



M:\PUYALLUP\20503 - North Levee Road Pump Station\02\_PLANSSET\Structural\S\_STND.dwg, 4/28/2022 9:28 AM, RUSSELL HORITA

**SPECIAL INSPECTION SCHEDULE**

VERIFICATION AND INSPECTION	CI	PI	REMARKS/REFERENCES
<b>CONCRETE:</b>			
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)
<b>MASONRY:</b>			
PROVISIONS OF CONSTRUCTION DOCUMENTS AND SUBMITTALS	-	X	
VERIFICATION OF F'm and F'ac	-	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
<b>STEEL:</b>			
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:			
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
<b>SOILS:</b>			
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

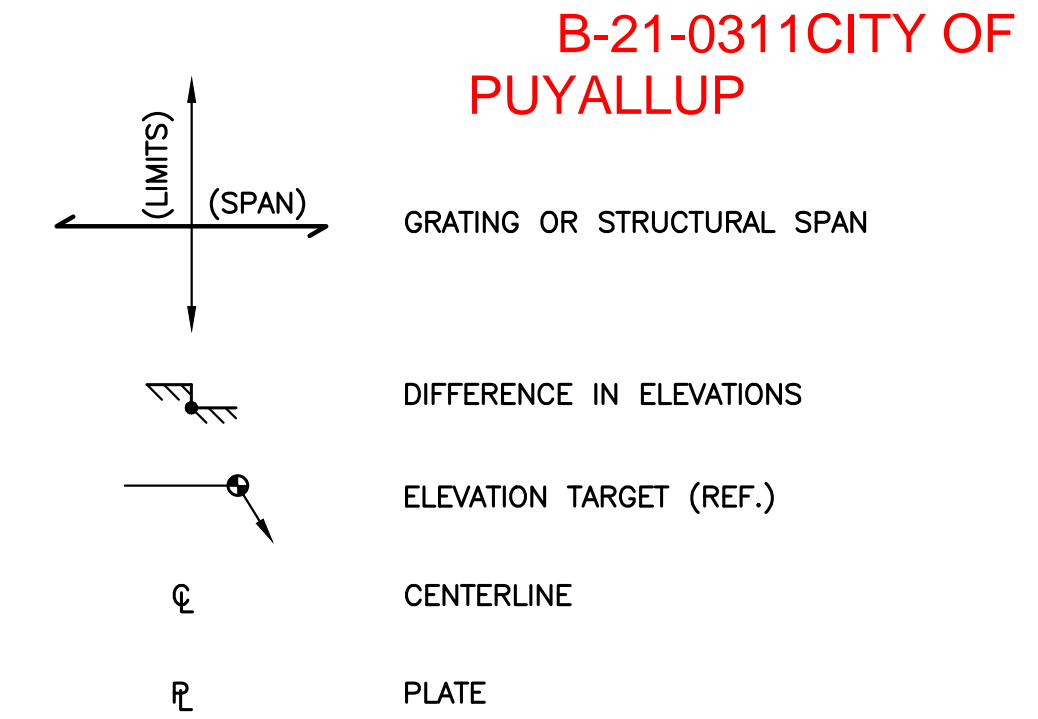
**INSPECTION SCHEDULE NOTES**

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

**SUPPLEMENTAL STRUCTURAL ABBREVIATIONS:**

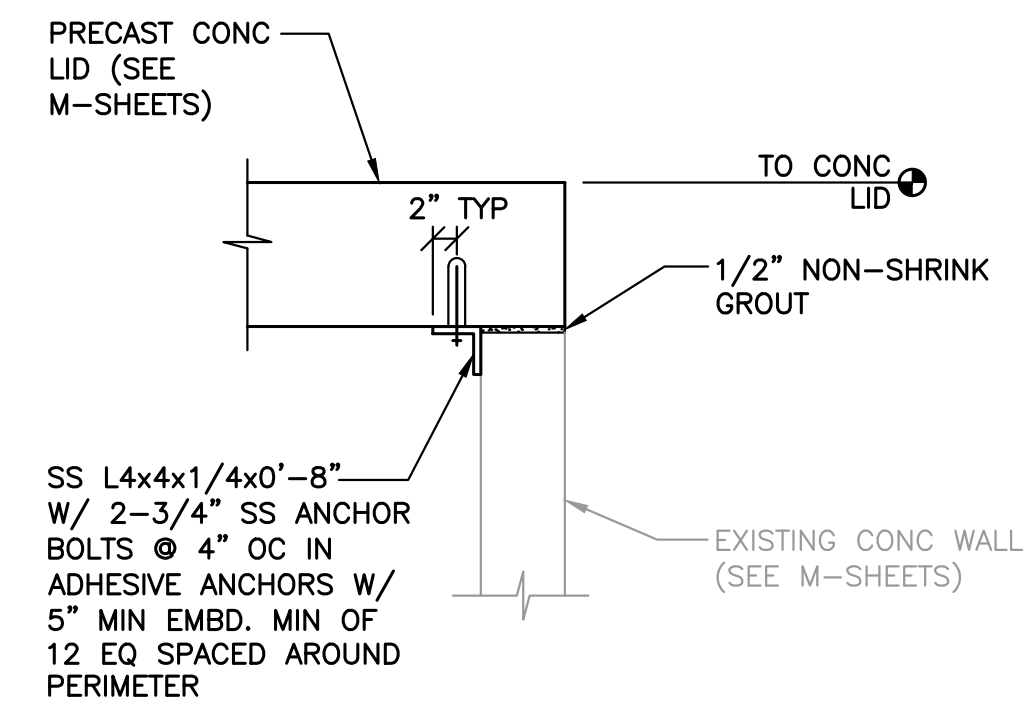
AFF ABOVE FINISH FLOOR	FRM'G FRAMING	T TOP
AL ALUMINUM	FS FAR SIDE	TN TOE NAIL
APPRX APPROXIMATE	FTG FOOTING	TO TOP OF
ARCH ARCHITECTURAL	GA GAUGE	TOS TOP OF SLAB
@ AT	HAS HEADER ANCHOR STUDS	TRANS TRANSVERSE
BEL BELOW	HDR HEADER	TYP TYPICAL
BM BEAM	HGR HANGER	UNO UNLESS NOTED OTHERWISE
BN BOUNDARY NAIL	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	
DIAPHR 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	
EQ 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**



DATE: APRIL 2022	RAH	AQ	MJB
DRAWN:	CHECKED:	APPROVED:	

	DATE	APPD
	REVISION	
	No.	



**1 TYP** TYPICAL PRECAST LID JOINT DETAIL  
SCALE: 3/4"=1'-0"

**City of Puyallup**  
Development & Permitting Services

**ISSUED PERMIT**

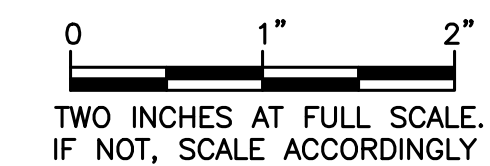
Building	Planning
Engineering	Public Works
Fire	Traffic

**APPROVED**

BY: *[Signature]*  
CITY ENGINEER  
CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

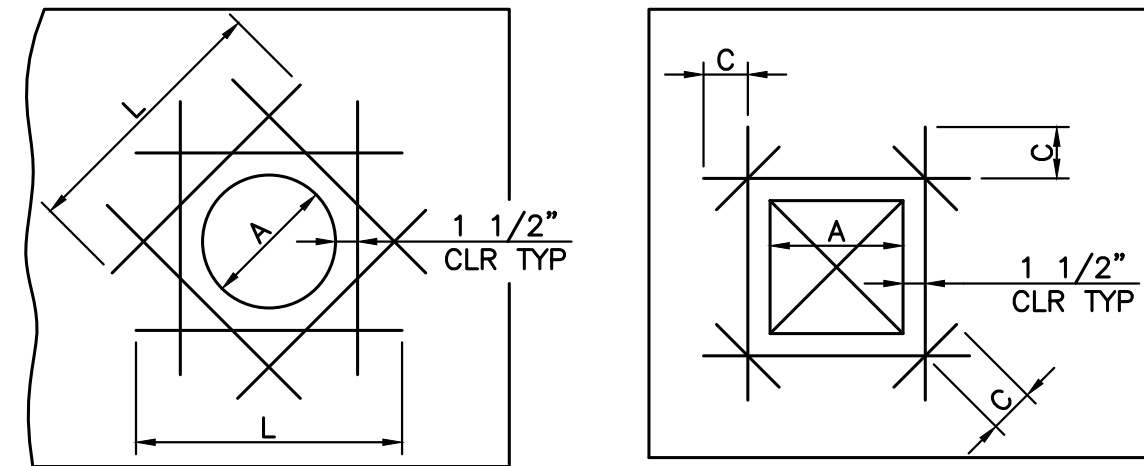
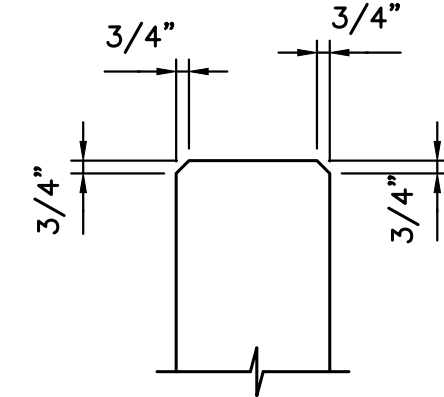
EXPIRATION DATE: 12/31/2023



**CITY OF PUYALLUP**  
WASHINGTON  
PERCE COUNTY  
**NORTH LEEVE ROAD PUMP STATION REPLACEMENT**  
SPECIAL INSPECTION SCHEDULE, SUPPLEMENTAL STRUCTURAL ABBREVIATIONS, AND STRUCTURAL LEGEND

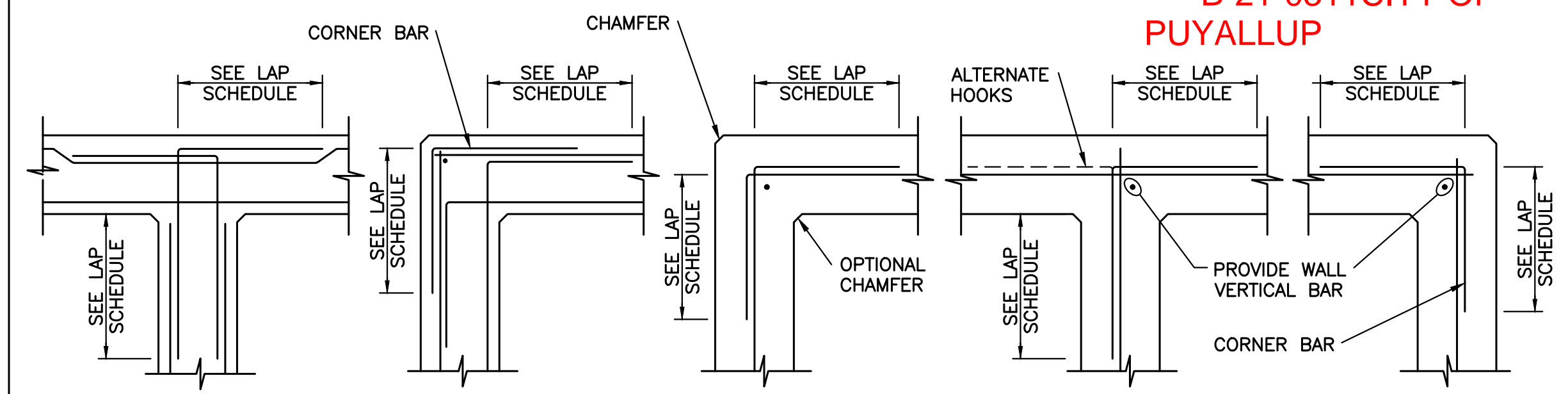
SHEET: **S-2**  
OF: **8**  
JOB NO.: 20503  
DWG: S\_STND

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"



OPENING SIZE (A)	TYPE I		TYPE II	
	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.



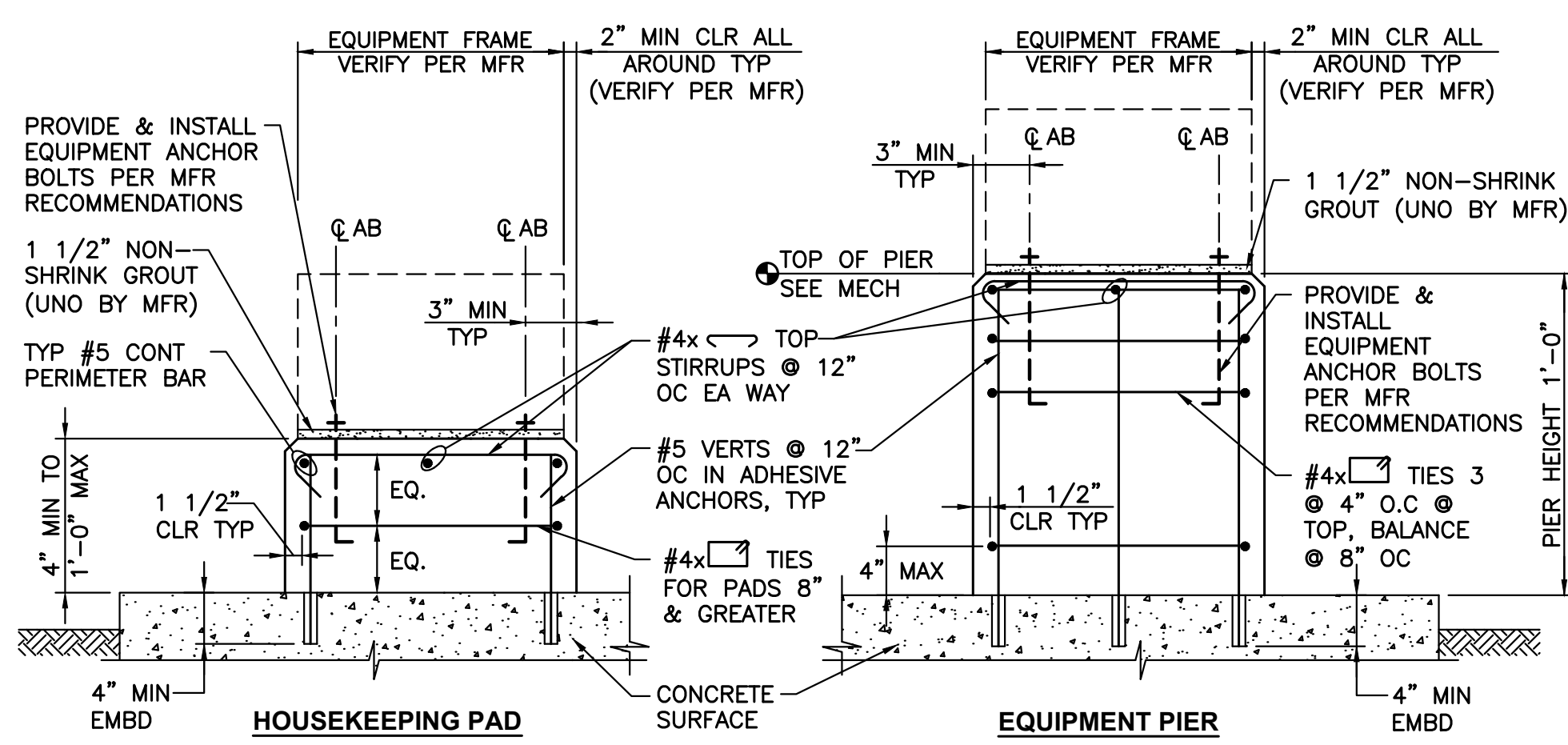
B-21-0311 CITY OF PUYALLUP

1 TYP. LAP SCHEDULE  
TYP NOT TO SCALE

2 TYP. CHAMFER DETAIL  
TYP NOT TO SCALE

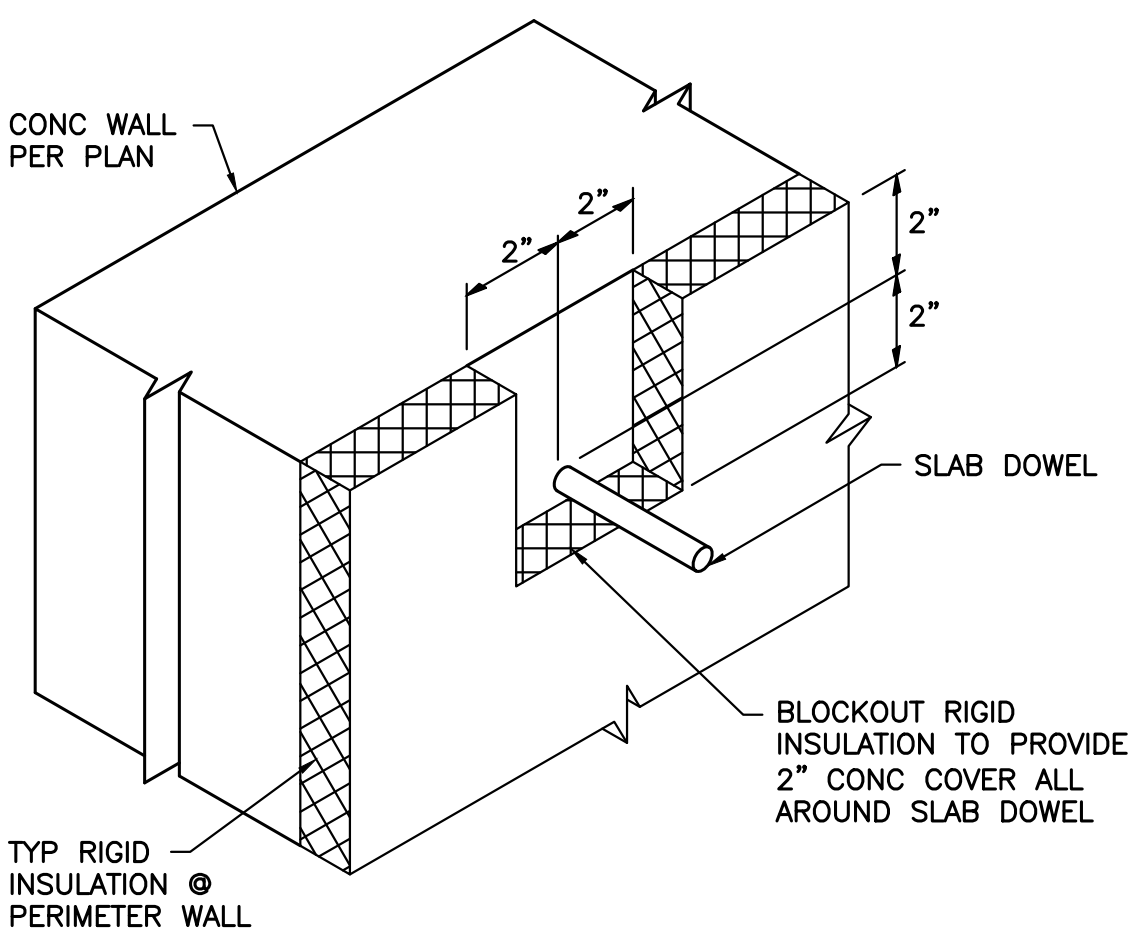
3 TYP PENETRATION REINFORCING DETAIL  
TYP NOT TO SCALE

4 TYP REINFORCING @ WALL INTERSECTION DETAIL  
TYP NOT TO SCALE

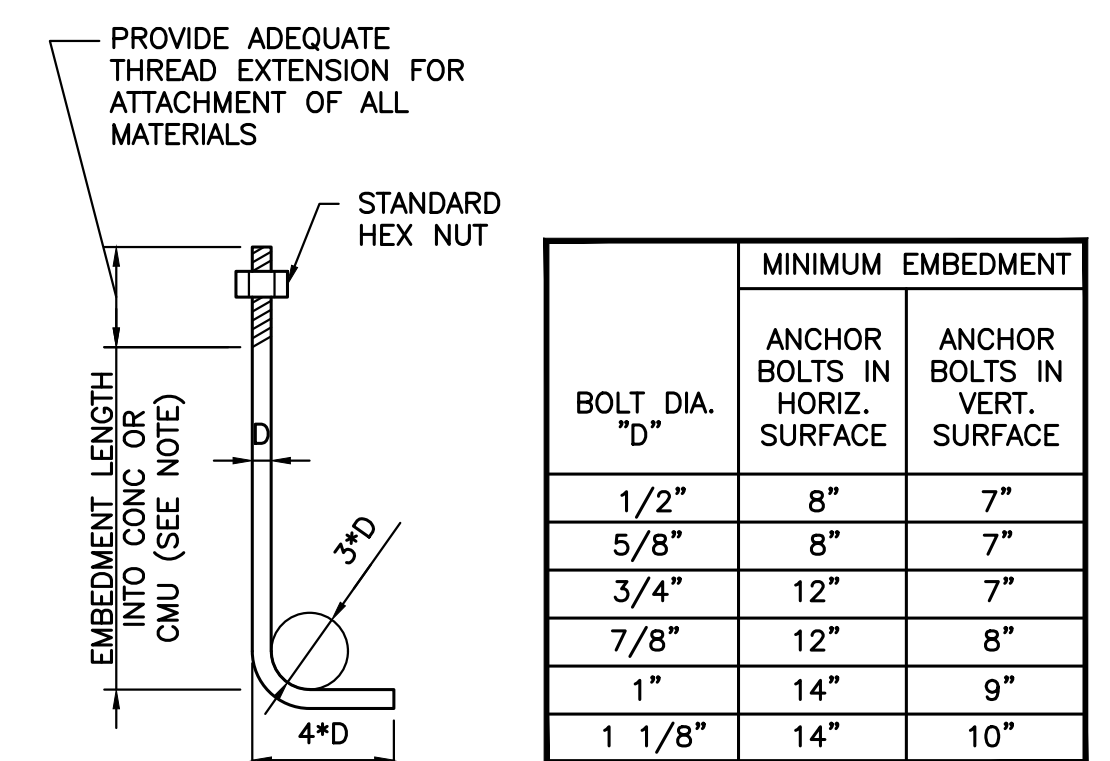


NOTES:  
1. CHAMFER ALL EXPOSED CORNERS OF HOUSEKEEPING PADS AND EQUIPMENT PIERS.  
2. FOR PIER HEIGHT LESS THAN 1'-0" SEE HOUSEKEEPING PAD DETAIL

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

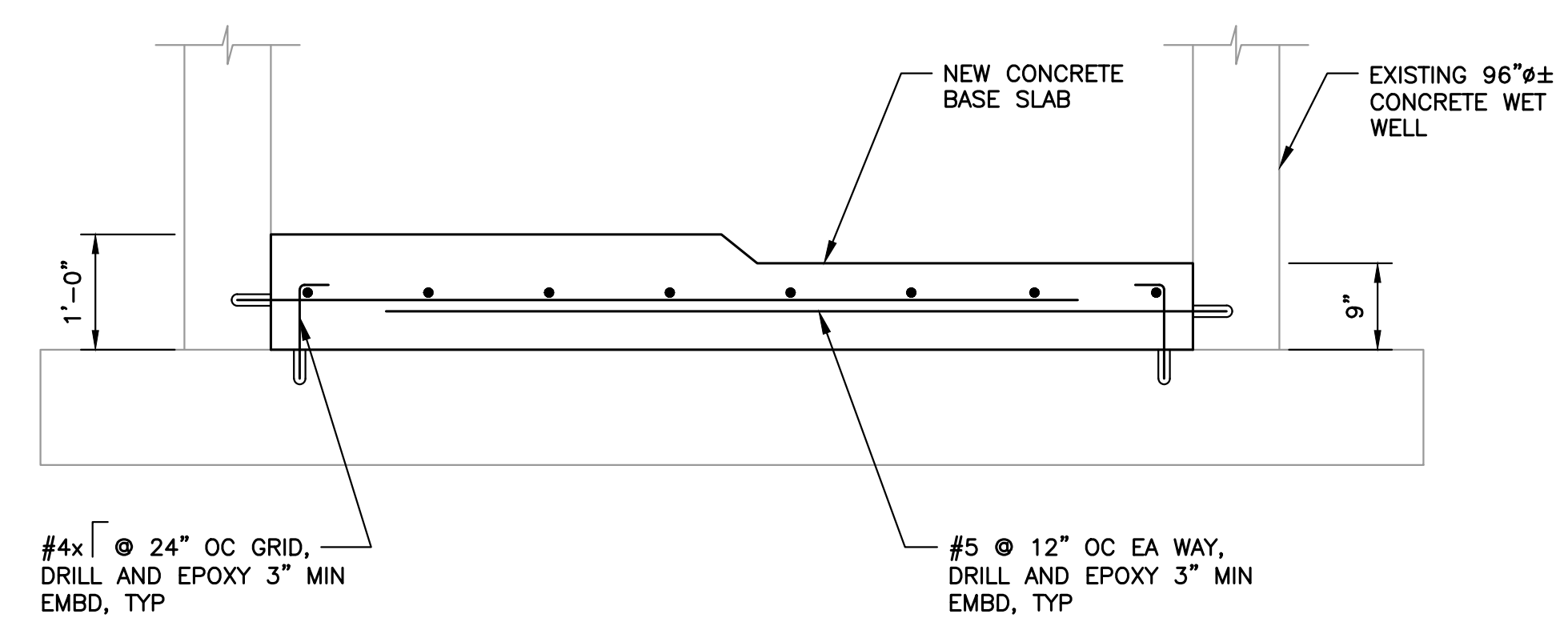


6 TYP CONCRETE COVER @ SLAB REINF & INSULATION DETAIL  
TYP NOT TO SCALE



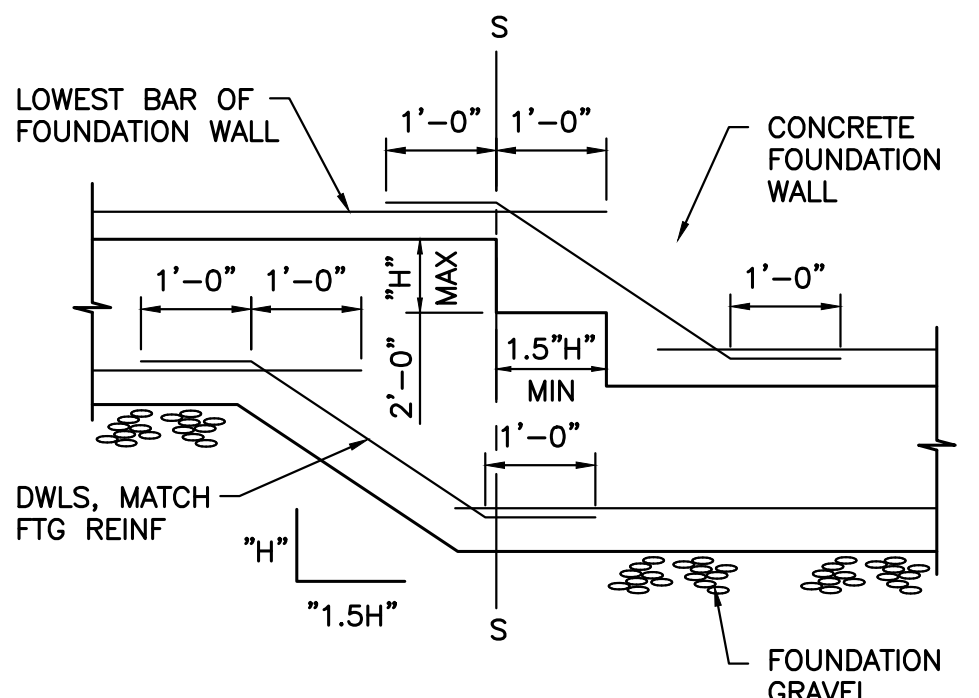
NOTE:  
ANCHOR BOLT EMBEDMENT IN VERTICAL SURFACE APPLIES TO CONCRETE ONLY.

7 TYP ANCHOR BOLT DETAIL  
TYP NOT TO SCALE



NOTE:  
SEE M-SHEETS FOR BALANCE OF INFORMATION.

8 WET WELL BASE SLAB DETAIL  
TYP NOT TO SCALE



9 TYP STEPPED FOOTING AT CONCRETE FOUNDATION WALL DETAIL  
TYP NOT TO SCALE

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

**APPROVED**

BY: [Signature]  
CITY ENGINEER  
CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

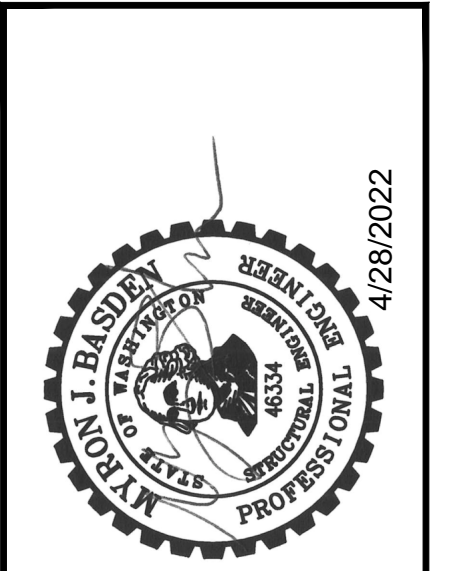
EXPIRATION DATE: 12/31/2023

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

**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
11130 RAINIER AVENUE SOUTH, SUITE 300  
SEATTLE, WASHINGTON 98144 • (206) 264-0860

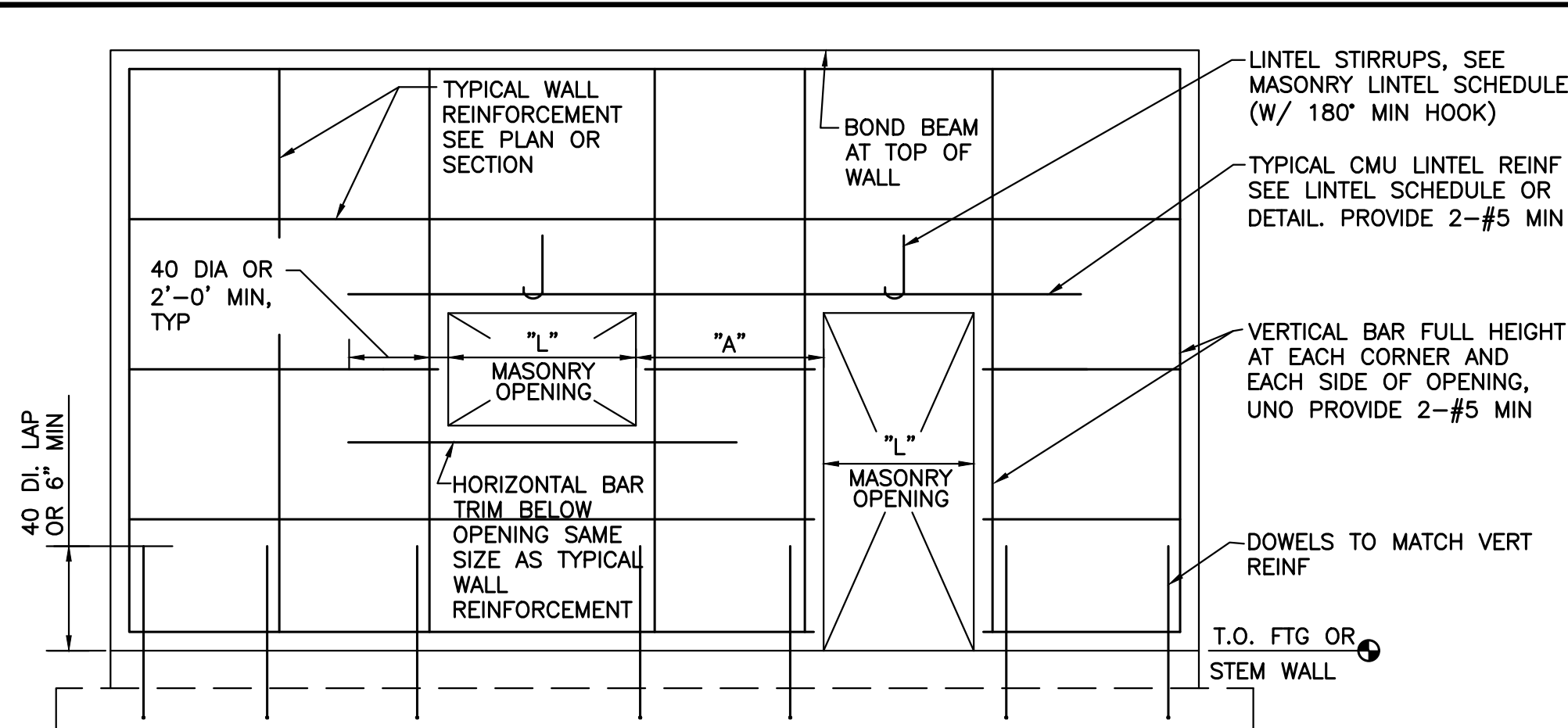
DATE: APRIL 2022	RAH	AO	MJB
DRAWN:	CHECKED:	APPROVED:	

DATE	APPD	REVISION
		No.



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

SHEET: **S-3**  
OF: **8**  
JOB NO.: 20503  
DWG: S\_STND



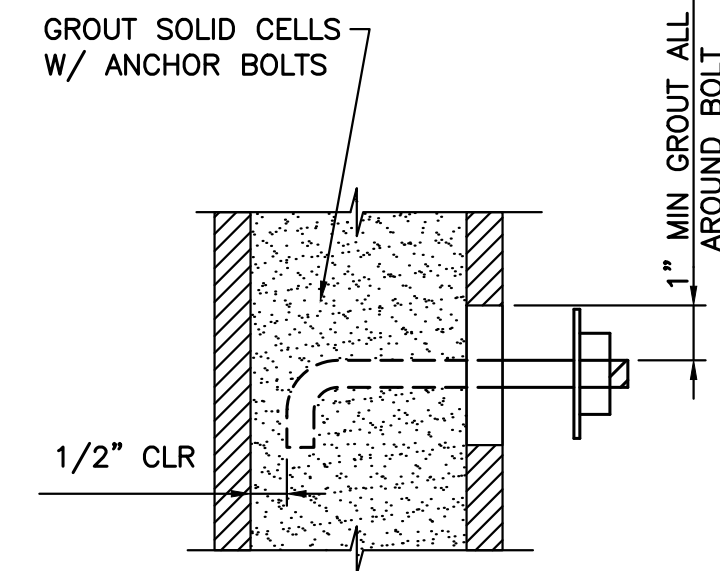
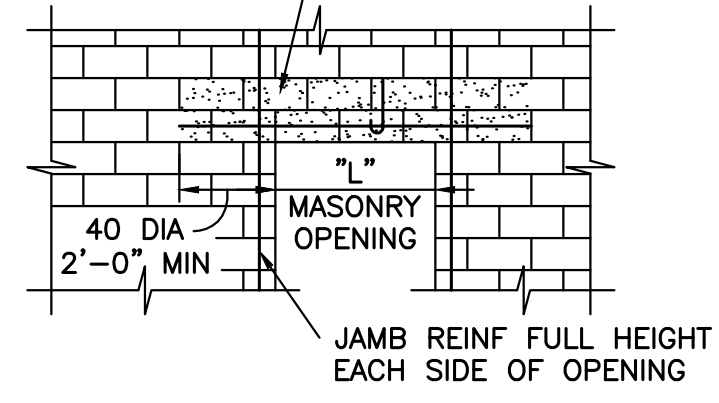
**NOTES:**  
 1. WHERE DISTANCE "A" IS BETWEEN 1'-4" AND 2'-0", PROVIDE #3 TIES AT 8" OC FULL HEIGHT OF THE SMALLER OF THE TWO OPENINGS.  
 2. DISTANCE "A" SHALL NOT BE LESS THAN 1'-4".  
 3. PROVIDE CONTINUOUS BOND BEAM W/2-#5 MIN AT ALL LEDGERS, UNO.

**1 TYPICAL CMU WALL REINFORCEMENT PLACEMENT**  
 TYP NOT TO SCALE

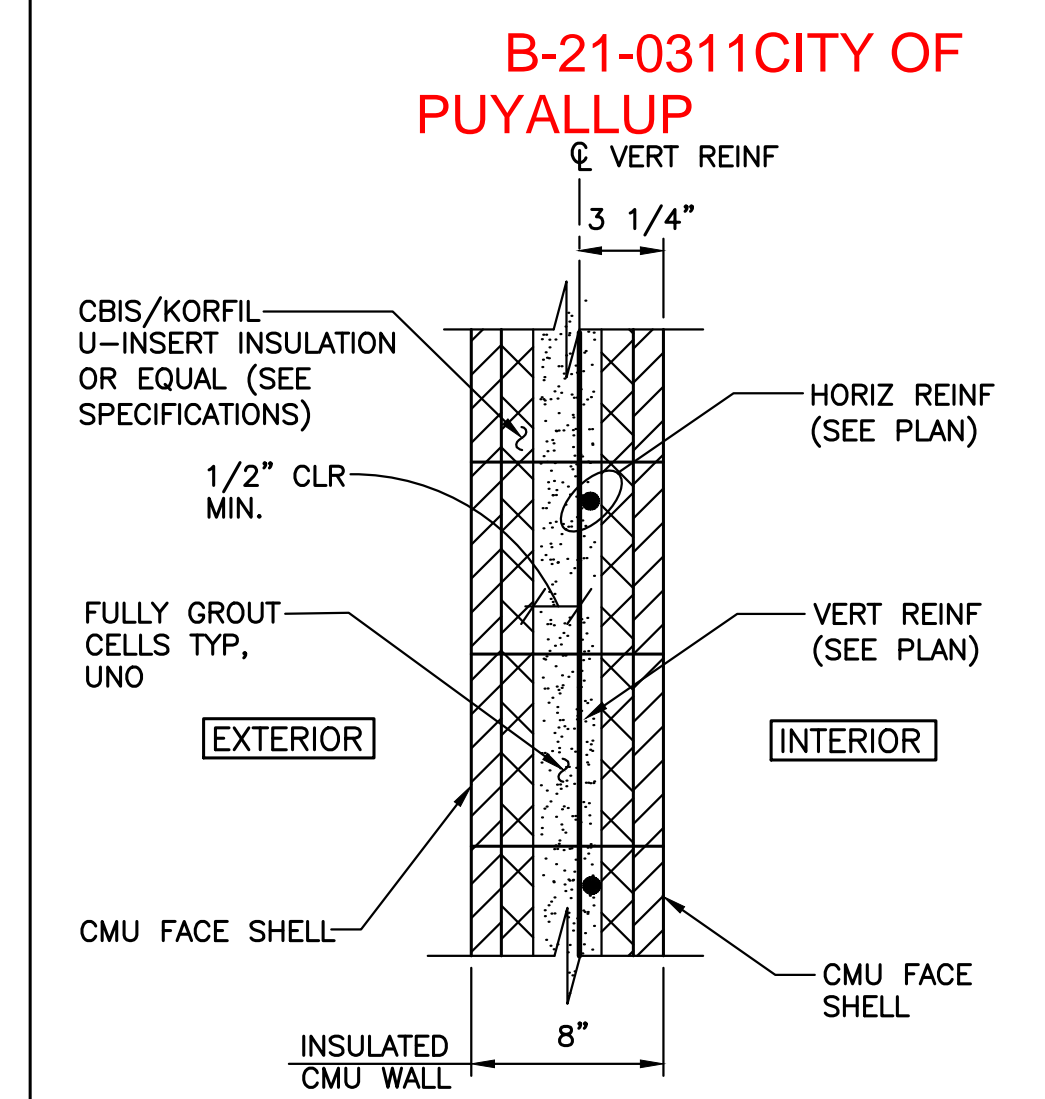
LINTEL SCHEDULE			
MASONRY OPENING "L"	DEPTH "D"	BOTTOM BARS	STIRRUPS
LESS THAN 4'-0"	16"	2-#5	#3 @ 16" OC

**NOTE:**  
 MASONRY CONTROL JOINT WHERE REQUIRED SHALL NOT BE LOCATED CLOSER THAN 5'-0" TO JAMB

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



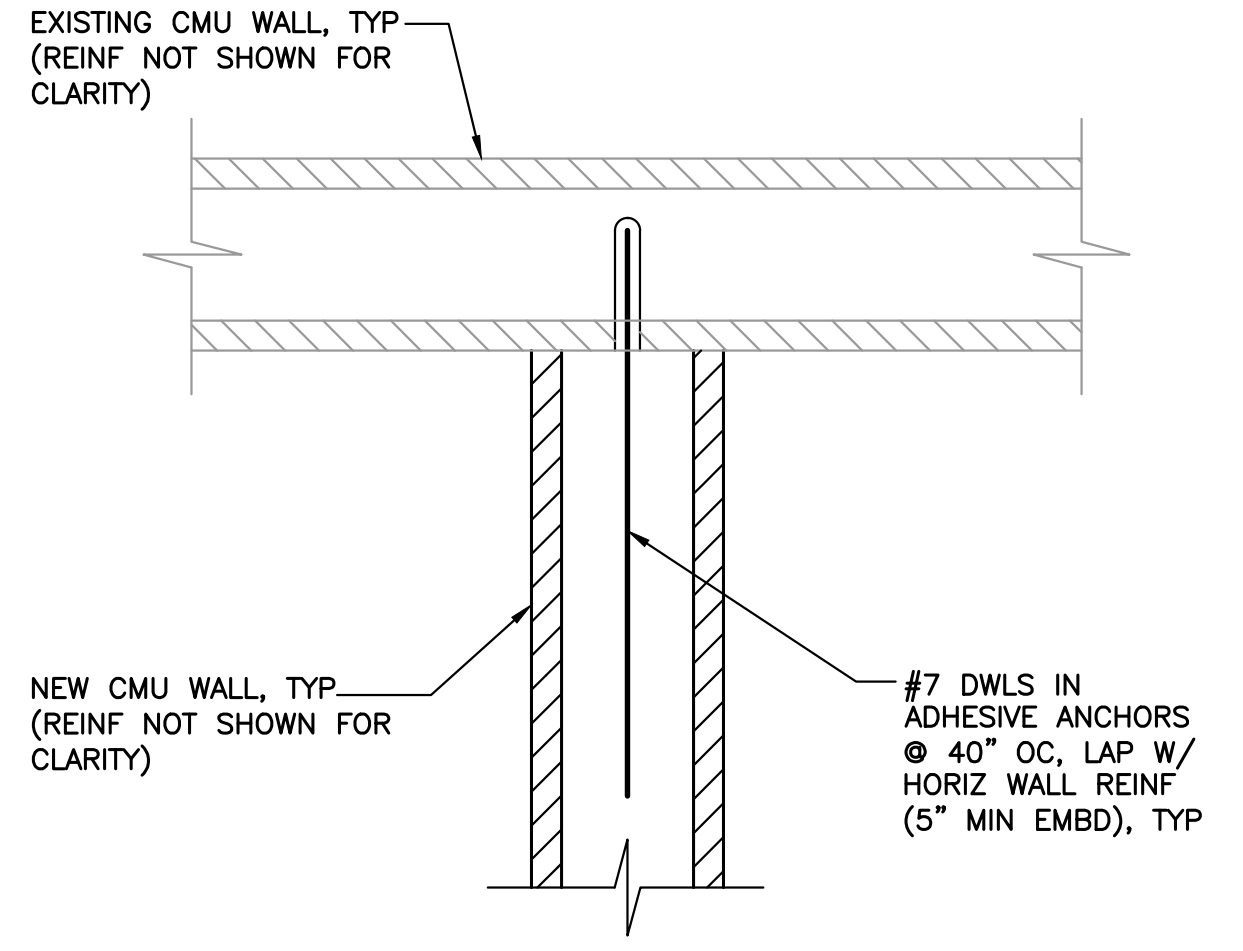
**3 TYPICAL CMU WALL ANCHOR BOLT DETAIL**  
 TYP NOT TO SCALE



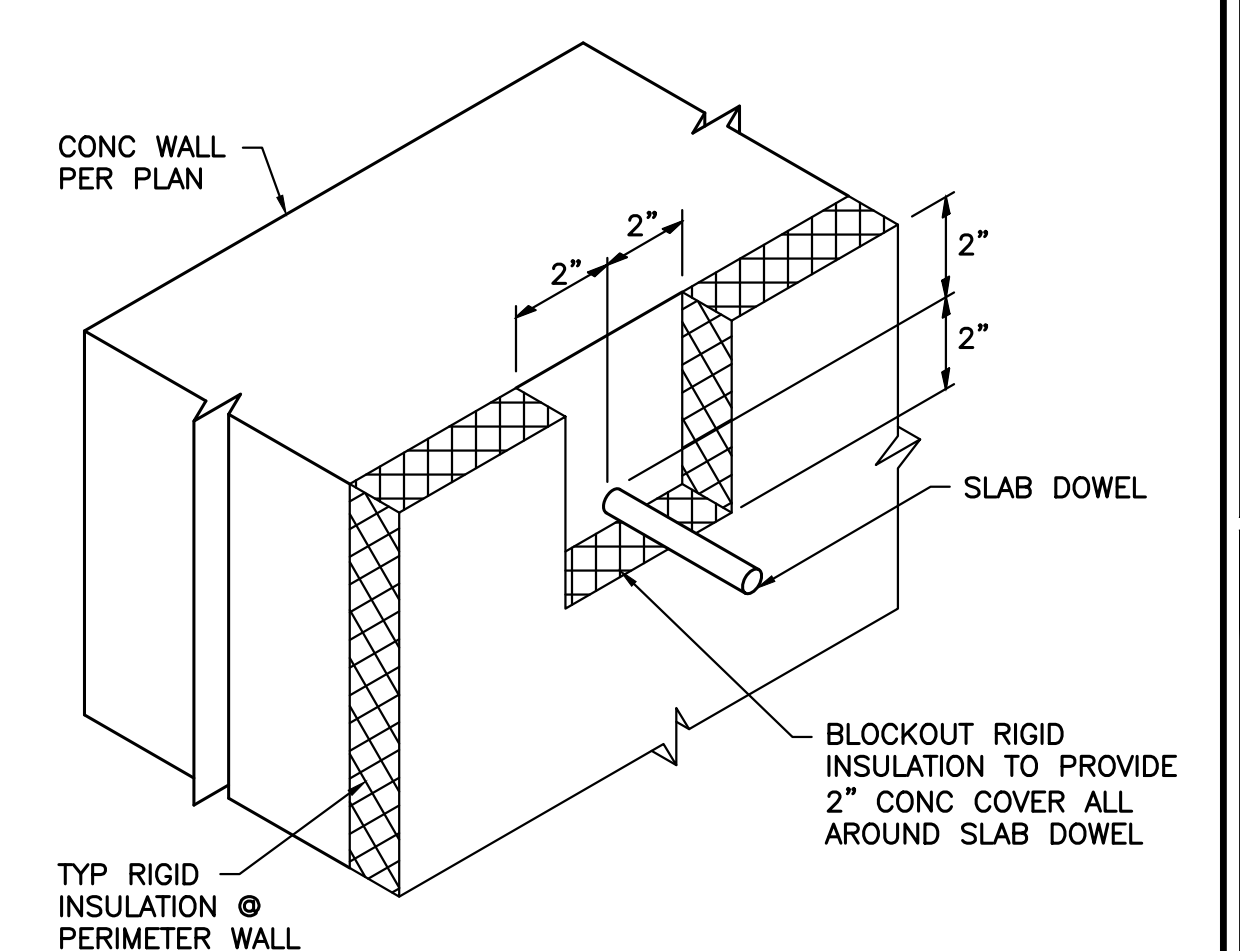
**4 TYPICAL 8" INSULATED CMU WALL DETAIL**  
 TYP SCALE: 1 1/2"=1'-0"

LOCATION	CONNECTION	REMARKS
END BRG'S AND INTERMEDIATE SUPPORTS	1 1/2"x 18 GA TYPE B GALVANIZED METAL DECK 36" WIDE DECK SHEETS 7 MIN-HILTI X-ENP19, OR EQUAL	1 MIN = 0.302 IN <sup>4</sup> Fy = 50 KSI +S MIN = 0.314 IN <sup>3</sup> -S MIN = 0.331 IN <sup>3</sup> 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	

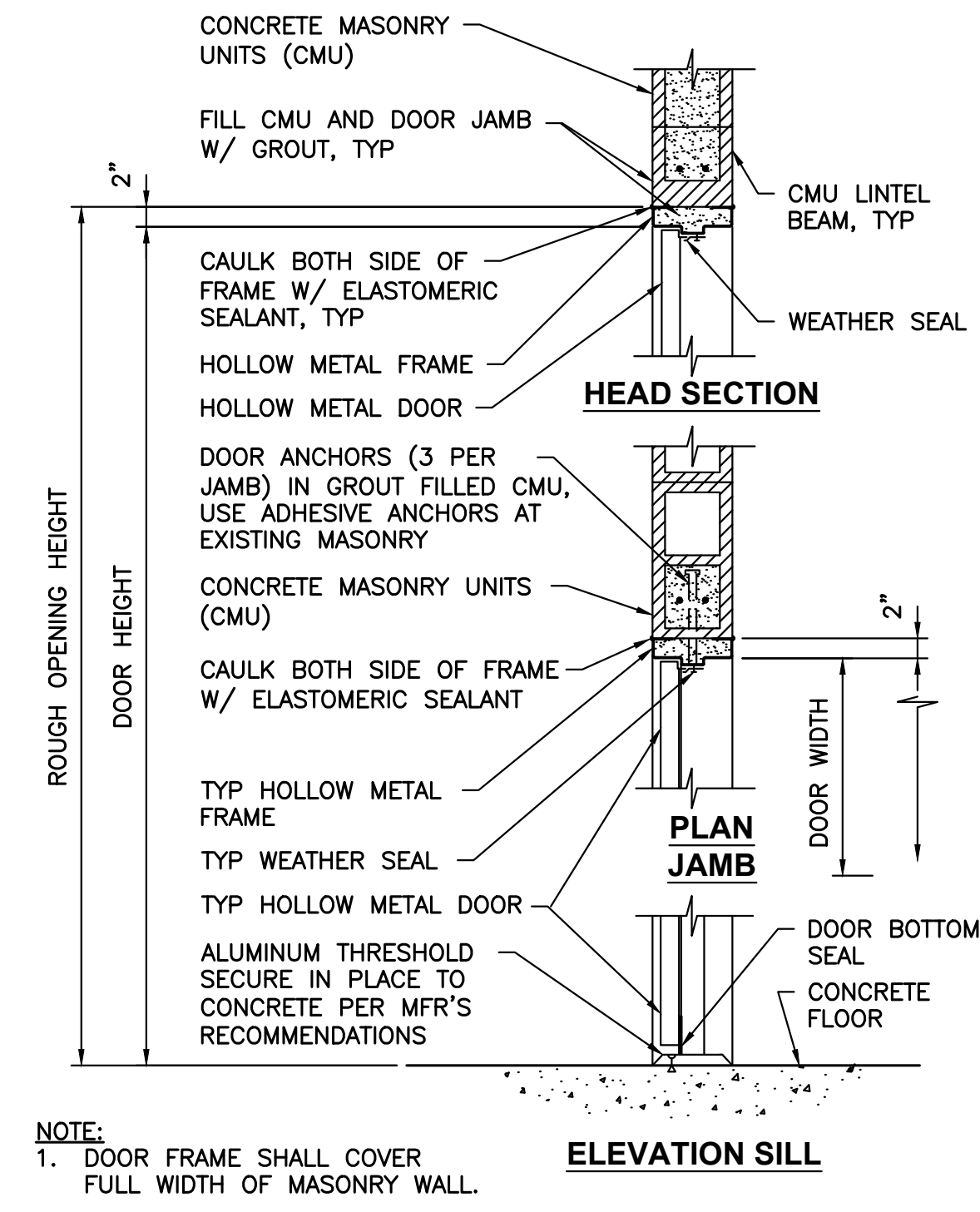
**5 TYP ROOF METAL DECK ATTACHMENT SCHEDULE**  
 TYP NOT TO SCALE



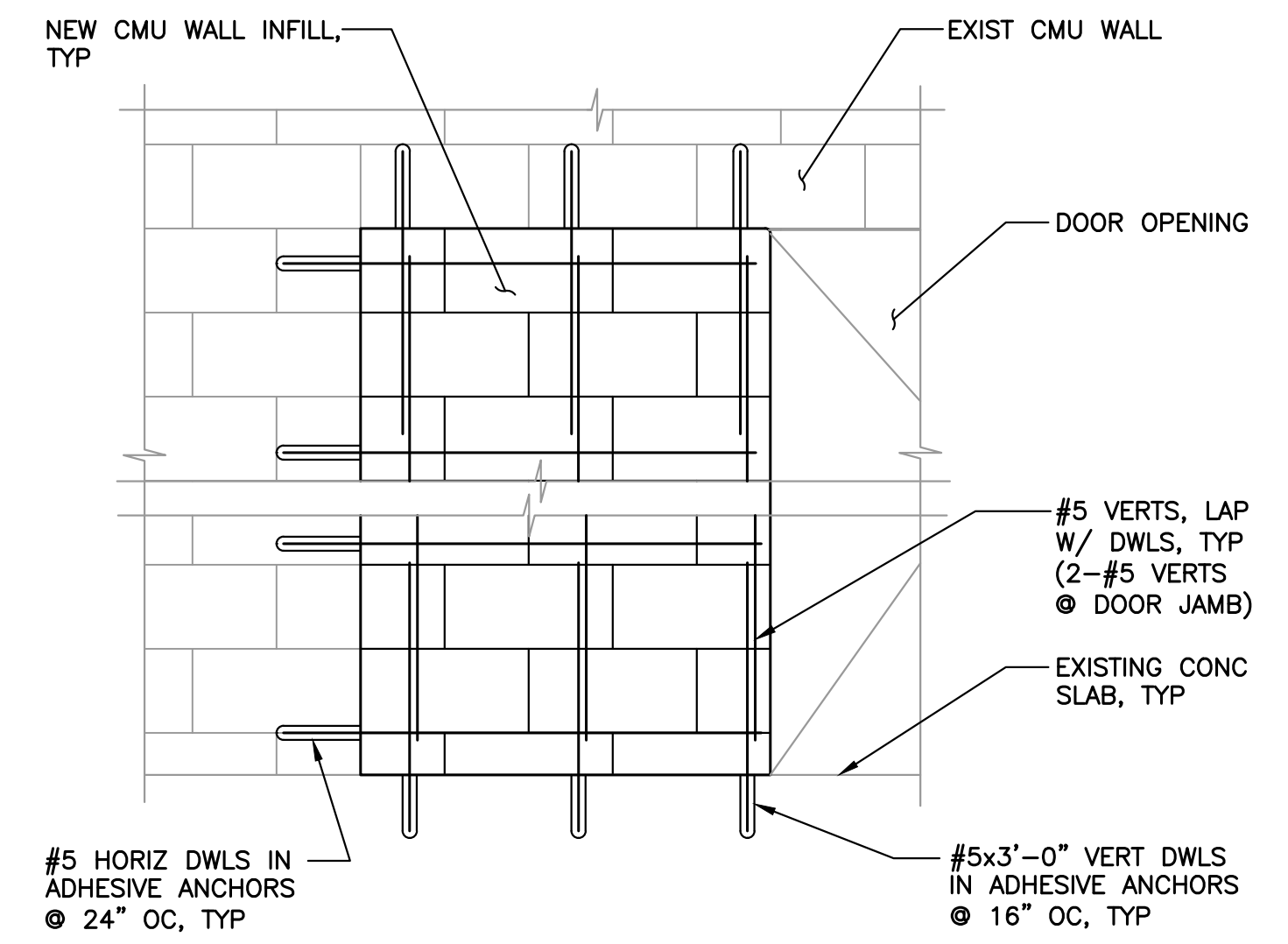
**6 TYPICAL NEW CMU WALL TO EXISTING CMU WALL CONNECTION PLAN DETAIL**  
 TYP SCALE: 1 1/2"=1'-0"



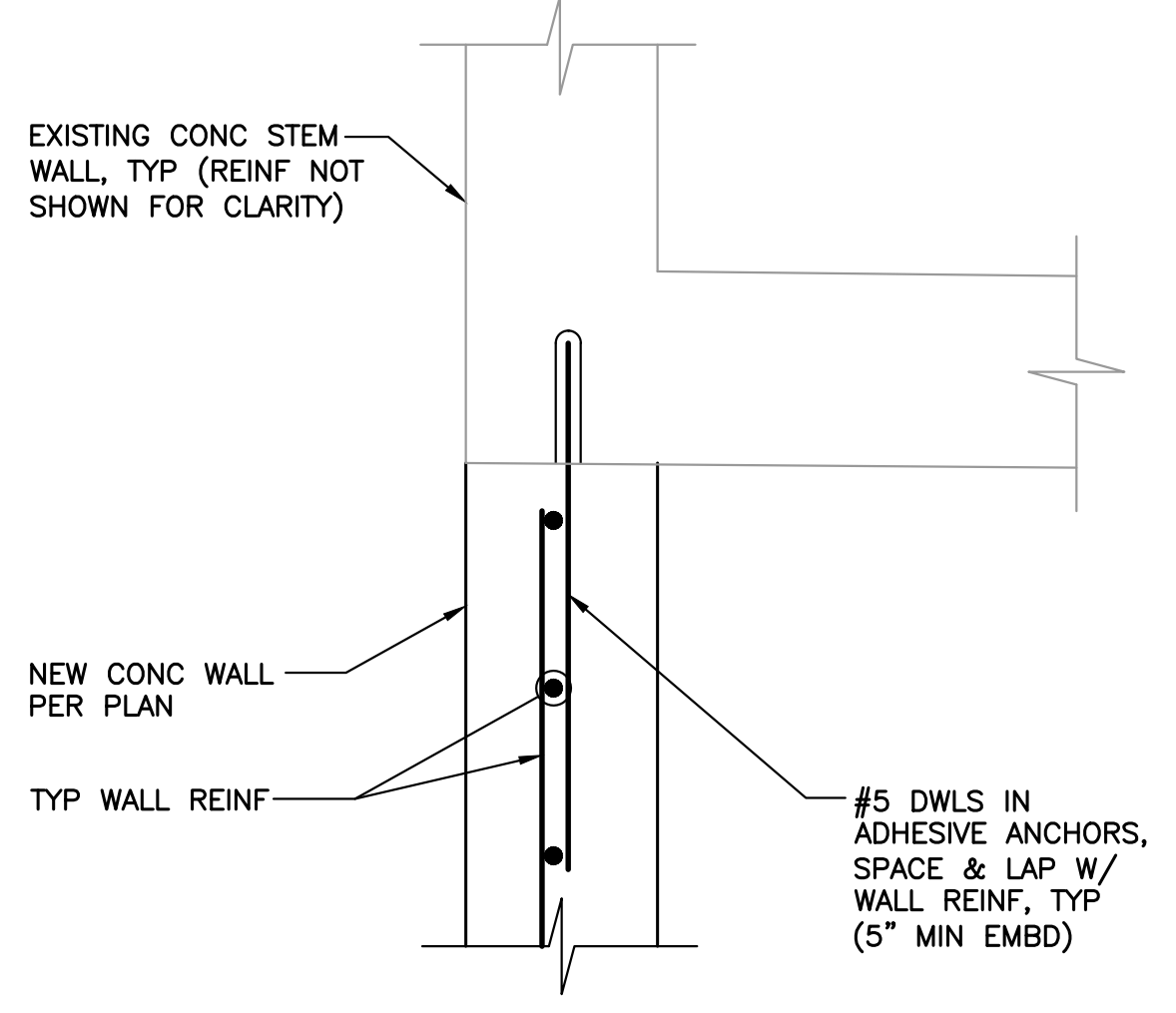
**7 TYPICAL CONCRETE COVER @ SLAB REINF & INSULATION DETAIL**  
 TYP NOT TO SCALE



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



**9 CMU WALL INFILL DETAIL**  
 TYP NOT TO SCALE



**10 TYPICAL NEW FOUNDATION TO EXISTING FOUNDATION CONNECTION PLAN DETAIL**  
 TYP SCALE: 1 1/2"=1'-0"

**City of Puyallup Development & Permitting Services ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

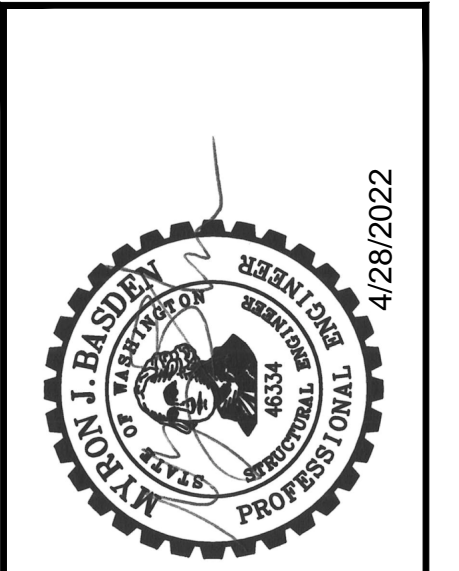
**APPROVED**  
 BY: [Signature]  
 CITY ENGINEER  
 CITY OF PUYALLUP  
 APPROVED DATE: 4/26/2022  
 EXPIRATION DATE: 12/31/2023

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

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 SEATTLE, WASHINGTON 98144 • (206) 264-0860

DATE: APRIL 2022	RAH	AO	MJB
DRAWN:	CHECKED:	APPROVED:	

DATE	APPD
REVISION	DATE
No.	



**CITY OF PUYALLUP**  
 WASHINGTON  
 PERCE COUNTY  
 NORTH LEEVE ROAD PUMP STATION REPLACEMENT  
 TYPICAL STRUCTURAL DETAILS

SHEET: **S-4**  
 OF: **8**  
 JOB NO.: 20503  
 DWG: S\_STND

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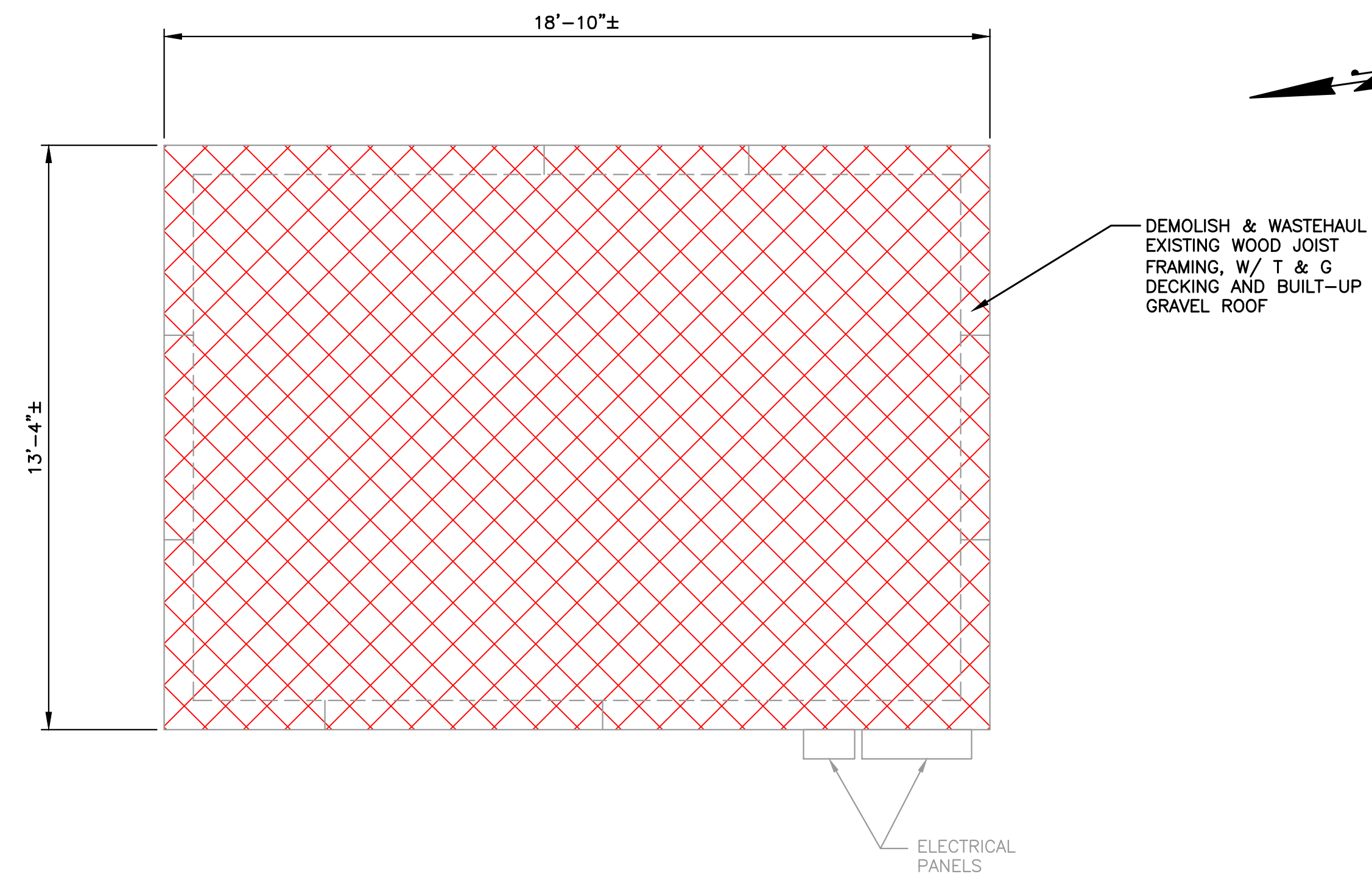
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REVISION	DATE	APPD
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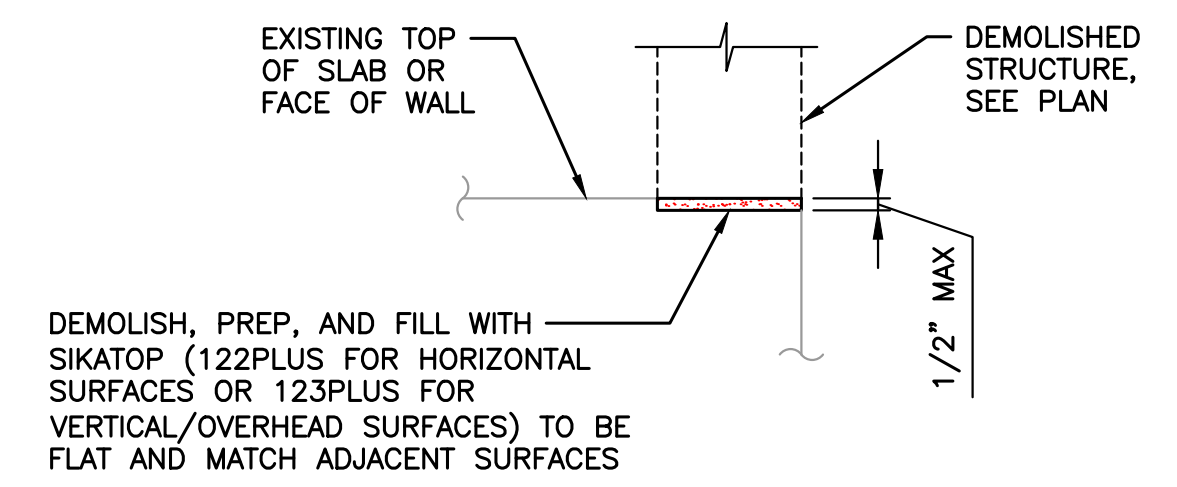


**CITY OF PUYALLUP**  
 WASHINGTON  
 PERCE COUNTY  
**NORTH LEEVE ROAD PUMP STATION REPLACEMENT**  
 EXISTING GENERATOR BUILDING FLOOR AND ROOF DEMOLITION PLANS

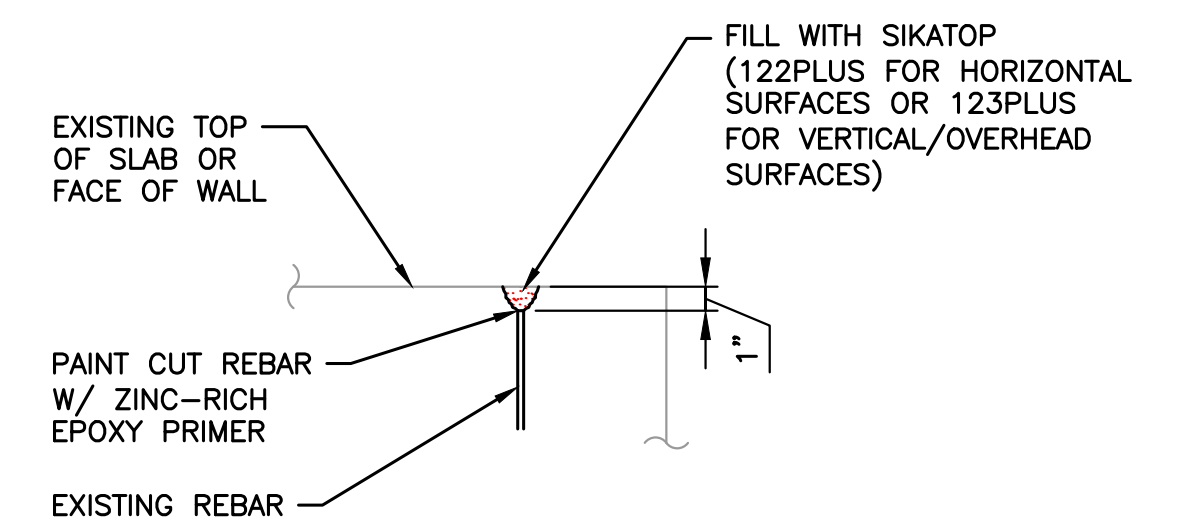
SHEET: **S-5**  
 OF: **8**  
 JOB NO.: 20503  
 DWG: S\_GEN\_PLN



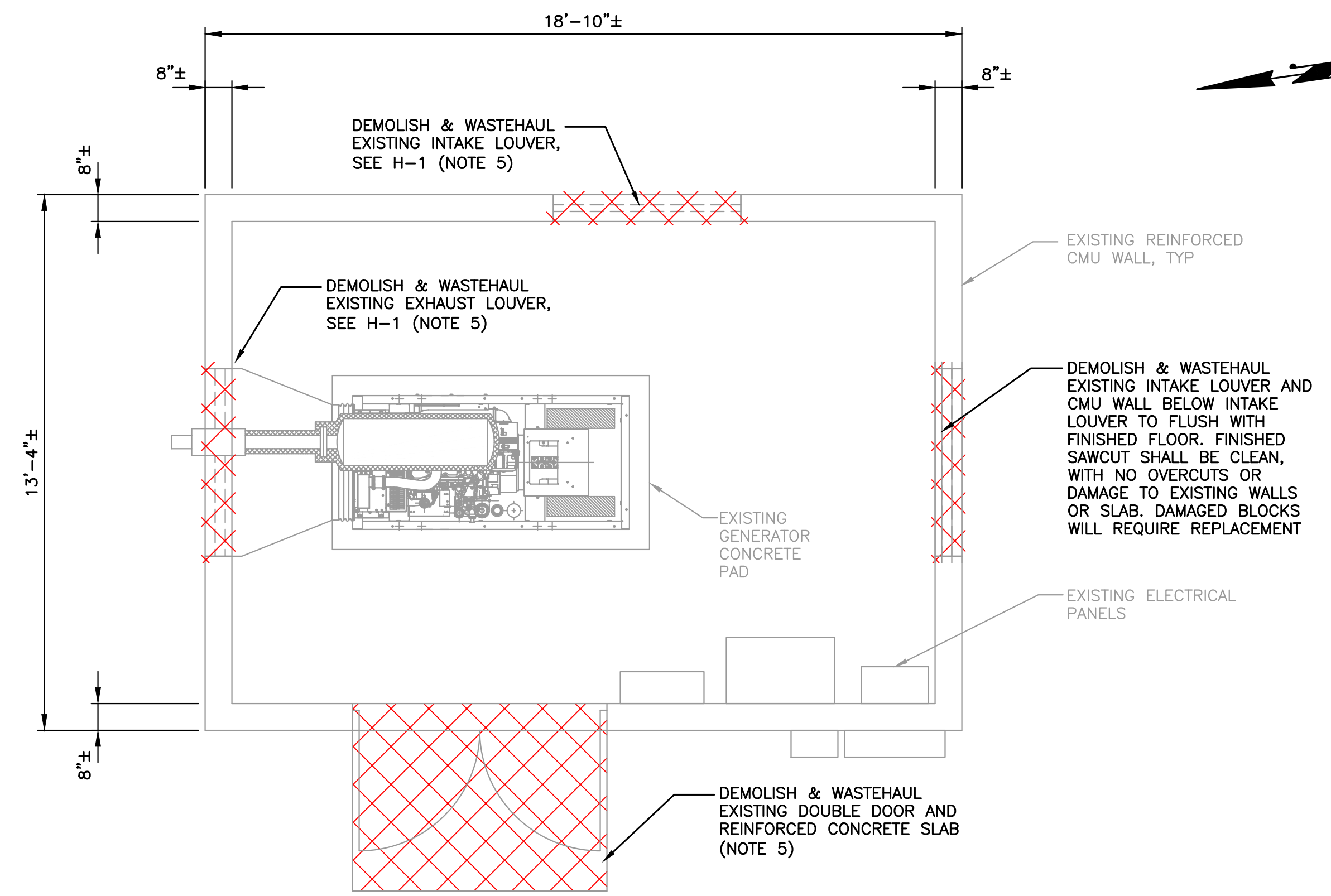
**GENERATOR BUILDING ROOF DEMOLITION PLAN**  
 SCALE: 3/8"=1'-0"



**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:**

- SEE SHEETS S-1 THROUGH S-4 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
- 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.
- EXISTING CONDITIONS AND DIMENSIONS ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION.
- SEE M-SHEETS FOR ADDITIONAL DEMOLITION INFORMATION.
- DO NOT CUT OR DAMAGE EXISTING CMU REINFORCING AROUND OPENINGS.

**City of Puyallup**  
 Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

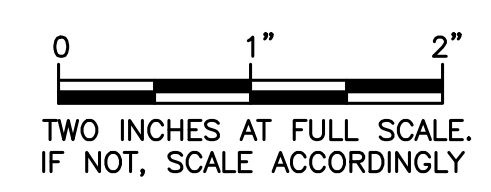
**APPROVED**

BY:

CITY ENGINEER  
 CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

EXPIRATION DATE: 12/31/2023



M:\PUYALLUP\20503 - North Levee Road Pump Station\02 PLANSET\Structural\S\_GEN\_PLN.dwg, 4/28/2022 9:29 AM, RUSSELL HORITA

DATE: APRIL 2022	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB
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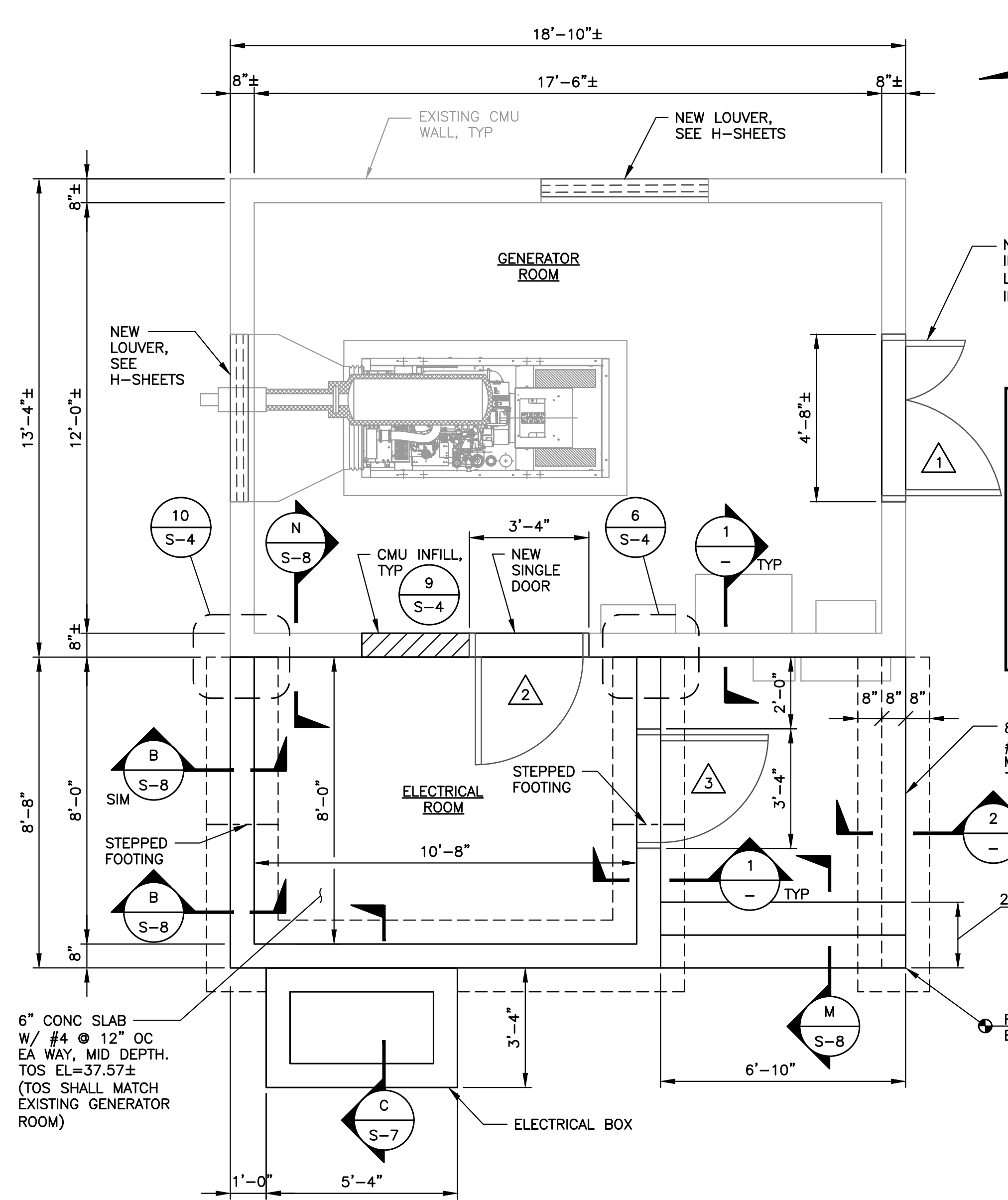
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	REVISION	
	No.	



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

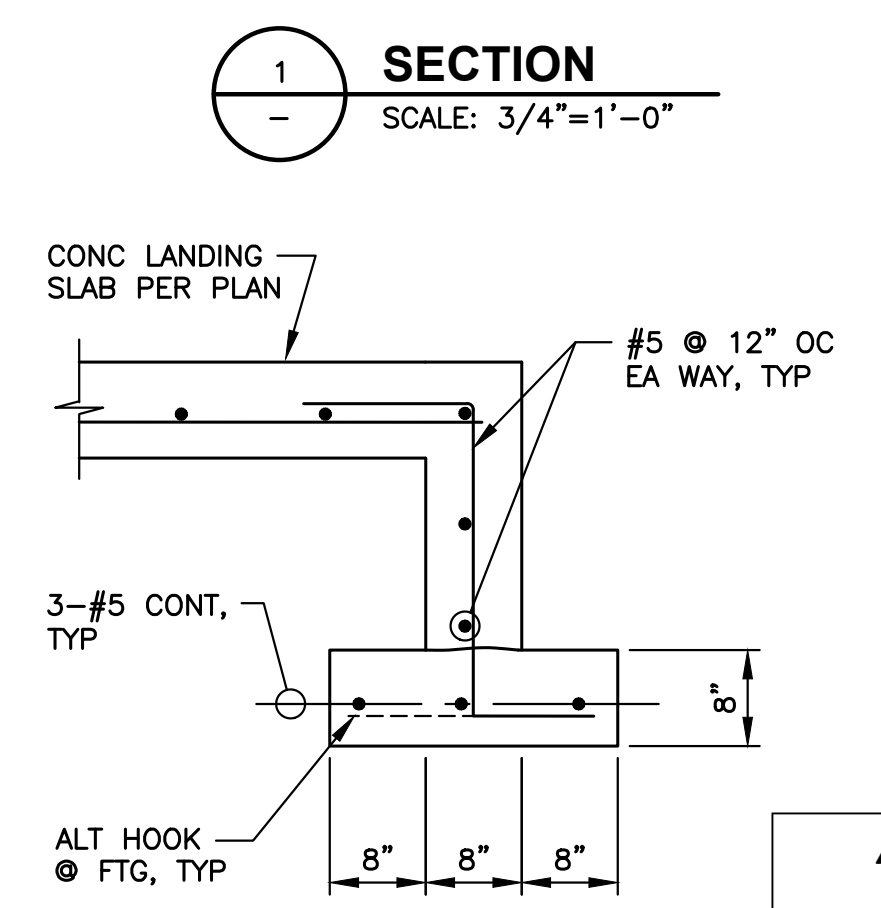
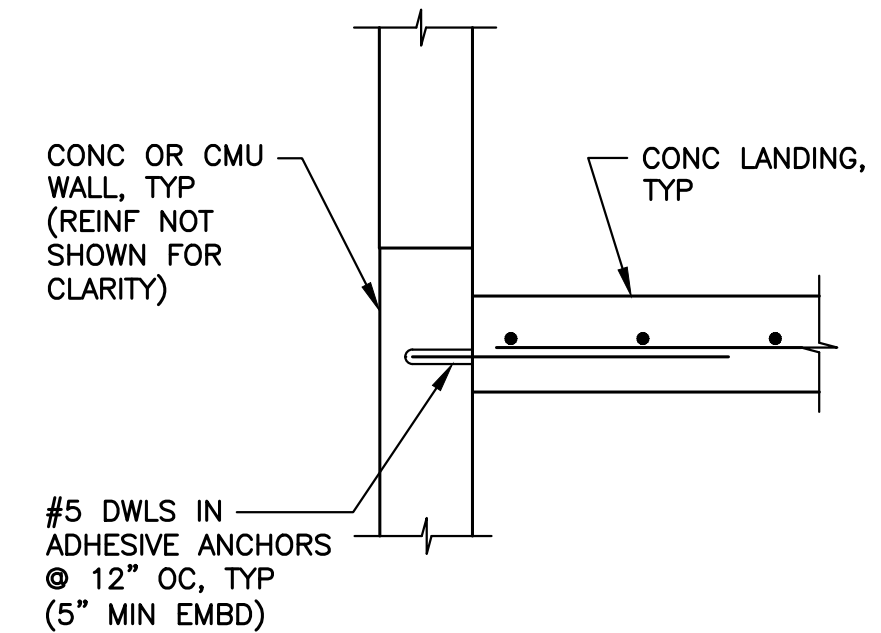
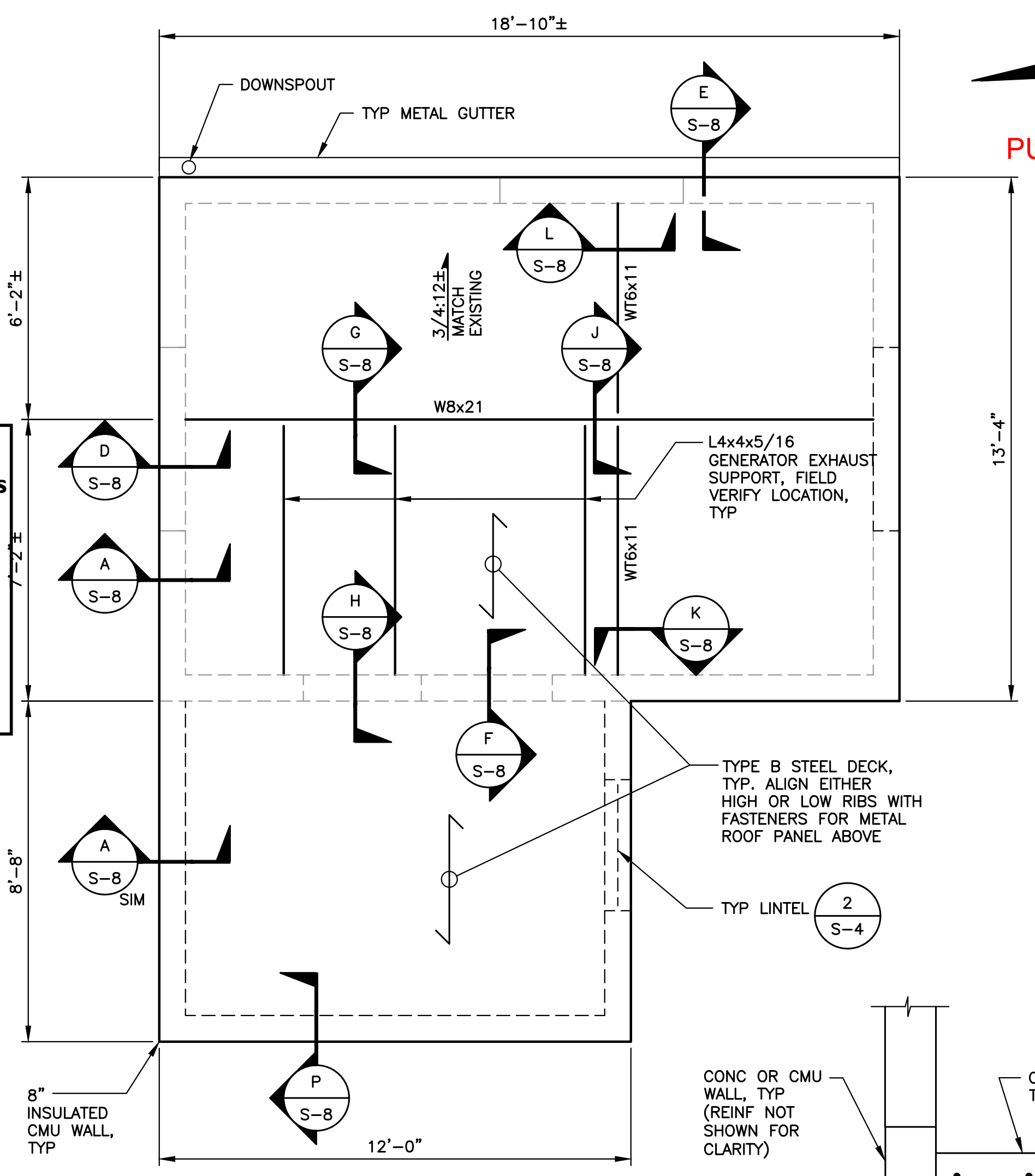
SHEET: **S-6**  
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**B-21-0311 CITY OF PUYALLUP**



**City of Puyallup  
 Development & Permitting Services  
 ISSUED PERMIT**

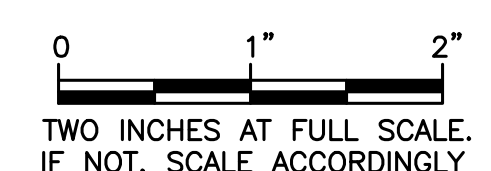
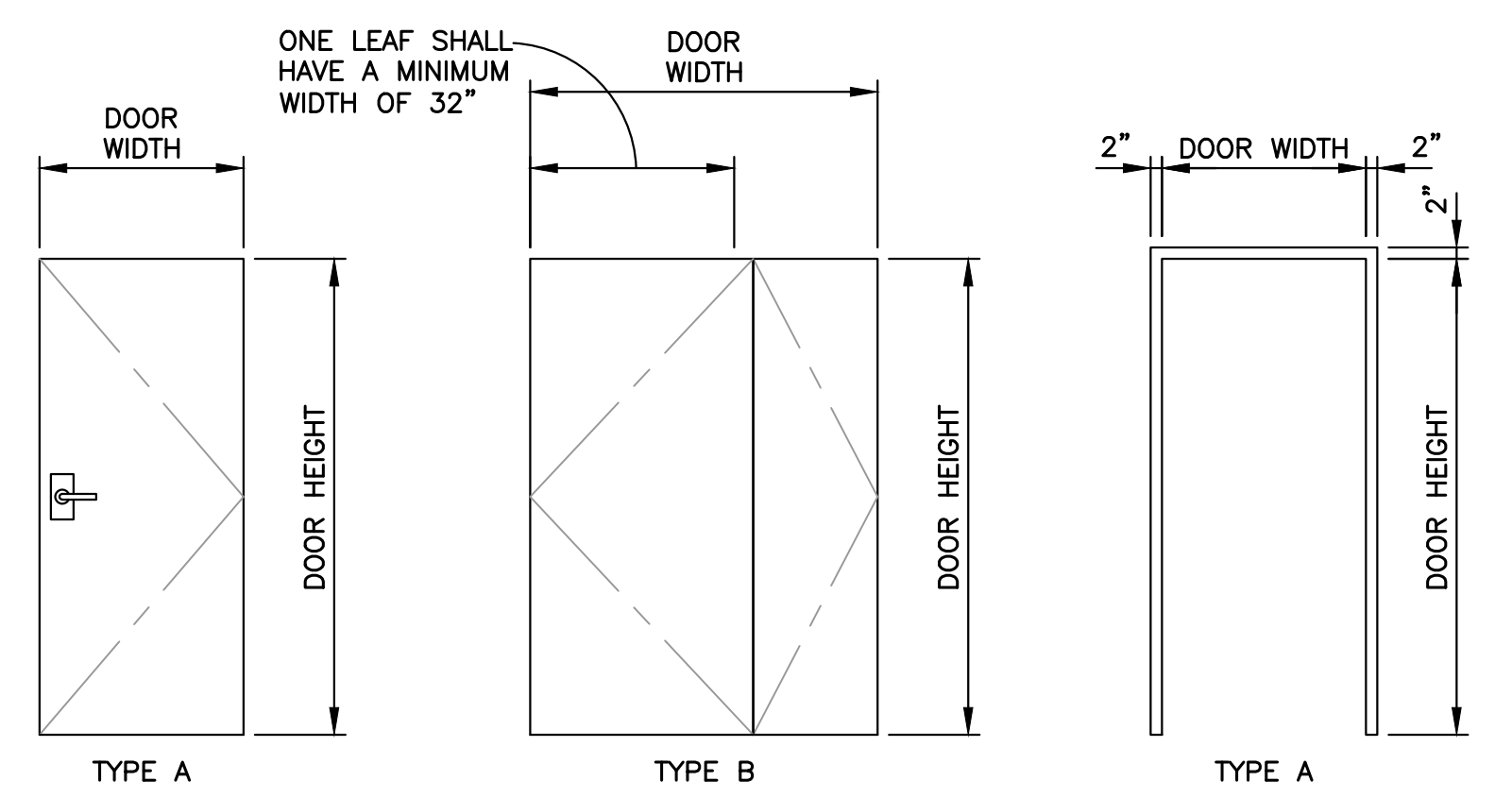
Building	Planning
Engineering	Public Works
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- NOTES:**
- SEE SHEETS S-1 THROUGH S-4 FOR GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
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  - EXISTING CONDITIONS AND DIMENSIONS ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION.

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

NOTE: GENERAL CONTRACTOR TO VERIFY DOOR HEIGHT WITH EXISTING CONCRETE CURB.



**APPROVED**

BY: *[Signature]*  
 CITY ENGINEER  
 CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

EXPIRATION DATE: 12/31/2023

NOTE: THIS APPROVAL EXPIRES ON THE DATE SHOWN. IF CONSTRUCTION HAS NOT STARTED BY THE EXPIRATION DATE, PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL.

THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

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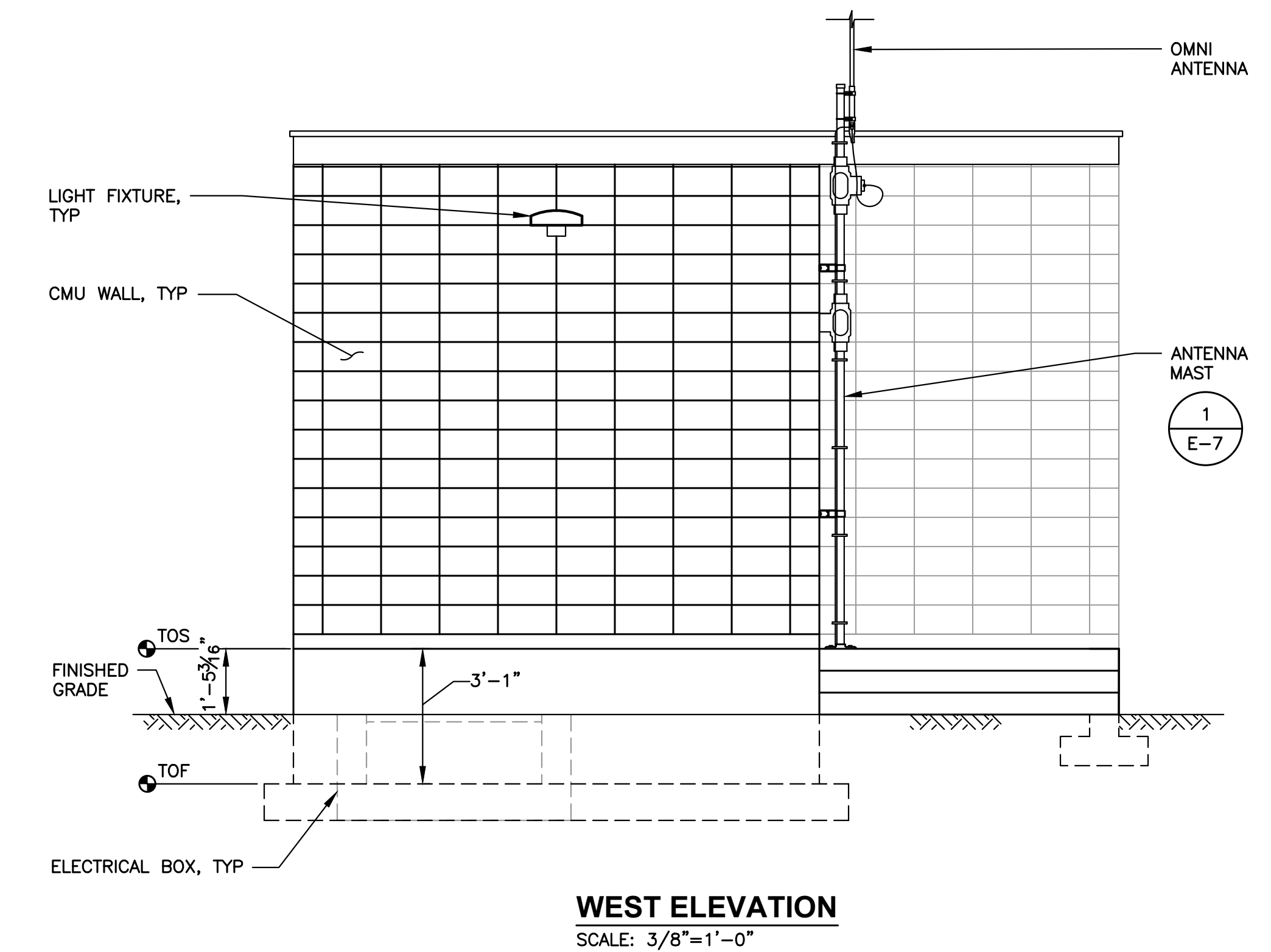
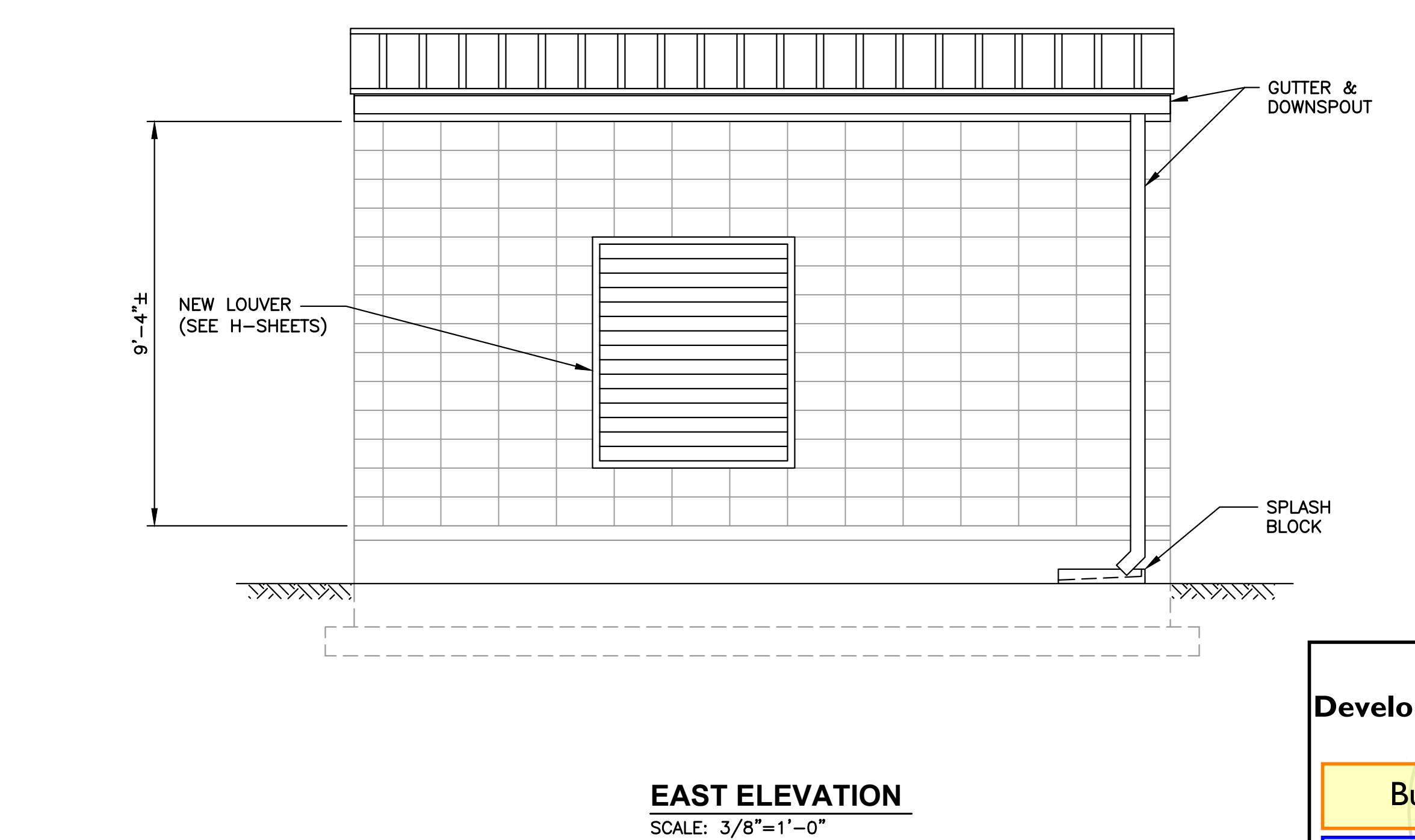
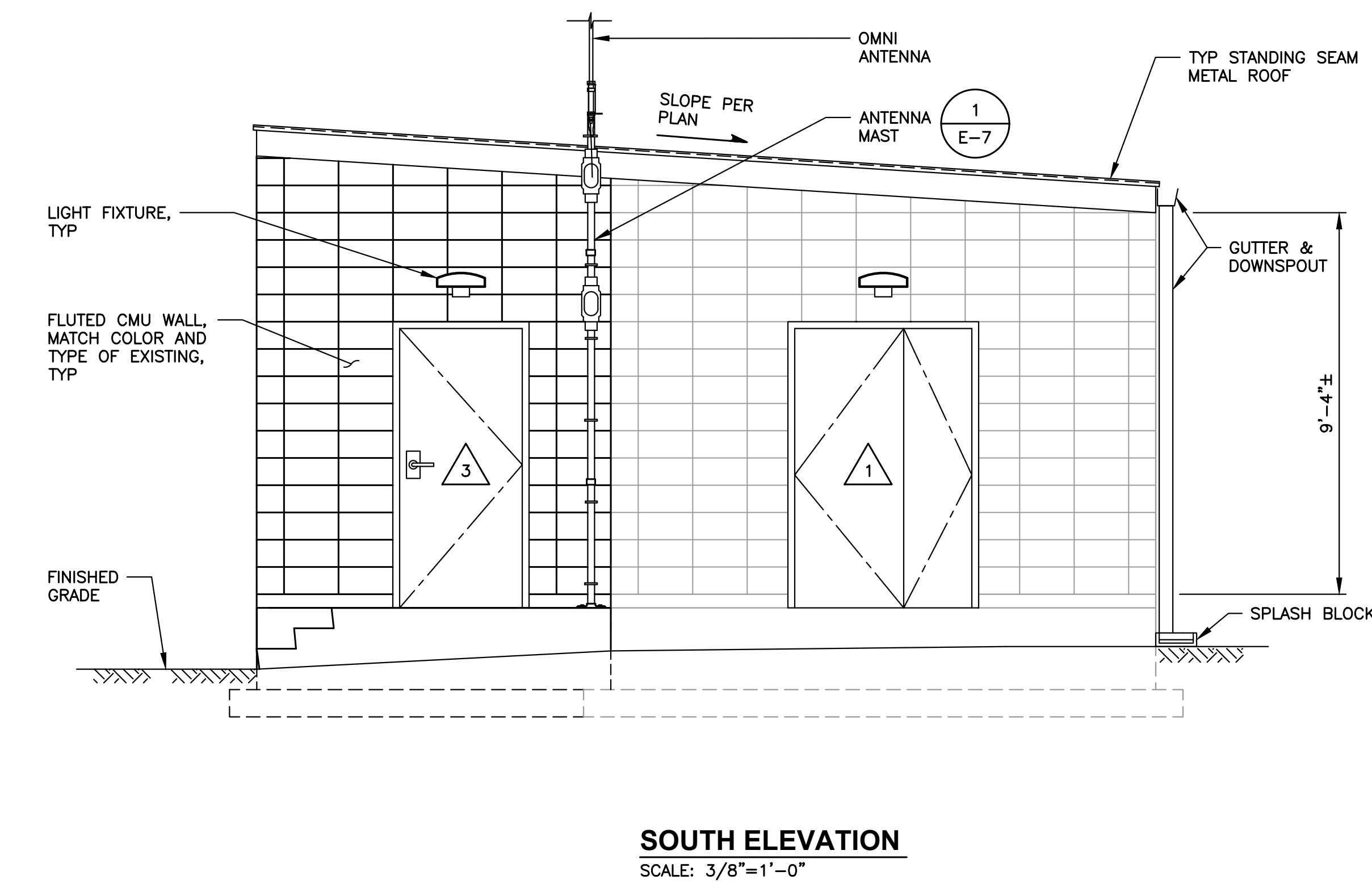
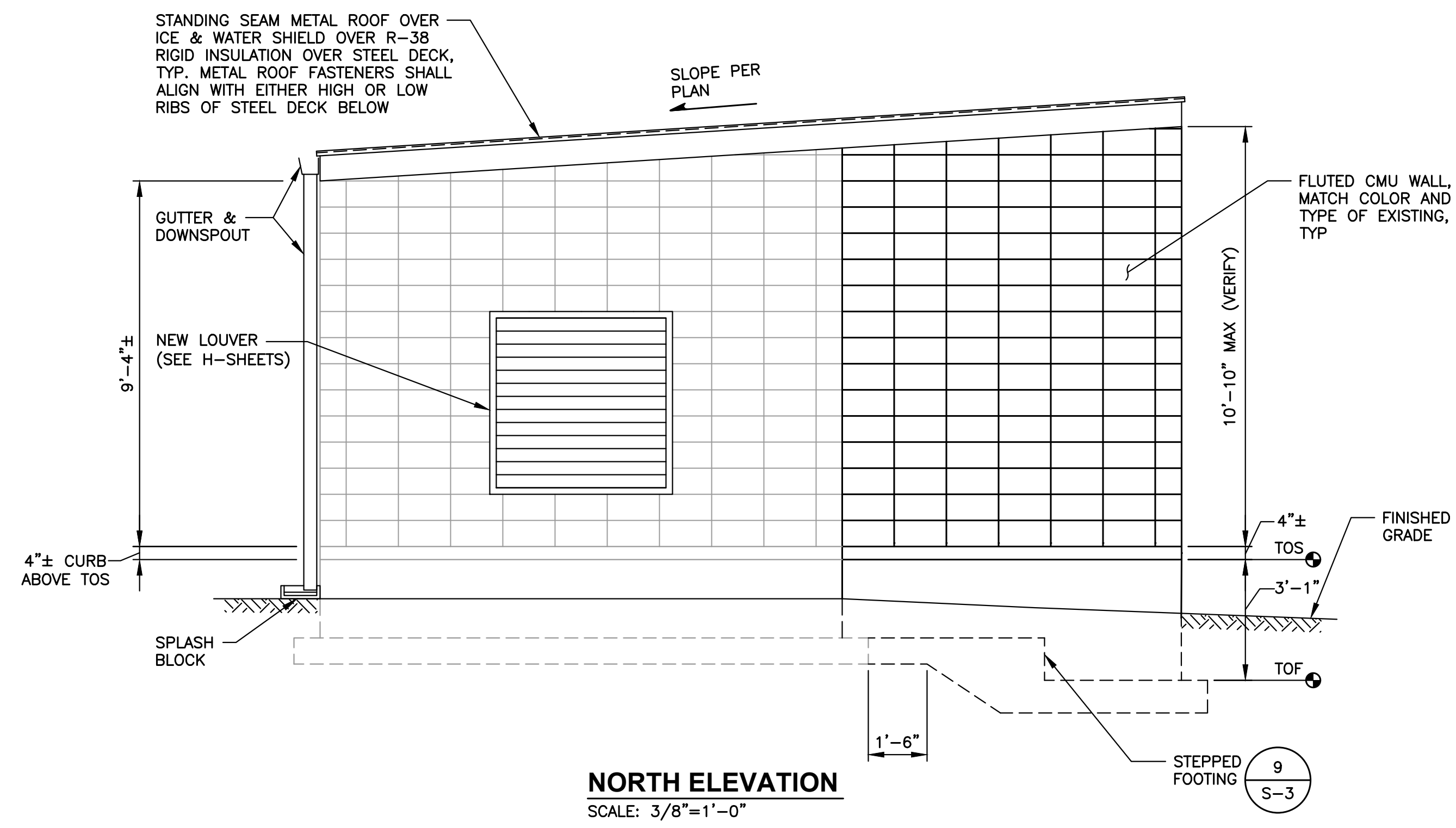
DATE: APRIL 2022	DRAWN: RAH	CHECKED: AQ	APPROVED: MJB
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No.	REVISION	DATE	APPD



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

SHEET: **S-7**  
OF: **8**  
JOB NO.: 20503  
DWG: S\_GEN\_PLN



**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

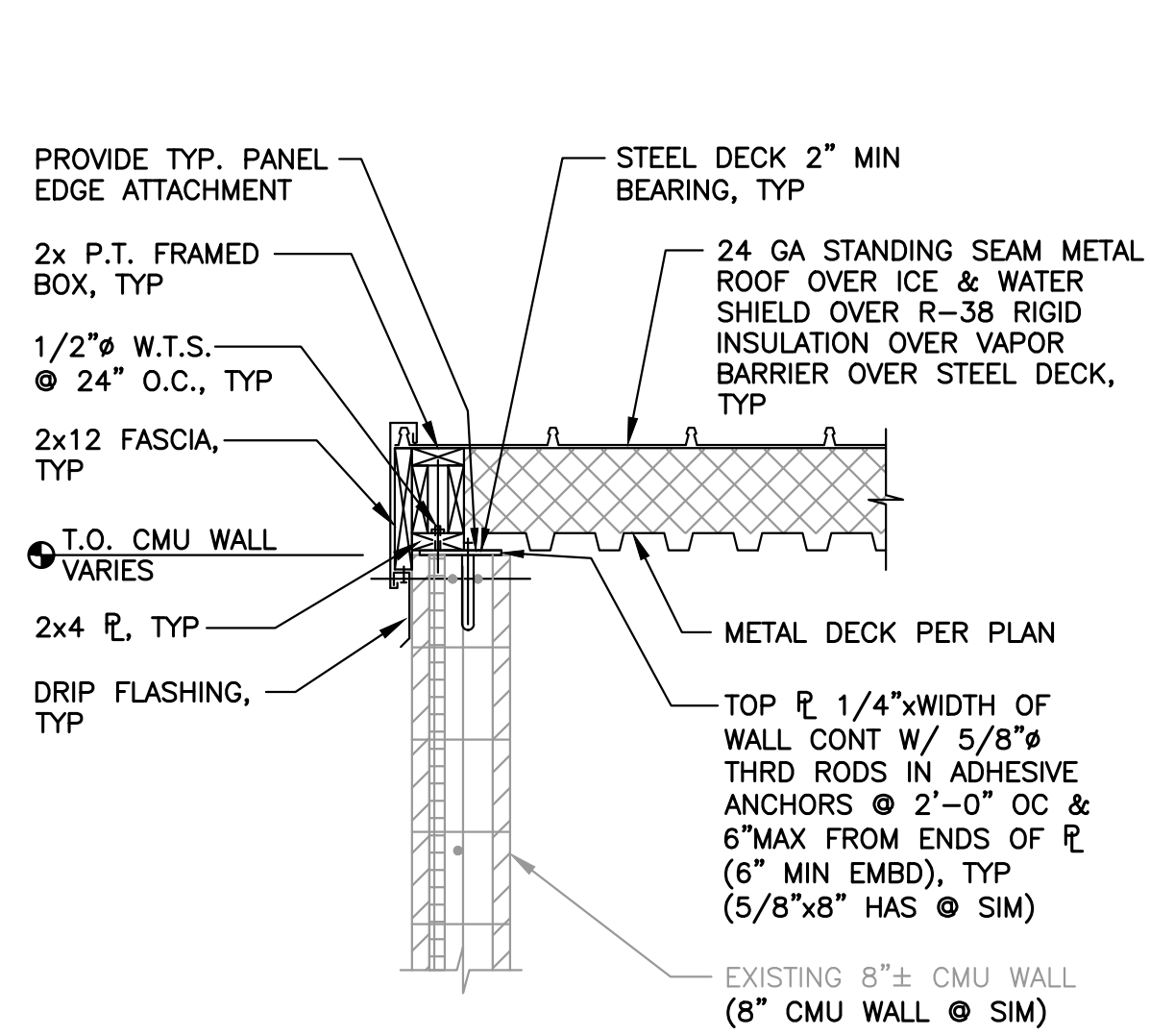
Building	Planning
Engineering	Public Works
Fire	Traffic

**APPROVED**  
BY: [Signature]  
CITY ENGINEER  
CITY OF PUYALLUP  
APPROVED DATE: 4/26/2022  
EXPIRATION DATE: 12/31/2023

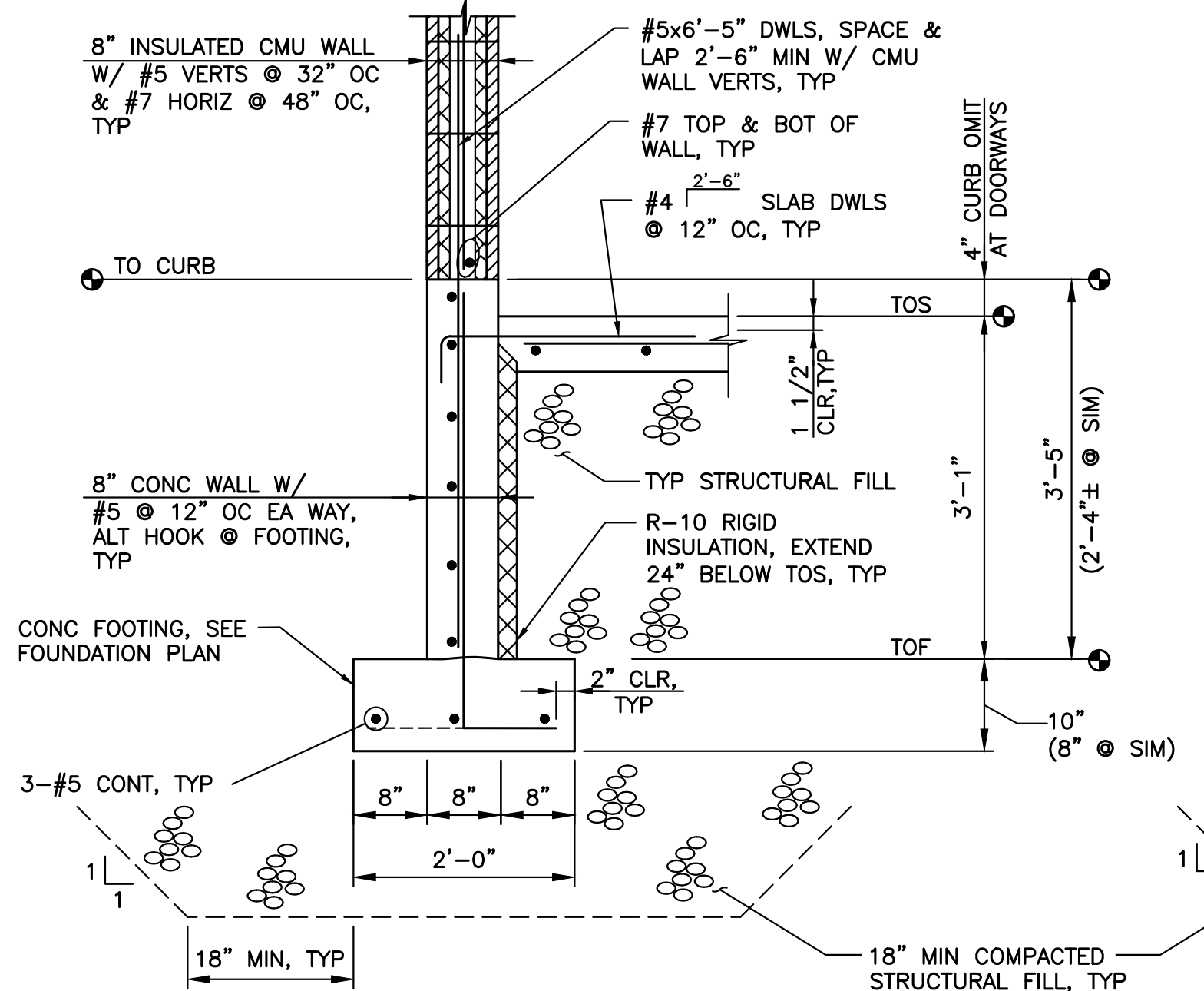


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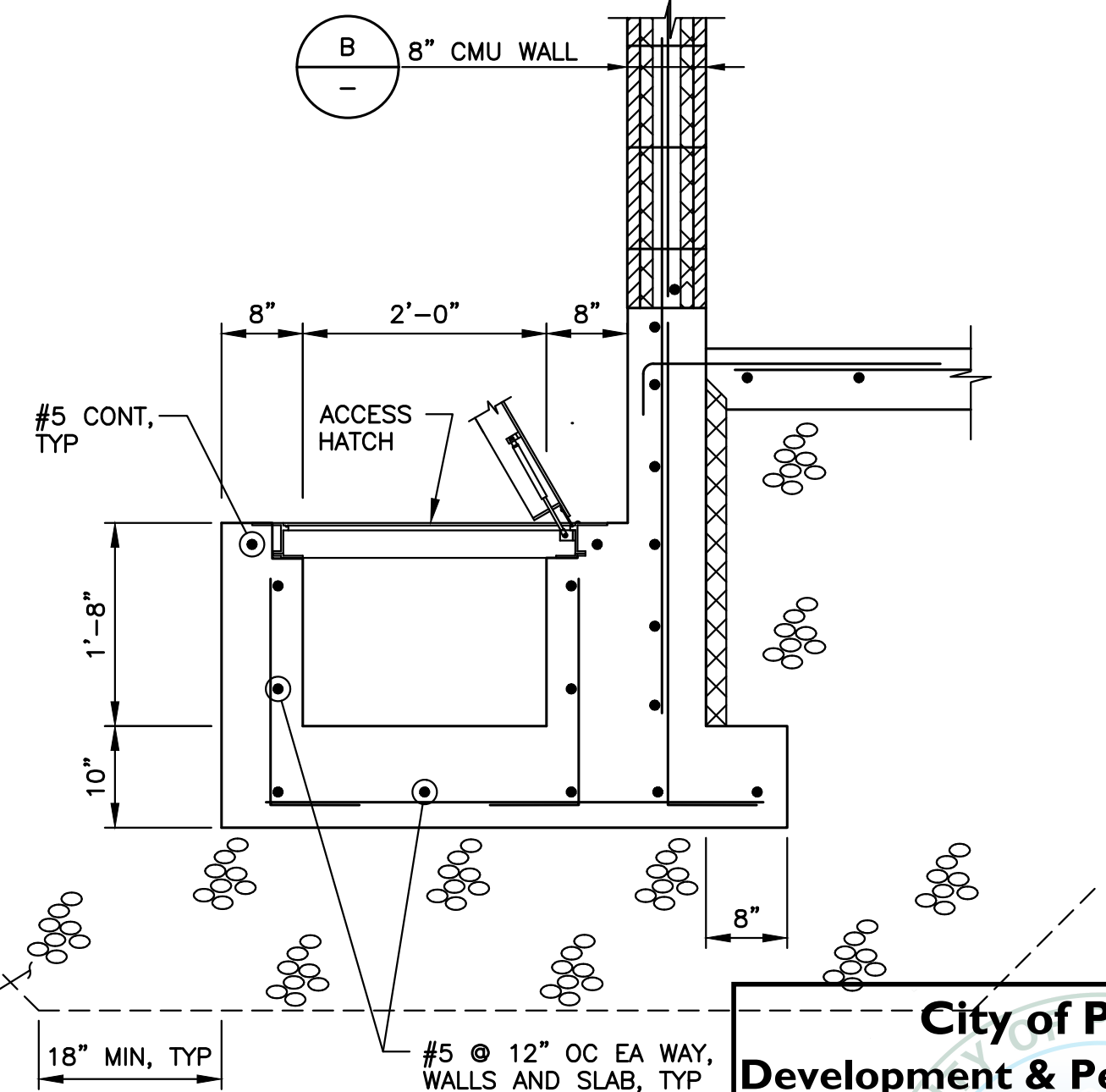
M:\PUYALLUP\20503 - North Levee Road Pump Station\02\_PLANSSET\Structural\S\_GEN\_PLN.dwg, 4/28/2022 9:29 AM, RUSSELL HORITA



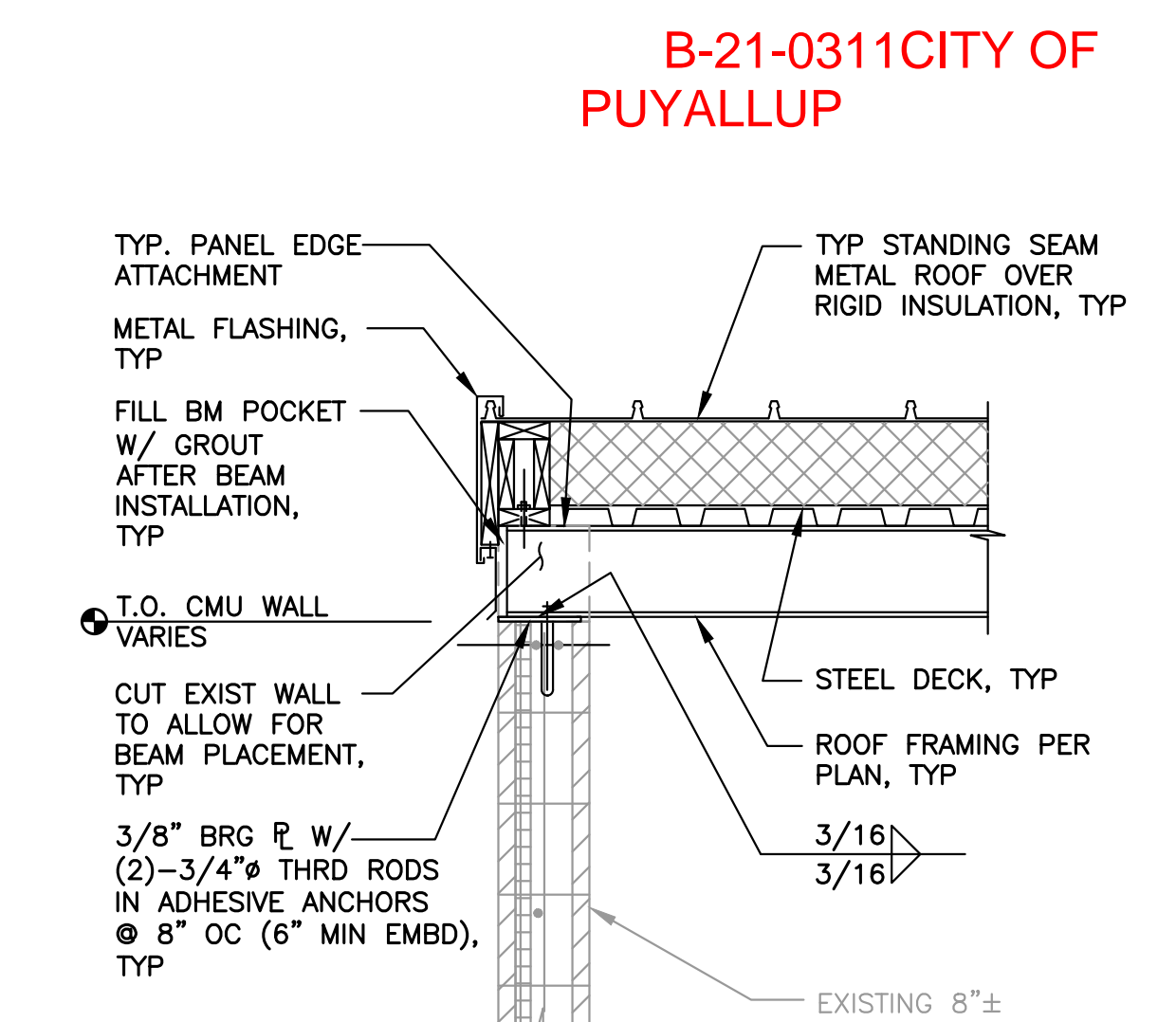
**A SECTION**  
S-6 SCALE: 3/4"=1'-0"



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



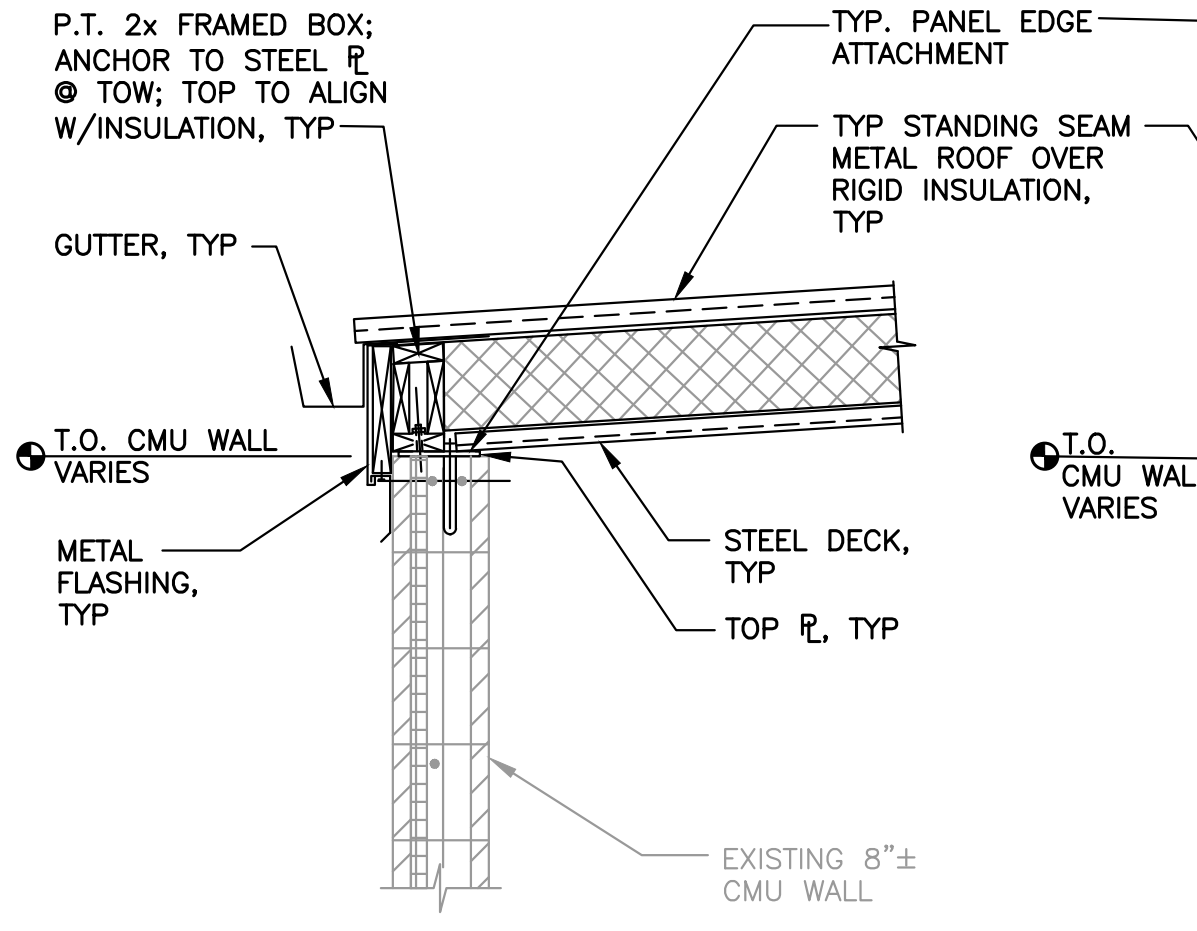
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S-6 SCALE: 3/4"=1'-0"



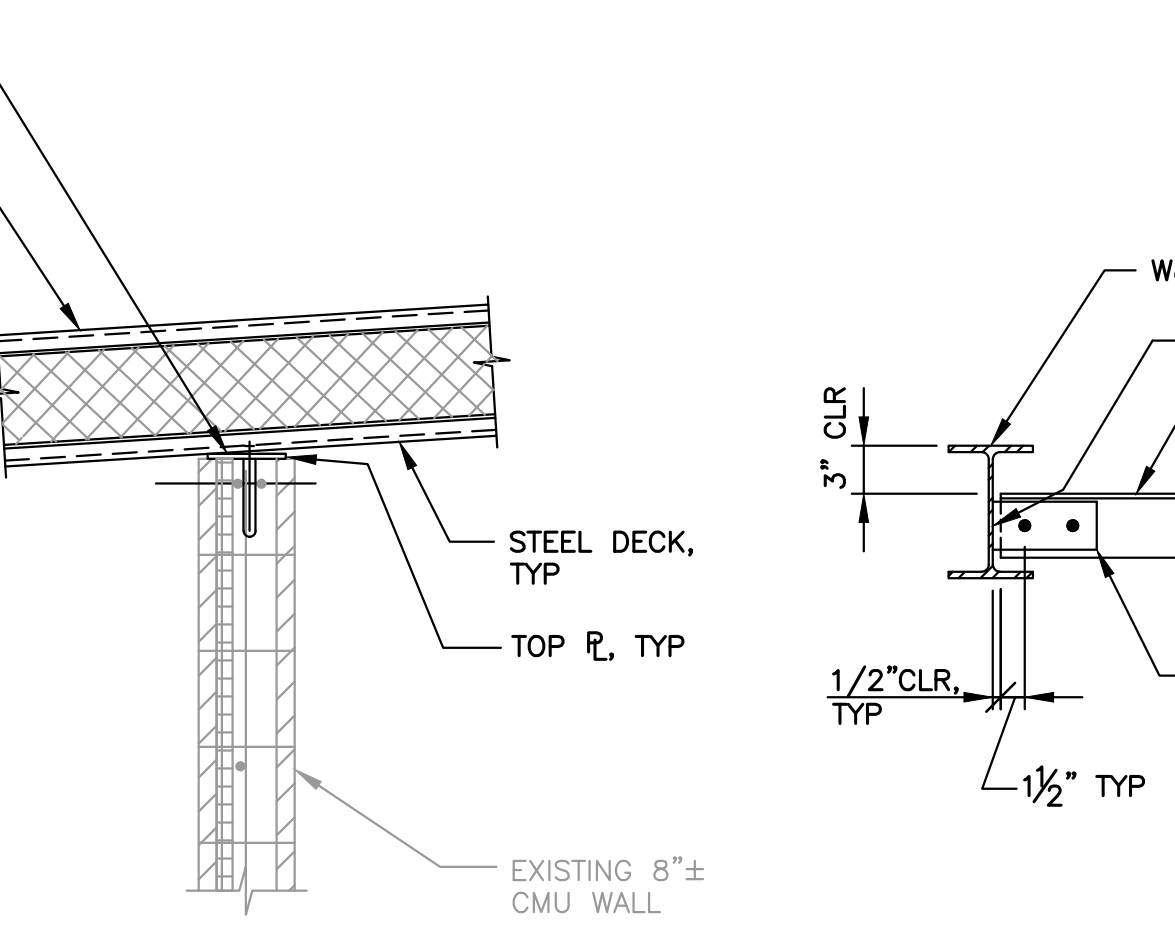
**D SECTION**  
S-6 SCALE: 3/4"=1'-0"

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

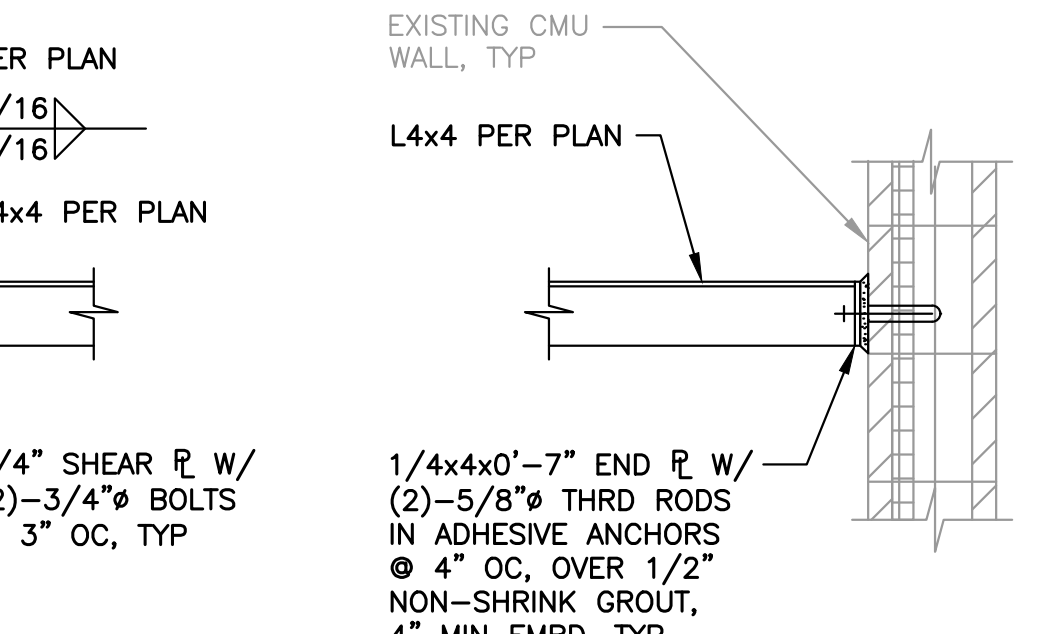
Building	Planning
Engineering	Public Works
Fire	Traffic



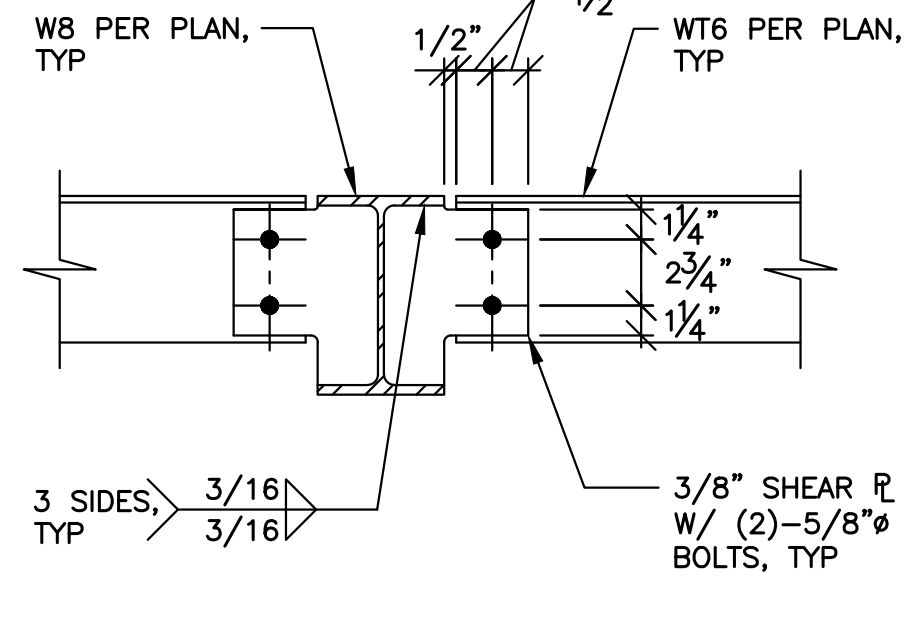
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S-6 SCALE: 3/4"=1'-0"



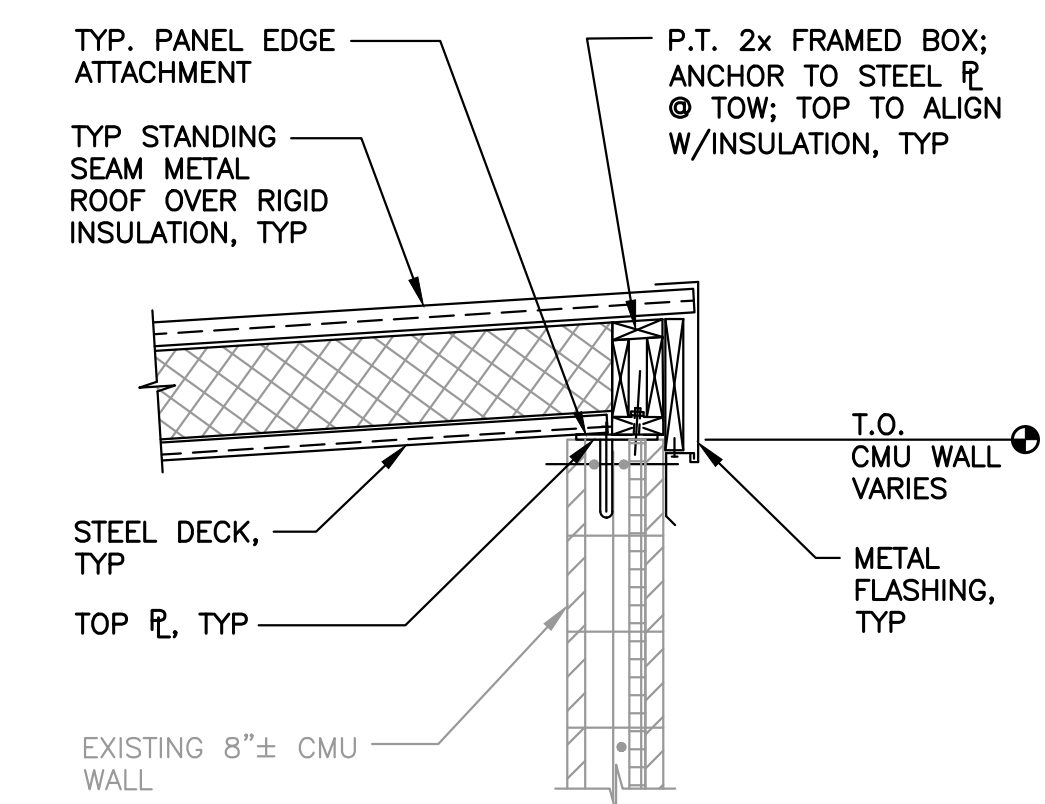
**F SECTION**  
S-6 SCALE: 3/4"=1'-0"



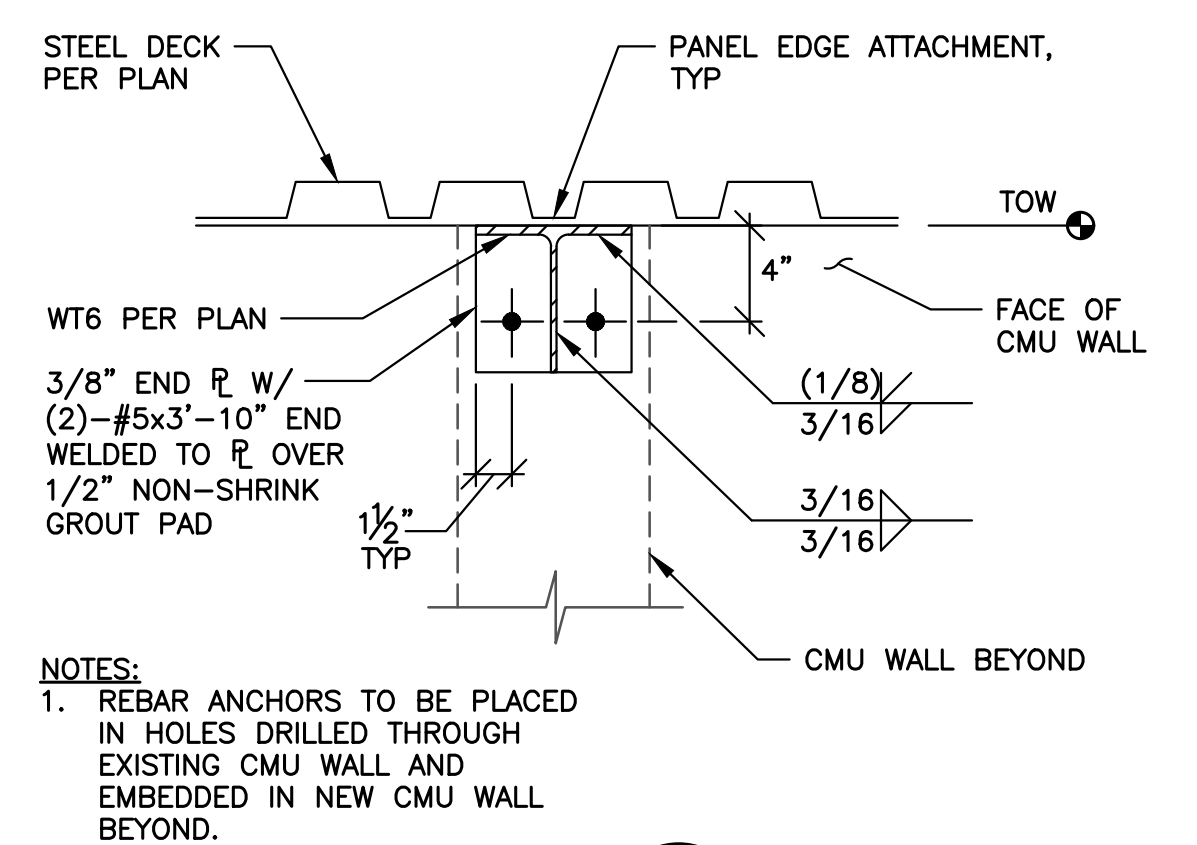
**G SECTION**  
S-6 SCALE: 1"=1'-0"



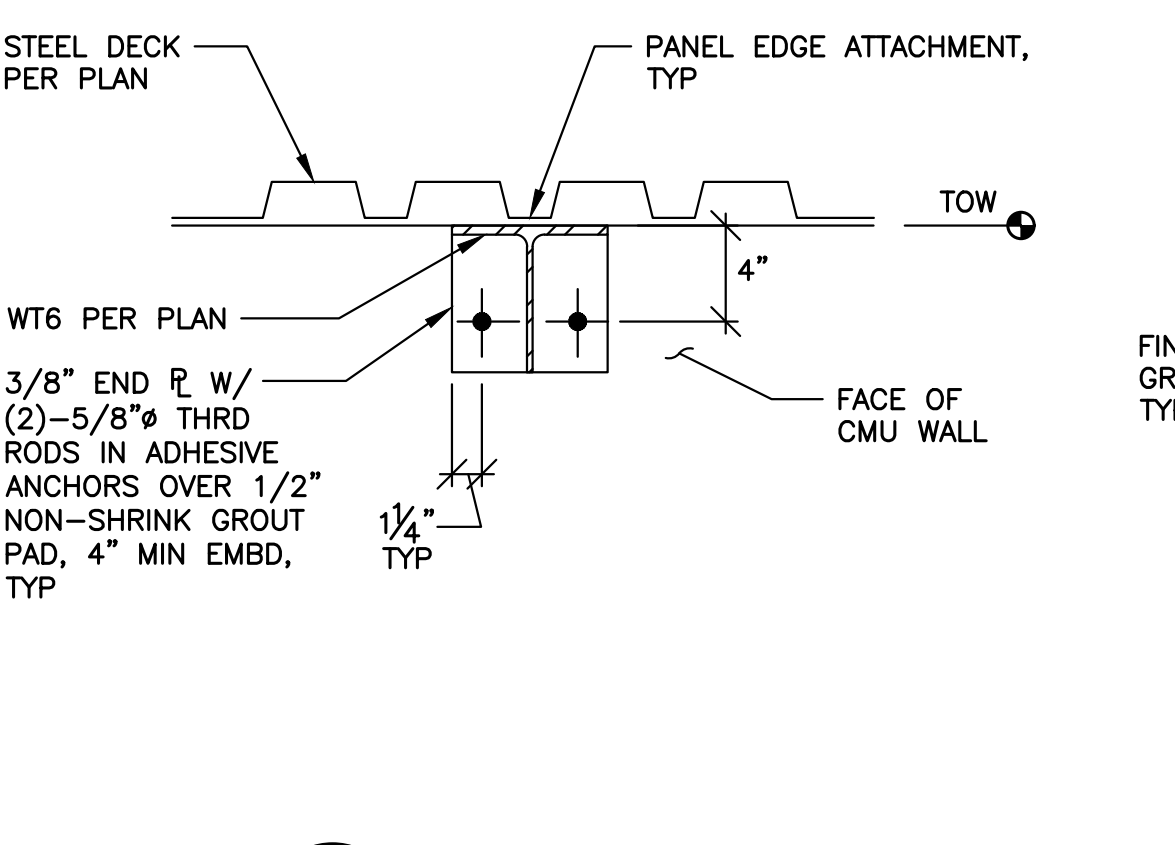
**H SECTION**  
S-6 SCALE: 1"=1'-0"



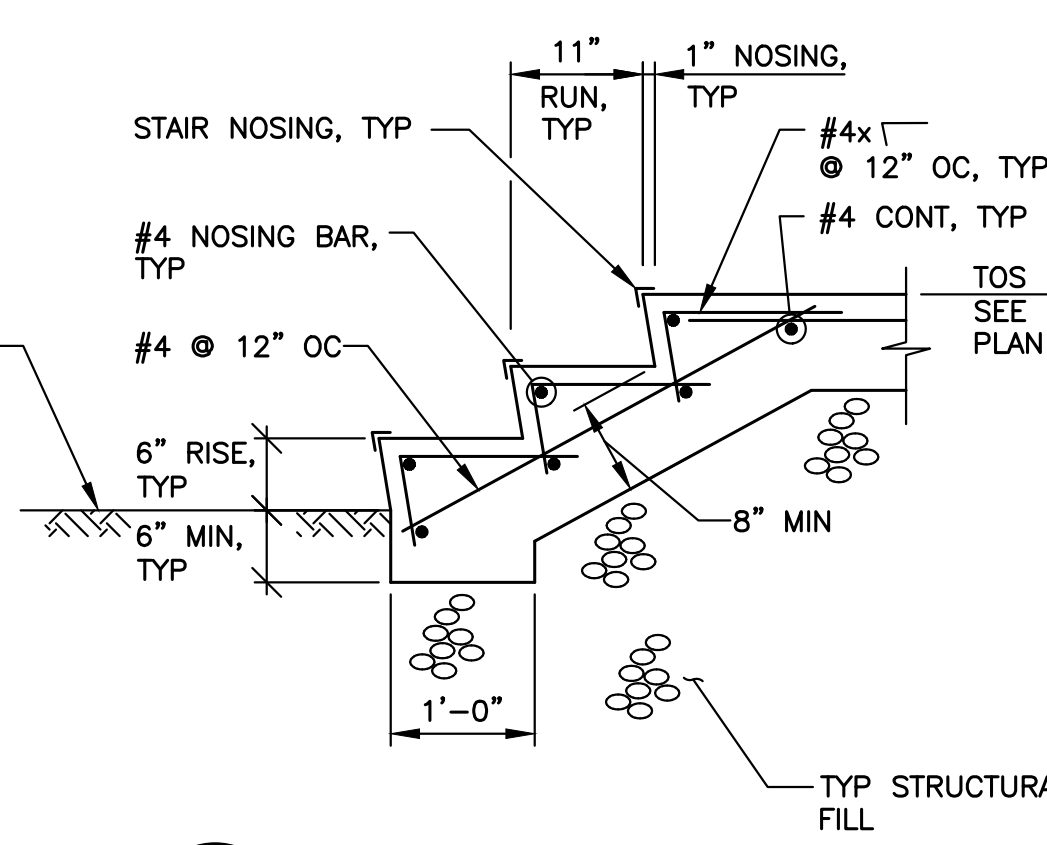
**J SECTION**  
S-6 SCALE: 1 1/2"=1'-0"



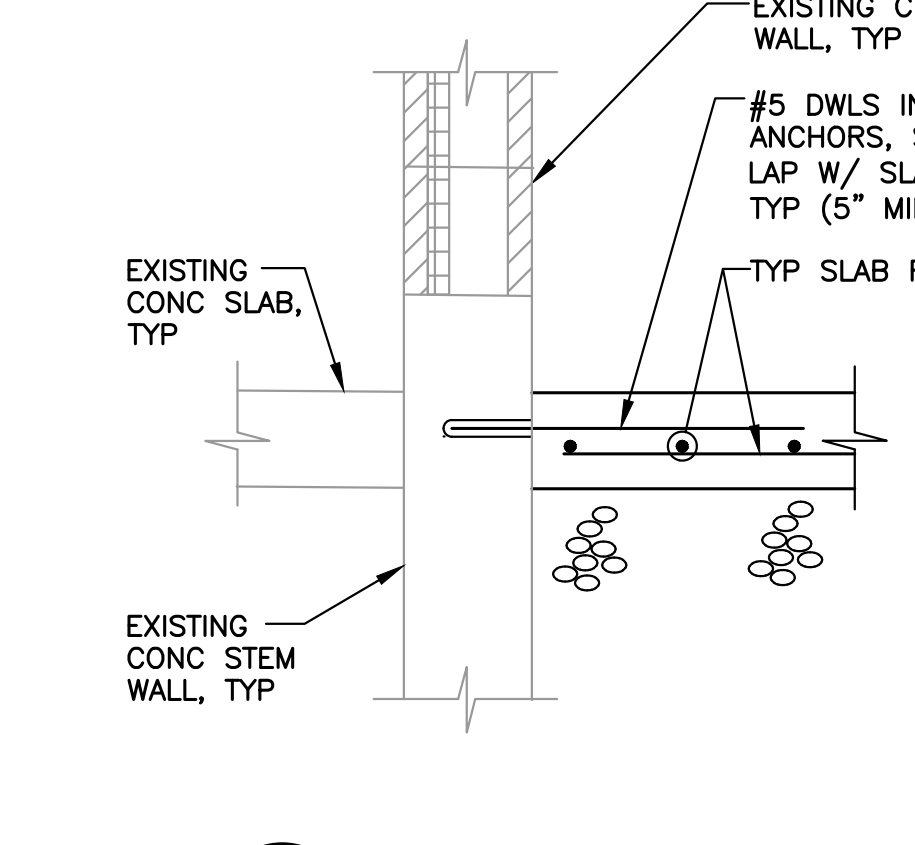
**K SECTION**  
S-6 SCALE: 1 1/2"=1'-0"



**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"

**P SECTION**  
S-6 SCALE: 3/4"=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.

**NOTE:**  
1. STEEL DECK NOT SHOWN FOR CLARITY.

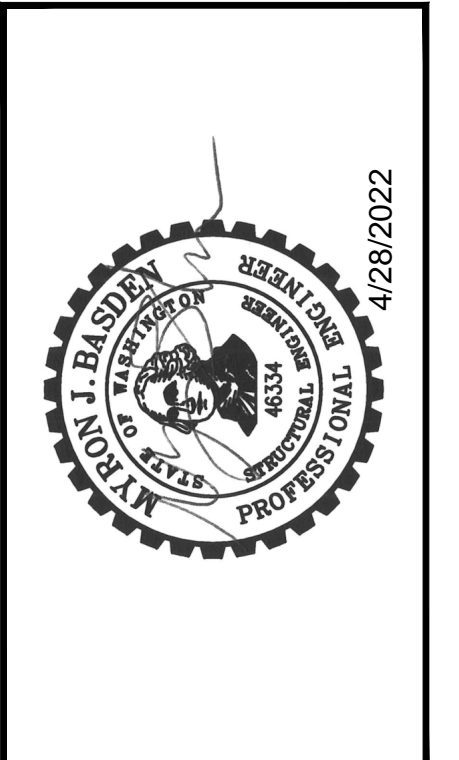
**APPROVED**  
BY: [Signature]  
CITY ENGINEER  
CITY OF PUYALLUP  
APPROVED DATE: 4/26/2022  
EXPIRATION DATE: 12/31/2023

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

**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
1130 RAINIER AVENUE SOUTH, SUITE 300  
SEATTLE, WASHINGTON 98144 • (206) 264-0860

DATE: APRIL 2022	RAH	AO	MJB
DRAWN:	CHECKED:	APPROVED:	

	DATE	APPD
	REVISION	
	No.	



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

SHEET: **S-8**  
OF: **8**  
JOB NO.: 20503  
DWG: S\_GEN\_PLN



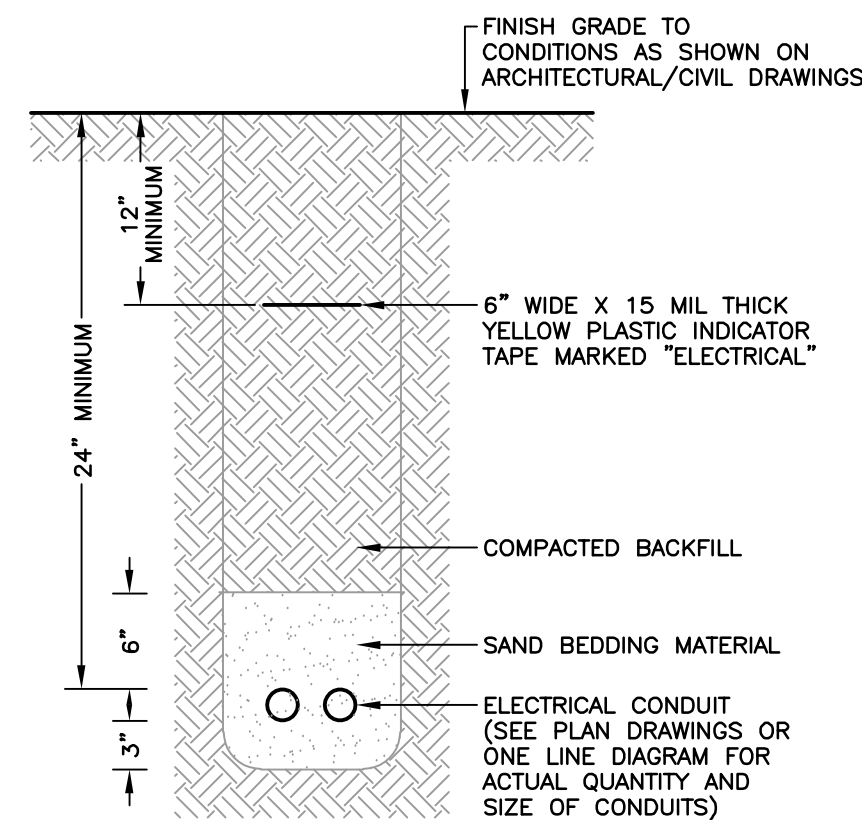


**ELECTRICAL GENERAL NOTES**

- 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 1, 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 1, 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.

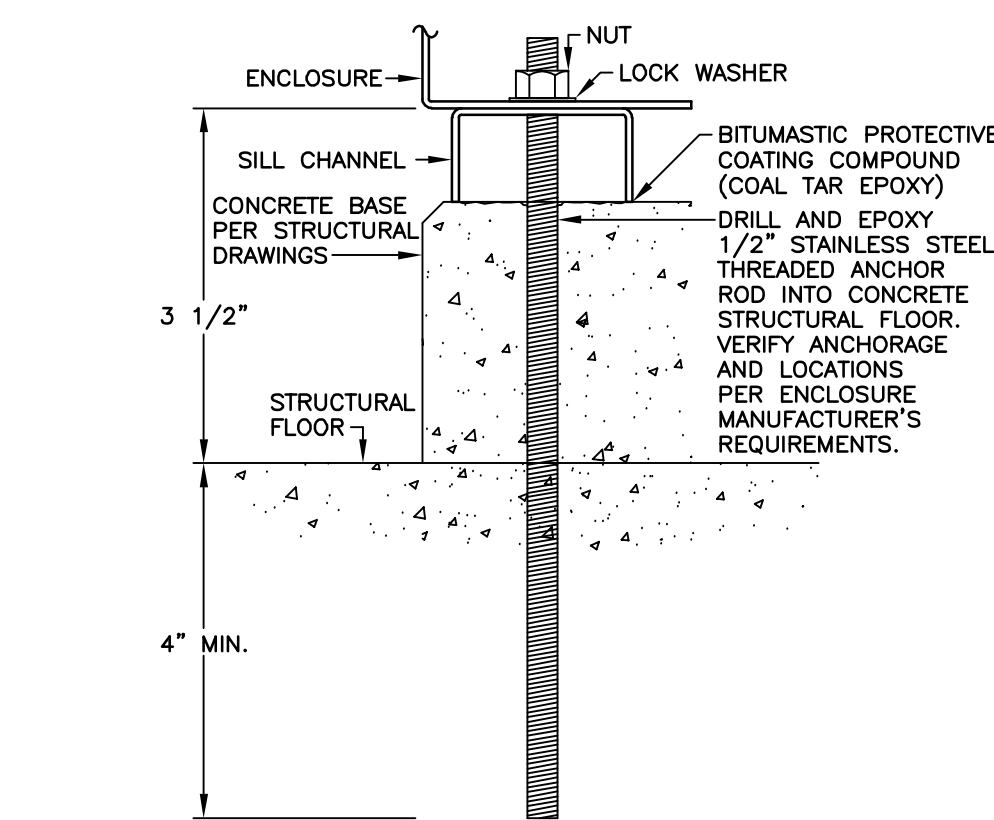
LIGHTING FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MANUFACTURER NAME	CATALOG NO.	LAMP		CATALOG NO.	REMARKS
				QTY	VA		
B	LED, 4' LONG, SURFACE MOUNTED, WIDE BEAM, FUSED, ENCLOSED AND GASKETED, ONE PIECE HOUSING, MOLDED FIBERGLASS REINFORCED POLYESTER BODY, IMPACT RESISTANT POLYCARBONATE DIFFUSER, STAINLESS 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	PROVIDE 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-A1-1-4-80LA-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				

B-21-0311 CITY OF PUYALLUP



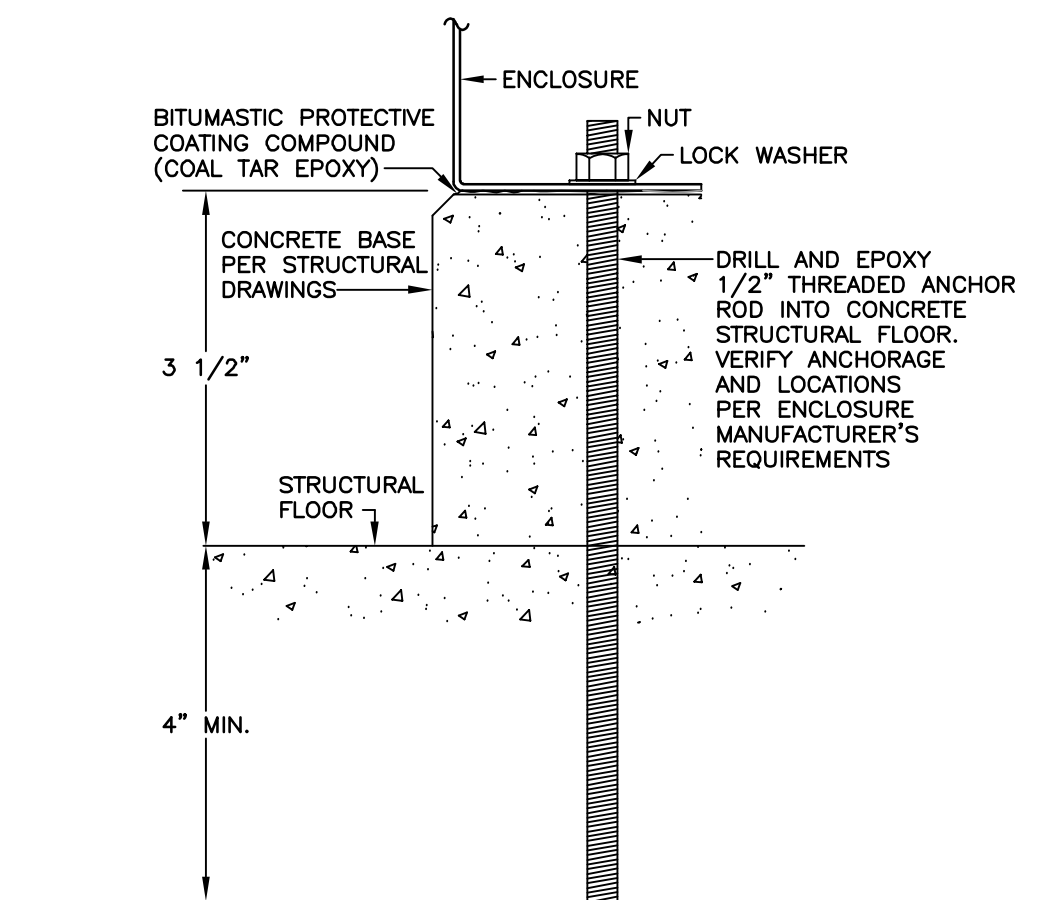
**DETAIL 1/E-2  
TRENCH FOR ELECTRICAL CIRCUITS  
SECONDARY POWER OR SIGNAL CIRCUITS**

SCALE: NONE  
NOTE: CONDUITS ARE SHOWN DIAGRAMMATICALLY. SEE PLAN DRAWINGS FOR ACTUAL CONDUIT QUANTITIES, DEPTH, SIZES AND ARRANGEMENTS.



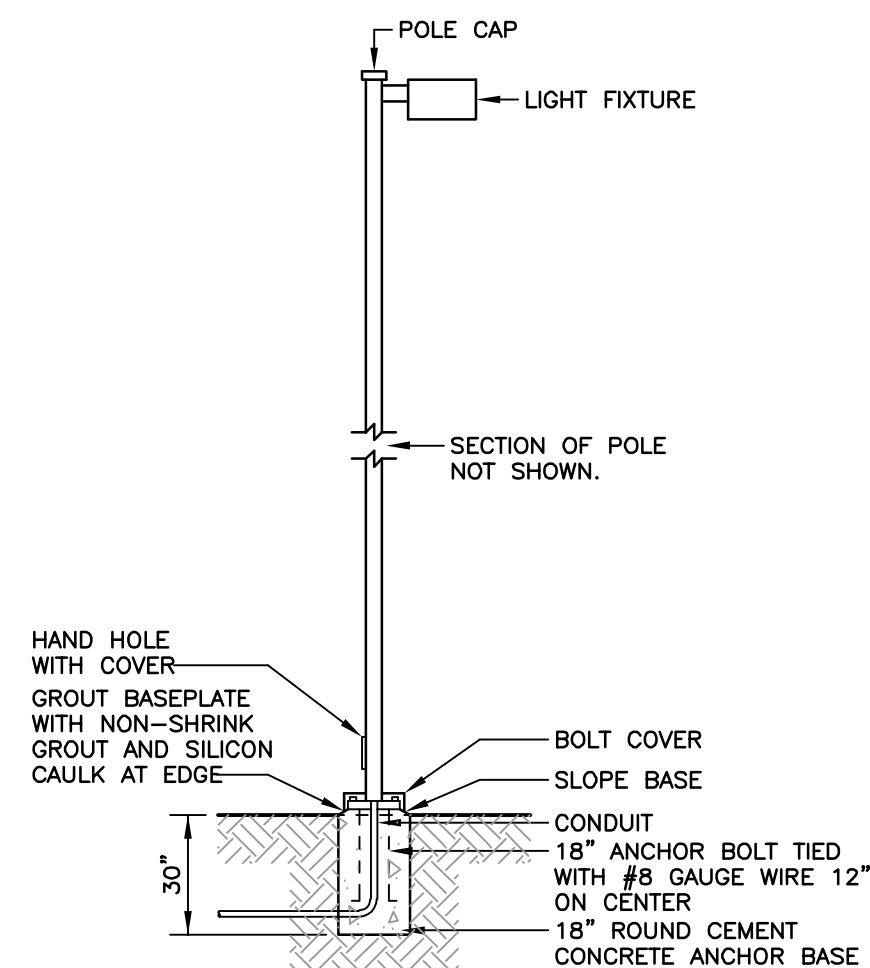
**DETAIL 2/E-2  
FLOOR MOUNTED ENCLOSURE MOUNTING  
WITH CHANNEL**

SCALE: NONE



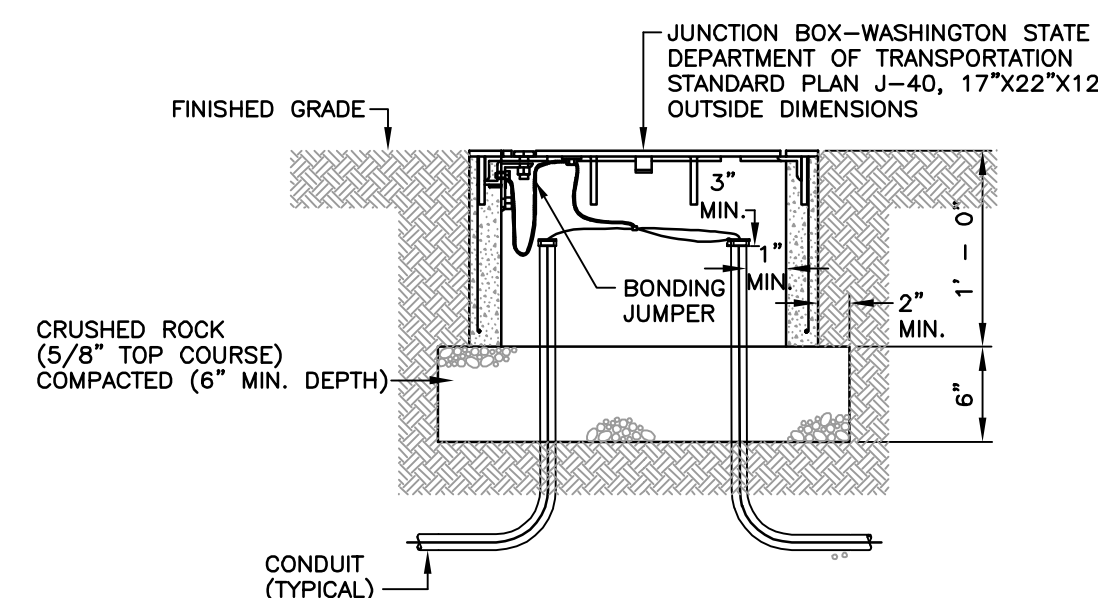
**DETAIL 3/E-2  
FLOOR MOUNTED ENCLOSURE MOUNTING**

SCALE: NONE



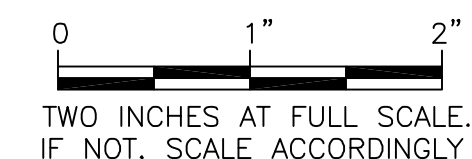
**DETAIL 5/E-2  
AREA LIGHT**

SCALE: NONE



**DETAIL 6/E-2  
STANDARD LOCKING JUNCTION BOX**

SCALE: NONE  
NOTE: CONDUITS ARE SHOWN DIAGRAMMATICALLY. SEE PLAN DRAWINGS FOR ACTUAL CONDUIT QUANTITIES, DEPTH, SIZES AND ARRANGEMENTS.



**APPROVED**

BY: *[Signature]*  
CITY ENGINEER  
CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

EXPIRATION DATE: 12/31/2023

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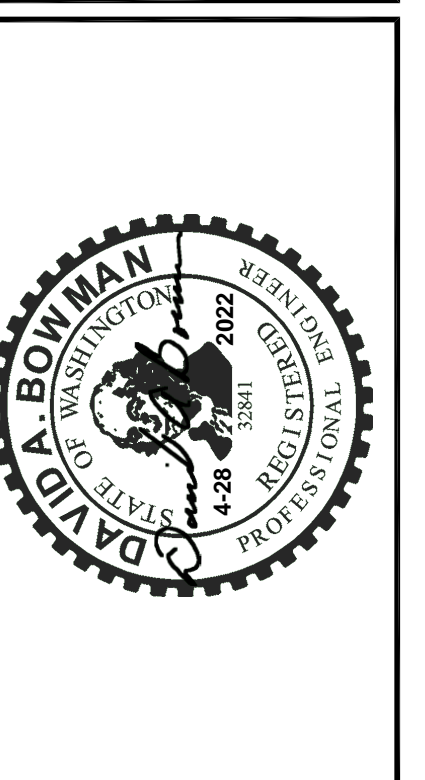
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**Gray & Osborne, Inc.**  
CONSULTING ENGINEERS  
1130 RAINIER AVENUE SOUTH, SUITE 300  
SEATTLE, WASHINGTON 98144 • (206) 284-0860

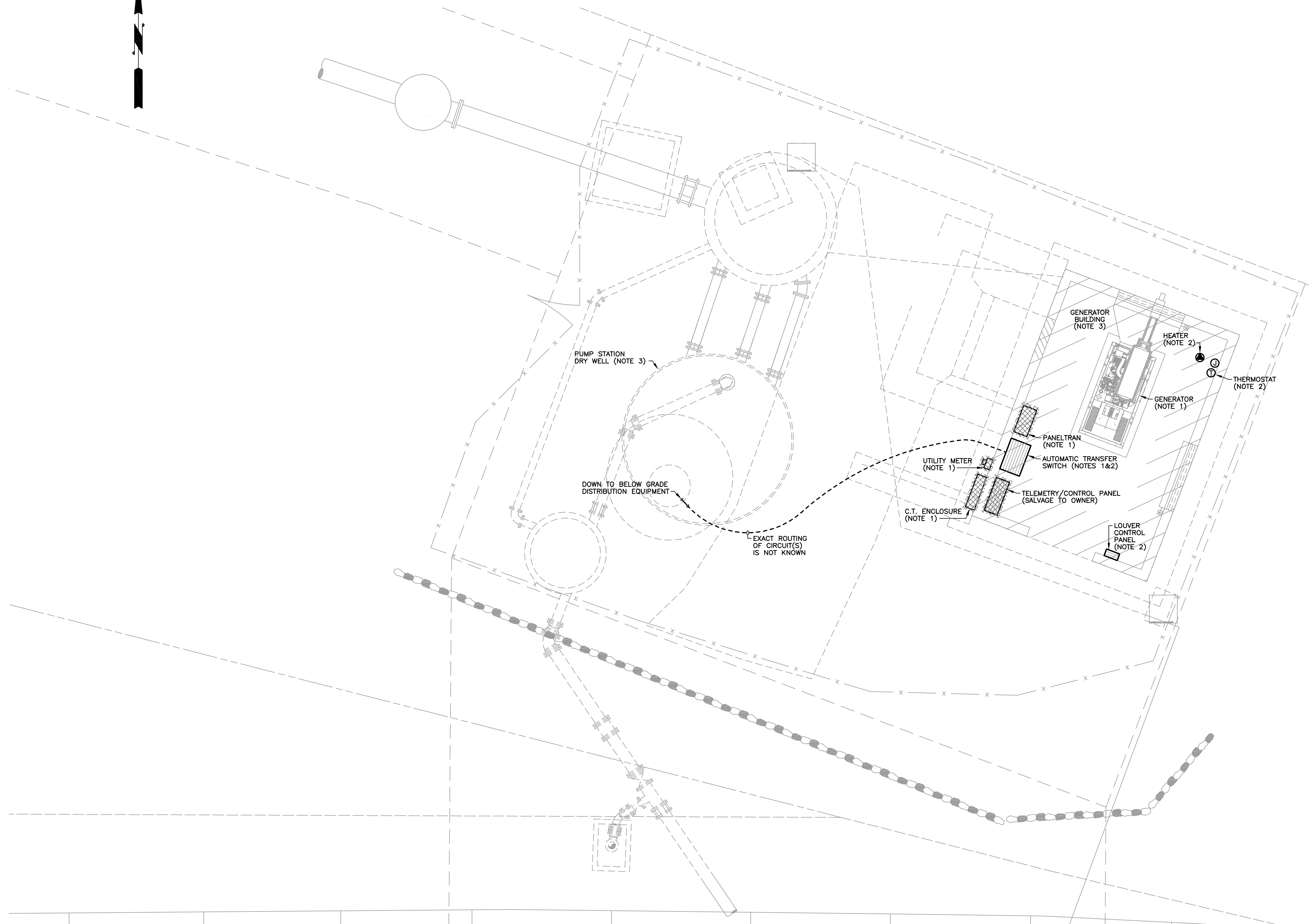
DATE: APR 2022	MLO	JRM	MLO
DRAWN:		CHECKED:	
APPROVED:			

	DATE	APPD
	REVISION	
No.		



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

SHEET: **E-2**  
OF: **9**  
JOB NO.: 20503  
DWG: C-E00-02



**NOTES:**

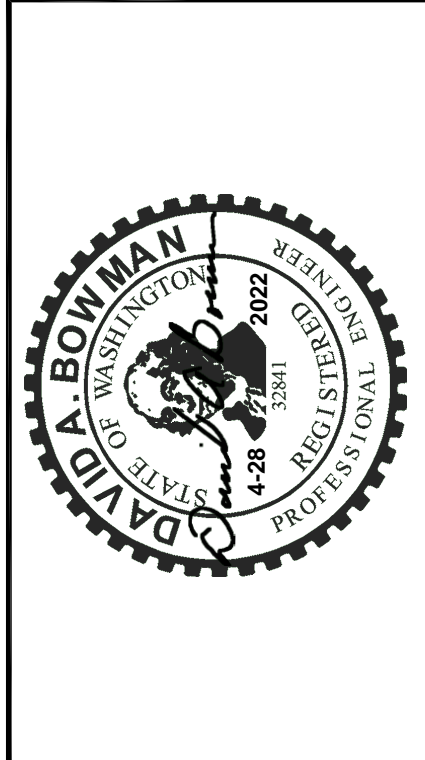
SEE SHEET E-2 FOR GENERAL NOTES FOR PLAN SHEETS (G01, G02, ETC.)

- 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.
- PRESERVE AND PROTECT DEVICE FOR REUSE. SEE MODIFIED PLANS FOR FURTHER INFORMATION.
- 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.

**Gray & Osborne, Inc.**  
 CONSULTING ENGINEERS  
 1130 RAINIER AVENUE SOUTH, SUITE 300  
 SEATTLE, WASHINGTON 98144 • (206) 264-0860

DATE: APR 2022	MLO	JRM	MLO
DRAWN:	MLO	CHECKED:	JRM
APPROVED:	MLO		

No.	REVISION	DATE	APPD



**CITY OF PUYALLUP**  
 WASHINGTON  
 PIERCE COUNTY  
**NORTH LEEVE ROAD PUMP STATION REPLACEMENT**  
 EXISTING/DEMOLITION ELECTRICAL SITE PLAN  
 NORTH LEEVE ROAD PUMP STATION

**EXISTING/DEMOLITION ELECTRICAL SITE PLAN  
 NORTH LEEVE ROAD PUMP STATION**  
 SCALE: 1/4" = 1'-0"  
 (GENERAL NOTES: G01, G02, G03, G04, G05, G06, G07, G08)  
 (NOTE 3)

**City of Puyallup**  
 Development & Permitting Services  
**ISSUED PERMIT**

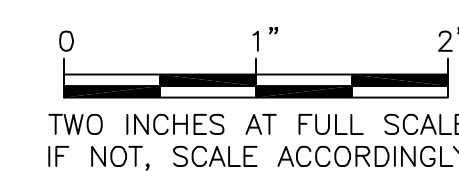
Building	Planning
Engineering	Public Works
Fire	Traffic

**APPROVED**

BY: *[Signature]*  
 CITY ENGINEER  
 CITY OF PUYALLUP

APPROVED DATE: 4/26/2022  
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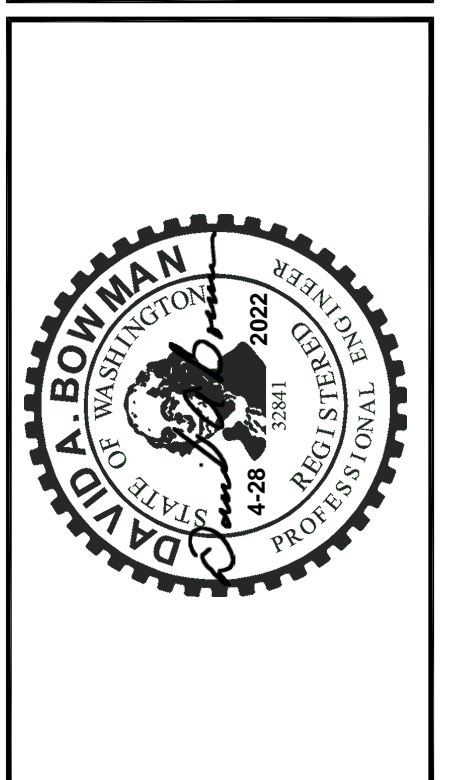


TWO INCHES AT FULL SCALE. IF NOT, SCALE ACCORDINGLY

B-21-0311CITY OF PUYALLUP

DATE: APR 2022	DRAWN: MLO/DEK	CHECKED: JRM	APPROVED: MLO
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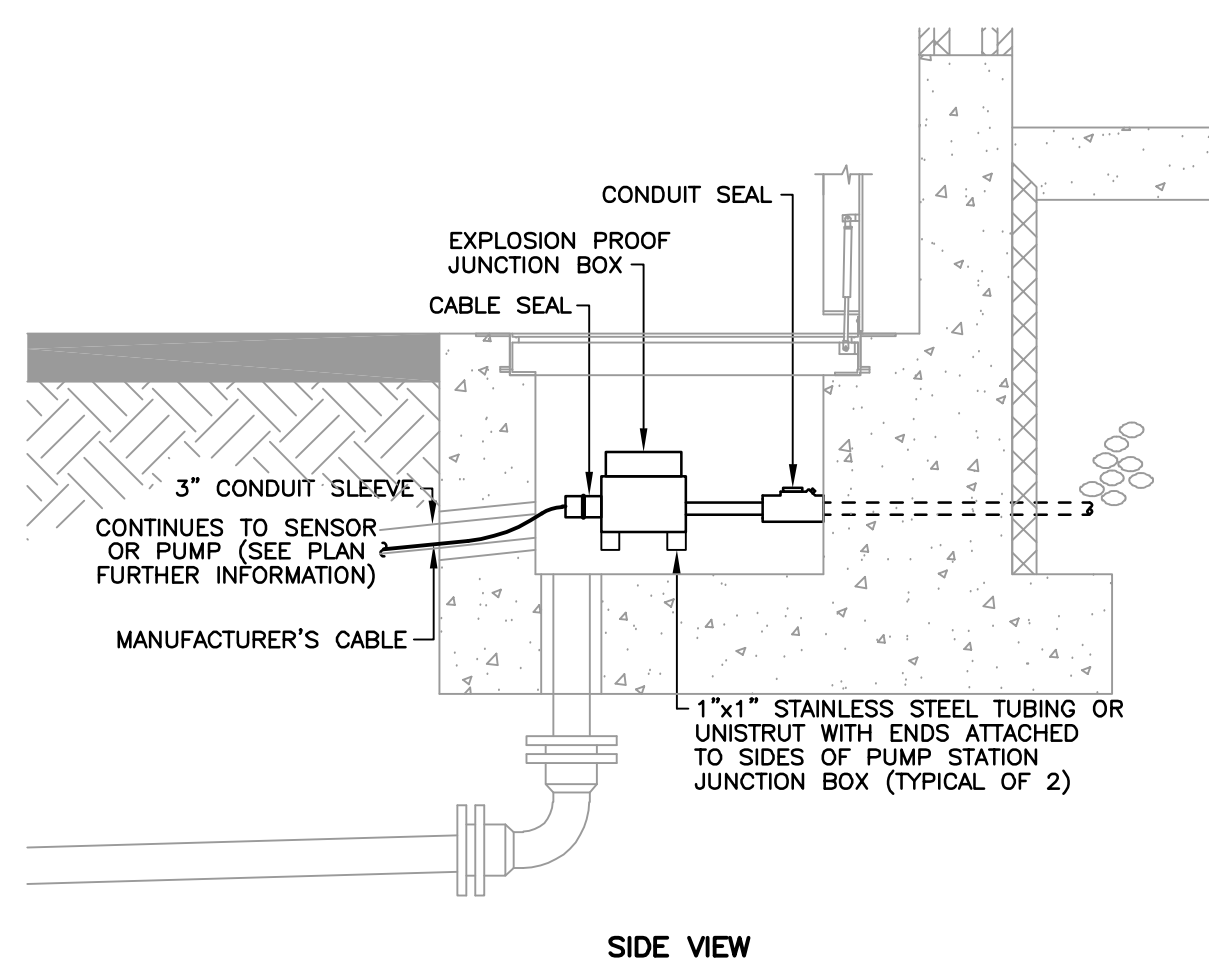
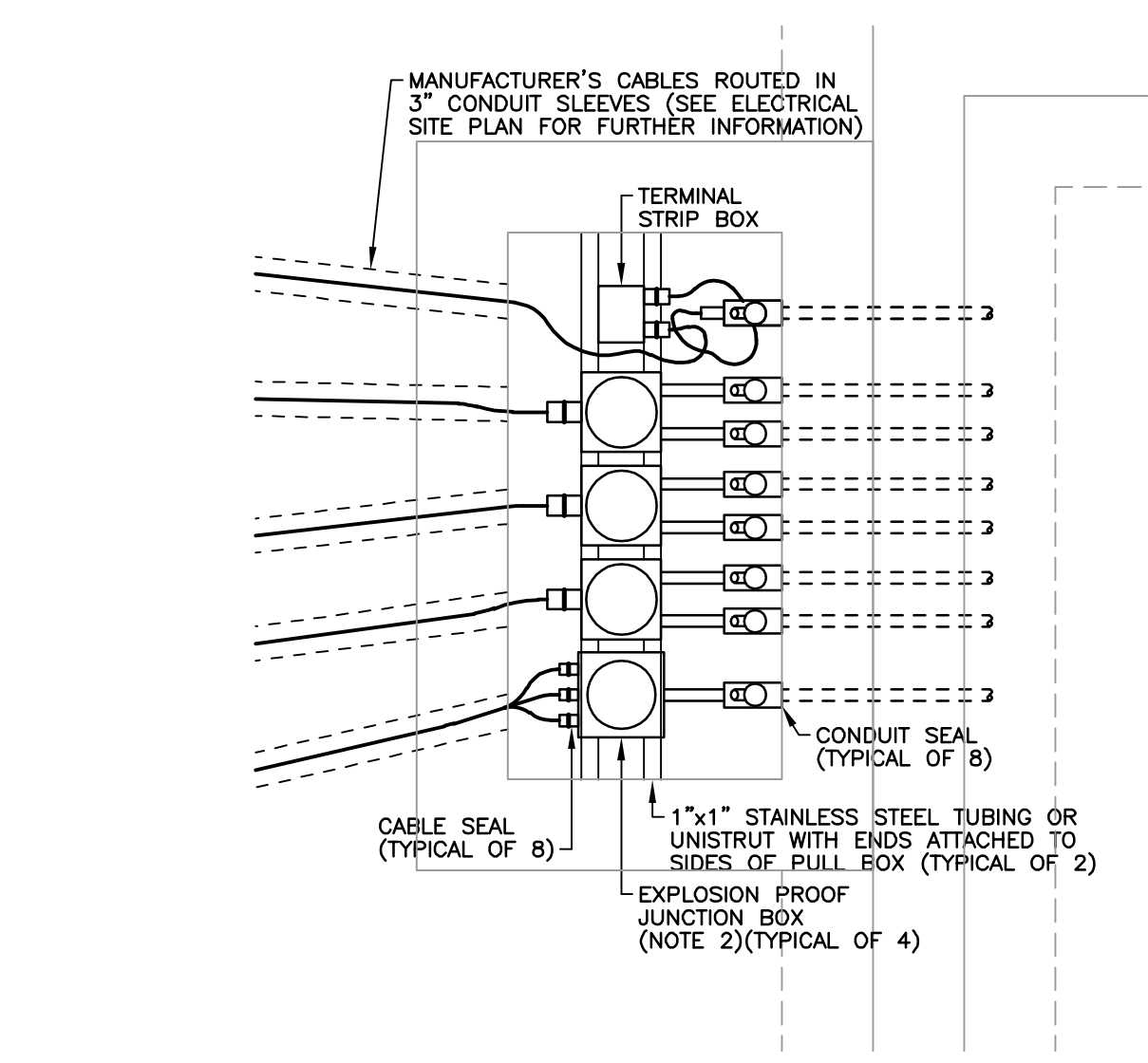
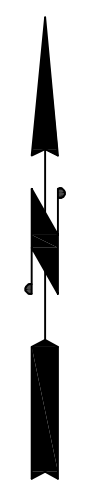
NO.	REVISION	DATE	APPD



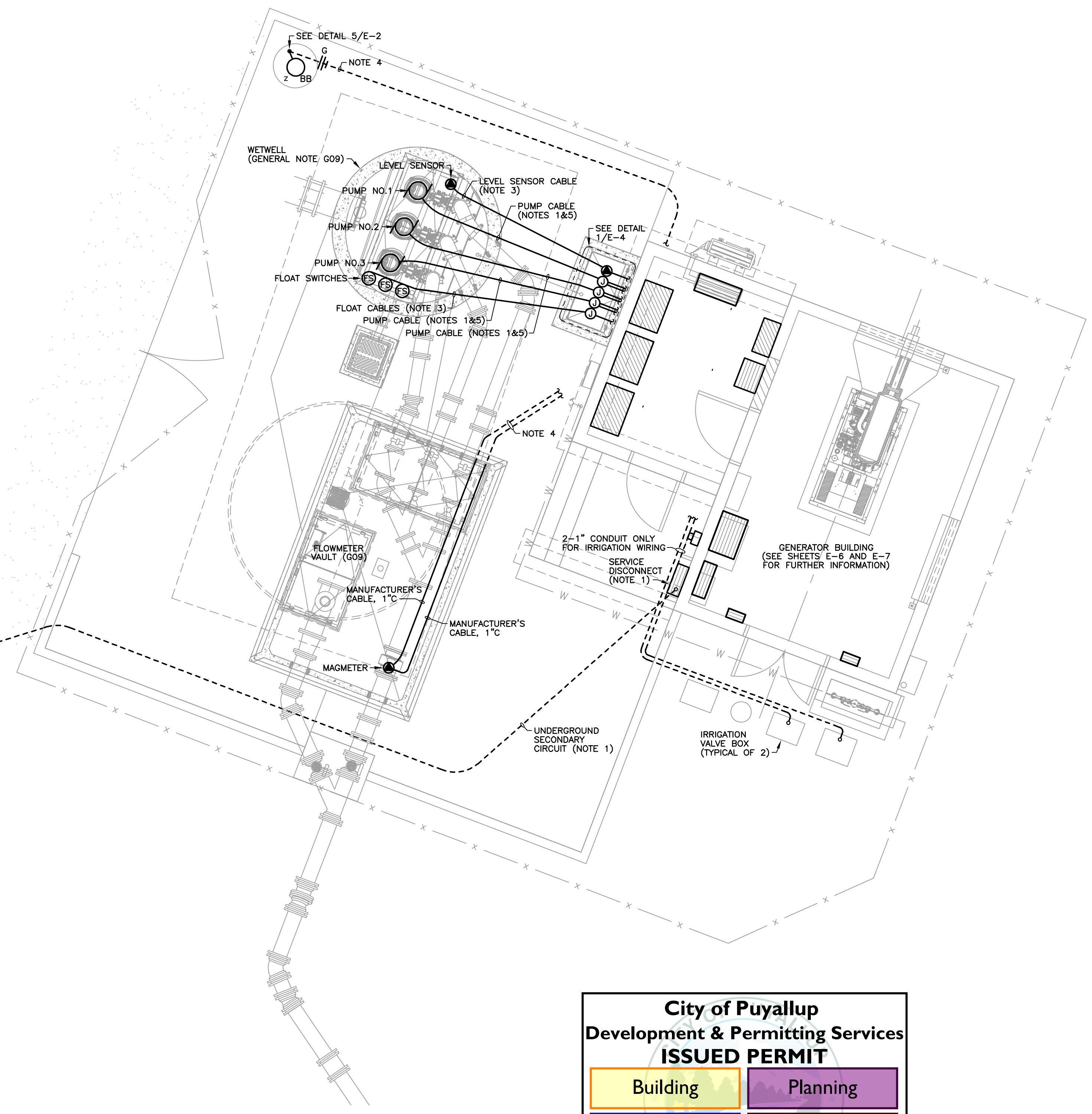
**CITY OF PUYALLUP**  
PIERCE COUNTY WASHINGTON  
**NORTH LEEVE ROAD PUMP STATION REPLACEMENT**  
MODIFIED ELECTRICAL SITE PLAN  
NORTH LEEVE ROAD PUMP STATION

SHEET: **E-4**  
OF: **9**  
JOB NO.: 20503  
DWG: C-E00-04

- NOTES:**
- SEE SHEET E-2 FOR GENERAL NOTES FOR PLAN SHEETS (G01, G02, ETC.)
  - SEE ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
  - SPLICE CONDUCTORS SHOWN TO MANUFACTURER'S CABLE(S) IN JUNCTION BOX.
  - 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.
  - SEE DETAIL 1/E-2 FOR TRENCHING INFORMATION.
  - 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.



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



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

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

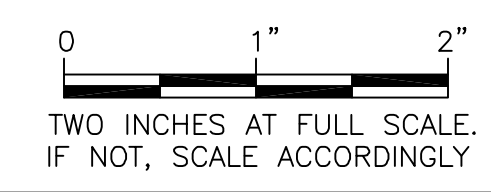
**APPROVED**

BY: *[Signature]*

CITY ENGINEER  
CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

EXPIRATION DATE: 12/31/2023

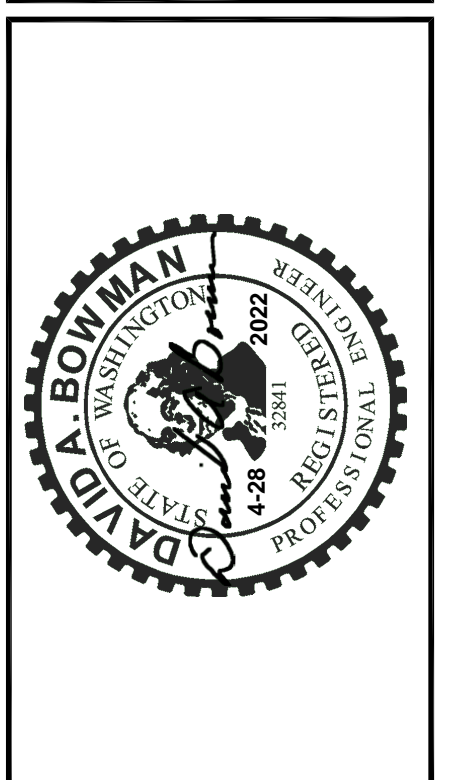


NOTE: THIS APPROVAL EXPIRES ON THE DATE SHOWN. IF CONSTRUCTION HAS NOT STARTED BY THE EXPIRATION DATE, PLANS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL.

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.

No.	REVISION	DATE	APPD

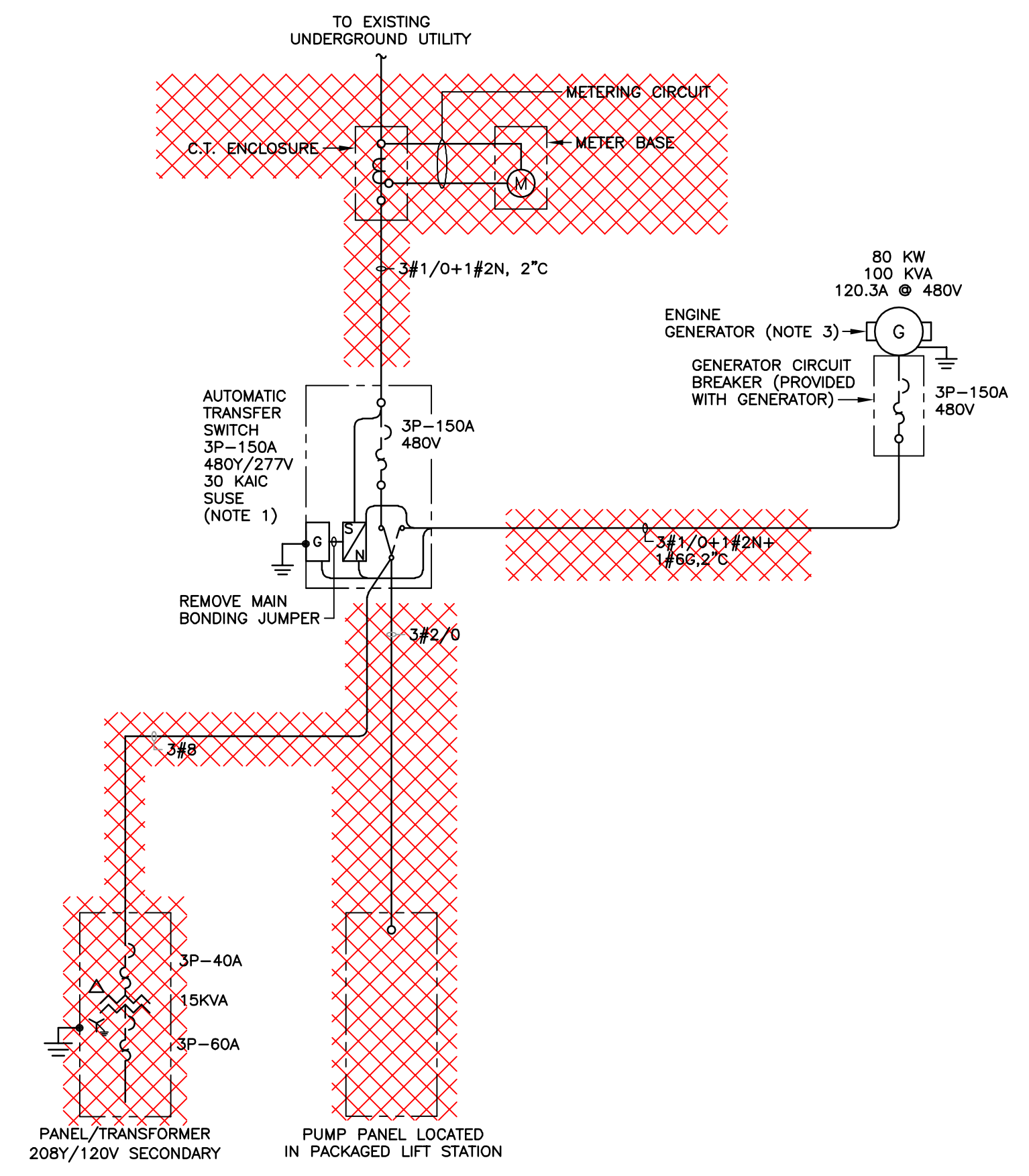
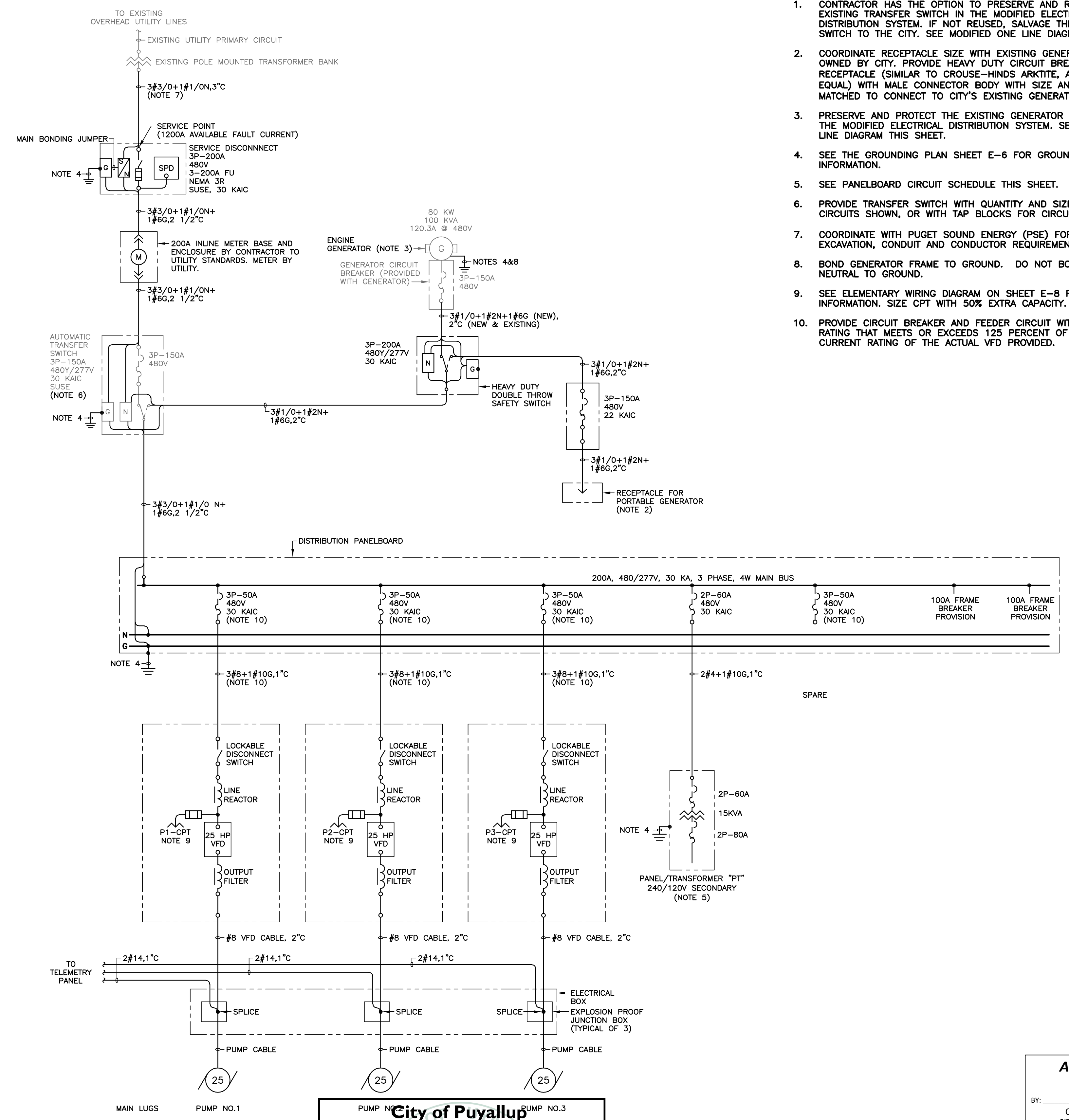


**CITY OF PUYALLUP**  
PIERCE COUNTY WASHINGTON  
**NORTH LEVEE ROAD PUMP STATION  
REPLACEMENT**  
ONE LINE DIAGRAMS

- NOTES:
- 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.
  - COORDINATE RECEPTACLE SIZE WITH EXISTING GENERATOR EQUIPMENT OWNED BY CITY. PROVIDE HEAVY DUTY CIRCUIT BREAKING RECEPTACLE (SIMILAR TO CROUSE-HINDS ARKITE, APPLETON OR EQUAL) WITH MALE CONNECTOR BODY WITH SIZE AND MANUFACTURER MATCHED TO CONNECT TO CITY'S EXISTING GENERATOR PLUG.
  - PRESERVE AND PROTECT THE EXISTING GENERATOR FOR REUSE WITH THE MODIFIED ELECTRICAL DISTRIBUTION SYSTEM. SEE MODIFIED ONE LINE DIAGRAM THIS SHEET.
  - SEE THE GROUNDING PLAN SHEET E-6 FOR GROUNDING INFORMATION.
  - SEE PANELBOARD CIRCUIT SCHEDULE THIS SHEET.
  - PROVIDE TRANSFER SWITCH WITH QUANTITY AND SIZE OF LUGS FOR CIRCUITS SHOWN, OR WITH TAP BLOCKS FOR CIRCUITS SHOWN.
  - COORDINATE WITH PUGET SOUND ENERGY (PSE) FOR TRENCHING, EXCAVATION, CONDUIT AND CONDUCTOR REQUIREMENTS.
  - BOND GENERATOR FRAME TO GROUND. DO NOT BOND GENERATOR NEUTRAL TO GROUND.
  - SEE ELEMENTARY WIRING DIAGRAM ON SHEET E-8 FOR FURTHER INFORMATION. SIZE CPT WITH 50% EXTRA CAPACITY.
  - 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.

**PANELBOARD CIRCUIT SCHEDULE**  
**PANEL "PT"** SECTION 1 OF 1

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



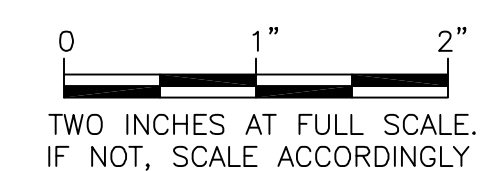
**EXISTING ONE LINE DIAGRAM**  
**NORTH LEVEE ROAD PUMPING STATION**  
SCALE: NONE  
(GENERAL NOTE P01)

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**  
MODIFIED ONE LINE DIAGRAM  
NORTH LEVEE ROAD PUMP STATION  
SCALE: NONE

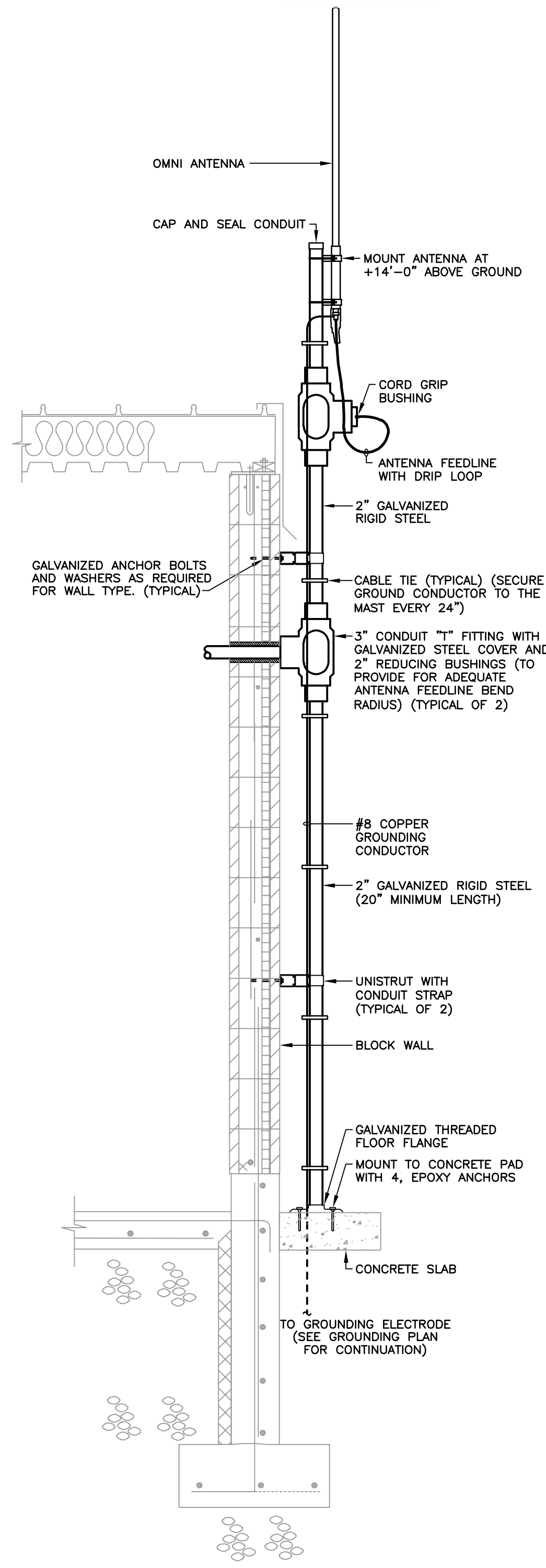
Engineering	Public Works
Fire	Traffic

**APPROVED**  
BY: *[Signature]*  
CITY ENGINEER  
CITY OF PUYALLUP  
APPROVED DATE: 4/26/2022  
EXPIRATION DATE: 12/31/2023

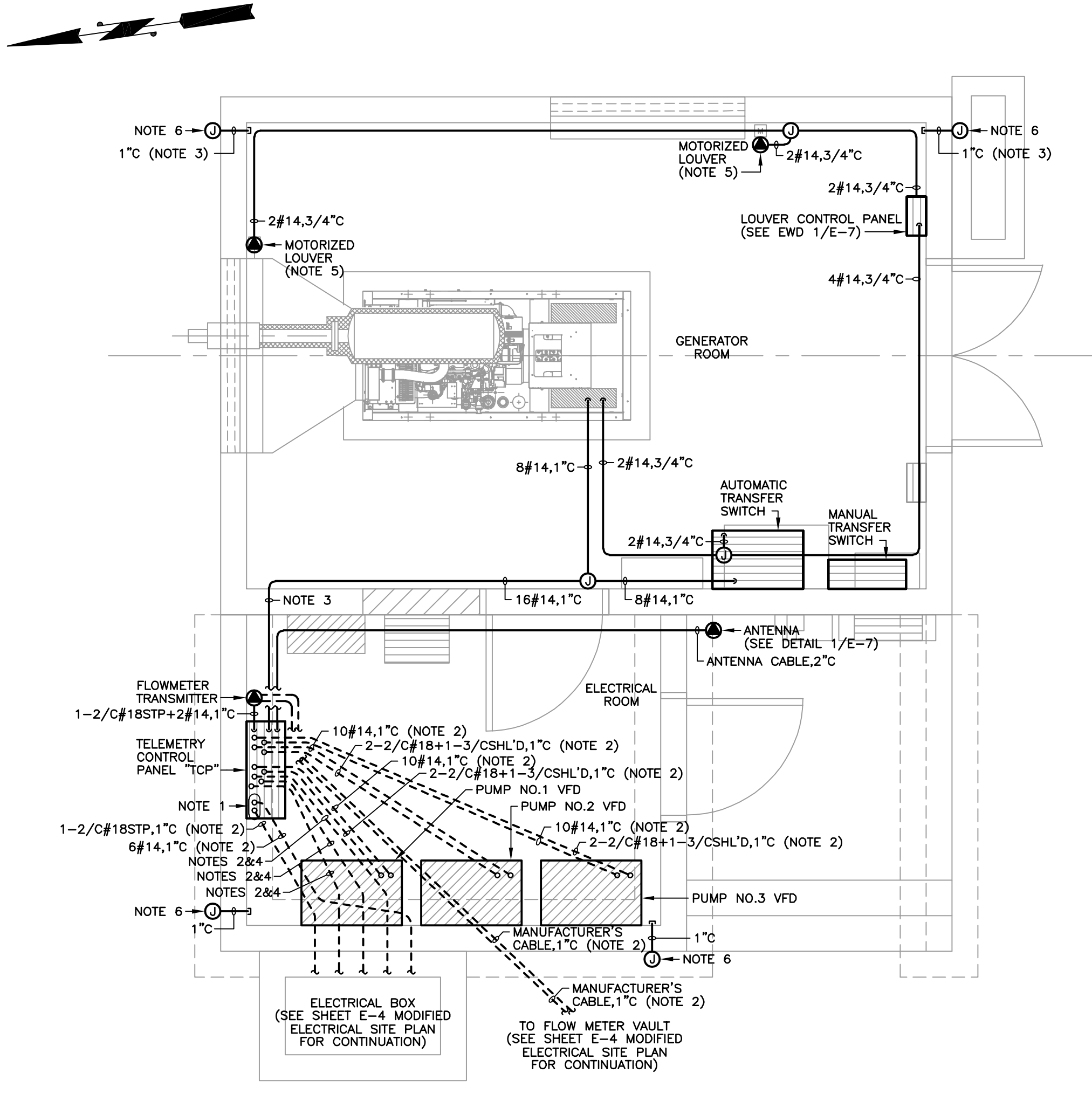
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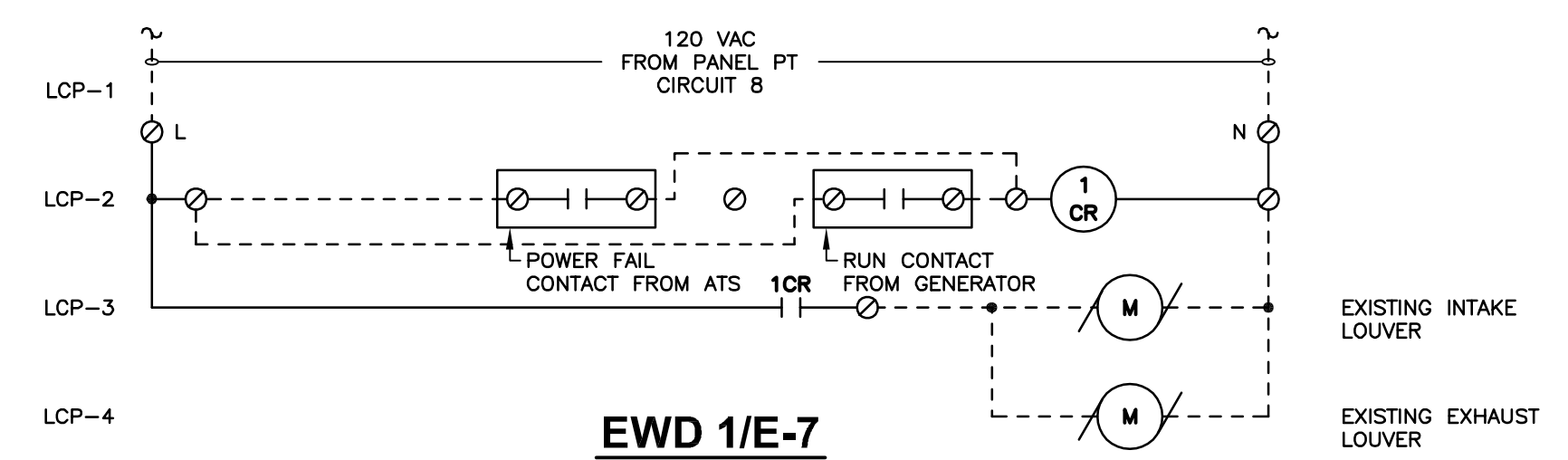




**DETAIL 1/E-7  
ANTENNA MOUNTING**  
SCALE: NONE



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



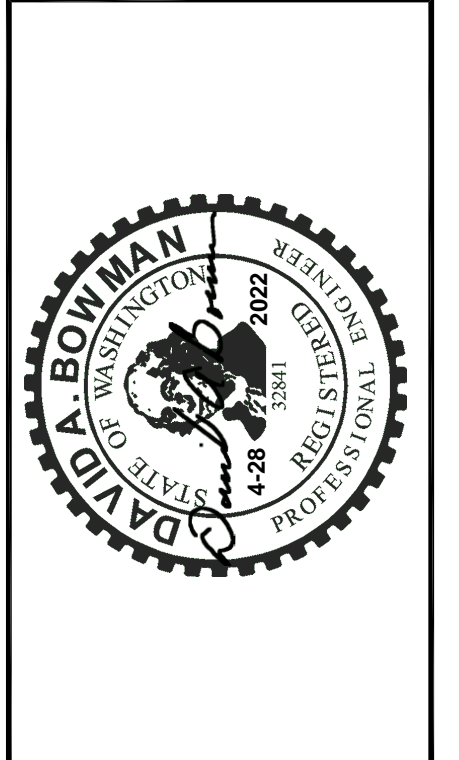
**EWD 1/E-7  
LOUVER CONTROL PANEL**  
SCALE: NONE

- NOTES:
- ROUTE CONDUITS UP FROM FLOOR INTO INTRINSICALLY SAFE AREA OF TELEMETRY CONTROL PANEL.
  - SEE DETAIL 1/E-2 FOR TRENCHING INFORMATION.
  - CORE DRILL EXISTING WALL TO INSTALL NEW CONDUIT PER REQUIREMENTS IN CONTRACT SPECIFICATIONS.
  - SEE MODIFIED ONE LINE DIAGRAM SHEET E-5 FOR CIRCUIT AND EQUIPMENT INFORMATION.
  - 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.
  - SURFACE MOUNT DEVICE BOX. MOUNT 6" BELOW TOP OF CMU WALL. COORDINATE EXACT LOCATION WITH ENGINEER IN FIELD. CAP CONDUIT IN ROOM INTERIOR.

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

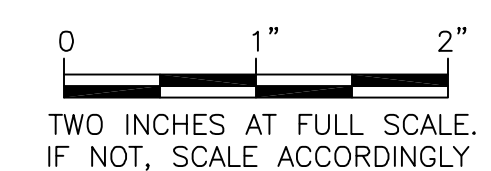
DATE: APR 2022	MLO	JRM	MLO
DRAWN:		CHECKED:	APPROVED:

REVISION	DATE	APPD



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

**APPROVED**  
BY: *[Signature]*  
CITY ENGINEER  
CITY OF PUYALLUP  
APPROVED DATE: 4/26/2022  
EXPIRATION DATE: 12/31/2023

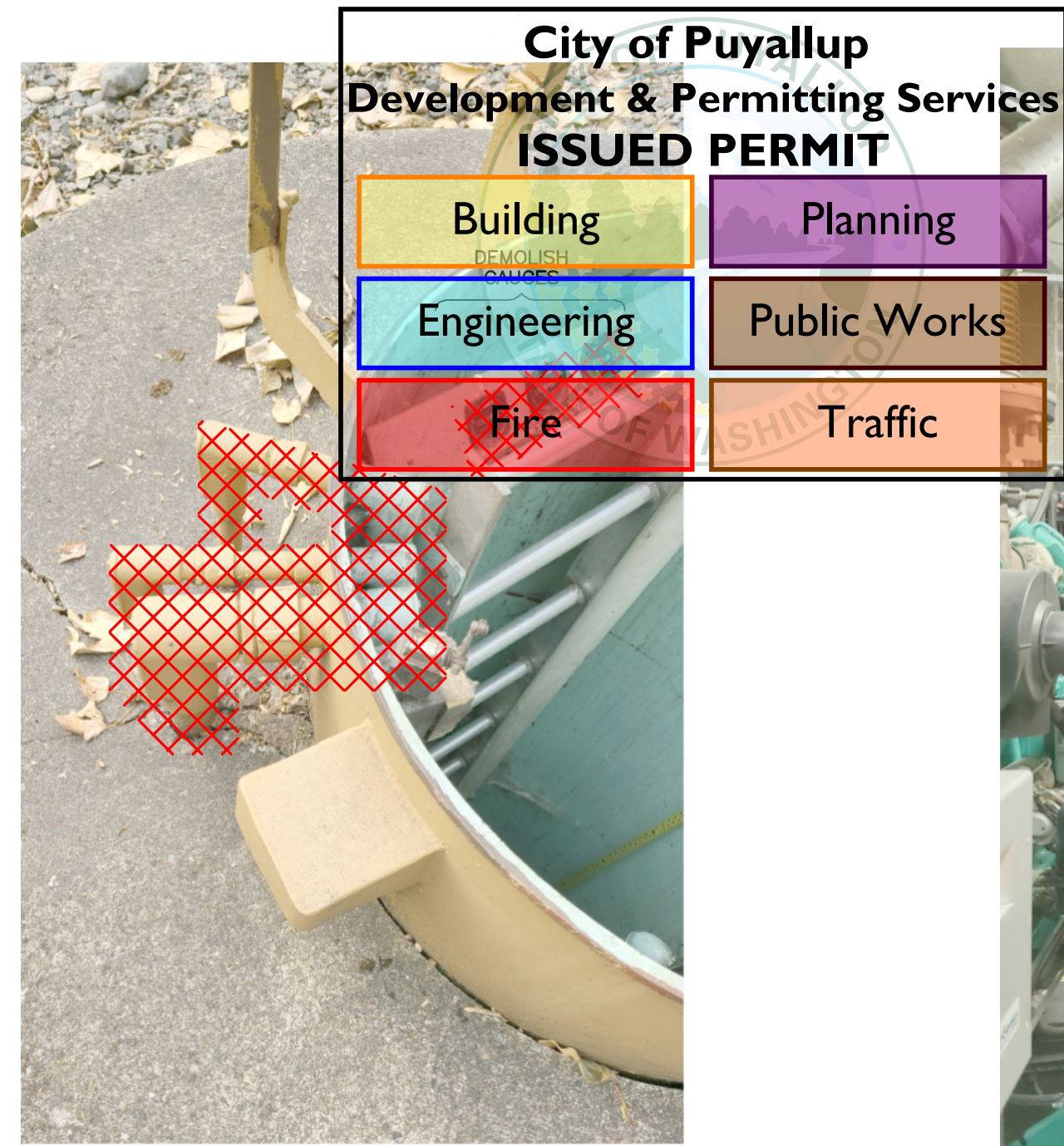


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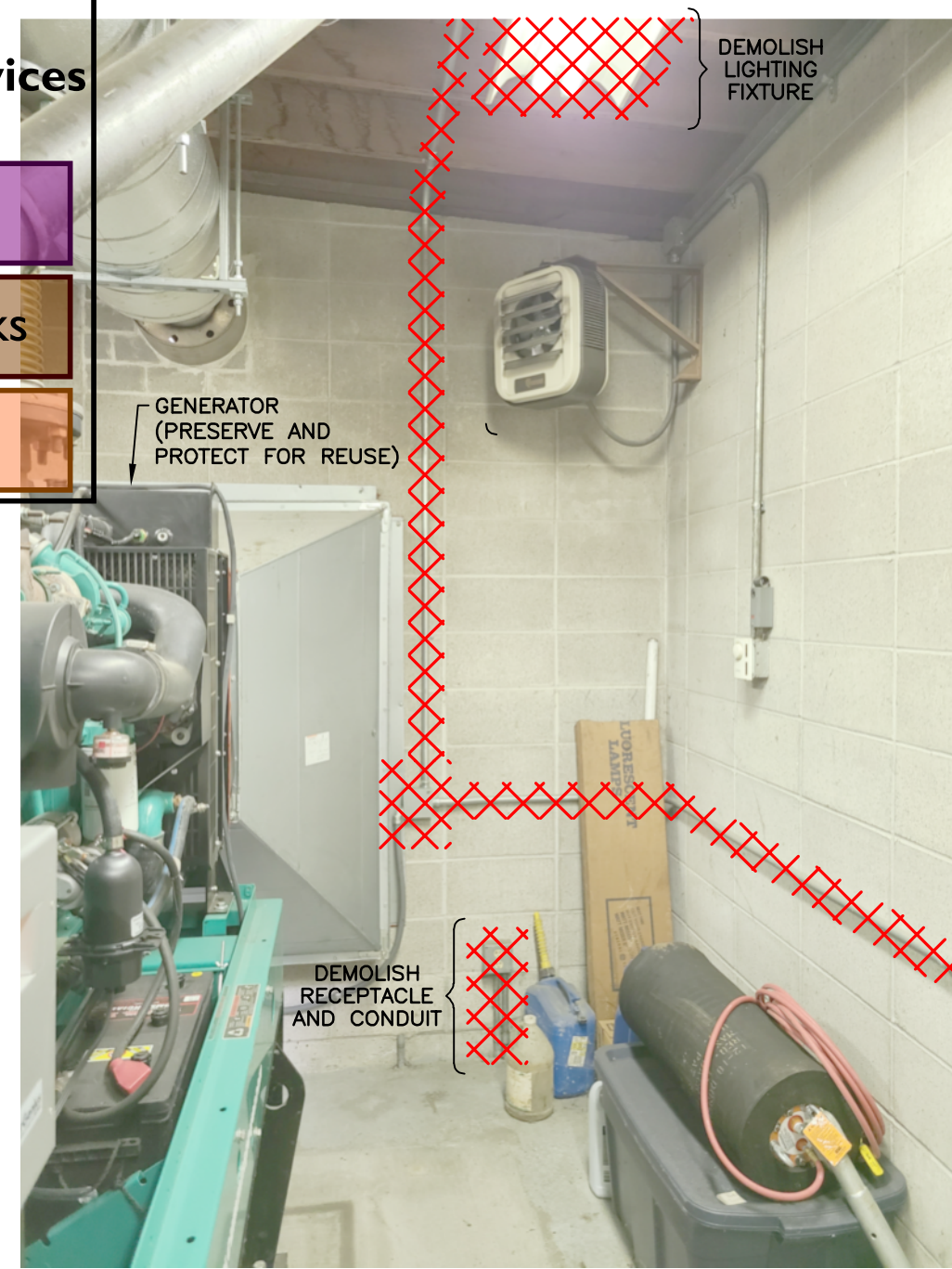
SHEET: **E-7**  
OF: **9**  
JOB NO.: 20503  
DWG: C-E00-07



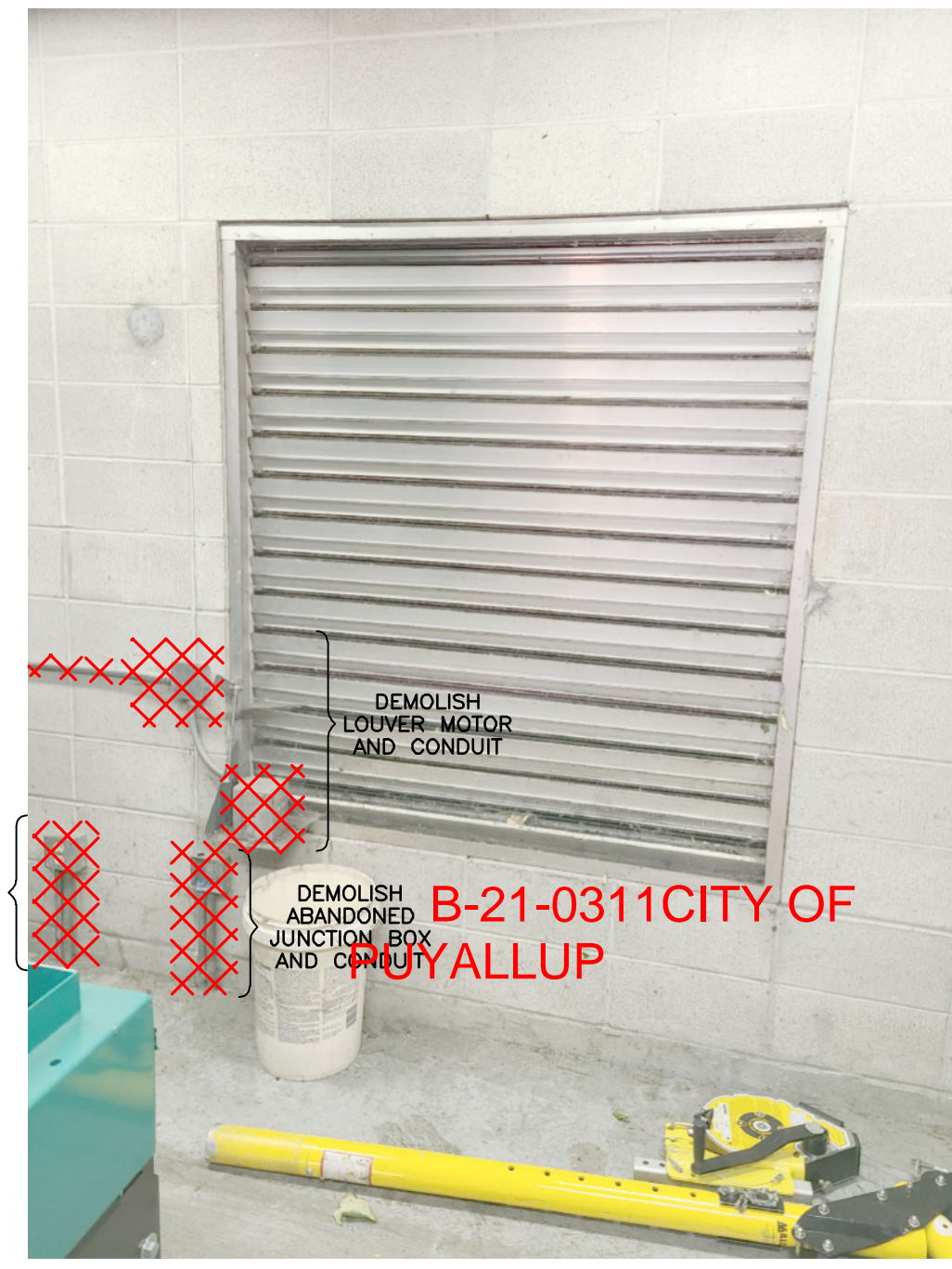




**DETAIL 1/E-9  
DRY WELL**  
SCALE: NONE



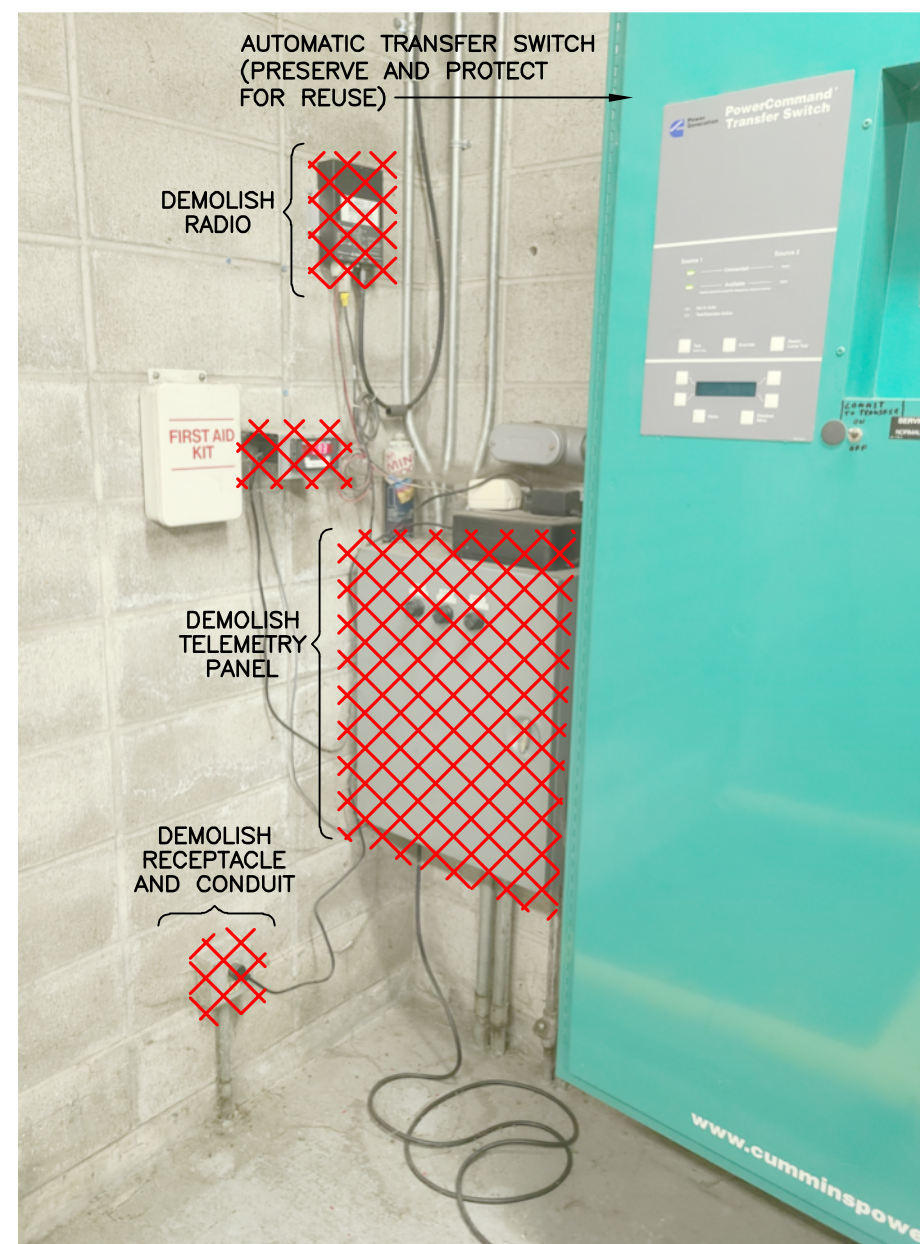
**DETAIL 2/E-9  
NORTHEAST CORNER**  
SCALE: NONE



**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

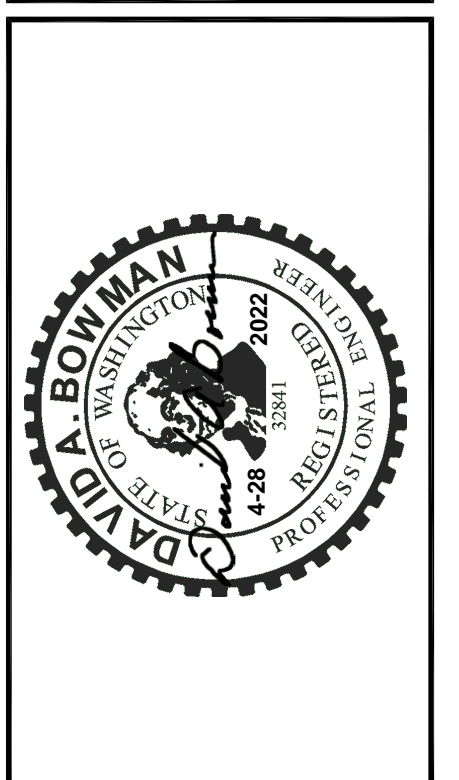
**APPROVED**  
BY: *[Signature]*  
CITY ENGINEER  
CITY OF PUYALLUP  
APPROVED DATE: 4/26/2022  
EXPIRATION DATE: 12/31/2023

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

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DRAWN:		CHECKED:	
APPROVED:			

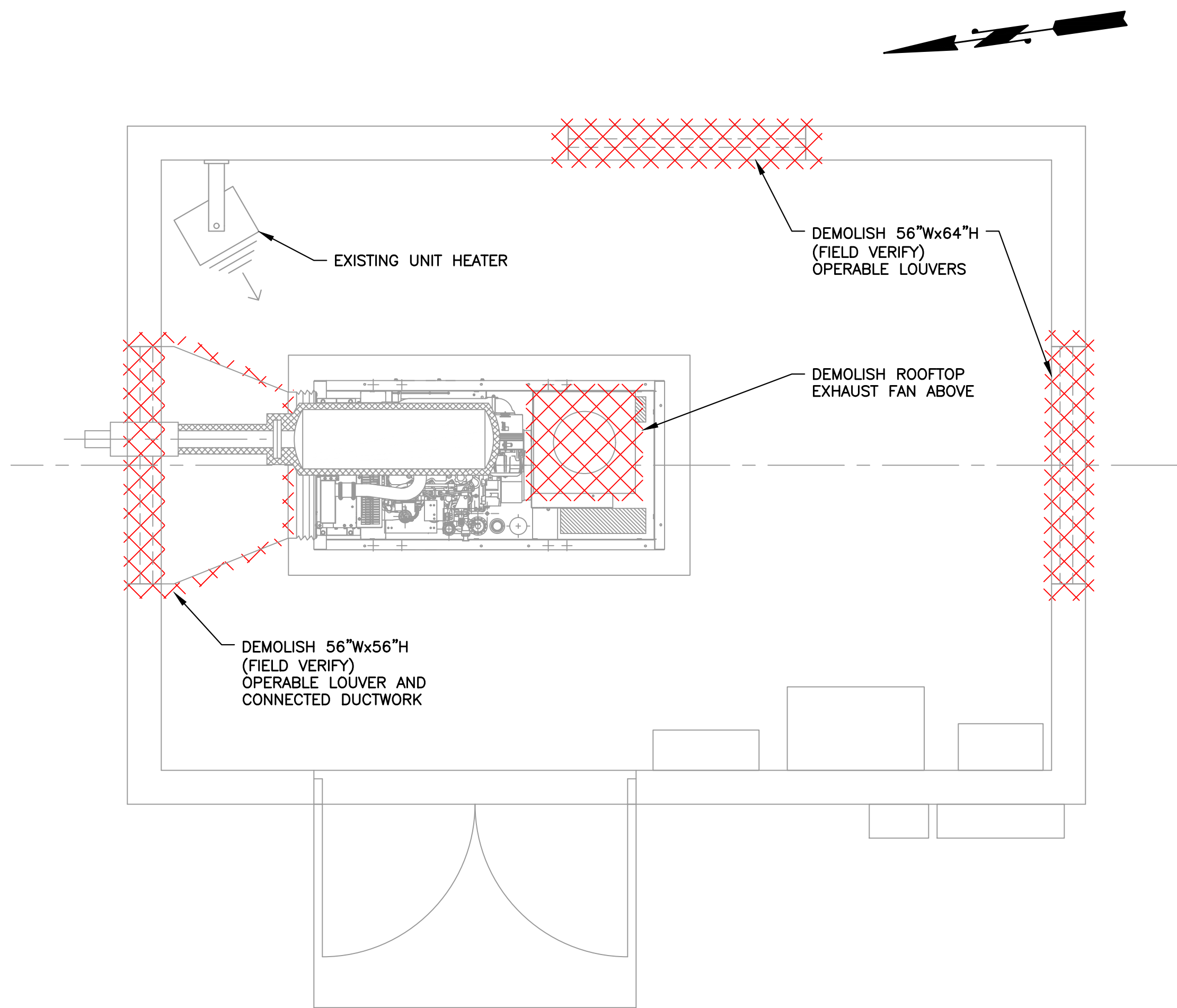
No.	REVISION	DATE	APPD



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

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

M:\PUYALLUP\20503 - North Levee Road Pump Station\02 PLANSET\HVAC\H\_PLAN.dwg, 4/28/2022 9:28 AM, RUSSELL HORITA



**HVAC DEMOLITION PLAN**  
SCALE: 1/2"=1'-0"

**HVAC DESIGN CRITERIA**

**OA VENTILATION**

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

**DESIGN TEMPERATURES**

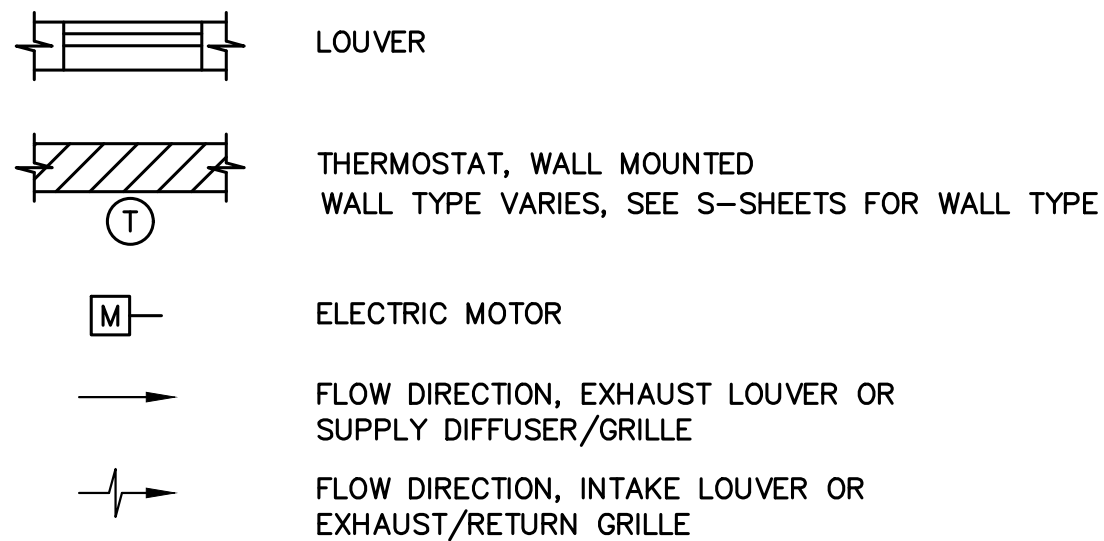
WINTER AMBIENT TEMP: 19 °F  
 SUMMER AMBIENT TEMP: 86 °F  
 INTERIOR HEATING SETPOINT: 40 °F  
 INTERIOR COOLING SETPOINT: 90 °F

**CONTROL DESCRIPTION:**

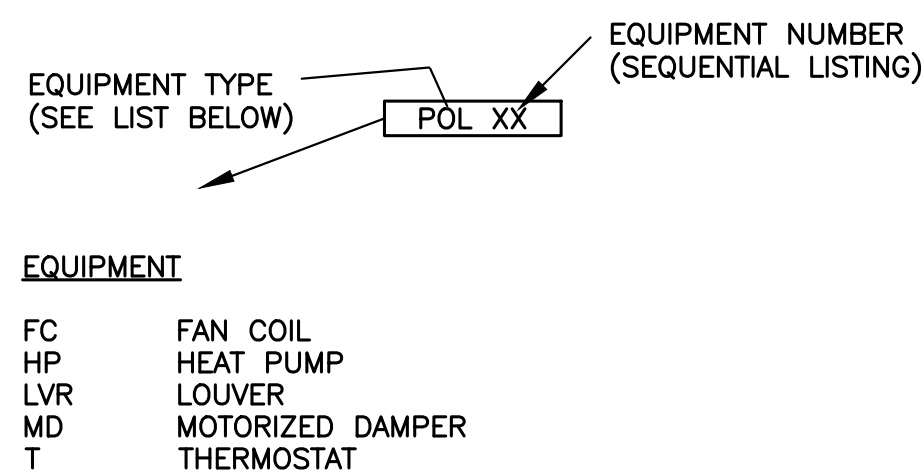
HEAT PUMP [HP 01] AND FAN COIL [FC 01] PROVIDE HEATING AND COOLING FOR THE ELECTRICAL ROOM AND IS CONTROLLED BY THERMOSTAT [T 01].

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

**HVAC SYMBOLS**



**HVAC EQUIPMENT & AIR DEVICE IDENTIFICATIONS**



**HVAC ABBREVIATIONS**

A AMPERE  
 ACH AIR CHANGES PER HOUR  
 AFF ABOVE FINISHED FLOOR  
 AFG ABOVE FINISHED GRADE  
 AHJ AUTHORITY HAVING JURISDICTION  
 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**

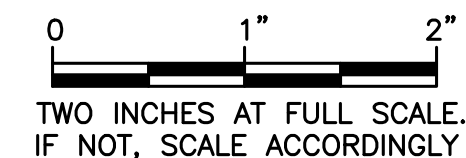
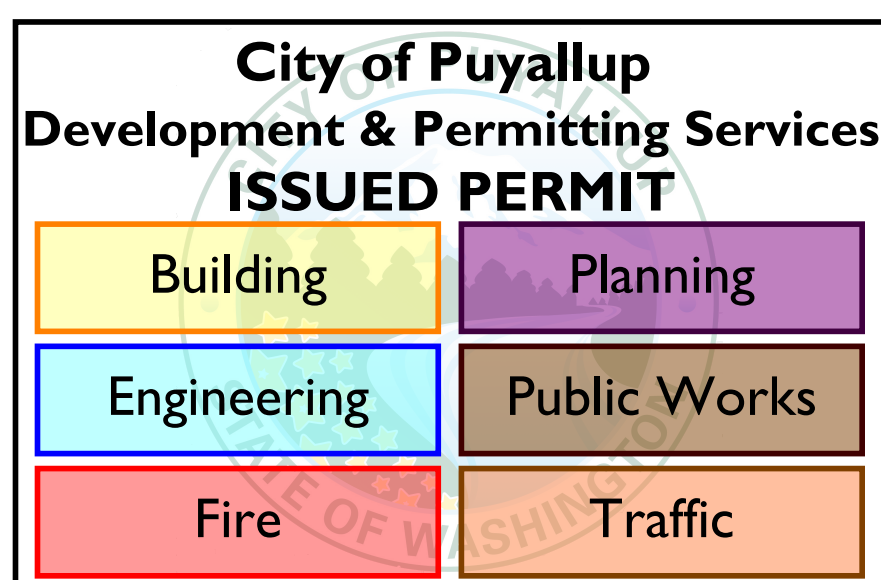
- MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE CONTRACT SPECIFICATIONS AND WITH THE PROVISIONS OF THE 2018 INTERNATIONAL MECHANICAL CODE, 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL FIRE CODE AS AMENDED BY THE STATE OF WASHINGTON AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- THESE 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.
- CONTRACTOR SHALL VERIFY THE DIMENSIONS WITH THE EQUIPMENT MANUFACTURER TO PROVIDE DUCT TRANSITIONS TO THE INLET/OUTLET DIMENSIONS OF THE EQUIPMENT.
- PROVIDE EARTHQUAKE RESTRAINT FOR HVAC EQUIPMENT IN ACCORDANCE WITH SMACNA RESTRAINT MANUAL AS REQUIRED BY 2018 INTERNATIONAL BUILDING CODE REQUIREMENTS.
- CONSTRUCTION, SUPPORTS AND INSTALLATION SHALL BE INSTALLED AND COMPLY WITH THE 2018 INTERNATIONAL MECHANICAL CODE (IMC) AND WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE.
- ALL DUCTWORK IS CLASSIFIED AS LOW PRESSURE.
- LOCATE THERMOSTATS 5 FEET AFF. UNLESS OTHERWISE NOTED.
- PROVIDE FLEXIBLE DUCT CONNECTIONS ON ALL DUCTWORK CONNECTING TO EQUIPMENT.
- EQUIPMENT DRAIN PIPING SHALL MAINTAIN A MIN HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF MIN -1/8 INCH VERTICAL PER 1 FOOT HORIZONTAL.
- CONTRACTOR SHALL COORDINATE CEILING EQUIPMENT LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING LAYOUT.
- EQUIPMENT CONDENSATE DRAINS SHALL BE TRAPPED AS REQUIRED BY THE EQUIPMENT OR APPLIANCE MANUFACTURER.
- 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 LINESSET COVER SYSTEM.
- BUILDING HVAC DOCUMENTS SUCH AS RECORDS, CALCULATIONS, COMPLIANCE FORMS, AND EQUIPMENT MANUALS SHALL BE SUPPLIED TO THE BUILDING OWNER.

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	56"x64" (FIELD VERIFY)	BOTTOM @ 20" AFF (FIELD VERIFY)	PROVIDE EXTENDED SILL, HYLAR/KYNAR FINISH, INSECT SCREEN, AND CLIP ANGLES.
		LVR 02	EXHAUST LOUVER	GREENHECK ESD-635 OR EQUAL	56"x56" (FIELD VERIFY)	BOTTOM @ 20" AFF (FIELD VERIFY)	PROVIDE EXTENDED SILL, HYLAR/KYNAR FINISH, BIRD 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	56"x64"	BELLIMO OR EQUAL	EXTERNAL	PER MFG.	OPEN	PROVIDE HI-PRO POLYESTER FINISH. OPEN WHEN GENERATOR IS RUNNING, OTHERWISE CLOSED.
		MD 02	CHANNEL	GREENHECK ICD-45 OR EQUAL	115 V 1ø	56"x56"	BELLIMO OR EQUAL	EXTERNAL	PER MFG.	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-GLO9NA-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	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-GLO9NA-U1 OR EQUAL	230 V 1ø 1 A	T 01	145-400 CFM			12.8 HSPF	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		



**APPROVED**

BY: *[Signature]*  
 CITY ENGINEER  
 CITY OF PUYALLUP

APPROVED DATE: 4/26/2022

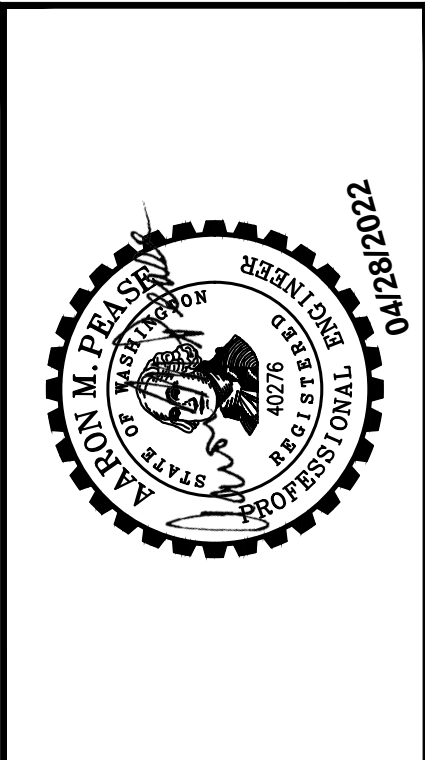
EXPIRATION DATE: 12/31/2023

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DATE: APRIL 2022  
 DRAWN: CRR  
 CHECKED: ASD  
 APPROVED: AMP

DATE	APPD
REVISION	No.

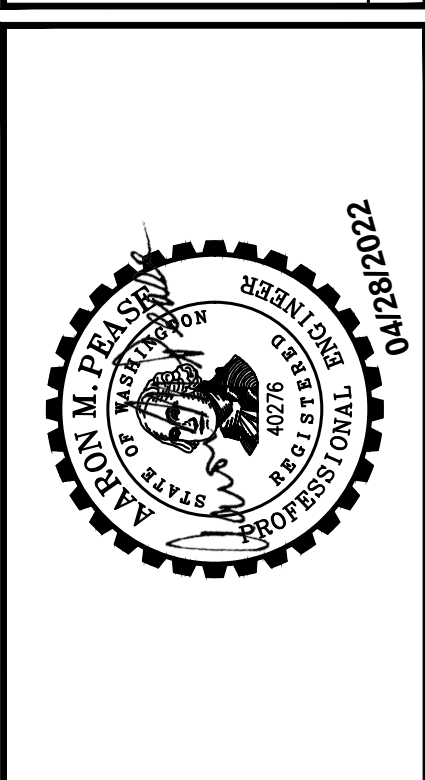


**CITY OF PUYALLUP**  
 WASHINGTON  
 PIERCE COUNTY  
 NORTH LEVEE ROAD PUMP STATION  
 REPLACEMENT  
 GENERATOR BUILDING HVAC DEMOLITION PLAN,  
 NOTES AND SCHEDULES

SHEET: **H-1**  
 OF: **2**  
 JOB NO.: 20503  
 DWG: H\_PLAN

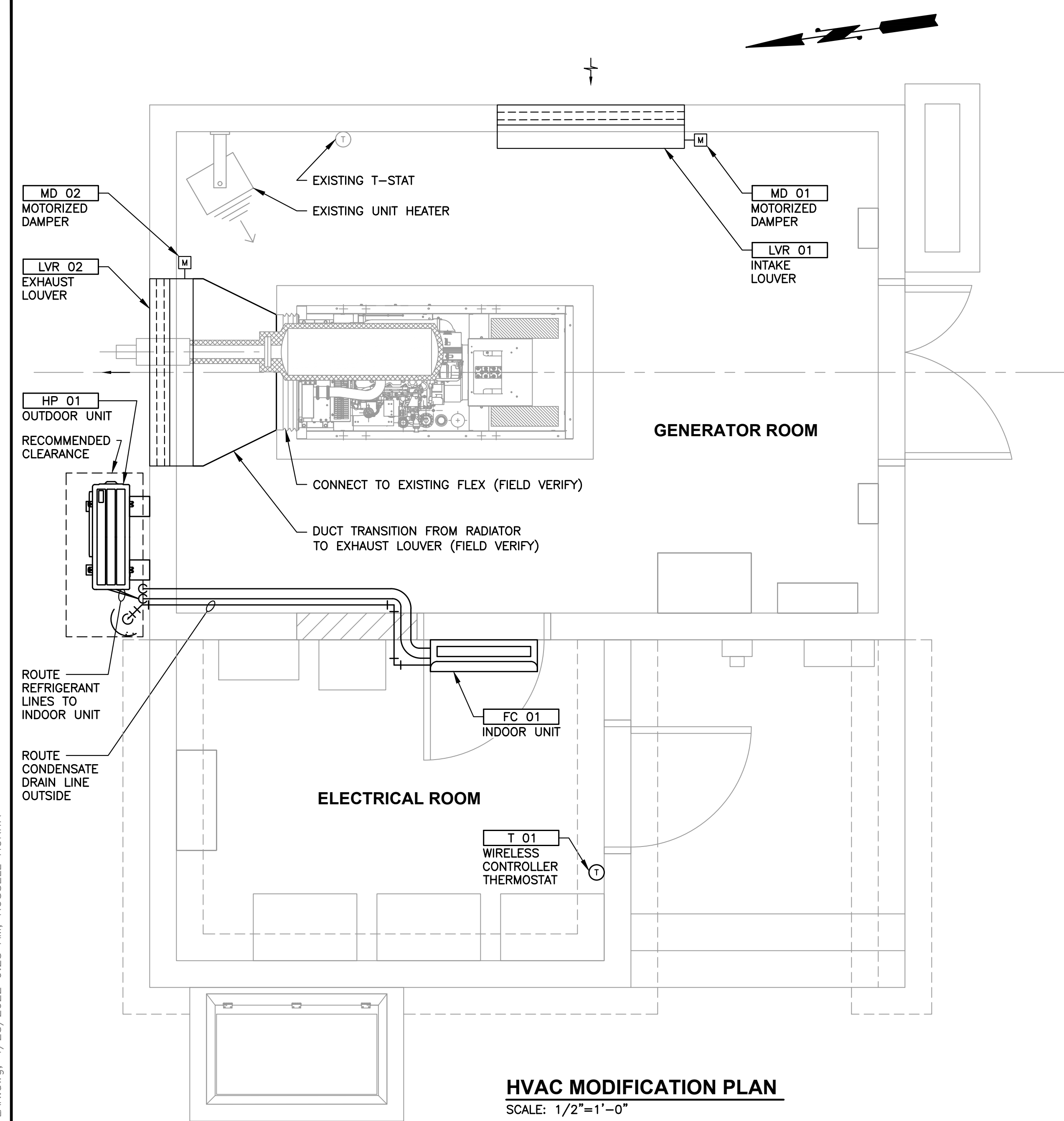
DATE: APRIL 2022	CRD	ASD	AMP
DRAWN:	CHEKED:	APPROVED:	

DATE	REVISION	APPD



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

SHEET: **H-2**  
OF: **2**  
JOB NO.: 20503  
DWG: H\_PLAN



**HVAC MODIFICATION PLAN**  
SCALE: 1/2"=1'-0"

**City of Puyallup**  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

**APPROVED**  
BY: *[Signature]*  
CITY ENGINEER  
CITY OF PUYALLUP  
APPROVED DATE: 4/26/2022  
EXPIRATION DATE: 12/31/2023

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

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