGINEER — STRUCTURAL

CITY OF PUYALLUP
WASHINGTON
PIERCE COUNTY
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
TYPICAL STRUCTURAL DETAILS

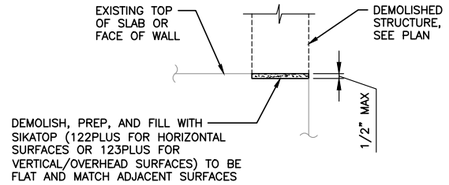
SHEET: S-4
OF: 8
JOB NO.: 20503
DWG:S_STND

m:\PUYALLUP\20503 – north levee road pump station\02 planset\Structural\S_STND.dwg, 3/30/2021 9:35 AM, RUSSELL HORITA

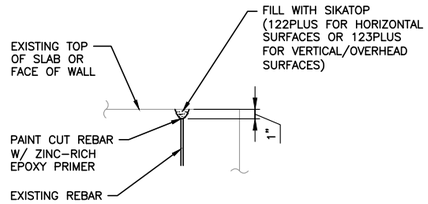


GENERATOR BUILDING ROOF DEMOLITION PLAN

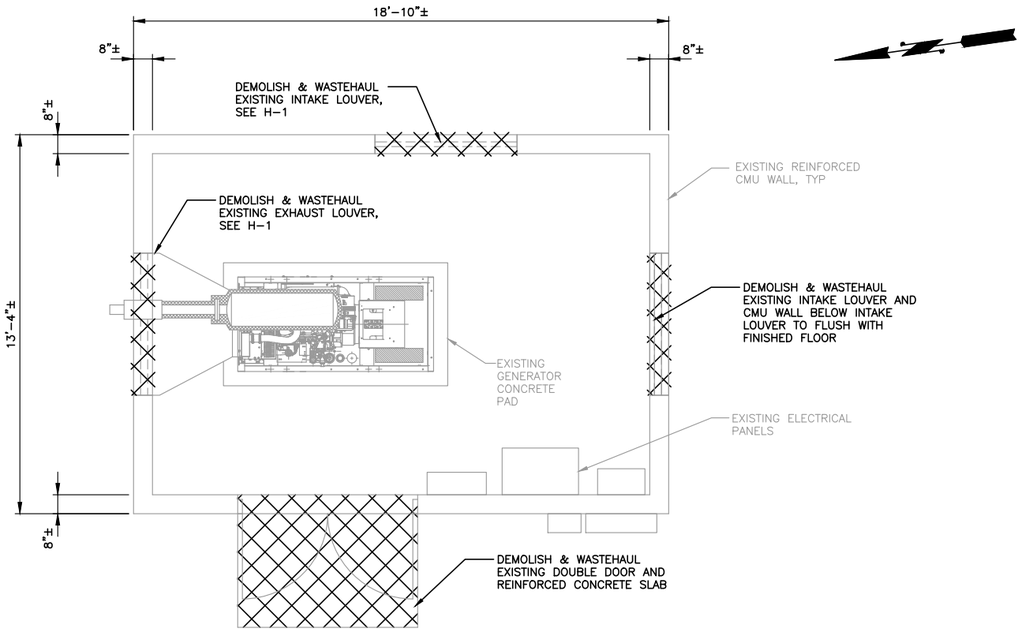
SCALE: 3/8"=1'-0"



TYPICAL DEMOLITION BOUNDARY DETAIL



TYPICAL REBAR DEMOLITION DETAIL



GENERATOR BUILDING FLOOR DEMOLITION PLAN

SCALE: 3/8"=1'-0"

LEGEND:

DENOTES ITEMS TO BE DEMOLISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

NOTES:

1. SEE SHEETS S-1 THROUGH S-4 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
2. DIMENSIONS SHOWN ON STRUCTURAL PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT THE ATTENTION OF THE ENGINEER IMMEDIATELY.
3. EXISTING CONDITIONS AND DIMENSIONS ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION.
4. SEE M-SHEETS FOR ADDITIONAL DEMOLITION INFORMATION.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021 | DRAWN: RAH | CHECKED: AQ | APPROVED: MJB

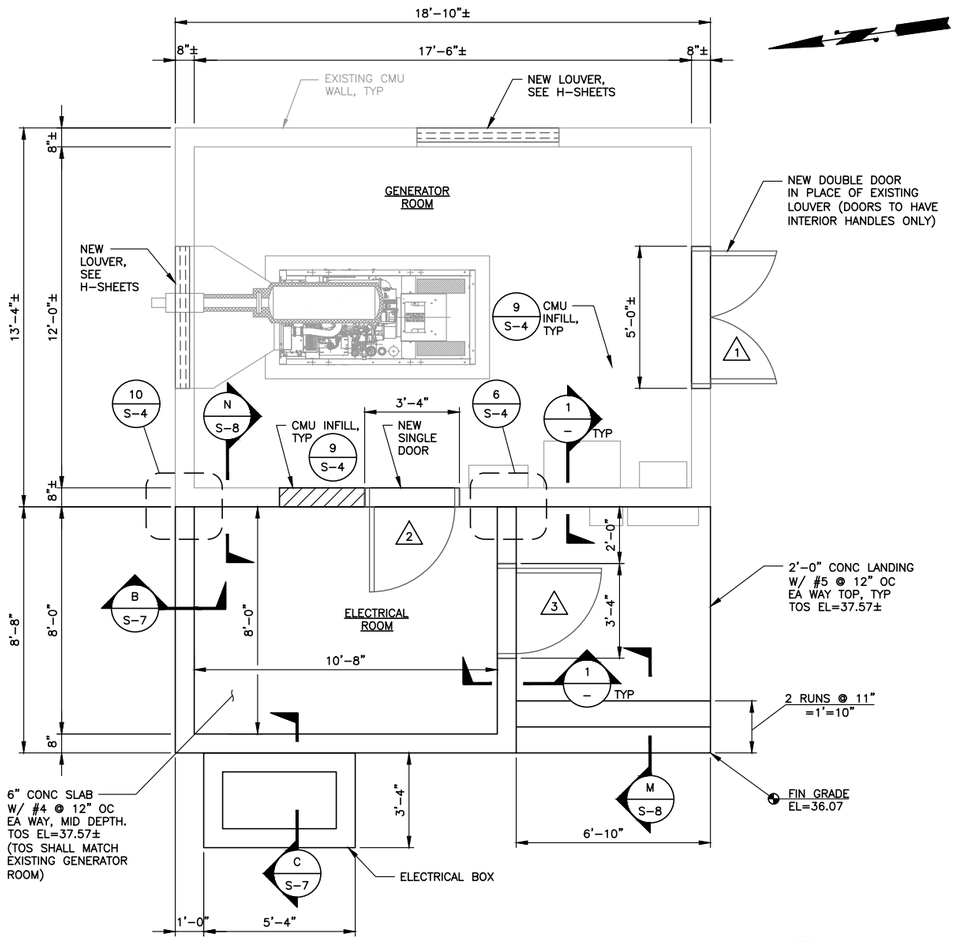
No.	REVISION	DATE	APPD
	PERMIT SET		

MYRON J. BASDEN
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
EXISTING GENERATOR BUILDING FLOOR AND ROOF DEMOLITION PLANS

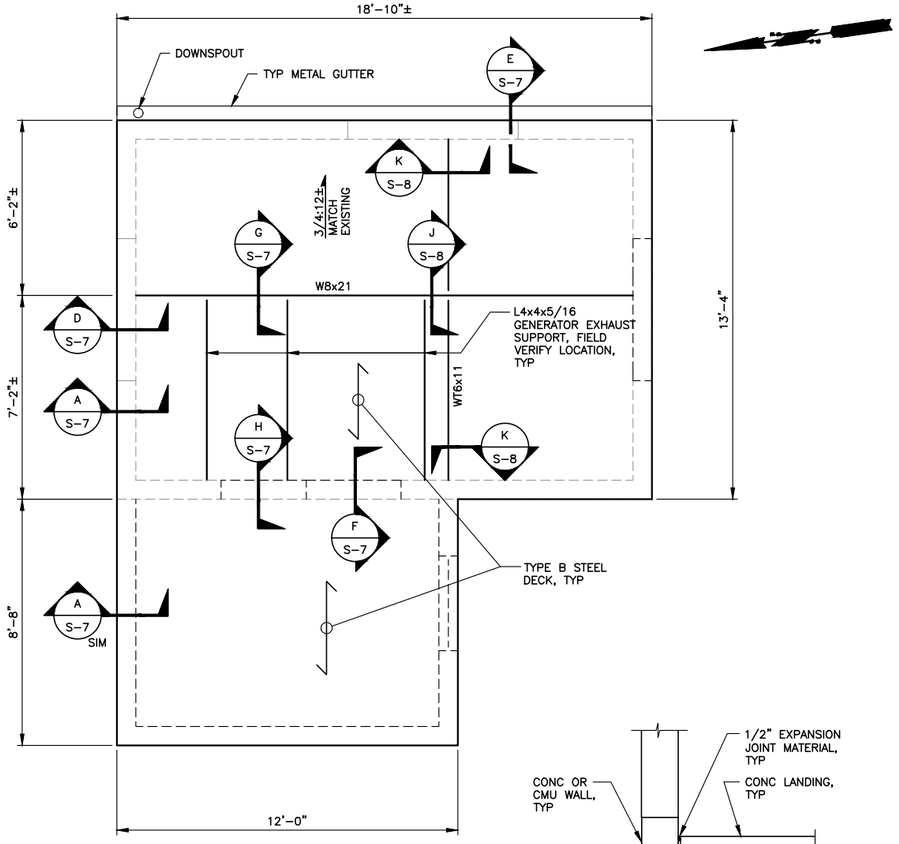
SHEET: S-5
OF: 8

JOB NO.: 20503
DWG:S_GEN_PLN



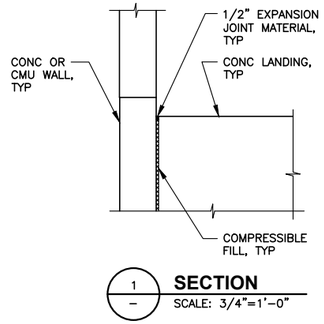
GENERATOR BUILDING FLOOR EXPANSION PLAN

SCALE: 3/8"=1'-0"



GENERATOR BUILDING ROOF EXPANSION PLAN

SCALE: 3/8"=1'-0"

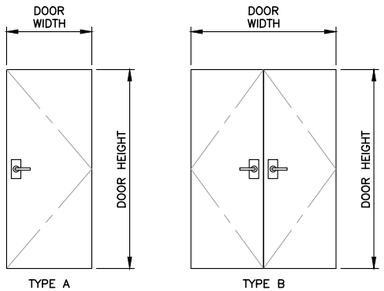


1/– SECTION

SCALE: 3/4"=1'-0"

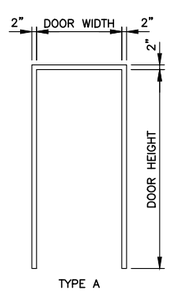
NOTES:

1. SEE SHEETS S-1 THROUGH S-4 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
2. DIMENSIONS SHOWN ON STRUCTURAL PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
3. EXISTING CONDITIONS AND DIMENSIONS ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION.



DOOR TYPE

SCALE: NTS



DOOR FRAME TYPE

SCALE: NTS

DOOR SCHEDULE

NO.	MATERIAL & TYPE	DOOR SIZE: WIDTH x HEIGHT x THICKNESS	DOOR TYPE	FRAME TYPE	FINISH	HARDWARE GROUP
1	INSULATED HOLLOW METAL	5'-0" x 6'-6" x 1 3/4"	B	A	PAINT	1
2	INSULATED HOLLOW METAL	3'-0" x 7'-2" x 1 3/4"	A	A	PAINT	2
3	INSULATED HOLLOW METAL	3'-0" x 7'-2" x 1 3/4"	A	A	PAINT	2

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB

PERMIT SET

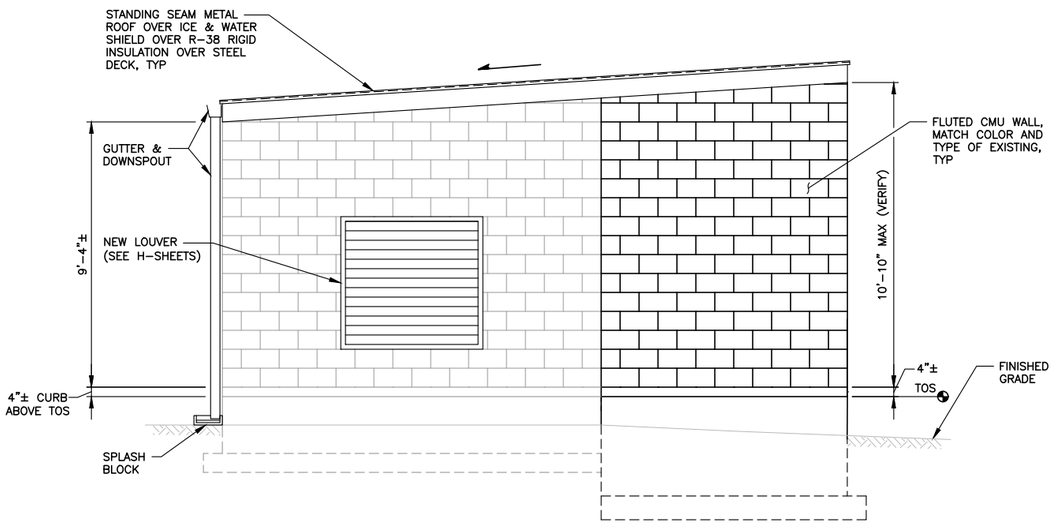
No.	REVISION	DATE	APPD

MYRON J. BASDEN — STATE OF WASHINGTON — 24141 — REGISTERED PROFESSIONAL ENGINEER

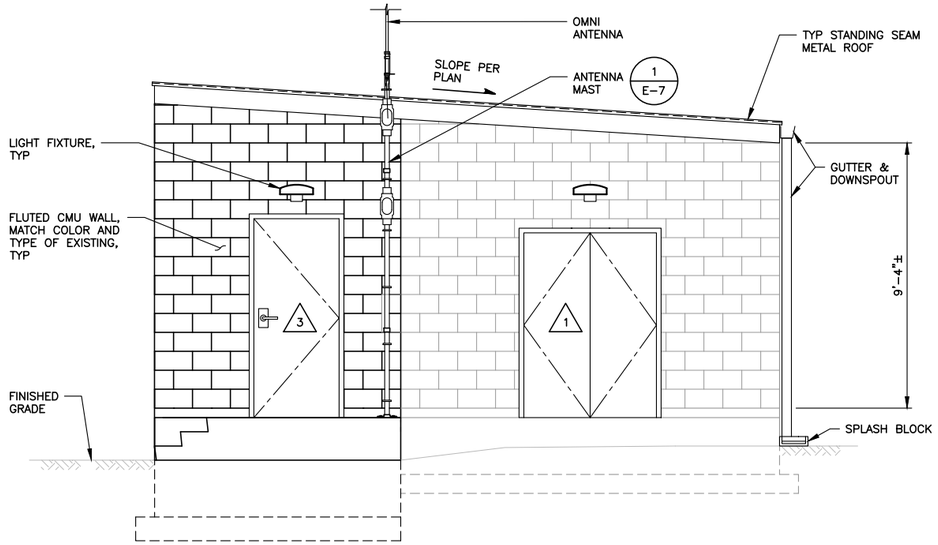
CITY OF PUYALLUP
WASHINGTON
PIERCE COUNTY
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
EXISTING GENERATOR BUILDING FLOOR AND ROOF EXPANSION PLANS

SHEET: S-6
OF: 8
JOB NO.: 20503
DWG: S_GEN_PLN

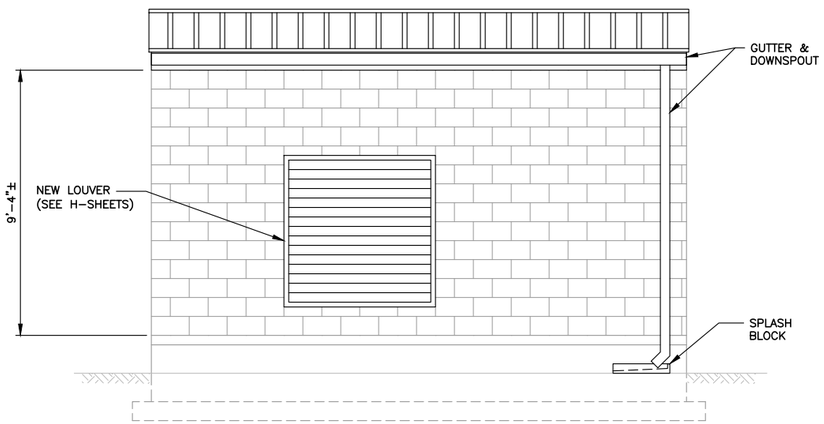
m:\PUYALLUP\20503 - north levee road pump station\02 planset\Structural\S_GEN_PLN.dwg, 3/30/2021 9:35 AM, RUSSELL HORITA



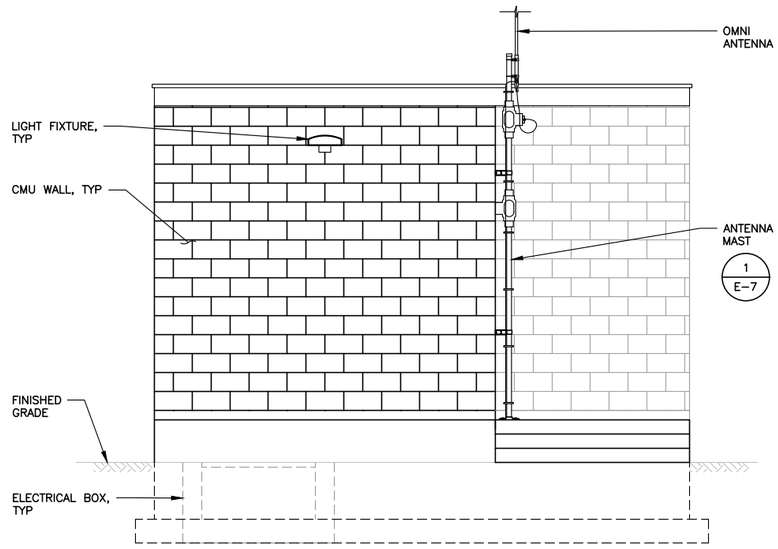
NORTH ELEVATION
SCALE: 3/8"=1'-0"



SOUTH ELEVATION
SCALE: 3/8"=1'-0"



EAST ELEVATION
SCALE: 3/8"=1'-0"



WEST ELEVATION
SCALE: 3/8"=1'-0"

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB

No.	REVISION	DATE	APPD

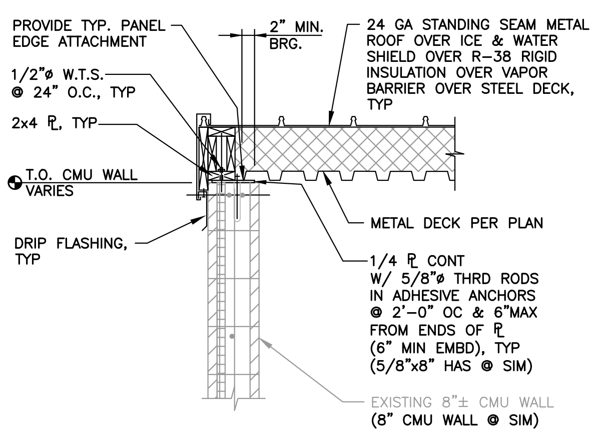
PERMIT SET

MYRON J. BASDEN
STATE OF WASHINGTON
PROFESSIONAL ENGINEER

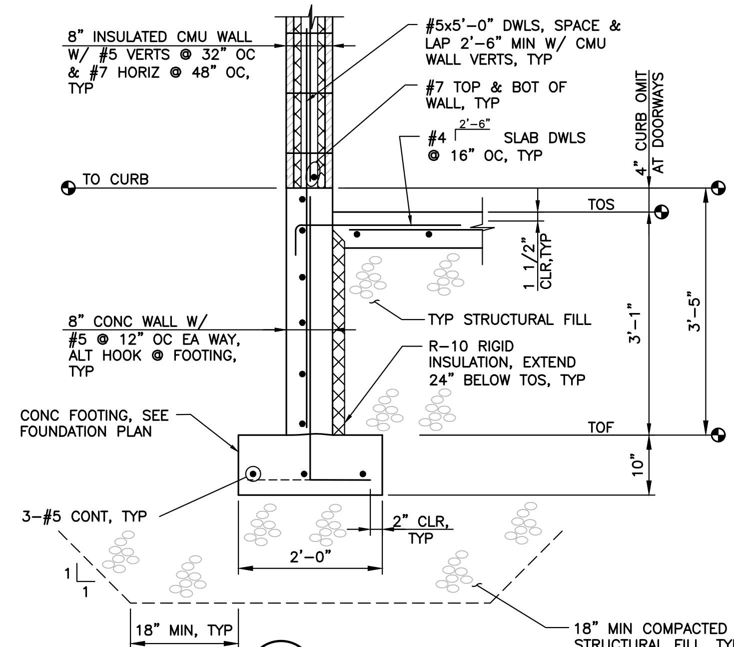
CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
ELEVATIONS

SHEET: S-7
OF: 8

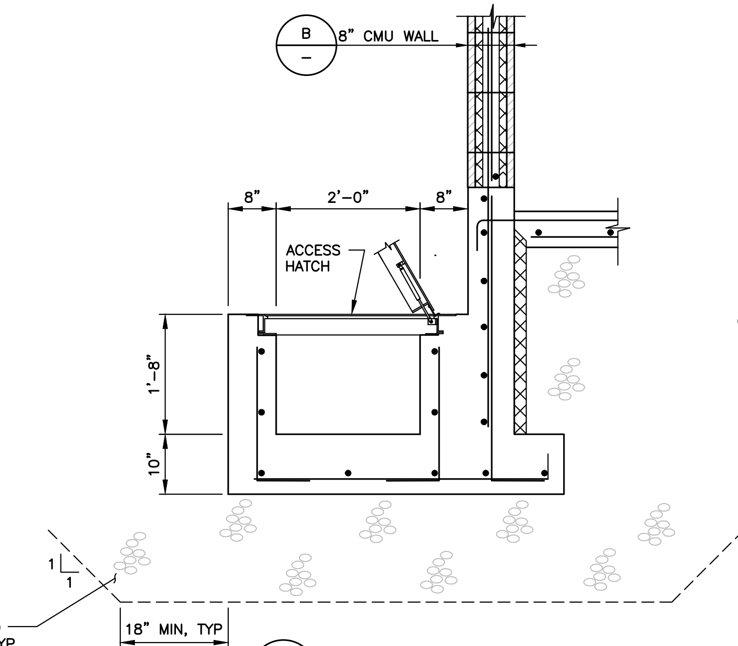
JOB NO.: 20503
DWG:S_GEN_PLN



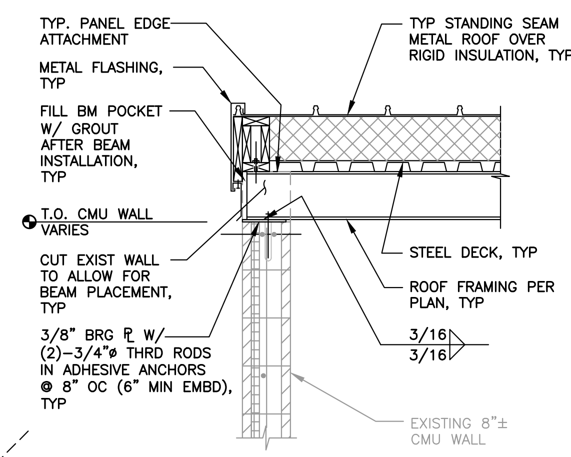
A SECTION
S-6 SCALE: 3/4"=1'-0"



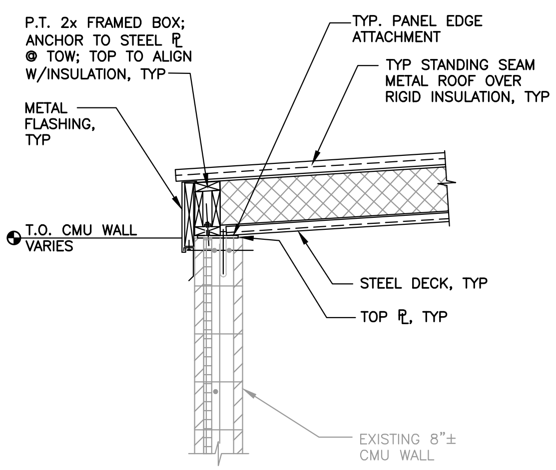
B SECTION
S-6 SCALE: 3/4"=1'-0"



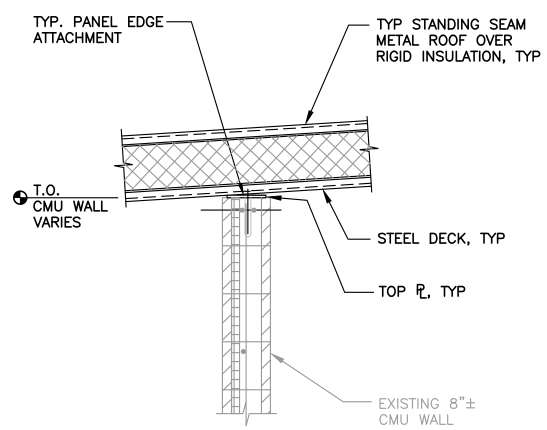
C SECTION
S-6 SCALE: 3/4"=1'-0"



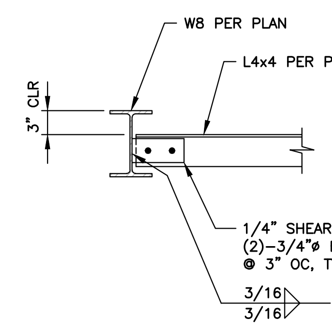
D SECTION
S-6 SCALE: 3/4"=1'-0"



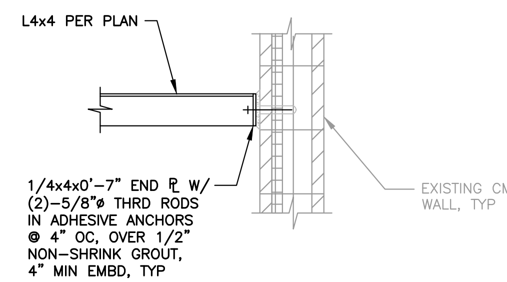
E SECTION
S-6 SCALE: 3/4"=1'-0"



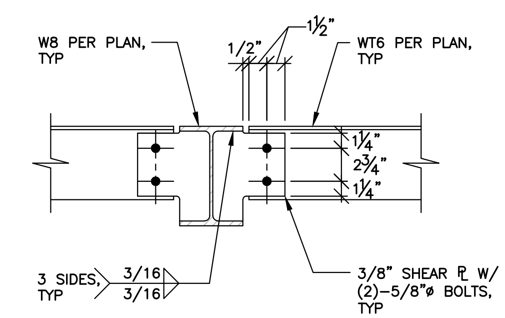
F SECTION
S-6 SCALE: 3/4"=1'-0"



G SECTION
S-6 SCALE: 1"=1'-0"

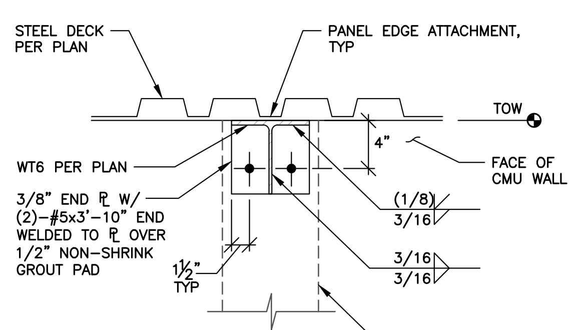


H SECTION
S-6 SCALE: 1"=1'-0"



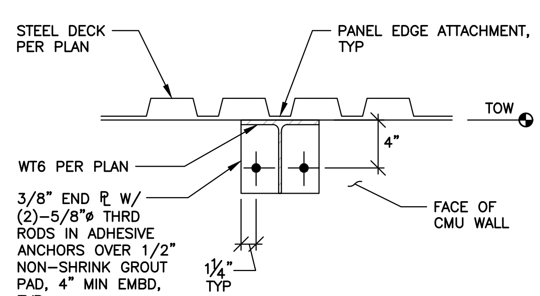
NOTE:
1. STEEL DECK NOT SHOWN FOR CLARITY.

J SECTION
S-6 SCALE: 1 1/2"=1'-0"

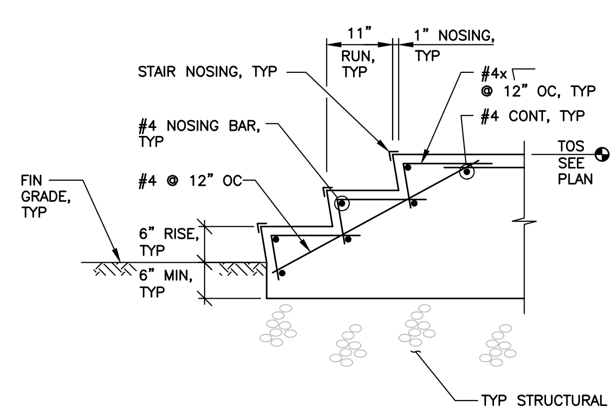


NOTES:
1. REBAR ANCHORS TO BE PLACED IN HOLES DRILLED THROUGH EXISTING CMU WALL AND EMBEDDED IN NEW CMU WALL BEYOND.
2. ALIGN METAL DECK FLUTE WITH FLANGE OF WT TO ALLOW FOR PANEL ATTACHMENT.

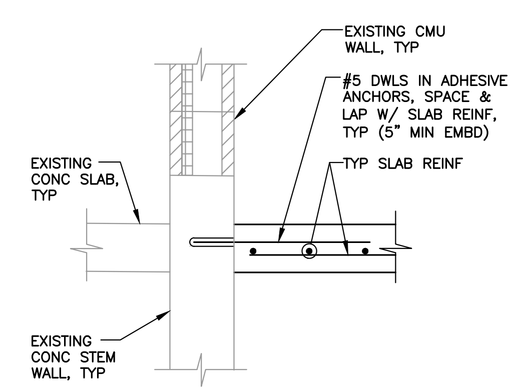
K SECTION
S-6 SCALE: 1 1/2"=1'-0"



L SECTION
S-6 SCALE: 1 1/2"=1'-0"



M SECTION
S-6 SCALE: 3/4"=1'-0"



N SECTION
S-6 SCALE: 1"=1'-0"

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

APPROVED
BY:
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE:
EXPIRATION DATE:
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
The City will not be responsible for errors and/or omissions on these plans.
Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS

DATE: MAR 2021
DRAWN: RAH
CHECKED: AQ
APPROVED: MJB

PERMIT SET

No.	REVISION	DATE	APPD

MYRON J. BASDEN
STATE OF WASHINGTON
46334
PROFESSIONAL STRUCTURAL ENGINEER

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
STRUCTURAL SECTIONS AND DETAILS

SHEET: S-8
OF: 8
JOB NO.: 20503
DWG: S_GEN_PLN

m:\PUYALLUP\20503 - north levee road pump station\02 planset\Structural\S_GEN_PLN.dwg. 3/30/2021 9:36 AM, RUSSELL HORITA

ELECTRICAL PLAN DRAWINGS SYMBOL SCHEDULE

SYMBOL | DESCRIPTION

POWER DISTRIBUTION AND CONTROL

- DISTRIBUTION/CONTROL EQUIPMENT – FLOOR MOUNTED
- DISTRIBUTION/CONTROL EQUIPMENT – WALL MOUNTED
- PANELBOARD – WALL MOUNTED
- SWITCH (SAFETY OR DISCONNECT)
- SWITCH (FUSIBLE)

LIGHTING FIXTURES

- LIGHTING FIXTURE POLE ARM MOUNTED
- LIGHTING FIXTURE POLE TOP MOUNTED
- FIXTURE WALL MOUNTED (RECESSED, SURFACE OR ARM)
- LED LINEAR FIXTURE CEILING MOUNTED (RECESSED, SURFACE OR PENDANT)

DESIGNATIONS

A,B,C,ETC. ARE FIXTURE TYPE, REFER TO LIGHTING FIXTURE SCHEDULE

1,2,3,ETC. ARE CIRCUIT NUMBERS OF PANELBOARD TO WHICH FIXTURE IS TO BE CONNECTED. REFER TO CIRCUIT SCHEDULE

a,b,c,ETC. ARE SWITCHING CONTROL REFERENCE

SHADED LIGHT FIXTURES ARE TO BE PROVIDED WITH INTEGRAL EMERGENCY BATTERY BACKED BALLASTS/POWER (1100 LUMEN UNLESS OTHERWISE NOTED)

SWITCHING

- SINGLE POLE SWITCH – WALL MOUNTED

DESIGNATIONS

E	EXISTING SWITCH	M	MOTOR RATED SWITCH
3	THREE WAY SWITCH	P	SWITCH W/ PILOT LIGHT
4	FOUR WAY SWITCH	T	TIME SWITCH
K	KEY OPERATED SWITCH	a	LOWER CASE = SWITCH LEG

ANY COMBINATION OF THE ABOVE DESIGNATIONS MAY BE SHOWN ON PLANS

RECEPTACLE OUTLETS

- DUPLEX RECEPTACLE OUTLET – WALL MOUNTED (NEMA 5–15R UNLESS OTHERWISE SPECIFIED)
- QUADRUPLEX RECEPTACLE OUTLET – WALL MOUNTED
- SPECIAL PURPOSE RECEPTACLE OUTLET
- SPECIAL PURPOSE RECEPTACLE OUTLET – WALL MOUNTED

DESIGNATIONS

1,2,3,ETC. ARE CIRCUIT NUMBERS OF PANELBOARD TO WHICH OUTLET IS TO BE CONNECTED. REFER TO CIRCUIT SCHEDULE

H = HORIZONTAL
WP = WEATHERPROOF
GFCI = GROUND FAULT CIRCUIT INTERRUPTER

SPECIAL PURPOSE CONNECTIONS

- SPECIAL PURPOSE EQUIPMENT CONNECTION
- SPECIAL PURPOSE EQUIPMENT CONNECTION – WALL MOUNTED

OTHER ELECTRICAL DEVICES

- SOLENOID VALVE
- PHOTO ELECTRIC SWITCH (PHOTOCELL) – WALL MOUNTED

MECHANICALLY ACTUATED SWITCHES

- FLOAT SWITCH
- LEVEL TRANSDUCER
- PRESSURE SWITCH
- FLOW (VELOCITY) SWITCH
- TEMPERATURE ACTUATED SWITCH (THERMOSTAT) – WALL MOUNTED
- TEMPERATURE ACTUATED SWITCH (THERMOSTAT)
- LIMIT SWITCH

GENERAL WIRING SYMBOLS

- JUNCTION BOX
- JUNCTION BOX – WALL MOUNTED
- WIRING RUN EXPOSED ON BUILDING OR STRUCTURE UNLESS OTHERWISE NOTED ON DRAWINGS
- WIRING RUN CONCEALED IN OR UNDER SLAB OR BELOW GRADE UNLESS OTHERWISE NOTED ON DRAWINGS
- INDICATES WIRE SIZE IF OTHER THAN #12AWG; LINE OR PHASE CONDUCTOR; NEUTRAL CONDUCTOR; GROUNDING CONDUCTOR; CROSSMARKS INDICATE QUANTITY AND USE OF CONDUCTORS
- ARROWHEAD INDICATES HOMERUN TO EQUIPMENT/DEVICE NOTED AT END OF ARROWHEAD, NUMBER (WHERE NOTED) INDICATES CIRCUIT WITHIN EQUIPMENT/DEVICE NOTED.
- CONDUIT TURN UP
- CONDUIT TURN DOWN

ELEMENTARY WIRING DIAGRAMS SYMBOL SCHEDULE

SYMBOL | DESCRIPTION

- PANEL OR DEVICE WIRING
- FIELD WIRING
- EQUIPMENT/DEVICE ENCLOSURE
- WIRING CONNECTED
- WIRING NOT CONNECTED
- DEVICE OR EQUIPMENT TERMINAL
- CONTROL PANEL TERMINAL
- MCC TERMINAL
- TRANSFORMER WINDING
- FUSE
- TRANSFORMER WINDING
- ARC SUPPRESSOR (METAL OXIDE VARISTOR)
- DIODE

CONTACTBLOCK OPERATORS

N.O. N.C.

- PUSHBUTTON (1PB,2PB,ETC.)
- MUSHROOM HEAD PUSHBUTTON (1PB,2PB,ETC.)
- "HAND OFF AUTO" A1–1SS — SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION
- "OFF — ON" XX–1SS — OFF–ON SELECTOR SWITCH (1SS,2SS,ETC.) "X" = CLOSED IN THIS POSITION ARROW POSITION DENOTES OPEN/CLOSED STATUS (SHOWN IN "OPEN" POSITION)

CONTACTS

N.O. N.C.

- SINGLE BREAK CONTACTS
- DOUBLE BREAK CONTACTS (CONTACT BLOCKS)

RELAY CONTACTS

N.O. N.C.

- XXCR XXCR — INSTANTANEOUS CONTACT OF RELAY (1CR, 2CR, ETC.)
- XXTR XXTR — TIMED DELAY CONTACT OF RELAY (DELAY ON ENERGIZATION–ON DELAY) (1TR, 2TR, ETC.)
- XXTR XXTR — TIMED DELAY CONTACT OF RELAY (DELAY ON DE–ENERGIZATION–OFF DELAY) (1TR, 2TR, ETC.)
- X–OL X–OL — OVERLOAD RELAY (1OL, 2OL, ETC.)

MECHANICALLY ACTUATED SWITCHES

N.O. N.C.

- XXFS XXFS — FLOAT SWITCHES (1FS, 2FS, ETC.)
- XXLS XXLS — FREE
- XXLS XXLS — HELD

LIMIT SWITCHES (1LS, 2LS, ETC.)

ABBREVIATIONS
N.O. = NORMALLY OPEN
N.C. = NORMALLY CLOSED

MAGNETIC COILS

- XX XCR — CONTROL RELAY (1CR, 2CR, ETC.)
- XX XTR — TIMED DELAY RELAY (1CR, 2CR, ETC.)
- XX M — MAGNETIC MOTOR STARTER (1M, 2M, ETC.)
- XX XCON — MAGNETIC CONTACTOR (1CON, 2CON, ETC.)
- SOLENOID (1SV, 2SV, ETC.) (FOR VALVE UNLESS OTHERWISE NOTED)

PILOT LIGHTS

- G CP–1LT — INCANDESCENT TRANSFORMER TYPE (1LT, 2LT, ETC.)
- G CP–1LT — INCANDESCENT "PUSH–TO–TEST" (CONNECT TEST CIRCUIT TO LINE) (1LT, 2LT, ETC.)

LENS COLOR CODE
A = AMBER
B = BLUE
C = CLEAR
G = GREEN
O = ORANGE
R = RED
W = WHITE
Y = YELLOW

INDICATING INSTRUMENTS

- A — AMMETER
- AM — AMMETER RELAY
- H — HOUR METER (ELAPSED TIME METER)

ONE LINE DIAGRAMS SYMBOL SCHEDULE

SYMBOL | DESCRIPTION

- DEVICE OR EQUIPMENT TERMINAL
- WIRING CONNECTED
- BUS
- WIRING
- EQUIPMENT/DEVICE ENCLOSURE
- PLUG–IN CONNECTION
- NON–AUTOMATIC BREAKER
- THERMAL MAGNETIC CIRCUIT BREAKER
- MAGNETIC ONLY CIRCUIT BREAKER (MOTOR CIRCUIT PROTECTOR)
- SWITCH
- CONTACTOR
- THERMAL OVERLOAD
- FUSE
- POWER TRANSFORMER
- CONTROL POWER TRANSFORMER
- CURRENT TRANSFORMER
- CAPACITOR
- GROUND CONNECTION
- TRANSFER SWITCH
- M — WATTHOUR METER (REVENUE METERING)
- G — GENERATOR
- N — NEUTRAL
- S/N — SOLID NEUTRAL
- MOTOR
- CONTROL STATION/PUSHBUTTON/ SPEED POTENTIOMETER
- LOAD BREAK FUSE HOLDER AND FUSE
- SAFETY DISCONNECT IN NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED
- AUXILIARY CONTACT
- NON–SWITCHED CONDUCTOR

GENERAL ELECTRICAL ACRONYMS AND ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFC	AVAILABLE FAULT CURRENT
AI	ANALOG INPUT
AL	ALUMINUM
AO	ANALOG OUTPUT
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKER
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DISCRETE INPUT
DO	DISCRETE OUTPUT
DVF	VFD OUTPUT DV/DT FILTER
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EWD	ELEMENTARY WIRING DIAGRAM
FMC	FLEXIBLE METAL CONDUIT
FU	FUSE
FVNR	FULL VOLTAGE NON REVERSING
FVR	FULL VOLTAGE REVERSING
G	GROUNDING CONDUCTOR
GFP	GROUND FAULT PROTECTOR
GND	GROUND
HP	HORSEPOWER
IC	INTERRUPTING CAPACITY
KA	KILO AMPERES
KAIC	KILO AMPERES INTERRUPTING CAPACITY
KCMIL	THOUSAND CIRCULAR MILLS
KV	KILOVOLT
KVA	KILOVOLT–AMPERE
KVAR	KILOVAR (REACTIVE KILOVOLT AMPERE)
KW	KILOWATT
KWH	KILOWATT–HOUR
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LPU	LINE PROTECTION UNIT
LNR	LINE REACTOR
M	MAGNETIC CONTACTOR
mA	MILLIAMPERES
MCP	MOTOR CURRENT PROTECTOR – MAGNETIC ONLY CIRCUIT BREAKER
MEG	MEGOHM
MLO	MAIN LUGS ONLY
mV	MILLIVOLT
MW	MEGAWATT
N	NEUTRAL CONDUCTOR
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
NESC	NATIONAL ELECTRICAL SAFETY CODE
OCP	OVERCURRENT PROTECTOR
ODP	OPEN DRIP PROOF
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OL	OVERLOAD
P	POLE
PF	POWER FACTOR
PH	PHASE
PRMC	PVC COATED RIGID METALLIC (STEEL) CONDUIT
PS	POWER SUPPLY
PSE	PUGET SOUND ENERGY
PVC	POLYVINYL CHLORIDE
RMC	RIGID METAL (STEEL) CONDUIT
RNC	RIGID NON–METALLIC CONDUIT
RPM	REVOLUTIONS PER MINUTE
RTRC	REINFORCED THERMOSETTING RESIN CONDUIT
SEC	SECOND
SHL'D	SHIELDED
SPD	SURGE PROTECTIVE DEVICE
STP	SHIELDED TWISTED PAIR
SUSE	SUITABLE FOR USE AS SERVICE ENTRANCE
TB	TERMINAL BLOCK
TEFC	TOTALLY ENCLOSED FAN COOLED
TENV	TOTALLY ENCLOSED NON–VENTILATED
V	VOLT
VA	VOLT AMPERE
VR	VOLTAGE MONITORING RELAY
W	WATT
WH	WATT HOUR
WP	WEATHER PROOF

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: DEC 2020 | DRAWN: TWG | CHECKED: JRM | APPROVED: MLO

PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	APP'D

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
ELECTRICAL SYMBOL SCHEDULES

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

SHEET: E-1
OF: 9
JOB NO.: 20503
DWG:C–E00–01

ELECTRICAL GENERAL NOTES

G01 IN GENERAL, DEVICES SHOWN ON THE ELECTRICAL DRAWINGS IN BACKGROUND (GRAY OR SCREENED) REPRESENT ONE OF THE FOLLOWING UNLESS NOTED OTHERWISE ON AN INDIVIDUAL SHEET:

- STRUCTURAL OR ARCHITECTURAL BUILDING STRUCTURES SUCH AS WALLS, DOORS, STAIRS, ETC. AND STRUCTURAL FRAMING MEMBERS.
- MECHANICAL EQUIPMENT OR DEVICES SUCH AS HVAC UNITS AND PROCESS EQUIPMENT WHICH ARE SHOWN ON THE MECHANICAL DRAWINGS AND ARE SHOWN IN BACKGROUND (GRAY OR SCREENED) ON THE ELECTRICAL DRAWINGS TO ASSIST IN DETERMINING THE LOCATION OF THE EQUIPMENT, CONNECTIONS AND DEVICES.
- DISTRIBUTION EQUIPMENT SHOWN ON ELECTRICAL PLAN DRAWINGS (SUCH AS LIGHTING PLANS) IS SHOWN IN BACKGROUND (GRAY OR SCREENED) IN ORDER TO CLARIFY OTHER ELECTRICAL DEVICES AND CIRCUITS SHOWN ON THAT SHEET.
- EQUIPMENT OR DEVICES THAT ARE EXISTING TO REMAIN (AND TO BE PRESERVED AND PROTECTED) WHERE SHOWN ON REVISED/MODIFICATIONS ELECTRICAL SHEETS.

G02 THE EXISTING FUNCTION OF THE LIFT STATION TO PUMP SEWAGE ARE TO REMAIN IN OPERATION AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK OF THE CONSTRUCTION PROCESS AND, TO ENSURE THAT ALL PUMPING FUNCTIONS REMAIN IN OPERATION DURING THE COURSE OF CONSTRUCTION, INCLUDING PROVIDING BYPASS PUMPING OR OTHER MEANS. FOR ITEMS THAT ARE SHOWN TO BE DEMOLISHED, THEY SHALL REMAIN IN OPERATION UNTIL NO LONGER REQUIRED FOR THE OPERATION OF THE LIFT STATION.

G03 THE ELECTRICAL EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS SHOWN ON THESE DRAWINGS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED AS BEING DEMOLISHED OR MODIFIED. THE CONTRACTOR SHALL COORDINATE NEW CONDUIT AND CIRCUIT ROUTING AND ELEVATIONS WITH EXISTING EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS PRIOR TO INSTALLATION. PROVIDE ALL MEANS NECESSARY TO PRESERVE, PROTECT AND KEEP EXISTING EQUIPMENT, MATERIALS, DEVICES AND ELECTRICAL CIRCUITS IN OPERATION DURING THE COURSE OF CONSTRUCTION INCLUDING PROVIDING TEMPORARY CIRCUITS TO ALLOW THEM TO REMAIN IN OPERATION AT ALL TIMES. THE INFORMATION SHOWN FOR EXISTING EQUIPMENT, MATERIALS AND UNDERGROUND OR CONCEALED ELECTRICAL CIRCUITS IS BASED ON AVAILABLE RECORD INFORMATION AND ON SITE SURVEY OF EXPOSED CIRCUITS, AND IS PROVIDED FOR INFORMATION ONLY. PRIOR TO COMMENCING NEW ELECTRICAL WORK OR TRENCHING, VERIFY LOCATIONS AND CONTENTS OF EXISTING EQUIPMENT, MATERIALS, DEVICES AND EXPOSED, CONCEALED OR UNDERGROUND CIRCUITS IN FIELD (BY TONING, X-RAY, EXCAVATION POTHOLING OR OTHER MEANS).

G04 THE DRAWINGS ARE NOT INTENDED TO SHOW ALL OF THE EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND REVIEW EXISTING CONDITIONS PRIOR TO BIDDING. WHERE EXISTING CONDITIONS DIFFER FROM THOSE SHOWN TO THE EXTENT IT WILL IMPACT THE COST OF THE CONTRACTOR'S WORK, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING A MINIMUM OF 10 DAYS PRIOR TO BIDDING.

G05 THERE ARE EXISTING AND NEW PROCESS PIPING AND EQUIPMENT INSTALLED/TO BE INSTALLED ON THIS SITE. THE CONTRACTOR SHALL COORDINATE NEW CONDUIT AND CIRCUIT ROUTING AND ELEVATIONS WITH EXISTING EQUIPMENT, PIPING, AND OTHER CONSTRUCTION ACTIVITIES PRIOR TO INSTALLATION. LOCATE EXISTING UNDERGROUND FACILITIES, PRESERVE AND PROTECT THEM DURING CONSTRUCTION AND ROUTE NEW CONDUITS TO AVOID CONFLICTS BY INSTALLING AT DIFFERENT LEVELS OR WHEN APPROVED BY THE ENGINEER, DIFFERENT ROUTING.

G06 EXISTING EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE IMMEDIATELY REPLACED WITH NEW EQUIPMENT, MATERIALS, DEVICES AND CIRCUITS OF LIKE MATERIALS AT NO ADDITIONAL COST TO THE OWNER.

G07 DEMOLISH EXISTING EQUIPMENT, MATERIALS AND DEVICES SHOWN CROSS HATCHED AND AS INDICATED UNLESS OTHERWISE NOTED. REMOVE CONDUIT (EXCEPT CONCEALED OR UNDERGROUND CONDUIT AS NOTED BELOW), FITTINGS, HANGERS, CONDUCTORS, DEVICE/JUNCTION BOXES, AND SIMILAR ITEMS ASSOCIATED WITH ITEM NOTED, BACK TO NEXT DEVICE REMAINING ON THE CIRCUIT OR BACK TO THE PANEL/MCC UNIT FROM WHICH THE CIRCUIT ORIGINATES. WHERE DEVICE BEING REMOVED IS IN THE MIDDLE OF A CIRCUIT, REPLACE/REPAIR CIRCUIT AS REQUIRED TO KEEP REMAINING DEVICES ON CIRCUIT IN OPERATION. ABANDON-IN-PLACE UNUSED CONDUITS CONCEALED IN SLAB, OR UNDERGROUND BELOW SLAB OR BELOW GRADE. CUT EXPOSED PORTION FLUSH WITH SLAB, OR 12" BELOW GRADE, AND PLUG WITH NON-SHRINK GROUT. CUT, PATCH, REPAIR AND PAINT EXISTING WALLS/CEILINGS AS REQUIRED TO REMOVE EXISTING DEVICES/EQUIPMENT. LEGALLY DISPOSE OF MATERIAL/EQUIPMENT WHICH ARE REMOVED.

G08 SALVAGE EQUIPMENT, MATERIALS AND DEVICES TO OWNER PER REQUIREMENTS OF DIVISION 1, SECTION 01900 UNLESS OTHERWISE NOTED ON DRAWINGS.

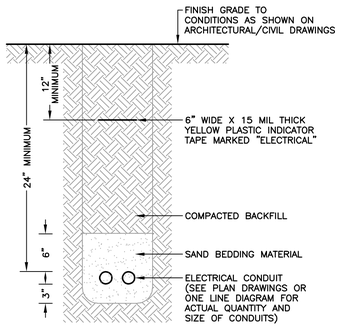
G09 WIRING METHODS, MATERIALS AND EQUIPMENT IN THIS AREA SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR CLASS I, DIVISION 1 HAZARDOUS (CLASSIFIED) LOCATIONS. REFER TO THE HAZARDOUS AREA CLASSIFICATIONS LETTER IN THE SPECIFICATIONS APPENDIX FOR FURTHER INFORMATION.

G10 WIRING METHODS, MATERIALS AND EQUIPMENT IN THIS AREA SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE FOR CLASS I, DIVISION 2 HAZARDOUS (CLASSIFIED) LOCATIONS. REFER TO THE HAZARDOUS AREA CLASSIFICATIONS LETTER IN THE SPECIFICATIONS APPENDIX FOR FURTHER INFORMATION.

G11 COORDINATE CONDUIT STUB UP LOCATIONS WITH APPROVED EQUIPMENT SHOP DRAWING SUBMITTALS PRIOR TO LOCATING CONDUIT STUB UPS IN THE SLAB. LOCATE CONDUIT STUB UPS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.

LIGHTING FIXTURE SCHEDULE

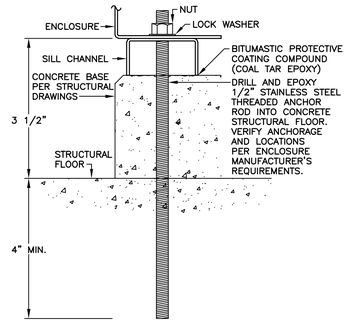
TYPE	DESCRIPTION	MANUFACTURER NAME	MANUFACTURER CATALOG NO.	LAMP QTY	LAMP VA	LAMP CATALOG NO	REMARKS
B	LED, 4' LONG, SURFACE MOUNTED,WIDE BEAM, FUSED, ENCLOSED AND GASKETED, ONE PIECE HOUSING, MOLDED FIBERGLASS REINFORCED POLYESTER BODY, IMPACT RESISTANT POLYCARBONATE DIFFUSER, STAINLESS STEEL STAINLESS STEEL LATCHES, WET LABEL, 80 CRI, 5 YEAR WARRANTY	DAYBRITE	V2-W-P-E-43L-840-4-UNV-GLR-WHP-TBK	1	38	LED 4000K	PROIVDE WITH TBK TOP BRACKET KIT
BB	LED, POLE MOUNTED OUTDOOR AREA LIGHT, RECTANGULAR, LOW PROFILE, DIE-CAST ALUMINUM HOUSING, TYPE IV DISTRIBUTION, DARK BRONZE POWDER COAT FINISH, FUSING, 120 VOLT, 5 YEAR WARRANTY	GARDCO	P21-A1-1-4-B0LA-NW-120-BRP-F	1	78	LED 4000K	
CC	LED, WALL MOUNTED OUTDOOR, DIE-CAST ALUMINUM HOUSING, CLEAR GLASS LENS, TYPE IV DISTRIBUTION, BRONZE FINISH, FUSING, 5 YEAR WARRANTY	GARDCO	111-16L-350-NW-G2-4-UNV-F1-BZ	1	18	LED 4000K	
P1	SQUARE, ASTM A-500 GRADE B STEEL, 20 FOOT LENGTH, ELECTROSTATICALLY APPLIED DARK BRONZE POLYESTER POWDER FINISH, POLE GROUNDING LUG ASSEMBLY	UNITED LIGHTING STANDARDS OR EQUAL	RPSQ-20-4-7-DB-GFCI-IUC				



DETAIL 1/E-2
TRENCH FOR ELECTRICAL CIRCUITS SECONDARY POWER OR SIGNAL CIRCUITS

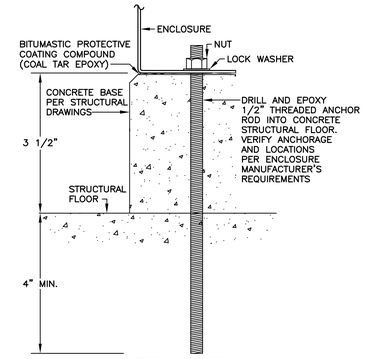
SCALE: NONE

NOTE: CONDUITS ARE SHOWN DIAGRAMATICALLY. SEE PLAN DRAWINGS FOR ACTUAL CONDUIT QUANTITIES, DEPTH, SIZES AND ARRANGEMENTS.



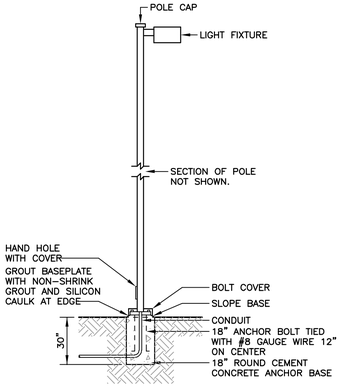
DETAIL 2/E-2
FLOOR MOUNTED ENCLOSURE MOUNTING WITH CHANNEL

SCALE: NONE



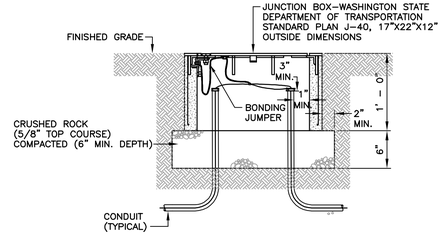
DETAIL 3/E-2
FLOOR MOUNTED ENCLOSURE MOUNTING

SCALE: NONE



DETAIL 5/E-2
AREA LIGHT

SCALE: NONE



DETAIL 6/E-2
STANDARD LOCKING JUNCTION BOX

SCALE: NONE

NOTE: CONDUITS ARE SHOWN DIAGRAMATICALLY. SEE PLAN DRAWINGS FOR ACTUAL CONDUIT QUANTITIES, DEPTH, SIZES AND ARRANGEMENTS.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

0 1" 2"

TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: _____

EXPIRATION DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: DEC 2020 | DRAWN: MLO | CHECKED: JRM | APPROVED: MLO

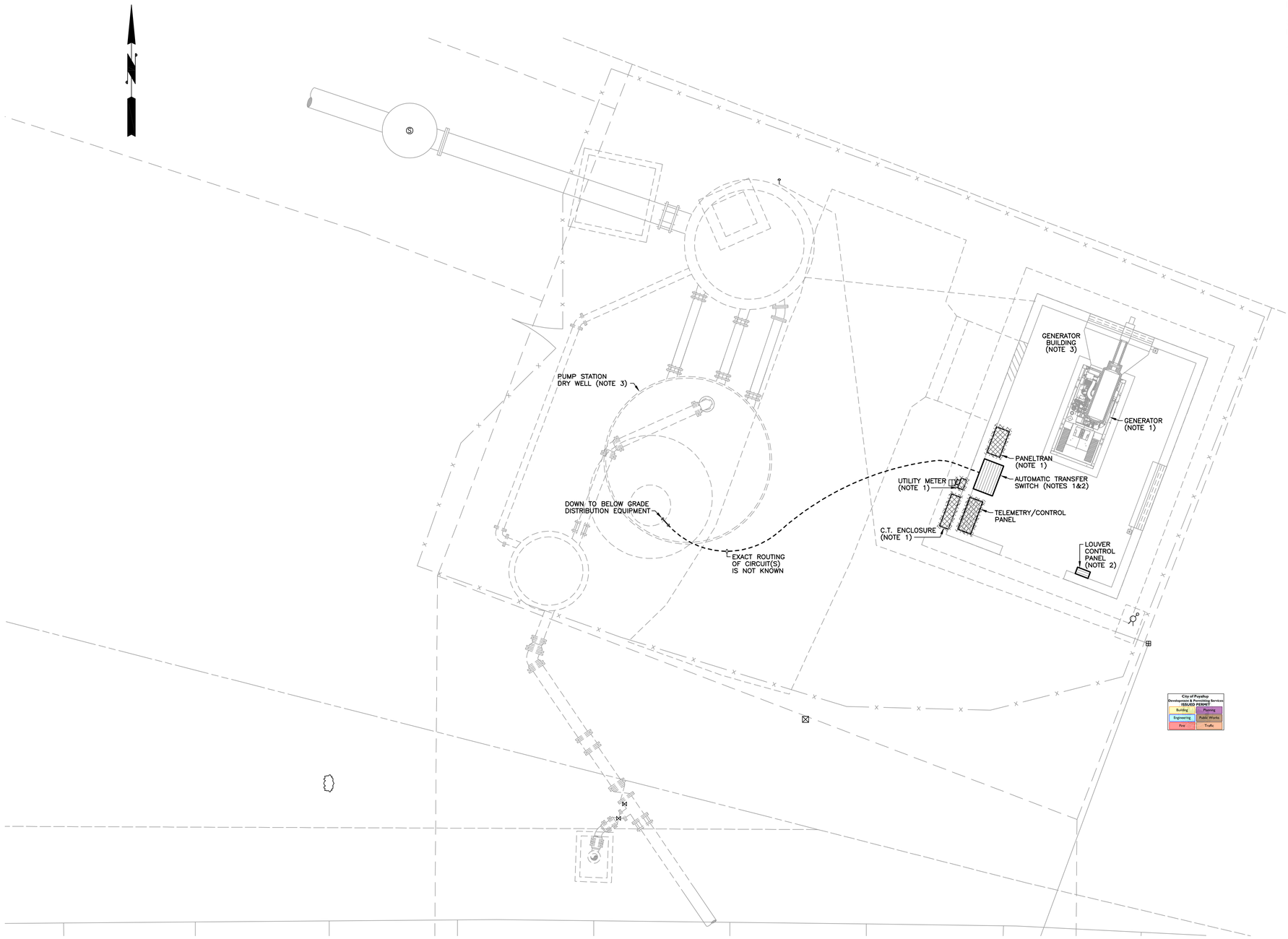
PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	APP'D

CITY OF PUYALLUP
WASHINGTON
PIERCE COUNTY
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
ELECTRICAL DETAILS AND GENERAL NOTES

SHEET: E-2
OF: 9

JOB NO.: 20503
DWG:C-E00-02



NOTES:

SEE SHEET E–2 FOR GENERAL NOTES FOR PLAN SHEETS (G01, G02, ETC.)

1. SEE EXISTING ONE LINE DIAGRAM SHEET E–5 FOR CIRCUIT AND EQUIPMENT INFORMATION. SEE DEMOLITION ONE LINE DIAGRAM SHEET E–5 FOR INFORMATION ON DEMOLITION OF EXISTING EQUIPMENT AND CIRCUITS.
2. PRESERVE AND PROTECT DEVICE FOR REUSE. SEE MODIFIED PLANS FOR FURTHER INFORMATION.
3. DEMOLISH ALL ELECTRICAL EQUIPMENT, DEVICES, CIRCUITS, BOXES, FITTINGS, HANGERS, AND SIMILAR ITEMS AFTER ALL EXISTING PUMPS ARE TAKEN OUT OF SERVICE. EXCEPT FOR EQUIPMENT NOTED FOR REUSE.

EXISTING/DEMOLITION ELECTRICAL SITE PLAN
NORTH LEVEE ROAD PUMP STATION

SCALE: 1/4" = 1'–0"
(GENERAL NOTES: G01, G02, G03, G04, G05, G06, G07, G08)
(NOTE 3)

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: DEC 2020
DRAWN: MLO
CHECKED: JRM
APPROVED: MLO

No.	REVISION	DATE	APPD

PRELIMINARY NOT FOR CONSTRUCTION

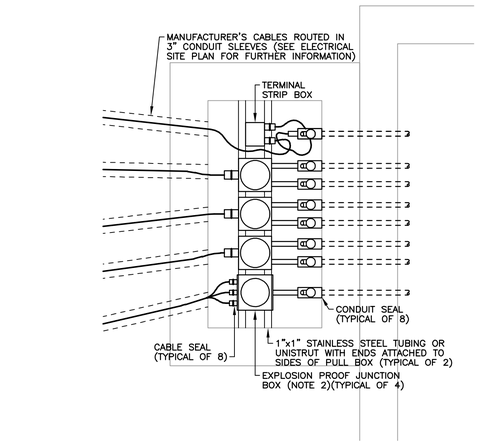
CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON

NORTH LEVEE ROAD PUMP STATION REPLACEMENT

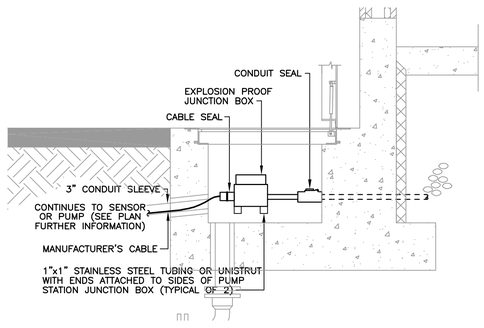
EXISTING/DEMOLITION ELECTRICAL SITE PLAN
NORTH LEVEE ROAD PUMP STATION

SHEET: **E-3**
OF: **9**

JOB NO.:
DWG:C–E00–03



PLAN VIEW



SIDE VIEW

DETAIL 1/E-4
PUMP STATION JUNCTION BOX
SCALE: 3/4" = 1'-0"

MODIFIED ELECTRICAL SITE PLAN
NORTH LEVEE ROAD PUMP STATION
SCALE: 1/4" = 1'-0"
(GENERAL NOTES: G01, G02, G04, G05, AND G06)

NOTES:

SEE SHEET E-2 FOR GENERAL NOTES FOR PLAN SHEETS (G01, G02, ETC.)

1. SEE ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
2. SPLICE CONDUCTORS SHOWN TO MANUFACTURER'S CABLE(S) IN JUNCTION BOX.
3. ROUTE MANUFACTURER'S CABLES IN 3" PVC SLEEVE ENCASED IN CONCRETE AS SHOWN ON SHEET M-6. SEE DETAILS 1 AND 2 ON SHEET M-3 FOR MOUNTING INFORMATION.
4. SEE DETAIL 1/E-2 FOR TRENCHING INFORMATION.
5. ROUTE PUMP CABLE IN 3" PVC SLEEVE ENCASED IN CONCRETE AS SHOWN ON SHEET M-6. SEE DETAILS 1 AND 2 ON SHEET M-3 FOR MOUNTING INFORMATION.

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

APPROVED
BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
The City will not be responsible for errors and/or omissions on these plans.
Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: DEC 2020	DRAWN: MLO	CHECKED: JRM	APPROVED: MLO

No.	REVISION	DATE	APPD
	PRELIMINARY NOT FOR CONSTRUCTION		

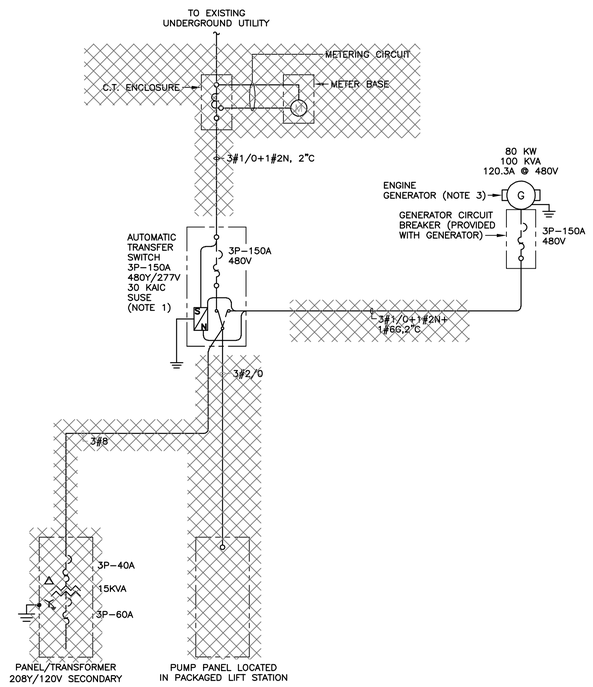
CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
MODIFIED ELECTRICAL SITE PLAN
NORTH LEVEE ROAD PUMP STATION

SHEET: E-4
OF: 9
JOB NO.:
DWG:C-E00-04

PANELBOARD CIRCUIT SCHEDULE
PANEL "PT"

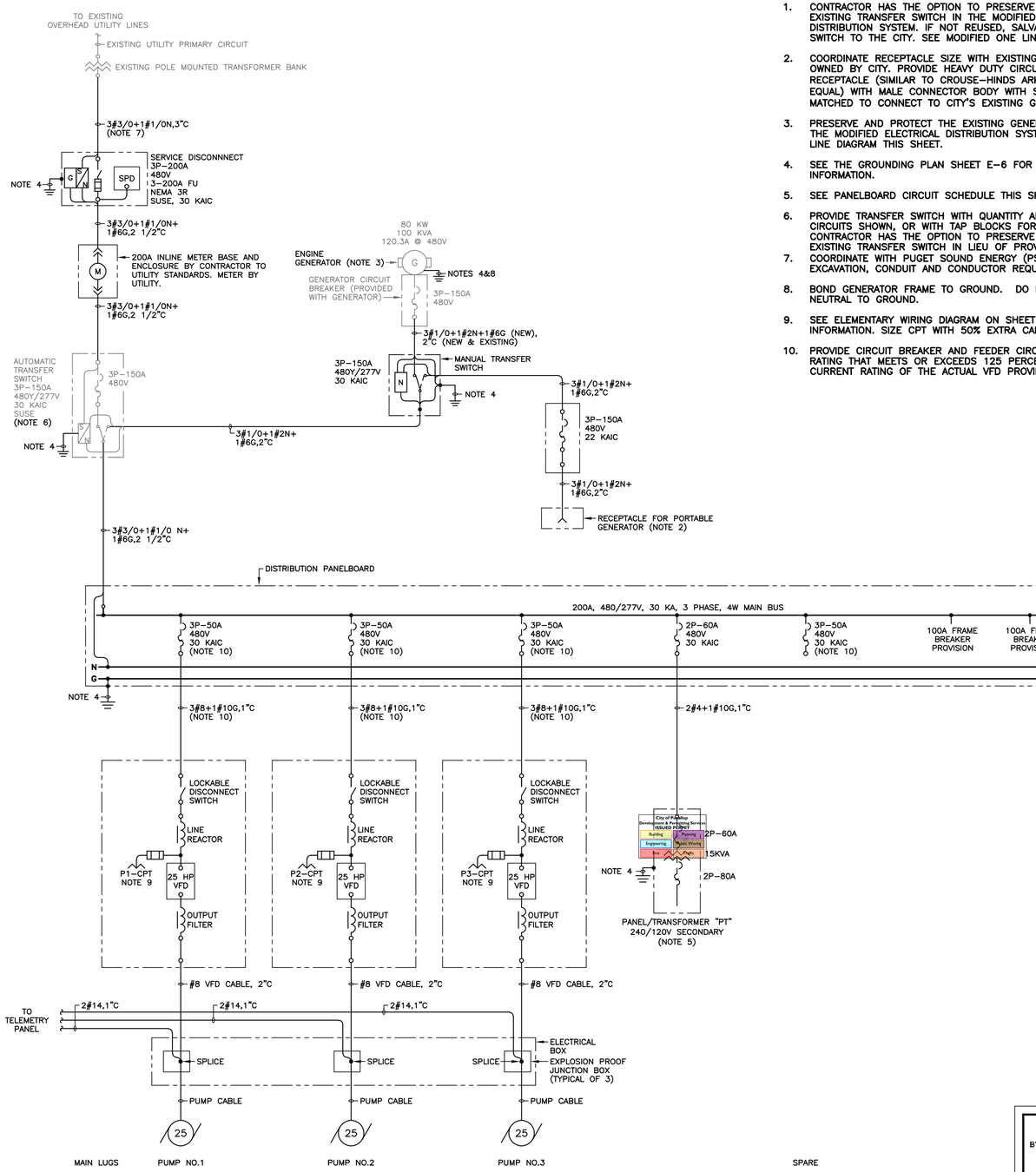
SECTION 1 OF 1

CKT. #	LOAD DESCRIPTION	BREAKER TYPE	POLE #	POLE #	BREAKER TYPE	LOAD DESCRIPTION	CKT. #
1	GENERATOR BLOCK HEATER	1P–20A	1	2	1P–20A	INTERIOR LIGHTING	2
3	GENERATOR BATTERY CHARGER	1P–20A	3	4	1P–20A	EXTERIOR AND SITE LIGHTING	4
5	TELEMETRY PANEL	1P–20A	5	6	1P–20A	HOT BOX RECEPTACLE	6
7	RECEPTACLES	1P–20A	7	8	1P–20A	LOUVER CONTROL PANEL	8
9	HVAC UNIT	2P–20A	9	10	1P–20A	EXHAUST FAN	10
			11	12	1P–20A	SPARE	12
13	SUMP PUMP	1P–20A	13	14	1P–20A	SPARE	14
15	FLOW METER	1P–20A	15	16	1P–20A	SPARE	16
17	SPARE	1P–20A	17	18	1P–20A	SPARE	18



EXISTING ONE LINE DIAGRAM
NORTH LEVEE ROAD PUMPING STATION

SCALE: NONE
(GENERAL NOTE P01)



MODIFIED ONE LINE DIAGRAM
NORTH LEVEE ROAD PUMPING STATION

SCALE: NONE

NOTES:

1. CONTRACTOR HAS THE OPTION TO PRESERVE AND REUSE THE EXISTING TRANSFER SWITCH IN THE MODIFIED ELECTRICAL DISTRIBUTION SYSTEM. IF NOT REUSED, SALVAGE THE TRANSFER SWITCH TO THE CITY. SEE MODIFIED ONE LINE DIAGRAM THIS SHEET.
2. COORDINATE RECEPTACLE SIZE WITH EXISTING GENERATOR EQUIPMENT OWNED BY CITY. PROVIDE HEAVY DUTY CIRCUIT BREAKING RECEPTACLE (SIMILAR TO CROUSE–HINDS ARKTITE, APPLETON OR EQUAL) WITH MALE CONNECTOR BODY WITH SIZE AND MANUFACTURER MATCHED TO CONNECT TO CITY'S EXISTING GENERATOR PLUG.
3. PRESERVE AND PROTECT THE EXISTING GENERATOR FOR REUSE WITH THE MODIFIED ELECTRICAL DISTRIBUTION SYSTEM. SEE MODIFIED ONE LINE DIAGRAM THIS SHEET.
4. SEE THE GROUNDING PLAN SHEET E–6 FOR GROUNDING INFORMATION.
5. SEE PANELBOARD CIRCUIT SCHEDULE THIS SHEET.
6. PROVIDE TRANSFER SWITCH WITH QUANTITY AND SIZE OF LUGS FOR CIRCUITS SHOWN, OR WITH TAP BLOCKS FOR CIRCUITS SHOWN. CONTRACTOR HAS THE OPTION TO PRESERVE AND REUSE THE EXISTING TRANSFER SWITCH IN LIEU OF PROVIDING A NEW UNIT.
7. COORDINATE WITH PUGET SOUND ENERGY (PSE) FOR TRENCHING, EXCAVATION, CONDUIT AND CONDUCTOR REQUIREMENTS.
8. BOND GENERATOR FRAME TO GROUND. DO NOT BOND GENERATOR NEUTRAL TO GROUND.
9. SEE ELEMENTARY WIRING DIAGRAM ON SHEET E–8 FOR FURTHER INFORMATION. SIZE CPT WITH 50% EXTRA CAPACITY.
10. PROVIDE CIRCUIT BREAKER AND FEEDER CIRCUIT WITH CURRENT RATING THAT MEETS OR EXCEEDS 125 PERCENT OF THE INPUT CURRENT RATING OF THE ACTUAL VFD PROVIDED.

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

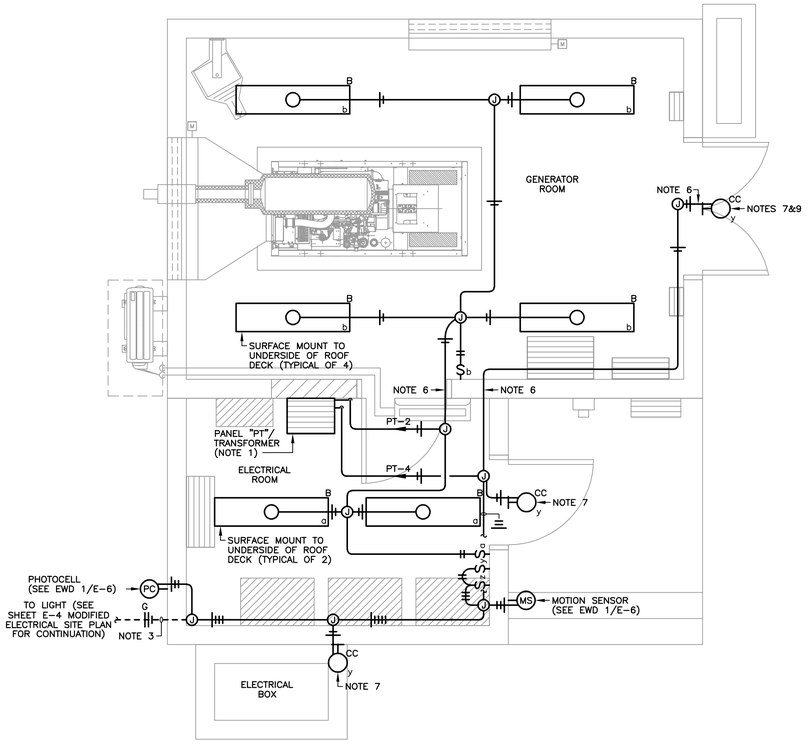
DATE: DEC 2020 | DRAWN: JRM/MLO | CHECKED: JRM | APPROVED: MLO

PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	APPD

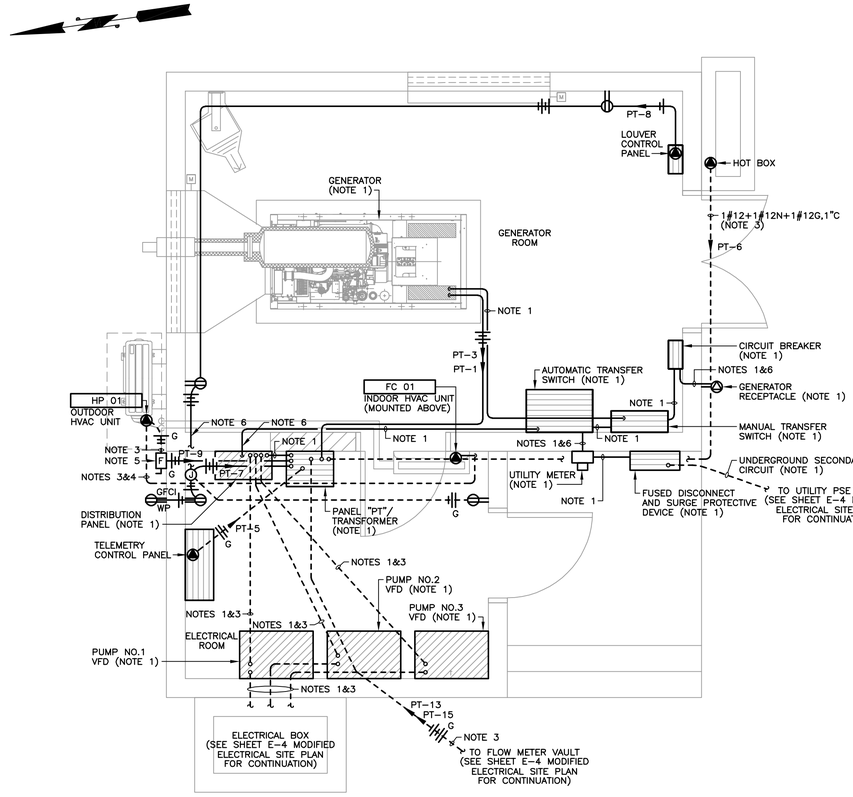
CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
ONE LINE DIGRAMS

SHEET: E-5
OF: 9
JOB NO.:
DWG:C–E00–05



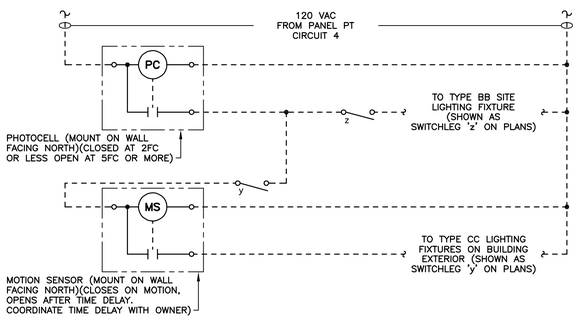
MODIFIED LIGHTING PLAN
GENERATOR BUILDING

SCALE: 3/8" = 1'-0"
(GENERAL NOTES: G01, G02, G04, G05, AND G06)



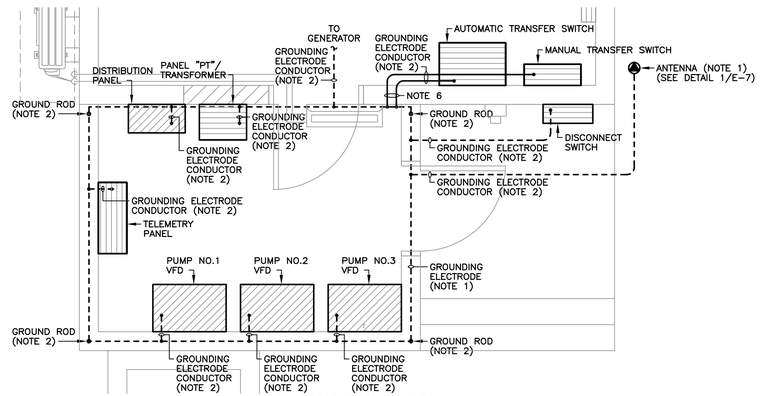
MODIFIED POWER PLAN
GENERATOR BUILDING

SCALE: 3/8" = 1'-0"
(GENERAL NOTES: G01, G02, G04, G05, AND G06)



EWD 1/E-6
EXTERIOR LIGHTING CONTROL

SCALE: NONE



GROUNDING PLAN
GENERATOR BUILDING

SCALE: 3/8" = 1'-0"
(GENERAL NOTES: G01, G02, G04, G05, AND G06)

NOTES:

SEE SHEET E-2 FOR GENERAL NOTES FOR PLAN SHEETS (G01, G02, ETC.)

1. SEE ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
2. PROVIDE #2 BARE COPPER GROUNDING ELECTRODE IN BUILDING FOOTING OR 30' DEEP WHERE THERE IS NO FOOTING. PROVIDE FOUR 3/4"X10' COPPER CLAD GROUND RODS CONNECTED TO GROUNDING ELECTRODE AS SHOWN. PROVIDE GROUNDING ELECTRODE CONDUCTORS FROM GROUNDING ELECTRODE TO THE FOLLOWING:

A. SERVICE DISCONNECT	#2
B. PUMP NO.1 VFD	#2
C. PUMP NO.2 VFD	#2
D. PUMP NO.3 VFD	#2
E. AUTOMATIC TRANSFER SWITCH	#2
F. TELEMETRY PANEL	#8
G. PANEL "PT"	#8
H. GENERATOR FRAME	#2
I. ANTENNA	#8
J. MANUAL TRANSFER SWITCH	#2
K. DISTRIBUTION PANEL	#4

EXOTHERMICALLY WELD ALL CONNECTIONS. ALL ABOVE GRADE CONDUCTORS SHALL BE IN PVC CONDUIT.

3. SEE DETAIL 1/E-2 FOR TRENCHING INFORMATION.
4. PROVIDE MANUFACTURER'S RECOMMENDED CONDUCTORS IN 3/4" MINIMUM CONDUIT.
5. PROVIDE 2P-30A, NEMA 3R, HEAVY DUTY FUSED DISCONNECT WITH LOCK-OUT HANDLE. SIZE FUSES PER HVAC EQUIPMENT MANUFACTURER'S RECOMMENDATIONS FOR ACTUAL HVAC EQUIPMENT PROVIDED ON SITE.
6. CORE DRILL EXISTING WALL TO INSTALL NEW CONDUIT PER REQUIREMENTS IN CONTRACT SPECIFICATIONS.
7. COORDINATE LOCATIONS OF LIGHTING FIXTURES WITH EXTERIOR ELEVATIONS ON STRUCTURAL SHEETS PRIOR TO DEVICE ROUGH-IN.
8. COORDINATE EXACT LOCATION OF MECHANICAL EQUIPMENT AND ELECTRICAL CONNECTIONS ON EQUIPMENT WITH MECHANICAL EQUIPMENT INSTALLER AND MECHANICAL SUBMITTAL DRAWINGS PRIOR TO DEVICE ROUGH-IN.
9. PROVIDE SURFACE MOUNT DEVICE BOX FOR THIS LIGHTING FIXTURE.

City of Puyallup Development & Permitting Services ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

APPROVED
BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED DATE: _____
EXPIRATION DATE: _____
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
The City will not be responsible for errors and/or omissions on these plans.
Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

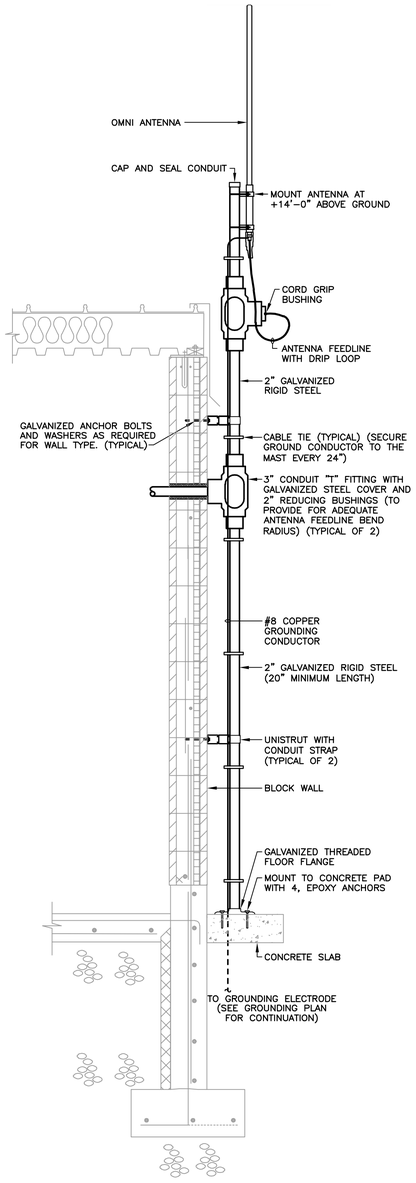
DATE: DEC 2020 | DRAWN: MLO | CHECKED: JRM | APPROVED: MLO

PRELIMINARY NOT FOR CONSTRUCTION

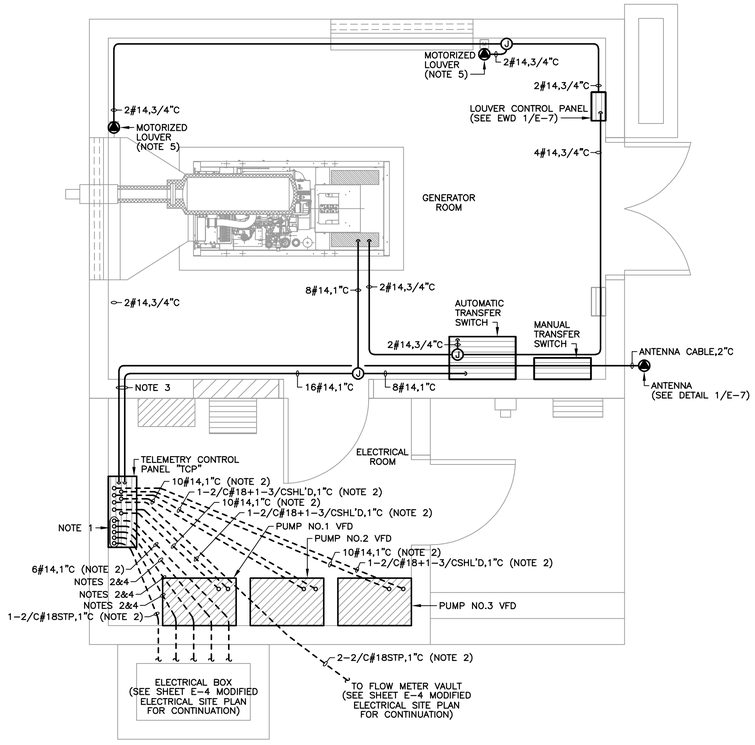
No.	REVISION	DATE	APPD

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
MODIFIED LIGHTING AND POWER PLANS
GENERATOR BUILDING

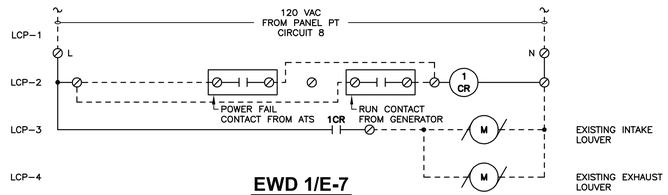
SHEET: E-6
OF: 9
JOB NO.:
DWG:C-E00-06



DETAIL 1/E-7
ANTENNA MOUNTING
SCALE: NONE



PROCESS INSTRUMENTATION AND CONTROL PLAN
GENERATOR BUILDING
SCALE: 3/8" = 1'-0"



EWD 1/E-7
LOUVER CONTROL PANEL
SCALE: NONE

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

NOTES:

SEE SHEET E-2 FOR GENERAL NOTES FOR PLAN SHEETS (G01, G02, ETC.)

1. ROUTE CONDUITS UP FROM FLOOR INTO INTRINSICALLY SAFE AREA OF TELEMETRY CONTROL PANEL.
2. SEE DETAIL 1/E-2 FOR TRENCHING INFORMATION.
3. CORE DRILL EXISTING WALL TO INSTALL NEW CONDUIT PER REQUIREMENTS IN CONTRACT SPECIFICATIONS.
4. SEE MODIFIED ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
5. CONNECT MOTORIZED DAMPER SPECIFIED UNDER DIVISION 15. EACH DAMPER MAY HAVE SEVERAL MOTOR OPERATORS. VERIFY EXACT QUANTITY OF MOTORS BEING PROVIDED WITH EQUIPMENT SUBMITTALS AND CONNECT TO EACH MOTOR. PROVIDE DISCONNECTING MEANS (SNAP-SWITCH) FOR EACH MOTOR.

0 1" 2"
TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

APPROVED
BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
The City will not be responsible for errors and/or omissions on these plans.
Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

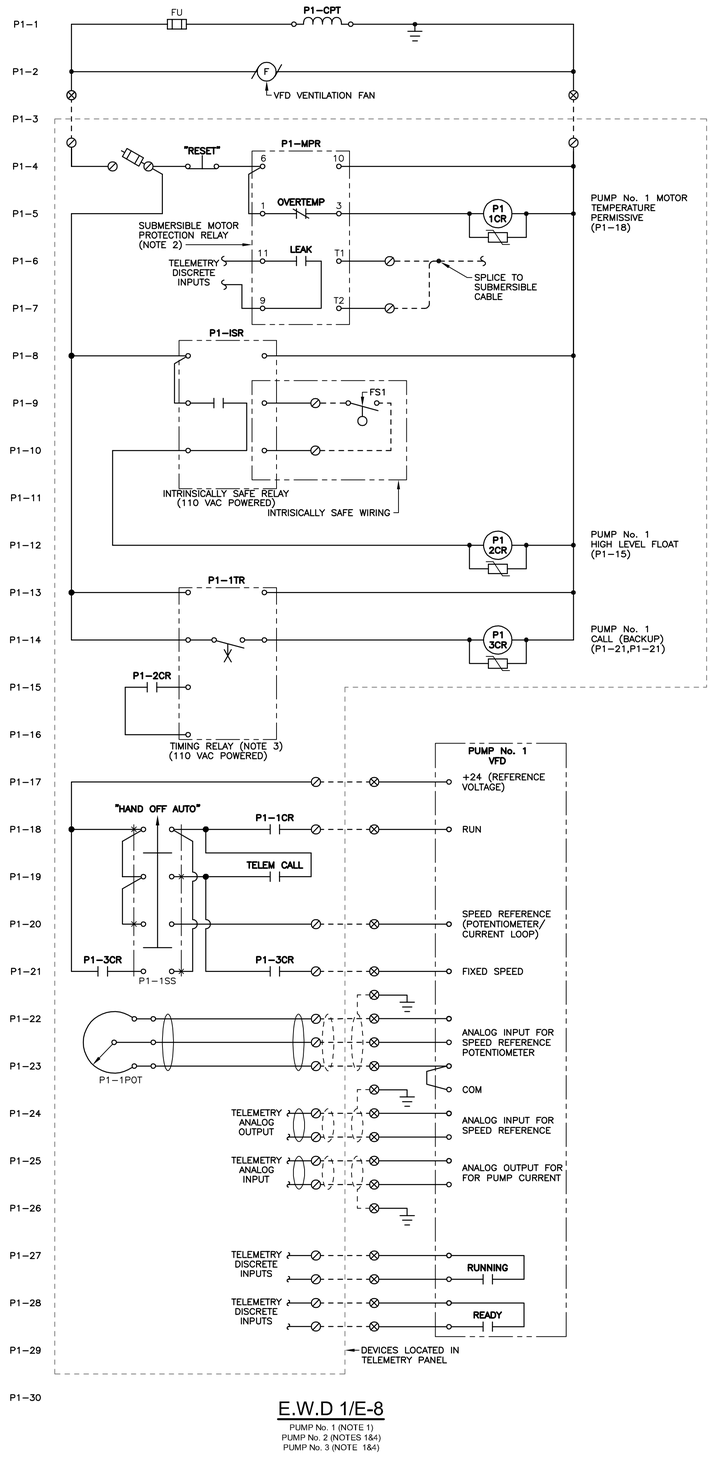
DATE: DEC 2020	DRAWN: MLO	CHECKED: JRM	APPROVED: MLO

PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	APPD

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
PROCESS INSTRUMENTATION AND CONTROL PLAN
GENERATOR BUILDING

SHEET: E-7
OF: 9
JOB NO.:
DWG:C-E00-07



E.W.D 1/E-8

PUMP No. 1 (NOTE 1)
PUMP No. 2 (NOTES 1&4)
PUMP No. 3 (NOTE 1&4)

NOTES:

1. TERMINAL NUMBERS AND WIRE LABELS ARE GENERIC AND PROVIDED AS A RECOMMENDATION. IF DIFFERENT TERMINAL NUMBERS ARE TO BE PROVIDED, SUBMIT MODIFIED SHEET WITH UPDATED WIRE LABELS WHICH MEET THE REQUITEMENTS OF SPECIFICATION 16120 3.3 K3 WITH THE MOTOR CONTROL CENTER SUBMITTAL.
2. INSTALL MOTOR PROTECTION RELAY PROVIDED WITH THE PUMP.
3. TIMING RELAY SHALL HAVE AN ON-DELAY OF 5 SECONDS AND AN OFF-DELAY ADJUSTED FROM AT LEAST 1 TO 10 MINUTES.
4. WIRING FOR PUMPS No. 2 AND No. 3 IS SIMILAR TO WIRING FOR PUMP No. 1.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: DEC 2020	DRAWN: THP	CHECKED: JRM	APPROVED: MLO

PRELIMINARY NOT FOR CONSTRUCTION

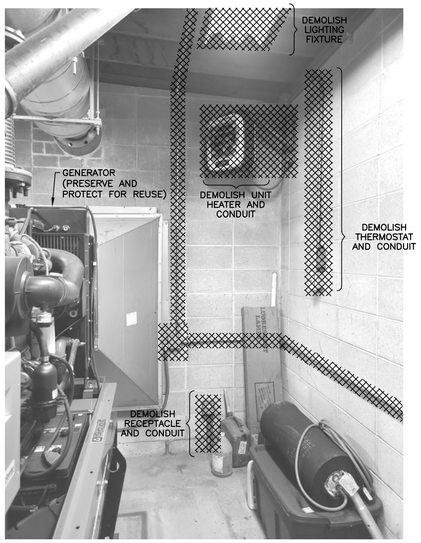
No.	REVISION	DATE	APPD

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
ELEMENTARY WIRING DIAGRAMS

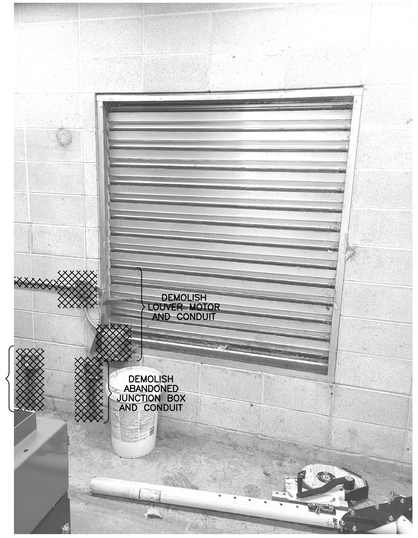
SHEET: **E-8**
OF: **9**

JOB NO.: 20503
DWG:C-E00-08

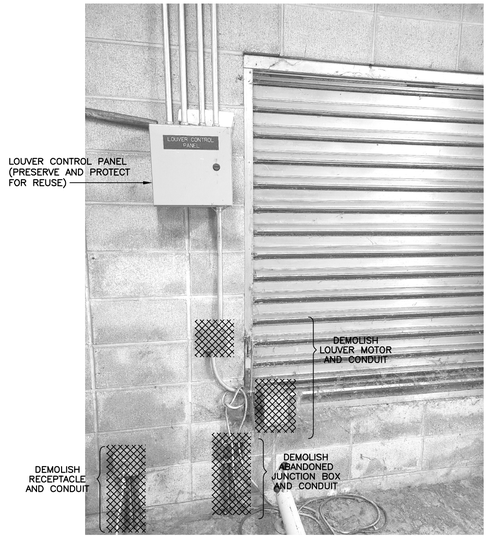
DETAIL 1/E-9
DRY WELL
SCALE: NONE



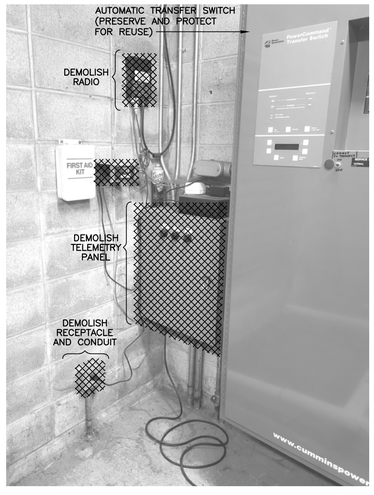
DETAIL 2/E-9
NORTHEAST CORNER
SCALE: NONE



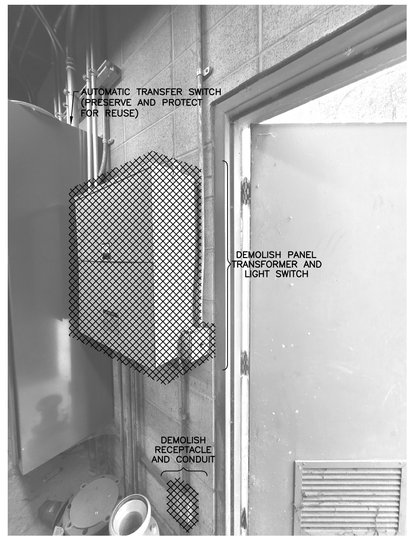
DETAIL 3/E-9
EAST WALL
SCALE: NONE



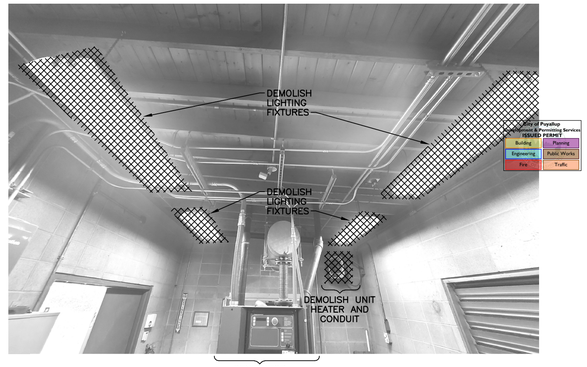
DETAIL 4/E-9
SOUTH WALL
SCALE: NONE



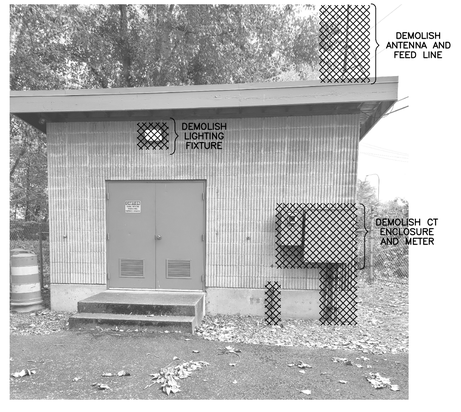
DETAIL 5/E-9
SOUTHWEST CORNER
SCALE: NONE



DETAIL 6/E-9
WEST WALL
SCALE: NONE



DETAIL 7/E-9
CEILING
SCALE: NONE



DETAIL 8/E-9
EXTERIOR WEST WALL
SCALE: NONE

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

APPROVED
BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____
NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.
The City will not be responsible for errors and/or omissions on these plans.
Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

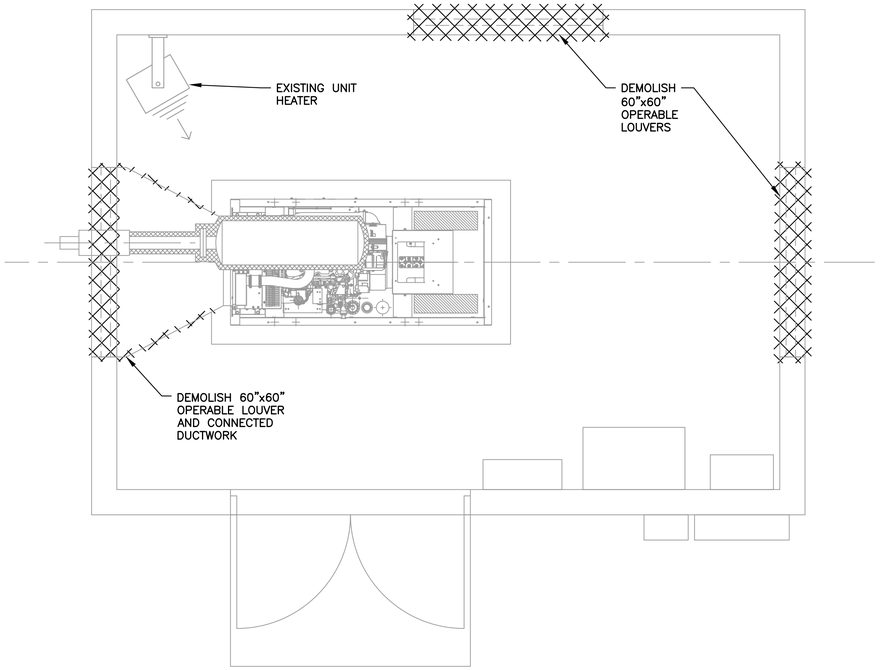
DATE: DEC 2020	
DRAWN: MLO	
CHECKED: JRM	
APPROVED: MLO	

No.	REVISION	DATE	APPD

PRELIMINARY NOT FOR CONSTRUCTION

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
DEMOLITION PHOTOS

SHEET: **E-9**
OF: **9**
JOB NO.: 20503
DWG:C-E00-09



HVAC DEMOLITION PLAN

SCALE: 1/2"=1'-0"

LOUVER SCHEDULE

BUILDING	ROOM NAME	LOUVER NO.	TYPE	MANUFACTURER & MODEL NO.	ROUGH OPENING SIZE (WxH)	MOUNTING HEIGHT	REMARKS
GENERATOR BUILDING	GENERATOR ROOM	LVR 01	INTAKE LOUVER	GREENHECK ESD-635 OR EQUAL	60"x60"	BOTTOM @ 16" AFF	PROVIDE EXTENDED SILL, HYLAR/KYNAR FINISH, BIRD SCREEN, INSECT SCREEN, AND CLIP ANGLES.
		LVR 02	EXHAUST LOUVER	GREENHECK ESD-635 OR EQUAL	60"x60"	BOTTOM @ 16" AFF	PROVIDE EXTENDED SILL, HYLAR/KYNAR FINISH, BIRD SCREEN, INSECT SCREEN, AND CLIP ANGLES.

CONTROL DAMPER SCHEDULE

BUILDING	ROOM NAME	DAMPER NO.	FRAME TYPE	MANUFACTURER & MODEL NO.	VOLTAGE AND PHASE	NOMINAL SIZE (WxH)	ACTUATOR MFR.	ACTUATOR MOUNTING	NO. OF ACTUATORS	FAIL POSITION	REMARKS
GENERATOR BUILDING	GENERATOR ROOM	MD 01	CHANNEL	GREENHECK ICD-45 OR EQUAL	115 V 1ø	60"x60"	BELLIMO OR EQUAL	EXTERNAL	1	OPEN	PROVIDE HI-PRO POLYESTER FINISH. OPEN WHEN GENERATOR IS RUNNING, OTHERWISE CLOSED.
		MD 02	CHANNEL	GREENHECK ICD-45 OR EQUAL	115 V 1ø	60"x60"	BELLIMO OR EQUAL	EXTERNAL	1	OPEN	PROVIDE HI-PRO POLYESTER FINISH. OPEN WHEN GENERATOR IS RUNNING, OTHERWISE CLOSED.

HEAT PUMP SCHEDULE

BUILDING	ROOM NAME	UNIT NO.	TYPE	MANUFACTURER & MODEL NO.	VOLTAGE, PHASE AND MCA	CONTROLS	STANDARD AIRFLOW	HEATING CAPACITY	COOLING CAPACITY	AHRI LISTED EFFICIENCY	REMARKS
GENERATOR BUILDING	ELECTRICAL ROOM	HP 01	OUTDOOR HEAT PUMP	MITSUBISHI MUZ-GL09NA-U1 OR EQUAL	230 V 1ø 9 A	FC 01	~1,200 CFM	8,100 BTU/HR @ 5 °F OAT	9,000 BTU/HR @ 95 °F OAT	24.6 SEER 12.8 HSPF	PROVIDE INSULATED LINE SET, INSULATED DRAIN PIPE, LINE HIDE SET, DRAIN PAN HEATER, AND WALL MOUNTING BRACKET.
		FC 01	INDOOR WALL FAN COIL	MITSUBISHI MSZ-GL09NA-U1 OR EQUAL	230 V 1ø 1 A	T 01	145-400 CFM				PROVIDE WIRELESS CONTROLLER MHK2. MOUNT ABOVE DOOR.

CONTROL SCHEDULE

BUILDING	ROOM NAME	UNIT NO.	TYPE	CONTROLLED EQUIPMENT	MANUFACTURER & MODEL NO.	HEAT SET POINT	COOL SET POINT	VOLTAGE AND PHASE	REMARKS
GENERATOR BUILDING	ELECTRICAL ROOM	T 01	WIRELESS PROGRAMMABLE THERMOSTAT	FC 01	MITSUBISHI MHK2 OR EQUAL	40 °F	90 °F	12 VDC	

HVAC DESIGN CRITERIA

OA VENTILATION

NONE: GENERATOR BUILDING SPACES ARE CONSIDERED NON-OCCUPIED EQUIPMENT ROOMS.

DESIGN TEMPERATURES

WINTER AMBIENT TEMP:	19 °F
SUMMER AMBIENT TEMP:	86 °F
INTERIOR HEATING SETPOINT:	40 °F
INTERIOR COOLING SETPOINT:	90 °F

HEATING/COOLING

ELECTRICAL ROOM:

REQ'D HEATING LOAD:	1.7 MBH
REQ'D COOLING LOAD:	6 MBH
TYPE:	SPLIT HEAT PUMP AND FAN COIL
DESIGN AIR FLOW:	120-440 CFM

CONTROL DESCRIPTION:

HEAT PUMP [HP 01] AND FAN COIL [FC 01] PROVIDE HEATING AND COOLING FOR THE ELECTRICAL ROOM AND IS CONTROLLED BY THERMOSTAT [T 01].

MOTORIZED DAMPERS [MD 01] AND [MD 02] SHALL BE INTERLOCKED WITH THE BACKUP GENERATOR TO OPEN WHEN THE GENERATOR IS OPERATING.

HVAC SYMBOLS

- # X # — RECTANGULAR DUCT (DIMENSION SHOWN X DIMENSION HIDDEN)
- TRANSITION, CONCENTRIC, 15° TYP
- LOUVER
- T — THERMOSTAT, WALL MOUNTED; WALL TYPE VARIES, SEE S-SHEETS FOR WALL TYPE
- M — ELECTRIC MOTOR
- FLOW DIRECTION, EXHAUST LOUVER OR SUPPLY DIFFUSER/GRILLE
- FLOW DIRECTION, INTAKE LOUVER OR EXHAUST/RETURN GRILLE

HVAC EQUIPMENT & AIR DEVICE IDENTIFICATIONS

EQUIPMENT TYPE (SEE LIST BELOW) — POL XX — EQUIPMENT NUMBER (SEQUENTIAL LISTING)

EQUIPMENT

FC	FAN COIL
HP	HEAT PUMP
LVR	LOUVER
MD	MOTORIZED DAMPER
T	THERMOSTAT

HVAC ABBREVIATIONS

A	AMPERE
ACH	AIR CHANGES PER HOUR
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JUSIDICTION
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
°F	DEGREES FAHRENHEIT
MBH	1,000 BTU'S/HR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTURER
MOCP	MAXIMUM OVER CURRENT PROTECTION
NA	NOT APPLICABLE
OA	OUTSIDE AIR
SP	STATIC PRESSURE
TEMP	TEMPERATURE
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
W	WATT
WC	WATER COLUMN

HVAC GENERAL NOTES

1. MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE CONTRACT SPECIFICATIONS AND WITH THE PROVISIONS OF THE 2015 INTERNATIONAL MECHANICAL CODE, 2015 INTERNATIONAL BUILDING CODE, 2015 INTERNATIONAL FIRE CODE AS AMENDED BY THE STATE OF WASHINGTON AND THE LOCAL AUTHORITY HAVING JURISDICTION.
2. THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET, WHICH MAY BE REQUIRED. THE HVAC CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES AND IS TO VERIFY ALL CLEARANCES BEFORE COMMENCING WORK.
3. CONTRACTOR SHALL VERIFY THE DIMENSIONS WITH THE EQUIPMENT MANUFACTURER TO PROVIDE DUCT TRANSITIONS TO HVAC VENTILATORS, FANS, LOUVERS, OR SUPPLY/EXHAUST GRILLES TO MATCH THE INLET/OUTLET DIMENSIONS OF THE EQUIPMENT.
4. PROVIDE EARTHQUAKE RESTRAINT FOR HVAC EQUIPMENT IN ACCORDANCE WITH SMACNA RESTRAINT MANUAL AS REQUIRED BY 2015 INTERNATIONAL BUILDING CODE REQUIREMENTS.
5. CONSTRUCTION, SUPPORTS AND INSTALLATION SHALL BE INSTALLED AND COMPLY WITH THE 2015 INTERNATIONAL MECHANICAL CODE (IMC) AND WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE.
6. ALL DUCTWORK IS CLASSIFIED AS LOW PRESSURE.
7. LOCATE THERMOSTATS 5 FEET AFF. UNLESS OTHERWISE NOTED.
8. PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTWORK CONNECTING TO EQUIPMENT.
9. EQUIPMENT DRAIN PIPING SHALL MAINTAIN A MIN HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF MIN -1/8 INCH VERTICAL PER 1 FOOT HORIZONTAL.
10. CONTRACTOR SHALL COORDINATE CEILING EQUIPMENT LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING LAYOUT.
11. EQUIPMENT CONDENSATE DRAINS SHALL BE TRAPPED AS REQUIRED BY THE EQUIPMENT OR APPLIANCE MANUFACTURER.
12. REFRIGERANT PIPING SHALL BE INSTALLED WITH CLOSED CELL ELASTOMERIC INSULATION IN ACCORDANCE WITH SPECIFICATION 15700. INSULATION EXPOSED TO OUTSIDE CONDITIONS SHALL BE ENCLOSED BY A LINE-HIDE LINESET COVER SYSTEM.
13. BUILDING HVAC DOCUMENTS SUCH AS RECORDS, CALCULATIONS, COMPLIANCE FORMS, AND EQUIPMENT MANUALS SHALL BE SUPPLIED TO THE BUILDING OWNER.

0 1" 2"

TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP

APPROVED DATE: _____

EXPIRATION DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RANIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: JAN 2021	DRAWN: CRR	CHECKED: ASD	APPROVED: AMP

PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	APPD

AARON M. PEASE — STATE OF WASHINGTON — 21670 — REGISTERED PROFESSIONAL ENGINEER

CITY OF PUYALLUP
WASHINGTON
PIERCE COUNTY

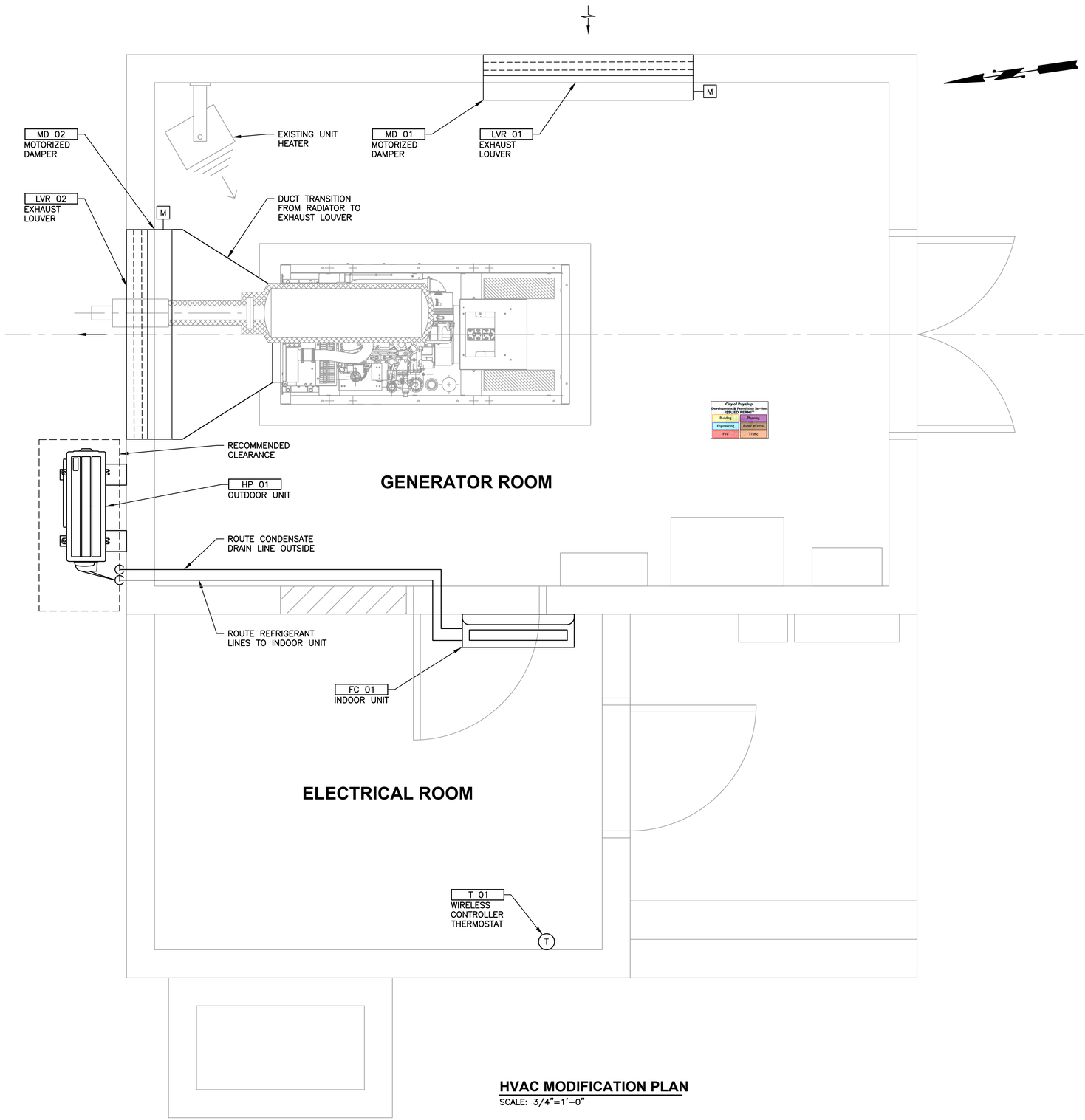
NORTH LEVEE ROAD PUMP STATION REPLACEMENT

GENERATOR BUILDING HVAC DEMOLITION PLAN, NOTES AND SCHEDULES

SHEET: H-1
OF: 2

JOB NO.: 20503
DWG:H_PLAN

m:\PUYALLUP\20503 - north levee road pump station\02 planset\HVAC\H_PLAN.dwg, 1/27/2021 12:28 PM, CHARLEY REID



HVAC MODIFICATION PLAN

SCALE: 3/4"=1'-0"

0 1" 2"

TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

APPROVED

BY: _____
CITY ENGINEER
CITY OF PUYALLUP
APPROVED
DATE: _____
EXPIRATION
DATE: _____

NOTE: This approval expires on the date shown. If construction has not started by expiration date, plans must be resubmitted for review and approval.

The City will not be responsible for errors and/or omissions on these plans.

Field conditions may dictate changes to these plans as determined by the City Engineer.

Gray & Osborne, Inc.
CONSULTING ENGINEERS
1130 RAINIER AVENUE SOUTH, SUITE 300
SEATTLE, WASHINGTON 98144 • (206) 284-0860

DATE: JAN 2021	DRAWN: CRR	CHECKED: ASD	APPROVED: AMP

PRELIMINARY NOT FOR CONSTRUCTION

No.	REVISION	DATE	APPD

AARON M. PEASE — STATE OF WASHINGTON — 21628 — REGISTERED PROFESSIONAL ENGINEER

CITY OF PUYALLUP
PIERCE COUNTY WASHINGTON
NORTH LEVEE ROAD PUMP STATION REPLACEMENT
GENERATOR BUILDING HVAC MODIFICATION PLAN

SHEET: H-2
OF: 2

JOB NO.: 20503
DWG:H_PLAN