

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	128-51PS-1	FRANKLIN	39	1
ILLINOIS			CONTRACT NO. 78958	

D-99-053-22



DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAI 57 (I-57)
SECTION (28-5)PS-1

WEST FRANKFORT PUMP STATION
REHABILITATION
FRANKLIN COUNTY

C-99-072-022

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- 38 POWER ONE LINE DIAGRAM
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TOWNSHIP
DENNING

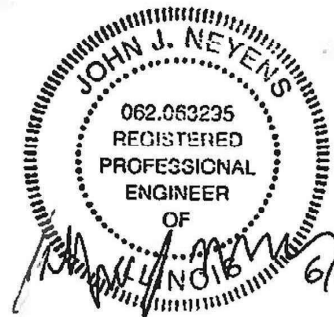
HIGHWAY STANDARDS

000001-08 001006
001001-02 664001-02

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-692-0123
OR 811

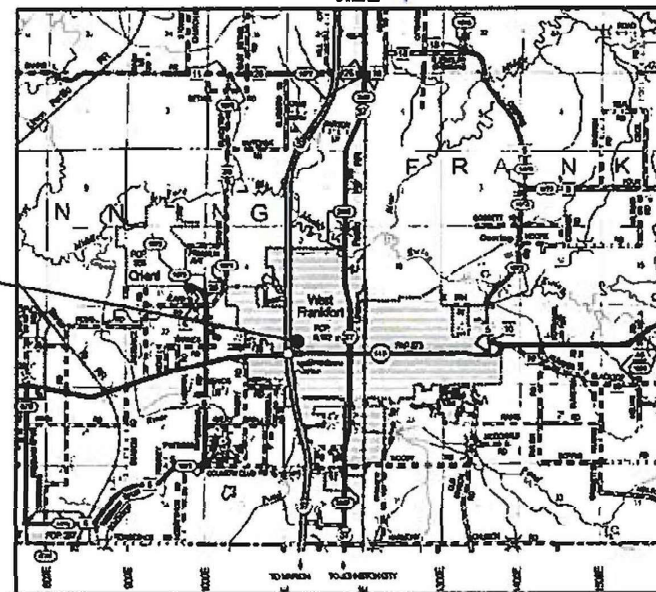
PROJECT ENGINEER GRANT DETERDING

CONTRACT NO. 78958



JOHN J. NEYENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063235
LICENSE EXPIRES NOVEMBER 30, 2023

WEST FRANKFORT
PUMP STATION



FRANKLIN COUNTY



AARON M. SCHAFER
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS NO. 081-007928
LICENSE EXPIRES NOVEMBER 30, 2022

PLANS PREPARED BY:

**KLINGNER
& ASSOCIATES, P.C.**
Engineers • Architects • Surveyors

Quincy, Illinois www.klingner.com
616 North 24th Street
217.223.3670
Columbia, IA Hannibal, MO Columbia, MO
STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED June 29 20 22
Kirk H. Bran REGIONAL ENGINEER
August 19, 2022
Scott A. Elk ENGINEER OF DESIGN AND ENVIRONMENT
August 19, 2022
Stephen M. Faria DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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D:\Projects\17824\Work\02 - Phase II Pump Station Blanket Agreement\District 9 West Frankfort Pump Station\2000 Sheet\078958-ah1-higher.dgn

PREPARED BY: Charles Stein
DISTRICT STUDIES AND PLANS ENGINEER

EXAMINED BY: Nancy Stei
DISTRICT LAND ACQUISITION ENGINEER

EXAMINED BY: Car Mel
DISTRICT PROGRAM DEVELOPMENT ENGINEER

EXAMINED BY: R. [Signature]
DISTRICT OPERATIONS ENGINEER

EXAMINED BY: Doyle J. Keefer
DISTRICT PROJECT IMPLEMENTATION ENGINEER

EXAMINED BY: Doyle J. Keefer
DISTRICT CONSTRUCTION ENGINEER

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KLINGNER & ASSOCIATES, P.C.
Engineers - Architects - Surveyors
#16 N. 24TH ST. QUINCY ILLINOIS 62424-2112-223-3870
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME	ams	DESIGNED	AMS	REVISED	-
DRAWN	AMS	CHECKED	EBB	REVISED	-
PLOT SCALE	2:8 1/4" = 1"	DATE	5/25/2022	REVISED	-
PLOT DATE	6/16/2022				

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
SIGNATURES**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-51PS-1)	FRANKLIN	39	2
			CONTRACT NO. 78958	
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

1. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOAD. THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN REQUIRED TO SUPPORT CONSTRUCTION EQUIPMENT USED IN CONSTRUCTING THIS PROJECT.
2. THE CONTRACTOR SHALL COORDINATE AND RECEIVE WRITTEN APPROVAL FROM IDOT PRIOR TO ANY PUMP STATION OPERATIONAL OUTAGES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY PUMPING OR OTHER ACCEPTABLE MEANS OF STORMWATER REMOVAL DURING ANY PUMP SYSTEM OUTAGES.
3. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT IS CAUSED TO THE EXISTING PUMP STATION BUILDING.
4. DRAWINGS ARE NOT TO SCALE.
5. THE DEPARTMENT RESERVES THE RIGHT TO NOTIFY THE CONTRACTOR TO CHANGE THE CONSTRUCTION SCHEDULE IF NEEDED TO ENSURE PROPER DEWATERING NEEDS FOR THE DEPARTMENT.

RATES OF APPLICATION TABLE

- | | |
|----------------------------------------------------|------------------|
| 1. AGGREGATE (SURFACE, BASE, SUBBASE, OR BACKFILL) | 2.05 TON / CU YD |
| STONE DUMPED RIPRAP | 1.50 TON / CU YD |

STRUCTURAL STEEL

1. STEEL FABRICATION AND ERECTION SHALL FOLLOW OSHA REQUIRMENTS.
2. STRUCTURAL STEEL:
 - a. WIDE FLANGE BEAMS - ASTM A992 (Fy=50ksi)
 - b. STEEL ANGLES, CHANNELS, RODS, AND PLATES - ASTM A36 (Fy=36 ksi)
 - c. WASHERS - ASTM F436
 - d. NUTS - ASTM A563
 - e. ANCHOR BOLTS - ASTM F1554 GRADE 36 (Fy=36 ksi)
3. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
4. REPAIR GALVANIZED SURFACES PER ASTM A780.

MASONRY

1. ALL MASONRY SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530/ASCE 5/TMS 402) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602).
2. GROUT TO FILL CORES SHALL BE ASTM C476, COARSE GROUT (3/8" MAXIMUM AGGREGATE) WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
3. CONCRETE MASONRY UNITS SHALL BE UNITS CONFORMING TO ASTM C90, GRADE N, TYPE 1, NORMAL WEIGHT (DENSITY OF UNIT=135 pcf), MIN. BLOCK COMPRESSIVE STRENGTH = 2400 psi SPECIFIED DESIGN STRENGTH OF MASONRY, f'm=1500 PSI.
4. ASTM C270 TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI SHALL BE USED FOR ALL MASONRY.
5. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
6. ALL CORES WITH REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. PLACE REINFORCEMENT BARS BEFORE GROUTING. CONSOLIDATE GROUT BY MECHANICAL VIBRATION.
7. PROPERLY SECURE VERTICAL REINFORCEMENT BARS TO ENSURE BAR IS LOCATED IN THE CENTER OF THE CMU CELL.
8. ALL CMU SHALL BE TEMPORARILY BRACED DURING CONSTRUCTION. TEMPORARY BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. COST SHALL BE INCLUDED IN "MASONRY WALL CONSTRUCTION". THE CONTRACTOR IS RESPONSIBLE FOR ALL COST ASSOCIATED WITH REPAIRS RESULTING FROM IMPROPER OR INSUFFICIENT BRACING.

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USER NAME = oms	DESIGNED AMS	REVISED -
	DRAWN AMS	REVISED -
PLOT SCALE = 2:0 "-1" / 1 in.	CHECKED EBB	REVISED -
PLOT DATE = 6/16/2022	DATE 5/25/2022	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
 GENERAL NOTES**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78958	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN
				CONSTRUCTION TYPE CODE
				FRANKLIN
				0044
				100% STATE
25000200	SEEDING, CLASS 2	ACRE	0.1	0.1
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	9	9
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	9	9
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	9	9
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.2	0.2
25100115	MULCH, METHOD 2	ACRE	0.1	0.1
28100805	STONE DUMPED RIPRAP, CLASS A3	TON	160	160
28200200	FILTER FABRIC	SQ YD	230	230
31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	50	50
35100100	AGGREGATE BASE COURSE, TYPE A	TON	50	50
50102400	CONCRETE REMOVAL	CU YD	13.6	13.6
50200100	STRUCTURE EXCAVATION	CU YD	108	108

REV. - MS

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 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms	DESIGNED AMS	REVISED -
	DRAWN AMS	REVISED -
PLOT SCALE = 210' = 1" / 10'	CHECKED EBB	REVISED -
PLOT DATE = 6/1 /2022	DATE 6/16/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
SUMMARY OF QUANTITIES

SCALE: NONE SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	4
CONTRACT NO. 78958			ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN
				CONSTRUCTION TYPE CODE
				FRANKLIN 0044 100% STATE
50300225	CONCRETE STRUCTURES	CU YD	25.9	25.9
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	8,079	8,079
50800105	REINFORCEMENT BARS	POUND	2,450	2,450
58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	109	109
67100100	MOBILIZATION	L SUM	1	1
Z0001904	STRUCTURAL STEEL REMOVAL	L SUM	1	1
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0022800	FENCE REMOVAL	FOOT	217	217
Z0034100	MASONRY WALL CONSTRUCTION	SQ FT	296	296
X0327472	ROOF SAMPLING AND ASBESTOS CONTAINING MATERIAL (ACM) IDENTIFICATION	L SUM	1	1
X0327473	HANDLING OF ASBESTOS CONTAINING MATERIALS (ACM)	L SUM	1	1
X0335700	PUMP STATION GENERAL WORK	L SUM	1	1

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USER NAME = oms	DESIGNED AMS	REVISED -
	DRAWN AMS	REVISED -
PLOT SCALE = 210' = 1" / in.	CHECKED EBB	REVISED -
PLOT DATE = 6/1 /2022	DATE 6/16/2022	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 6

WEST FRANKFORT PUMP STATION
 SUMMARY OF QUANTITIES

SCALE: NONE SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	5
CONTRACT NO. 78958			ILLINOIS FED. AID PROJECT	

SUMMARY OF QUANTITIES

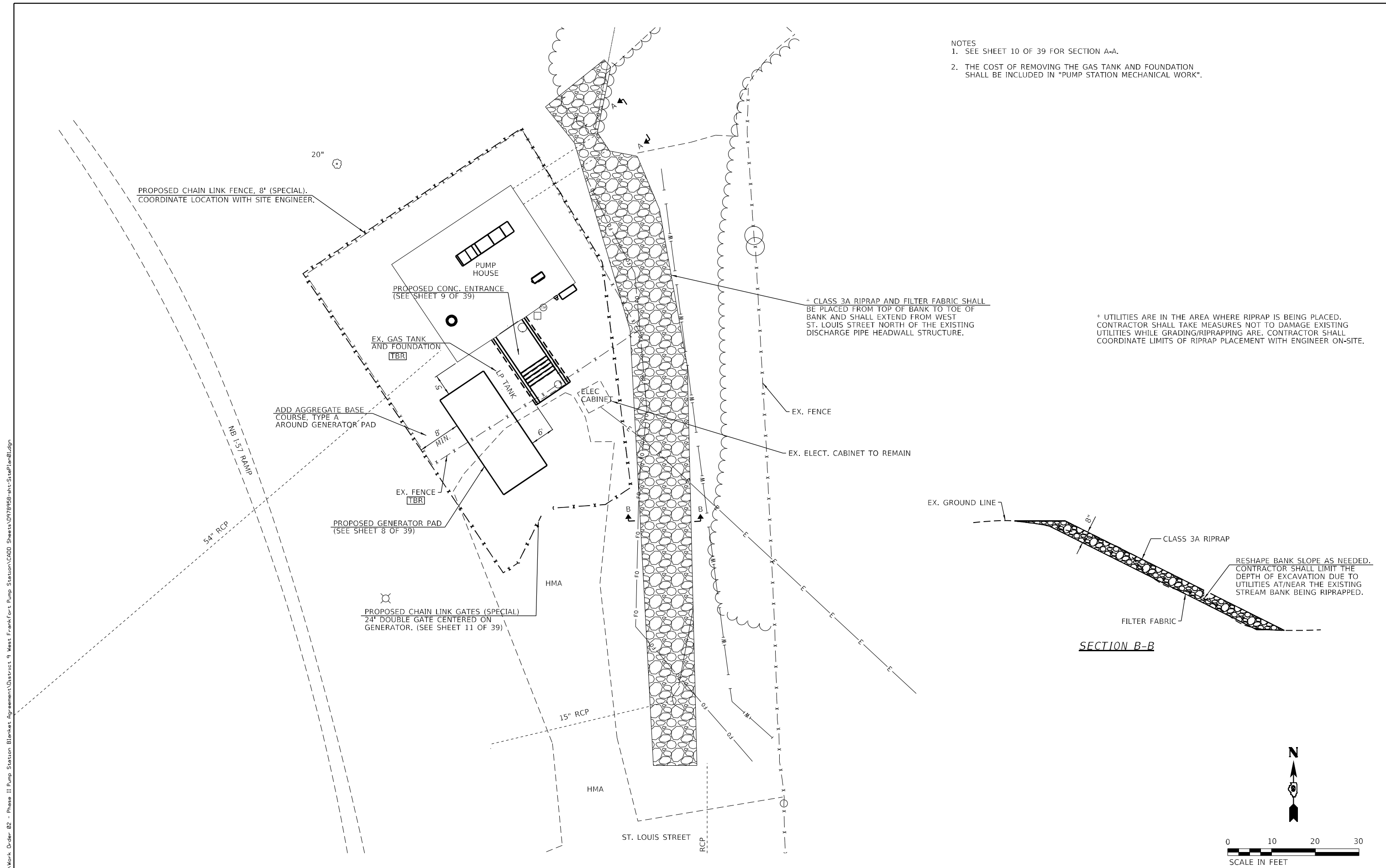
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	URBAN
				CONSTRUCTION TYPE CODE
				FRANKLIN
				0044
				100% STATE
X0783300	PUMP STATION ELECTRICAL WORK	L SUM	1	1
X0783500	PUMP STATION MECHANICAL WORK	L SUM	1	1
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
X6640308	CHAIN LINK GATES (SPECIAL)	EACH	1	1
X6640570	CHAIN LINK FENCE, 8' (SPECIAL)	FOOT	185	185

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KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors <small>616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738</small>	USER NAME = ems	DESIGNED AMS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WEST FRANKFORT PUMP STATION SUMMARY OF QUANTITIES	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 6/16/2022	DATE 6/16/2022	REVISED -			SCALE: NONE	SHEET 3 OF 3 SHEETS	STA. TO STA.		

- NOTES
1. SEE SHEET 10 OF 39 FOR SECTION A-A.
 2. THE COST OF REMOVING THE GAS TANK AND FOUNDATION SHALL BE INCLUDED IN "PUMP STATION MECHANICAL WORK".



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 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

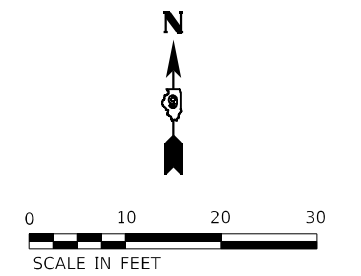
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PLOT DATE = 6/16/2022	DATE	REVISED -

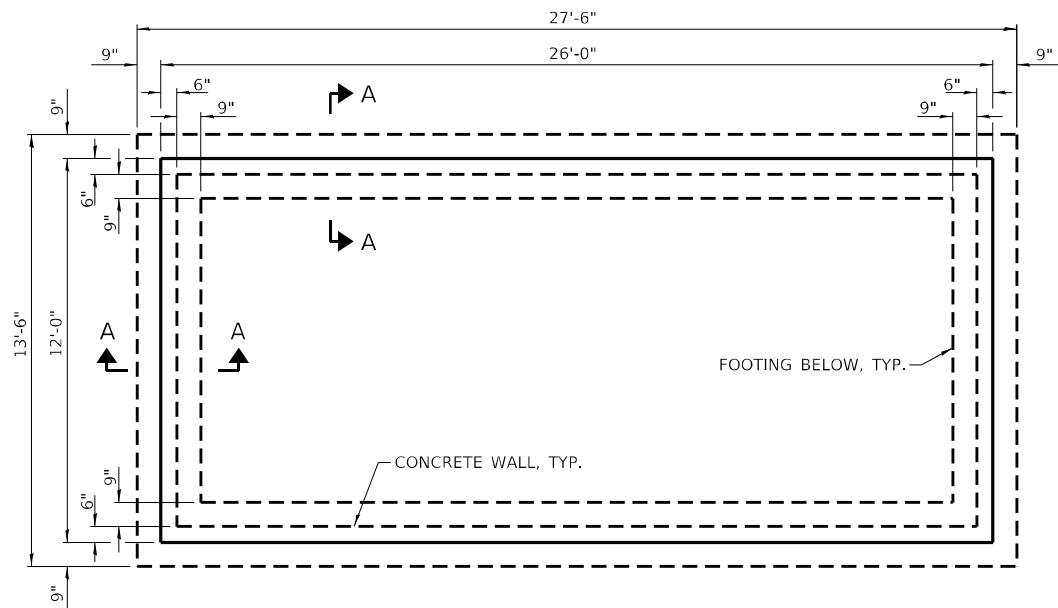
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
 SITE PLAN**

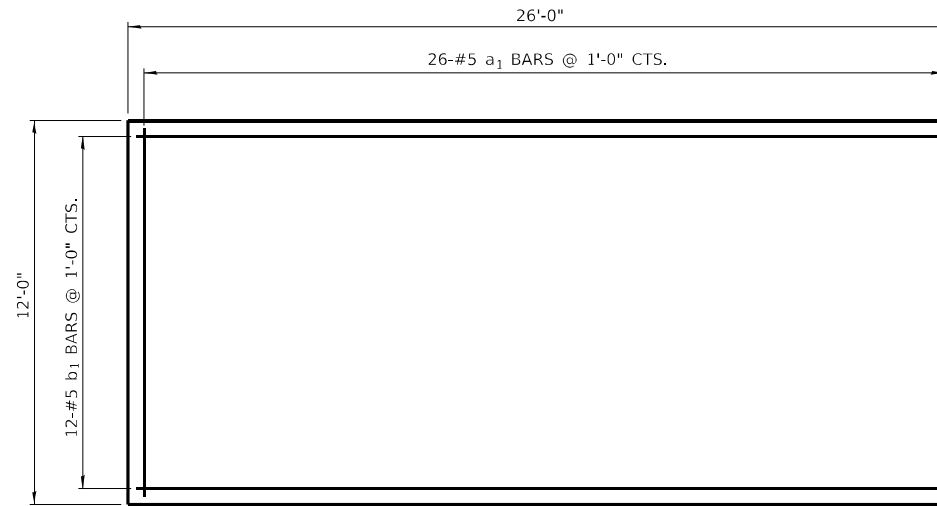
SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

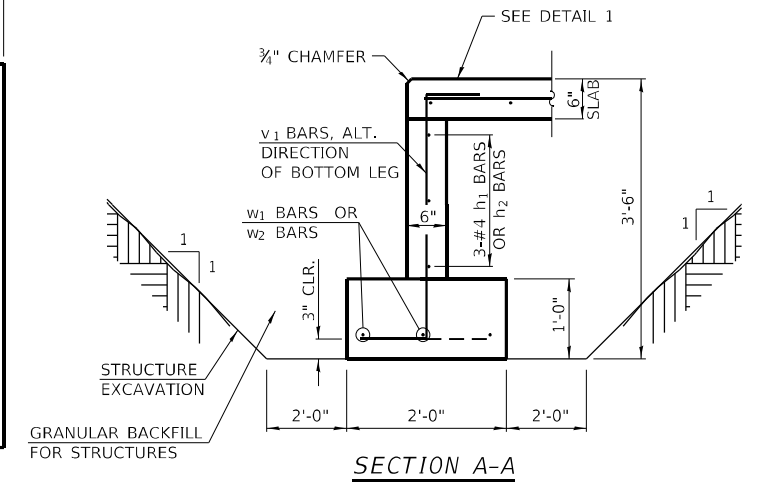




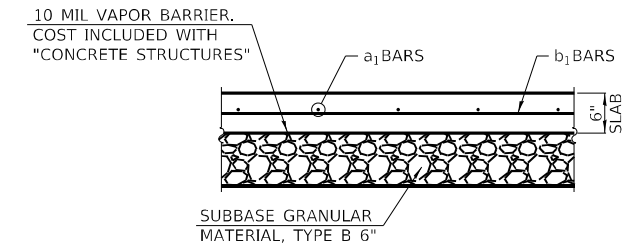
GENERATOR PAD FOUNDATION PLAN



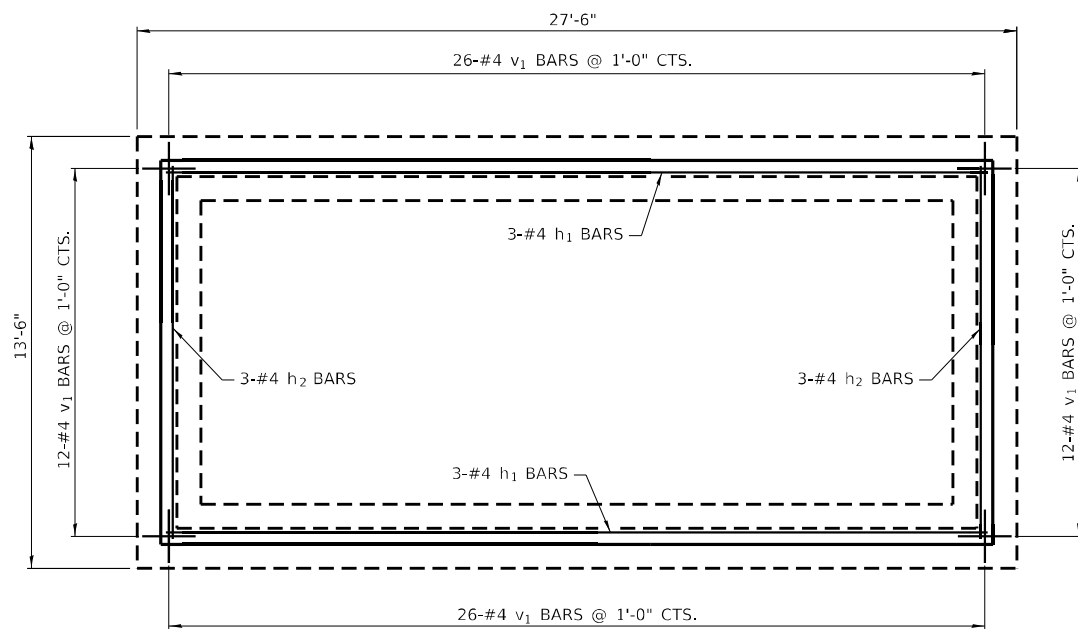
GENERATOR PAD SLAB REINFORCEMENT



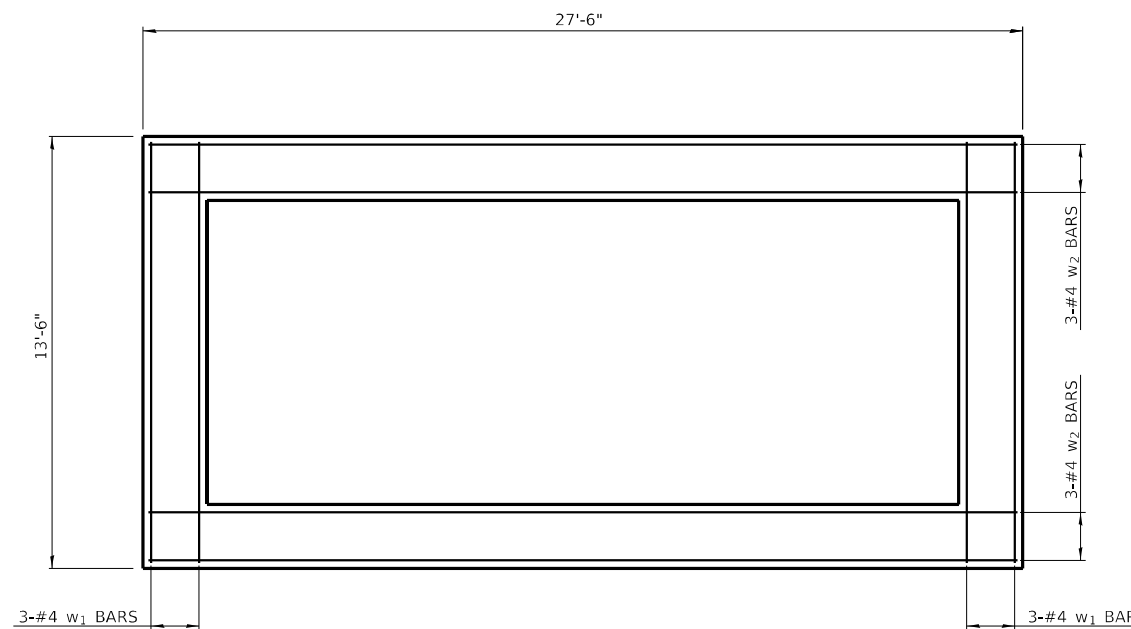
SECTION A-A



DETAIL 1 - 6" SLAB SECTION



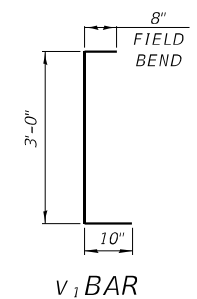
GENERATOR PAD WALL REINFORCEMENT



GENERATOR PAD FOOTING REINFORCEMENT

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	26	#5	11'-8"	—
b1	12	#5	25'-8"	—
h1	6	#4	25'-8"	—
h2	6	#4	11'-8"	—
v1	76	#4	4'-6"	┌
w1	6	#4	13'-2"	—
w2	6	#4	27'-2"	—
CONCRETE STRUCTURES			Cu. Yd.	14.0
REINFORCEMENT BARS			Lbs.	1180
STRUCTURE EXCAVATION			Cu. Yd.	76
GRANULAR BACKFILL FOR STRUCTURES			Cu. Yd.	82
SUBBASE GRANULAR MATERIAL, TYPE B 6"			Sq. Yd.	31



V1 BAR

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STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

USER NAME = oms	DESIGNED	REVISED -
PLOT SCALE = 6.0000' / in.	DRAWN	REVISED -
PLOT DATE = 6/16/2022	CHECKED	REVISED -
	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

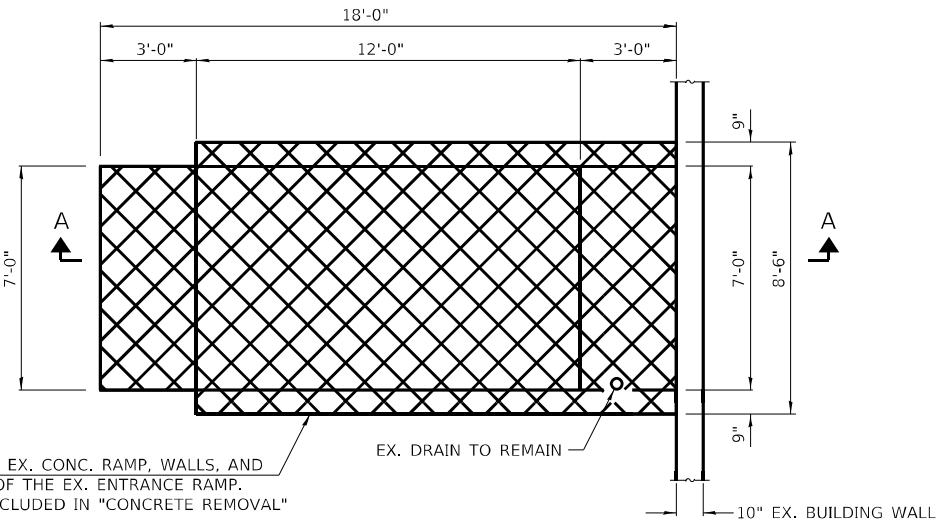
WEST FRANKFORT PUMP STATION
GENERATOR PAD DETAILS
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	8
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

LEGEND

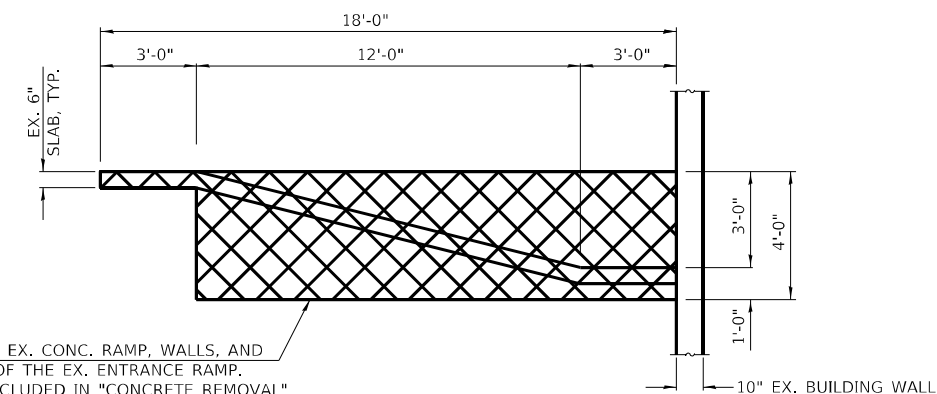


CONCRETE REMOVAL

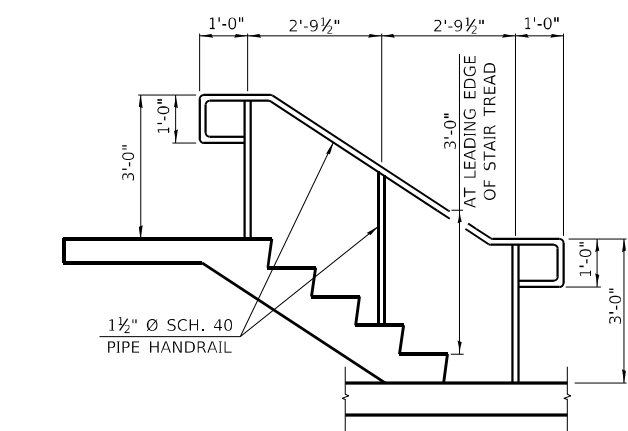


EX. CONC. ENTRANCE DEMO PLAN

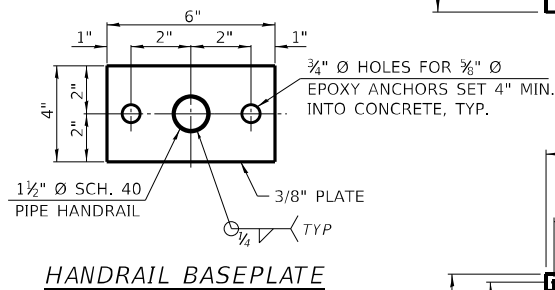
REMOVE EX. CONC. RAMP, WALLS, AND REBAR OF THE EX. ENTRANCE RAMP. COST INCLUDED IN "CONCRETE REMOVAL"



SECTION A-A

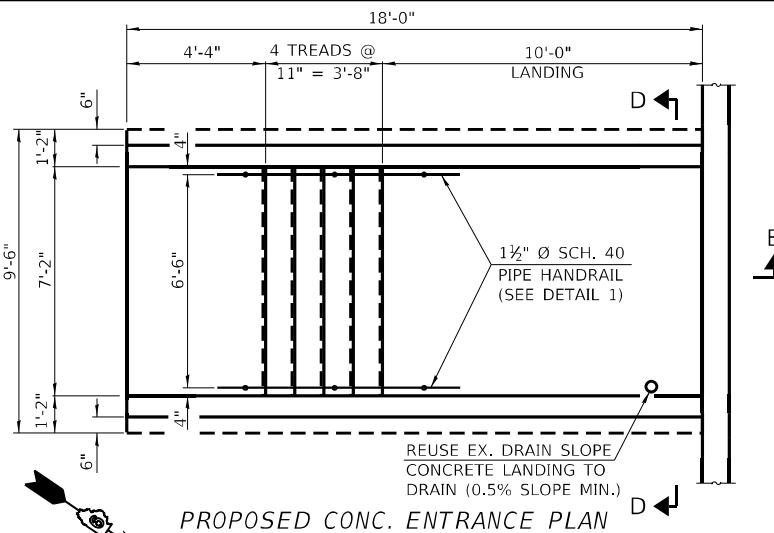


DETAIL 1 - HANDRAIL ELEVATION (BOTH SIDES)

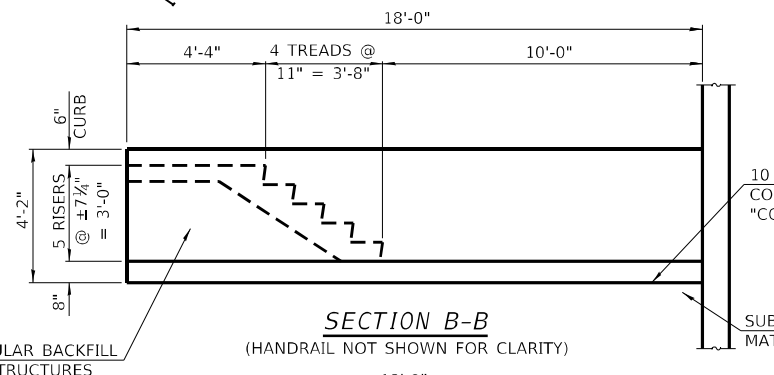


HANDRAIL BASEPLATE

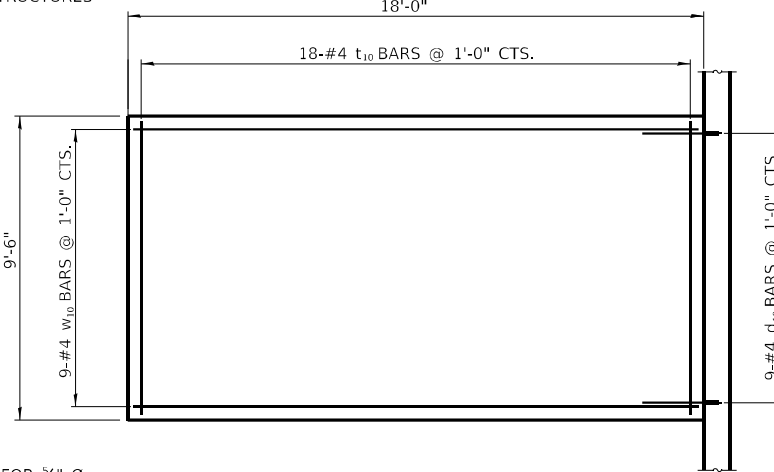
- NOTES:
1. PROVIDE 1/4" Ø WEEP HOLES AT LOW POINTS OF HANDRAILS AND POSTS.
 2. ALL HANDRAILS, POSTS, AND ACCESORIES SHALL BE HOT DIPPED GALVANIZED.
 3. COST OF HANDRAIL SHALL BE INCLUDED IN FURNISHING AND ERECTING STRUCTURAL STEEL*.



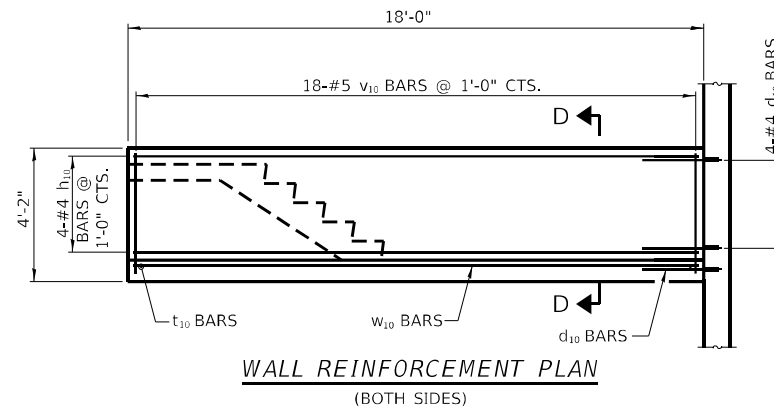
PROPOSED CONC. ENTRANCE PLAN



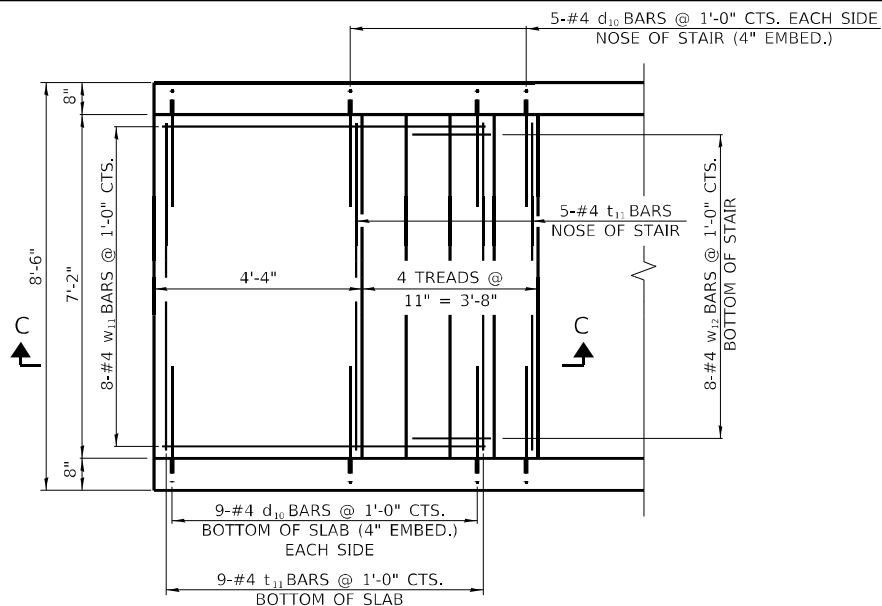
SECTION B-B (HANDRAIL NOT SHOWN FOR CLARITY)



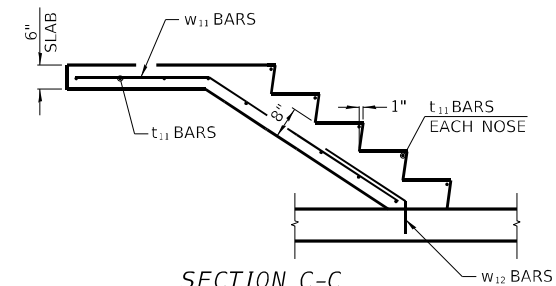
BOTTOM SLAB REINFORCEMENT PLAN



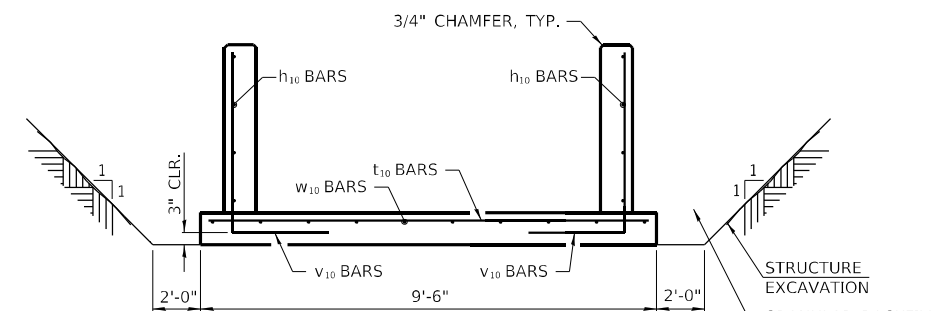
WALL REINFORCEMENT PLAN (BOTH SIDES)



STAIR REINFORCEMENT PLAN



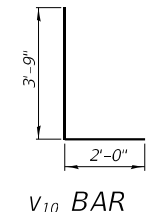
SECTION C-C



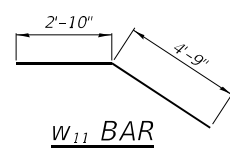
SECTION D-D

BILL OF MATERIAL

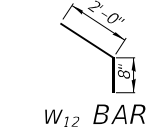
Bar	No.	Size	Length	Shape	
d10	45	#4	2'-6"	—	
h10	8	#4	17'-8"	—	
t10	18	#4	9'-2"	—	
t11	14	#4	6'-10"	—	
v10	36	#5	5'-9"	—	
w10	9	#4	17'-8"	—	
w11	8	#4	7'-7"	—	
w12	8	#4	2'-8"	—	
CONCRETE STRUCTURES				Cu. Yd.	9.0
REINFORCEMENT BARS				Lbs.	720
CONCRETE REMOVAL				Cu. Yd.	5.7
STRUCTURE EXCAVATION				Cu. Yd.	32
FURNISHING AND ERECTING STRUCTURAL STEEL				Lbs.	132
GRANULAR BACKFILL FOR STRUCTURES				Cu. Yd.	27
SUBBASE GRANULAR MATERIAL, TYPE B 6"				Sq. Yd.	19



V10 BAR



W11 BAR



W12 BAR

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 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

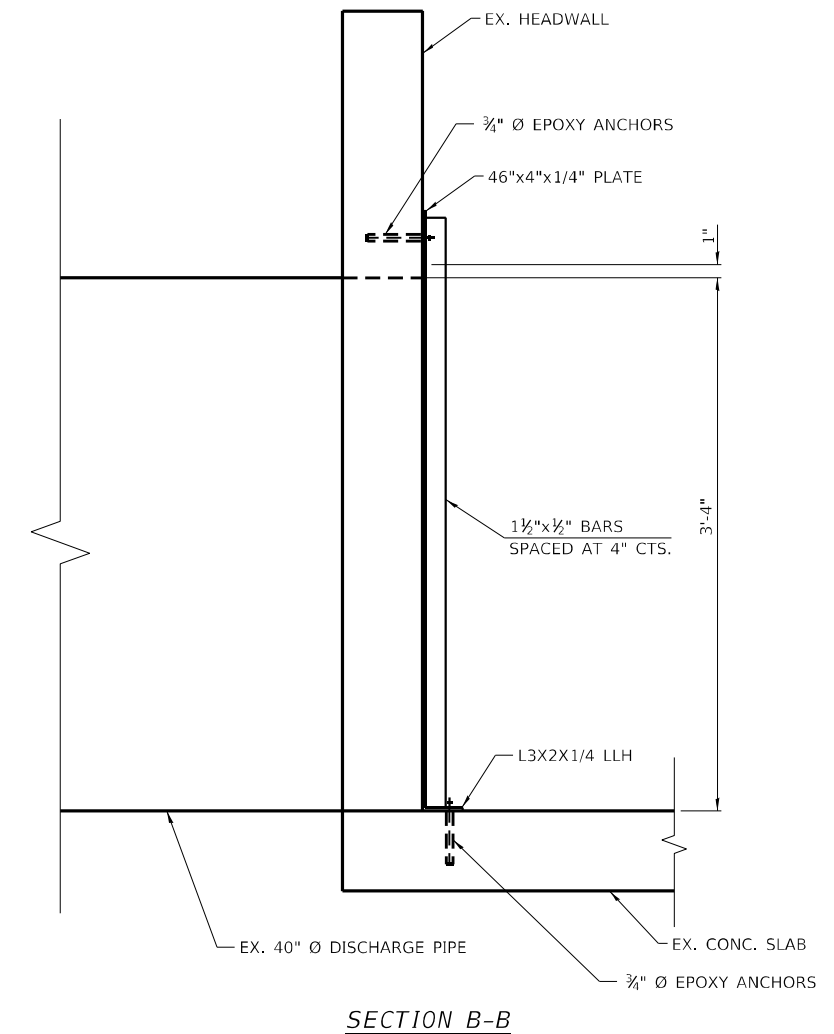
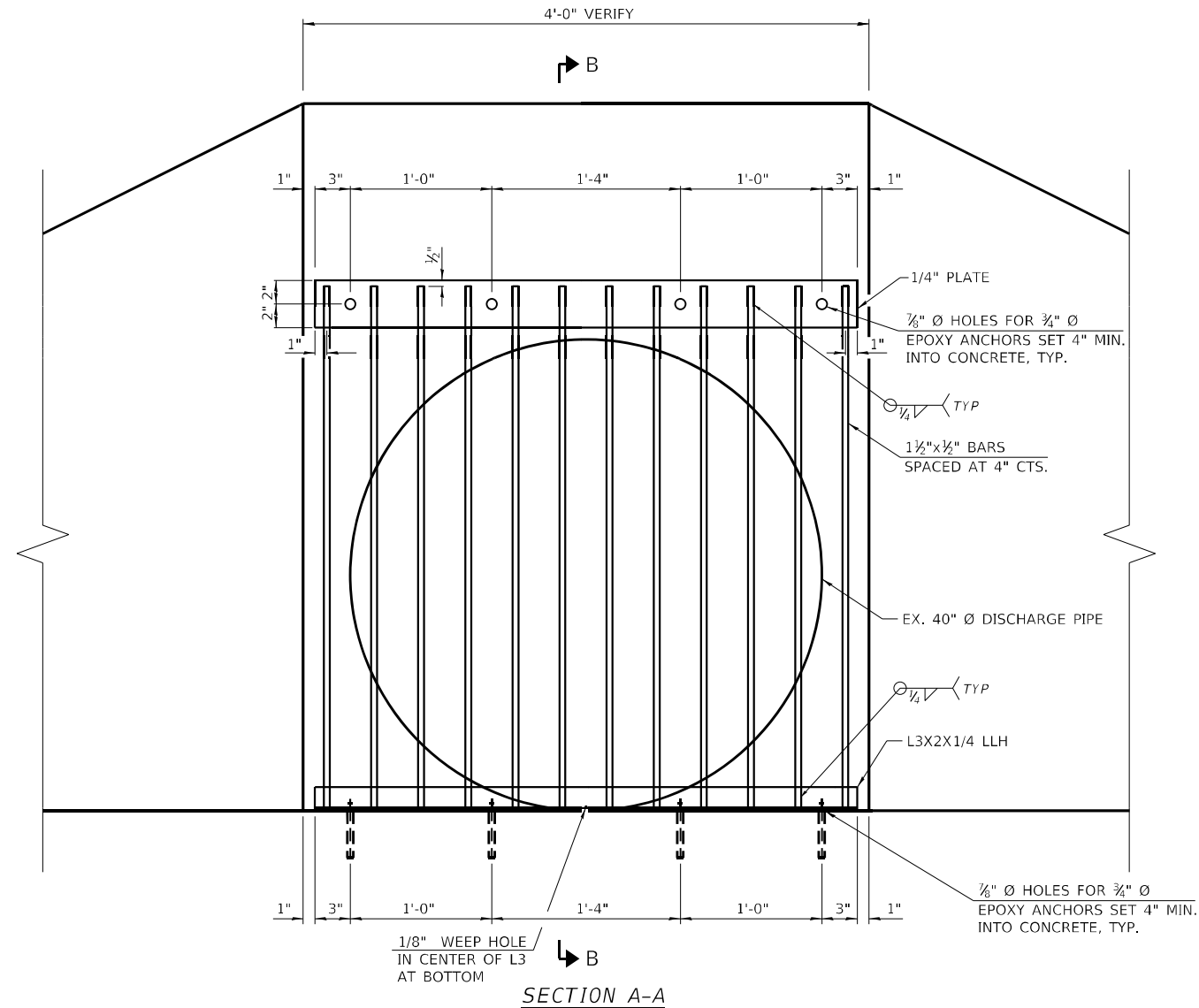
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	DATE	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION CONCRETE ENTRANCE DEMO AND PROPOSED PLAN AND DETAILS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	9
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.



- NOTES:
1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, PRIOR TO STEEL FABRICATION.

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.

BILL OF MATERIAL

FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	150
------------------------------------------	-------	-----

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 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

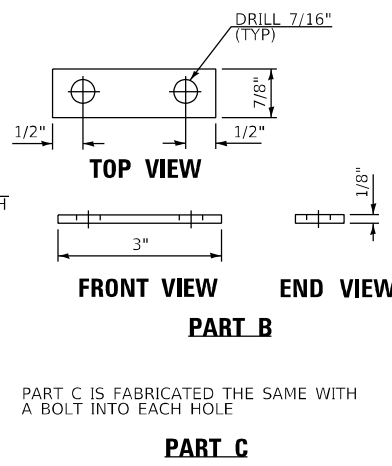
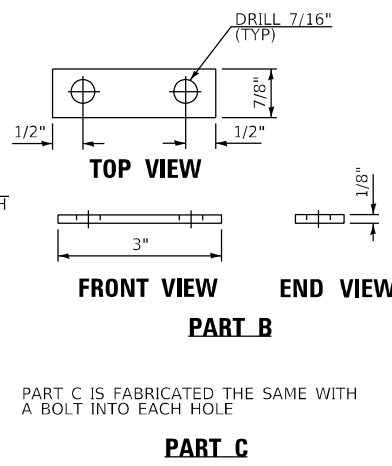
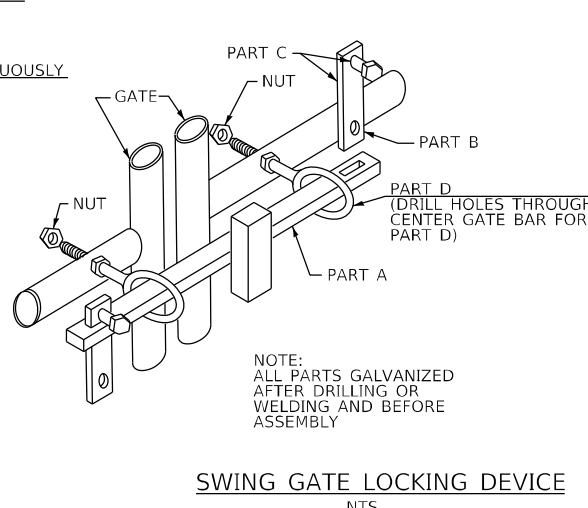
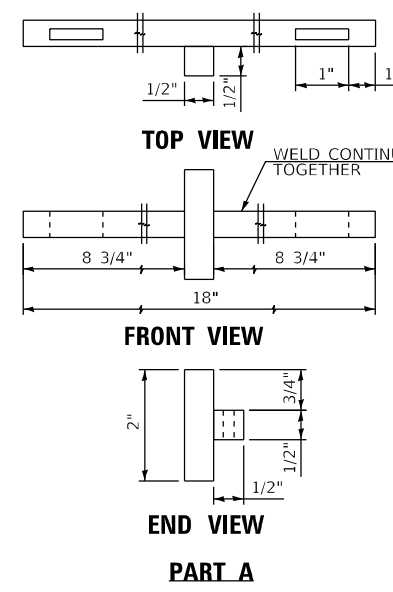
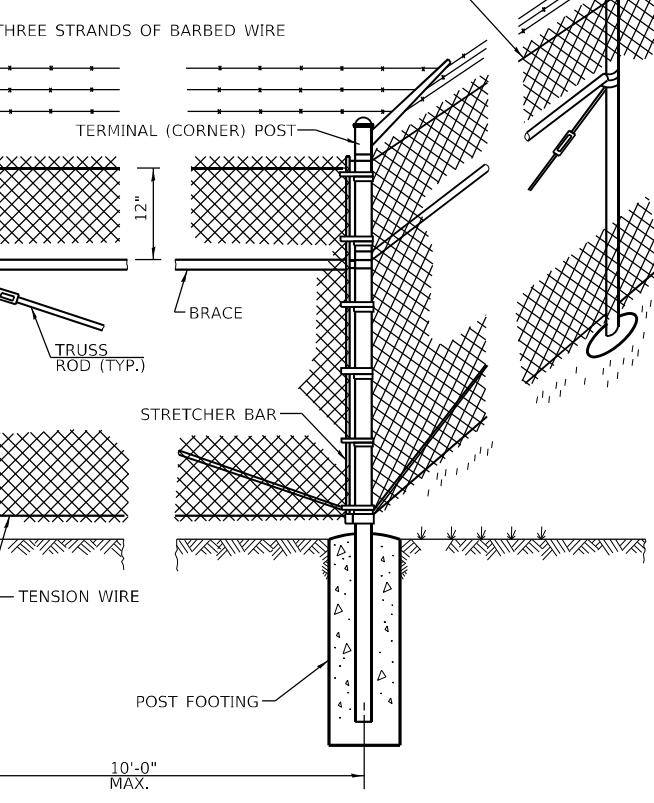
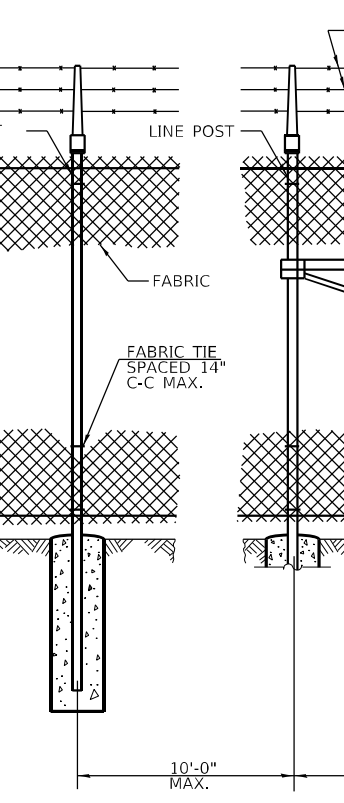
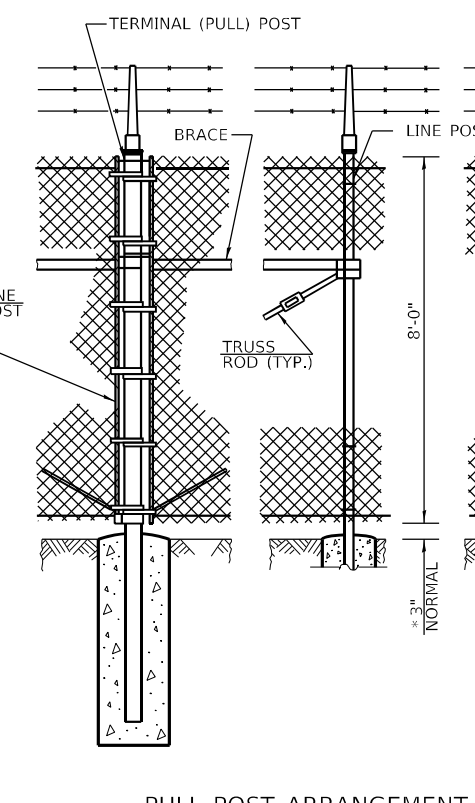
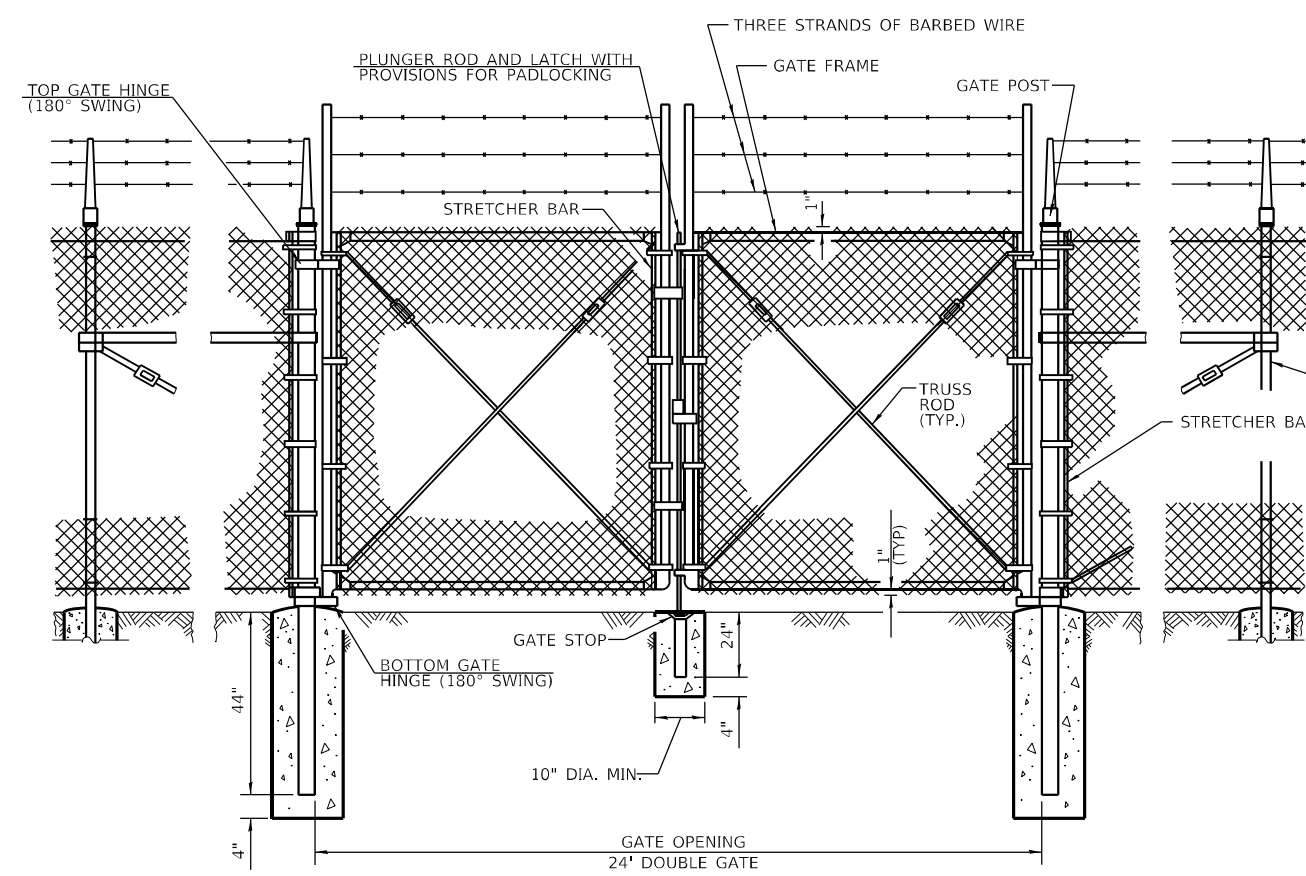
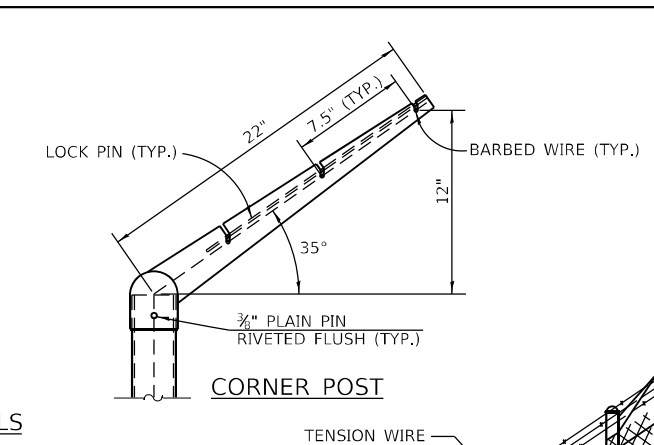
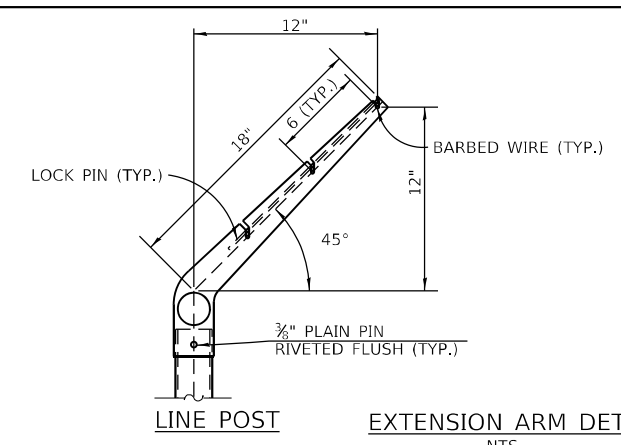
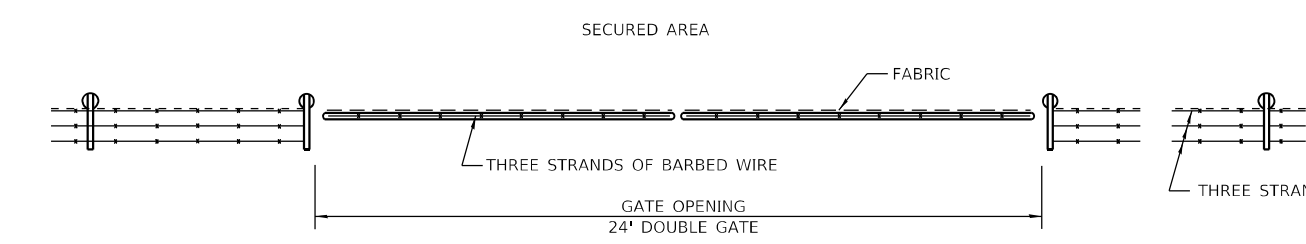
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PLOT SCALE = 6.0000' / in.	DRAWN	REVISED -
PLOT DATE = 6/16/2022	CHECKED	REVISED -
	DATE	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WEST FRANKFORT PUMP STATION DISCHARGE PIPE COVER DETAILS	
SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	10
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

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ELEVATION
NTS

* ON UNEVEN GROUND THIS DIMENSION MAY VARY BETWEEN 1 MIN. TO 5 MAX. FOR A MAX. DISTANCE OF 8'-0".

GENERAL NOTES

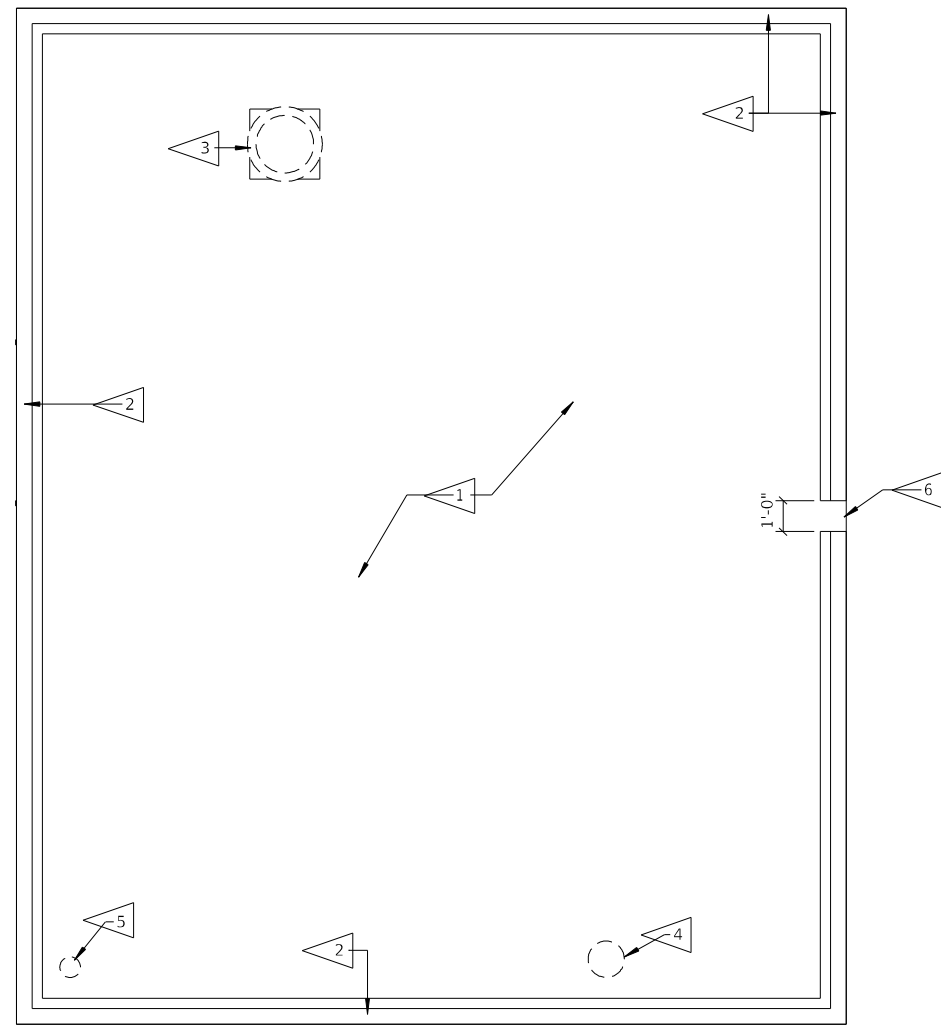
SEE HIGHWAY STANDARD 664001 FOR ADDITIONAL CHAIN LINK FENCE AND GATE DETAILS.

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PLOT DATE = 6/16/2022	CHECKED EBB	REVISED -
	DATE 5/20/2022	REVISED -

WEST FRANKFORT PUMP STATION CHAIN LINK FENCE DETAILS	
SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	11
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "PUMP STATION GENERAL WORK", UNLESS OTHERWISE NOTED.



ROOF PLAN: DEMOLITION

GENERAL DEMOLITION NOTES

1. THE CONTRACTOR SHALL MAKE A PERSONAL INSPECTION OF THE SITE AND INCLUDE ALL WORK REQUIRED BY THE DRAWINGS. NOTIFY THE ENGINEER IN WRITING OF ANY INCONSISTENCIES IN THE DRAWINGS.
2. ALL MATERIALS THAT HAVE BEEN DEMOLISHED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE BY CONTRACTOR. NO DEMOLISHED MATERIALS SHALL BE STOCKPILED ON SITE.
3. COST OF ROOFING MATERIAL, FLASHING AND TRIM, AND ACCESSORIES SHALL BE INCLUDED IN "PUMP STATION GENERAL WORK".

KEYED DEMOLITION NOTES

- 1 REMOVE EXISTING ASPHALT BUILT-UP ROOF SYSTEM FROM EXISTING CONCRETE DECK IN ITS ENTIRETY. CONTRACTOR TO VERIFY IF ANY EXISTING ROOF MATERIALS CONTAIN ASBESTOS. IF ANY ROOFING MATERIALS DO CONTAIN ASBESTOS, THEY MUST BE REMOVED IN ACCORDANCE WITH STATE REGULATIONS. (SEE SPECIAL PROVISIONS).
- 2 REMOVE EXISTING SHEET METAL COPING AND WOOD NAILER AND DISPOSE OF OFF-SITE.
- 3 REMOVE EXISTING ROOF EQUIPMENT: SEE SHEETS 25-33 OF 39.
- 4 REMOVE EXISTING ROOF VENT AND INFILL EXISTING OPENING WITH CORRUGATED METAL DECK AND COLD FORMED STEEL FRAMING. TOP OF DECK TO BE FLUSH WITH TOP OF CONCRETE DECK: SEE SHEETS 25-33 OF 39.
- 5 REMOVE EXISTING ROOF DRAIN: SEE SHEETS 25-33 OF 39.
- 6 SAWCUT NEW SCUPPER OPENING INTO EXISTING 5-1/2" HIGH CONCRETE CURB AT ROOF EDGE FOR NEW SCUPPER. CENTER SCUPPER OPENING IN WALL.

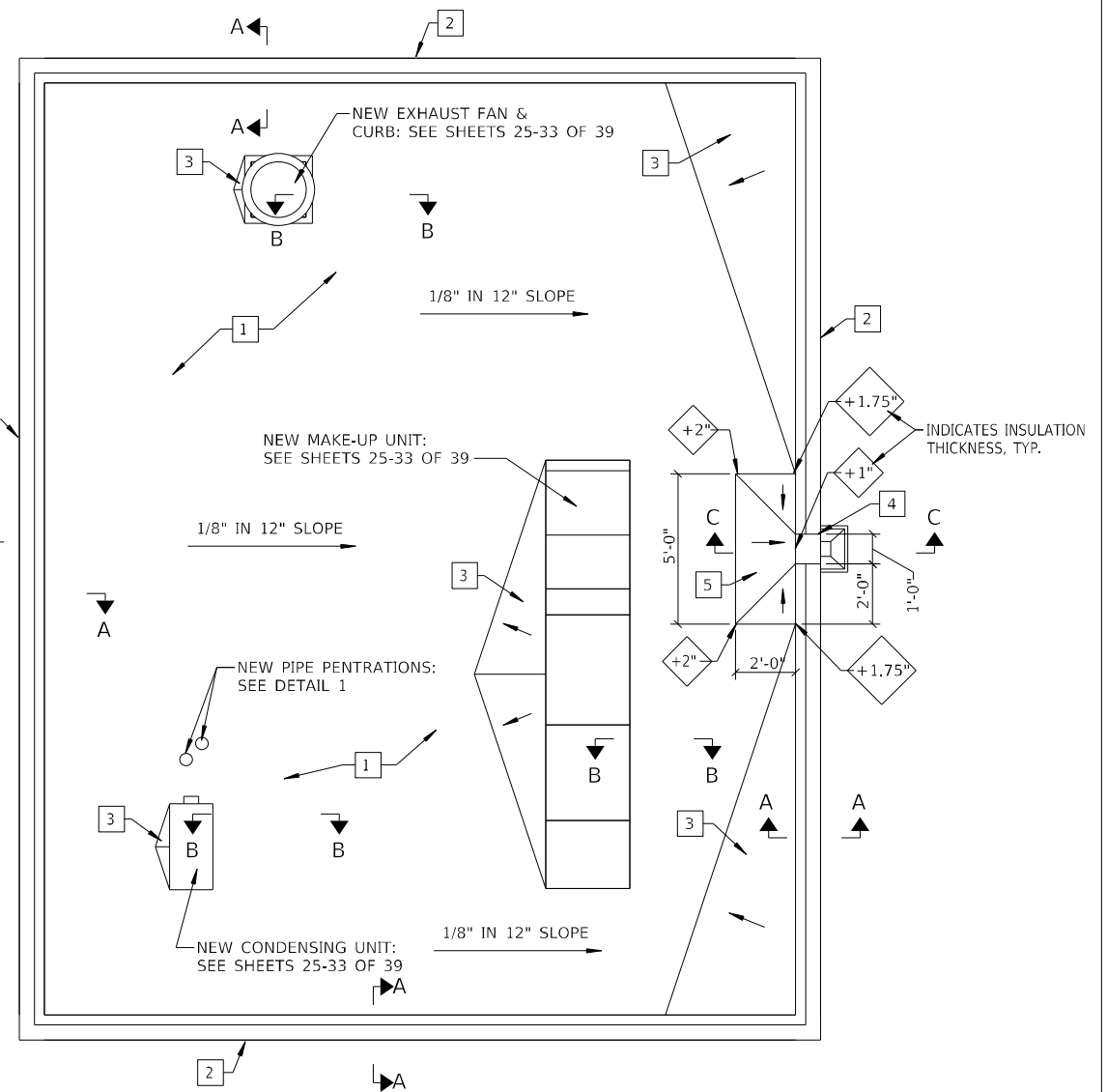
GENERAL RENOVATION NOTES

1. EXISTING CONCRETE ROOF DECK IS NOT SLOPED.
2. PROVIDE CRICKETS AT HIGH SLOPE SIDE OF ALL EQUIPMENT CURBS WHICH ARE PERPENDICULAR TO SLOPE DIRECTION.

KEYED RENOVATION NOTES

- 1 INSTALL NEW ROOF SYSTEM: 60 MIL. EPDM FULLY ADHERED OVER 1/8" IN 12" SLOPED POLYISO TAPERED INSULATION ADHERED OVER EXISTING CONCRETE DECK.
- 2 INSTALL NEW MANUFACTURED FASCIA SYSTEM.
- 3 PROVIDE CRICKET: 1/2" IN 12" TAPERED POLYISO. INSULATION. PLAN VIEW PROPORTION OF CRICKET TO BE 3:1 (LENGTH:WIDTH) RATIO.
- 4 INSTALL SHEET METAL SCUPPER LINER, COLLECTOR & DOWNSPOUT AT NEWLY SAWCUT SCUPPER OPENING.
- 5 PROVIDE SUMP AT SCUPPER: 1/2" IN 12" TAPERED POLYISO. INSULATION.

NOTES:
1. FOR SECTIONS A-A, B-B, AND C-C AND DETAIL 1, SEE SHEET 13 OF 39.



ROOF PLAN: RENOVATION

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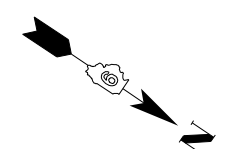
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616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

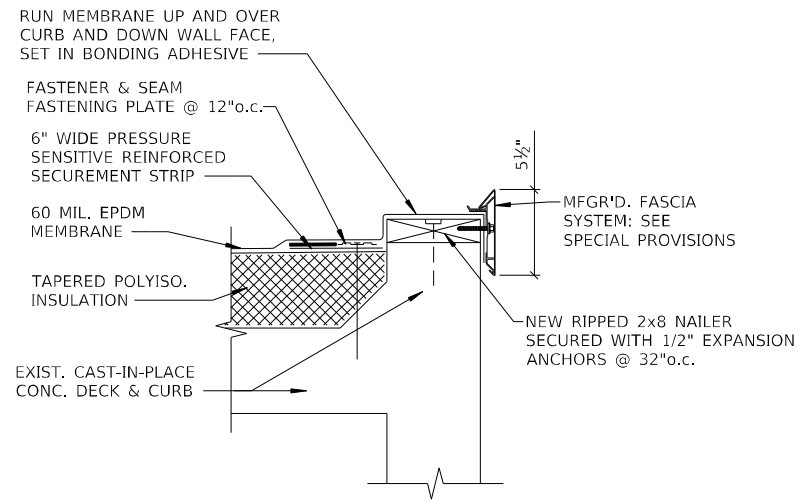
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

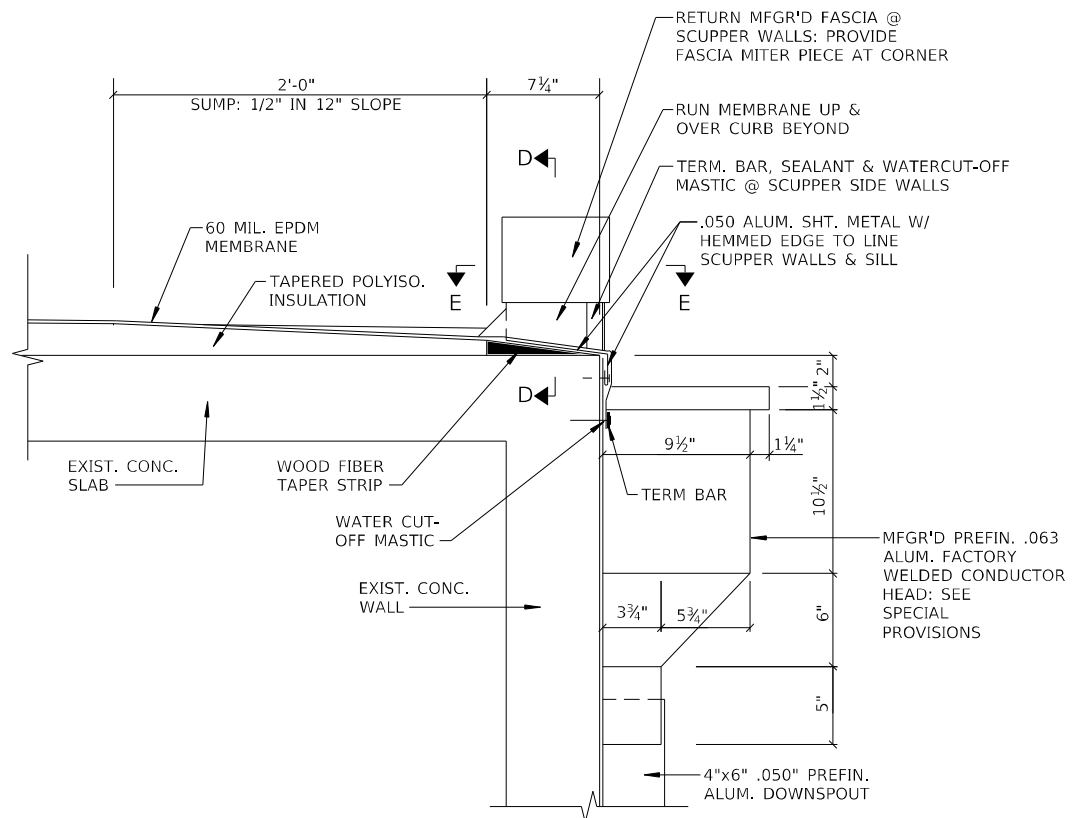
WEST FRANKFORT PUMP STATION ROOF DEMO AND RENOVATION PLANS	
SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	12
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



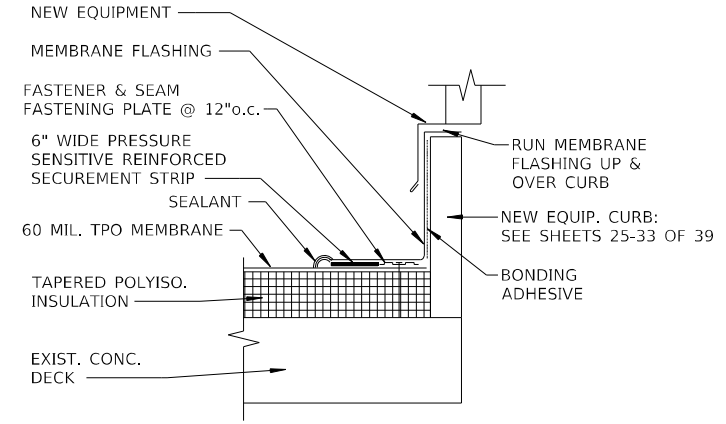


SECTION A-A - ROOF EDGE CURB

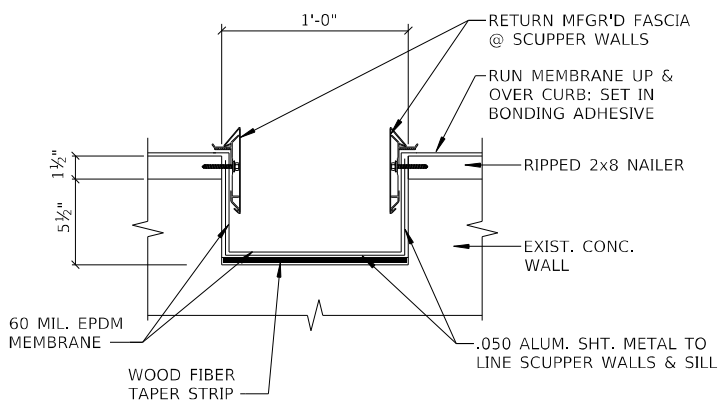


SECTION C-C - SCUPPER

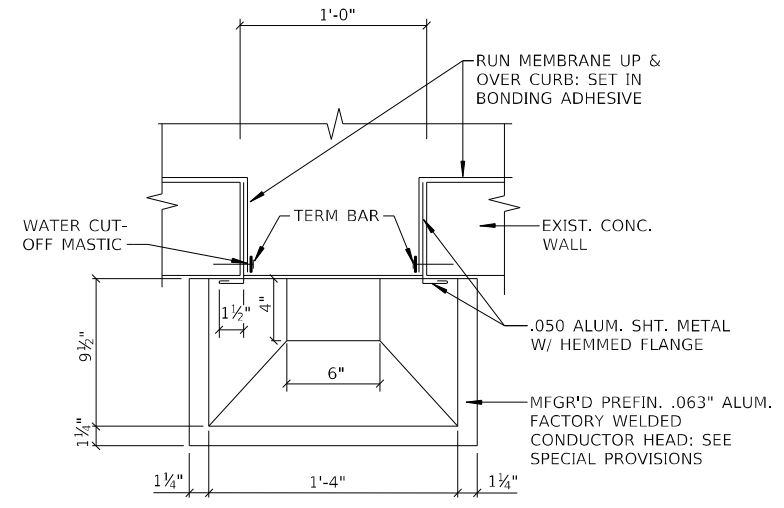
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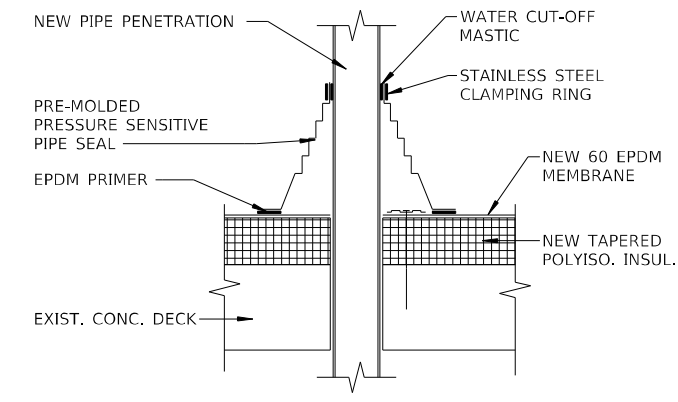
SECTION B-B - EQUIP. CURB



SECTION D-D - SCUPPER PROFILE



SECTION E-E - SCUPPER PLAN VIEW



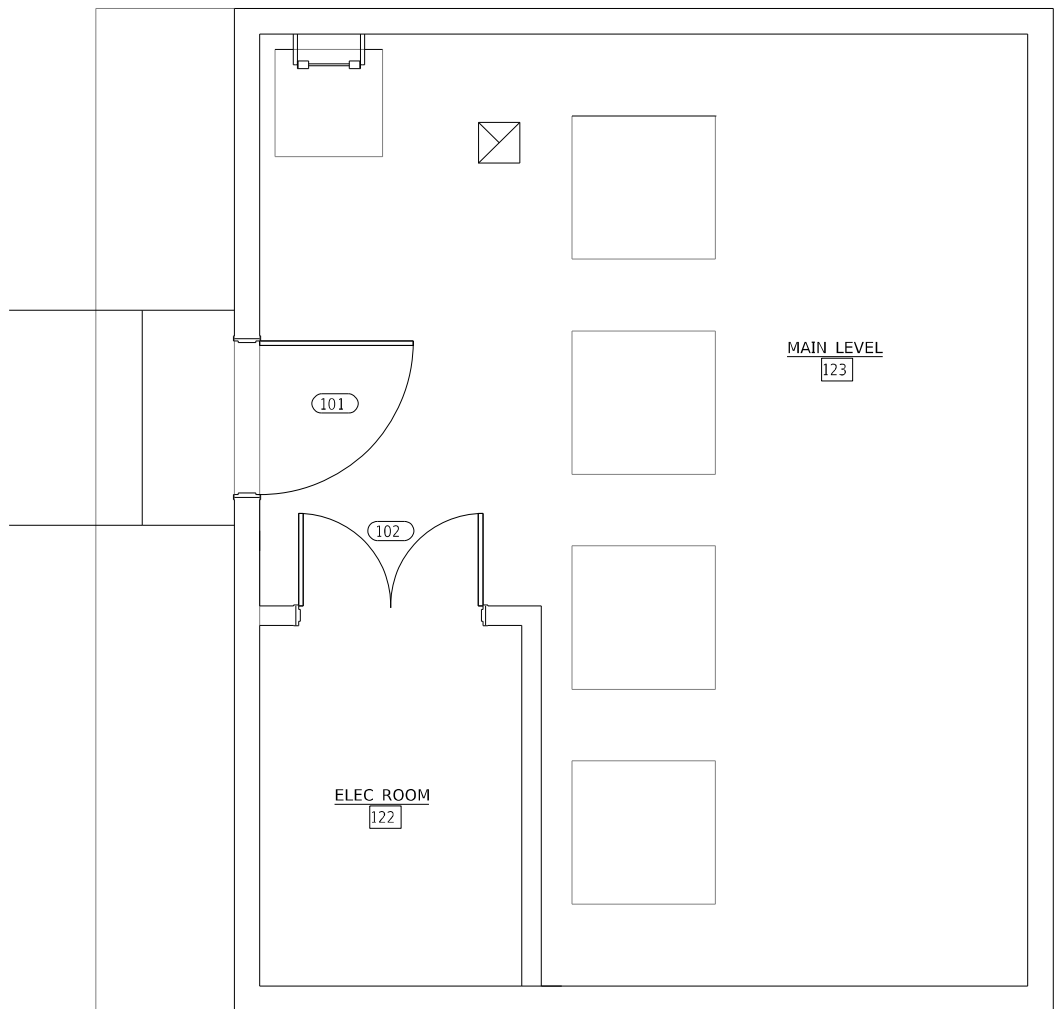
DETAIL 1 - PIPE FLASHING

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	DATE	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	13
			CONTRACT NO. 78958	
ILLINOIS FED. AID PROJECT				

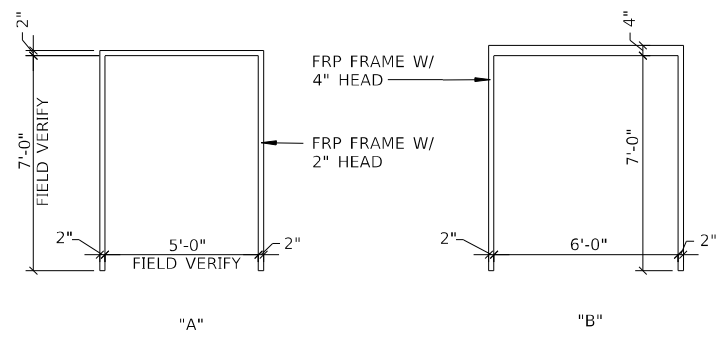
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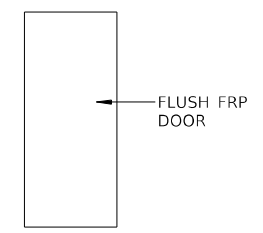
FLOOR PLAN: MAIN LEVEL

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "PUMP STATION GENERAL WORK", UNLESS OTHERWISE NOTED.

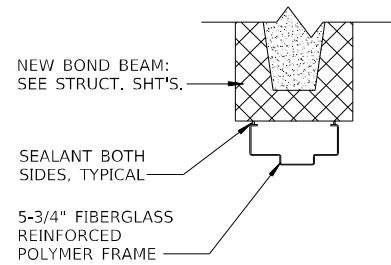
DOOR AND FRAME SCHEDULE												FIRE RATING	HARDWARE		REMARKS
DOOR NUMBER	SIZE			TYPE	MATERIAL	FINISH	FRAME			DETAILS			HARDWARE GROUP	DOOR NUMBER	
	WIDTH	HEIGHT	THICKNESS				TYPE	MATERIAL	FINISH	HEAD	JAMB				
101	5' - 0"	7' - 0"	1 3/4"	A	FRP	PREFIN.	A	FRP	PREFIN.	Detail 3	Detail 4	01	101		
102	6' - 0"	7' - 0"	1 3/4"	A	FRP	PREFIN.	B	FRP	PREFIN.	Detail 1	Detail 2	02	102	DOUBLE DOOR	



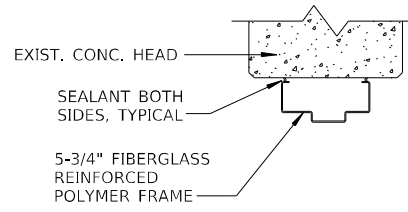
DOOR FRAME TYPES



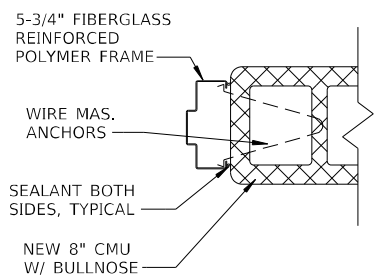
DOOR TYPE



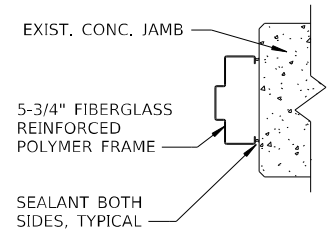
DETAIL 1: HEAD



DETAIL 3: HEAD

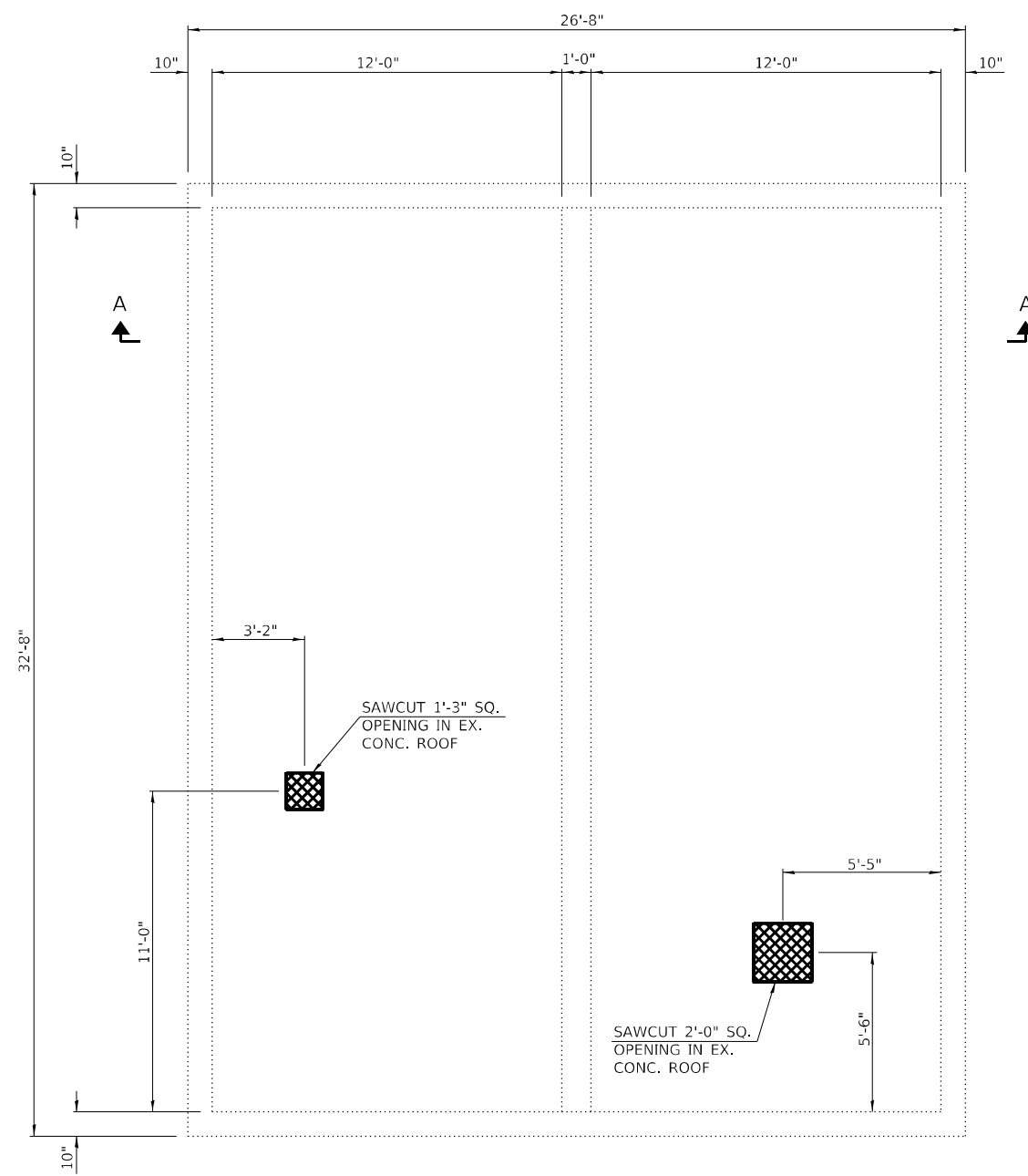


DETAIL 2: JAMB



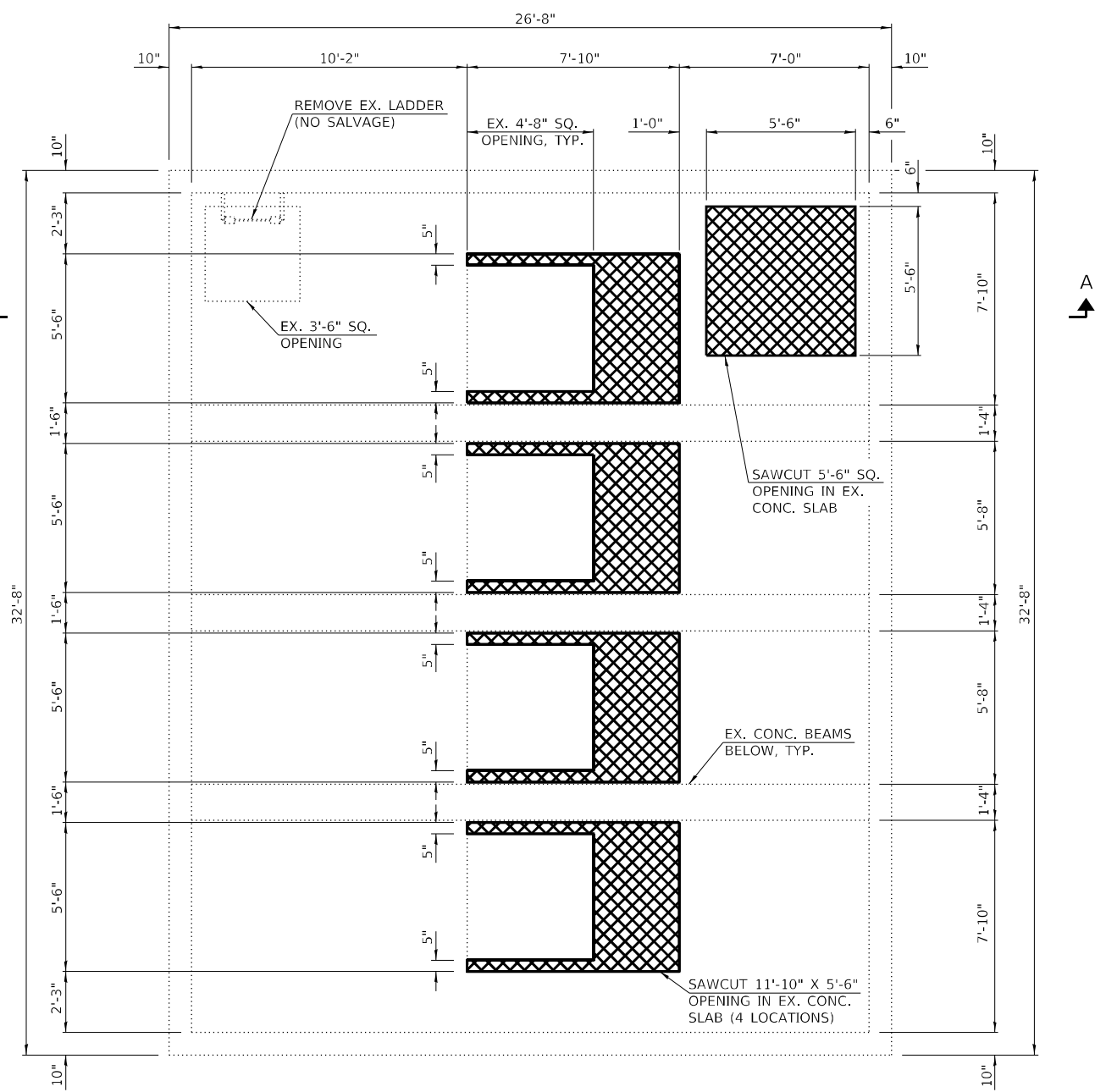
DETAIL 4: JAMB

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ROOF LEVEL - DEMO PLAN

LEGEND
 CONCRETE REMOVAL



MAIN LEVEL - DEMO PLAN

- NOTES:**
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER ECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. COORDINATE ALL CONDUIT, PIPING, AND DUCT PENETRATION WITH MECHANICAL AND ELECTRICAL DRAWINGS.
 3. COST OF LADDER REMOVAL SHALL BE INCLUDED IN "STRUCTURAL STEEL REMOVAL".
 4. SEE SHEET 19 OF 39 FOR SECTION A-A.

BILL OF MATERIAL

CONCRETE REMOVAL	CU YD	3.0
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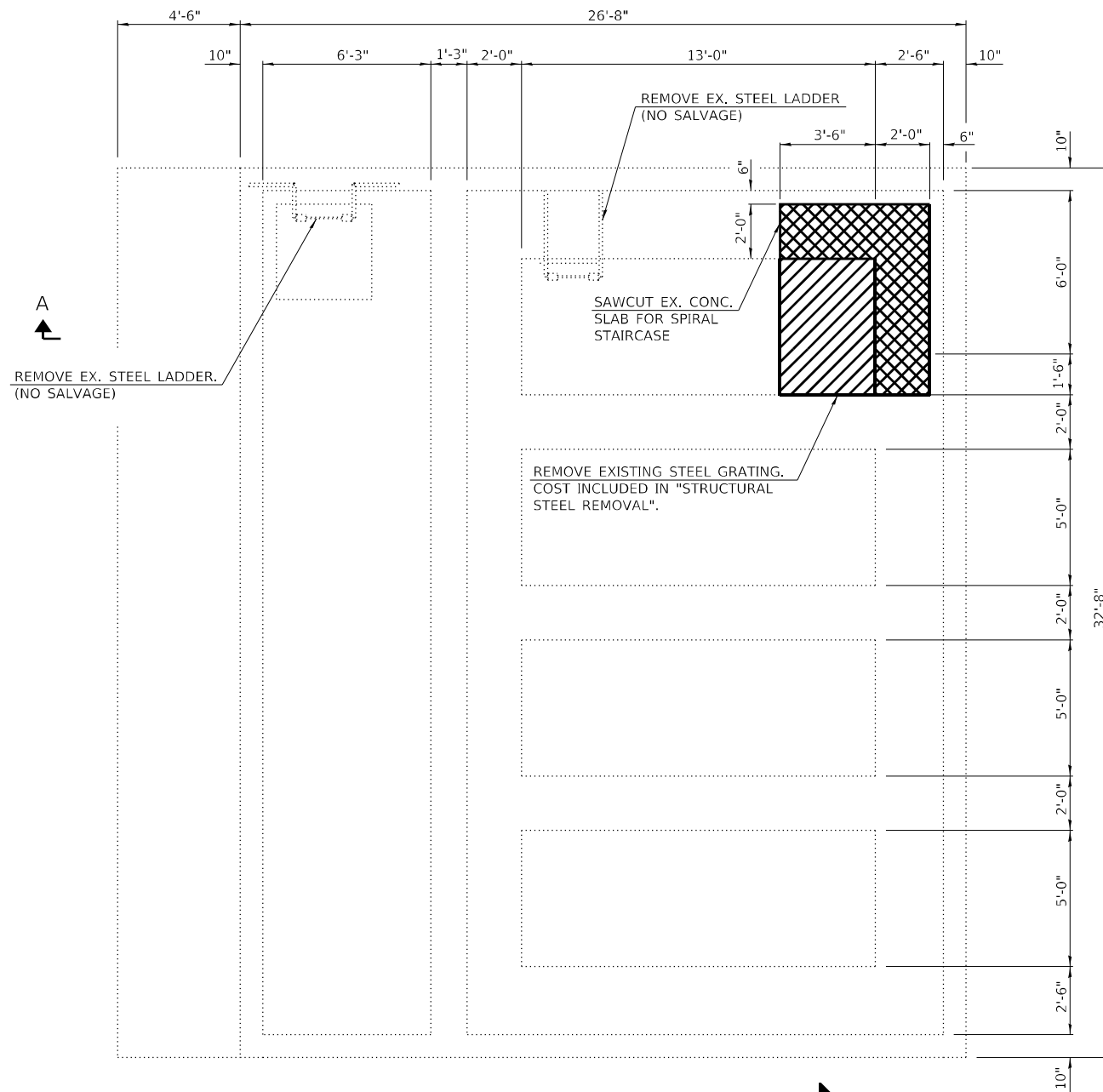
KLINGNER & ASSOCIATES, P.C. Engineers • Architects • Surveyors 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738	USER NAME = oms	DESIGNED	REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

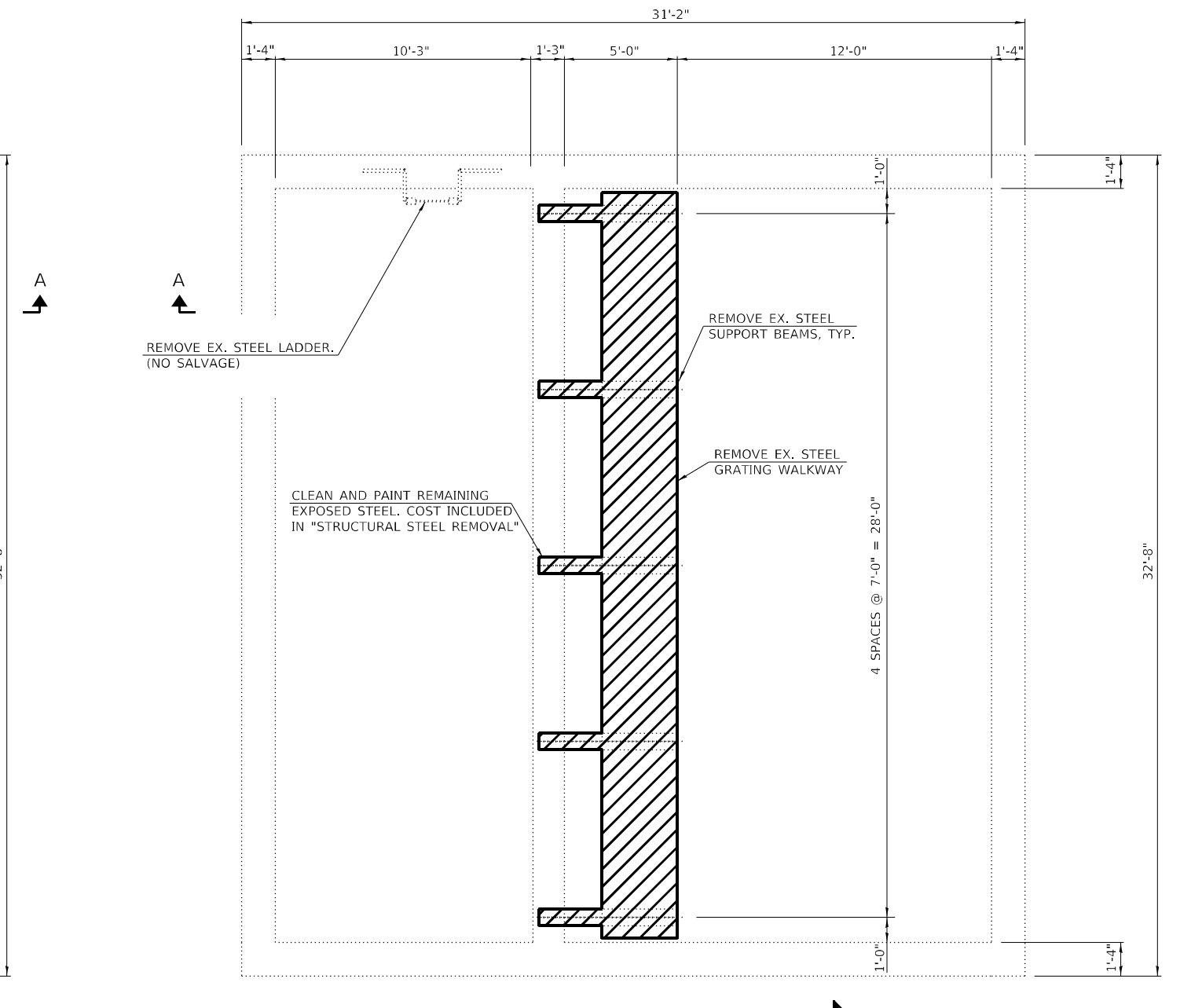
WEST FRANKFORT PUMP STATION EXISTING PUMP STATION DEMOLITION PLANS			
SCALE: NONE	SHEET 1 OF 2 SHEETS	STA. TO STA.	

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	15
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

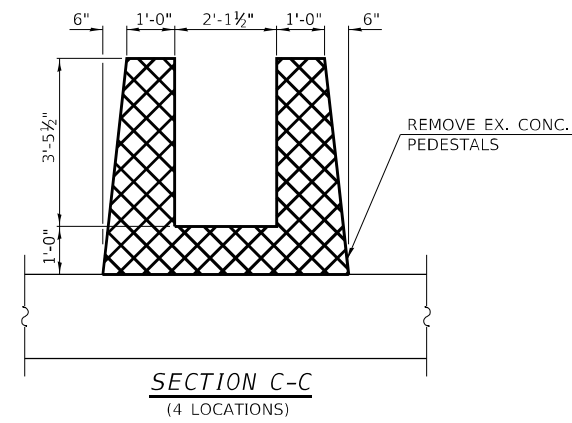
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STORAGE LEVEL - DEMO PLAN



LOWER WALKWAY - DEMO PLAN



**SECTION C-C
(4 LOCATIONS)**

- NOTES:**
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. COORDINATE ALL CONDUIT, PIPING, AND DUCT PENETRATION WITH MECHANICAL AND ELECTRICAL DRAWINGS.
 3. COST OF LADDER REMOVAL, EX. STEEL WALKWAY SUPPORT BEAM REMOVAL, AND EX. STEEL WALKWAY GRATING SHALL BE INCLUDED IN "STRUCTURAL STEEL REMOVAL".
 4. SEE SHEET 19 OF 39 FOR SECTION A-A.

LEGEND

- CONCRETE REMOVAL
- STEEL REMOVAL

BILL OF MATERIAL

CONCRETE REMOVAL	CU YD	4.9
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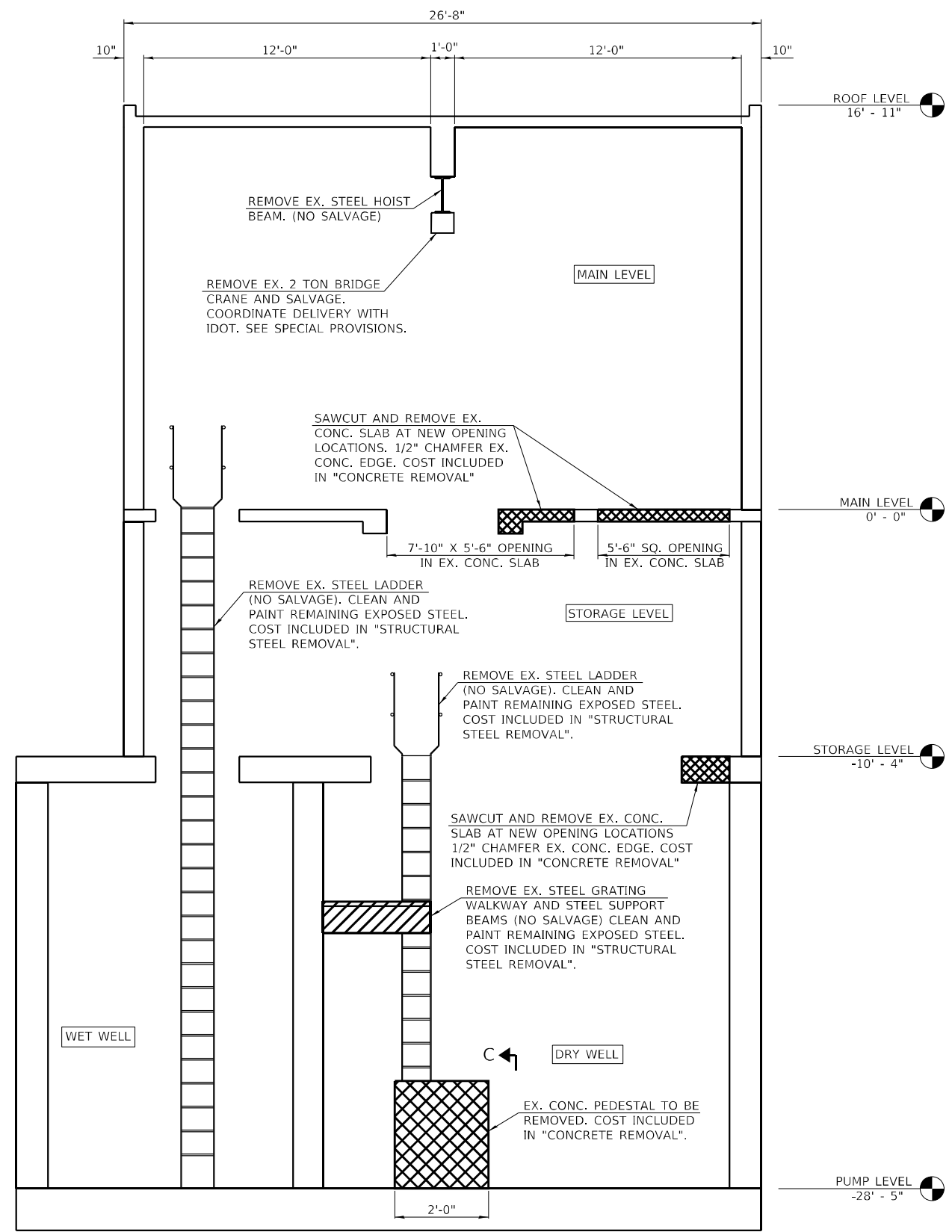
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

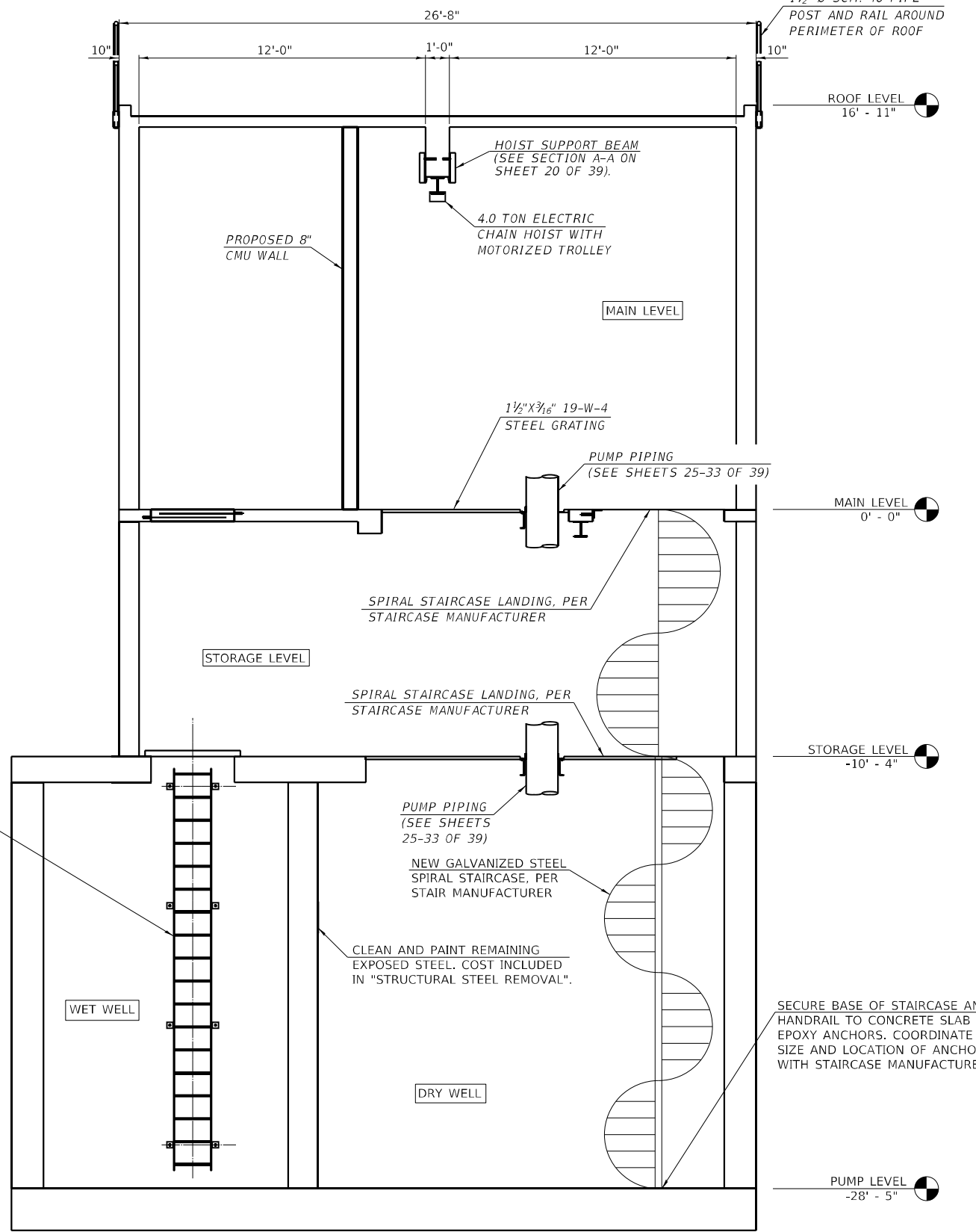
**WEST FRANKFORT PUMP STATION
EXISTING PUMP STATION DEMOLITION PLANS**

SCALE: NONE SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.I. RTE. 57	SECTION (28-5)PS-1	COUNTY FRANKLIN	TOTAL SHEETS 39	SHEET NO. 16
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



BUILDING SECTION A-A - DEMO
(LOOKING SOUTHWEST)



BUILDING SECTION B-B - PROPOSED
(LOOKING SOUTHWEST)

LEGEND

	CONCRETE REMOVAL
	STEEL REMOVAL

- NOTES:**
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
 2. COST OF NEW SPIRAL STAIRCASE AND 4 TON HOIST SHALL BE INCLUDED IN "PUMP STATION GENERAL WORK". SEE SPECIAL PROVISIONS.
 3. NEW SPIRAL STAIRCASE SHALL BE HOT DIPPED GALVANIZED. SEE SPECIAL PROVISIONS.
 4. FOR SECTION C-C SEE SHEET 16 OF 39.

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STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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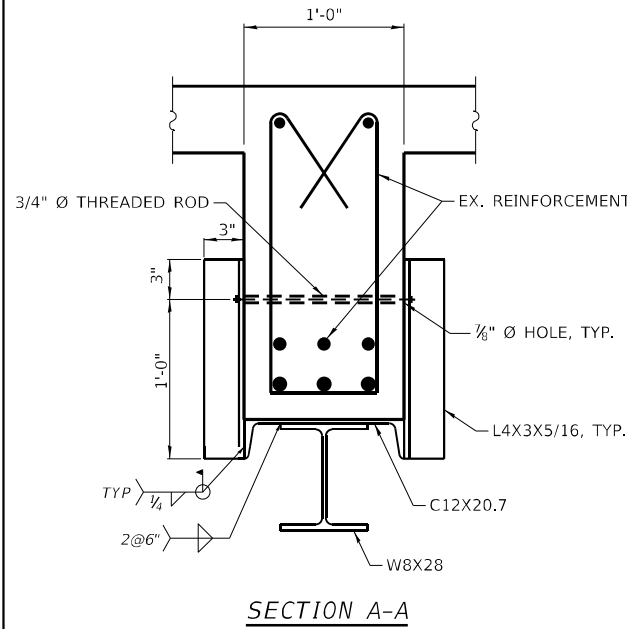
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
PUMP STATION BUILDING DEMO AND PROPOSED ELEVATIONS**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	19
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

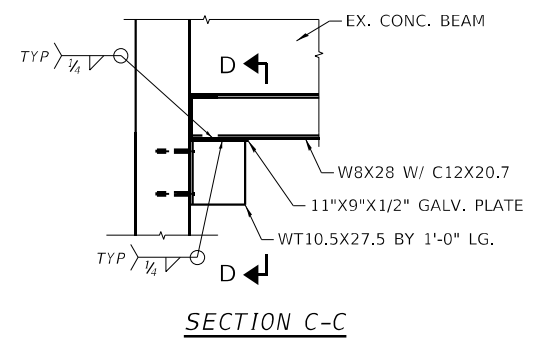
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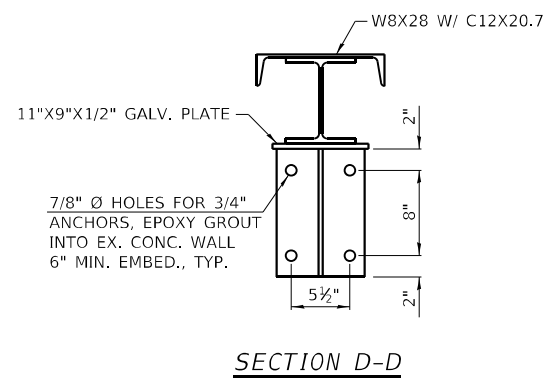
SECTION A-A

NOTE:
 1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL").
 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, PRIOR TO FABRICATION.

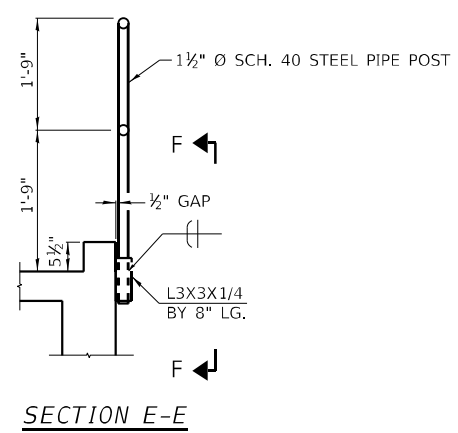
ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.



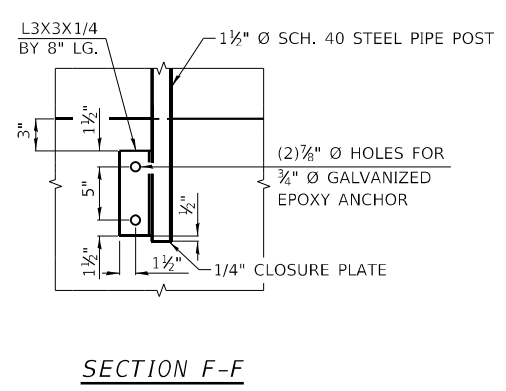
SECTION C-C



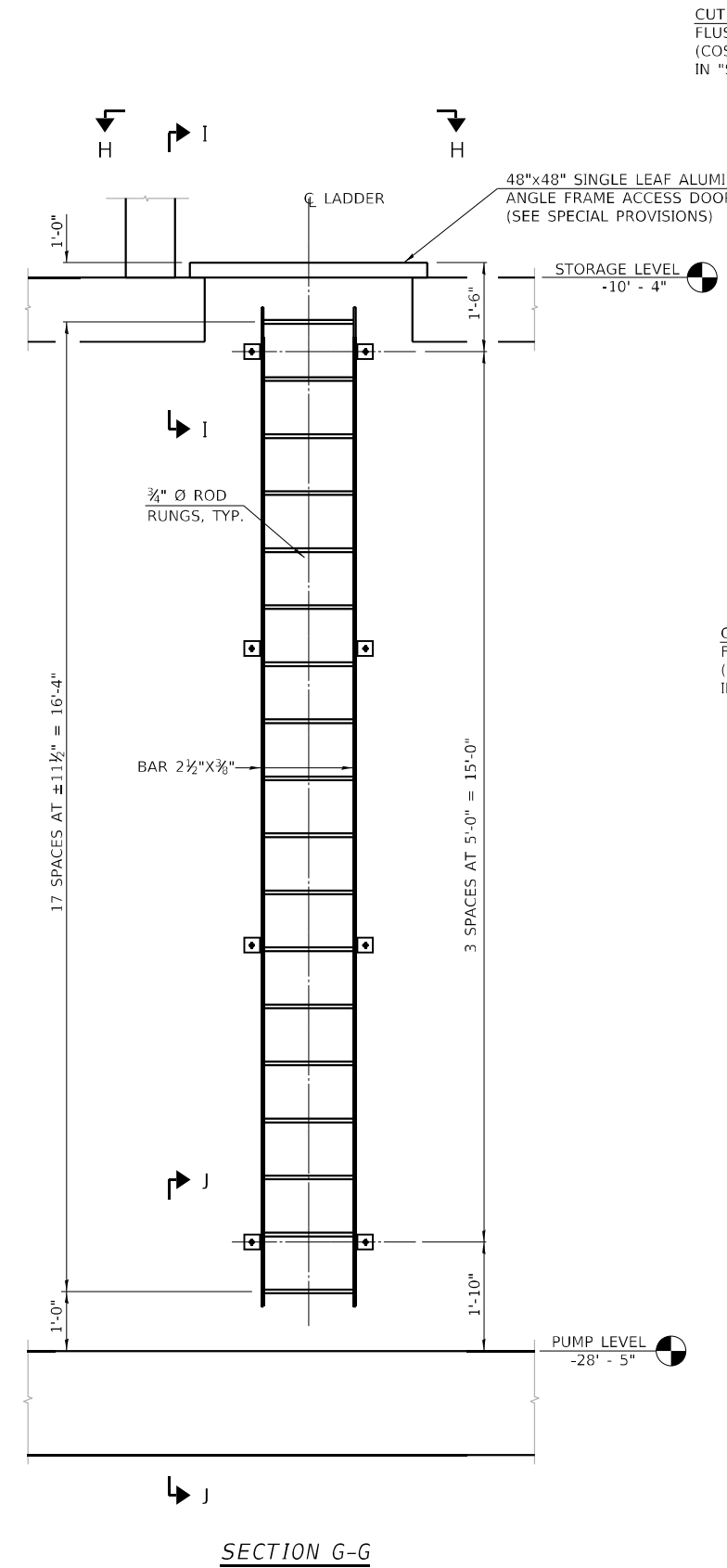
SECTION D-D



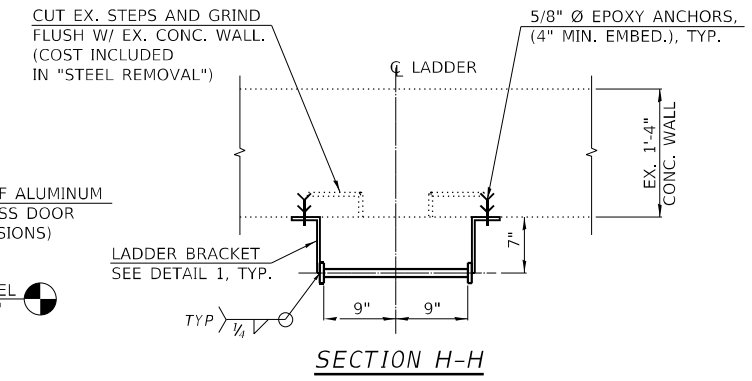
SECTION E-E



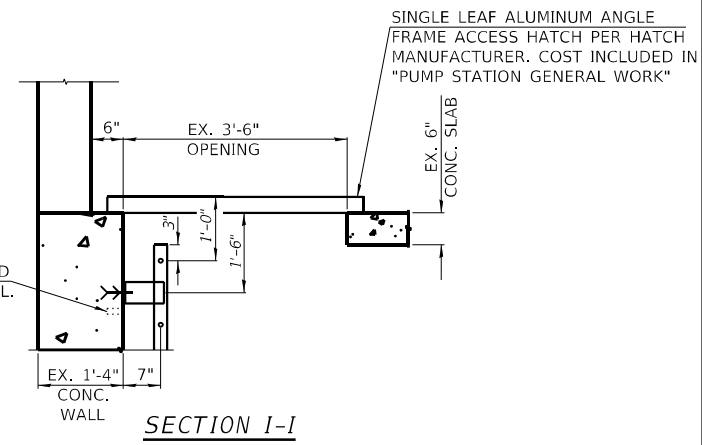
SECTION F-F



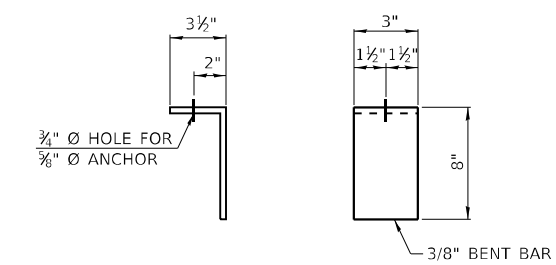
SECTION G-G



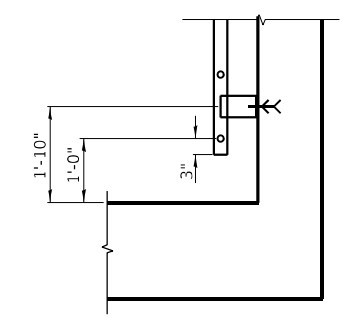
SECTION H-H



SECTION I-I



DETAIL 1 - BRACKET



SECTION J-J

BILL OF MATERIAL

FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,040
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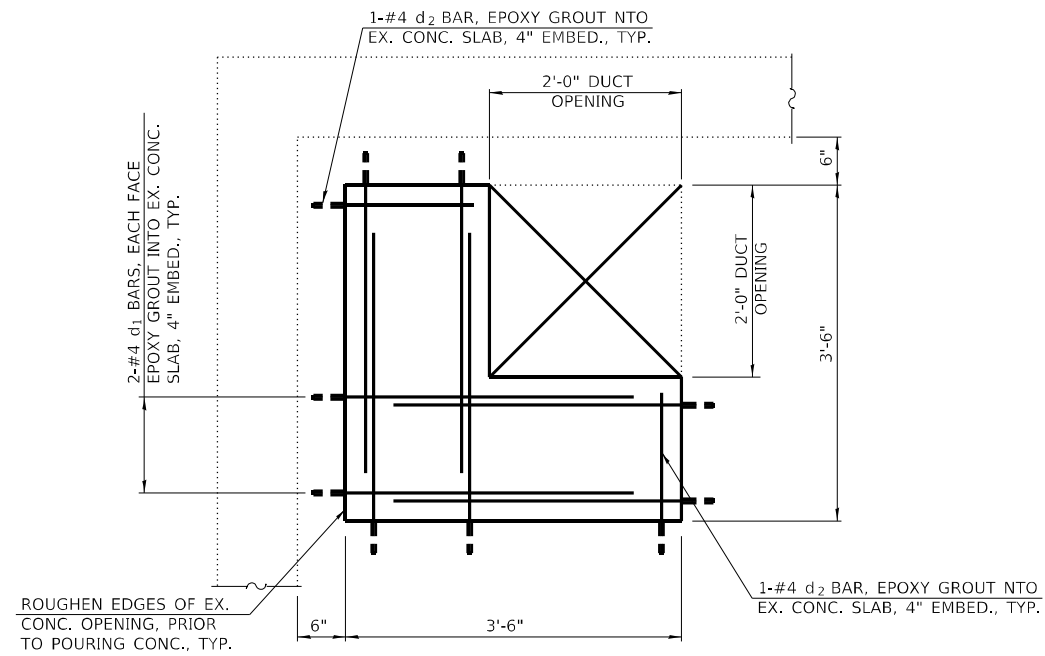
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	DATE	REVISED -

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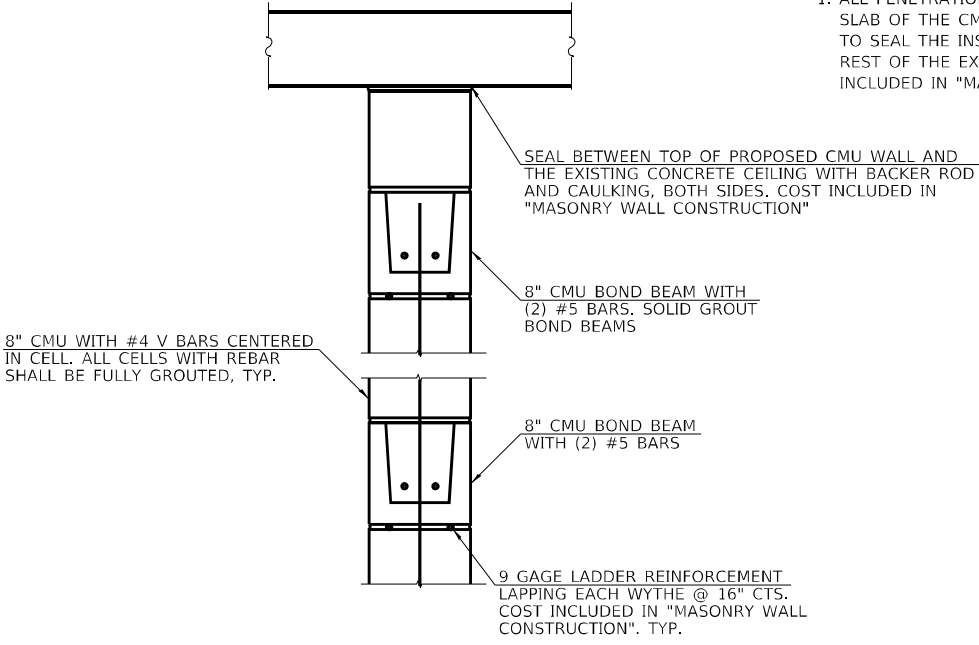
WEST FRANKFORT PUMP STATION STRUCTURAL DETAILS			
SCALE: NONE	SHEET 1	OF 5 SHEETS	STA. TO STA.

F.A.I. RTE. 57	SECTION (28-5)PS-1	COUNTY FRANKLIN	TOTAL SHEETS 39	SHEET NO. 20
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

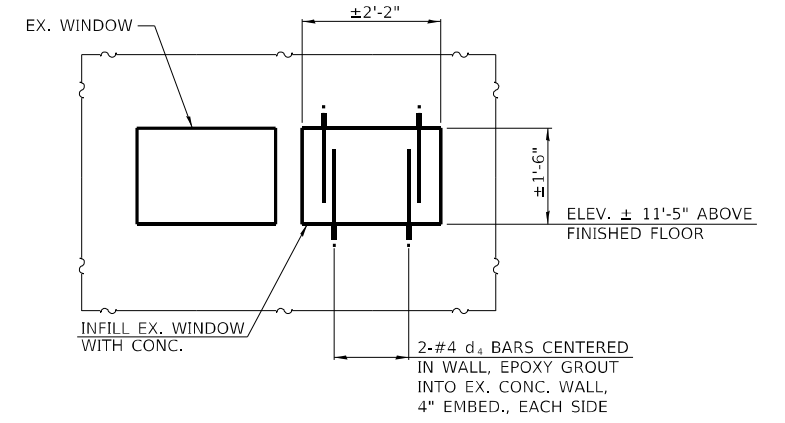
NOTE:
 1. ALL PENETRATIONS IN CMU WALLS AND IN THE EX. CONC. SLAB OF THE CMU ENCLOSURE SHALL BE FULLY GROUTED TO SEAL THE INSIDE OF THE CMU ENCLOSURE FROM THE REST OF THE EX. INTERIOR PUMP STATION BUILDING. COST INCLUDED IN "MASONRY WALL CONSTRUCTION".



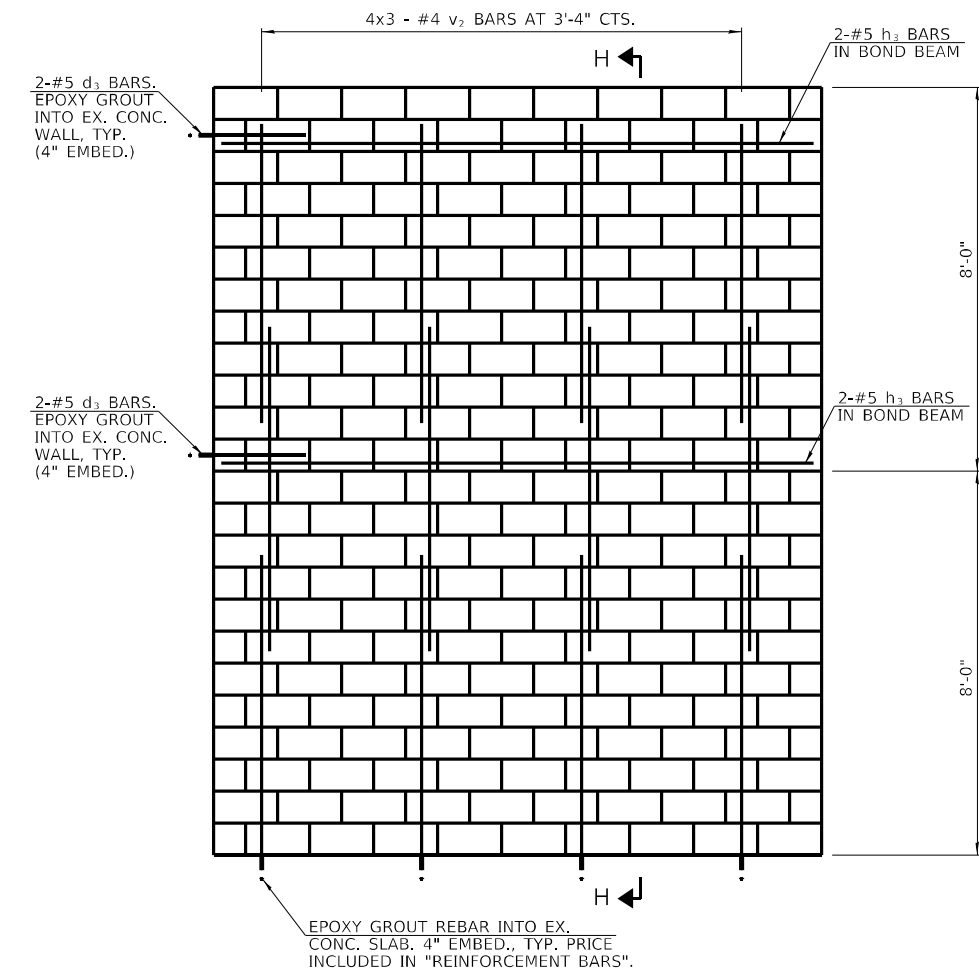
DETAIL 1 - PATCH DETAIL



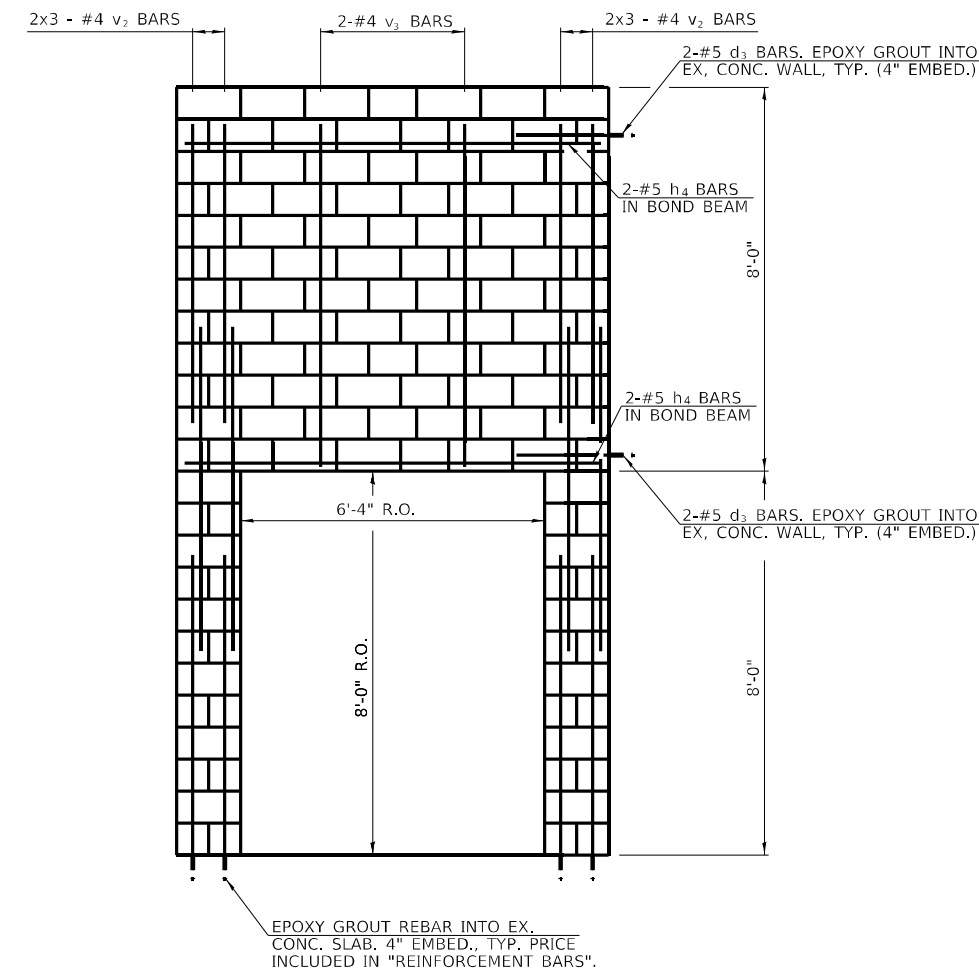
SECTION H-H



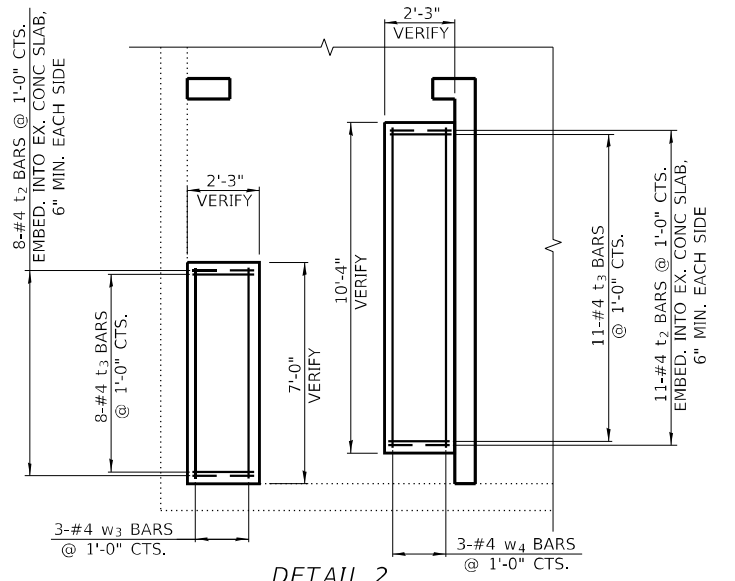
SECTION I-I - EX. WINDOW



SECTION F-F



SECTION G-G

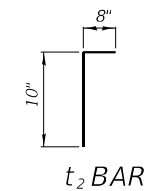


DETAIL 2

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d1	8	#4	3'-6"	—
d2	2	#4	1'-8"	—
d3	8	#5	3'-0"	—
d4	4	#4	1'-6"	—
h3	4	#5	12'-8"	—
h4	4	#5	8'-8"	—
t2	38	#4	1'-6"	┌
t3	19	#4	1'-11"	—
w3	3	#4	6'-8"	—
w4	3	#4	10'-0"	—
v2	24	#4	6'-9"	—
v3	2	#4	7'-6"	—
CONCRETE STRUCTURES			Cu. Yd.	1.0
REINFORCEMENT BARS			Lbs.	350
MASONRY WALL CONSTRUCTION			Sq. Ft.	296

BARS INDICATED THUS 4X3-#4 ETC. INDICATES 4 LINES OF BARS WITH 3 LENGTHS PER LINE.



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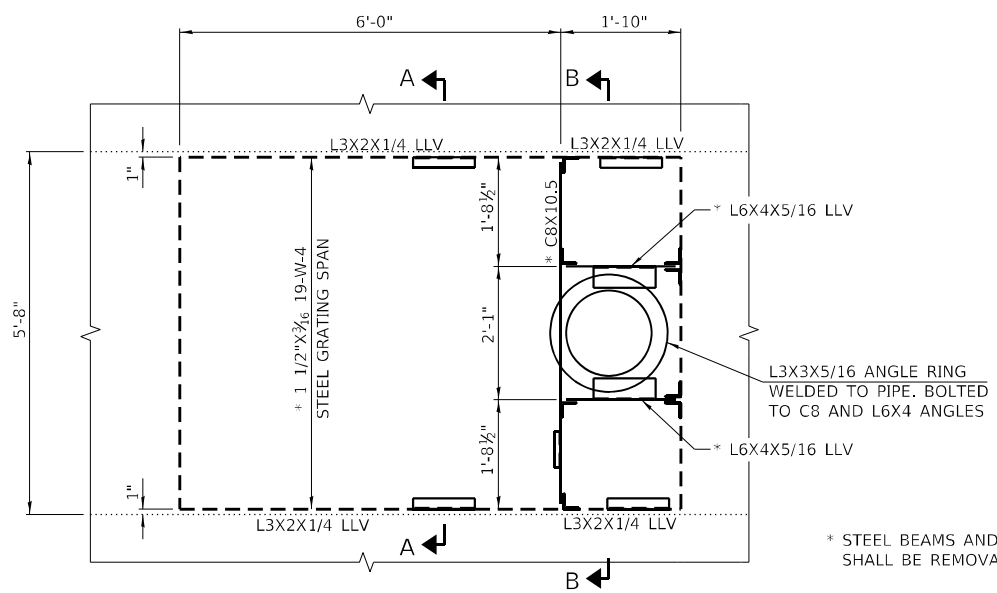
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PLOT SCALE = 6.0000' / 1"	DRAWN	REVISED -
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	DATE	REVISED -

STATE OF ILLINOIS
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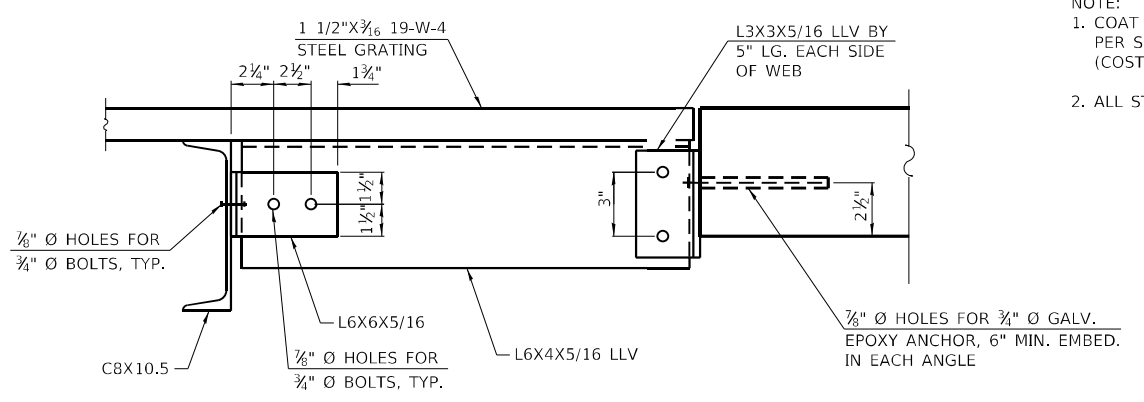
WEST FRANKFORT PUMP STATION
 STRUCTURAL DETAILS

SCALE: NONE SHEET 2 OF 5 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	21
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

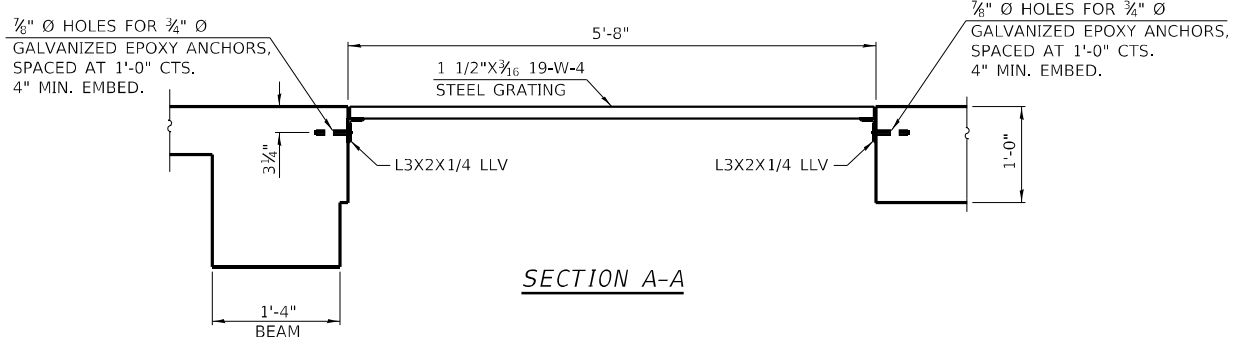


DETAIL 1 - PIPE SUPPORT
(MAIN LEVEL - 4 LOCATIONS)

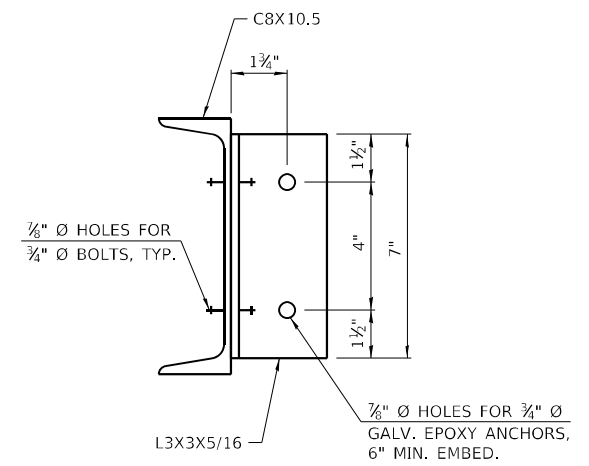


SECTION C-C

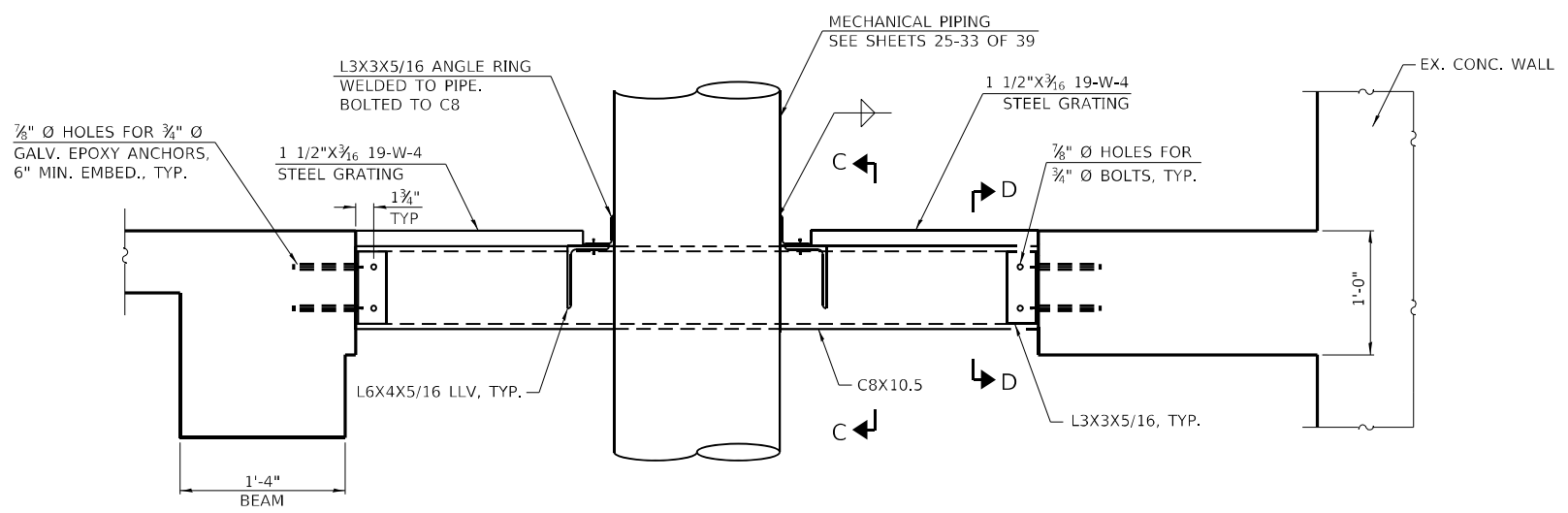
NOTE:
1. COAT EXPOSED REBAR ENDS WITH EPOXY BONDING AGENT PER SECTION 508.04 OF THE STANDARD SPECIFICATIONS (COST INCLUDED IN "CONCRETE REMOVAL")
2. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.



SECTION A-A



SECTION D-D



SECTION B-B

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.

BILL OF MATERIAL

FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	2,709
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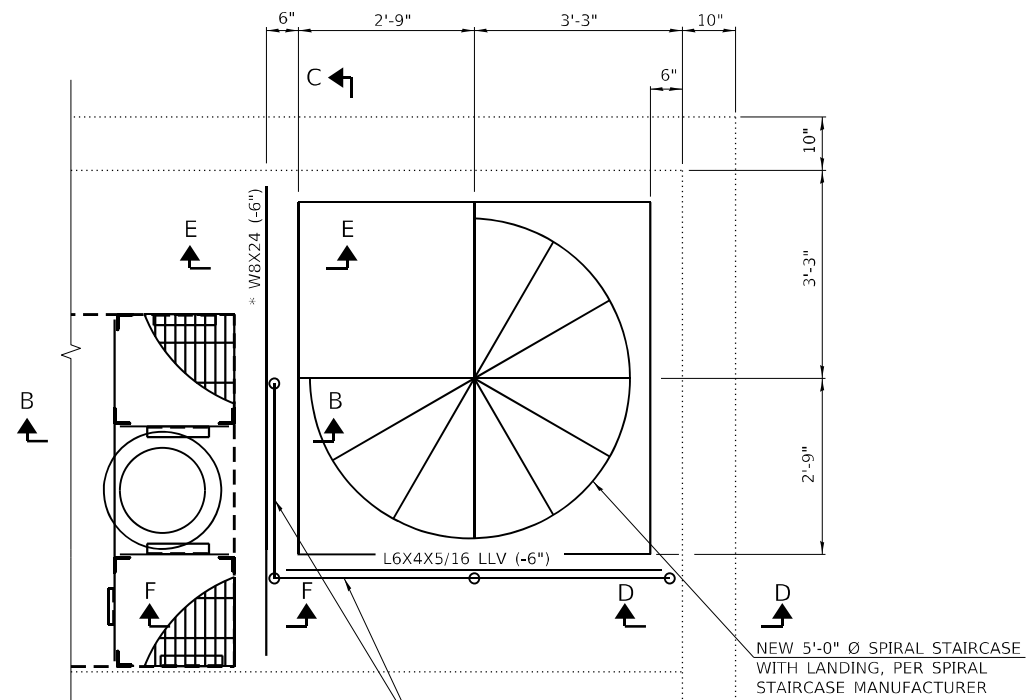
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STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

USER NAME = oms	DESIGNED	REVISED -
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PLOT DATE = 6/16/2022	CHECKED	REVISED -
	DATE	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WEST FRANKFORT PUMP STATION STRUCTURAL DETAILS	
SCALE: NONE	SHEET 3 OF 5 SHEETS STA. TO STA.

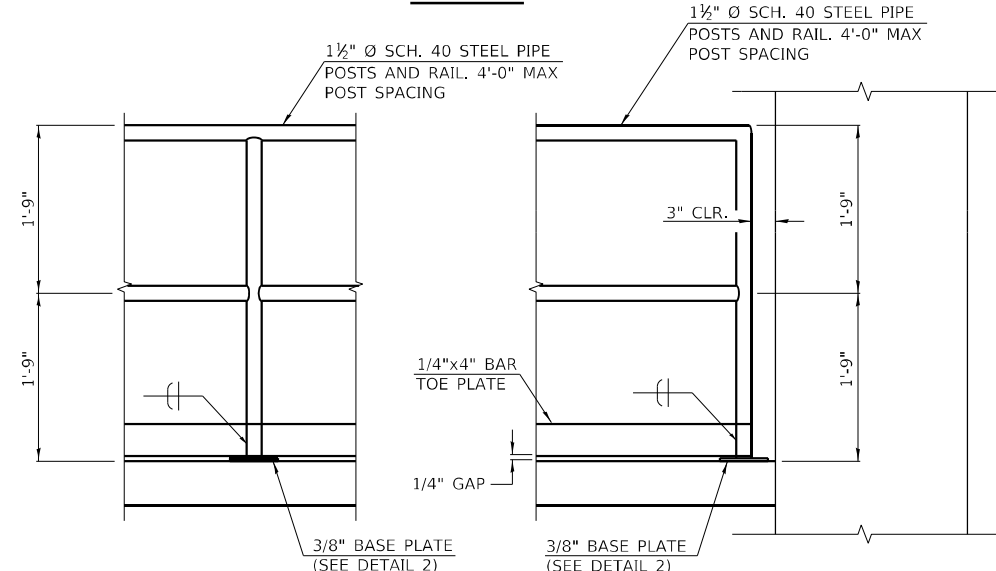
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	22
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



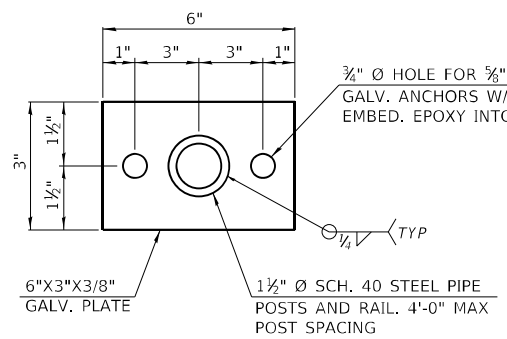
* INSTALL W8X24 PRIOR TO CUTTING CONCRETE

1 1/2" Ø SCH. 40 STEEL PIPE POSTS AND RAIL, 4'-0" MAX POST SPACING (SEE SECTION A-A)

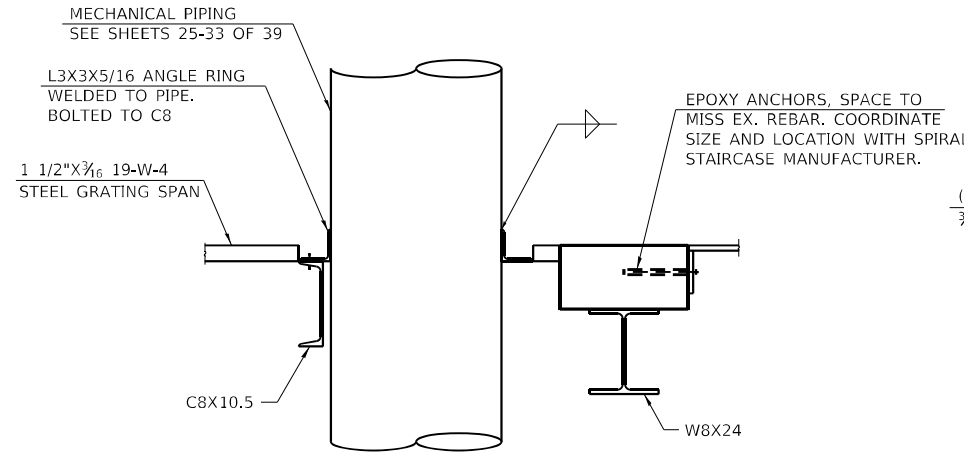
DETAIL 1



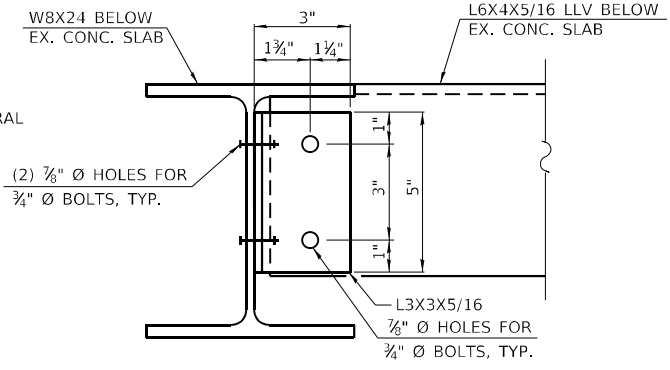
SECTION A-A - HANDRAIL SECTION



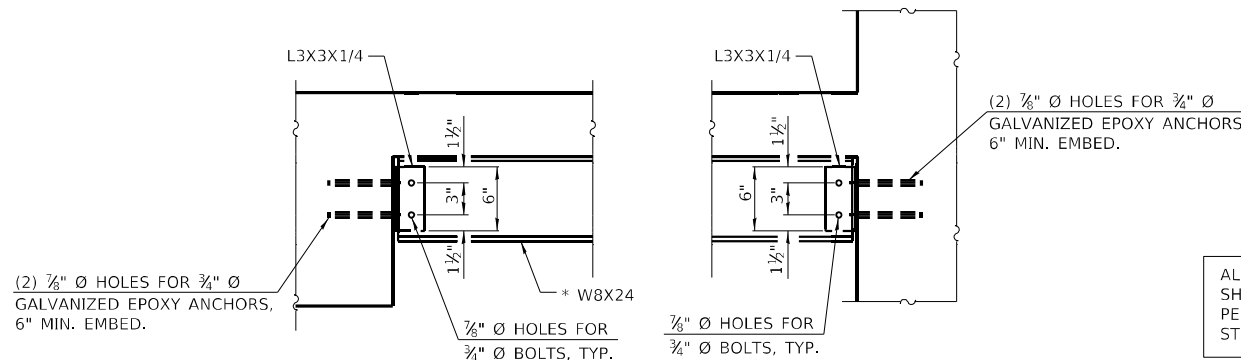
DETAIL 2 - HANDRAIL BASE PALTE



SECTION B-B

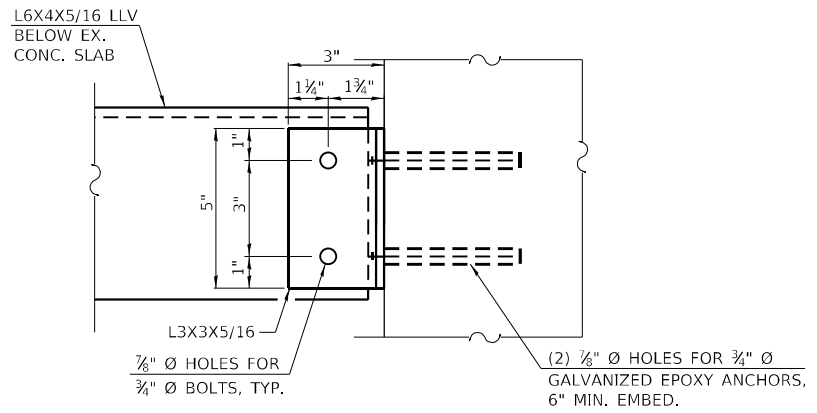


SECTION F-F

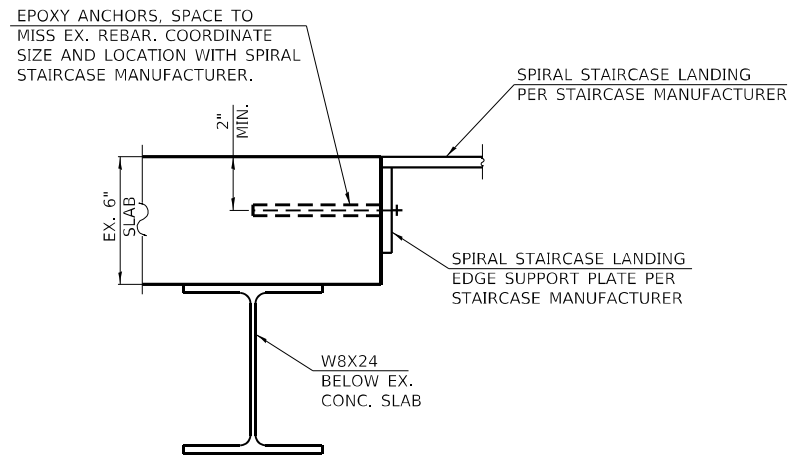


SECTION C-C

ALL WORK ASSOCIATED WITH ITEMS ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND FOR "FURNISHING AND ERECTING STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.



SECTION D-D



SECTION E-E

BILL OF MATERIAL

FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	404
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STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

USER NAME = oms	DESIGNED	REVISED -
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PLOT DATE = 6/16/2022	CHECKED	REVISED -
	DATE	REVISED -

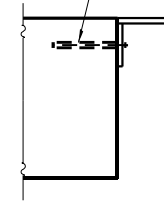
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**WEST FRANKFORT PUMP STATION
STRUCTURAL DETAILS**

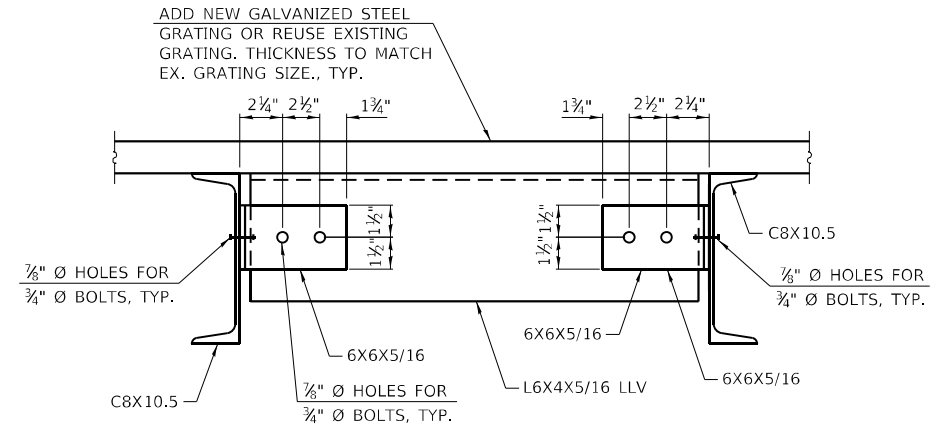
SCALE: NONE SHEET 4 OF 5 SHEETS STA. TO STA.

F.A.I. RTE. 57	SECTION (28-5)PS-1	COUNTY FRANKLIN	TOTAL SHEETS 39	SHEET NO. 23
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

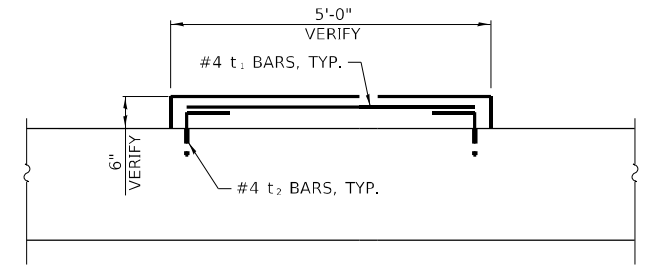
EPOXY ANCHORS, SPACE TO MISS EX. REBAR, COORDINATE SIZE AND LOCATION WITH SPIRAL STAIRCASE MANUFACTURER.



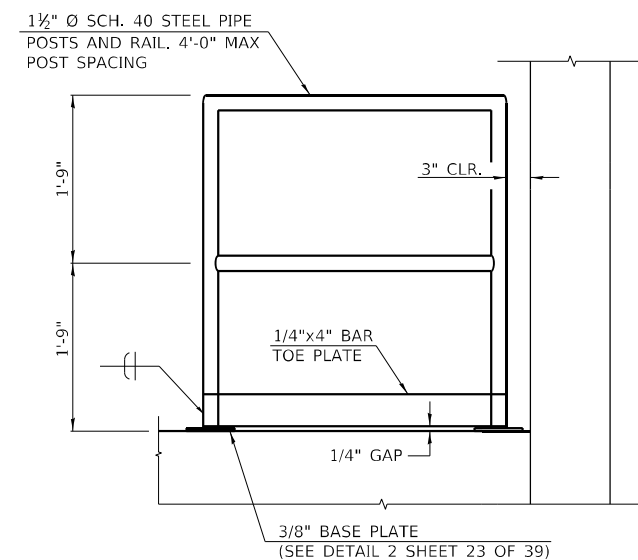
SECTION A-A



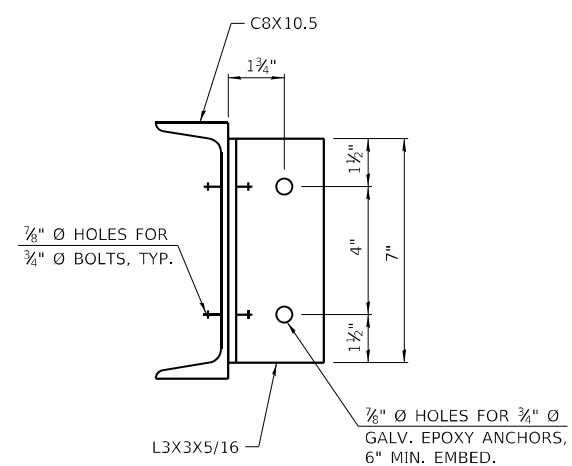
SECTION E-E



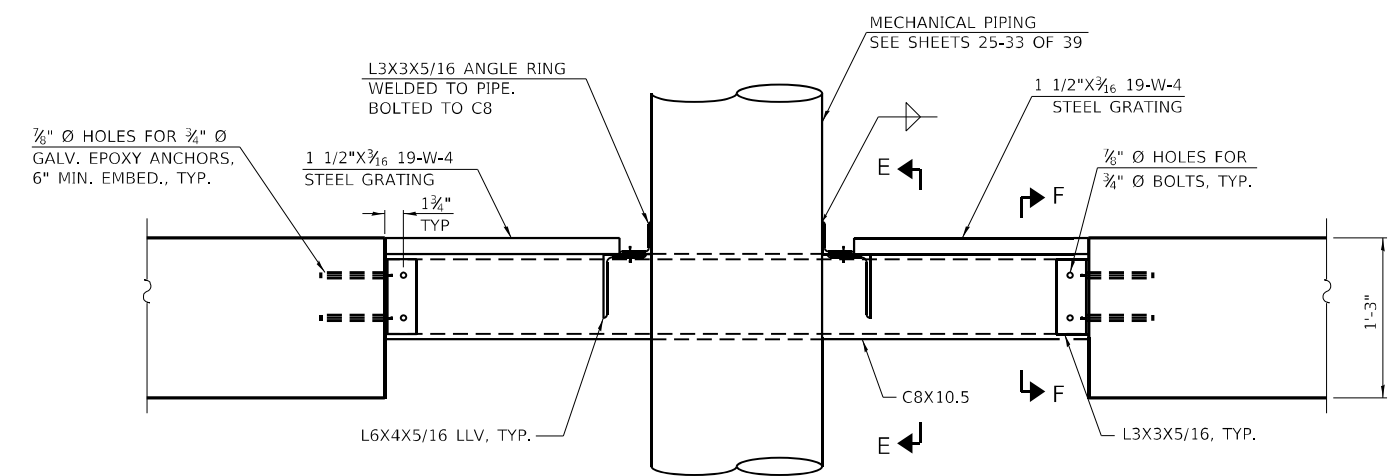
SECTION H-H
(PUMP LEVEL - 4 LOCATIONS)



SECTION C-C - HANDRAIL SECTION



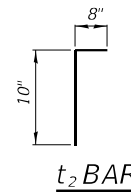
SECTION F-F



SECTION D-D
(STORAGE LEVEL - 4 LOCATIONS)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
t1	40	#4	4'-8"	—
t2	80	#4	1'-6"	┌
CONCRETE STRUCTURES			CU YD	1.9
REINFORCEMENT BARS			POUND	200
FURNISHING AND ERECTING STRUCTURAL STEEL			POUND	1,644



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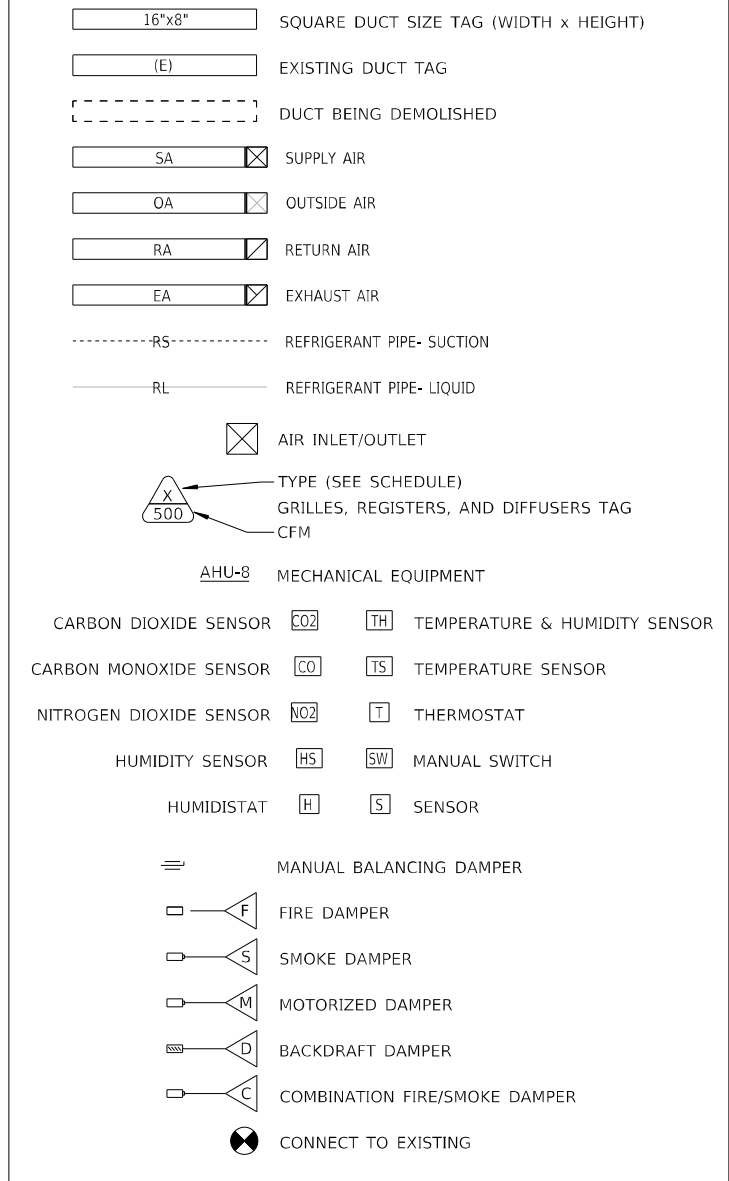
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	DATE	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION STRUCTURAL DETAILS			
SCALE: NONE	SHEET 5	OF 5 SHEETS	STA. TO STA.

F.A.I. RTE. 57	SECTION (28-5)PS-1	COUNTY FRANKLIN	TOTAL SHEETS 39	SHEET NO. 24
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

HVAC SYMBOLS



GENERAL HVAC NOTES:

1. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO NFPA 90A, SMACNA, ASHRAE AND ALL OTHER STATE AND LOCAL CODES. DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC. OF MUNICIPAL, COUNTY, AND STATE GOVERNMENTS, OWNER'S INSURANCE COMPANY, LOCAL UTILITIES, AND LABOR REGULATIONS. ALL MECHANICAL INSTALLATIONS SHALL ALSO COMPLY WITH THE MANUFACTURER'S RECOMMENDATIONS/INSTRUCTIONS.
2. INSTALLATION OF MECHANICAL DEVICES SHALL BE COORDINATED WITH THE BUILDING STRUCTURE, LIGHTING FIXTURES, PIPING, CONDUIT, AND OTHER TRADES AS NECESSARY.
3. MECHANICAL EQUIPMENT, SUCH AS UNIT HEATERS, FANS, LOUVER-DAMPERS, ETC., SHALL BE FURNISHED AS INDICATED IN THE EQUIPMENT SCHEDULES.
4. MECHANICAL INSTALLATION SHALL BE COMPLETE AND SHALL INCLUDE ALL MECHANICAL WIRING, CONTROLS FOR STATS, UNIT HEATERS, FANS, LOUVER-DAMPERS, ETC.

COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

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	DRAWN	REVISED -
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PLOT DATE = 6/16/2022	DATE	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	25
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

CONTROL DIAGRAM SYMBOL LEGEND	
	POWER WIRING TO REMOTE DEVICE/EQUIPMENT
	POWER WIRING WITHIN CONTROL CABINET
	CONTROL VOLTAGE WIRING TO REMOTE DEVICE/EQUIPMENT
	CONTROL VOLTAGE WIRING WITHIN CONTROL CABINET
	WIRING TERMINATION POINT
	WIRING SPLICE
	NO CONNECTION
	DISCRETE INPUT/OUTPUT
	ANALOG INPUT/OUTPUT
	COMMUNICATION CONNECTION
	CIRCUIT BREAKER
	FUSE, XX = FUSE RATING
	NORMALLY OPEN SWITCH
	NORMALLY CLOSED SWITCH
	FUSED SWITCH, XX = FUSE RATING
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	MOTOR OVERLOAD RELAY
	NORMALLY OPEN TIME DELAY RELAY CLOSES UPON TIME DELAY AFTER ACTIVATION, XX = TIME (S)
	NORMALLY CLOSED TIME DELAY RELAY OPENS UPON TIME DELAY AFTER ACTIVATION, XX = TIME (S)
	NORMALLY CLOSED TIME DELAY RELAY OPENS UPON TIME DELAY AFTER DE-ACTIVATION, XX = TIME (SECONDS)
	NORMALLY OPEN TIME DELAY RELAY OPENS UPON TIME DELAY AFTER DE-ACTIVATION, XX = TIME (SECONDS)
	NORMALLY OPEN TEMPERATURE SWITCH CLOSED ABOVE SETPOINT, XX = SETPOINT
	NORMALLY CLOSED TEMPERATURE SWITCH OPEN ABOVE SETPOINT, XX = SETPOINT
	NORMALLY OPEN FLOW SWITCH CLOSES UPON INCREASING FLOW
	NORMALLY CLOSED FLOW SWITCH OPENS UPON INCREASING FLOW
	NORMALLY OPEN FLOAT SWITCH CLOSES UPON INCREASING LEVEL
	NORMALLY CLOSED FLOAT SWITCH OPENS UPON INCREASING LEVEL
	NORMALLY OPEN PRESSURE SWITCH CLOSES UPON INCREASING PRESSURE, XX = SETPOINT (POUNDS PER SQUARE INCH)
	NORMALLY CLOSED PRESSURE SWITCH OPENS UPON INCREASING PRESSURE, XX = SETPOINT (POUNDS PER SQUARE INCH)
	NORMALLY OPEN LIMIT SWITCH CLOSES UPON LIMIT, XX = SETPOINT
	NORMALLY CLOSED LIMIT SWITCH OPENS UPON LIMIT, XX = SETPOINT
	NORMALLY OPEN KEYED SWITCH CLOSES UPON KEY TURN
	VOLTAGE TRANSFORMER
	CURRENT TRANSFORMER
	MAGNETIC DOOR POSITION SENSOR
	NORMALLY CLOSED KEYED SWITCH OPENS UPON KEY TURN
	THREE POSITION SELECTOR SWITCH MAINTAINED CONTACTS (SHOWN IN HAND POSITION)
	TWO POSITION SELECTOR SWITCH MAINTAINED CONTACTS (SHOWN IN HAND POSITION)
	NORMALLY OPEN PUSHBUTTON MOMENTARY CONTACT, XX = FUNCTION
	NORMALLY CLOSED PUSHBUTTON MOMENTARY DISCONNECT, XX = FUNCTION

CONTROL DIAGRAM SYMBOL LEGEND		
	CURRENT SWITCH	
	MOTOR SOFT STARTER, XX = SIZE	
	INDICATING LIGHT, C = COLOR	LENS COLOR CODE: R = RED Y = YELLOW G = GREEN W = WHITE B = BLUE A = AMBER
	PUSH-TO-TEST INDICATING LIGHT, C = COLOR	
	SOLENOID VALVE	
	SPECIALTY ITEM XX = DESCRIPTION	EXAMPLES: ETM = ELAPSED TIME METER MSC = MOTOR STARTS COUNTER
	INSTRUMENTATION/CONTROL DEVICE (LABELED ON DIAGRAM) XX= TYPE YY= TAG	EXAMPLES: T = THERMOSTAT GS = COMBUSITBLE GAS SENSOR PS = DOOR POSITION SENSOR
	LOCAL CONTROL DEVICE	
	REMOTE LOCATED CONTROL DEVICE	
	PANEL MOUNTED CONTROL DEVICE	
	INACCESSIBLE CONTROL DEVICE	
INSTRUMENTN NOTATION ABBREVIATIONS:		
ALM = ALARM	PWR = POWER	OL = OVERLOAD
FLT = FAULT	MON = MONITOR	H = HAND
EBL = ENABLE	BYP = BYPASS	O = OFF (OR ON)
STS = STATUS	OVR = OVERRIDE	A = AUTOMATIC

ELECTRICAL SYMBOLS	
	STANDARD DUPLEX RECEPTACLE
	DUPLEX GFCI RECEPTACLE WITH WEATHERPROOF ENCLOSURE
	SINGLE POLE SWITCH
	MOTOR HORSEPOWER RATED SWITCH
	JUNCTION BOX
	MOTOR (SEE SCHEDULE)
	BRANCH CIRCUIT HOME RUN

GENERAL ELECTRICAL NOTES:

- APPLICABLE STANDARDS: NFPA-70, NFPA-101, STATE BUILDING CODES, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1971 AND ALL AMENDMENTS THERETO; EQUIPMENT, DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC., OF MUNICIPAL, COUNTY, AND STATE GOVERNMENTS, OWNER'S INSURANCE COMPANY, LOCAL UTILITIES, AND LABOR REGULATIONS. NOTHING CONTAINED IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO CONFLICT WITH THESE LAWS, CODES, AND ORDINANCES.
- DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS OF ELECTRICAL EQUIPMENT. EXACT LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO ROUGH-IN.
- INSTALLATIONS WHICH INCLUDE ELECTRICAL FIXTURES, DEVICES, CONDUIT, SWITCHES, PANELS, HANGERS, WIRE, CABLE, STANDARDS, ETC., MUST BE ENTIRELY SUITABLE FOR TEMPERATURES, HUMIDITY, DAMP AREAS, VOLTAGE, FREQUENCY, AND ALL INSTALLATION CONDITIONS.
- INSTALLATION MUST BE ENTIRELY SAFE IN EVERY RESPECT, AND MUST NOT CREATE ANY CONDITIONS OF ANY KIND WHICH WILL BE HARMFUL TO ANY OCCUPANT OF THE BUILDING IF CONTRACTOR BELIEVES THAT INSTALLATION WILL NOT BE SAFE FOR ALL PEOPLE, HE/SHE SHALL SO REPORT IN WRITING TO ENGINEER BEFORE ANY EQUIPMENT IS PURCHASED OR WORK IS INSTALLED, GIVING EXACT RECOMMENDATIONS, AND REASONS FOR THEM.
- GROUNDING: ALL GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- INSTALLATION OF ELECTRICAL DEVICES SHALL BE COORDINATED WITH OTHER TRADES AS NECESSARY TO PREVENT ANY CONFLICTS DURING CONSTRUCTION.
- LIGHTING: FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH LAMPS IN ACCORDANCE WITH THE LIGHT FIXTURE SCHEDULE SHOWN ON THE DRAWINGS. ALL UNITS SHALL BE COMPLETE WITH SUSPENSION ACCESSORIES, CANOPIES, SOCKETS, LOUVERS, FRAMES, AND ROUGH-IN BOXES, WIRED AND ASSEMBLIES TO FURNISH A COMPLETE WORKABLE SYSTEM.
- ELECTRICAL CONTRACTOR SHALL INSTALL LOW VOLTAGE CONDUIT AND JUNCTION BOXES.
- EQUIPMENT GROUNDING CONDUCTORS SHALL BE PULLED WITH ALL BRANCH CIRCUITS. CONDUIT SHALL NOT BE USED AS A GROUND U.N.O.

ELECTRICAL ONE-LINE DIAGRAM SYMBOLS	
	CIRCUIT BREAKER XX = RATING, YY = TYPE, ZZ = NOTE
	REDUCED VOLTAGE AUTOTRANSFORMER (RVAT) MOTOR STARTER X = NEMA STARTER SIZE
	NON-FUSED DISCONNECT SWITCH WW = RATING, XX = NUMBER OF POLES, YY = ENCLOSURE TYPE
	FUSED DISCONNECT SWITCH WW = RATING, XX = NUMBER OF POLES, YY = FUSE RATING, ZZ = ENCLOSURE TYPE
	MOTOR STARTER WW = NEMA STARTER SIZE, XX = NUMBER OF POLES, YY = ENCLOSURE TYPE, ZZ = TAG
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH WW = RATING, XX = NUMBER OF POLES, YY = ENCLOSURE TYPE, # = NEMA STARTER SIZE
	ELECTRIC MOTOR
	DIESEL GENERATOR, XX = CAPACITY, YY = NUMBER OF POLES
	FEEDER TAG
	GROUNDING ELECTRODE CONDUCTOR TAG
	EARTH GROUND
	TRANSIENT VOLTAGE SUPPRESSION DEVICE
	SURGE ARRESTER DEVICE
	VOLTAGE TRANSFORMER
	CURRENT TRANSFORMER
	CONTINUATION
	CONDUIT, PIPE, & WIRE ROUTE OE = OVERHEAD ELECTRIC UE = UNDERGROUND ELECTRIC PG = PUMPED GREASE
	ELECTRICAL PANEL XXX = PANEL TAG, ### = BUS RATING, MCB = MAIN CIRCUIT BREAKER

COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

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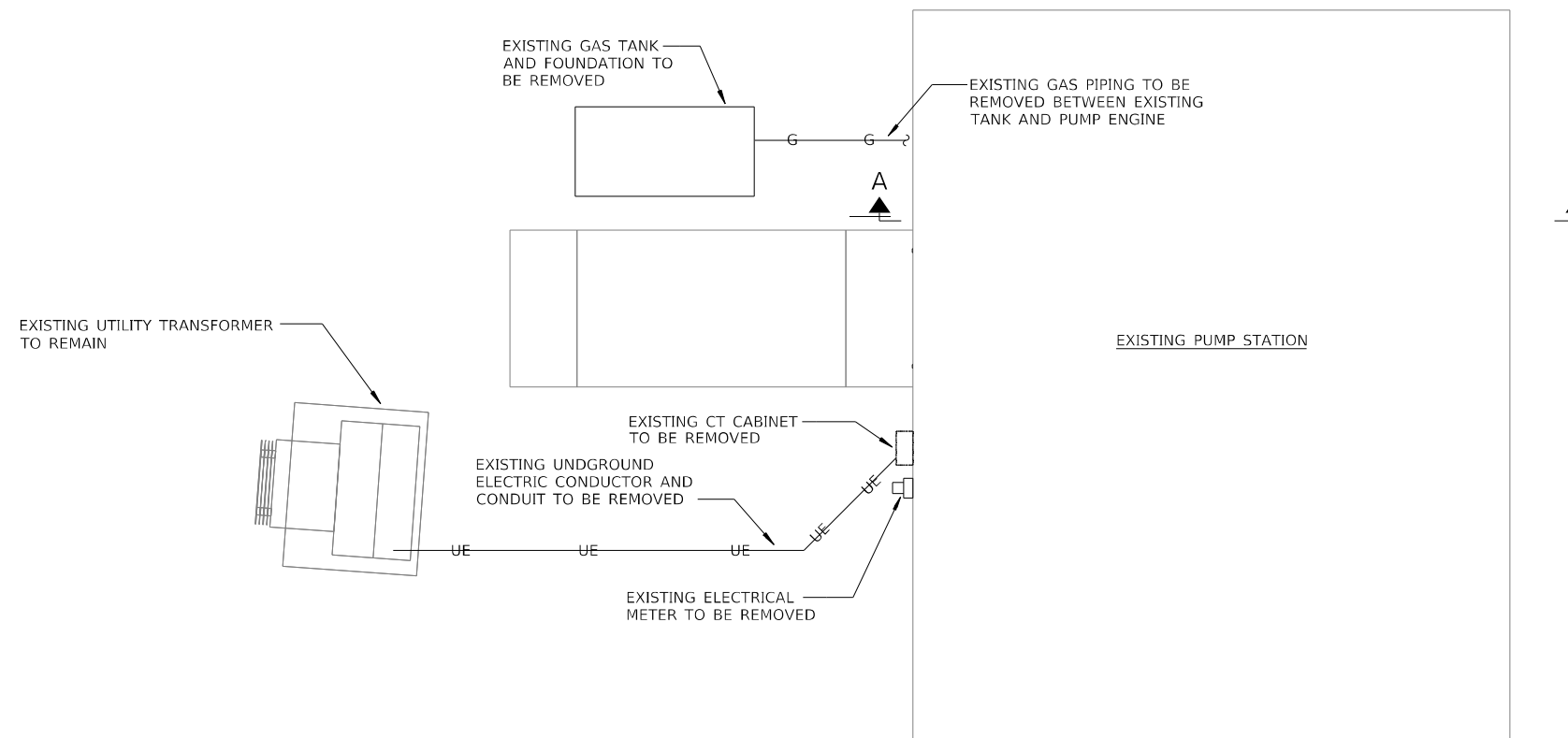
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COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

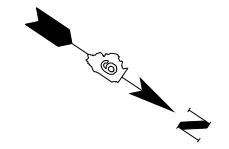
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

NOTES:

1. SEE SHEET 31 OF 39 FOR SECTION A-A.



SITE DEMOLITION PLAN



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KLINGNER & ASSOCIATES, P.C.
 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

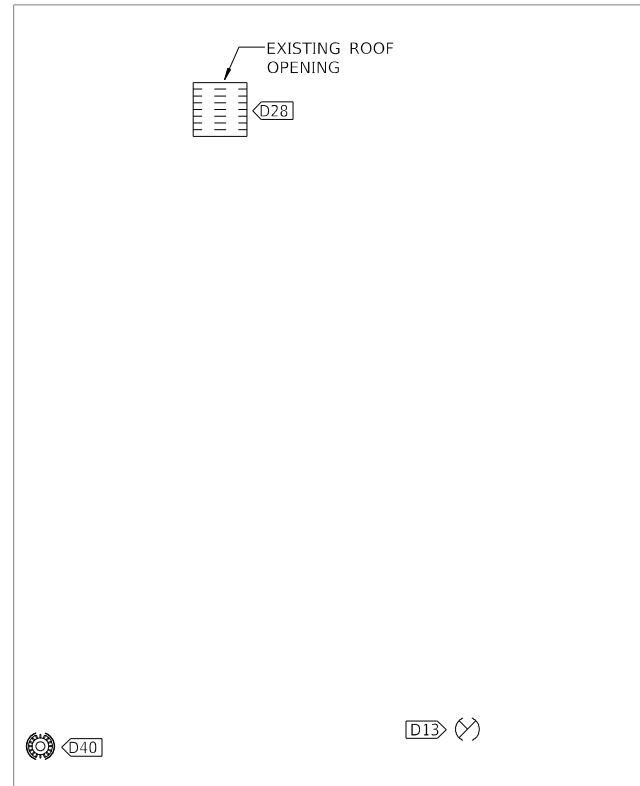
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

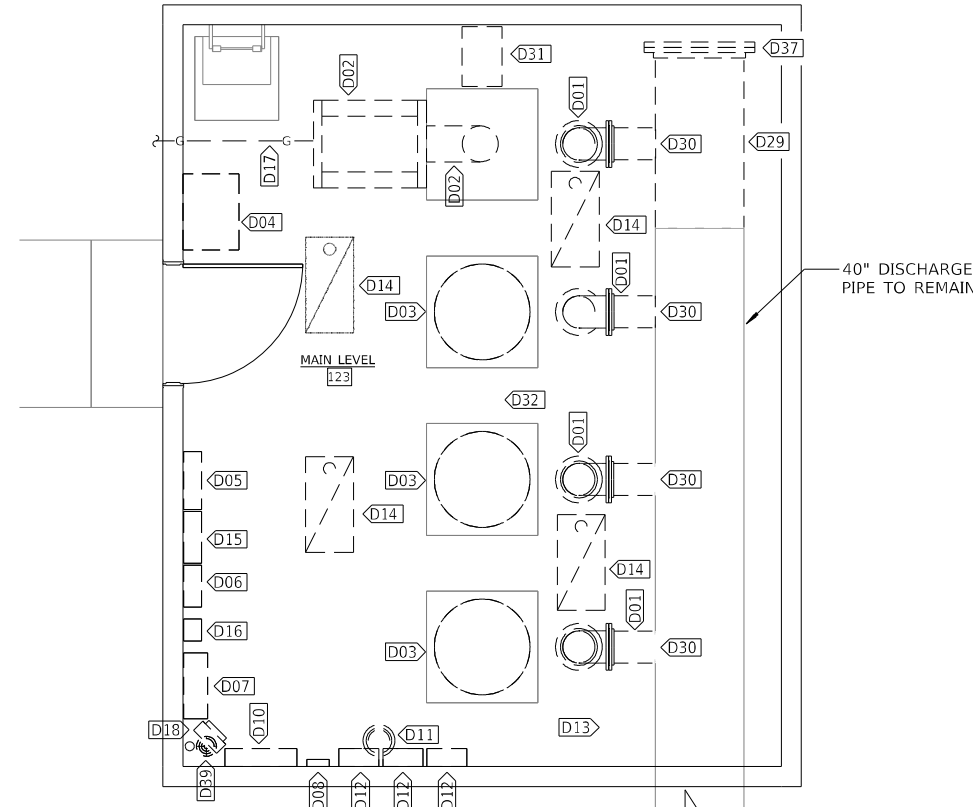
**WEST FRANKFORT PUMP STATION
 MECHANICAL AND ELECTRICAL SITE DEMOLITION PLAN**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

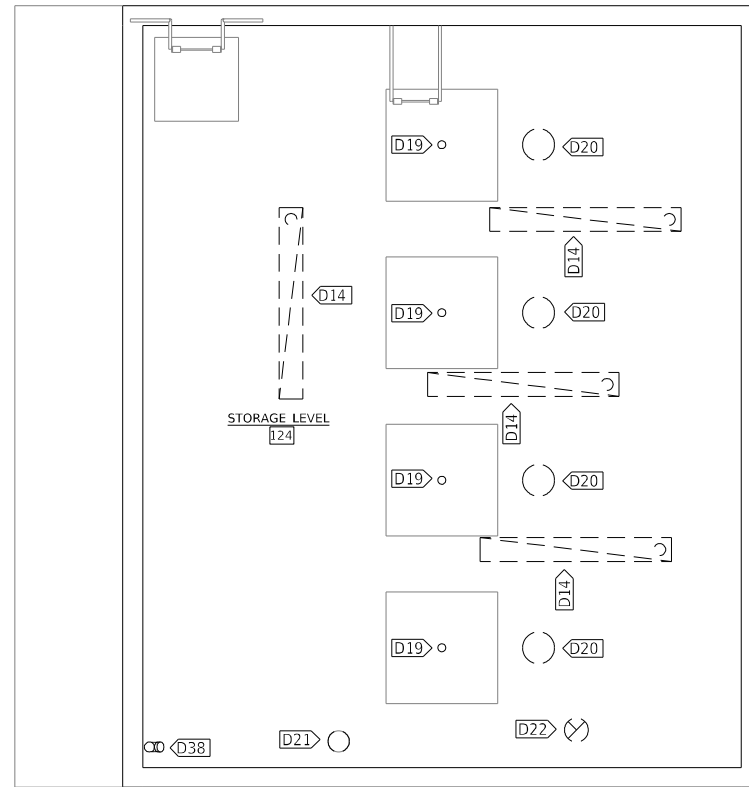
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	27
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



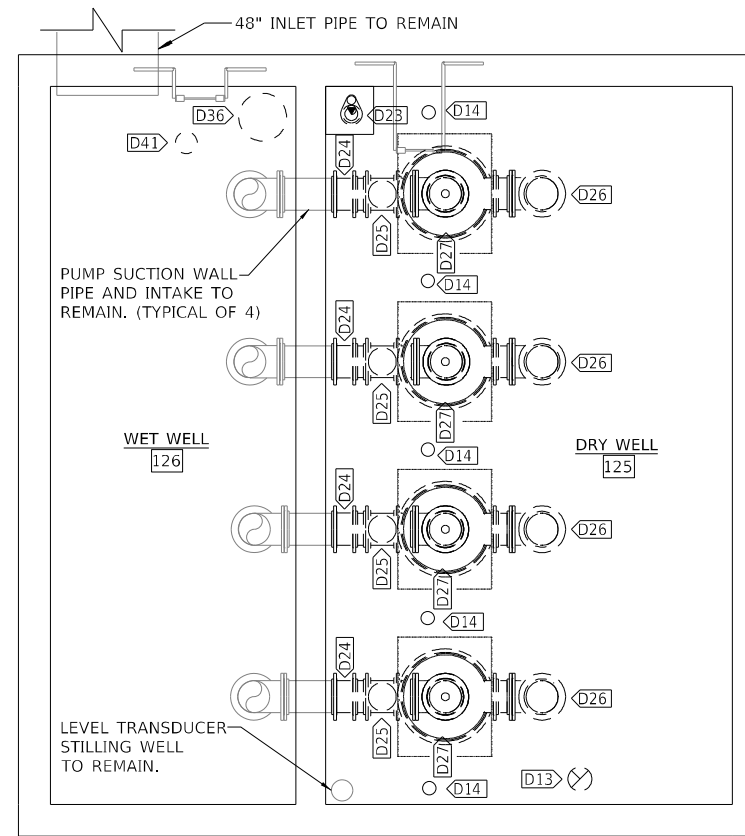
ROOF LEVEL DEMOLITION PLAN



MAIN LEVEL DEMOLITION PLAN



STORAGE LEVEL DEMOLITION PLAN



PUMP LEVEL DEMOLITION PLAN

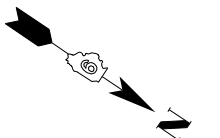
VALUE	DESCRIPTION
D01	PUMP DISCHARGE PIPE AND FITTING TO BE REMOVED.
D02	DIESEL ENGINE PUMP DRIVER AND ALL ANCILLARY EQUIPMENT TO BE REMOVED. INFILL EXHAUST PIPE PENETRATION TO MATCH ADJACENT MATERIAL.
D03	PUMP MOTOR TO BE REMOVED.
D04	AUTOMATIC TRANSFER SWITCH TO BE REMOVED.
D05	DISCONNECT SWITCH TO BE REMOVED.
D06	PUMP STATION LIGHTING PANEL TO BE REMOVED.
D07	MAIN DISTRIBUTION PANEL TO BE REMOVED.
D08	MISSION PANEL TO BE REMOVED.
D10	PUMP CONTROLLER TO BE REMOVED.
D11	STILLING WELL TO BE CUT AT STORAGE LEVEL. INFILL EXISTING PENETRATION.
D12	PUMP CONTROL PANELS TO BE REMOVED.
D13	REMOVE EXHAUST DUCT. INFILL EXISTING PENETRATIONS TO MATCH ADJACENT MATERIAL.
D14	LIGHT FIXTURE TO BE REMOVED.
D15	ELECTRICAL EQUIPMENT TO BE REMOVED.
D16	STEP DOWN TRANSFORMER TO BE REMOVED.
D17	GAS PIPING TO BE REMOVED BETWEEN EXISTING TANK AND PUMP ENGINE.
D18	UNIT HEATER TO BE REMOVED.
D19	PUMP DRIVE SHAFT TO BE REMOVED.
D20	PUMP DISCHARGE PIPE TO BE REMOVED.
D21	STILLING WELL TO BE CUT APPROXIMATELY 9" ABOVE STORAGE LEVEL FLOOR. REINSTALL BLIND FLANGE FROM UPPER LEVEL AT REVISED TOP OF STILLING WELL ELEVATION.
D22	REMOVE EXHAUST DUCT AND ASSOCIATED EXHAUST FAN. REMOVE ASSOCIATED ELECTRICAL CONDUIT AND WIRING.
D23	SUMP PUMP TO BE REMOVED.
D24	BOLTED COUPLING "DRESSER COUPLING" TO BE REMOVED.
D25	GATE VALVE TO BE REMOVED.
D26	PUMP DISCHARGE 90 DEGREE FITTING TO BE REMOVED.
D27	PUMP AND ASSOCIATED APPURTENANCES INCLUDING PEDESTAL TO BE REMOVED.
D28	LOUVER TO BE REMOVED. EXISTING ROOF OPENING TO REMAIN.
D29	40" DISCHARGE PIPE TO BE CUT AND REMOVED AS SHOWN TO FACILITATE NEW SPIRAL STAIRCASE. SEE STRUCTURAL PLANS FOR INFORMATION ON STAIRCASE.
D30	WELD CLOSURE CAP ON OPENING DUE TO REMOVAL OF PUMP DISCHARGE PIPING.
D31	EXISTING HOIST TO BE REMOVED.
D32	SEE STRUCTURAL SHEETS FOR INFORMATION ON HOIST BEAM/RAIL. SEE SHEET 20 OF 39.
D36	REMOVE STILLING WELL AND ASSOCIATED FLOATS WITHIN WET WELL.
D37	SALVAGE EXISTING BLIND FLANGE AND HARDWARE FOR REINSTALLATION. SEE PROCESS FLOOR PLANS. SHEET 30 OF 39.
D38	ROOF/FLOOR DRAIN PIPE SHALL BE REMOVED. INFILL FLOOR OPENINGS.
D39	MAIN LEVEL FLOOR DRAIN AND ROOF DRAIN PIPING UP TO ROOF DRAIN TO BE REMOVED. INFILL FORMER OPENINGS.
D40	ROOF DRAIN TO BE REMOVED. INFILL FORMER OPENING.
D41	REMOVE EXISTING LIGHT, SWITCH, AND ANY OTHER ELECTRICAL EQUIPMENT WITHIN WET WELL.

GENERAL SHEET NOTES:

- REMOVE ALL EXISTING MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, ELECTRICAL CONDUIT, WIRING DEVICES AND OTHER SIMILAR ITEMS ANY NOT OTHERWISE INDICATED ON THE PLANS TO REMAIN WITHIN THE ENTIRE PUMP STATION.
- ALL UNUSED PENETRATIONS TO BE INFILLED TO MATCH ADJACENT MATERIAL AND BE MADE WATER TIGHT WHERE NECESSARY.
- CONTRACTOR SHALL DISPOSE OF ALL REMOVAL ITEMS, UNLESS NOTED OTHERWISE.

COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

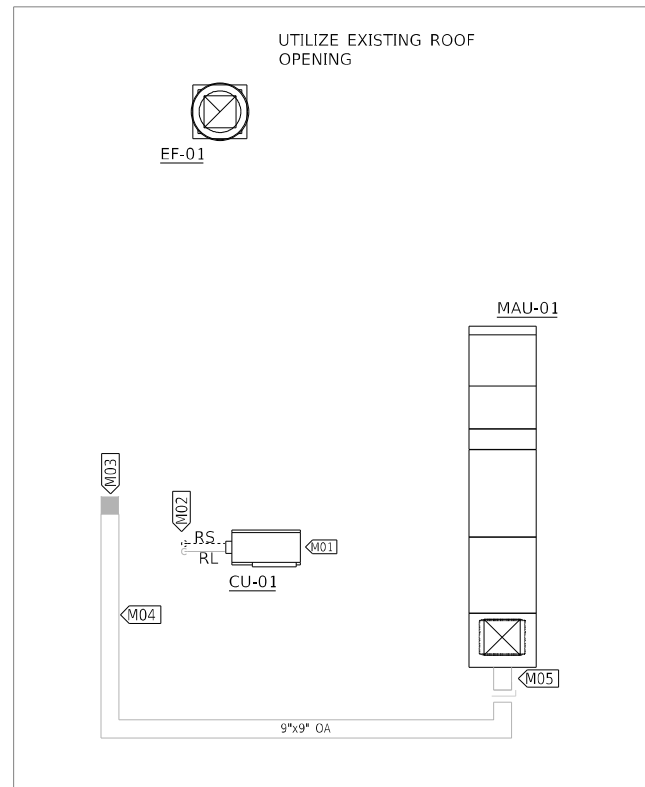
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



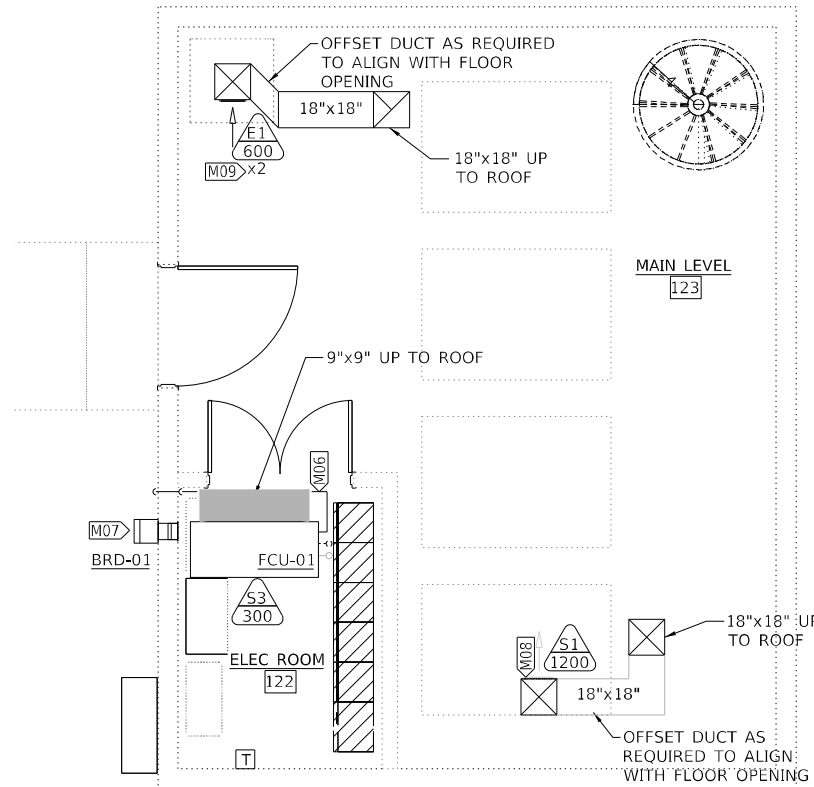
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	28
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



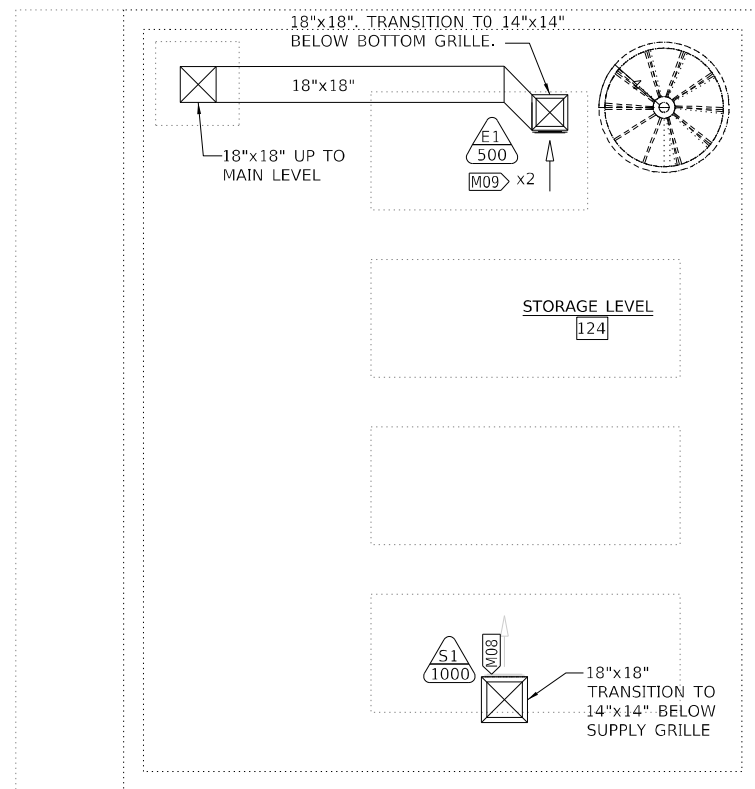
ROOF LEVEL HVAC PLAN



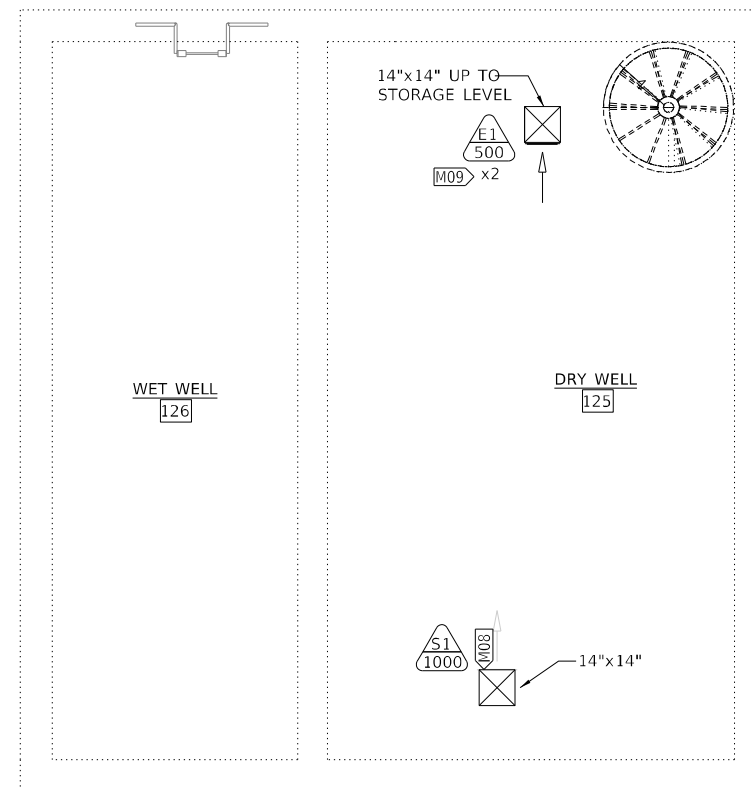
MAIN LEVEL HVAC PLAN

KEYNOTE LEGEND	
VALUE	DESCRIPTION
M01	SUPPORT CONDENSING UNIT ON RUBBER BASE HVAC ROOF SUPPORT SYSTEM.
M02	PROVIDE PIPE PENETRATION BOOT AND MAKE WATER TIGHT.
M03	CUT NEW OPENING IN ROOF AND PROVIDE CURB TO FACILITATE DUCT PENETRATION.
M04	DOUBLE WALL INSULATED DUCT WITH WHITE PVC JACKET.
M05	PROVIDE EXTENDED HEIGHT CURB TO ALLOW FOR DUCT CONNECTION TO CURB ABOVE ROOF.
M06	1" PVC CONDENSATE DRAIN LINE. PENETRATE EXTERIOR WALL AT 12" ABOVE FLOOR. TURN DRAIN DOWN ON EXTERIOR SIDE OF WALL AND TERMINATE ABOVE GRADE.
M07	CUT NEW OPENING IN WALL FOR BAROMETRIC RELIEF DAMPER.
M08	SUPPLY GRILLE LOCATED IN VERTICAL SECTION OF DUCTWORK. LOCATE GRILLE APPROXIMATELY HALFWAY BETWEEN FLOOR AND DECK ABOVE.
M09	INSTALL ONE EXHAUST GRILLE WITHIN 6 INCHES OF DECK ABOVE AND ONE GRILLE WITHIN 6 INCHES ABOVE FLOOR.

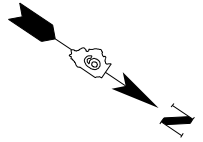
COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"



STORAGE LEVEL HVAC PLAN



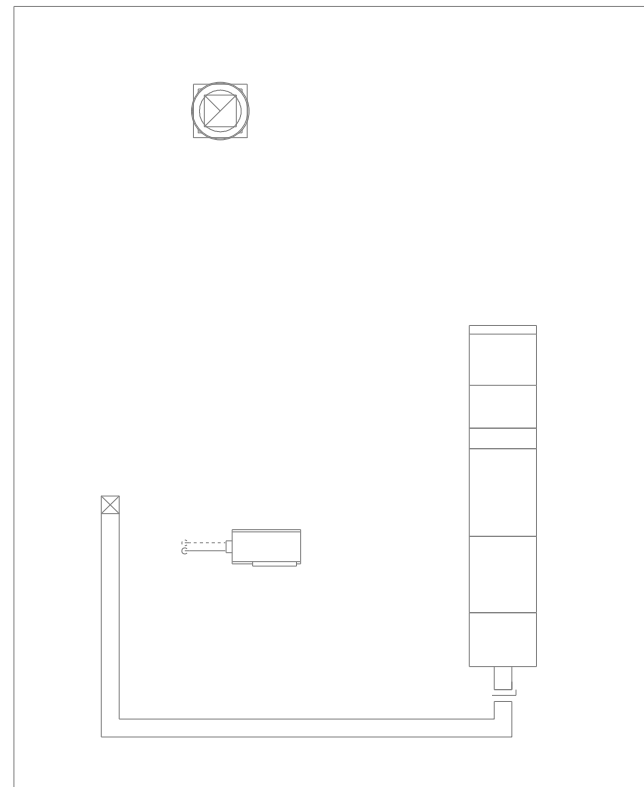
PUMP LEVEL HVAC PLAN



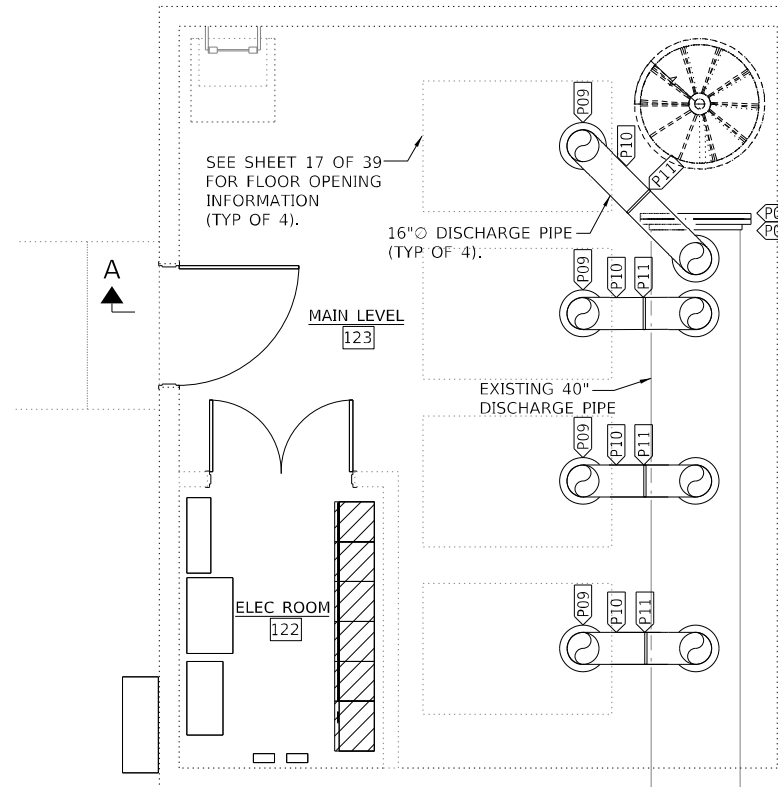
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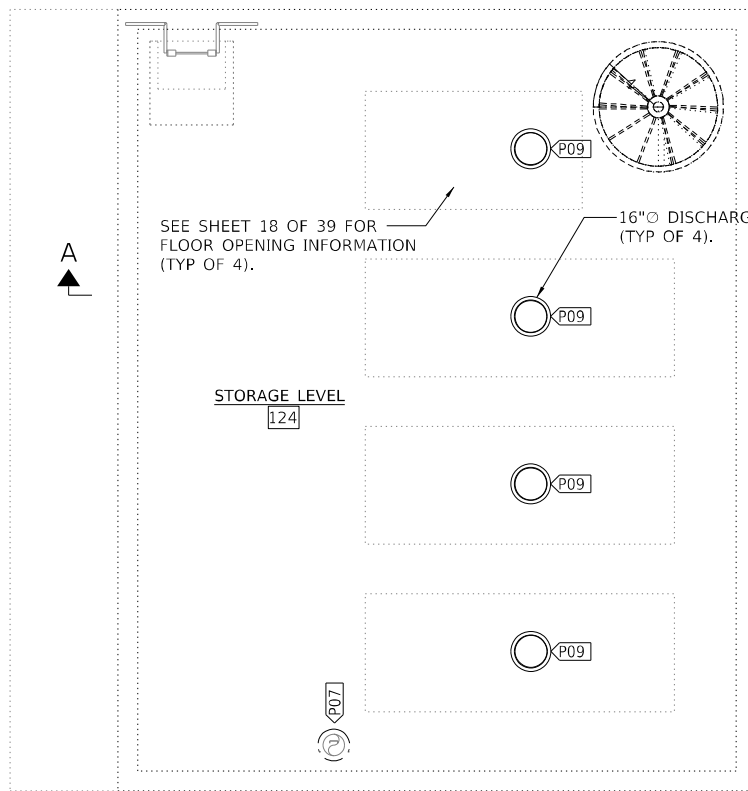
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CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



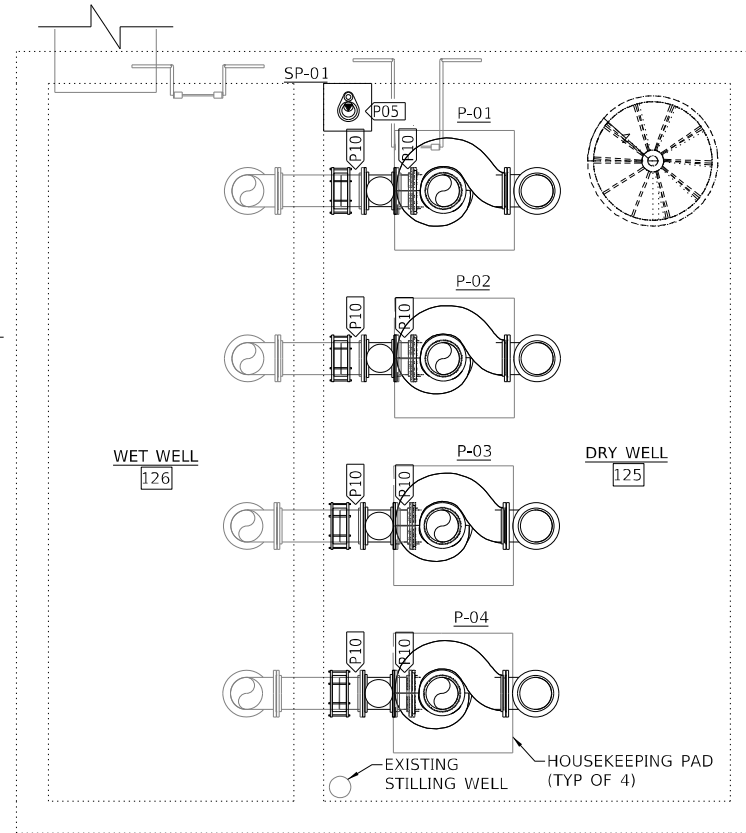
ROOF LEVEL PROCESS PLAN



MAIN LEVEL PROCESS PLAN



STORAGE LEVEL PROCESS PLAN



PUMP LEVEL PROCESS PLAN

VALUE	DESCRIPTION
P03	FABRICATE AND INSTALL NEW ANGLE FLANGE TO MATCH FORMER ANGLE FLANGE AND END OF COMMON DISCHARGE PIPE.
P04	INSTALL SALVAGED BLIND FLANGE. RE-USE EXISTING HARDWARE. PROVIDE NEW RUBBER GASKET.
P05	INSTALL SUMP PUMP AND ASSOCIATED FLOATS IN EXISTING SUMP PIT. INSTALL NEW 2" STEEL DISCHARGE PIPE.
P07	LEVEL TRANSDUCER STILLING WELL TO BE CUT 9" ABOVE STORAGE LEVEL FLOOR. REINSTALL BLIND FLANGE AT REVISED TOP OF STILLING WELL ELEVATION. INSTALL NEW LEVEL TRANSDUCER IN EXISTING STILLING WELL.
P09	ANGLE FLANGE WELDED TO PIPE TO PROVIDE VERTICAL AND LATERAL SUPPORT AT FLOOR PENETRATION ELEVATION. SEE SHEETS 22-23 OF 39 FOR ADDITIONAL INFORMATION.
P10	ADJUST LENGTH OF HORIZONTAL PIPE SPOOL AS REQUIRED TO ALLOWED PUMP CENTER OF GRAVITY TO BE DIRECTLY LOCATED UNDERNEATH OVERHEAD HOIST.
P11	PIPE SUPPORT: PIPE SADDLE WITH U-BOLT. 3"Ø PIPE STANCHION WITH 12" x 12" BASEPLATE

COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

NOTES:
1. SEE SHEET 31 OF 39 FOR SECTION A-A.

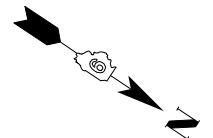
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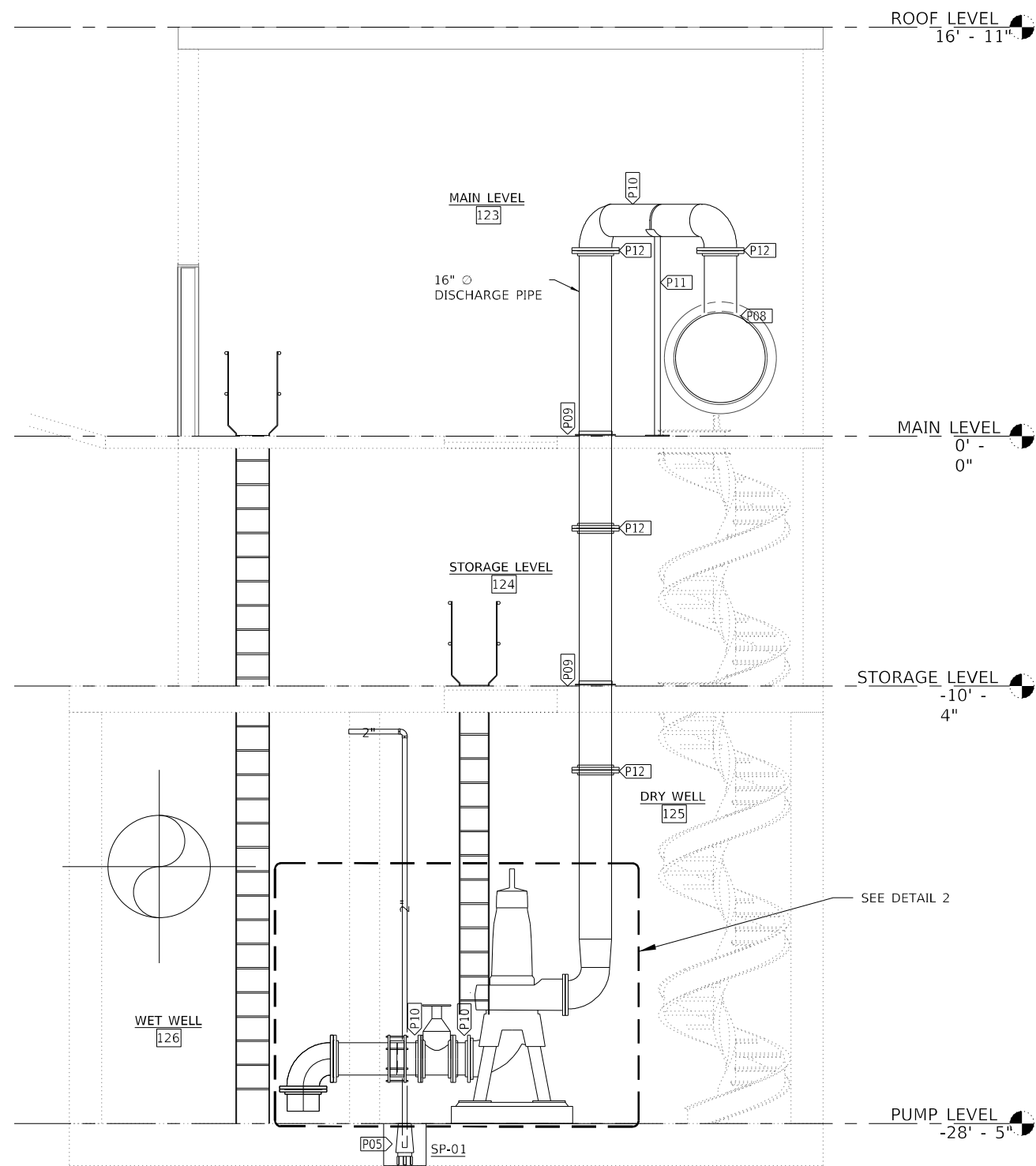
KLINGNER & ASSOCIATES, P.C. <small>Engineers • Architects • Surveyors</small> <small>616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670</small> <small>STATE OF ILLINOIS DESIGN FIRM NO. 184-2738</small>	USER NAME = oms	DESIGNED	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

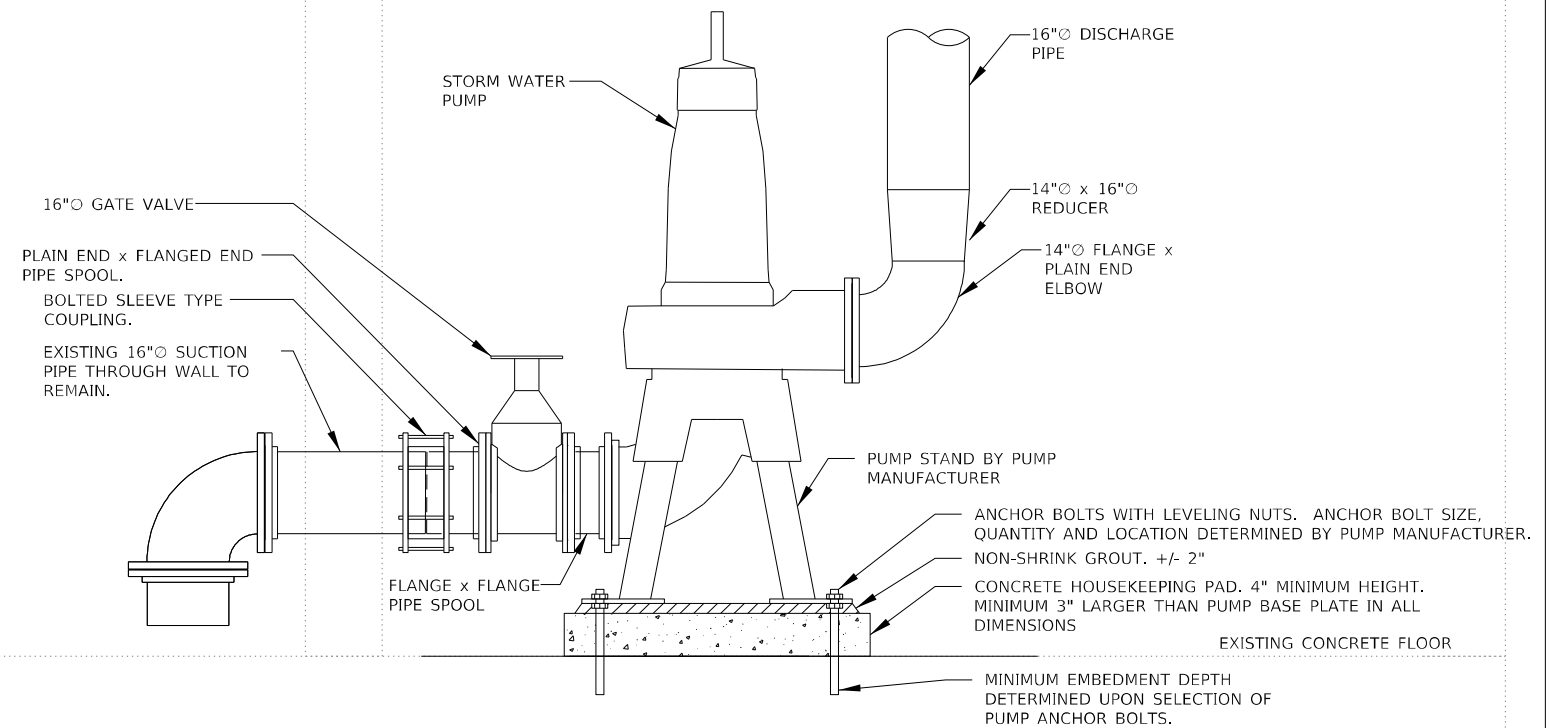
WEST FRANKFORT PUMP STATION MECHANICAL PLANS	
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	30
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				





SECTION A-A - PUMPING EQUIPMENT



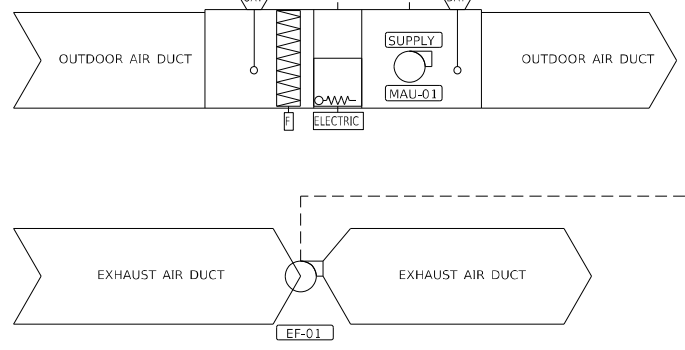
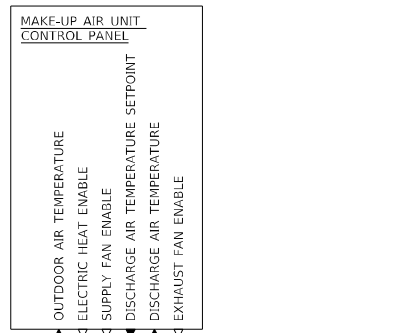
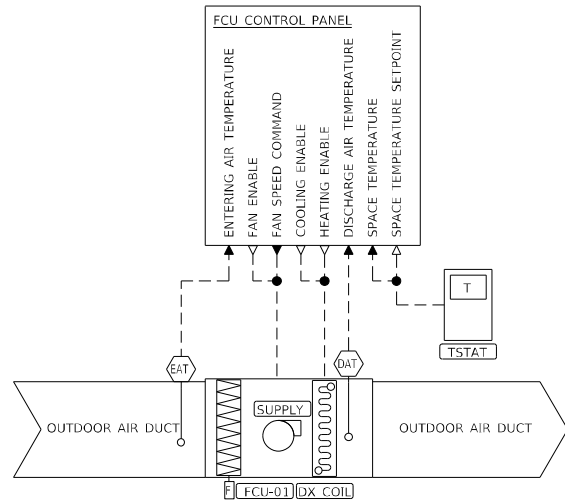
DETAIL 2 - PUMPING EQUIPMENT

KEYNOTE LEGEND	
VALUE	DESCRIPTION
P05	INSTALL SUMP PUMP AND ASSOCIATED FLOATS IN EXISTING SUMP PIT. INSTALL NEW 2" STEEL DISCHARGE PIPE. INSTALL CHECK VALVE IN DISCHARGE PIPE.
P08	WELD DISCHARGE PIPE CONNECTION TO EXISTING 40" COMMON GRAVITY DISCHARGE PIPE.
P09	ANGLE FLANGE WELDED TO PIPE TO PROVIDE VERTICAL AND LATERAL SUPPORT AT FLOOR PENETRATION ELEVATION. SEE SHEETS 22-24 OF 39 FOR ADDITIONAL INFORMATION.
P10	ADJUST LENGTH OF HORIZONTAL PIPE SPOOL AS REQUIRED TO ALLOWED PUMP CENTER OF GRAVITY TO BE DIRECTLY LOCATED UNDERNEATH OVERHEAD HOIST.
P11	PIPE SUPPORT: PIPE SADDLE WITH U-BOLT. 3" PIPE STANCHION WITH 12" x 12" BASEPLATE
P12	FLANGED JOINT

COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

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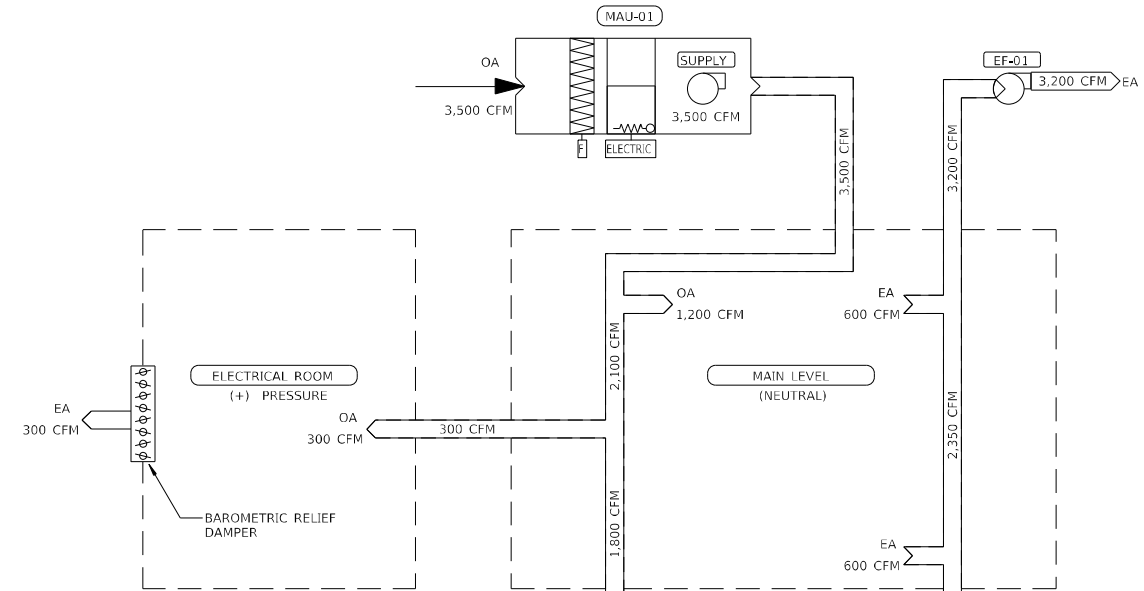
FAN COIL UNIT CONTROL SUMMARY						
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	BAS TREND	BAS ALARM	COMMENTS
FCU ON/OFF	●					
FAN ON/OFF	●					
COOLING MODE	●					
HEATING MODE	●					
SPACE TEMPERATURE	●					
SPACE TEMPERATURE SETPOINT	●					

- FAN COIL UNIT SEQUENCE OF OPERATION**
- A. FCU UNIT CONTROL**
1. THE FCU CONTROLLER SHALL OPERATE THE REFRIGERANT SYSTEM TO MAINTAIN THE SPACE AIR TEMPERATURE SETPOINT PROVIDED BY THE LOCAL THERMOSTAT.
 2. THE FCU CONTROLLER SHALL AUTOMATICALLY OPERATE THE REFRIGERANT SYSTEM TO SWITCH BETWEEN HEATING AND COOLING OPERATION BASED ON THE DEVIATION BETWEEN THE ENTERING AIR TEMPERATURE AND THE SPACE TEMPERATURE DEVIATION FROM SETPOINT.
 - a. INITIAL COOLING SETPOINT: 72°F
 - b. INITIAL HEATING SETPOINT: 55°F
 3. THE FCU CONTROLLER SHALL ENABLE THE SUPPLY FAN AT ALL TIMES.
 4. THE FCU SUPPLY FAN SHALL MAINTAIN A CONSTANT SUPPLY AIR FLOW.

COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

MAKE-UP AIR UNIT CONTROL SUMMARY						
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	BAS TREND	BAS ALARM	COMMENTS
MAU ENABLE	●					
HEATING MODE	●					
OUTDOOR AIR TEMPERATURE	●					
DISCHARGE AIR TEMPERATURE	●					
DISCHARGE AIR TEMPERATURE SETPOINT	●					

- MAKE-UP AIR UNIT SEQUENCE OF OPERATION**
- A. MAKE-UP AIR UNIT CONTROL**
1. THE MAU SUPPLY FAN SHALL BE ENABLED AT ALL TIMES.
 2. THE MAU SHALL BE IN HEATING MODE WHENEVER THE OUTDOOR AIR TEMPERATURE IS BELOW THE ELECTRIC HEAT SHALL BE ENABLED WHENEVER THE MAU IS IN HEATING MODE.
 - a. INITIAL HEATING MODE DISCHARGE AIR TEMPERATURE: 55°F
 3. THE MAU ELECTRIC HEAT SHALL OPERATE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT WHEN IN HEATING MODE
- EXHAUST FAN SEQUENCE OF OPERATION**
- A. EXHAUST FAN CONTROL**
1. THE EXHAUST FAN SHALL BE ENABLED AT ALL TIMES BY THE MAKE-UP AIR UNIT.
 2. THE EXHAUST FAN SHALL MAINTAIN A CONSTANT EXHAUST AIR FLOW WHENEVER THE MAKE-UP AIR UNIT IS ENABLED.



HVAC SCHEMATIC DIAGRAM SYMBOLS

FCU - FAN COIL UNIT	--- --	FIELD CONTROL WIRING
MAU - MAKE-UP AIR UNIT	--- --	FACTORY CONTROL WIRING
OAP - VRF OUTDOOR AIR PROCESSING UNIT	--- --	CONTROLS VENDOR WIRING
ERV - ENERGY RECOVERY VENTILATOR	--- --	SUPPLIED ANALOG SIGNAL
OA - OUTDOOR AIR	--- --	DIGITAL SIGNAL
RA - RETURN AIR	--- --	
EA - EXHAUST AIR	--- --	
SA - SUPPLY AIR	--- --	
TA - TRANSFER AIR	--- --	
DUCTWORK	--- --	
FAN	--- --	
DX COIL OR HOT GAS RE-HEAT	--- --	
DAMPER	--- --	
ELECTRIC RESISTANCE HEAT	--- --	
FILTER	--- --	
FIXED PLATE HEAT EXCHANGER	--- --	
ELECTRIC UNIT HEATER	--- --	
(V)	--- --	
FS	--- --	FREEZE STAT
FDP	--- --	FILTER DIFFERENTIAL PRESSURE SWITCH
DP	--- --	DUCT STATIC PRESSURE SENSOR
ENT	--- --	ENTHALPY SENSOR
T	--- --	AIR TEMPERATURE SENSOR
AF	--- --	AIRFLOW SWITCH
XX	--- --	SPACE SENSOR
---	---	AIRFLOW DIRECTION

AIRFLOW SCHEMATIC
NTS

CONDENSING UNIT SCHEDULE													
TAG	TYPE	REFRIGERANT	COOLING		HEATING (47F)		OPERATING RANGE		ELECTRICAL				
			CAP. (BTU/H)	MIN. SEER	CAP. (BTU/H)	MIN. HSPF	COOLING	HEATING	VOLT	FREQ	PHASE	MCA	MOP
CJ-01	OUTDOOR REFRIGERANT HEAT PUMP	R410A	24,000	15.8	27,000	8.6	23F TO 122F	-4F TO 61F	208 V	60 Hz	1	19.6	30

FAN COIL UNIT SCHEDULE												
TAG	TYPE	REFRIGERANT	COOLING		HEATING		ELECTRICAL				COMMENTS	
			CAP. (BTU/H)	MIN. SEER	CAP. (BTU/H)	MIN. HSPF	VOLT	FREQ	PHASE	MCA		MOP
FCU-01	OUTSIDE AIR FAN COIL UNIT	R410A	48,100		46,115		208 V	60 Hz	1	2.15	15	1,2

COMMENTS
1 PROVIDE WITH CONTROLLER TO PROVIDE SEQUENCE OF OPERATION INDICATED
2 PROVIDE WITH WASHABLE FILTER

COST OF ALL MECHANICAL RELATED ITEMS INCLUDED IN "PUMP STATION MECHANICAL WORK"

DAMPER SCHEDULE										
TAG	TYPE	DIMENSIONS		BACK PRESURE	START TO OPEN PRESSURE	MATERIAL			PAINT	COMMENTS
		WIDTH	HEIGHT			FRAME	BLADE	SEAL		
BRD-01	BAROMETRIC RELIEF DAMPER	8"	6"	2.0 IN. WG	0.05 IN WG	GALV. STEEL	ALUMINUM	TPE	NONE	1,2

COMMENTS
1 PROVIDE WITH MOUNTING FLANGE ON DISCHARGE SIDE
2 PROVIDE WITH 90 DEGREE WEATHERHOOD

MAKE UP AIR UNIT SCHEDULE																
TAG	TYPE	OUTDOOR AIRFLOW	SUPPLY FAN			ELECTRIC HEAT				ELECTRICAL					UNIT WEIGHT	COMMENTS
			TYPE	DRIVE TYPE	EXT. STATIC PRESSURE	HEATING CAPACITY	CONTROL	EAT	LAT	VOLT	FREQ	PHASE	MCA	MOP		
MAU-01	ELECTRIC HEAT ONLY	3,500 CFM	BACKWARD INCLINED	DIRECT	0.5 IN W.G.	70 KW	SCR	0F	63F	480 V	60 Hz	3	91.8	100	1,450 LBS	1,2,3,4,5,6,7,8

COMMENTS
1 PROVIDE WITH DISCHARGE TEMPERATURE CONTROL. PROVIDE WITH REMOTE INTERFACE.
2 PROVIDE WITH INTAKE WEATHERHOOD AND BIRDSCREEN.
3 PROVIDE WITH 2-INCH WASHABLE ALUMINUM MESH FILTERS
4 PROVIDE WITH EXHAUST FAN STARTER
5 PROVIDE WITH FREEZE PROTECTION RELAY
6 PROVIDE WITH HEATING INLET AIR SENSOR
7 PROVIDE WITH EXTENDED HEIGHT ROOF CURB
8 PROVIDE WITH UNIT MOUNTED DISCONNECT

FAN SCHEDULE														
TAG	TYPE	AIRFLOW	SUPPLY FAN			FAN RPM		ELECTRICAL					UNIT WEIGHT	COMMENTS
			TYPE	DRIVE TYPE	EXT. STATIC PRESSURE	FAN RPM	SONES	VOLT	FREQ	PHASE	MCA	MOP		
FF-01	ROOF MOUNTED UPBLAST EXHAUST FAN	3,200 CFM	CENTRIFUGAL	RFIT	0.25 IN W.G.	536	8	208 V	60 Hz	1	5.4	20	125 LBS	1,2,3

COMMENTS
1 SPARK RESISTANT B CONSTRUCTION
2 PROVIDE WITH UNIT MOUNTED DISCONNECT
3 PROVIDE WITH ADAPTER CURB TO MOUNT ON EXISTING ROOF PENETRATION

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE											
TAG	TYPE	CONNECTION SIZE		PERFORMANCE			DAMPER	MATERIAL	FINISH	FRAME	COMMENTS
		HEIGHT	WIDTH	CFM	TOTAL P.D.	MAX NC					
S1	SUPPLY GRILLE	24"	12"	1,200	0.15 IN W.G.	30	OPPOSED BLADE DAMPER	316 STAINLESS STEEL	MILL	FLANGE	1
E1	EXHAUST GRILLE	24"	12"	600	0.032 IN W.G.	14	OPPOSED BLADE DAMPER	316 STAINLESS STEEL	MILL	FLANGE	1

COMMENTS
1 DOUBLE DEFLECTION

SUMP PUMP SCHEDULE														
TAG	TYPE	DISCHARGE SIZE	PERFORMANCE		SOLIDS HANDLING	IMPELLER MATERIAL	PUMP HOUSING	ELECTRICAL					ENVIRONMENTAL RATING	COMMENTS
			GPM	TDH				VOLT	FREQ	PHASE	MCA	MOP		
SP-01	SUBMERSIBLE EFFLUENT PUMP	2"	50	25'	3/4"	BRONZE	CAST IRON	120	60 Hz	1	14	20	CLASS 1, DIV. 1	1,2

COMMENTS
1 PROVIDE WITH SIMPLEX CONTROL AND STARTER PANEL: H/O/A SWITCH, RUN INDICATOR, VISUAL AND AUDIBLE ALARM, AND INTRINSICALLY SAFE RELAYS
2 ON, OFF, AND HIGH FLOAT SWITCHES

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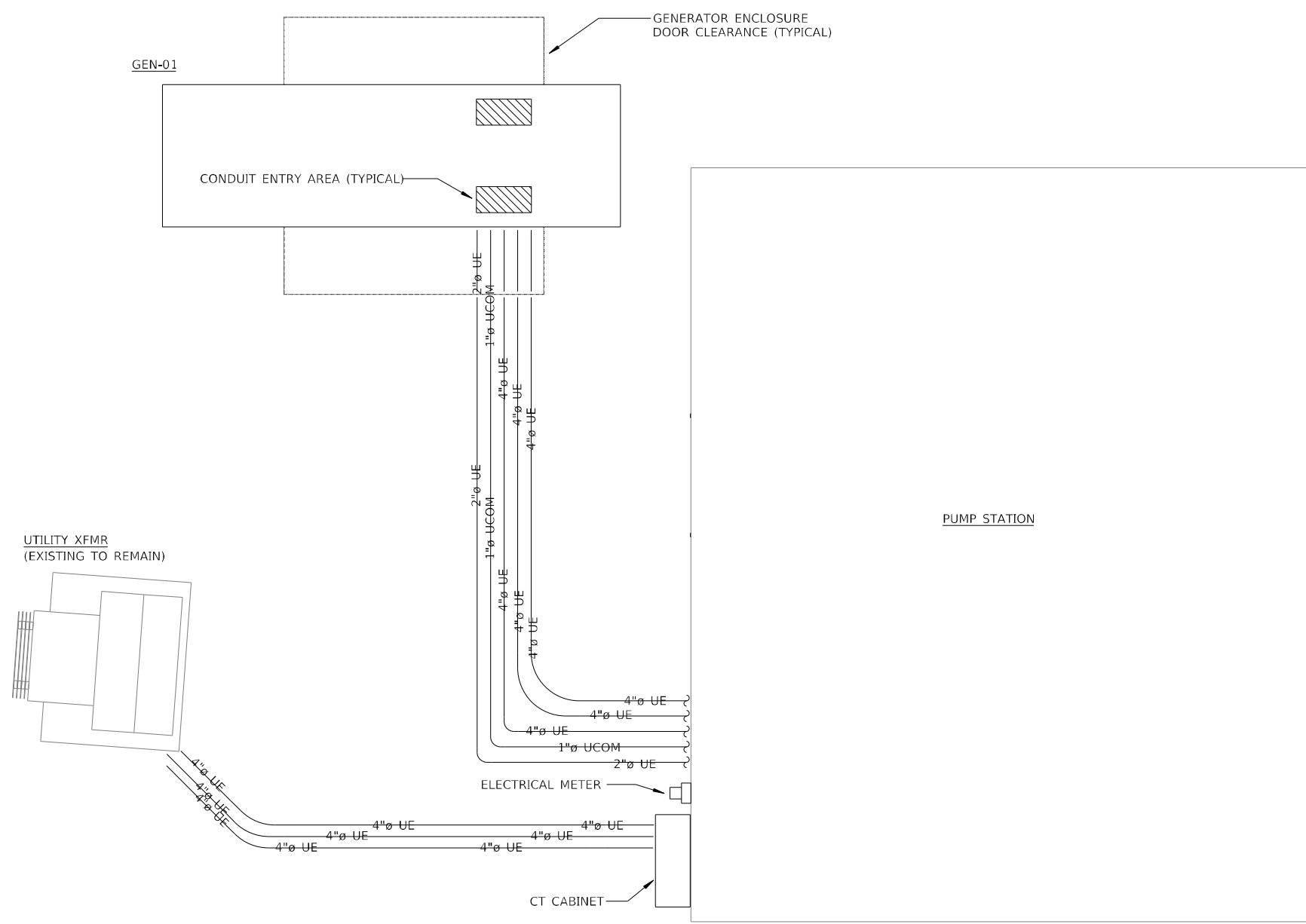
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST FRANKFORT PUMP STATION
MECHANICAL SCHEDULES

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

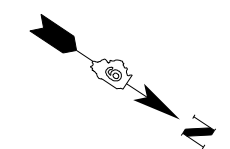
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	33
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

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COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

ELECTRICAL SITE PLAN



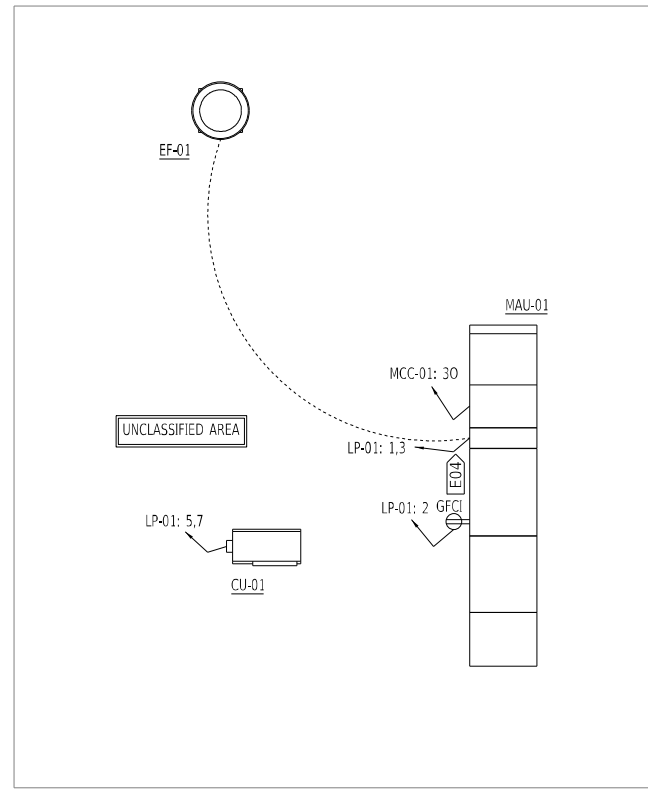
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 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 164-2738

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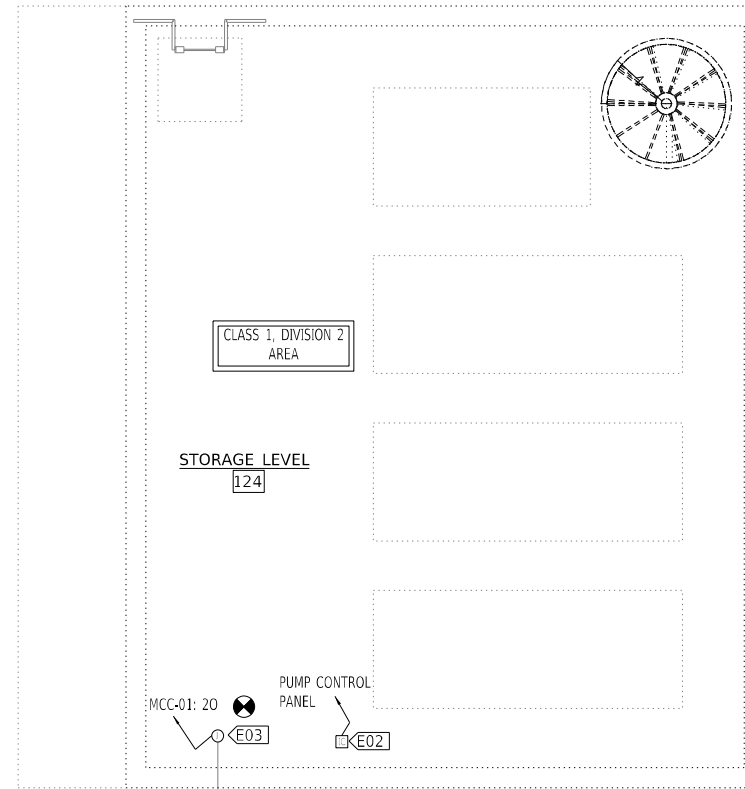
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

WEST FRANKFORT PUMP STATION ELECTRICAL SITE PLAN			
SCALE: NONE	SHEET 1	OF 1 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	34
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



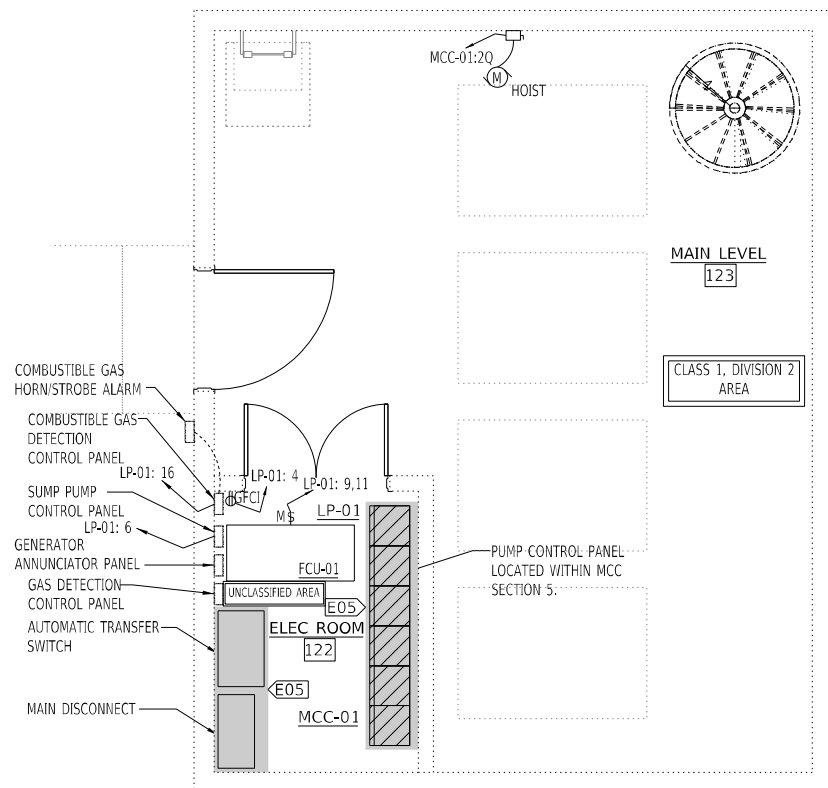
ROOF LEVEL POWER PLAN



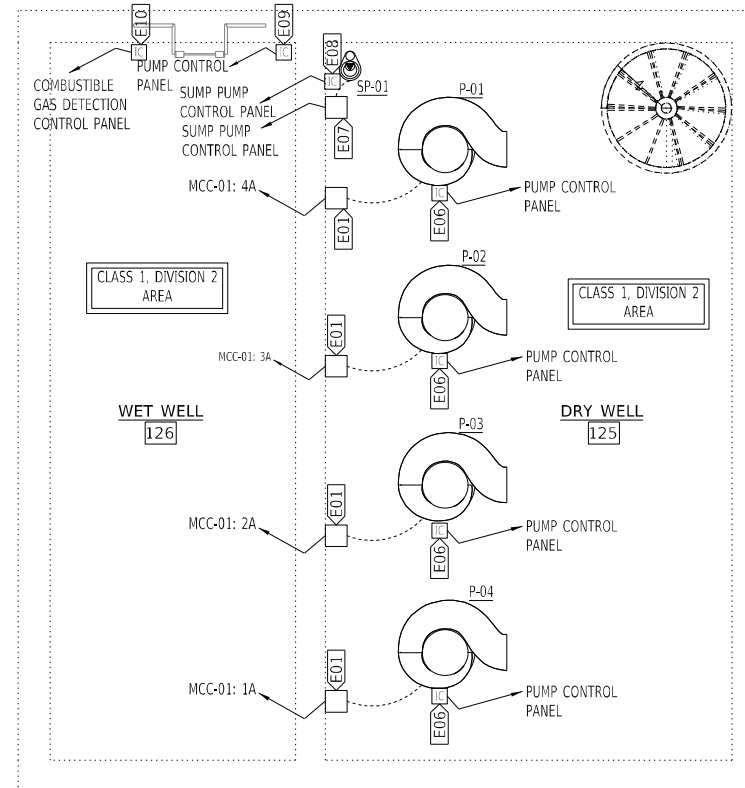
MAIN LEVEL POWER PLAN

VALUE	DESCRIPTION
E01	200A, SWITCH RATED RECEPTACLE/PLUG, NEMA 4X, CLASS 1, DIV. 2. MOUNT RECEPTACLE 6' ABOVE FLOOR WITH ANGLE WALL BOX KIT. INSTALL PLUG ON POWER CABLE SUPPLIED WITH PUMP.
E02	INSTALL NEW PRESSURE LEVEL/TRANSMITTERS ON MODIFIED STILLING WELL.
E03	REPLACE ROADWAY LIGHT JUNCTION BOX WITH NEW CLASS 1, DIV. 2 JUNCTION BOX. PROVIDE NEW CIRCUIT FROM MCC-01 TO THIS LOCATION. EXISTING CONDUCTORS TO HIGHWAY LIGHTING TO REMAIN.
E04	STARTER FOR EXHAUST FAN LOCATED WITHIN MAU-01
E05	PROVIDE 4" TALL HOUSEKEEPING PAD FOR ELECTRICAL EQUIPMENT.
E06	PUMP MONITORING: PROVIDE WITH CONTROL CABLE OF SUFFICIENT LENGTH TO CONNECT TO PUMP CONTROL PANEL WITH NO SPLICES
E07	20A, SWITCH RATED RECEPTACLE/PLUG, NEMA 4X, CLASS 1, DIV. 2. MOUNT RECEPTACLE 6' ABOVE FLOOR WITH ANGLE WALL BOX KIT. INSTALL PLUG ON POWER CABLE SUPPLIED WITH PUMP.
E08	SUMP PUMP FLOAT SWITCHES
E09	STORM WATER HIGH/LOW SUMP FLOAT SWITCHES. ATTACH TO LIFTING CHAIN AND SUSPEND WITHIN SUMP WITH 15 POUND MUSHROOM TYPE BOAT ANCHOR ON END OF LIFTING CHAIN.
E10	COMBUSTIBLE GAS DETECTION SENSOR LOCATED WITHIN WET WELL. CONNECT TO CONTROL PANEL IN ELECTRICAL ROOM.

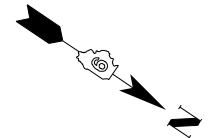
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



STORAGE LEVEL POWER PLAN



PUMP LEVEL POWER PLAN

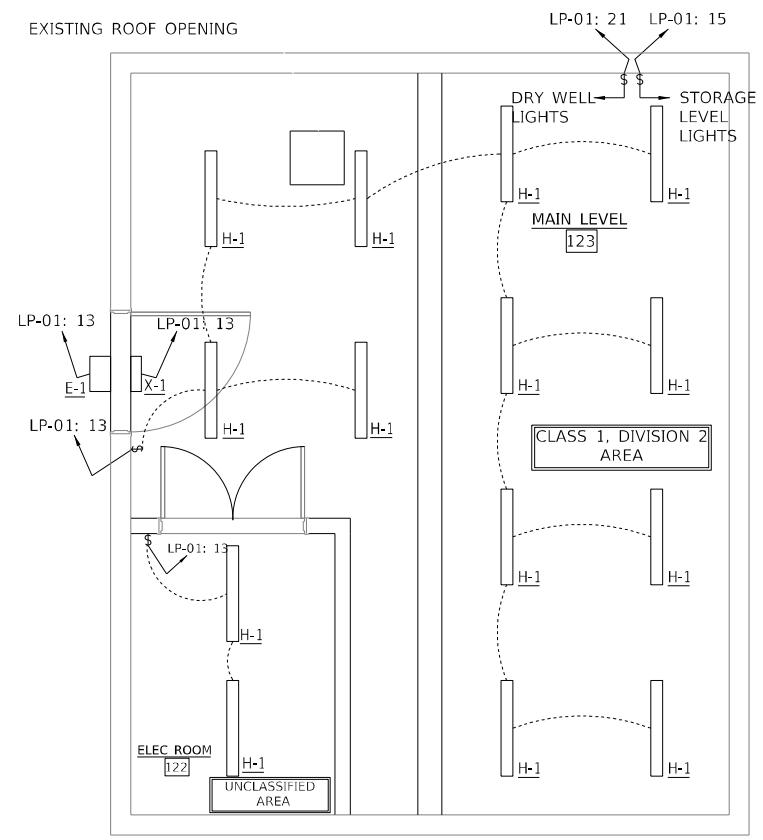


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	DATE	REVISED -

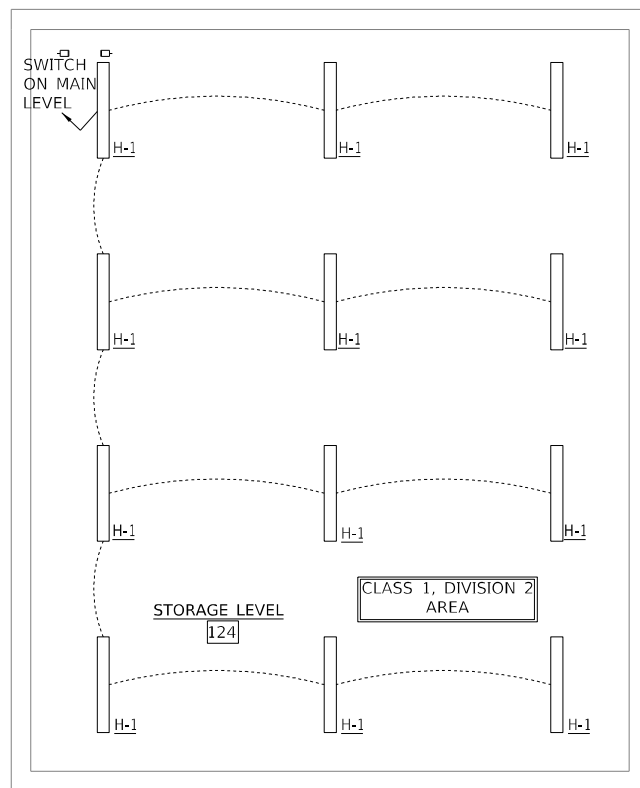
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	35
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

EXISTING ROOF OPENING

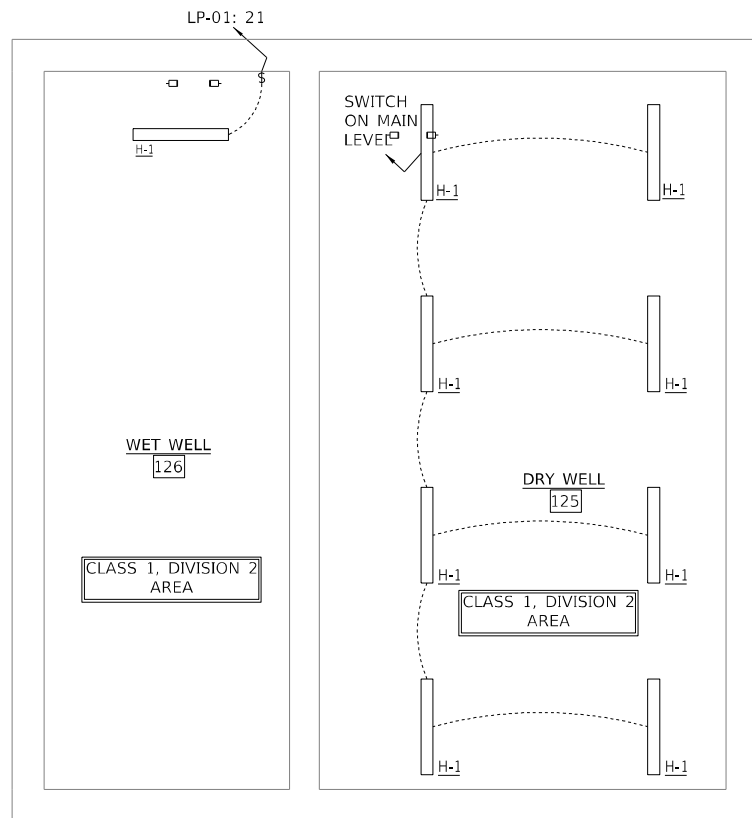


MAIN LEVEL LIGHTING PLAN

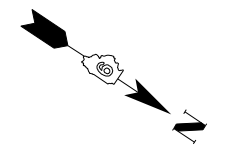
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"



STORAGE LEVEL LIGHTING PLAN



PUMP LEVEL LIGHTING PLAN



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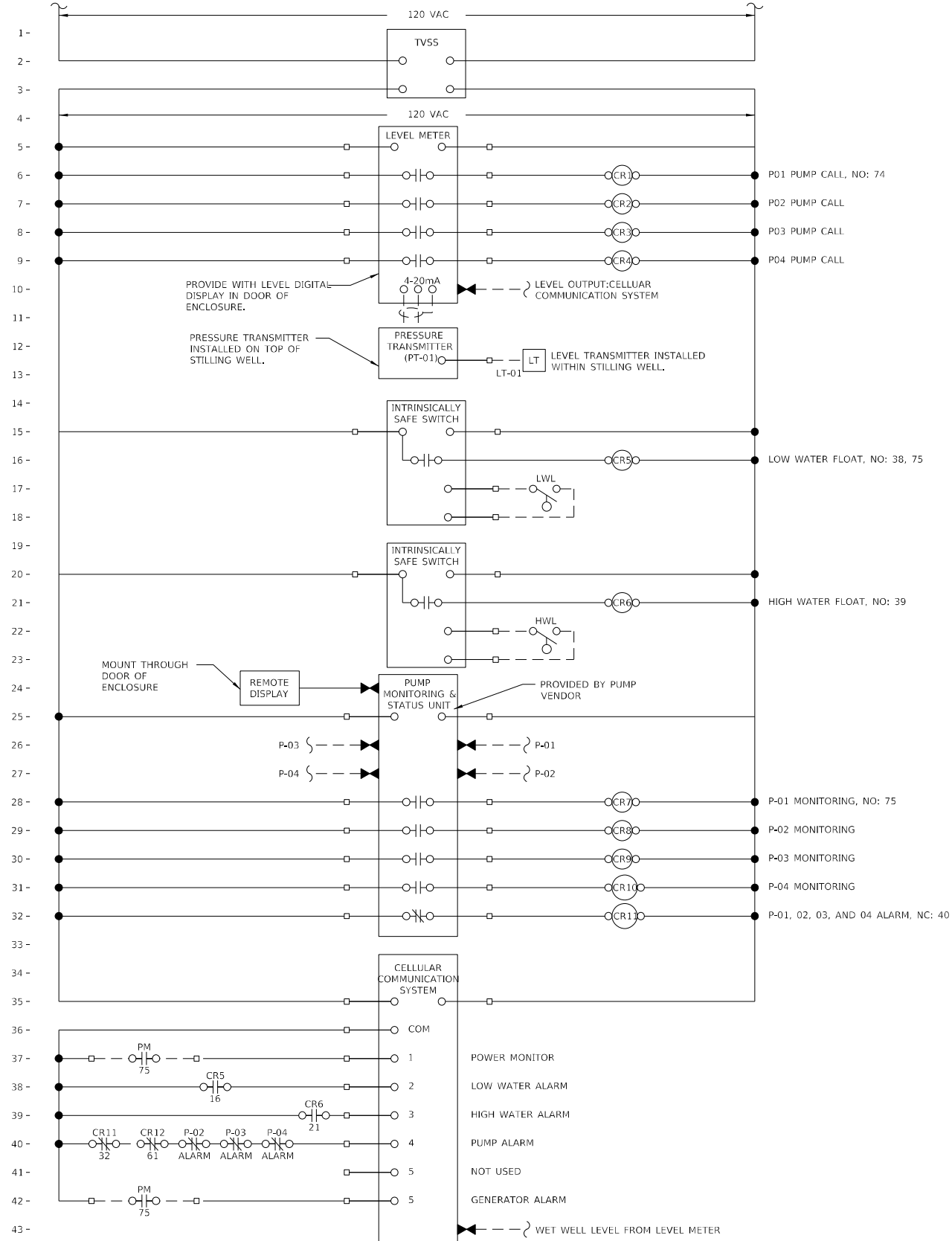
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

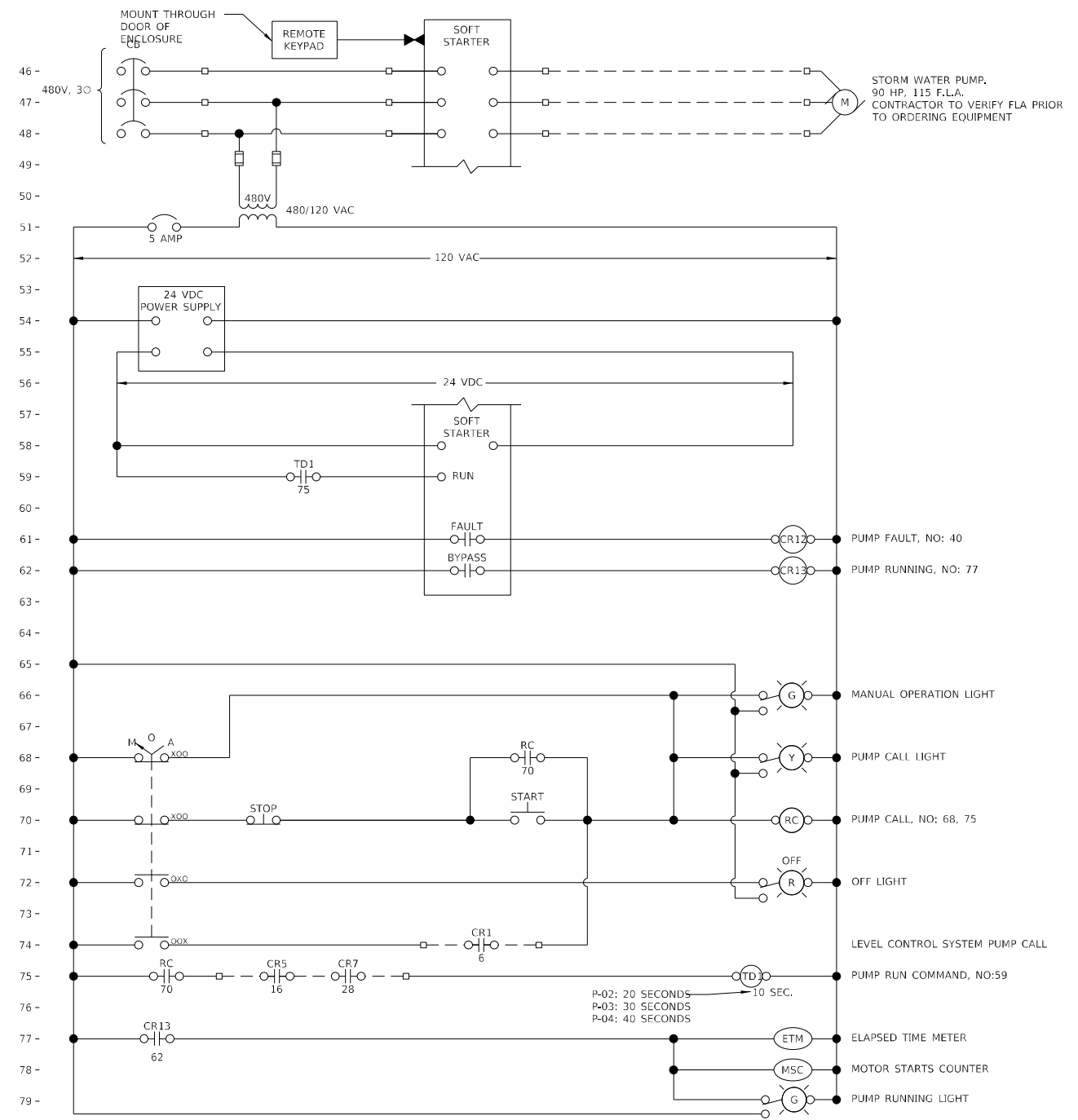
**WEST FRANKFORT PUMP STATION
 LIGHTING PLANS**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	36
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				



CONTROL DRAWING No. 1
PUMP CONTROL PANEL



- STORMWATER PUMPS**
1. MAJOR EQUIPMENT:
 - a. PUMPS: (P-01, P-02, P-03, AND P-04)
 2. CONTROL LOGIC:
 - a. PUMPS (P1 AND P2)
 - 1) PUMP OPERATION SHALL BE PREVENTED WHENEVER THE PUMP MONITORING AND STATUS RELAY IS IN A FAULT CONDITION.
 - 2) PUMP OPERATION SHALL BE PREVENTED WHEN WATER LEVEL IS BELOW LOW WATER FLOAT ELEVATION.
 - 3) WHEN OFF IS SELECTED AT THE MCC, THE PUMP SHALL BE OFF.
 - 4) WHEN MANUAL IS SELECTED AT THE MCC, THE PUMP SHALL BE CONTROLLED VIA START/STOP PUSHBUTTON FOLLOWING START DELAY.
 - 5) WHEN AUTO IS SELECTED AT THE MCC, THE PUMP SHALL OPERATE AUTOMATICALLY ACCORDING TO THE LEVEL CONTROL SYSTEM.
 - i. LEVEL CONTROL SYSTEM SHALL STAGE PUMPS ON AT FOUR DIFFERENT LEVELS: LEAD, LAG, HIGH, AND HIGH HIGH. ON/OFF ELEVATIONS FOR EACH LEVEL SHALL BE DETERMINED DURING CONSTRUCTION WITH OWNER INPUT.
 - ii. LEVEL CONTROL SYSTEM SHALL ALTERNATE LEAD, LAG, HIGH, AND HIGH HIGH PUMPS WITH THE COMPLETION OF EACH PUMPING CYCLE.
 - 6) PUMP RUNNING LIGHT, PUMP STARTS COUNTER, AND PUMP OPERATING HOUR METER SHALL BE ACTIVATED WHEN SOFT STARTER IS IN BYPASS MODE.

THE CONTROL LOOP DESCRIPTIONS ARE NOT INTENDED TO BE AN INCLUSIVE LISTING OF ALL ELEMENTS AND APPURTENANCES REQUIRED TO EXECUTE LOOP FUNCTIONS, BUT ARE RATHER INTENDED TO SUPPLEMENT AND COMPLEMENT THE DRAWINGS AND OTHER SPECIFICATION SECTIONS.

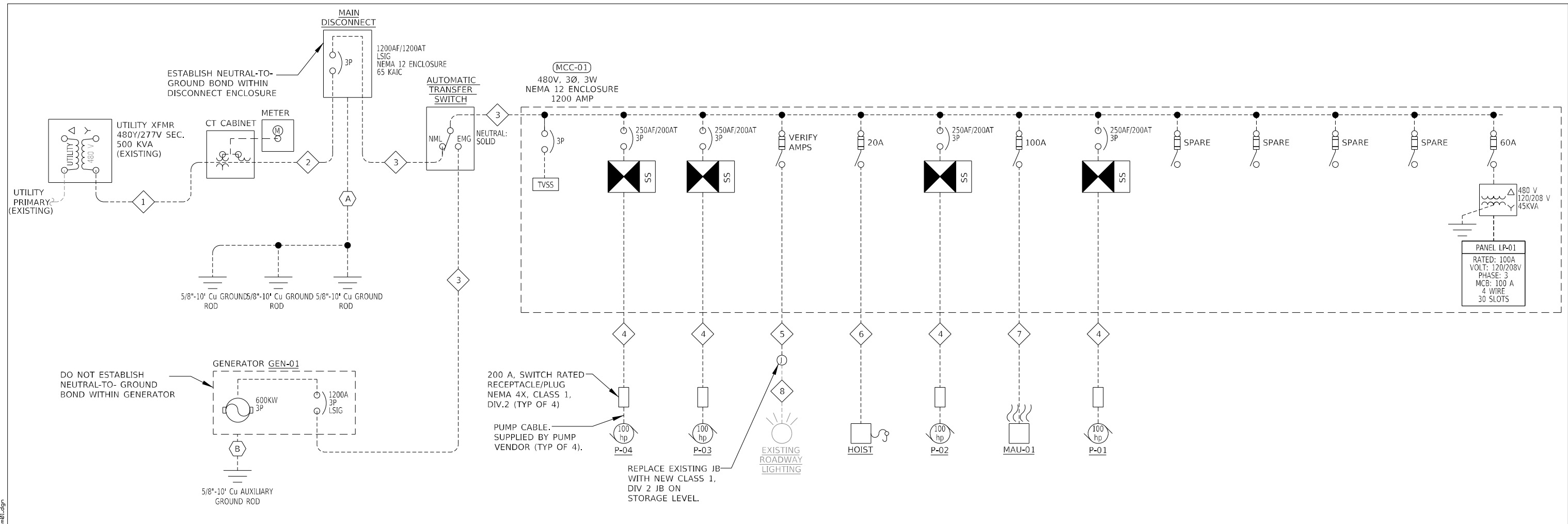
COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

CONTROL DRAWING No. 2
P01 (P02, P03, AND P04 SIMILAR)

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	DATE	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(28-5)PS-1	FRANKLIN	39	37
CONTRACT NO. 78958				
ILLINOIS FED. AID PROJECT				

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POWER ONE-LINE
NTS

FEEDER SCHEDULE							
FEEDER TAG	PHASE CONDUCTORS			NEUTRAL SIZE	EGC SIZE	CONDUIT	
	PARALLEL SETS	QUANTITY	SIZE			SIZE	TYPE
1	3	3	600 KCMIL	600 KCMIL	--	4"	PVC
2	3	3	600 KCMIL	600 KCMIL	3/0 AWG	4"	RMC
3	3	3	600 KCMIL	--	3/0 AWG	4"	RMC
4	1	3	2/0	--	#4 AWG	2"	RMC
5	MATCH EXISTING CONDUCTORS SERVING HIGHWAY LIGHTING						
6	1	3	12 AWG	--	12 AWG	3/4"	RMC
7	1	3	1 AWG	--	8 AWG	1-1/2"	RMC
8	EXISTING CONDUCTORS TO BE RE-USED						

GEC SCHEDULE	
GEC TAG	GEC SIZE
A	3/0 AWG Cu
B	#6 AWG Cu

COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

	SECTION 6	SECTION 5	SECTION 4	SECTION 3	SECTION 2	SECTION 1
A	60A FUSIBLE SWITCH AND 45 KVA TRANSFORMER 480V PRI. x 120/208V SEC.	PUMP CONTROL SECTION	P-01 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT	P-02 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT	P-03 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT	MAIN LUGS
B						
C						
D						
E						1A
F						TVSS
G						
H						
I						
J						
K		P-04 SOLID STATE SOFT STARTER 100 HP 480V 3-PHASE, 3W W/ CIRCUIT BREAKER DISCONNECT				
L	4A		3A	2A		
M	100A FUSIBLE SWITCH (SPARE) 4O		100A FUSIBLE SWITCH (MAU-01) 3O	100A FUSIBLE SWITCH 2O (ROADWAY LTS)		
N	100A FUSIBLE SWITCH (SPARE) 4Q		SPACE 3Q	100A FUSIBLE SWITCH (HOIST) 2Q		
O	100A FUSIBLE SWITCH (SPARE) 4S		SPACE 3S	SPACE 2S		
P	100A FUSIBLE SWITCH (SPARE) 4U		SPACE 3U	SPACE 2U		
Q	SPACE 4W		SPACE 3W	SPACE 2W		
R						
S						
T						
U						
V						
W	100 AMP 3-PHASE, 4W PANELBOARD 120/208V 100A MAIN BREAKER					
X	6M SPACE	5A	4W	3W	2W	1U

ID	SECTION	CELL	STARTER, CLASS, OR DESCRIPTION	SIZE (INCHES)	CB TRIP/FUSE CLIPS (A)	HP RATING	CONTROL DEVICES											NAMEPLATE IDENTIFICATIONS					
							AUX INTLKS	PUSH BUTTONS	SELECTOR SWITCHES	INDICATING LIGHTS	OTHER												
								NO	NC	START-STOP	FWD-REV-STOP	FAST-SLOW-STOP	HAND-OFF-AUTO ON-OFF	FWD-OFF-REV	FAST-OFF-SLOW	GREEN	RED	AMBER	PUSH TO TEST	ELAPSED TIME METER	MOTOR STARTS COUNTER	CURRENT SWITCH	
1	A		1,200 MAIN LUGS	12																			MAIN LUGS
1	E		TVSS	6																			TVSS
1	G		SOLID STATE SOFT STARTER (IEC CONTACTORS)	42	200/250	100			X		X					2	1	1	X	X	X	X	STORM WATER PUMP (P-04)
1	U		SPACE	12																			SPACE
2	A		SOLID STATE SOFT STARTER (IEC CONTACTORS)	42	200/250	100			X		X					2	1	1	X	X	X	X	STORM WATER PUMP (P-03)
2	O		FUSIBLE SWITCH	6	100																		ROADWAY LIGHTS
2	Q		FUSIBLE SWITCH	6	100																		HOIST
2	S		SPACE	6																			SPACE
2	U		SPACE	6																			SPACE
2	W		SPACE	6																			SPACE
3	A		SOLID STATE SOFT STARTER (IEC CONTACTORS)	42	200/250	100			X		X					2	1	1	X	X	X	X	STORM WATER PUMP (P-02)
3	O		FUSIBLE SWITCH	6	100																		MAU-01
3	Q		SPACE	6																			SPACE
3	S		SPACE	6																			SPACE
3	U		SPACE	6																			SPACE
3	W		SPACE	6																			SPACE
4	A		SOLID STATE SOFT STARTER (IEC CONTACTORS)	42	200/250	100			X		X					2	1	1	X	X	X	X	STORM WATER PUMP (P-01)
4	O		FUSIBLE SWITCH	6	100																		SPARE
4	Q		FUSIBLE SWITCH	6	100																		SPARE
4	S		FUSIBLE SWITCH	6	100																		SPARE
4	U		FUSIBLE SWITCH	6	100																		SPARE
4	W		SPACE	6																			SPACE
5	A		RELAY SECTION	72																			PUMP CONTROLS
6	A		45 KVA DISTRIBUTION TRANSFORMER	36	60																		120/208V, 3 PHASE XFMR
6	M		PANELBOARD	33	100																		PANEL LP-01
6	X		SPACE	3																			SPACE

COMMENTS
1 PROVIDE FUSES WITHIN FUSIBLE SWITCHES MATCHED TO THE LOAD SERVED
2 PROVIDE WITH 160KA SURGE RATING TVSS

MCC-01 ELEVATION
NTS

LIGHT FIXTURE SCHEDULE

TAG	DESCRIPTION	MOUNT	TYPE	COLOR TEMP.	OUTPUT	DISTRIBUTION	DRIVER CONTROL	VOLT	LOAD	ACCESSORIES	REMARKS
E1	EXTERIOR WALL PACK	WALL	LED	3000 K	3,300 lm	R3	FIELD ADJUSTABLE OUTPUT	120 V	29 VA	EXTERNAL GLARE SHIELD	INSTALL AT 9'-0" ABOVE CONTROL ROOM FLOOR. INTEGRAL PHOTOCCELL
H1	4' LINEAR HARSH ENVIRONMENT CLASS 1 DIV. 2 LISTED FIBERGLASS HOUSING	SURFACE	LED	5000 K	5,000 lm		ON/OFF	120 V	47 VA		
X1	CLASS 1 DIV. 2 EXIT SIGN	SURFACE	LED					120 V	6 VA	BATTERY BACK-UP	

No.	Description	Brkr. Amps	Load				Brkr. Amps	Description	No.
			A	B	C	C			
1	EF-01	20	561			180	20	ROOF RECEPTACLE	2
3				561			20	ELECTRICAL ROOM RECEPTACLE	4
5	CU-01	30			2038	1680	20	SUMP PUMP	6
7							20	SPARE	8
9	FCU-01	15		224			20	GENERATOR ENGINE BATTERY CHARGER	10
11				224			50*	GENERATOR BLOCK HEATER (COORDINATE BREAKER SIZE W/ EQUIP. PROVIDED)	12
13	MAIN LEVEL LIGHTS	20	693						14
15	STORAGE LEVEL LIGHTS	20		564			20	COMBUSTIBLE GAS DETECTOR	16
17	SPARE	20					20	SPARE	18
19	SPARE	20					20	SPARE	20
21	DRY WELL LIGHTS	20		426		1000	20	PUMP CONTROL SECTION	22
23	SPARE	20					20	SPARE	24
25	SPARE	20					20	SPARE	26
27	SPARE	20					20	SPARE	28
29	SPARE	20					20	SPARE	30
Totals			Phase A	Phase B	Phase C	Total Wattage(VA)	Capacity		
			3472	3205	3942	10619	36027		

COST OF ALL ELECTRICAL RELATED ITEMS INCLUDED IN "PUMP STATION ELECTRICAL WORK"

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