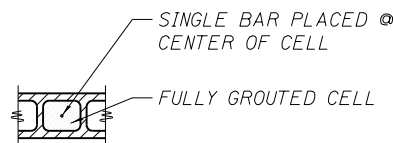


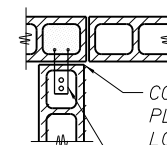
NOTE: DO NOT INTERRUPT BOND BEAM REINF.

1 TYPICAL CMU CONTROL JOINT
N.T.S.



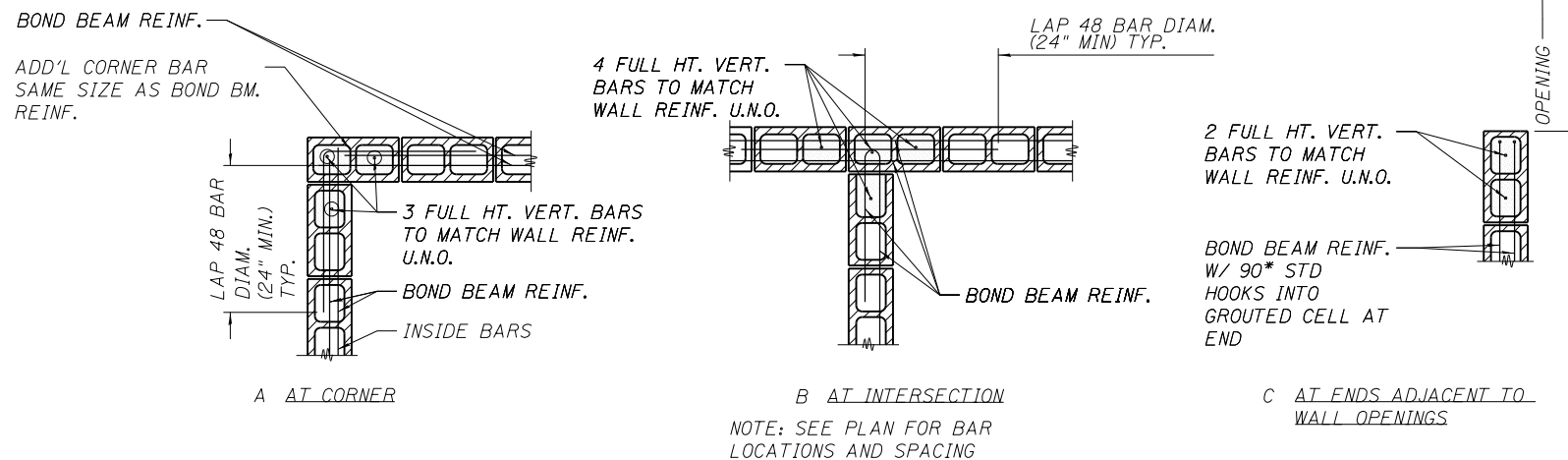
SINGLE REINFORCED CMU
NOTE: SEE PLAN FOR BAR LOCATIONS AND SPACING

2 TYPICAL MASONRY REINFORCEMENT
N.T.S.



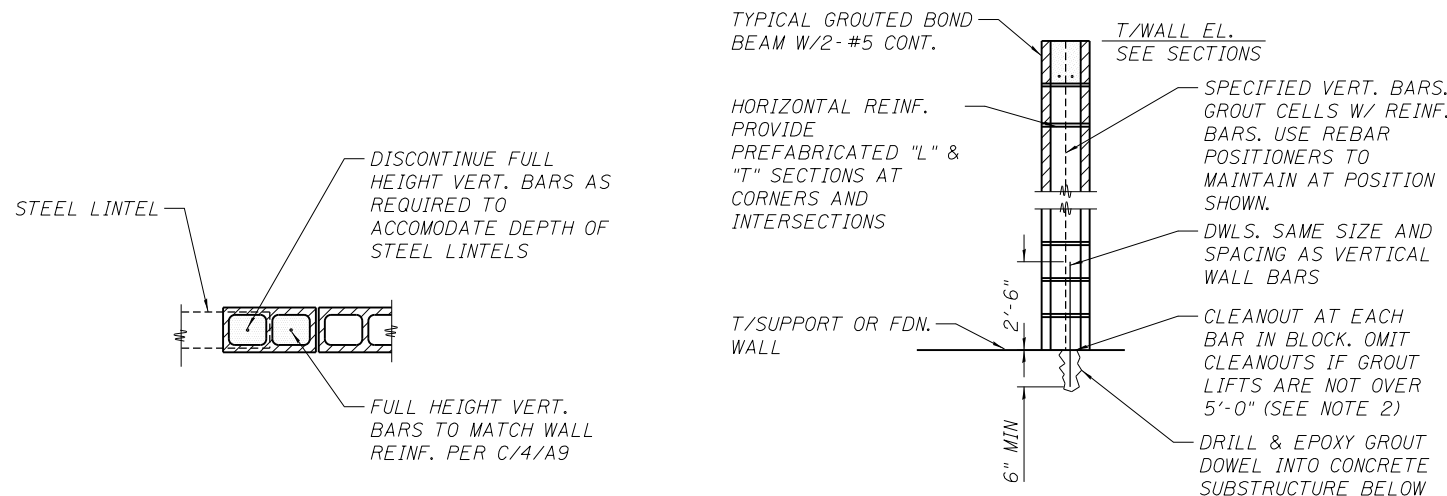
CONTROL JOINT. SEE PLANS/ELEVATIONS FOR LOCATIONS
JOINT STABILIZING ANCHORS @ 24" O.C. ANCHOR MUST ALLOW MOVEMENT IN THE PLANE OF THE INTERSECTING WALL.

3 TYPICAL CONTROL JOINTS AT INTERSECTING INTERIOR WALLS
N.T.S.

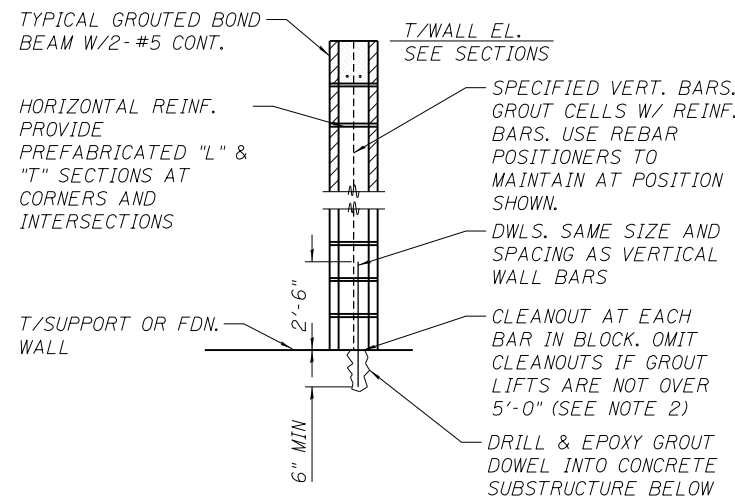


4 TYPICAL MASONRY WALL BOND BEAM AND ADD'L VERT. BAR DETAILS
N.T.S.

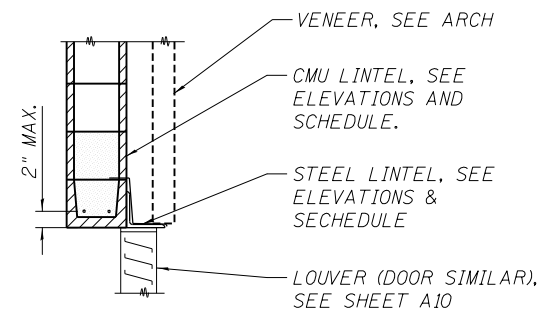
NOTES:
1. SEE DETAILS AND DRAWINGS FOR BOND BEAM LOCATIONS. ALL BOND BEAMS SHALL HAVE CONT. (2)#5 REBAR U.N.O.
2. IF HIGHLIFT GROUTING IS USED (OVER 5'-0"), CONFORM TO THE FOLLOWING:
a.) PROVIDE CLEANOUT AT THE BOTTOM COURSE OF EACH VERTICAL BAR. COVER SPACE WITH SAND. REMOVE SAND AND MORTAR DROPPINGS PRIOR TO GROUTING. DO NOT SEAL CLEANOUT UNTIL AFTER INSPECTION.
b.) LIMIT EACH GROUT LIFT TO 5'-0". STOP GROUT POUR 1 1/2" MAX BELOW TOP OF MASONRY. MECHANICALLY CONSOLIDATE EACH LIFT. RECONSOLIDATE AFTER EXCESS WATER HAS BEEN ABSORBED INTO MASONRY (3 TO 5 MINUTES).



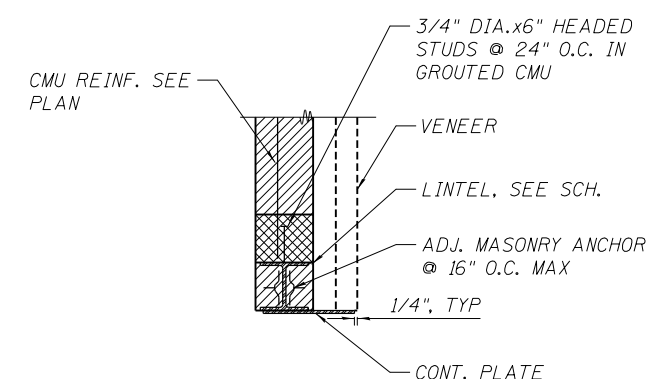
5 TYPICAL VERTICAL REINFORCEMENT AT WINDOWS AND DOORS W/ STEEL LINTEL
N.T.S.



6 TYPICAL REINF. CONCRETE MASONRY WALL SECTION
N.T.S.



7 TYPICAL SECTION AT CMU LINTEL FOR EXTERIOR WALL OPENINGS
N.T.S.

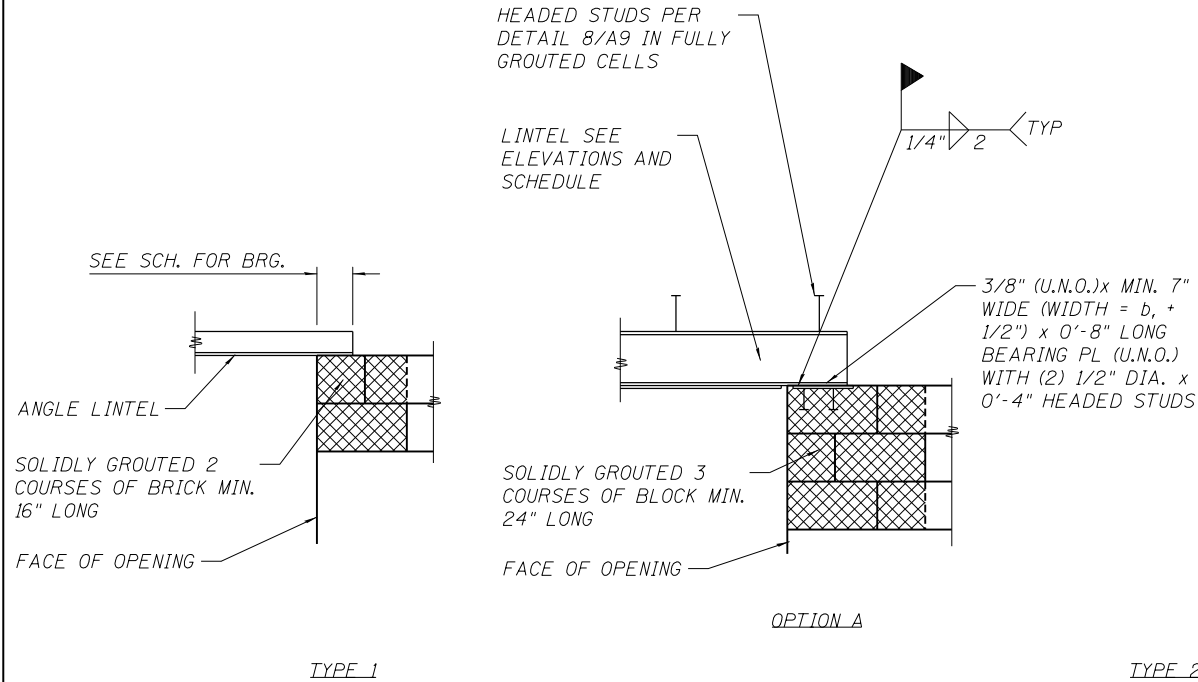


8 TYPICAL SECTION AT WF LINTEL FOR EXTERIOR WALL OPENINGS
N.T.S.

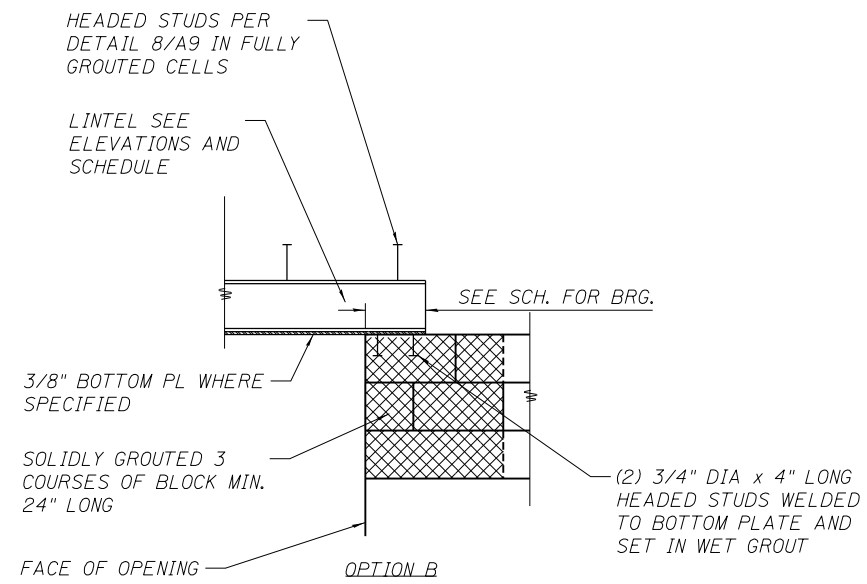
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exp U.S. Services Inc. Chicago, IL	PLOT SCALE =	DRAWN - KMF	REVISED -			CONTRACT NO. 72B58					
BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	PLOT DATE	CHECKED - TH	REVISED -			ILLINOIS FED. AID PROJECT					

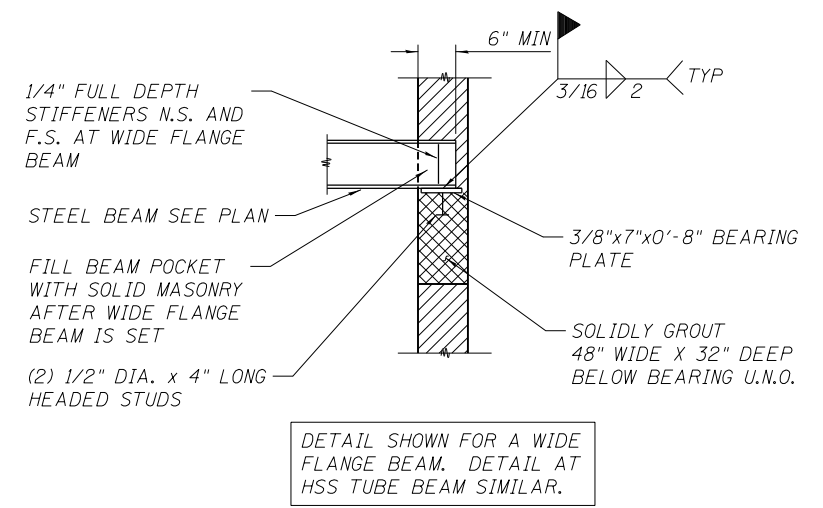
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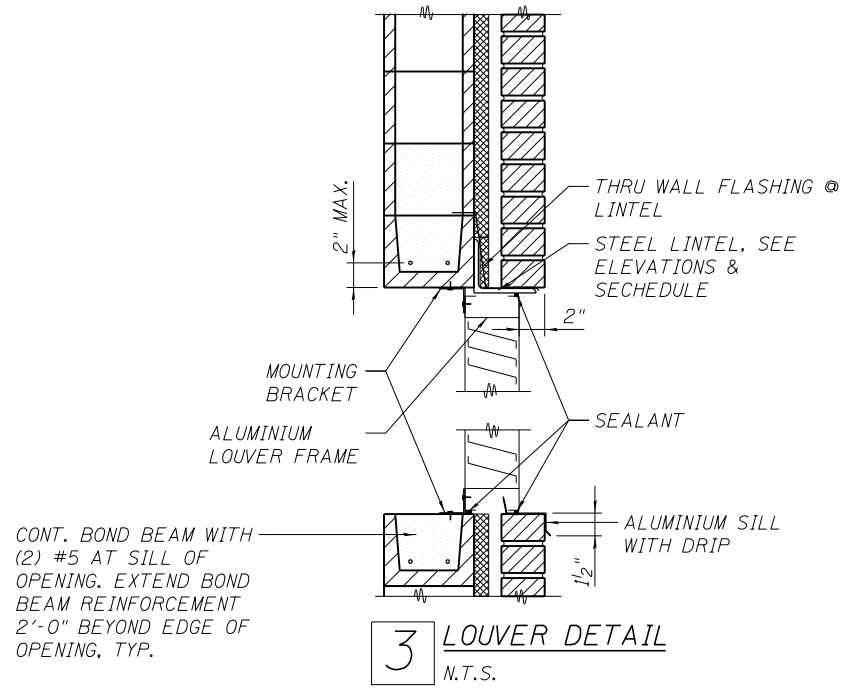
1 DETAIL AT STEEL LINTEL BEARING ON CMU
N.T.S.



SEE DETAIL 4/A9 AND 5/A9 AND
ELEVATIONS FOR BAR LOCATIONS AND
SPACING ADJACENT TO OPENINGS



2 TYP. BEAM BRG. PERPENDICULAR TO CMU WALL
N.T.S.



MASONRY WALLS LINTEL SCHEDULE (EXTERIOR AND INTERIOR)					
LINTEL DESIGNATION	CLEAR SPAN	8" CMU LINTEL	BRICK LINTEL (IF REQ'D)	BEARING EA. END	REMARKS
L1	5'-0" OR LESS (U.N.O.)	8" TOTAL DEPTH GROUTED BOND BEAM W/2- #5	L4x 3/2x 5/16 LLV	6"	SOLIDLY GROUT CORE FOR TWO COURSES BELOW CMU LINTEL BRG. @ EACH END
L2	OVER 5'-0" TO 7'-0" (U.N.O.)	16" TOTAL DEPTH GROUTED BOND BEAM W/2- #5	L6x 3/2x 3/8 LLV	8"	SOLIDLY GROUT CORE FOR TWO COURSES BELOW CMU LINTEL BRG. @ EACH END
L3	SEE PLAN	W8x31 + BOT PL 3/8" CONT.	SEE CMU LINTEL	8"	SEE 1/A10 FOR BEARING INFORMATION AT A STEEL LINTEL

- ALL EXTERIOR STEEL LINTELS AND ATTACHED STEEL MEMBERS SHALL BE HOT DIP GALVANIZED AND PROPERLY FLASHED.
- CONTROL AND EXPANSION JOINTS SHALL NOT BE PLACED AT BEARING POINTS OR IN THE LINTEL SPAN.
- WHERE W SECTIONS ARE USED, THE CONTINUOUS BOTTOM PLATE SHALL BE 1/2" LESS IN WIDTH THAN THE WALL THICKNESS.

INTERIOR NON-LOAD BEARING MASONRY WALL REINFORCEMENT SCHEDULE			
CMU WALL THICKNESS	MAX. HEIGHT OF CMU BETWEEN BRACE POINTS	REINFORCEMENT	REMARKS
8"	<= 16'-0"	#5 REBAR @ 40" O.C. IN FULLY GROUTED CELLS, TYP. U.N.O.	ADHERE TO TYPICAL DETAILS 1 THRU 6 ON A9

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	DATE = 8/5/2014	CHECKED - JS	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
MASONRY DETAILS AND SCHEDULES

SHEET NO. A10 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	602
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

GENERAL STRUCTURAL NOTES

A. GENERAL

- Contractor shall verify location and sizes of openings, and the location of dowels, anchor bolts, plates, angles and other miscellaneous items to be embedded in concrete based on the selected equipment prior to placement of concrete. Where discrepancies occur or adjustments are necessary, it is the contractor's responsibility to notify the Engineer in writing prior to construction.
- All sections, details and notes shown on the drawings are intended to be typical and shall be construed to apply at any similar situation elsewhere on the job, except where a different detail is shown. Prepare working drawings to show the application of typical sections and details for similar situations.

B. DESIGN CODES

- International Building Code, IBC 2006.
- ACI Code Requirements of Environmental Engineering Concrete Structures, ACI 350-06.
- AISC Steel Construction Manual, 13th Edition.

C. DESIGN LOADS

- Design Live Loads**

1 st Floor	250 psf
Floor Grating	250 psf
Roof	20 psf
- Roof Snow Load**

Ground Snow Load	20 psf
Balanced Snow Load	6 psf
Unbalanced Snow Load	20 psf
Roof Slope Factor, Cs	0.51
Snow Exposure Factor, Ce	0.8
Snow Load Importance Factor, Is	1.0
Thermal Factor, Ct	1.0
- Wind Load**

Enclosed Building Wind Speed, V	90 mph
Importance Factor, Iw	1.0
Exposure Category	D
Topographic Factor, Kzt	1.0
Main Wind Force Resisting System	20 psf
- Earth Pressure**

Equivalent Fluid Pressure	
Above Water Table	55 psf
Below Water Table	65 psf
Environmental Durability Factor, Sd	1.69
- Seismic Design Data**

Occupancy category	II
Importance factor, Ie	1.0
Site class	D
Spectral response - Ss	0.141g
SI	0.056g
Design response - Sds	0.226g
Sd1	0.134g
Building Seismic Design Category	C
Response Factor, R	5
Analytic Procedure	Equiv. Lateral Force
Basic Seismic Force Resisting System	Special Reinforced Masonry Shear Walls

D. FOUNDATIONS

- A Structure Geotechnical Investigation Report prepared by Wang Engineering, Inc. (dated August 5, 2013) is available from IDOT District 6. The report is for informational purposes only and shall not be considered part of the contract documents, and no warranty is made by the owner with regard to the completeness and accuracy of the subsurface investigation data, soil test data or statements and interpretations given in the report.
- Water levels indicated on the boring logs may be subject to seasonal and/or annual variations. A dewatering system of sufficient capacity shall be installed and operated to maintain the construction area free of water at all times.

D. FOUNDATIONS (Continued)

- The foundation design is based on gross allowable bearing capacity of 11,000 psf.
- Perform excavation using excavation bracing system. Refer to Special Provision for Braced Excavation (Special). All footing excavations shall be inspected, prior to concrete placement, by the department's soils engineer to verify suitable bearing material of bearing capacity as specified. The soils engineer shall certify in writing that all foundations were placed on soil with the bearing capacity as specified.
- Notify the Engineer when additional excavation is required to reach suitable bearing material.
- Within the excavation area of the foundations, all vegetation, topsoil, previously placed fill and unsuitable soils shall be removed. All footings shall bear on virgin soil or properly placed and compacted engineered fill.
- Do not place backfill against substructure walls until floor slabs supporting top and bottom of the walls have attained a compressive strength of 3000 psi as indicated by cylinder testing. Place backfill evenly against each side of substructures to produce equal and opposite lateral pressures, the difference in elevation shall not exceed 2 feet.

E. CONCRETE

- Concrete work shall be in accordance with Section 503 of the Illinois Department of Transportation Standard Specifications.
- All cast-in-place concrete shall be Class SI (f'c = 3,500 psi at 14 days) in accordance with Article 1020.04 of the Illinois Department of Transportation Standard Specifications, unless noted otherwise.
- Reinforcement bars designated (E) shall be epoxy coated.
- Reinforcement bar bending dimensions are out to out.
- Bars noted thus, 3x2-#5 indicates 3 lines of #5 bars with 2 lengths per line.
- Reinforcement lap splices shall be according to the following table unless shown otherwise in the plans.

CLASS "B" SPLICE	CLASS "C" SPLICE			
f'c = 3,500 psi	f'c = 3,500 psi			
Size	Top Bars	Other Bars	Top Bars	Other Bars
#4	2'-3"	2'-0"	2'-11"	2'-7"
#5	2'-10"	2'-6"	3'-8"	3'-3"
#6	3'-4"	3'-0"	4'-5"	3'-10"
#7	4'-6"	3'-11"	5'-10"	5'-2"
#8	5'-10"	5'-2"	7'-8"	6'-9"

- Unless otherwise shown on the drawings, rebar clearances shall be as follows:

Cast against earth	3"
Exposed to earth or weather	2"
All other locations	1 1/2"
- All exposed concrete edges shall have a 3/4" x 3/4" chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground level.
- Dowel holes shall be drilled 1/4" larger than the diameter of the dowels. Depth of embedment shall be as shown on the drawings.

F. STRUCTURAL AND MISCELLANEOUS STEEL

- All detailing, fabrication and erection of structural steel shall conform to 2010 AISC Specifications and Codes.
- Provide structural steel as follows:

Wide flange shapes	ASTM A992 GR50
Steel tube	ASTM A500 GR B
Headed studs	ASTM A108
All other steel	ASTM A36
- All welding electrodes shall be E70XX.
- All welding work shall conform to the AWS D1.1 Structural Welding Code, latest edition, and shall be performed by AWS certified welders.

F. STRUCTURAL AND MISCELLANEOUS STEEL (Continued)

- Non-Metallic Non-Shrinkage Grout: Pre-mixed, non-metallic, non-corrosive, non-staining product containing selected Silica sands, Portland cement, shrinkage compensating agents, plasticizing and water reducing agents, complying with ASTM C1107. Grout shall have minimum compressive strength of 5000 psi at 28 days when tested in conformance with ASTM C109
- The Contractor shall submit detailed, engineered, coordinated, and checked shop drawings for all structural and miscellaneous steel to review for compliance with the design intent prior to the start of fabrication and/or erection.
- Minimum fillet weld size shall comply with the AISC requirements, but shall not be less than 3/16", unless noted otherwise.
- Shop and field testing and inspection of structural steel fabrication and erection work, including welded and bolted connections, shall be as required in the specification.
- All beams shall be fabricated with the natural camber up.
- The Contractor shall be responsible for the control of all erection procedures and sequences, especially with relation to temperature differential, erection tolerances, and with respect to structural steel framing into walls.
- After fabrication, all steel shall be cleaned of all rust, loose mill scale and other foreign materials. Priming is required for all non-galvanized structural steel.
- There shall be no field cutting of structural steel members, for the work of other trades, without the prior approval of the engineer.
- Provide lintels for all openings per Lintel Schedule whether or not indicated on the drawings.
- All false work shoring required by the Contractor for erection purposes shall be provided at no cost to the owner. All such temporary work shall be removed by the Contractor unless approved by the owner in writing.
- All erection procedures, design and calculations shall be prepared and sealed by the Contractor's qualified Structural Engineer licensed in the State of Illinois. Any review of such calculations and/or drawings by the Engineer will be solely limited to any effects on the integrity of the permanent, primary structure.
- See Special Provisions for additional requirements.

G. CONSTRUCTION

- Contractor shall follow written dimensions only and not scale dimensions from the contract plans for construction purposes.
- No construction joints, except those shown on the plans, will be allowed unless approved by the Engineer.
- It shall be the Contractor's responsibility to verify the location of all utilities prior to starting construction. Contractor must check with Architectural, Structural, Plumbing, Mechanical, Electrical and other disciplines for the size and location of openings, sleeves, chases, conduits, depressed areas, anchors, hangers, equipment supports, inserts, concrete pads and other miscellaneous items connected with concrete construction before placing concrete.

H. WATERSTOPS

- Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free hydrophilic polymer modified chloroprene rubber, for adhesive bonding to concrete.
 - Products: Subject to compliance with requirements, use one of the following manufacturer:
 - Hydrotite; SikaGreenstreak.
 - ADCOR ES; Grace Construction Products.
 - Adeka Ultra Seal; OCM, Inc.

ABBREVIATIONS

B.F.	back face
CL	centerline
cts.	centers
cl.	clearance
const.	construction
Ø	diameter
E.F.	each face
Elev.	elevation
F.F.	front face
galv.	galvanized
I.F.	inside face
jt.	joint
O.C.	on center
O.F.	outside face
typ.	typical
U.N.O.	Unless Noted Otherwise

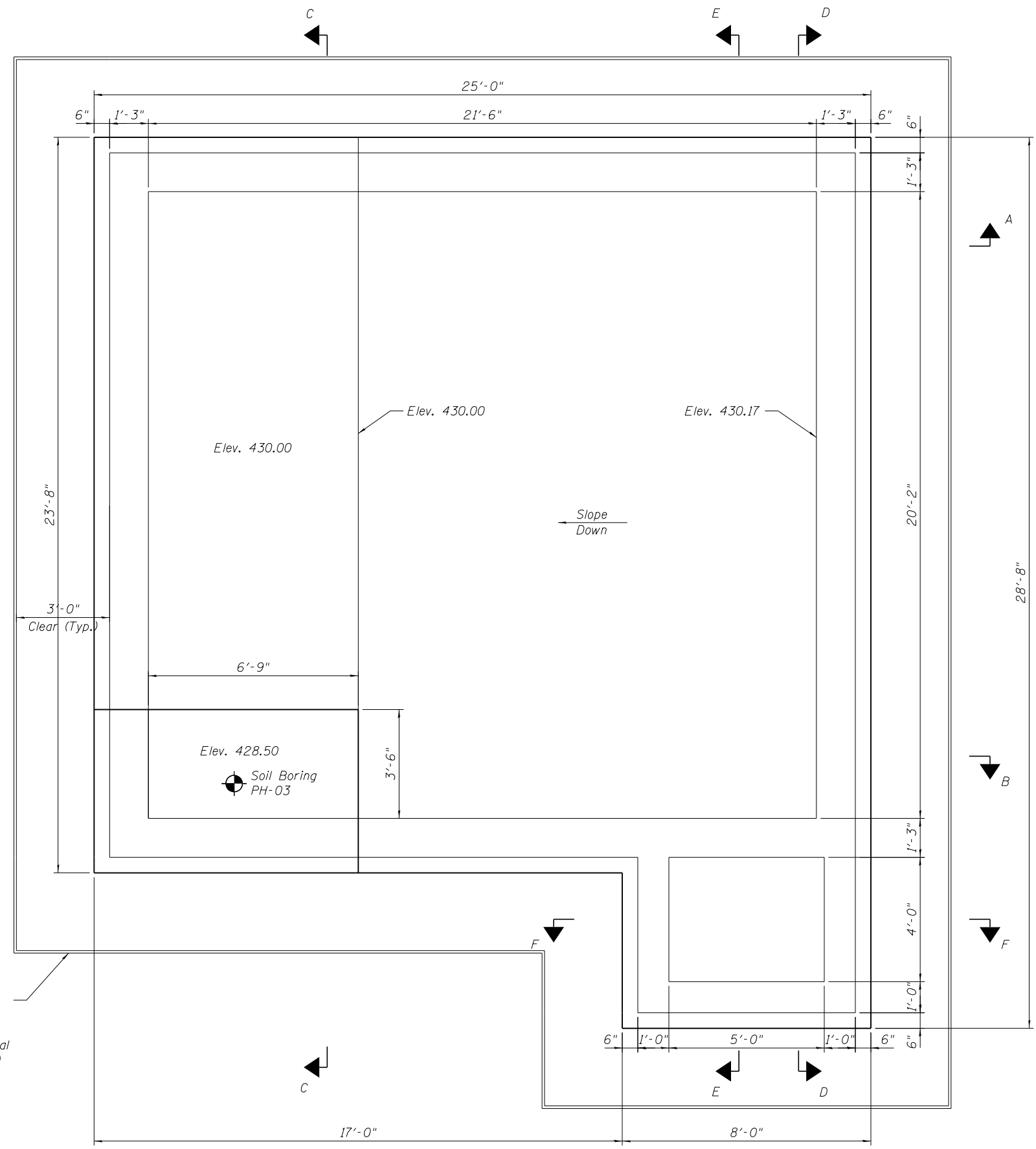
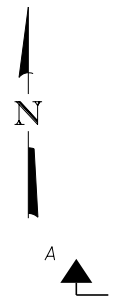
SYMBOLS

- Hydrophilic Self Expanding Rubber Strip Waterstop

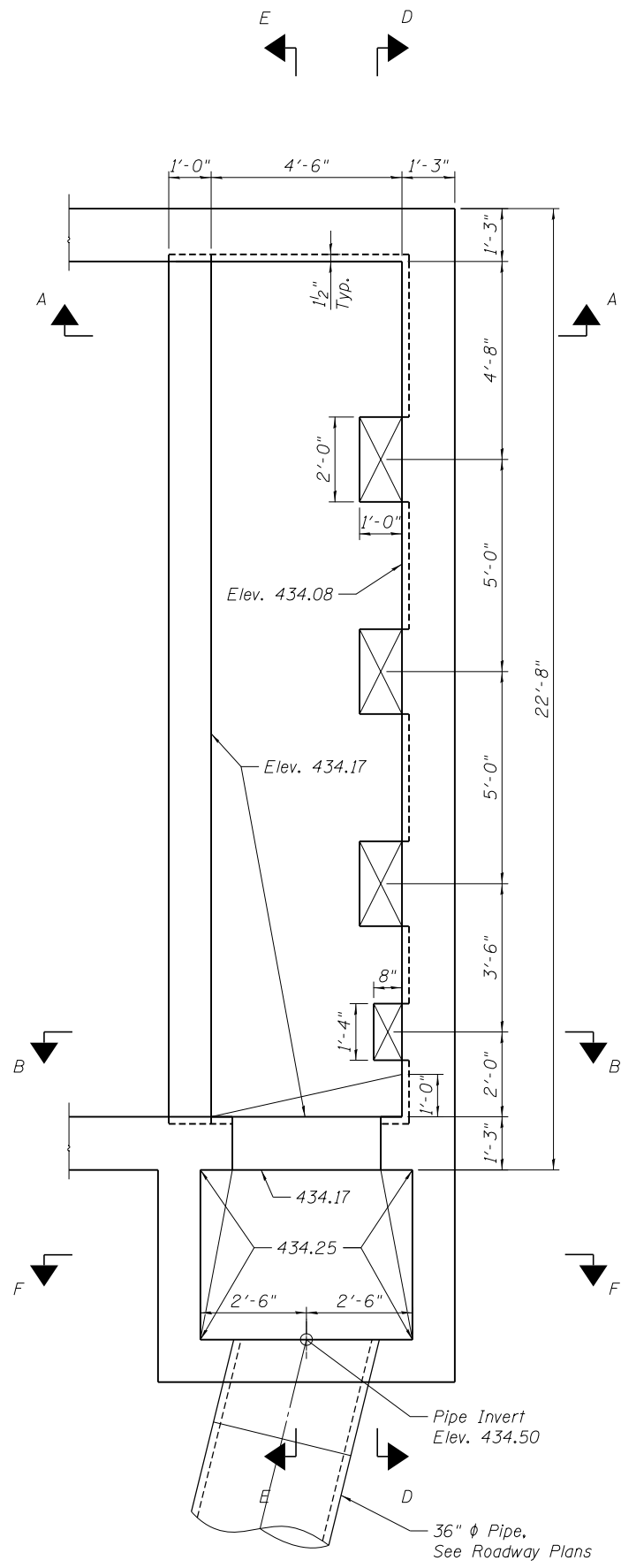
BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	125.1
Reinforcement Bars, Epoxy Coated	Pound	42780
Braced Excavation (Special)	Cu. Yd.	463.0
Seal Coat Concrete	Cu. Yd.	103.0

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 DATE = 8/5/2014
 DESIGNED - VCP
 CHECKED - SS
 REVISIONS -
 PLOT SCALE =
 DRAWN - STD
 REVISIONS -
 PLOT DATE
 CHECKED - VCP
 REVISIONS -



WET WELL PLAN



INLET CHANNEL PLAN

- Notes:
1. See Sheet S-04 for Section A-A and Section B-B
 2. See Sheet S-05 for Section C-C and Section F-F
 3. See Sheet S-06 for Section D-D
 4. See Sheet S-07 for Section E-E

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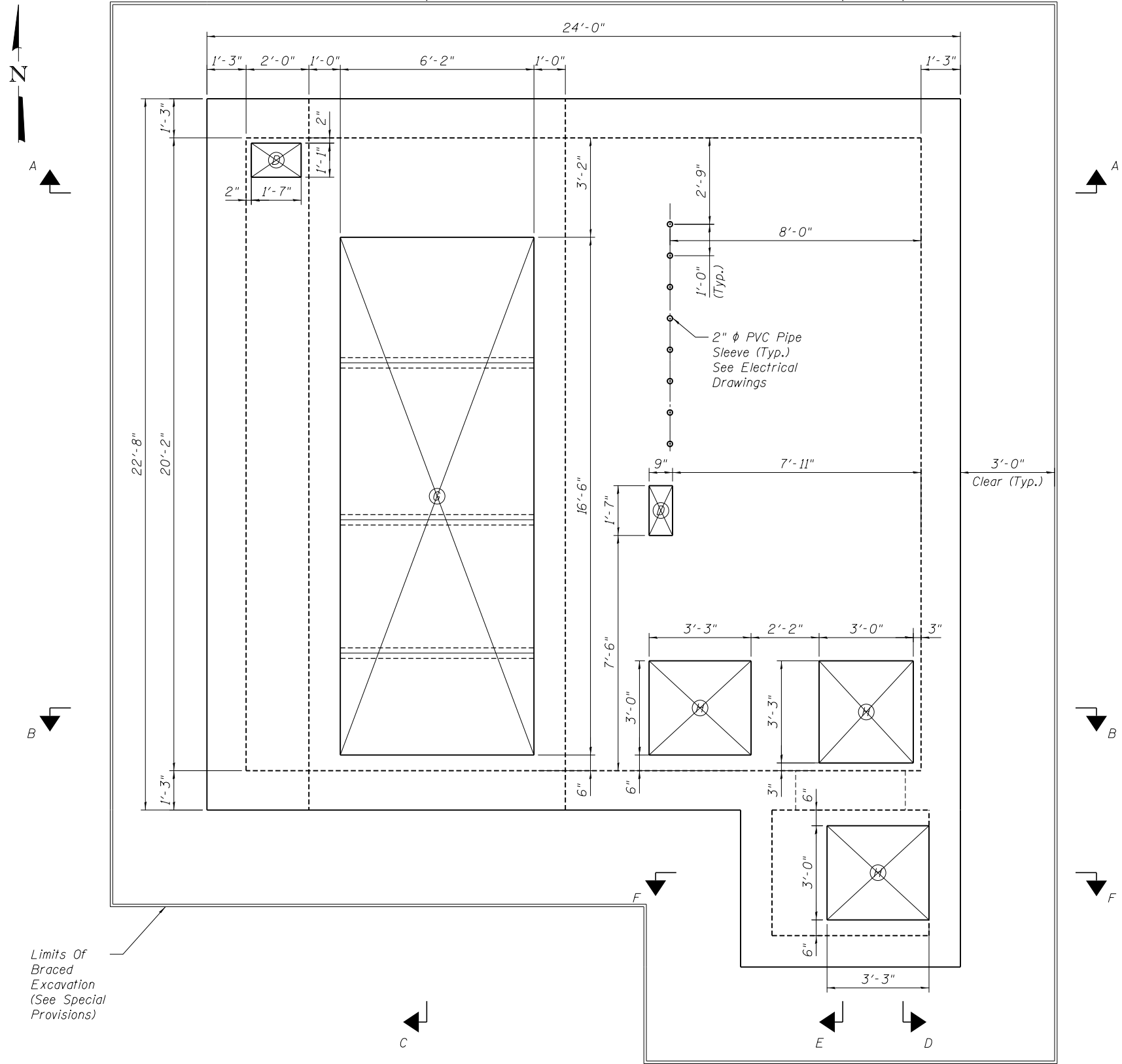
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION


IL-104 PUMP STATION
STRUCTURAL PLAN - WET WELL FLOOR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	604
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

SHEET NO. S-02 OF 22 SHEETS

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 Floor Openings
 D = Duct, See Mechanical Plans
 G = Grating, See sheet S-21
 H = Hatch, See Architectural Plans

GROUND FLOOR PLAN

Limits Of Braced Excavation (See Special Provisions)

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
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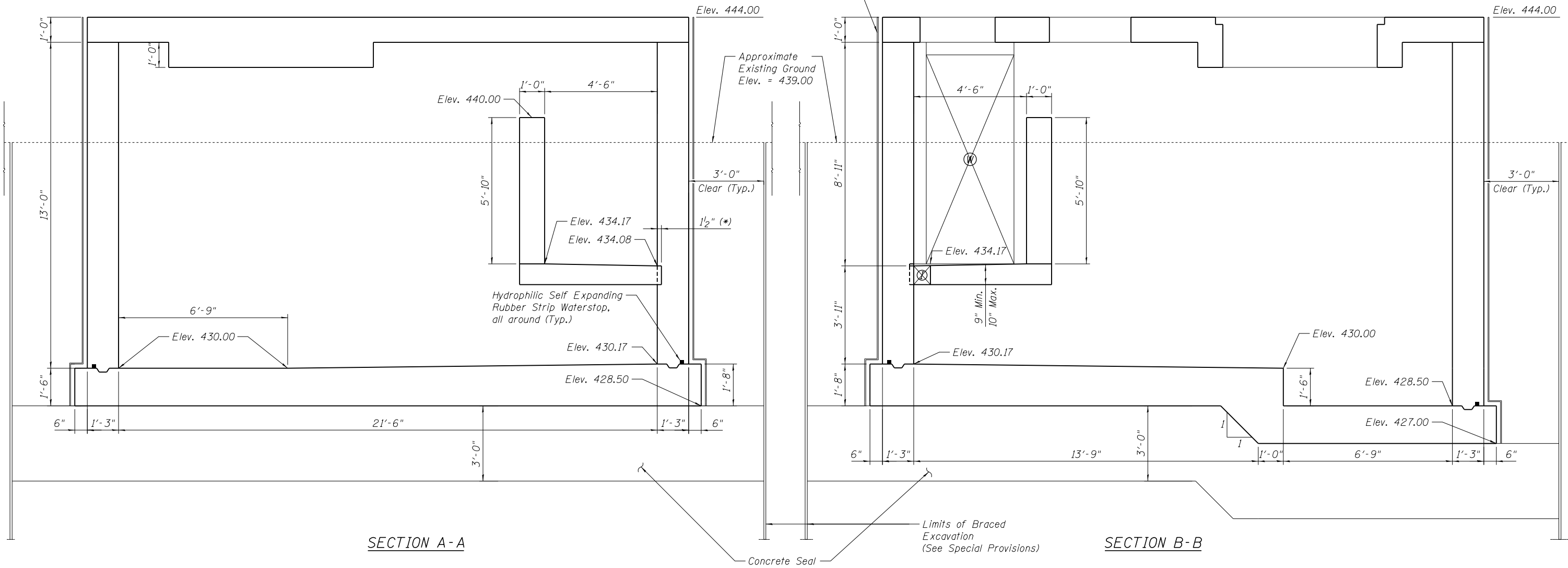
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
STRUCTURAL PLAN - GROUND FLOOR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	605
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

SHEET NO. S-03 OF 22 SHEETS

Limits of Sheet Waterproofing Membrane System with Protection Board; typical all around. (Cost included with Pump Station General Work)



SECTION A-A

SECTION B-B



Structure Openings
I : Inlet Floor
W : Wall

(*) Blockout for Inlet slab, except at Inlet Floor openings

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

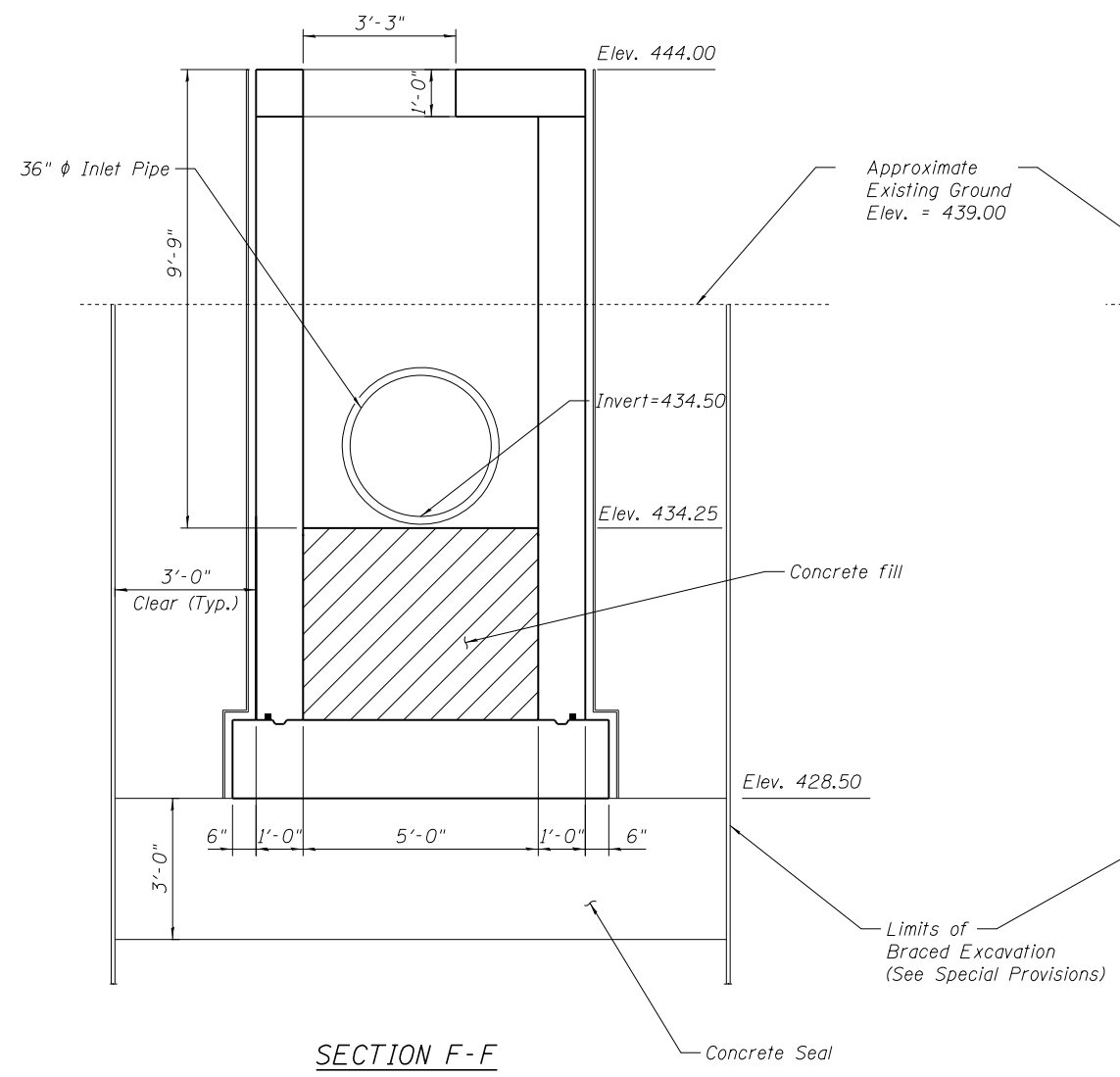
IL-104 PUMP STATION
STRUCTURAL SECTIONS
1 OF 4

SHEET NO. S-04 OF 22 SHEETS

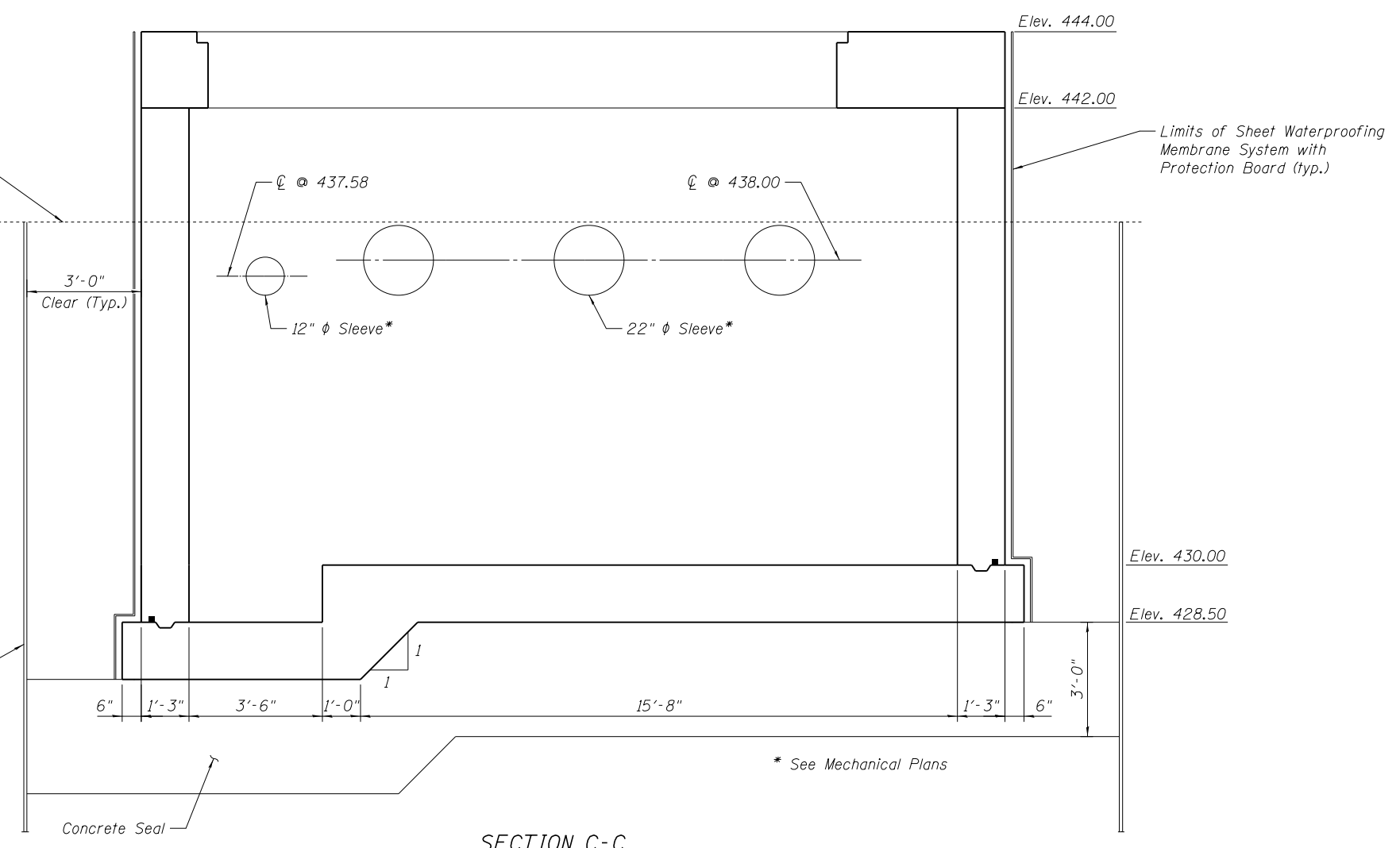
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CONTRACT NO. 72B58				

ILLINOIS FED. AID PROJECT

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SECTION F-F



SECTION C-C

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

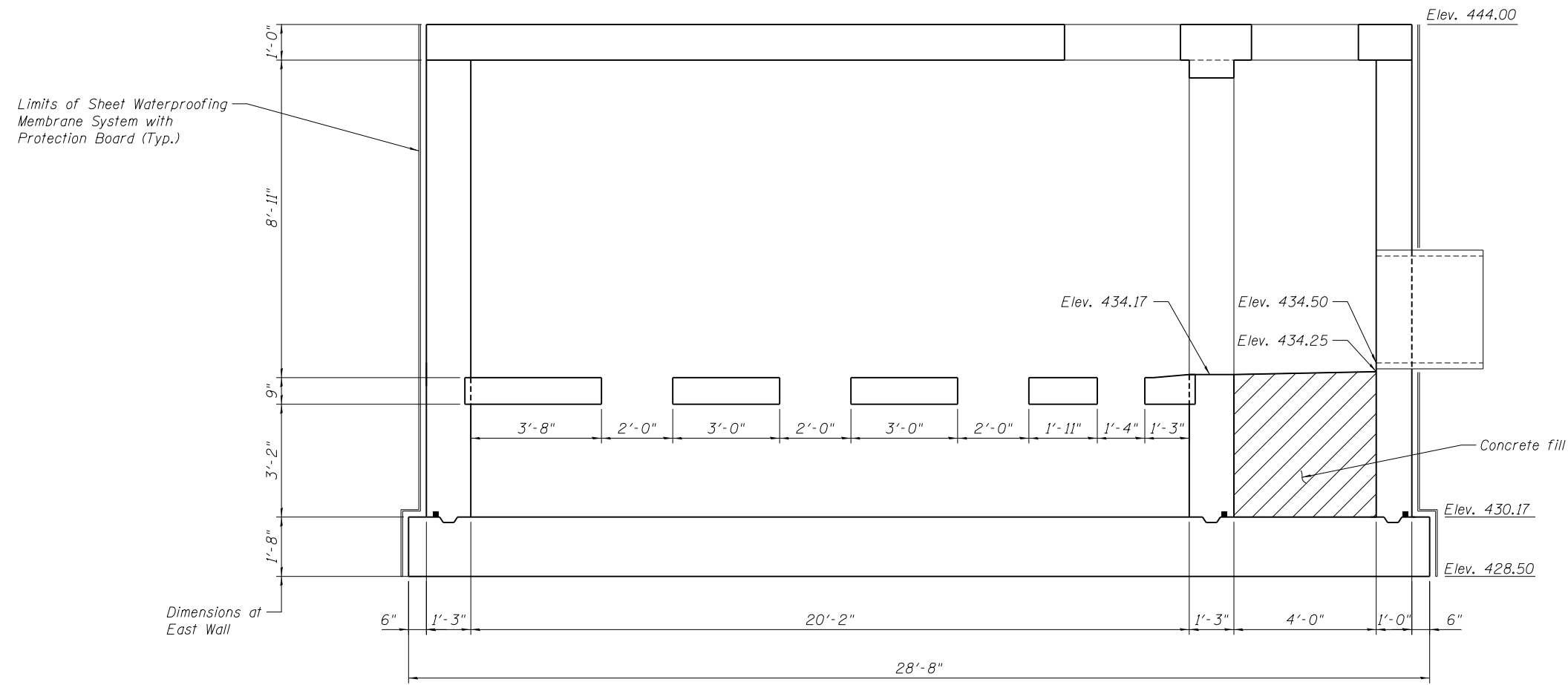
IL-104 PUMP STATION
STRUCTURAL SECTIONS
2 OF 4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	607
CONTRACT NO. 72B58				

SHEET NO. S-05 OF 22 SHEETS

ILLINOIS FED. AID PROJECT

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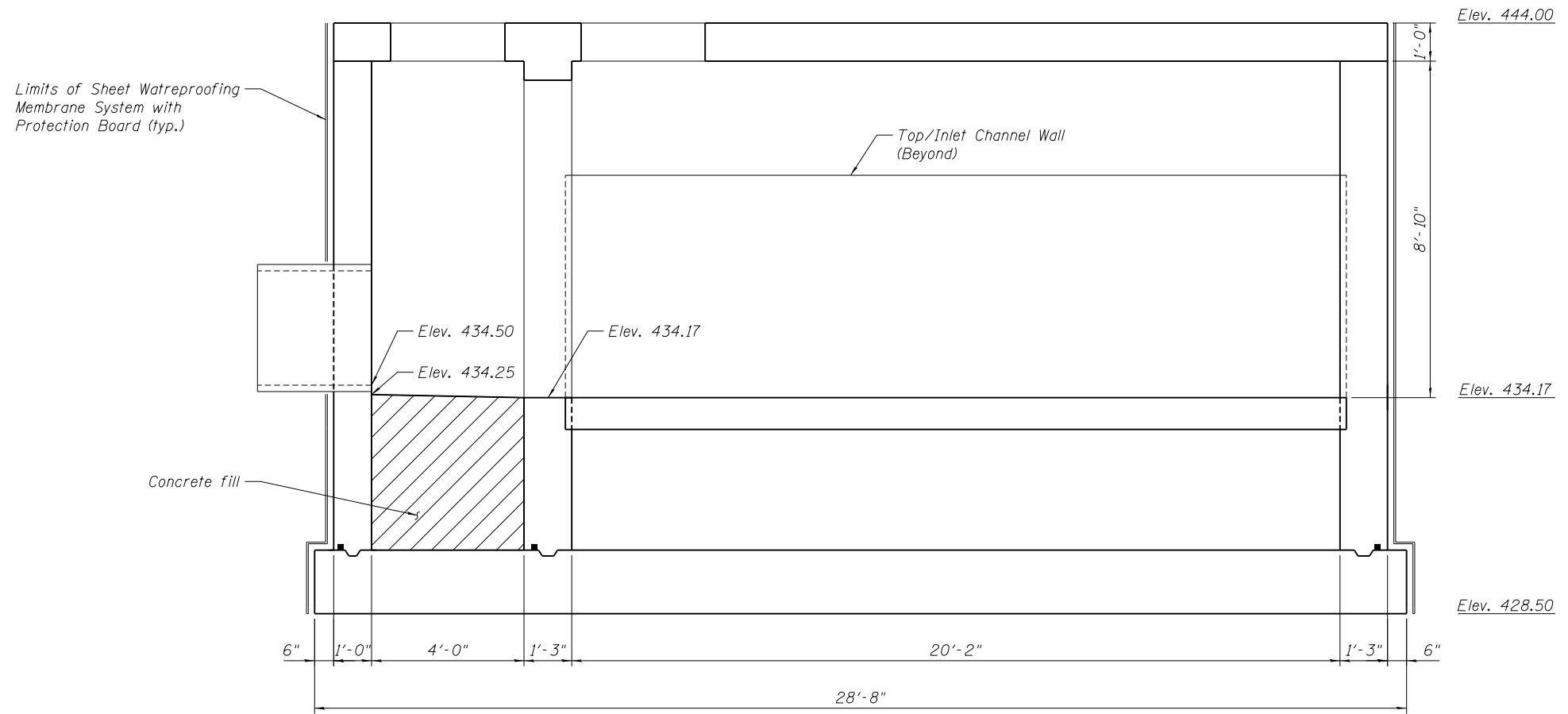


SECTION D-D

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL-104 PUMP STATION STRUCTURAL SECTIONS 3 OF 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE =	CHECKED - VCP	REVISED -			SHEET NO. S-06 OF 22 SHEETS					
					ILLINOIS FED. AID PROJECT						

exp U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

\\VAL\SUNM\72B58-001-BORDER.DGN, \\PMPSTAI\72B58-001-OPE.DGN
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SECTION E-E

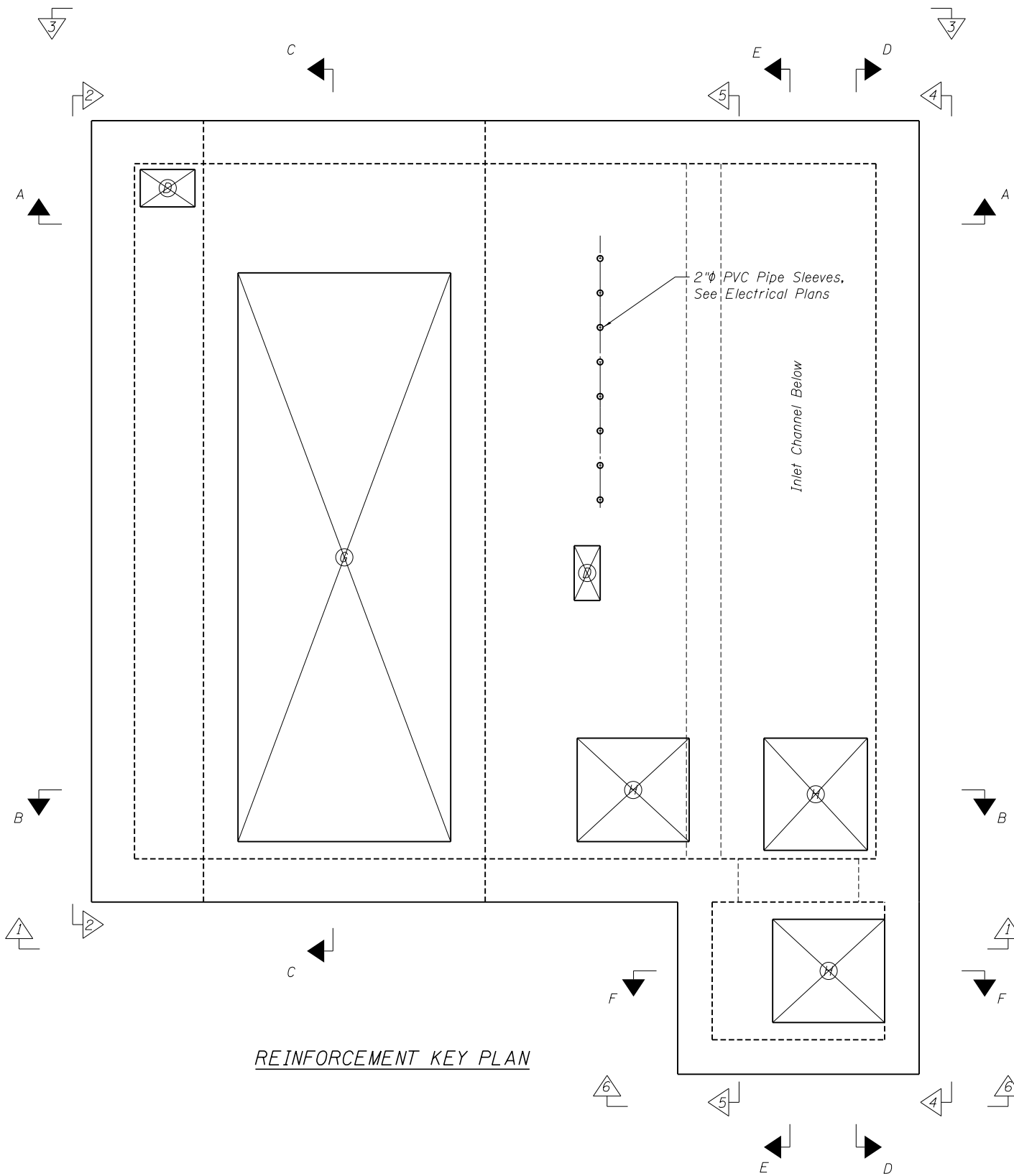
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	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
STRUCTURAL SECTIONS
4 OF 4

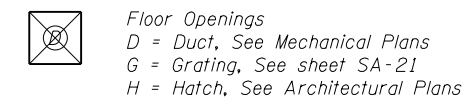
SHEET NO. S-07 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	609
				CONTRACT NO. 72B58
ILLINOIS FED. AID PROJECT				



Notes:

1. See Sheet S-11 for Section A-A and Section B-B
2. See Sheet S-12 for Section C-C and Section F-F
3. See Sheet S-13 for Section D-D
4. See Sheet S-14 for Section E-E
5. See Sheet S-15 for Elevation 1 and Elevation 6
6. See Sheet S-16 for Elevation 2
7. See Sheet S-17 for Elevation 3
8. See Sheet S-18 for Elevation 4
9. See Sheet S-19 for Elevation 5
9. See Sheet S-20 for Corner Reinforcement Details



REINFORCEMENT KEY PLAN

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FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
exp U.S. Services Inc. Chicago, IL	PLOT SCALE =	DRAWN - STD	REVISED -
BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	PLOT DATE =	CHECKED - VCP	REVISED -

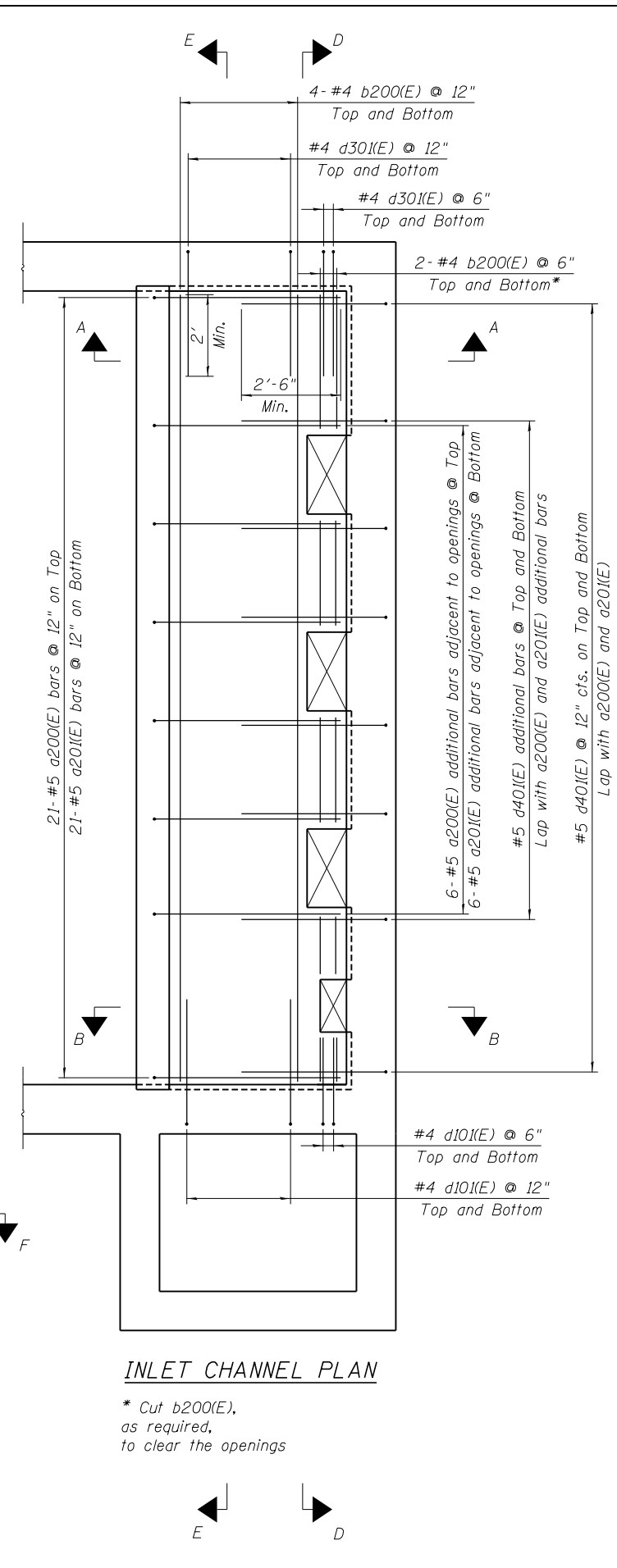
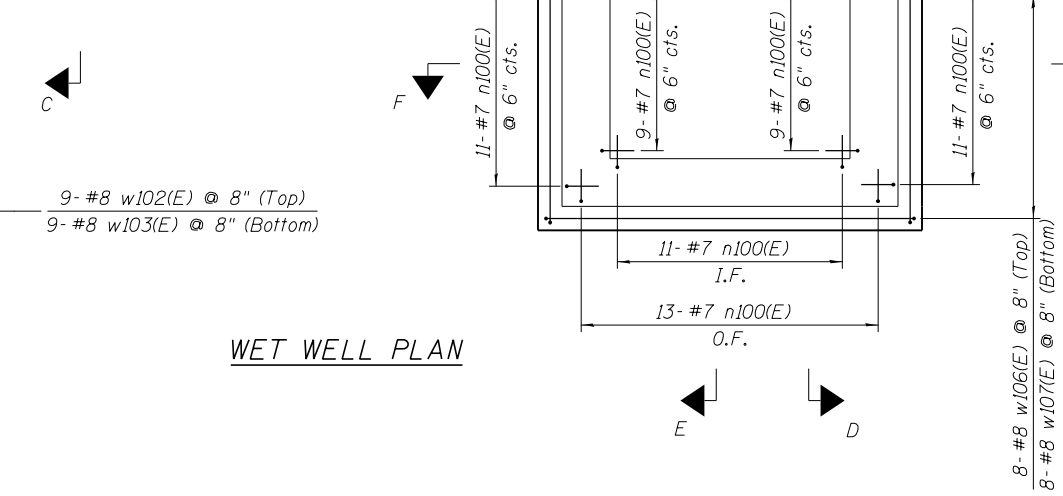
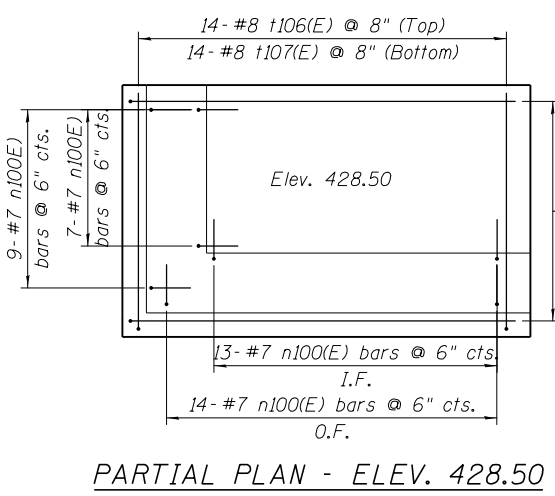
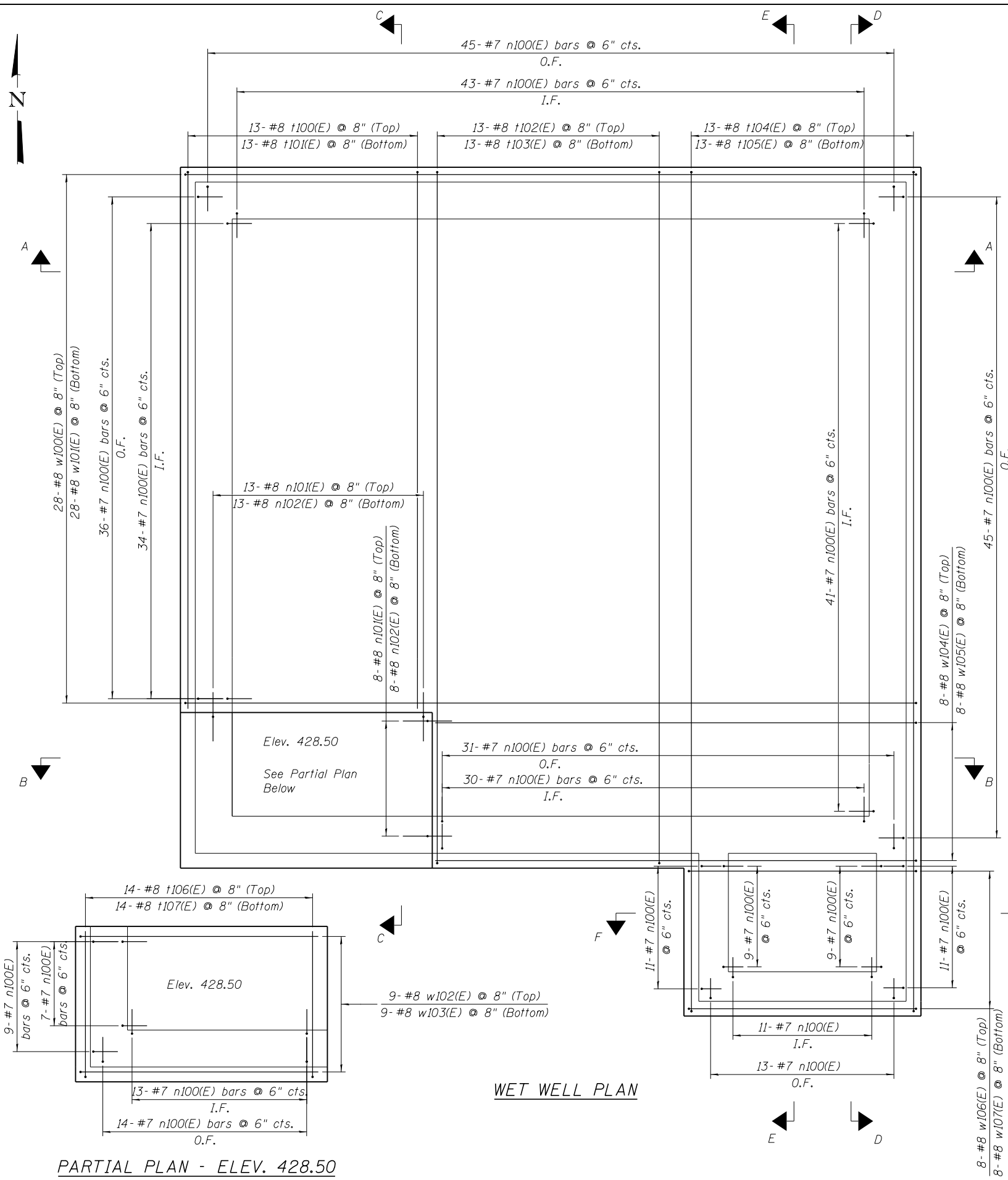
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
REINFORCEMENT DETAILS - KEY PLAN**

SHEET NO. S-08 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	610
				CONTRACT NO. 72B58
ILLINOIS FED. AID PROJECT				

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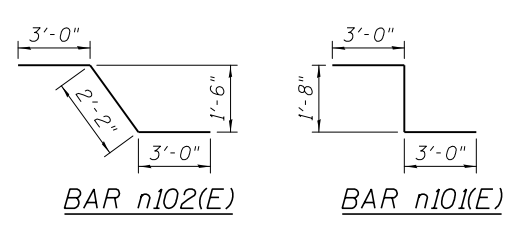
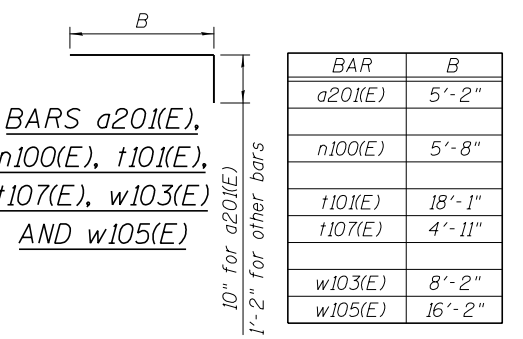
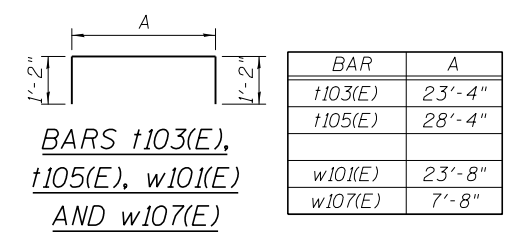


BAR LIST

Bar	No.	Size	Length	Shape
a200(E)	27	#5	5'-0"	—
a201(E)	27	#5	6'-0"	└
b200(E)	12	#4	19'-10"	—
n100(E)	412	#7	6'-10"	└
n101(E)	21	#8	7'-8"	└
n102(E)	21	#8	8'-2"	└
t100(E)	13	#8	18'-1"	—
t101(E)	13	#8	19'-3"	└
t102(E)	13	#8	23'-4"	—
t103(E)	13	#8	25'-8"	└
t104(E)	13	#8	28'-4"	—
t105(E)	13	#8	30'-8"	└
t106(E)	14	#8	4'-11"	—
t107(E)	14	#8	6'-1"	└
w100(E)	28	#8	24'-8"	—
w101(E)	28	#8	27'-0"	└
w102(E)	9	#8	8'-2"	—
w103(E)	9	#8	9'-4"	└
w104(E)	8	#8	16'-2"	—
w105(E)	8	#8	17'-4"	└
w106(E)	8	#8	7'-8"	—
w107(E)	8	#8	10'-0"	└

BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	39.9
Reinforcement Bars, Epoxy Coated	Pound	17940



INLET CHANNEL PLAN

* Cut b200(E), as required, to clear the openings

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
	PLOT DATE	CHECKED - VCP	REVISED -

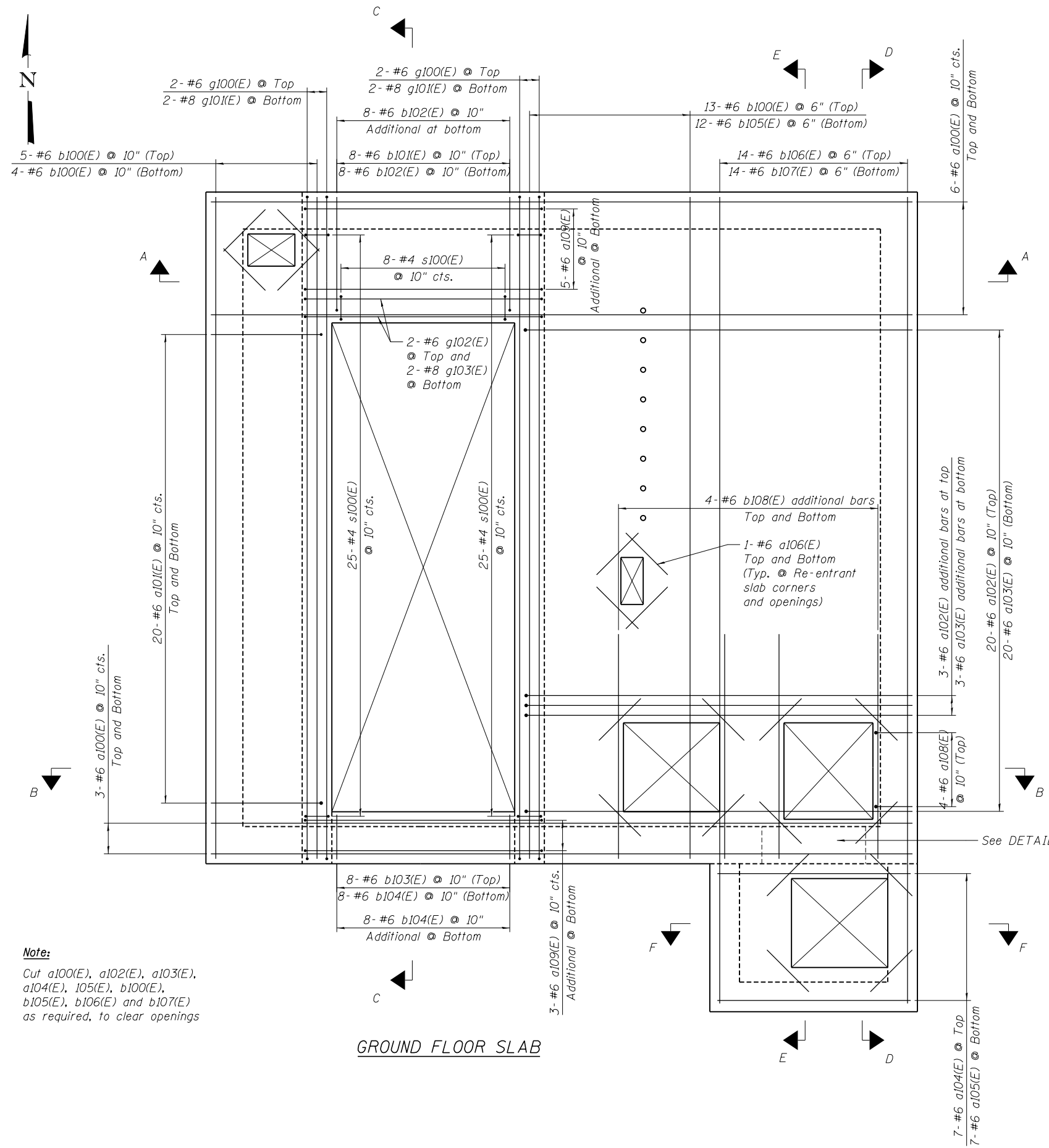
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
REINFORCEMENT DETAILS - WET WELL FLOOR SLAB**

SHEET NO. S-09 OF 22 SHEETS

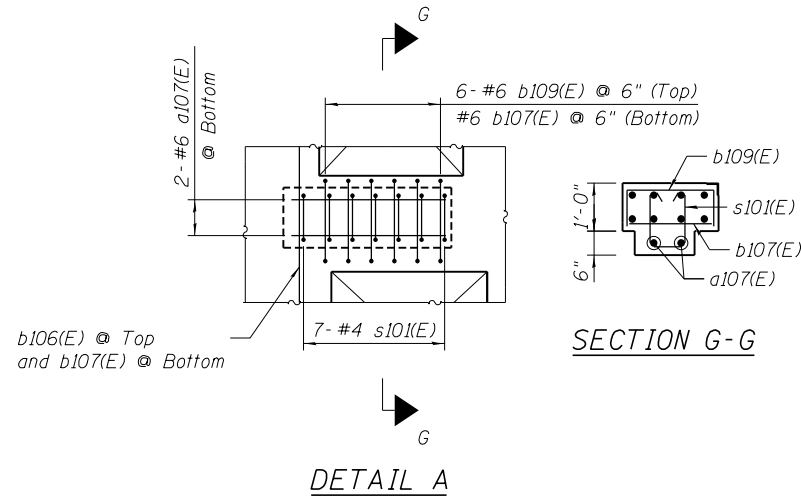
F.A.P. RTE. 745	SECTION 123B-2	COUNTY MORGAN	TOTAL SHEETS 782	SHEET NO. 611
CONTRACT NO. 72B58				ILLINOIS FED. AID PROJECT

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 7-2014, 15:03:10



Note:
 Cut a100(E), a102(E), a103(E), a104(E), 105(E), b100(E), b105(E), b106(E) and b107(E) as required, to clear openings

GROUND FLOOR SLAB



DETAIL A

A AND B DIMENSIONS

BAR	A	B
a101(E)	3'-9"	9"
a102(E)	13'-1"	9"
a108(E)	1'-2"	8"
b101(E)	3'-6"	9"
b102(E)	4'-0"	9"
b105(E)	22'-4"	9"
b107(E)	27'-4"	9"

BARS a101(E), a102(E), a108(E), b101(E), b102(E), b105(E) AND b107(E)

C AND D DIMENSIONS

BAR	C	D
a105(E)	6'-8"	9"
a109(E)	7'-10"	9"
b104(E)	1'-5"	1'-0"
b109(E)	1'-8"	9"
g100(E)	22'-4"	1'-0"
g102(E)	7'-10"	1'-0"

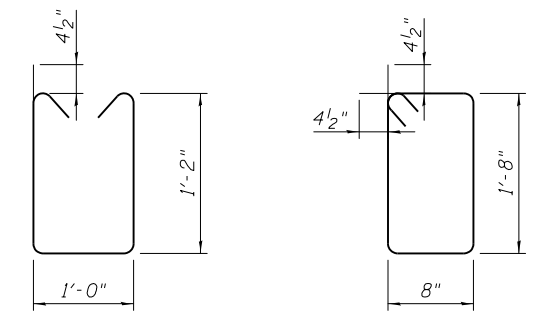
BARS a105(E), a109(E), b104(E), b109(E), g100(E) AND g102(E)

BAR LIST

Bar	No.	Size	Length	Shape
a100(E)	18	#6	23'-8"	—
a101(E)	40	#6	4'-6"	┌
a102(E)	23	#6	13'-10"	┌
a103(E)	23	#6	13'-1"	┌
a104(E)	7	#6	6'-8"	—
a105(E)	7	#6	8'-2"	┌
a106(E)	40	#6	2'-0"	—
a107(E)	2	#6	3'-2"	—
a108(E)	4	#6	1'-10"	┌
a109(E)	8	#6	9'-4"	┌
b100(E)	22	#6	22'-4"	—
b101(E)	8	#6	4'-3"	┌
b102(E)	16	#6	4'-9"	┌
b103(E)	8	#6	1'-5"	—
b104(E)	16	#6	3'-2"	┌
b105(E)	12	#6	23'-1"	┌
b106(E)	14	#6	27'-4"	—
b107(E)	14	#6	28'-1"	┌
b108(E)	8	#6	7'-6"	—
b109(E)	6	#6	3'-2"	┌
g100(E)	4	#6	24'-4"	┌
g101(E)	4	#8	22'-4"	—
g102(E)	2	#6	9'-10"	┌
g103(E)	2	#8	7'-10"	—
s100(E)	58	#4	5'-5"	┌
s101(E)	7	#4	4'-1"	┌

BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	19.5
Reinforcement Bars, Epoxy Coated	Pound	5630



BAR s101(E)

BAR s100(E)

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
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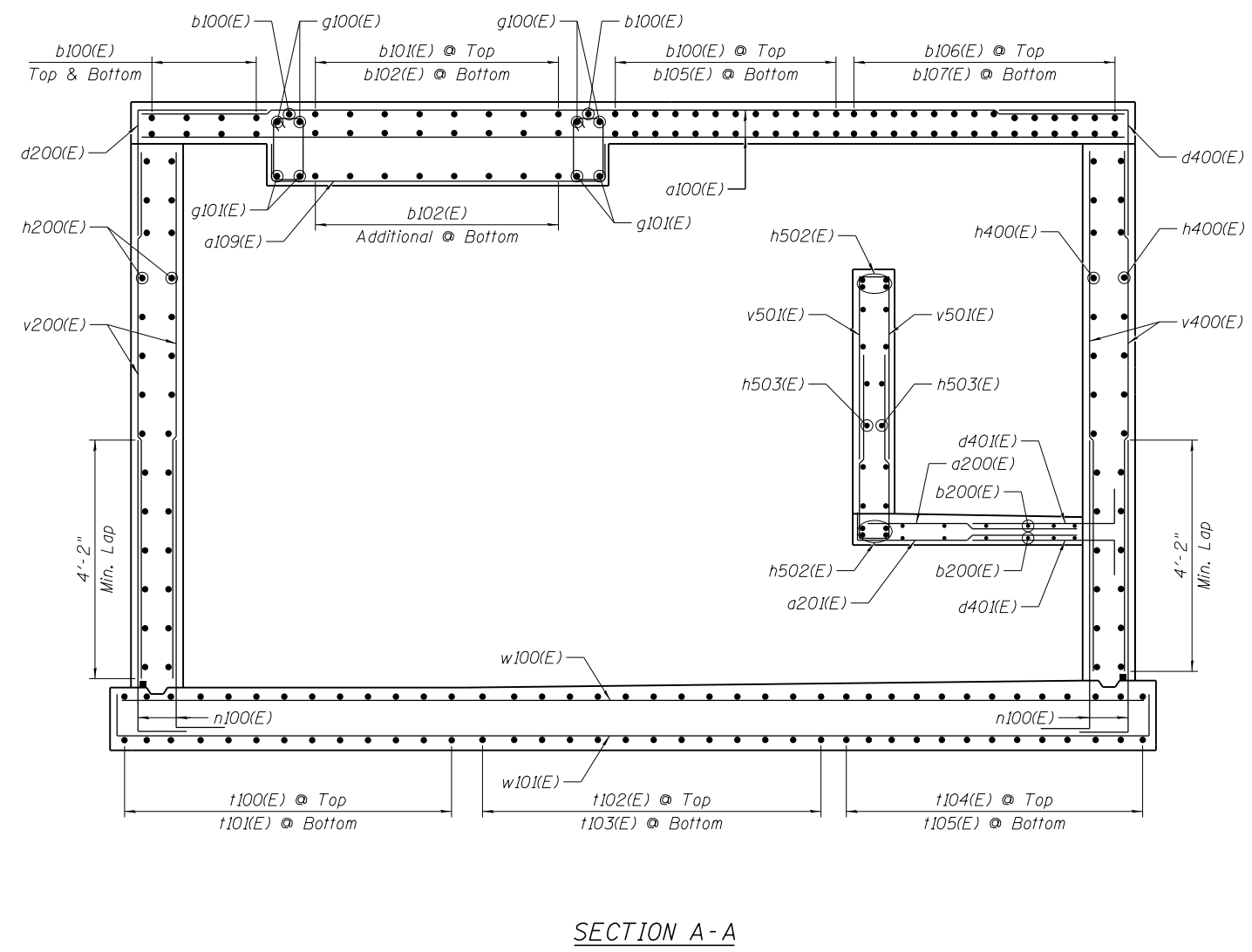
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
 REINFORCEMENT DETAILS - GROUND FLOOR SLAB**

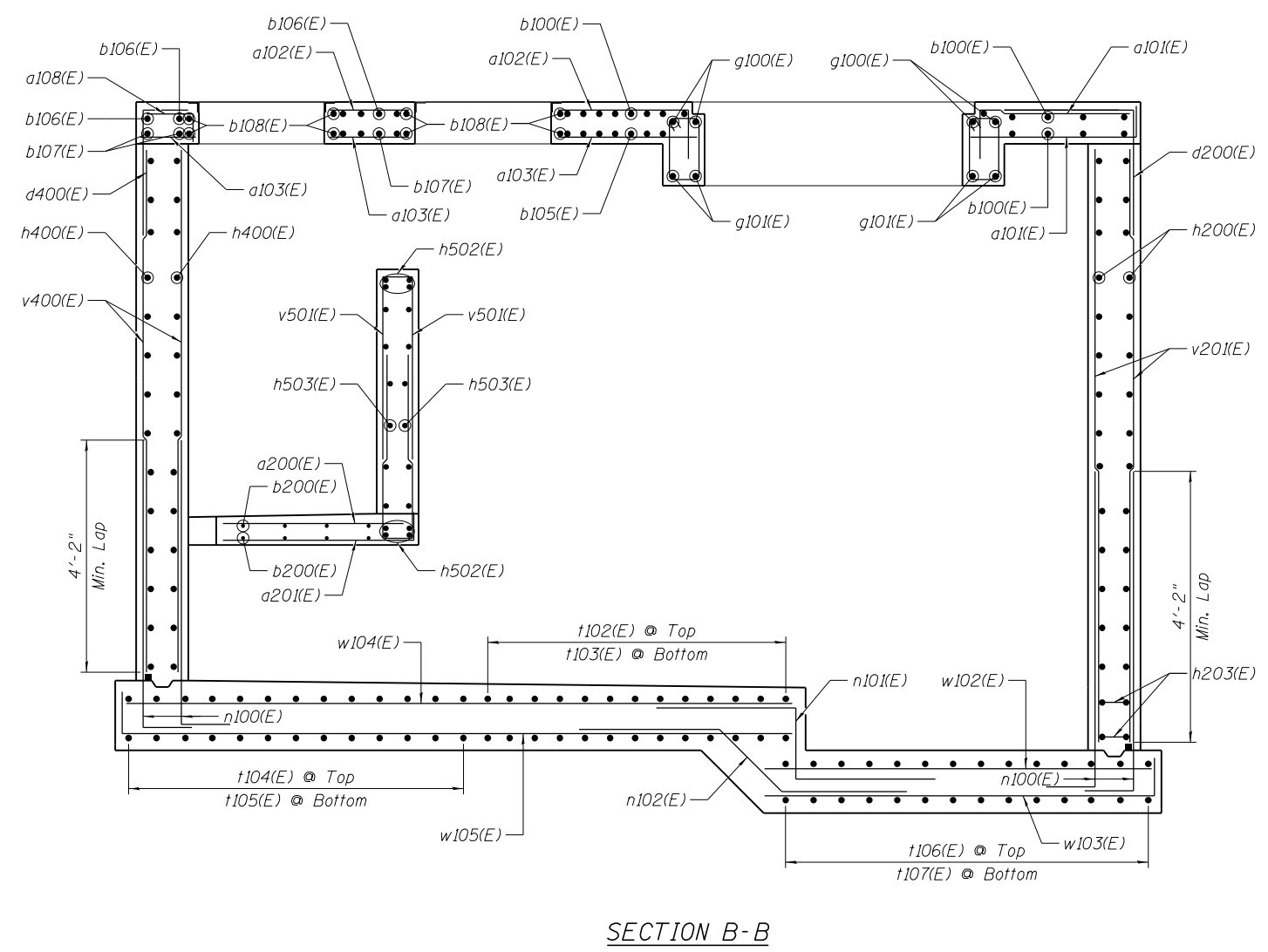
SHEET NO. S-10 OF 22 SHEETS

F.A.P. RTE. 745	SECTION 123B-2	COUNTY MORGAN	TOTAL SHEETS 782	SHEET NO. 612
CONTRACT NO. 72B58				ILLINOIS FED. AID PROJECT

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SECTION A-A



SECTION B-B

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
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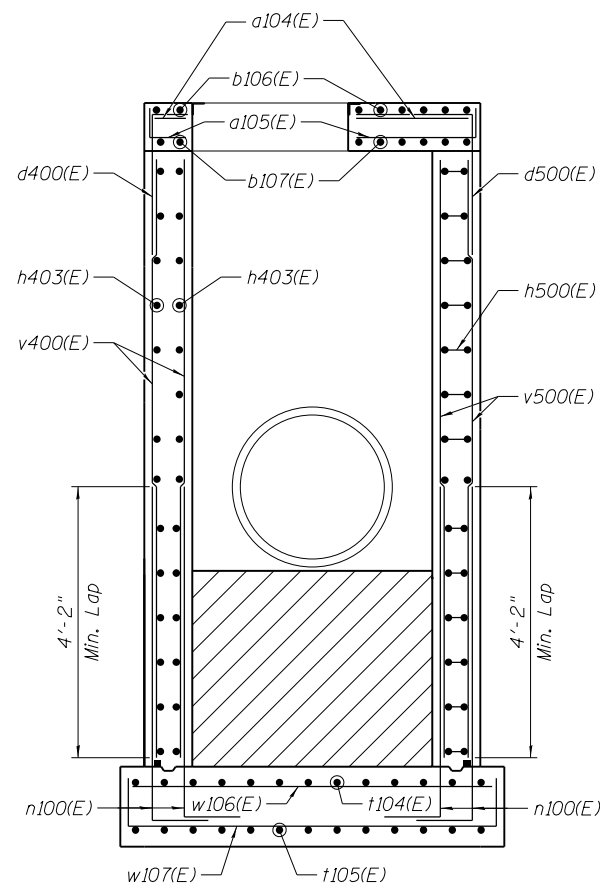
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
REINFORCEMENT DETAILS - SECTIONS
1 OF 4

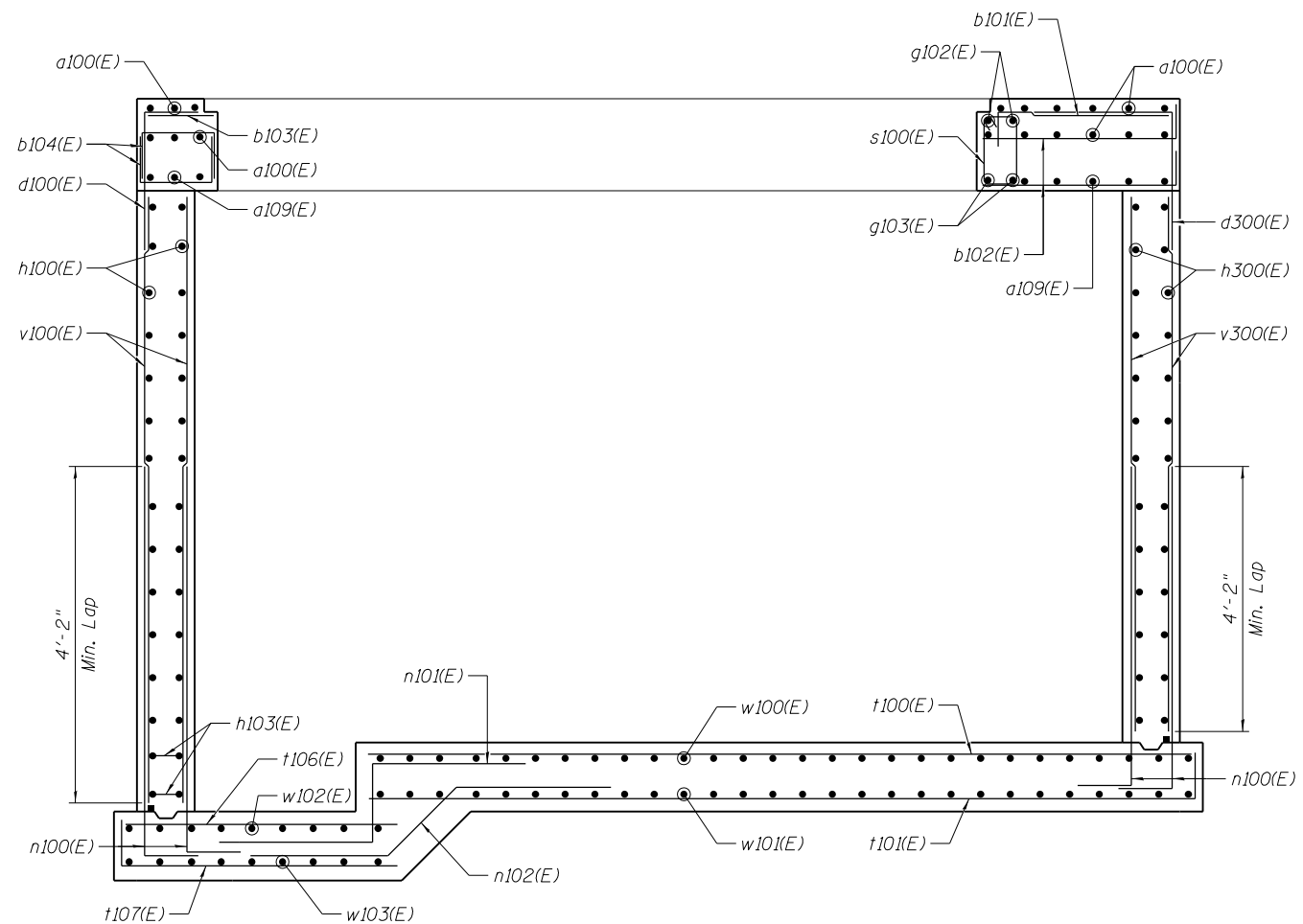
SHEET NO. S-11 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	613
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

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SECTION F-F



SECTION C-C

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

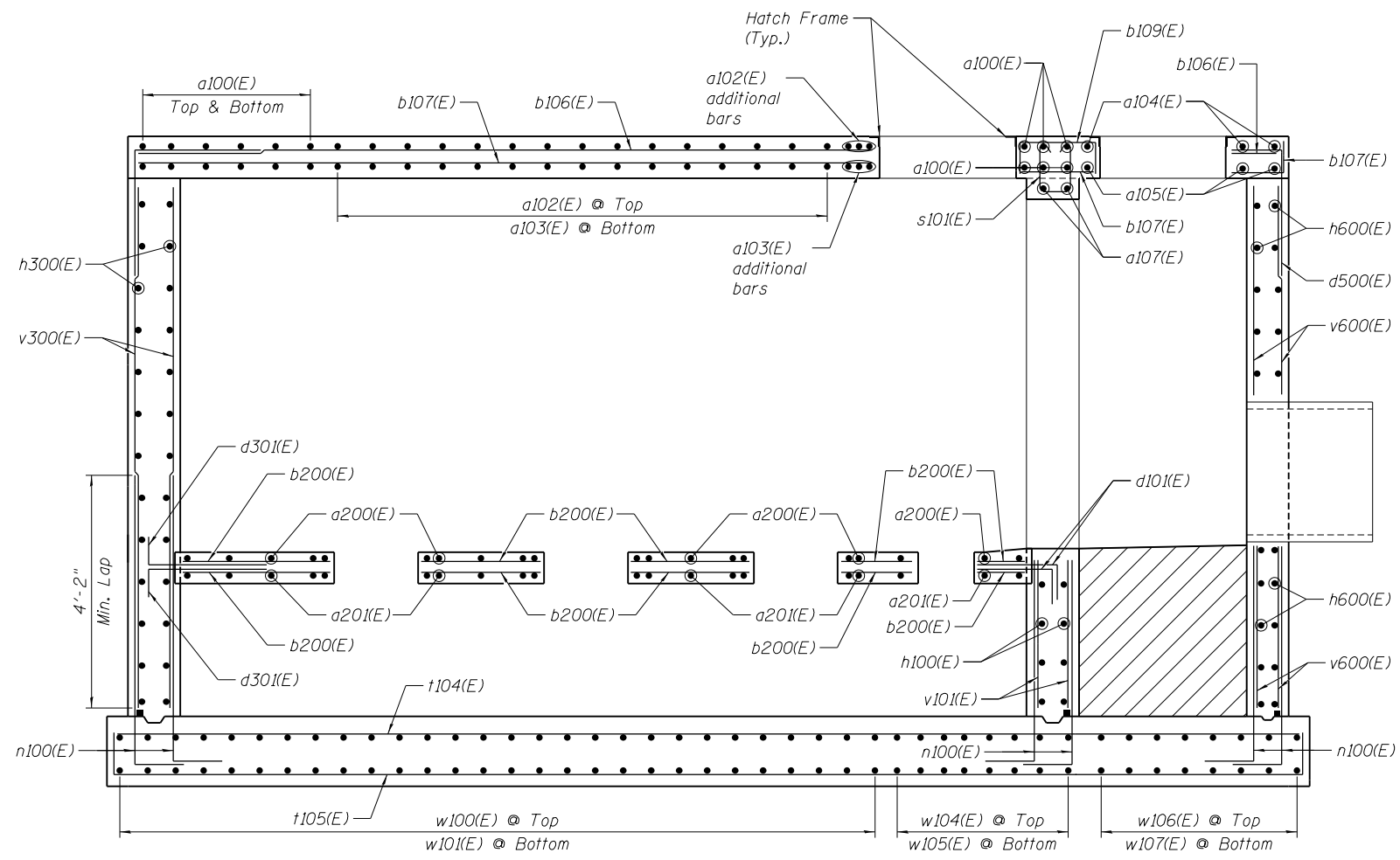
**IL-104 PUMP STATION
 REINFORCEMENT DETAILS - SECTIONS
 2 OF 4**

SHEET NO. S-12 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	614
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				



\\VALLS\NUM-72B58-001-BORDER.DGN, \\PMP\STAL-72B58-001-MISCDETAIL.DGN, \\PMP\STAL-72B58-001-MISCDETAIL_SHT.DGN
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SECTION D-D

Note:
 Cut a102(E), a103(E), a200(E), a201(E), b106(E), b107(E), b200(E), d500(E), h100(E), h600(E), v101(E) and v600(E), as required, to clear the openings

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

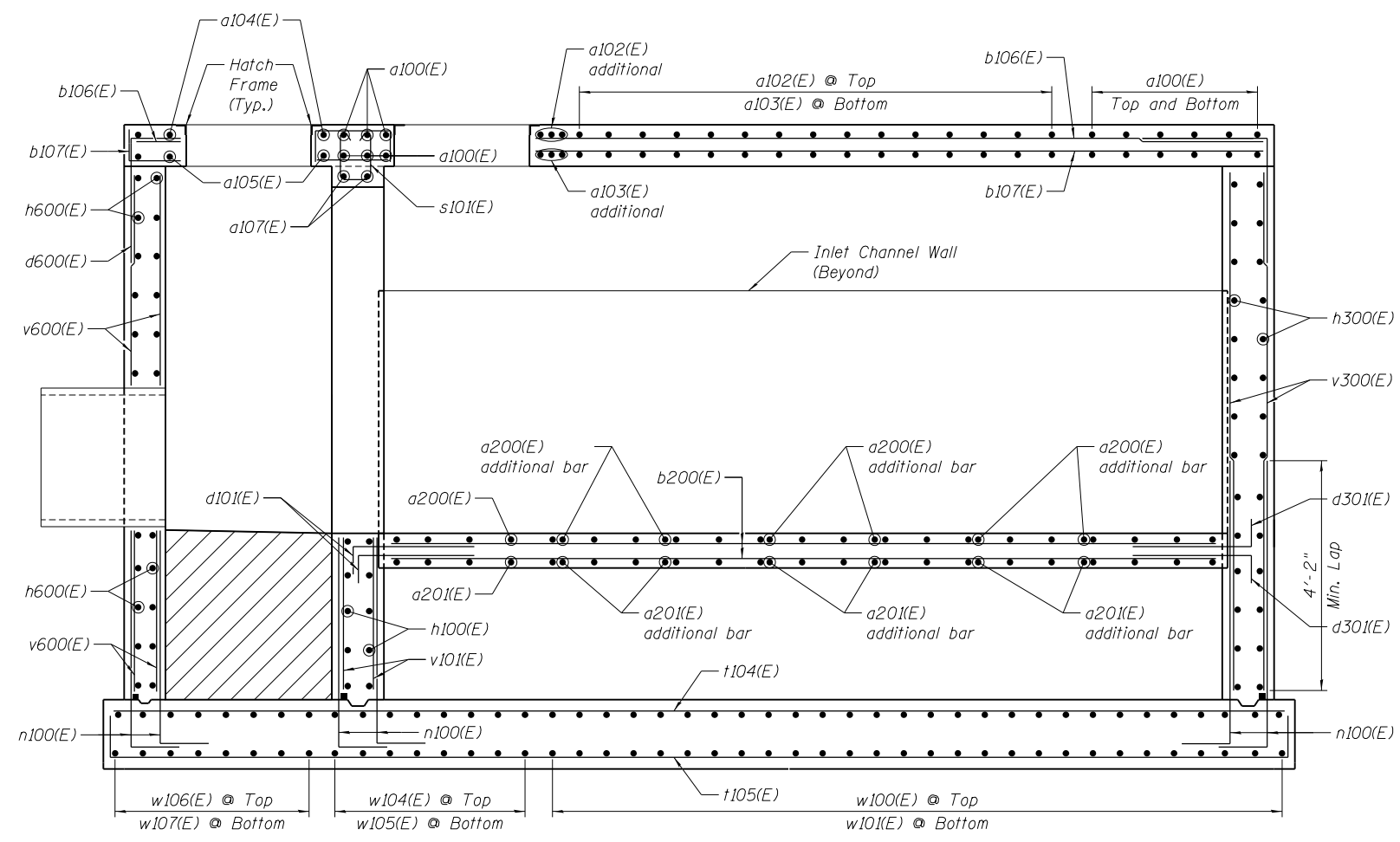
IL-104 PUMP STATION
 REINFORCEMENT DETAILS - SECTIONS
 3 OF 4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	615
CONTRACT NO. 72B58				

SHEET NO. S-13 OF 22 SHEETS

ILLINOIS FED. AID PROJECT

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 exp U.S. Services Inc. Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY



SECTION E-E

Note:
 Cut a102(E), a103(E), a200(E), a201(E), b107(E), b200(E), h100(E), h600(E), v101(E) and v600(E), as required, to clear the openings

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
	PLOT DATE =	CHECKED - VCP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
REINFORCEMENT DETAILS - SECTIONS
4 OF 4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	616
CONTRACT NO. 72B58				

BAR LIST

Bar	No.	Size	Length	Shape
d100(E)	25	#6	6'-0"	┌
d101(E)	12	#4	3'-8"	┌
d102(E)	8	#8	7'-8"	┌
d103(E)	12	#5	4'-6"	┌
d600(E)	14	#6	6'-0"	┌
h100(E)	28	#7	23'-8"	—
h101(E)	28	#7	8'-9"	—
h102(E)	28	#7	4'-0"	┌
h103(E)	4	#7	12'-5"	┌
h600(E)	28	#7	11'-4"	┌
h601(E)	8	#5	4'-0"	┌
v100(E)	15	#7	14'-2"	—
v101(E)	31	#7	12'-6"	—
v600(E)	14	#7	12'-6"	—

BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	17.1
Reinforcement Bars, Epoxy Coated	Pound	4450

A, B AND C DIMENSIONS

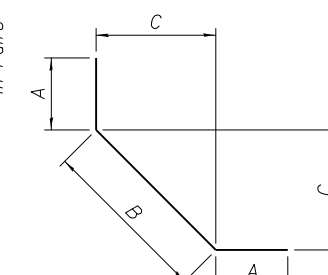
BAR	A	B	C
h102(E)	10"	2'-4"	1'-7 ³ / ₁₆ "
h601(E)	2'-0"	1'-0"	1'-4"

D AND E DIMENSIONS

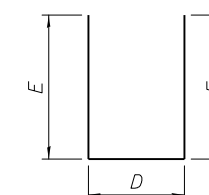
BAR	D	E
h101(E)	9"	4'-0"
h103(E)	9"	5'-10"
h600(E)	8"	5'-4"

F AND G DIMENSIONS

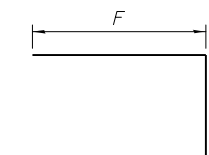
BAR	F	G
d100(E)	3'-0"	3'-0"
d101(E)	3'-0"	8"
d102(E)	6'-4"	1'-4"
d103(E)	3'-8"	10"
d600(E)	3'-0"	3'-0"



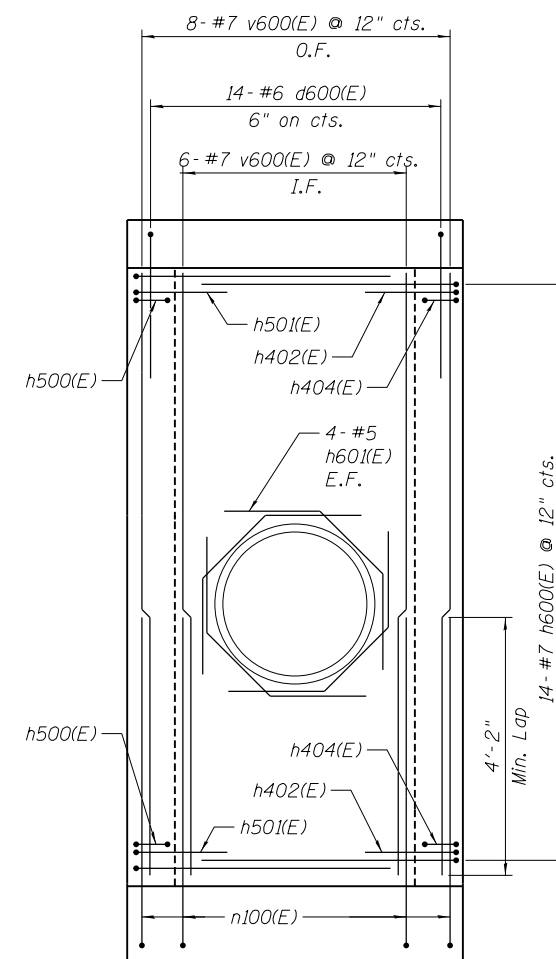
BARS h102(E) AND h601(E)



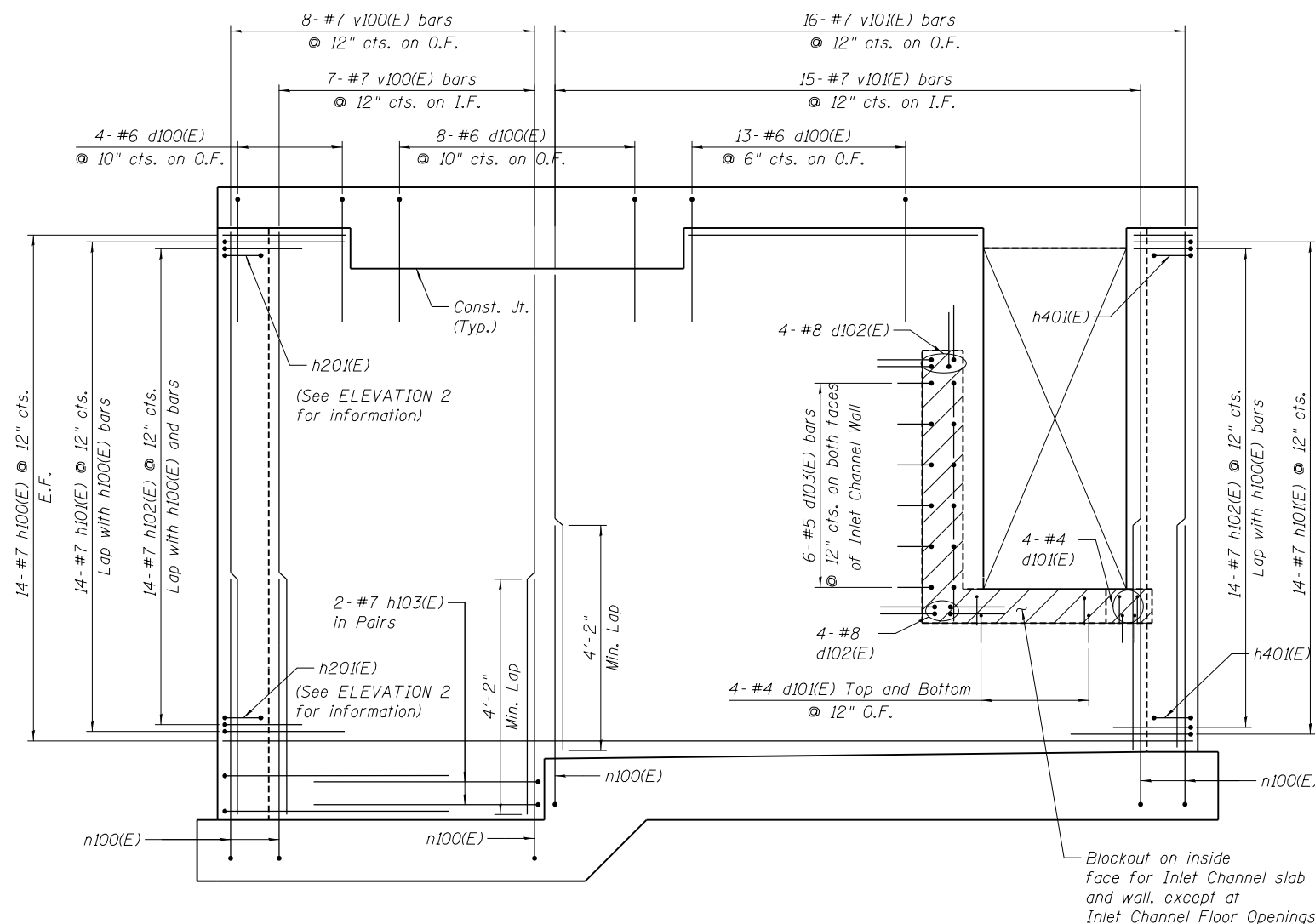
BARS h101(E), h103(E) AND h600(E)



BARS d100(E), d101(E), d102(E), d103(E) AND d600(E)



ELEVATION 6



ELEVATION 1 (SOUTH WALL)

Notes:

1. Cut h100(E), h101(E), h102(E), n100(E), v100(E) and v101(E), as required, to clear opening
2. Cut h600(E), n100(E) and v600(E), as required, to clear pipe

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FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
DATE = 8/5/2014	CHECKED - SS	REVISED -	
PLOT SCALE =	DRAWN - STD	REVISED -	
PLOT DATE =	CHECKED - VCP	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
REINFORCEMENT DETAILS - ELEVATIONS
1 OF 5**

SHEET NO. S-15 OF 22 SHEETS

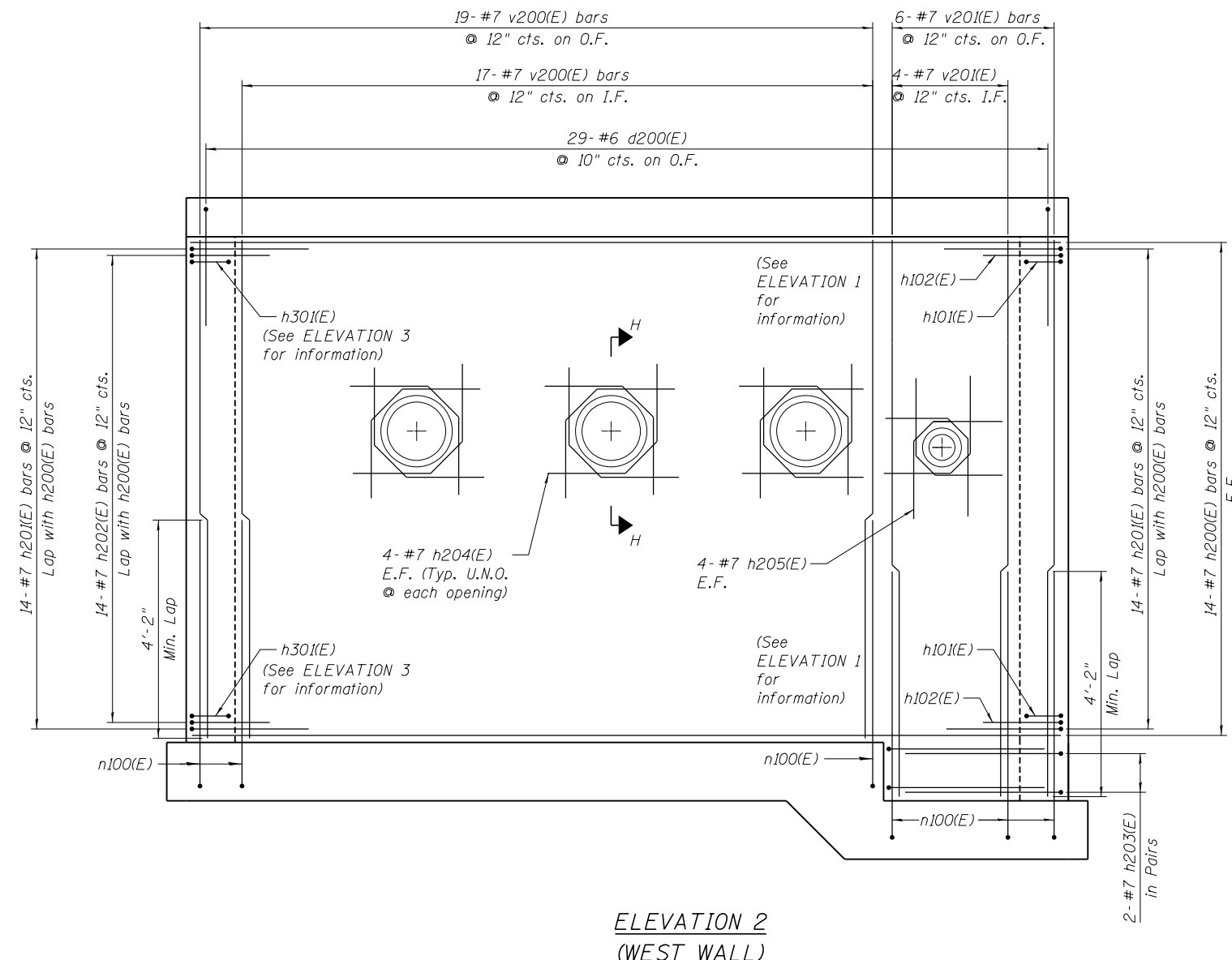
F.A.P. RTE. 745	SECTION 123B-2	COUNTY MORGAN	TOTAL SHEETS 782	SHEET NO. 617
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	

BAR LIST

Bar	No.	Size	Length	Shape
d200(E)	29	#6	6'-0"	└─┘
h200(E)	28	#7	22'-4"	—
h201(E)	28	#7	8'-9"	—
h202(E)	14	#7	4'-0"	└─┘
h203(E)	4	#7	9'-3"	└─┘
h204(E)	24	#7	5'-0"	└─┘
h205(E)	8	#7	4'-8"	└─┘
v200(E)	36	#7	12'-8"	—
v201(E)	10	#7	14'-2"	—

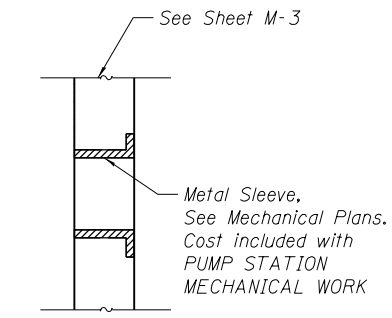
BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	12.8
Reinforcement Bars, Epoxy Coated	Pound	3770

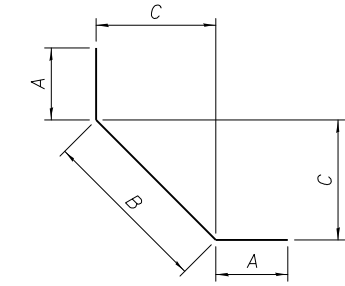


**ELEVATION 2
(WEST WALL)**

Note:
1. Cut h200(E), v200(E) and v201(E) bars, as required, to clear pipes.



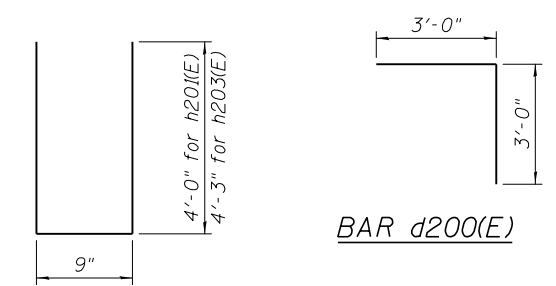
SECTION H-H



A, B AND C DIMENSIONS

BAR	A	B	C
h202(E)	10"	2'-4"	1'-7 ¹³ / ₁₆ "
h204(E)	2'-0"	1'-0"	1'-4"
h205(E)	2'-0"	8"	6"

**BARS h202(E),
h204(E) AND h205(E)**



**BARS h201(E)
AND h203(E)**

BAR d200(E)

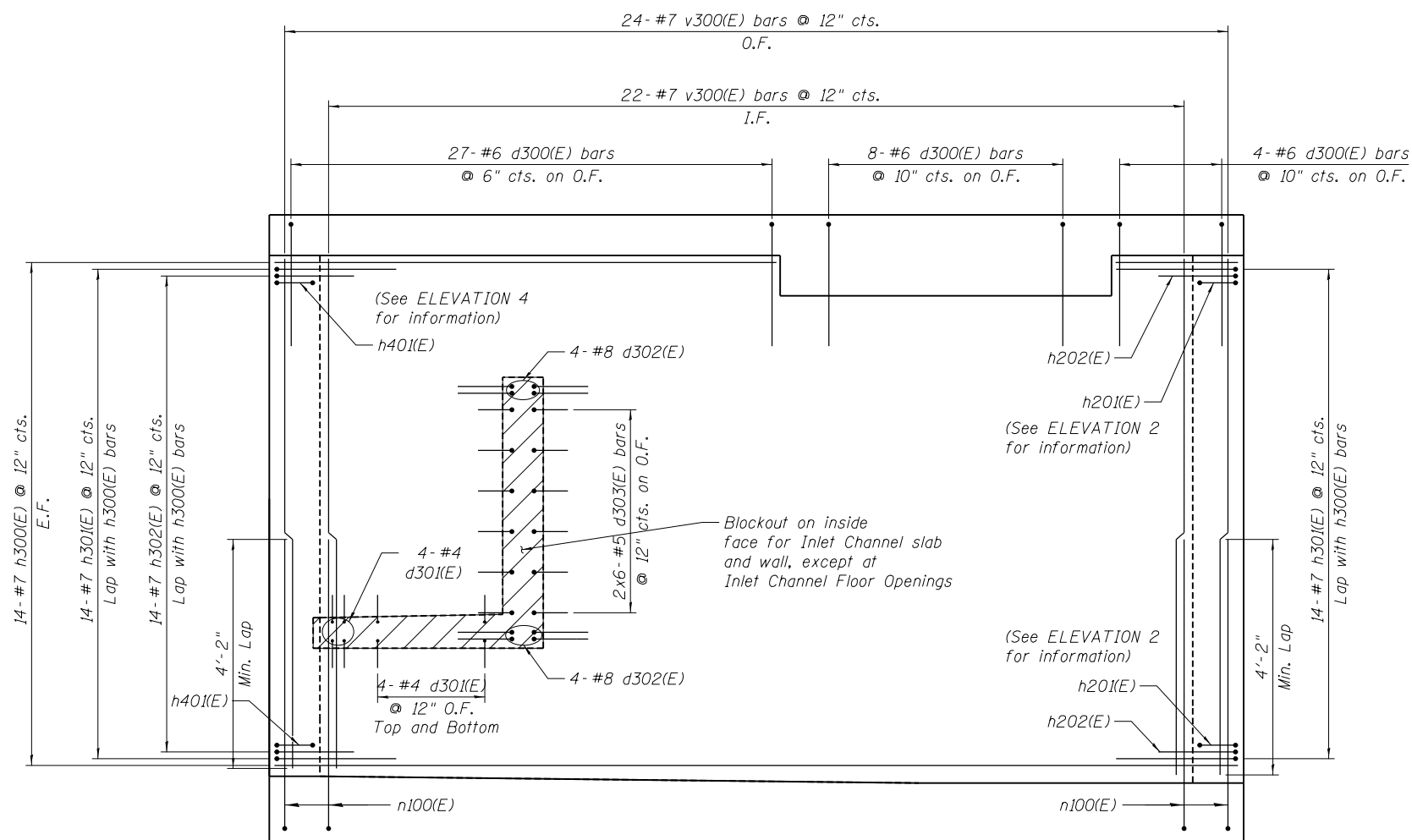
\\VAL\SUN-72B58-001-BORDER.DGN, ..\PMPSTAI-72B58-001-MISCDETAIL.DGN
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BAR LIST

Bar	No.	Size	Length	Shape
d300(E)	39	#6	6'-0"	└─┘
d301(E)	12	#4	3'-8"	└─┘
d302(E)	8	#8	7'-10"	└─┘
d303(E)	12	#5	4'-6"	└─┘
h300(E)	28	#7	23'-8"	—
h301(E)	28	#7	8'-9"	└─┘
h302(E)	14	#7	4'-0"	└─┘
v300(E)	46	#7	12'-6"	—

BILL OF MATERIAL

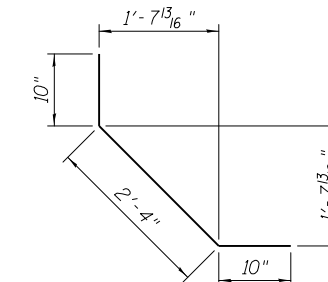
Item	Unit	Total
Concrete Structures	Cu. Yd.	12.9
Reinforcement Bars, Epoxy Coated	Pound	3750



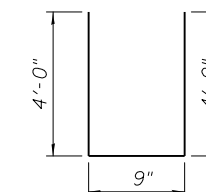
**ELEVATION 3
(NORTH WALL)**

Note:

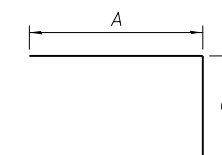
1. Cut h300(E), h301(E) and v300(E), as required



BAR h302(E)



BAR h301(E)



**BARS d300(E), d301(E),
d302(E) AND d303(E)**

A AND B DIMENSIONS

BAR	A	B
d300(E)	3'-0"	3'-0"
d301(E)	3'-0"	8"
d302(E)	6'-4"	1'-4"
d303(E)	3'-8"	10"

FILE NAME = \\F:\exp\72858-001-BORDER.DGN; USER NAME = exp U.S. Services Inc.; DESIGNED - STD; REVISED -; DATE - 8/5/2014; CHECKED - SS; REVISED -; PLOT SCALE =; DRAWN - STD; REVISED -; PLOT DATE =; CHECKED - VCP; REVISED -;

exp U.S. Services Inc.
 Chicago, IL
 BUILDINGS-EARTH & ENVIRONMENT-ENERGY
 INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
REINFORCEMENT DETAILS - ELEVATIONS
3 OF 5**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	619
				CONTRACT NO. 72B58

SHEET NO. S-17 OF 22 SHEETS

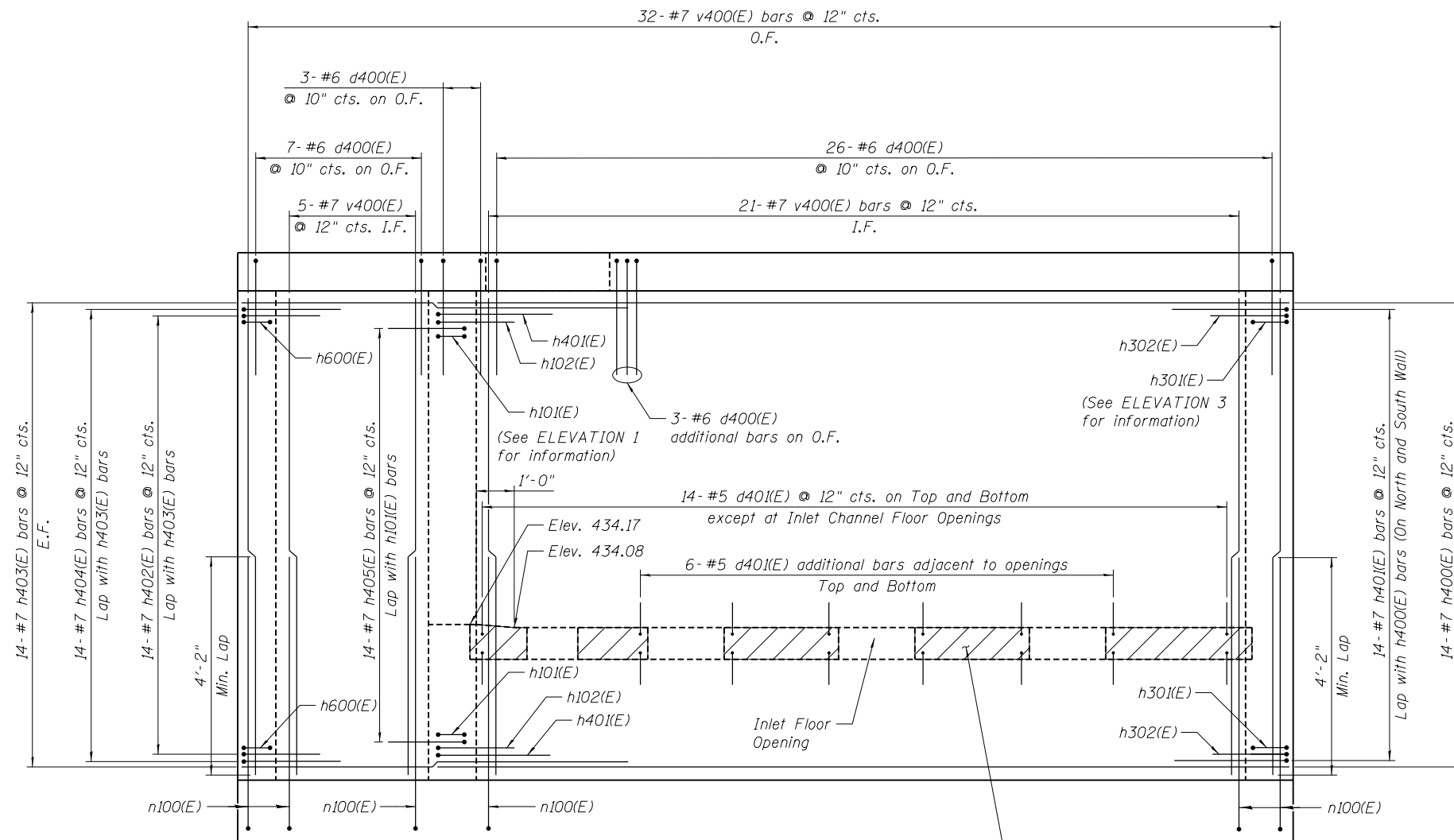
ILLINOIS FED. AID PROJECT

BAR LIST

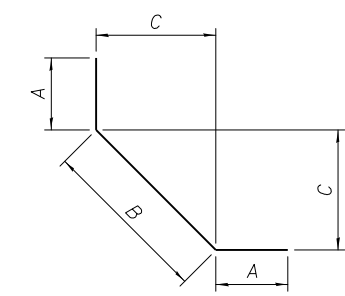
Bar	No.	Size	Length	Shape
d400(E)	39	#6	6'-0"	┌
d401(E)	40	#5	4'-6"	┌
h400(E)	28	#7	22'-4"	—
h401(E)	28	#7	8'-9"	┌
h402(E)	14	#7	3'-11"	┌
h403(E)	28	#7	9'-6"	—
h404(E)	14	#7	8'-8"	┌
h405(E)	14	#7	4'-0"	┌
v400(E)	58	#7	12'-6"	—

BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	16.1
Reinforcement Bars, Epoxy Coated	Pound	4820



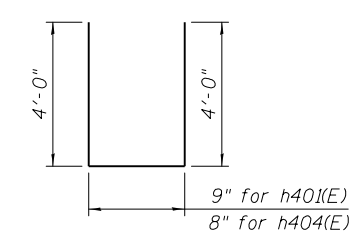
**ELEVATION 4
(EAST WALL)**



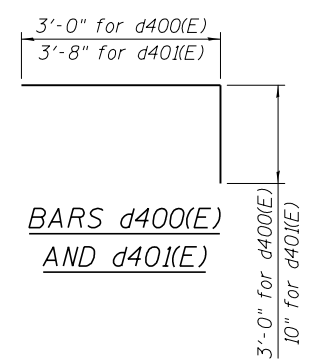
**BARS h402(E)
AND h405(E)**

A, B AND C DIMENSIONS

BAR	A	B	C
h402(E)	1'-2"	1'-7"	1'-1 ⁷ / ₁₆ "
h405(E)	1'-0"	2'-0"	1'-5"



**BAR h401(E)
AND h404(E)**



**BARS d400(E)
AND d401(E)**

FILE NAME = \\PMPSTAI-72B58-001-BORDER.DGN, USER NAME = PMPSTAI-72B58-001-MISCDETAIL_SHT.DGN, DATE = 8/5/2014, DESIGNED - STD, CHECKED - SS, REVISED - , DRAWN - STD, REVISIONS - , PLOT SCALE = , CHECKED - VCP, REVISIONS - , PLOT DATE = ,

FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
7-30-2014_1510317	8/5/2014	CHECKED - SS	REVISED -
exp U.S. Services Inc.	PLOT SCALE =	DRAWN - STD	REVISED -
BUILDINGS-EARTH & ENVIRONMENT-ENERGY	PLOT DATE =	CHECKED - VCP	REVISED -
INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
REINFORCEMENT DETAILS - ELEVATIONS
4 OF 5**

SHEET NO. S-18 OF 22 SHEETS

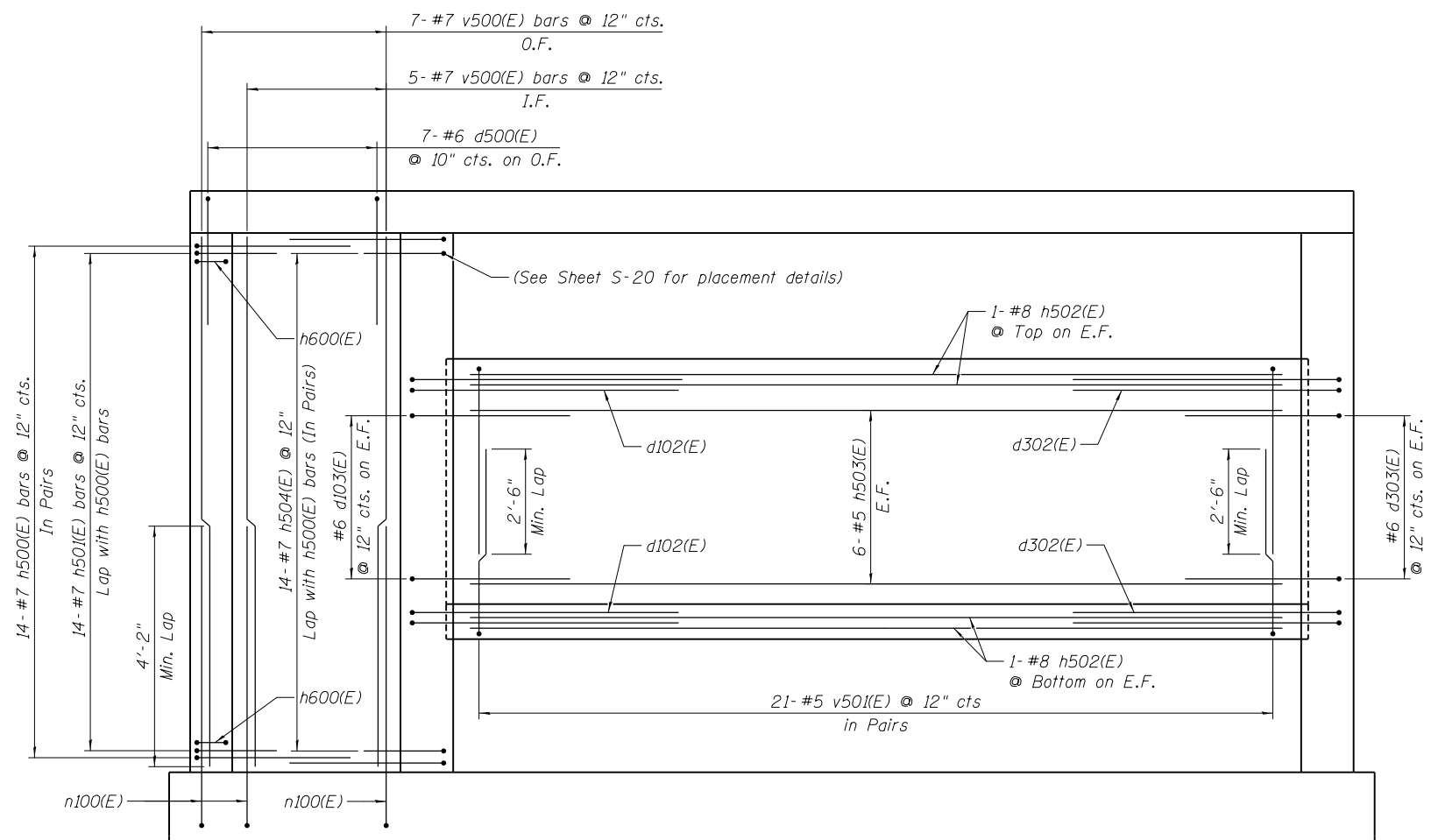
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	620
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	

BAR LIST

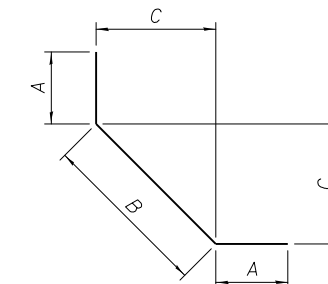
Bar	No.	Size	Length	Shape
d500(E)	7	#6	6'-0"	┌
h500(E)	28	#7	10'-8"	┌
h501(E)	14	#7	3'-11"	┌
h502(E)	8	#8	19'-10"	—
h503(E)	12	#5	19'-10"	—
h504(E)	28	#7	4'-0"	┌
v500(E)	12	#7	12'-6"	—
v501(E)	42	#5	9'-9"	┌

BILL OF MATERIAL

Item	Unit	Total
Concrete Structures	Cu. Yd.	6.8
Reinforcement Bars, Epoxy Coated	Pound	2420



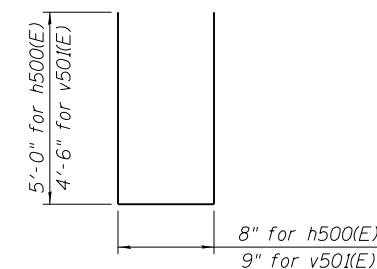
ELEVATION 5



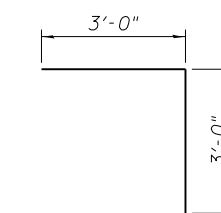
A, B AND C DIMENSIONS

BAR	A	B	C
h501(E)	1'-2"	1'-7"	1'-1 7/16"
h504(E)	1'-0"	2'-0"	1'-5"

BARS h501(E) AND h504(E)



BARS h500(E) AND v501(E)



BAR d500(E)

\\VALLSNUM-72B58-001-BORDER.DGN, \\PMPSTAI-72B58-001-MISIDE.TAIL.DGN
 7-30-2014, 15:20:318
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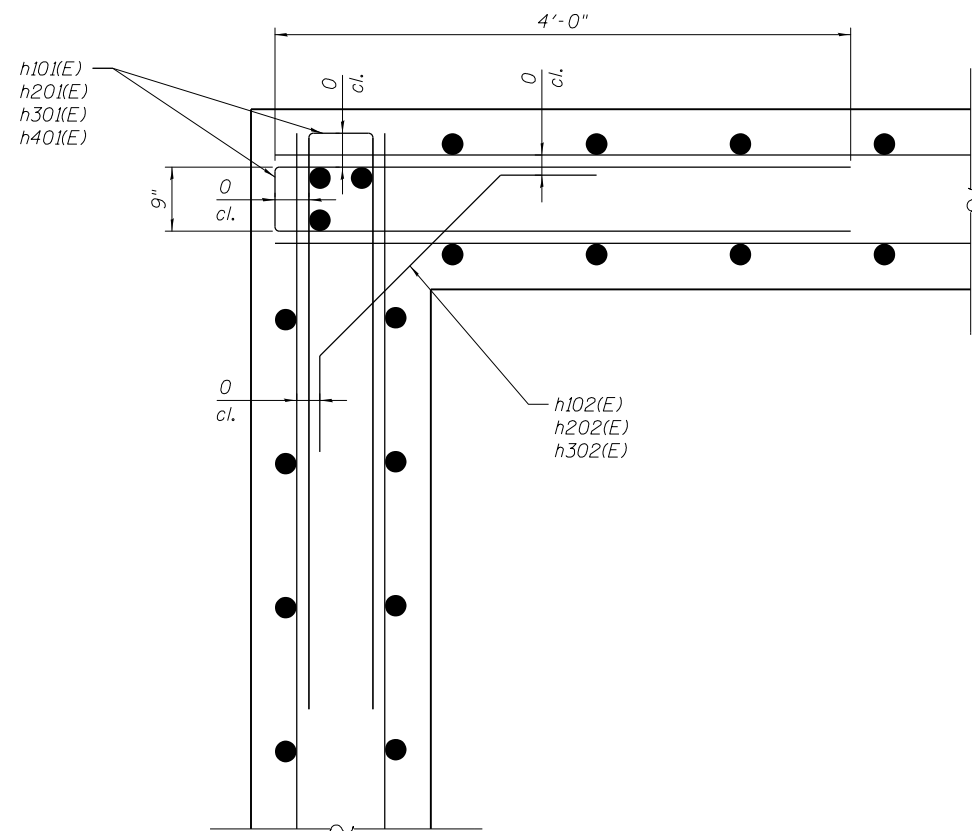
FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
exp U.S. Services Inc. Chicago, IL	PLOT SCALE =	DRAWN - STD	REVISED -
BUILDINGS-EARTH & ENVIRONMENT-ENERGY INDUSTRIAL-INFRASTRUCTURE-SUSTAINABILITY	PLOT DATE =	CHECKED - VCP	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

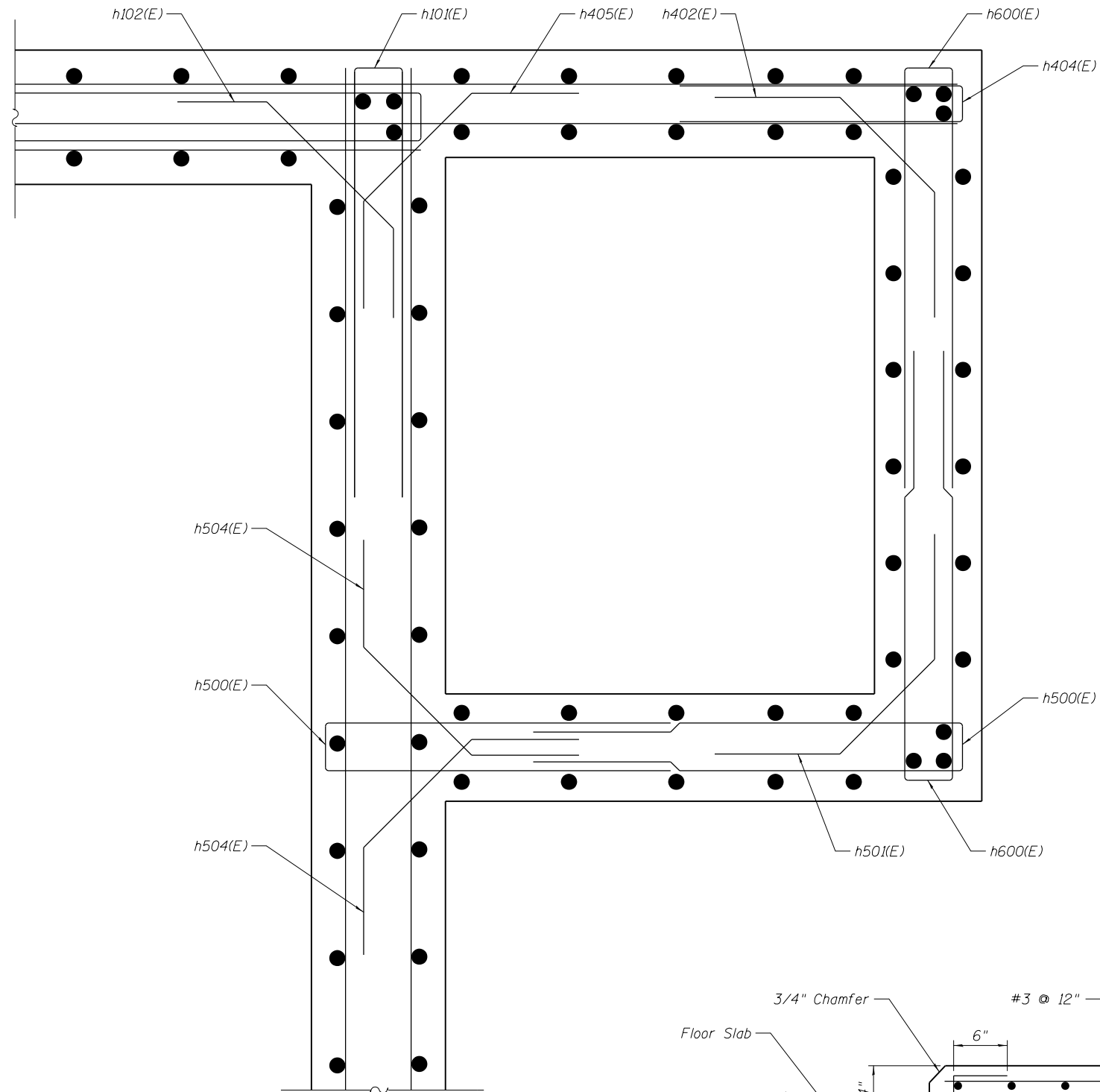
**IL-104 PUMP STATION
REINFORCEMENT DETAILS - ELEVATIONS
5 OF 5**

SHEET NO. S-19 OF 22 SHEETS

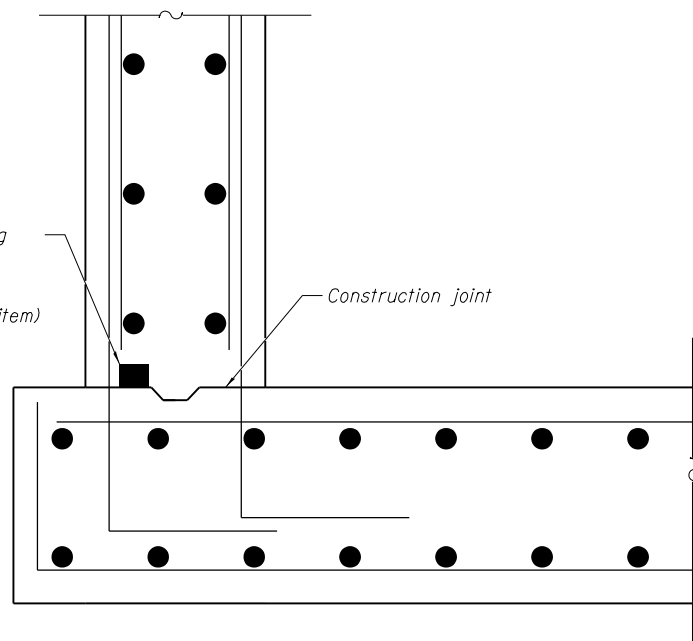
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	621
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	



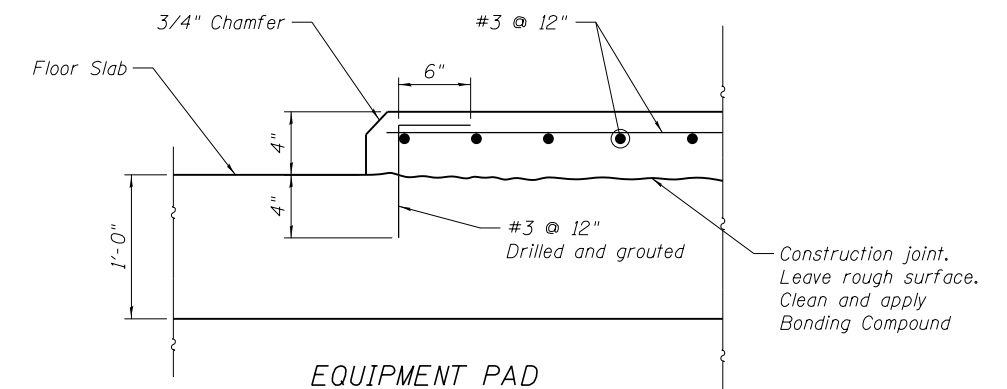
TYPICAL CORNER DETAIL



WALL INTERSECTION DETAIL
(SOUTH AND EAST WALL)



TYPICAL WATERSTOP DETAIL



EQUIPMENT PAD

(See Mechanical Plans for location and limits)

Note:

Cost of concrete and reinforcing steel for Equipment Pad shall be included with Pump Station Mechanical Work pay item.

\\VALLS\N\72B58-001-BORDER.DGN, \\PMPSTAI-72B58-001-MISCDETAIL.DGN
 7-30-2014, 15:03:19
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FILE NAME =	USER NAME =	DESIGNED - STD	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
	PLOT DATE =	CHECKED - VCP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

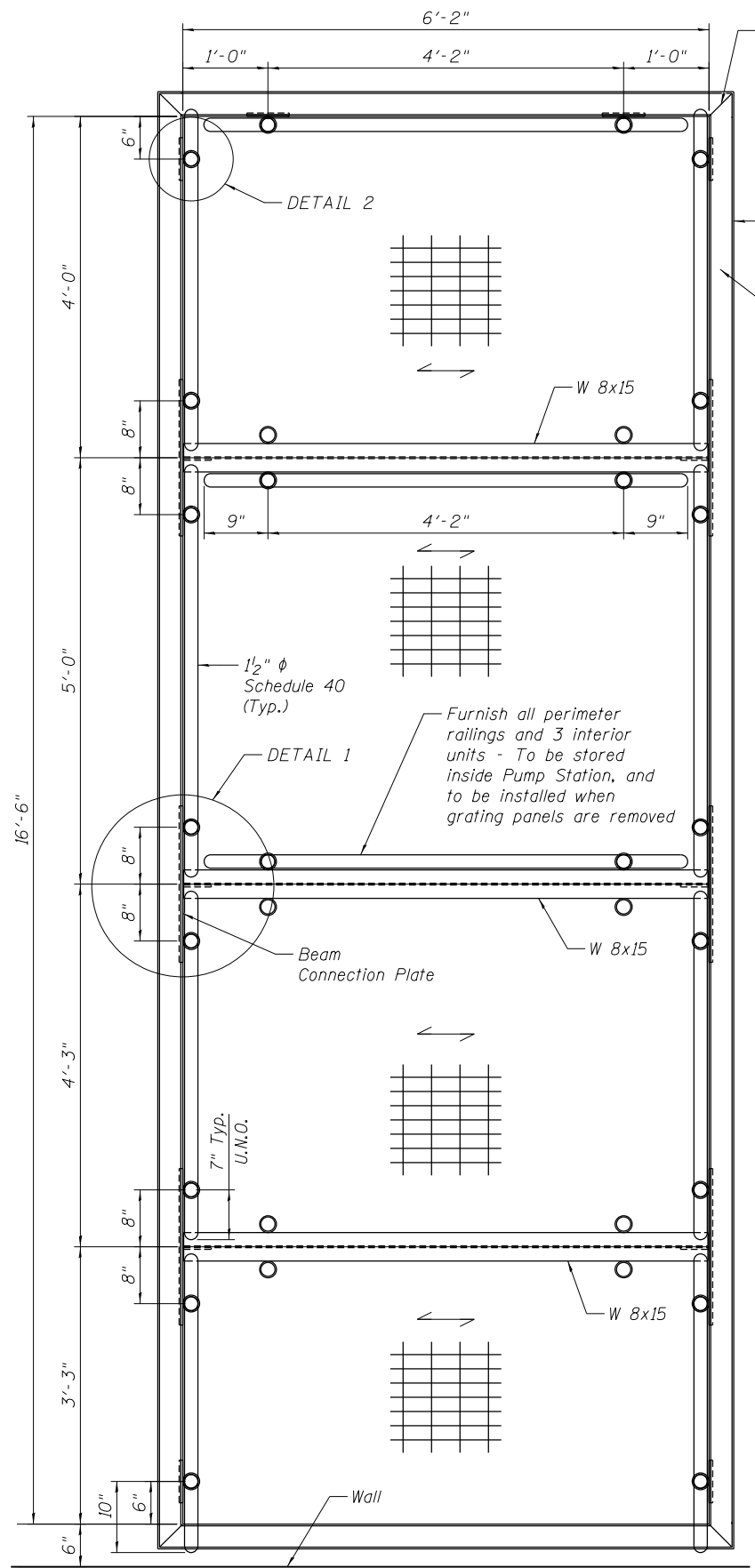
IL-104 PUMP STATION
STRUCTURAL DETAILS

SHEET NO. S-20 OF 22 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	622
CONTRACT NO. 72B58				

ILLINOIS FED. AID PROJECT

\\\VALLS\N\72B58-001-BORDER.DGN, ...PMPSTAI-72B58-001-MISCDETAIL.DGN, ...PMPSTAI-72B58-001-MISCDETAIL.DGN
 7-30-2014, 15:03:20 NE\W\MMND \\FS-004\AM\VALU\1.D-TRANS.07\TRCH\02012341-02\STRUCT\CAD\72B58\MPSTAI\SHEET\72B58-521-MISCDETAIL_SHT.DGN



GRATING PLAN

Miter cut, weld and grind smooth @ corners (typ.)

1/4"x2" Flat Bar Welded to Angle

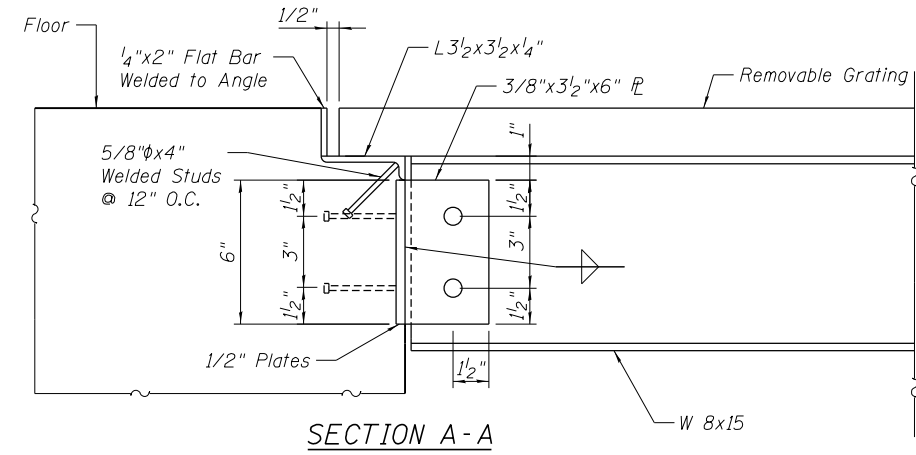
L 3/2"x3/2"x1/4"

Trim at Embedded plates

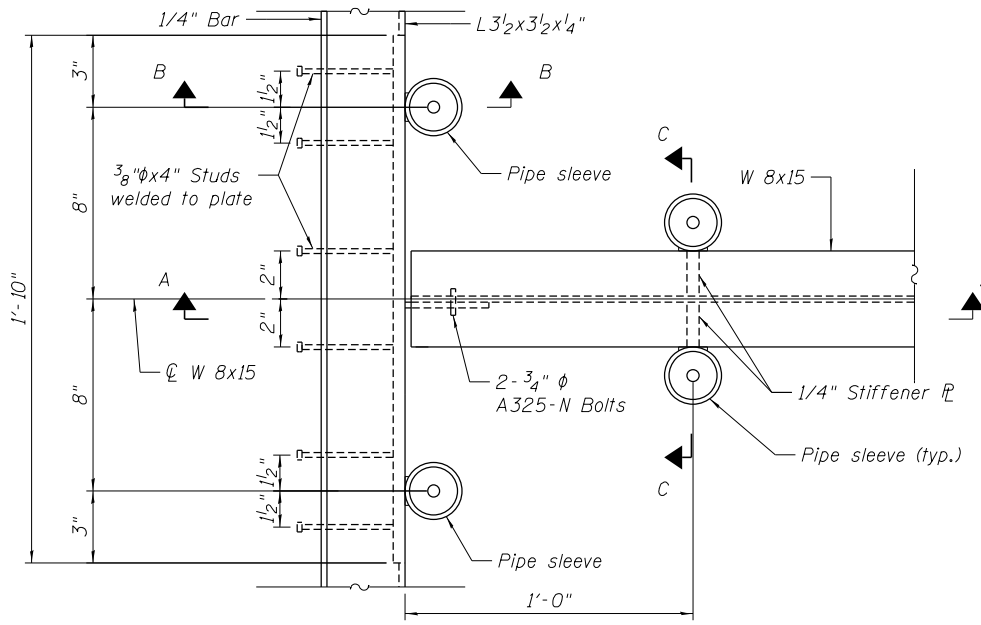
Indicates Galvanized Steel Grating 2"x1/4" Brg. Bars @ 1-3/16" O.C. Cross Bars @ 4" O.C.

Indicates span direction of Grating

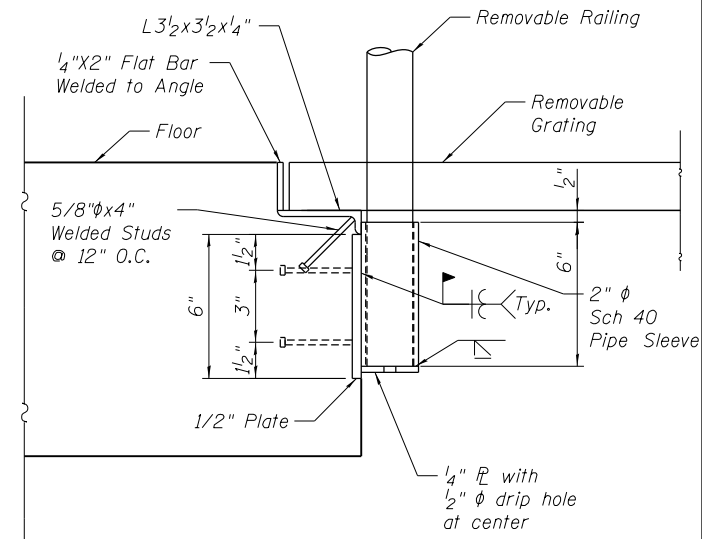
- Notes:**
- The floor grating shall consist of slip resistant panels fabricated from ASTM A36 steel. The main bearing bars shall be 2" x 1/4" and spaced at 1 3/16" center-to-center. The cross bars shall be 3/8" diameter spaced at 4 inch center-to-center, and welded to every main bearing bar. The grating shall be heavy duty welded steel grating #19-H-4 as manufactured by Amico Grating, Inc. or approved equal.
 - The grating, steel beams, angles, plates and railings (including all appurtenant parts and connections) shall be hot-dip galvanized in accordance with ASTM A123 or A153 as applicable.
 - Install grating according to the manufacturer's recommendations. Secure the grating units to the floor using steel saddle clips and anchor studs welded to the support angles.
 - The grating, steel beams, angles, plates and railings (including all appurtenant parts and connections) shall be included with the Pump Station General Work pay item.



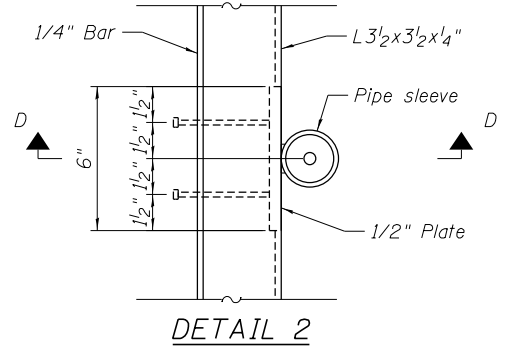
SECTION A-A



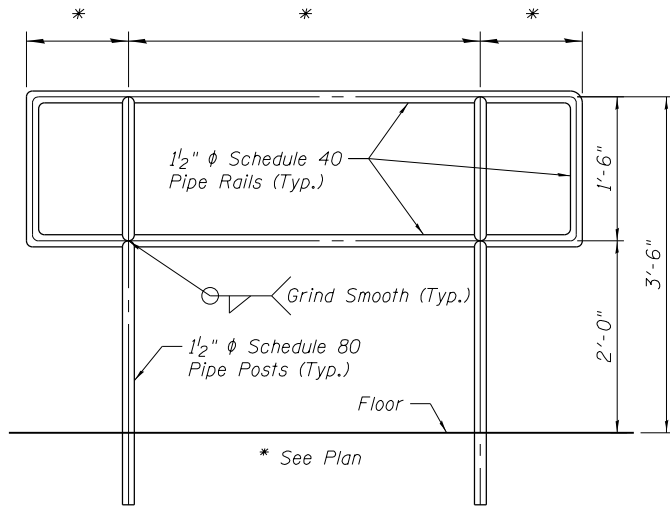
DETAIL 1



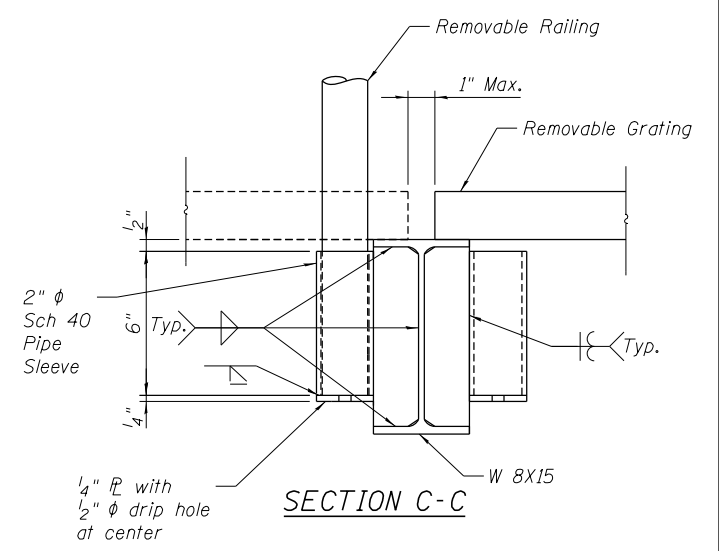
**SECTION D-D (SHOWN)
SECTION B-B (SIMILAR)**



DETAIL 2



TYPICAL REMOVABLE RAILING



SECTION C-C

FILE NAME =	USER NAME =	DESIGNED - VCP	REVISED -
	DATE - 8/5/2014	CHECKED - SS	REVISED -
	PLOT SCALE =	DRAWN - STD	REVISED -
	PLOT DATE	CHECKED - VCP	REVISED -

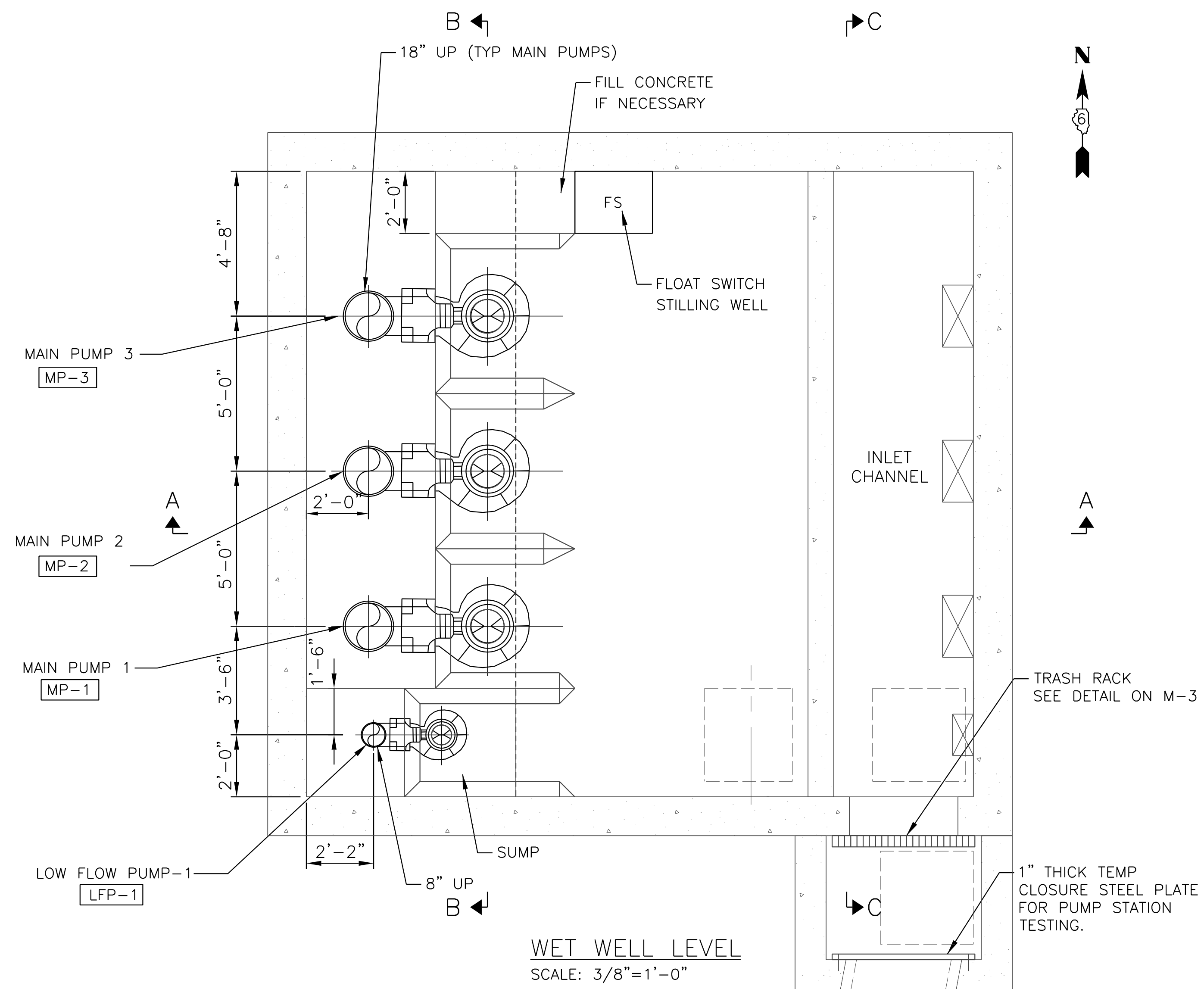
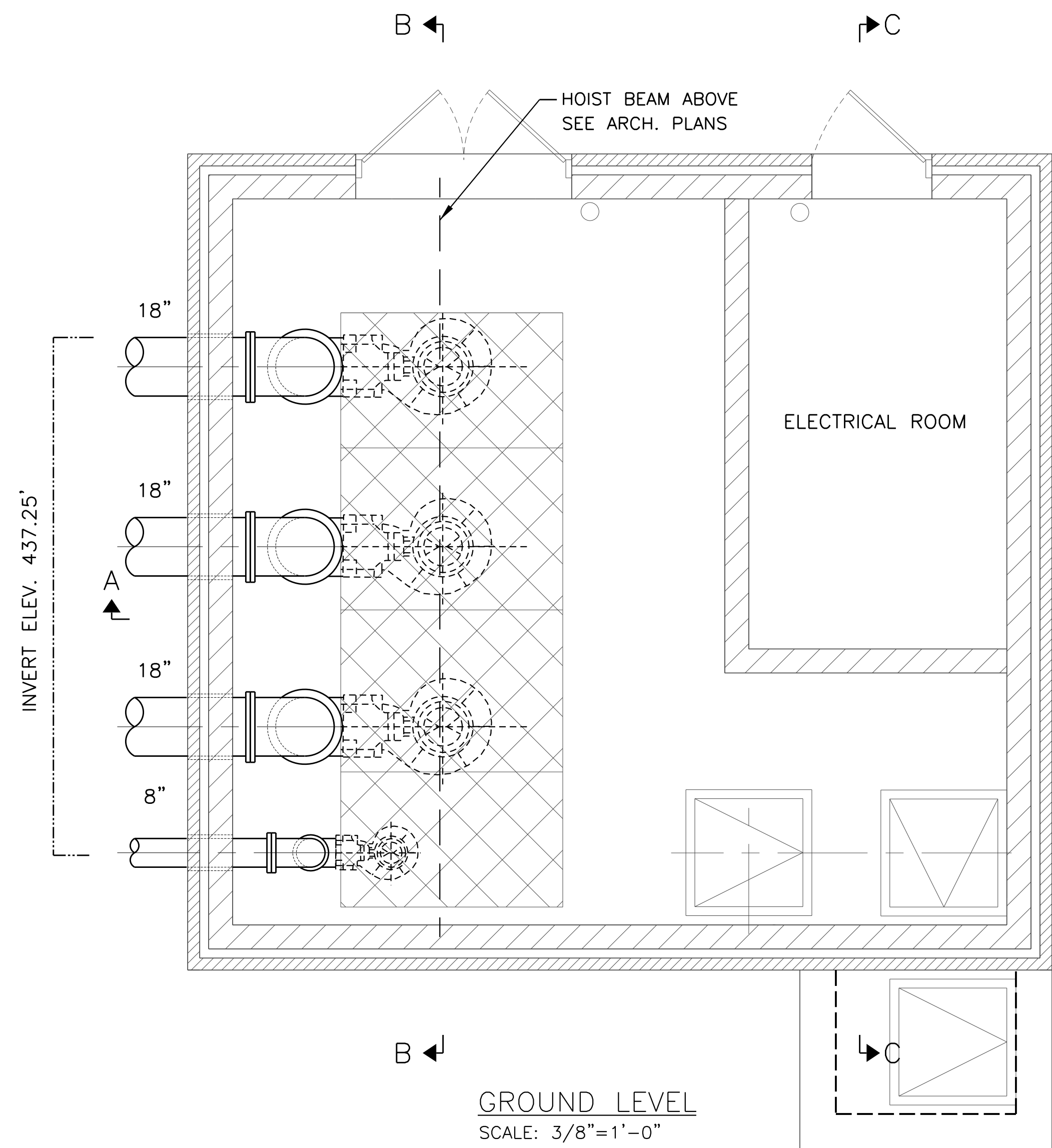
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
STRUCTURAL STEEL DETAILS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	623
CONTRACT NO. 72B58				

SHEET NO. S-21 OF 22 SHEETS

ILLINOIS FED. AID PROJECT



NOTES:

1. THE DESIGN OF THE PUMP STATION HAS BEEN BASED ON A SPECIFIC PUMP. OTHER PUMPS PRODUCING THE SAME HYDRAULIC CHARACTERISTIC ARE ACCEPTABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL ADJUSTMENTS TO THE STATION DESIGN REQUIRED TO ADAPT HIS FINAL SELECTED PUMPS AT NO ADDITIONAL COST.
2. EQUIPMENT SHALL BE CLASS 1, DIV. 2, GROUP D EXPLOSION PROOF.
3. SEE ELECTRICAL PLANS FOR LEVEL SENSORS.
4. COORDINATE WITH THE VILLAGE OF MEREDOSIA AND PROVIDE WATER FOR TESTING OF MAIN PUMPS, LOW FLOW PUMP, FLOAT SWITCHES AND LEVEL SENSOR.

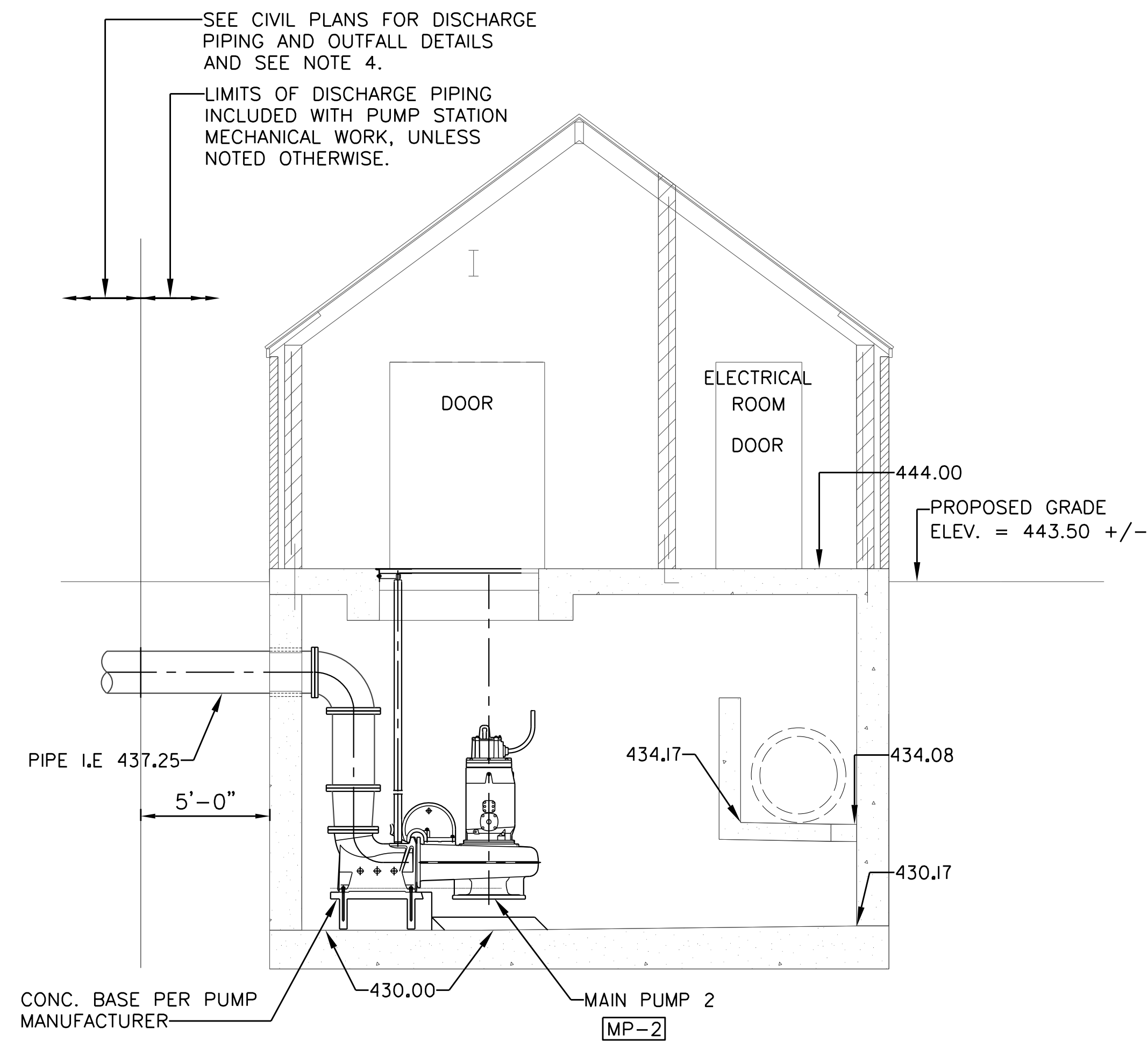
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		DRAWN - VP	REVISED -
	PLOT SCALE = AS SHOWN	CHECKED -	REVISED -
	PLOT DATE = 08/05/2014	APPROVED - JZ	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

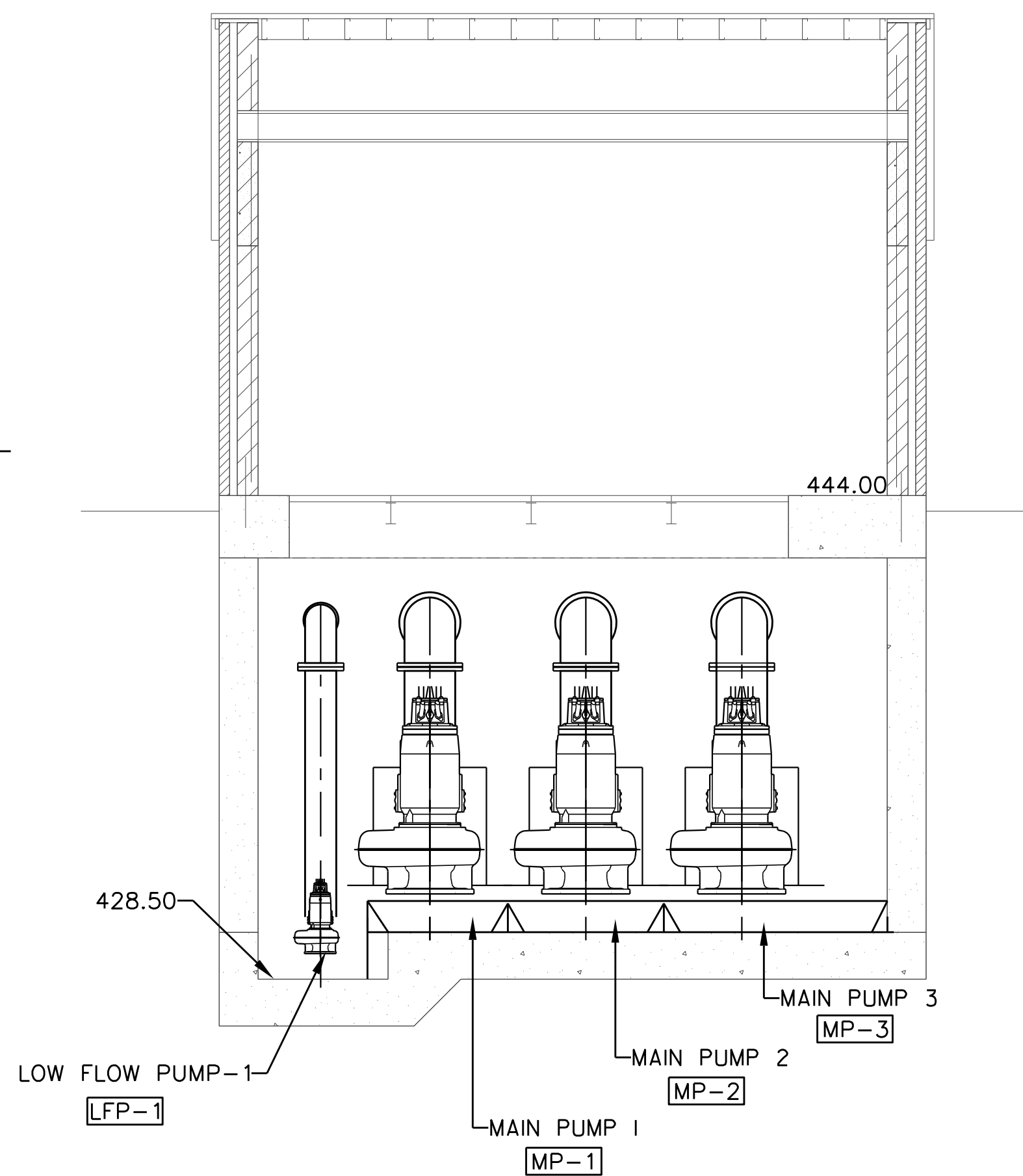
IL-104 PUMP STATION
MECHANICAL PLANS

SCALE: SHEET NO. M-1 OF 4 SHEETS STA. TO STA.

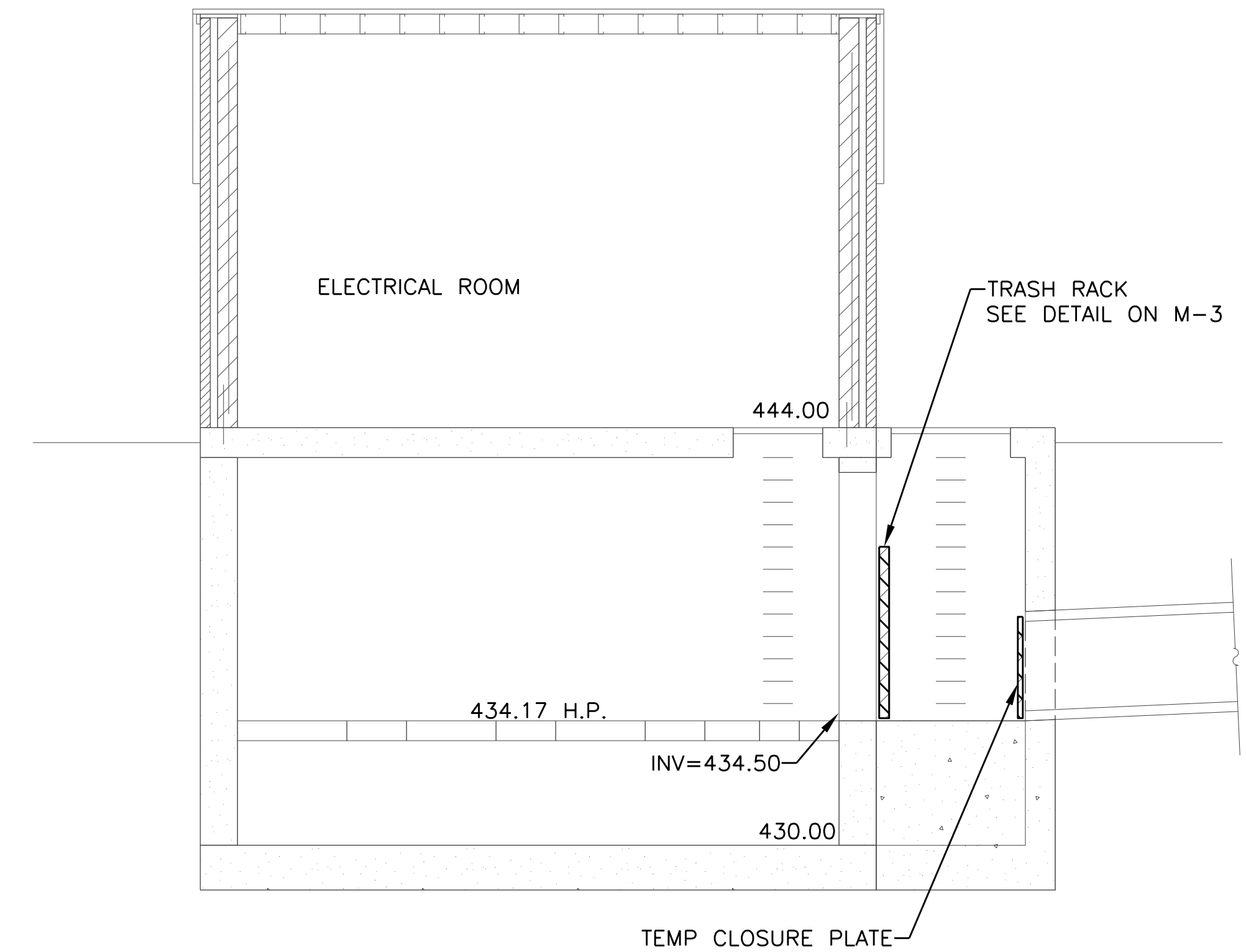
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	625
CONTRACT NO. 72B58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



CROSS SECTION A-A
SCALE: 1/4"=1'-0"



CROSS SECTION B-B
SCALE: 1/4"=1'-0"



CROSS SECTION C-C
SCALE: 1/4"=1'-0"

NOTES:

1. THE DESIGN OF THE PUMP STATION HAS BEEN BASED ON A SPECIFIC PUMP. OTHER PUMPS PRODUCING THE SAME HYDRAULIC CHARACTERISTIC ARE ACCEPTABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL ADJUSTMENTS TO THE STATION DESIGN REQUIRED TO ADAPT HIS FINAL SELECTED PUMPS AT NO ADDITIONAL COST.
2. EQUIPMENT SHALL BE CLASS 1, DIV. 2, GROUP D EXPLOSION PROOF.
3. SEE ELECTRICAL PLANS FOR LEVEL SENSORS.
4. PROVIDE DUCKBILL VALVES AT THE END OF THE PUMP DISCHARGE PIPES IN THE OUTFALL. SEE M-3 FOR PIPE AND VALVE SCHEDULE.

FILE NAME = M-2.dgn	USER NAME = jburto	DESIGNED - RH	REVISED -
		DRAWN - VP	REVISED -
	PLOT SCALE = AS SHOWN	CHECKED -	REVISED -
	PLOT DATE = 08/05/2014	APPROVED - JZ	REVISED -

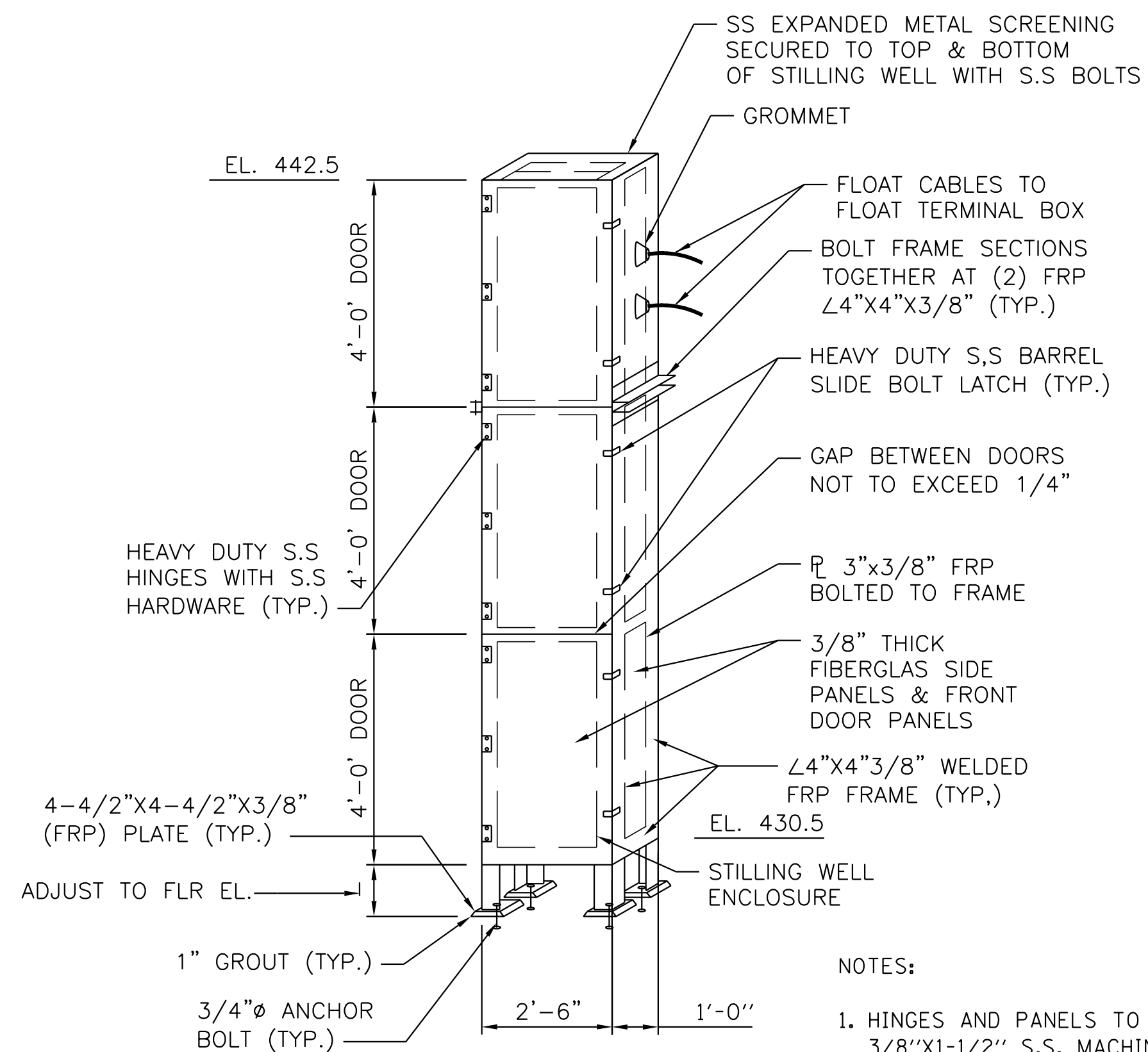
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
MECHANICAL SECTIONS

SCALE: SHEET NO. M-2 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	626
CONTRACT NO. 72B58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



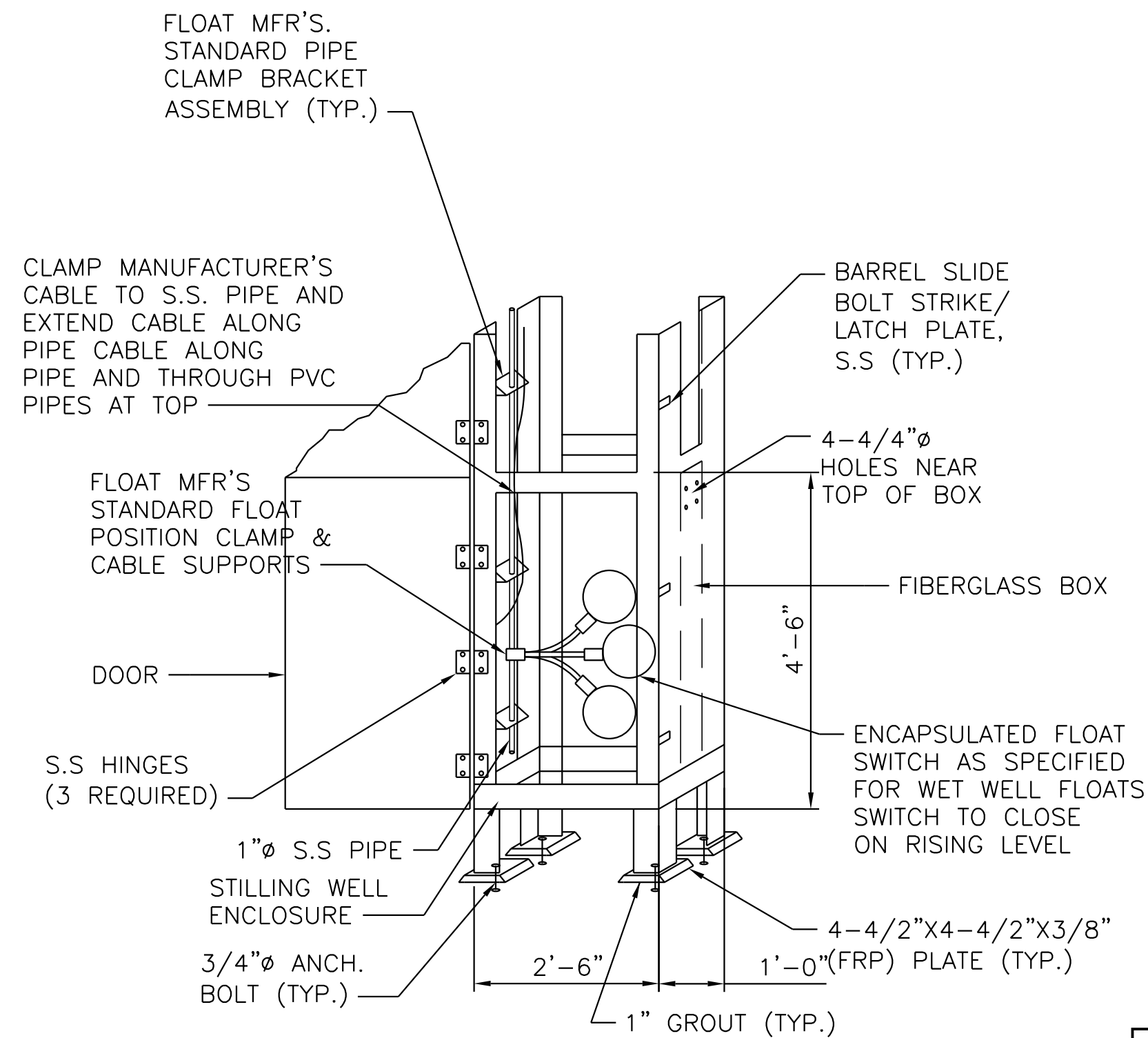


FLOAT STILLING WELL DETAIL FOR PUMP FLOAT CONTROL

SCALE: NOT TO SCALE

NOTES:

- HINGES AND PANELS TO BE SECURED WITH 3/8"x1-1/2" S.S. MACHINE BOLTS & LOCKINGWASHERS
- FOR NUMBER OF FLOAT CABLES SEE ELECTRICAL DWGS.



ENLARGED FLOAT DETAIL IN STILLING WELL ENCLOSURES

SCALE: NOT TO SCALE

NOTES:

- CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWING FOR ENGINEER APPROVAL. FRP FRAME SHALL BE FULLY BOLTED AND GLUED TO FORM A RIGID SELF SUPPORTED BOX.

PUMPING OPERATION RANGES WITH RISING WATER				
FUNCTION	PLC (LEVEL SENSOR)		FLOAT	
	ELEVATION (FT)	LEVEL ABOVE WET PIT FLOOR (FT)	ELEVATION (FT)	LEVEL ABOVE WET PIT FLOOR (FT)
LOW FLOW PUMP START	434	4.0	434.5	4.5
LEAD MAIN PUMP START & LOW FLOW PUMP STOP	435.2	5.2	435.7	5.7
LAG MAIN PUMP START	436.2	6.2	436.7	6.7
STANDBY MAIN PUMP START	440.5	10.5	441	11
HIGH WATER ALARM	441	11	441	11

PUMPING OPERATION RANGES WITH FALLING WATER				
FUNCTION	PLC (LEVEL SENSOR)		FLOAT	
	ELEVATION (FT)	LEVEL ABOVE WET PIT FLOOR (FT)	ELEVATION (FT)	LEVEL ABOVE WET PIT FLOOR (FT)
STANDBY MAIN PUMP STOP	435.2	5.2	434.7	4.7
LEAD & LAG MAIN PUMPS STOP, LOW FLOW PUMP START	434.0	4.0	433.5	3.5
MAIN PUMPS FAIL TO STOP ALARM	433	3.0	432.5	2.5
LOW FLOW PUMP STOP LOW WATER ALARM	430.5	0.5	430.5	0.5

NOTES:

- THE DESIGN OF THE PUMP STATION HAS BEEN BASED ON A SPECIFIC PUMP. OTHER PUMPS PRODUCING THE SAME HYDRAULIC CHARACTERISTIC ARE ACCEPTABLE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL ADJUSTMENTS TO THE STATION DESIGN REQUIRED TO ADAPT HIS FINAL SELECTED PUMPS AT NO ADDITIONAL COST.
- EQUIPMENT SHALL BE CLASS 1, DIV. 2, GROUP D EXPLOSION PROOF.
- SEE ELECTRICAL PLANS FOR LEVEL SENSORS.

FILE NAME = M-4.dgn	USER NAME = jburto	DESIGNED - RV	REVISED -
		DRAWN - RV	REVISED -
	PLOT SCALE = AS SHOWN	CHECKED - JC	REVISED -
	PLOT DATE = 08/05/2014	APPROVED - JZ	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
MECHANICAL INSTRUMENTATION & CONTROL DETAILS**

SCALE: SHEET NO. M-4 OF 4 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	628
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 72B58	

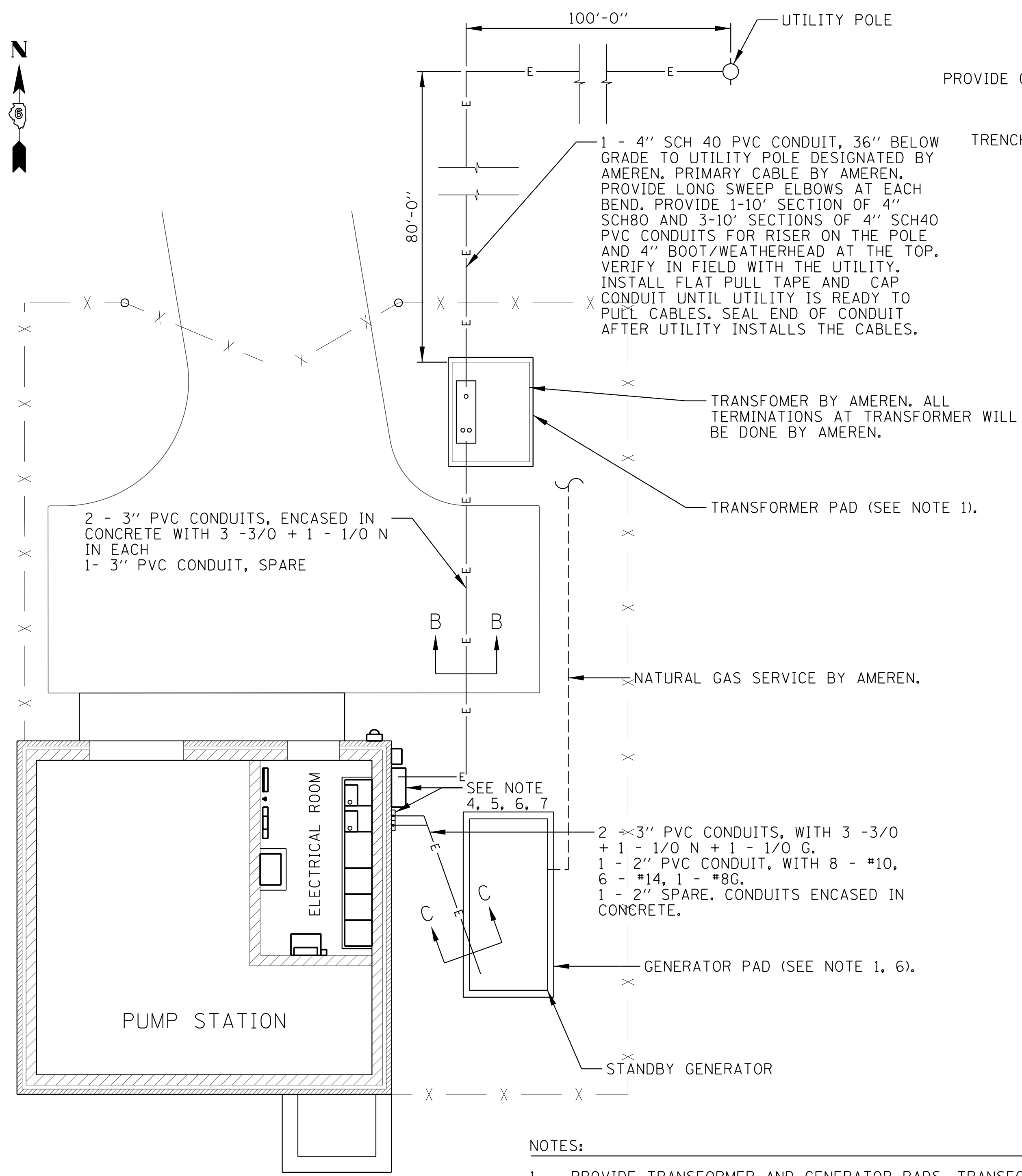
SYMBOLS FOR ELECTRICAL PLANS		SYMBOLS FOR ELECTRICAL PLANS		SYMBOLS FOR SINGLE LINE DIAGRAM		SYMBOLS FOR CONTROL SCHEMATICS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONDUIT SIZE SHALL BE 3/4", UNLESS OTHERWISE NOTED. WIRE SIZE SHALL BE 12 AWG, UNLESS OTHERWISE NOTED. CROSS HATCH LINES INDICATE NUMBER OF WIRES		PUSH BUTTON STATION		VOLTMETER		MOTOR STARTER CONTACTS
	UNDERGROUND DUCT LINE		UNIT HEATER		VOLTMETER SELECTOR SWITCH		PUSHBUTTON MOMENTARY MAKE CONTACT
	CONDUIT CONCEALED IN CEILING OR WALLS		DAMPER GRAVITY TYPE		CURRENT TRANSFORMER (CT)		PUSHBUTTON MOMENTARY BREAK CONTACT
	CONDUIT CONCEALED IN FLOOR OR UNDER FLOOR		GAS SENSOR		AMMETER		PUSHBUTTON MAINTAINED CONTACT
	CONDUIT EXPOSED		FLOAT SWITCH		AMMETER SELECTOR SWITCH		2 OR 3 POSITION SELECTOR SWITCH CLOSED CONTACTS INDICATED BY "X"
	CONDUIT TURNED UP		COMPRESSION BELL		GROUND FAULT RELAY		MULTI-POSITION, MULTI-CONTACT SELECTOR SWITCH CLOSED CONTACT INDICATED BY "X"
	CONDUIT TURNED DOWN		MOTOR, NUMBER DENOTES HORSEPOWER		SELECTOR SWITCH		INDICATOR LIGHT, LETTER DENOTES COLOR, LED TYPE
	PAD MOUNTED TRANSFORMER		CONTROL STATION AS NOTED (PUSHBUTTONS AND INDICATOR LIGHTS)		CIRCUIT BREAKER		PUSH-TO-TEST INDICATOR LIGHT LED TYPE
	GROUND ROD		THERMOSTAT		FUSE		RELAY COIL
	JUNCTION BOX		INTRUSION LIMIT SWITCH		THERMAL OVERLOAD ELEMENT		TIME DELAY RELAY
	FLUSH MOUNTED JUNCTION BOX		HEAT DETECTOR		POTENTIAL TRANSFORMER (PT)		SYNCHRONOUS MOTOR TIME DELAY RELAY
	PANELBOARD		SMOKE DETECTOR		GENERATOR		CONTACT NORMALLY OPEN
	COMBINATION INTERLOCKED RECEPTACLE AND DISCONNECT SWITCH WITH EXTERNAL OPERATOR 3P, 600V, NO.* NEMA TYPE X.P. EXPLOSION PROOF		KEY SWITCH		UTILITY METER		CONTACT NORMALLY CLOSED
	DISCONNECT SWITCH WITH EXTERNAL OPERATOR 30 AMP - 3 POLE, 600V U.N.O., NO.* NEMA TYPE X.P. EXPLOSION PROOF		TELEPHONE OUTLET		DIGITAL METER		FLOAT SWITCH, CLOSES ON RISING LEVEL
	DUPLEX CONVENIENCE RECEPTACLE		DATA OUTLET		SURGE PROTECTION DEVICE		FLOAT SWITCH, OPENS ON RISING LEVEL
	EXPLOSION PROOF RECEPTACLE, 125 VAC STRAIGHT BLADE		FLUSH MOUNTED PANELBOARD PANEL TYPE (LIGHTING PANEL) LP-1 - UNIT NUMBER		DISCONNECT SWITCH WITH EXTERNAL HANDLE 30AMP, 3 POLE, 600V U.N.O. NO. NEMA TYPE X.P. EXPLOSION PROOF		TEMPERATURE ACTUATED SWITCH CLOSES ON RISING TEMPERATURE
	WALL MOUNTED LIGHTING FIXTURE		SURFACE MOUNTED PANELBOARD		EXPLOSION PROOF RECEPTACLE SLEEVE TYPE		TEMPERATURE ACTUATED SWITCH OPENS ON RISING TEMPERATURE
	INCANDESCENT OR HID LUMINAIRE (LETTER DENOTES TYPE) (NUMBER DENOTES CIRCUIT)		MANUAL DISCONNECT SWITCH NONFUSED (RATING AS INDICATED)		EXPLOSION PROOF PLUG PIN TYPE		LIMIT SWITCH, NORMALLY OPEN
	WALL MOUNTED EMERGENCY LIGHT FIXTURE, EXPLOSION PROOF		MANUAL DISCONNECT SWITCH FUSED (RATING AS INDICATED)		SPECIAL PURPOSE RECEPTACLE 480V, XP INDICATES EXPLOSION PROOF		LIMIT SWITCH, NORMALLY CLOSED
	FLUORESCENT FIXTURE, PENDANT MOUNTED. (A) INDICATES FIXTURE TYPE - REFER TO FIXTURE SCHEDULE. (2a) INDICATES CIRCUIT NO. 2 ON SWITCH a TYP.		LIMIT SWITCH		SEAL-OFF FITTING		ELAPSED TIME METER
	FLUORESCENT FIXTURE WALL MOUNTED		LEVEL TRANSMITTER		FIRE ALARM PULL STATION		OPERATIONS COUNTER
	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT		UNIT HEATER OR FAN		MANUAL MOTOR STARTER		DISCONNECTING PLUG AND RECEPTACLE
	EXIT SIGN		SOLENOID VALVE				TERMINAL DESIGNATION
	INCANDESCENT, COMPACT FLUORESCENT, OR HID FIXTURE ON EMERGENCY CIRCUIT		PRESSURE SWITCH				UNDERGROUND DUCT SECTION ⊕ ACTIVE ○ SPARE
	CONDUIT SEAL		120V MANUAL STARTER				EQUIPMENT IDENTIFICATION TAG
	SPECIAL PURPOSE RECEPTACLE		LEVEL/TEMP SWITCH				OPEN CONTACT WITH TIME-DELAY CLOSE FEATURE (SHOWS DURATION)
	CONTROL CABLE CONNECTOR		INDICATES 3 WAY SWITCH 120V SINGLE POLE SWITCH INDICATES SWITCH CIRCUIT NUMBER XP - EXPLOSION PROOF				CLOSED CONTACT WITH TIME-DELAY OPEN FEATURE (SHOWS DURATION)

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
AC	ALTERNATIVE CURRENT
ACK	ACKNOWLEDGE
BS	BEARING TEMPERATURE
C	CONDUIT
C.B.	CIRCUIT BREAKER
CR	CONTROL RELAY
DAM	DAMPER
DISC.	DISCONNECT
DS	DOOR SWITCH CIRCUIT
EF	EXHAUST FAN
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G.F.I.	GROUND FAULT INTERRUPTER
GND	GROUND
GRF	GROUND FAULT RELAY
H.P.	HORSEPOWER
JB	JUNCTION BOX
LED	LIGHT EMITTING DIODE
LFP	LOW FLOW PUMP
LS	LIMIT SWITCH
LTG	LIGHTING
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MH	MOUNTING HEIGHT
MM	MILLIMETER
MOD	MOTOR OPERATED DAMPER
MOV	METAL OXIDE VARISTOR
MP	MAIN PUMP
N.C.	NORMALLY CLOSED (CONTACT)
N.O.	NORMALLY OPEN (CONTACT)
NIC	NOT IN CONTRACT
PLC	PROGRAM LOGIC CONTROLLER
PNL	PANEL
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SF	SUPPLY FAN
SPD	SURGE PROTECTIVE DEVICE
SS	LEAKAGE SENSOR
STA	STATION
SW	SWITCH
SWGR	SWITCHGEAR
TB	TERMINAL BLOCK
TDC	TIME-DELAY CLOSE
TDO	TIME-DELAY OPEN
TP	THERMAL PROTECTION (WINDING)
TRANSF.	TRANSFORMER
TS	THERMOSTAT
TVSS	TRANSIENT VOLTAGE SURGE PROTECTOR
TWSH	TWISTED SHIELDED CABLE UNLESS NOTED OTHERWISE
U.N.O.	EXPLOSION PROOF CLASS I DIV 2 CLASSIFIED
X.P.	EXPLOSION PROOF CLASS I DIV 2 CLASSIFIED
XFER	TRANSFER
XFMR	TRANSFORMER

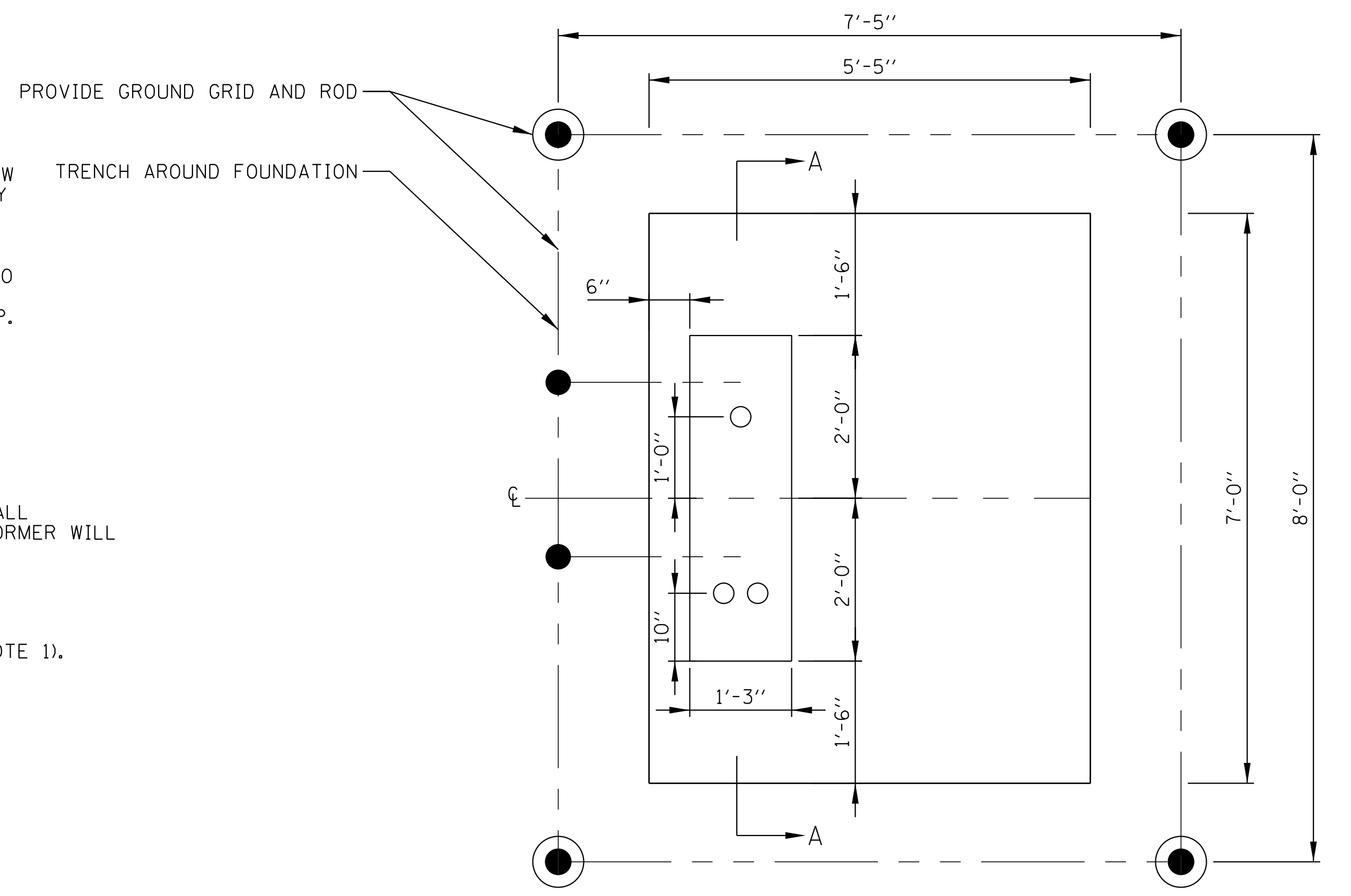
NOTES:

1. THIS IS A STANDARD LIST OF ABBREVIATIONS AND SYMBOLS THAT APPEARS IN THIS PROJECT.



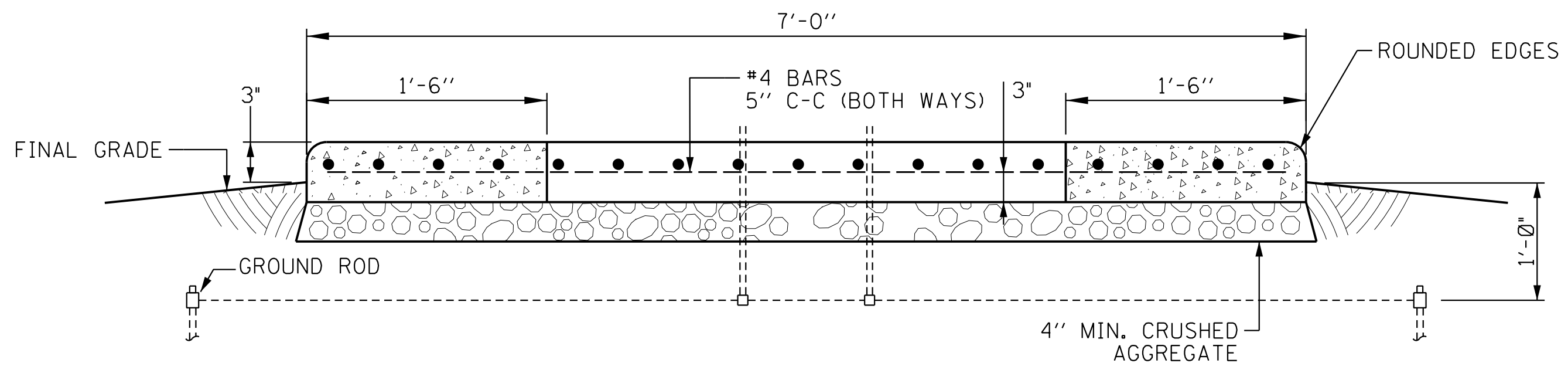
ELECTRICAL SITE PLAN
SCALE: 1" = 5'-0"

- NOTES:**
1. PROVIDE TRANSFORMER AND GENERATOR PADS. TRANSFORMER PAD SHALL COMPLY WITH AMEREN SPECIFICATIONS. SEE CIVIL PLANS FOR GENERATOR PAD DETAILS. PADS TO BE INCLUDED WITH PUMP STATION ELECTRICAL WORK.
 2. SEE E-17 & E-18 FOR GROUNDING PLANS AND DETAILS.
 3. SEE E-16 FOR CT, PT, AND METER WIRING AND LAYOUT, AND WALL PENETRATION DETAILS.
 4. PROVIDE CT, PT, AND METER CABINETS AND LB TYPE CONDUIT BODIES FOR GENERATOR FEEDERS AND CONTROL WIRING. COORDINATE THEIR LOCATION WITH THE SERVICE ENTRANCE EQUIPMENT IN MCC.
 5. EXTEND CONDUITS TO MAIN & GEN COMPARTMENT, ATS, AP-1, AND CONTROL PANEL. PROVIDE CONDUIT SEALS IN THE WALL. SEE E-16 FOR DETAILS.
 6. SEAL INSIDE OF CONDUITS WITH STEEL WOOL AND FLEXIBLE PUTTY TO PREVENT MICE INFESTATION.
 7. STUB UP AND CAP SPARE CONDUITS AT BOTH ENDS.

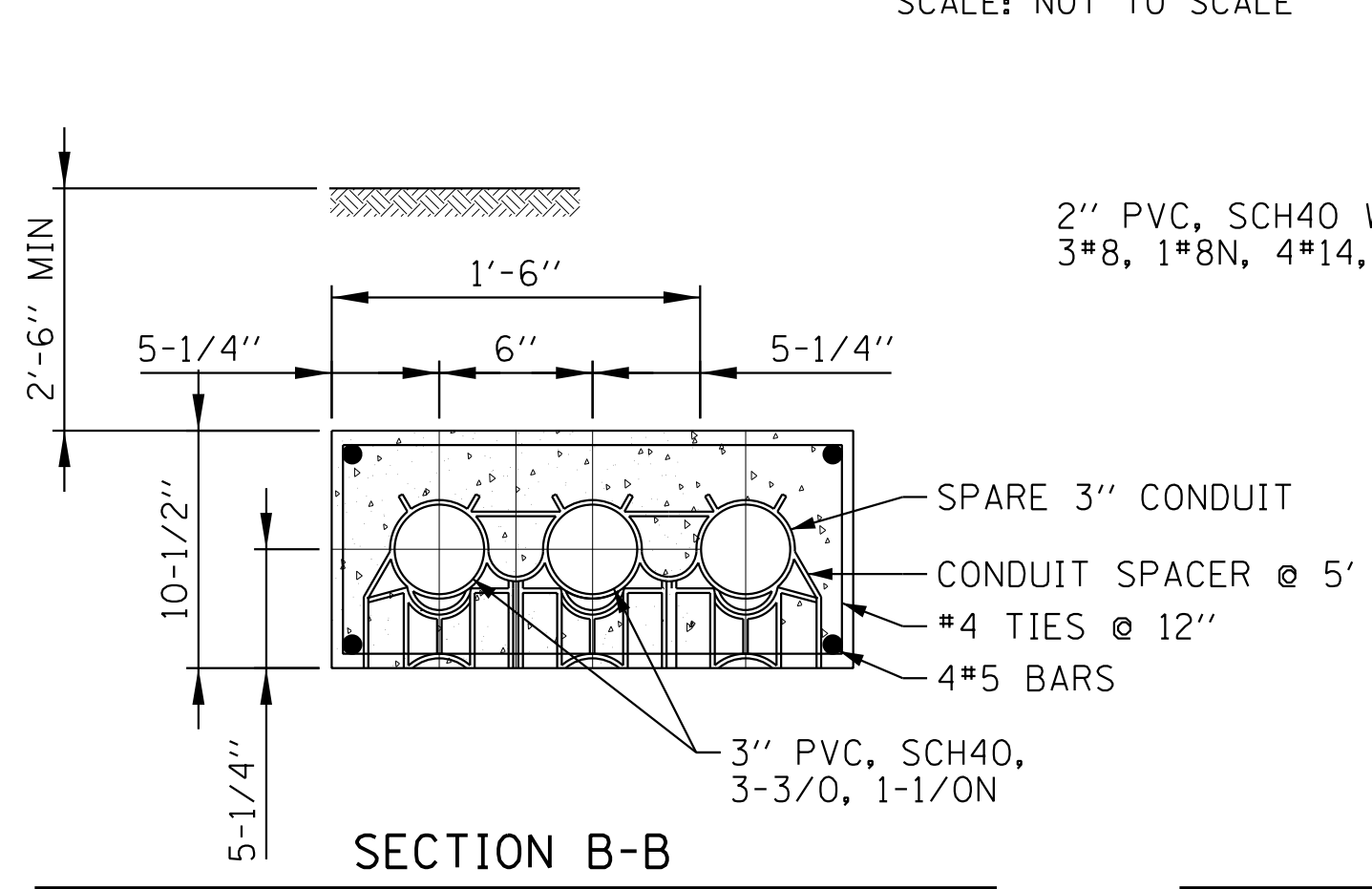


AMEREN TRANSFORMER PAD DETAIL
SCALE: NOT TO SCALE

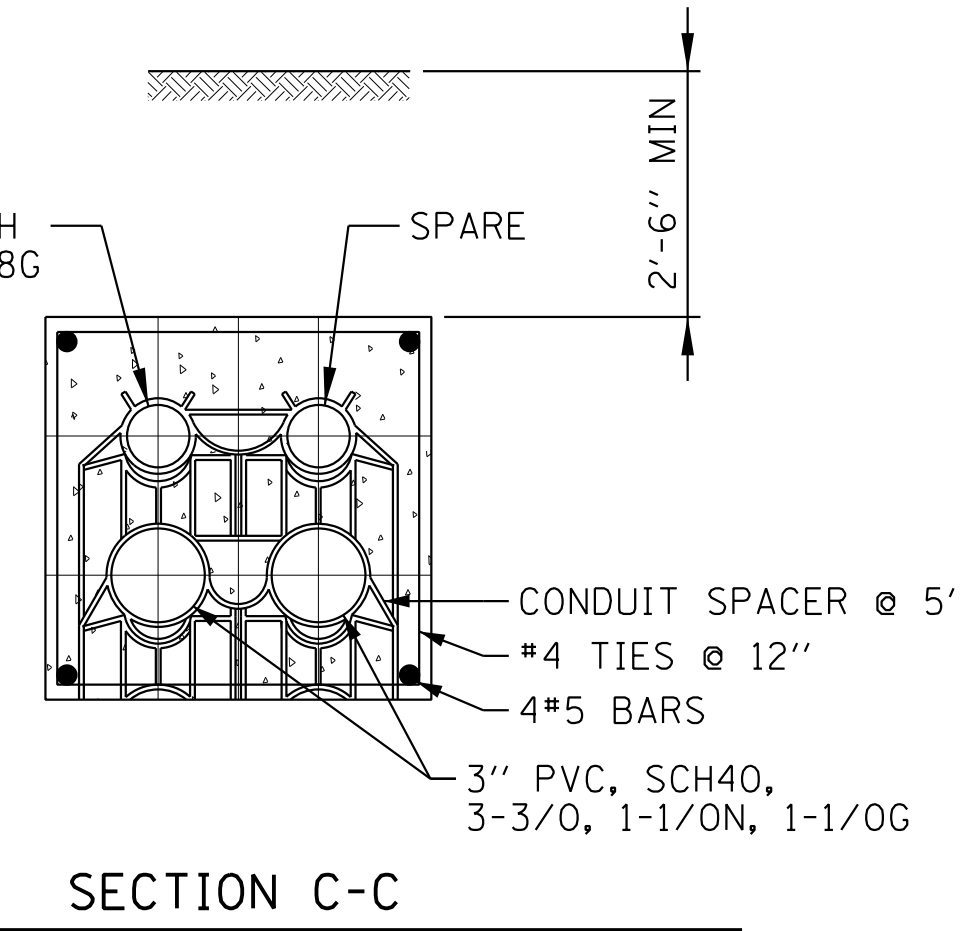
- NOTES:**
1. SEE E-17 FOR GROUNDING CABLE CONNECTION DETAILS



SECTION A-A
SCALE: NOT TO SCALE



SECTION B-B
SCALE: NOT TO SCALE



SECTION C-C
SCALE: NOT TO SCALE

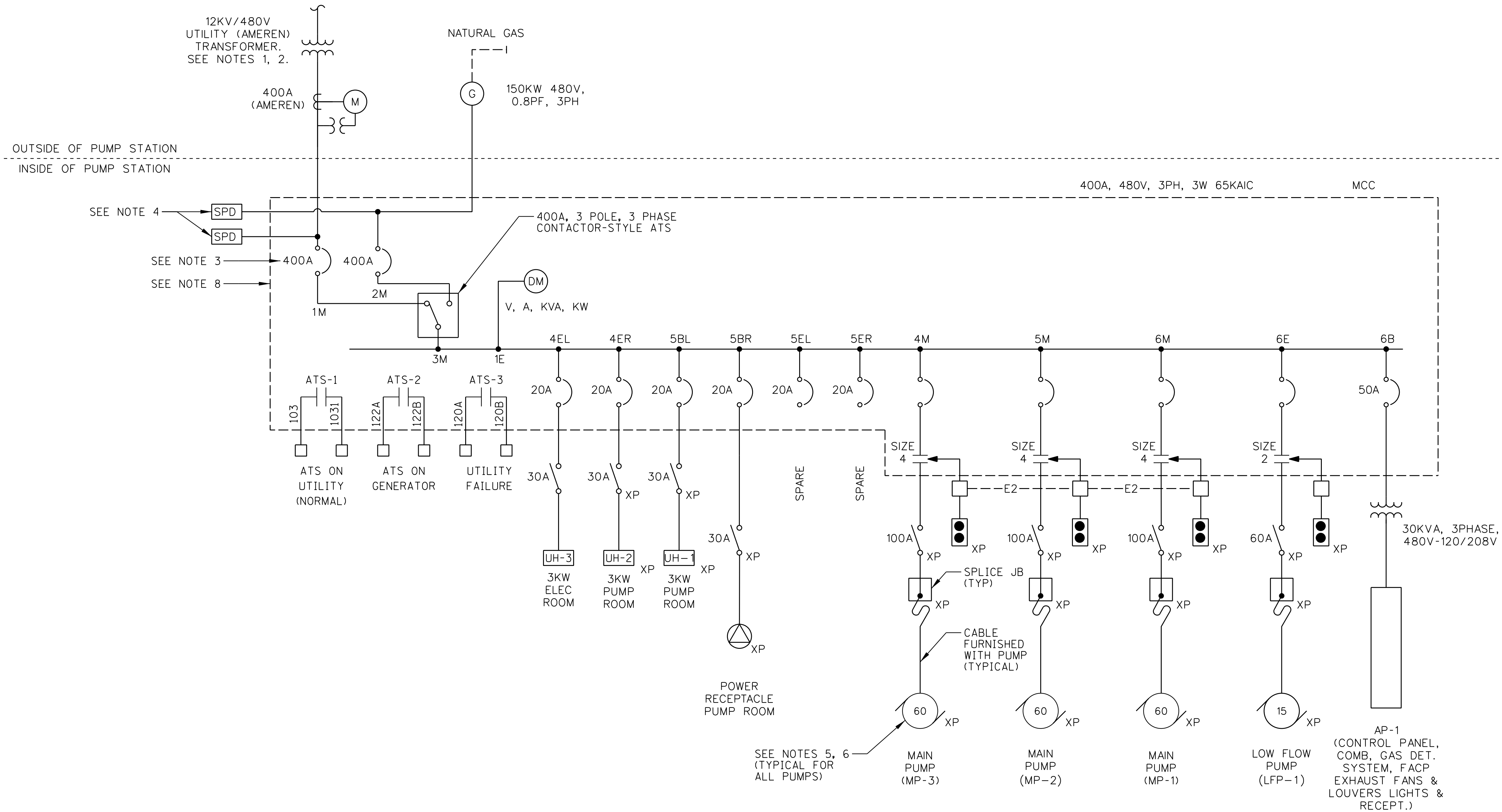
LEGEND

- (M) UTILITY METER
- (G) GENERATOR
- (DM) DIGITAL METER

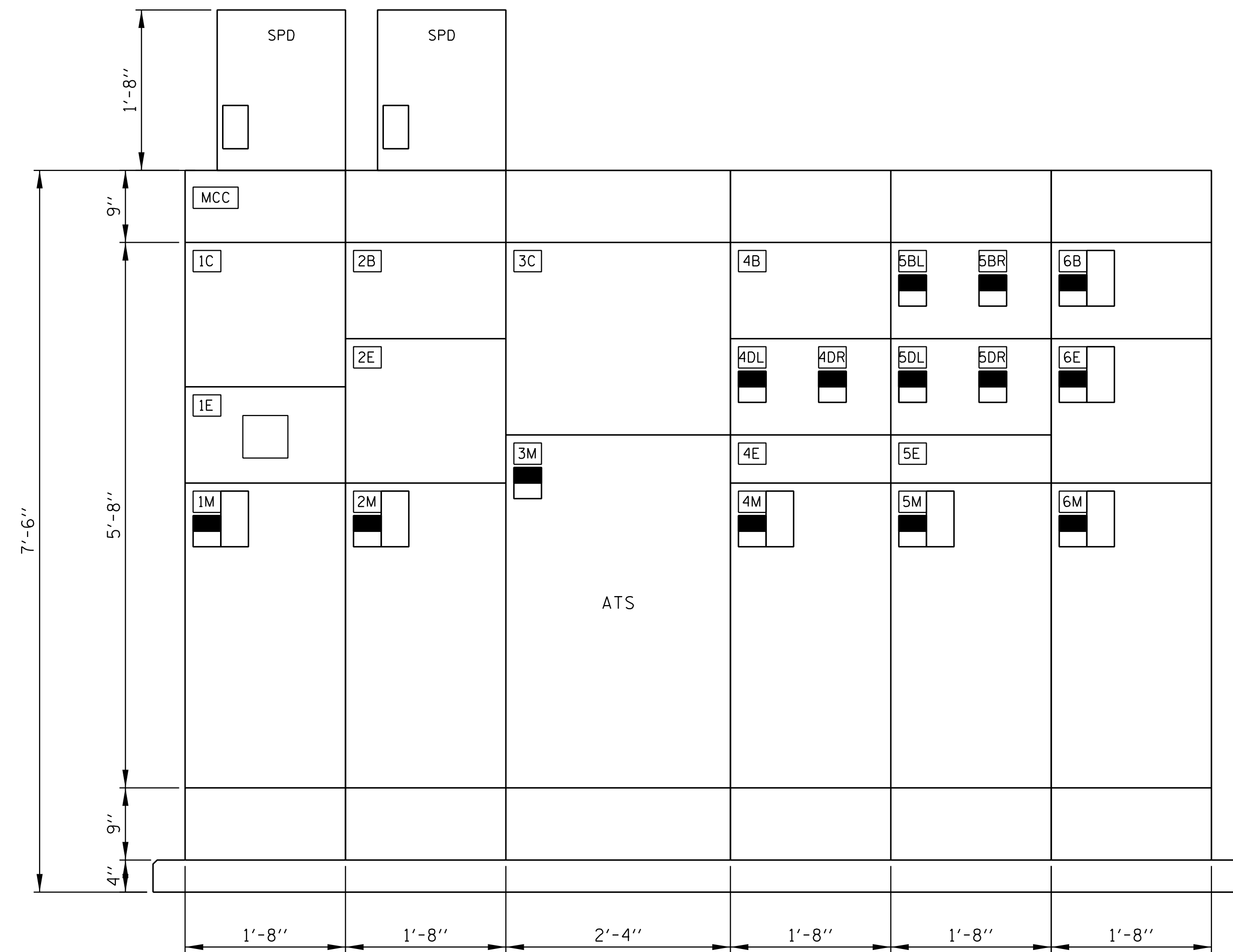
- E2 INTERLOCK TO INHIBIT OPERATION OF LAG PUMPS WHEN MCC IS POWERED FROM GENERATOR
- XP EXPLOSION-PROOF, LISTED FOR USE IN CLASS 1 DIVISION II LOCATION

NOTES:

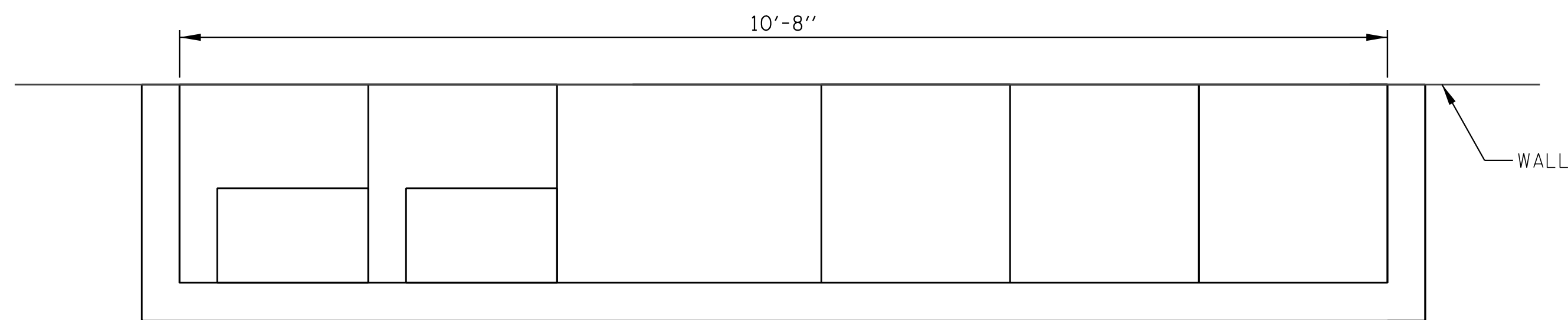
1. COORDINATE WITH THE UTILITY (AMEREN) AND PROVIDE PRIMARY CONDUIT AND TRANSFORMER PAD. SEE SHEET E-2 FOR DETAILS. THIS WORK SHALL BE PAID UNDER THE "P.S. ELECTRICAL WORK" PAY ITEM.
2. PROVIDE SECONDARY CONDUIT AND CABLE, CT CABINET, PT CABINET, AND METER FITTING. THIS WORK AND ALL OTHER WORK SHOWN ON THIS SHEET SHALL BE PAID UNDER THE "P.S. ELECTRICAL WORK" PAY ITEM.
3. PROVIDE NEUTRAL BUS IN MAIN AND GENERATOR CIRCUIT BREAKER SECTIONS. PROVIDE GENERATOR NEUTRAL BONDING AS PER DETAIL ON SHEET E-18.
4. PROVIDE 200KA, 480V, 3PH, 4W, SPD, SERVICE ENTRANCE RATED, WITH DISCONNECT AND SURGE COUNTER, IN NEMA 1/12 ENCLOSURE. LEAD LENGTH SHALL BE KEPT TO A MINIMUM. COORDINATE WITH HVAC CONTRACTOR TO MOUNT SF-1 ABOVE SPD AND PROVIDE REQUIRED NEC WORK SPACE.
5. PUMP CONTROL CABLE IS NOT SHOWN FOR CLARITY. SEE E-5, E-6, E-12, AND E-16 FOR CONTROL CABLE DETAILS.
6. COORDINATE WITH MECHANICAL CONTRACTOR AND PUMP SUPPLIER AND PROVIDE PUMP CONTROL WIRING AND POWER WIRING TO MATCH THE SELECTED EQUIPMENT.
7. PUMP ROOM, WET WELL AND TRASH RACK CHAMBER ARE CLASSIFIED CLASS 1 DIVISION II GROUP D AREAS IN ACCORDANCE WITH NFPA 820 2012, TABLE 4.2, ROW 4. ALL EQUIPMENT IN THOSE AREAS SHALL BE LISTED FOR USE IN CLASS 1 DIVISION II GROUP D AREA AND INSTALLATION SHALL COMPLY WITH 2014 NEC.
8. PROVIDE SIGNAGE IN ACCORDANCE WITH NEC, INCLUDING SIGNS AT THE SERVICE ENTRANCE EQUIPMENT TO CONFORM TO NEC 701.7 (A) AND 701.7 (B).



FILE NAME = E-3.dgn	USER NAME = jburto	DESIGNED - RV	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL-104 PUMP STATION ELECTRICAL SYSTEM ONE LINE DIAGRAM		F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = AS SHOWN	CHECKED - JC	REVISED -		745	123B-2	MORGAN	782	632	CONTRACT NO. 72B58	
MILHOUSE ENGINEERING & CONSTRUCTION	PLOT DATE = 08/05/2014	APPROVED - JZ	REVISED -	SCALE: SHEET NO. E-3 OF 18 SHEETS STA. TO STA.		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



MCC ELEVATION
EAST WALL ELEC ROOM

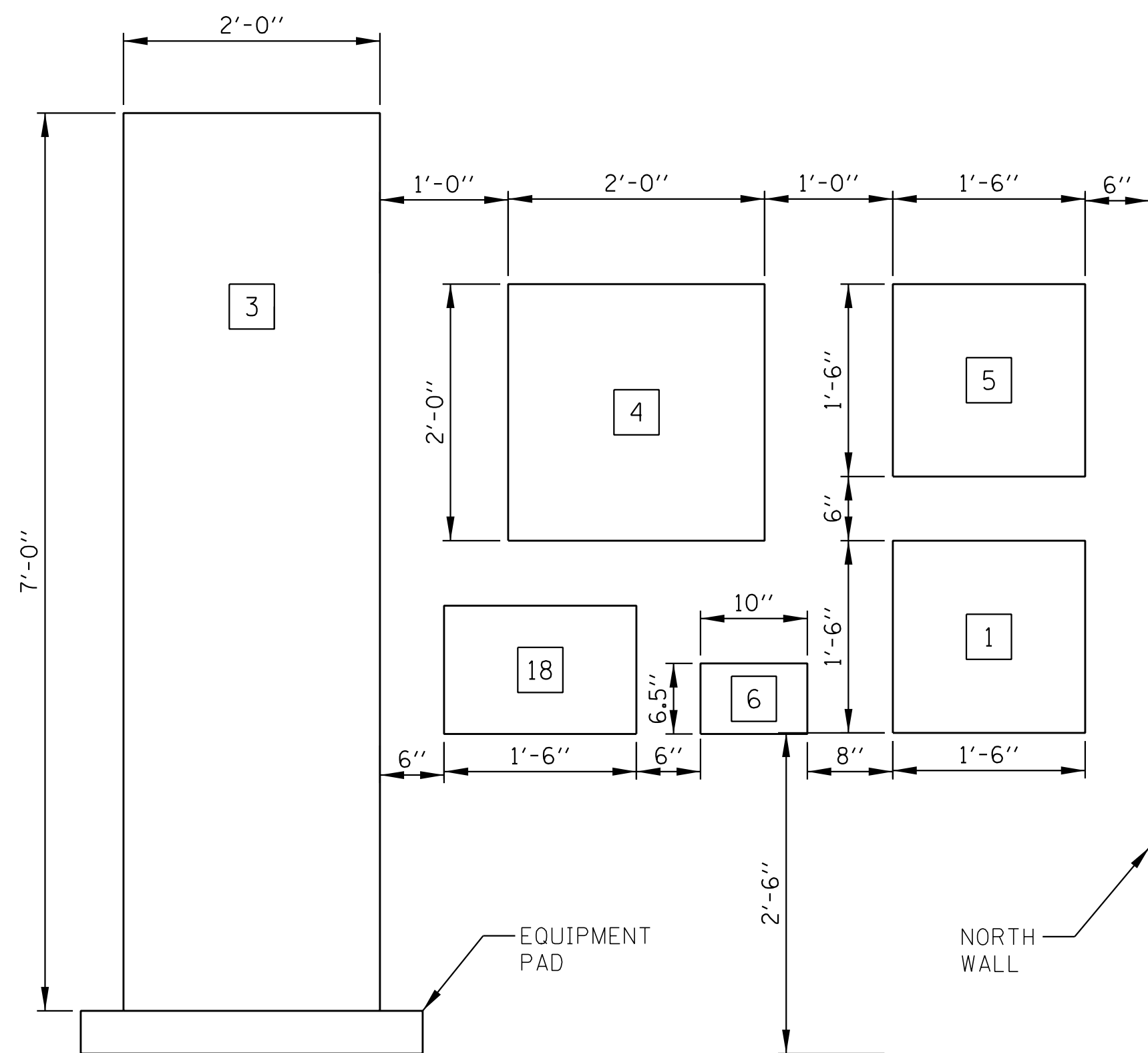


MCC PLAN VIEW

NOTES:

- SEE E-12 FOR FULL EQUIPMENT LIST.
- DIMENSIONS SHOWN ARE MAXIMUM DIMENSIONS TO ENSURE NEC REQUIREMENTS FOR CLEARANCES ARE MET. IF SIZES CHANGE, ENSURE THAT NEC REQUIRED CLEARANCES ARE MET.
- PROVIDE 4-#4, 1-#4G FROM SPD TO RESPECTIVE INCOMING LINE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.

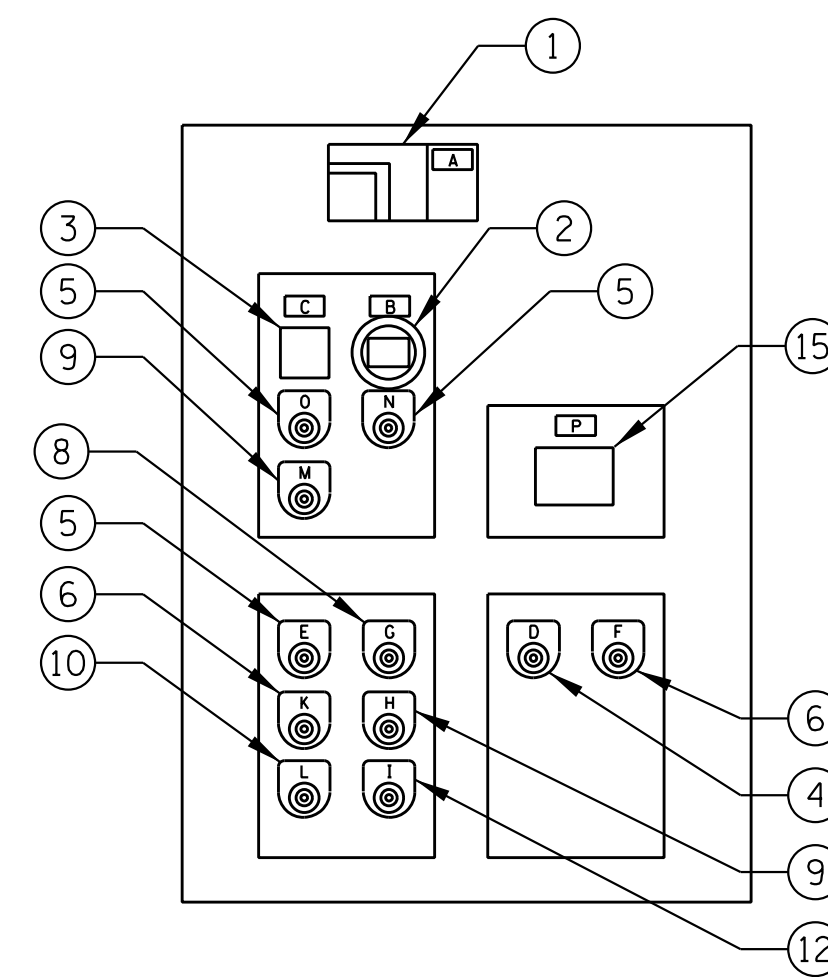
PROVIDE EQUIPMENT PADS PER DETAIL ON CIVIL PLANS



MISC PANELS
WEST WALL ELEC ROOM

EQUIPMENT LABEL LEGEND:

- ① TELEPHONE SERVICE BACKBOARD
- ③ CONTROL PANEL
- ④ FIRE ALARM CONTROL PANEL
- ⑤ INTRUSION ALARM PANEL
- ⑥ COMBUSTIBLE GAS DETECTION PANEL
- ⑧ VENTILATION PANEL

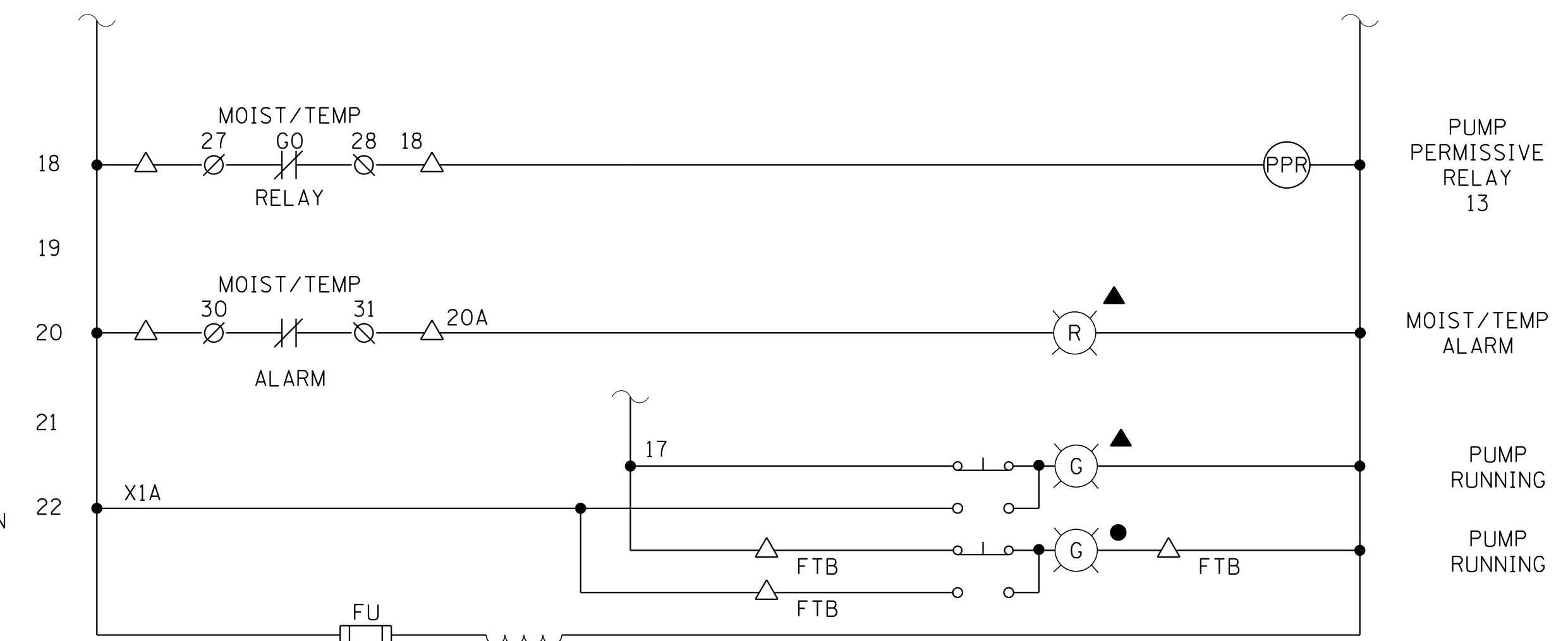
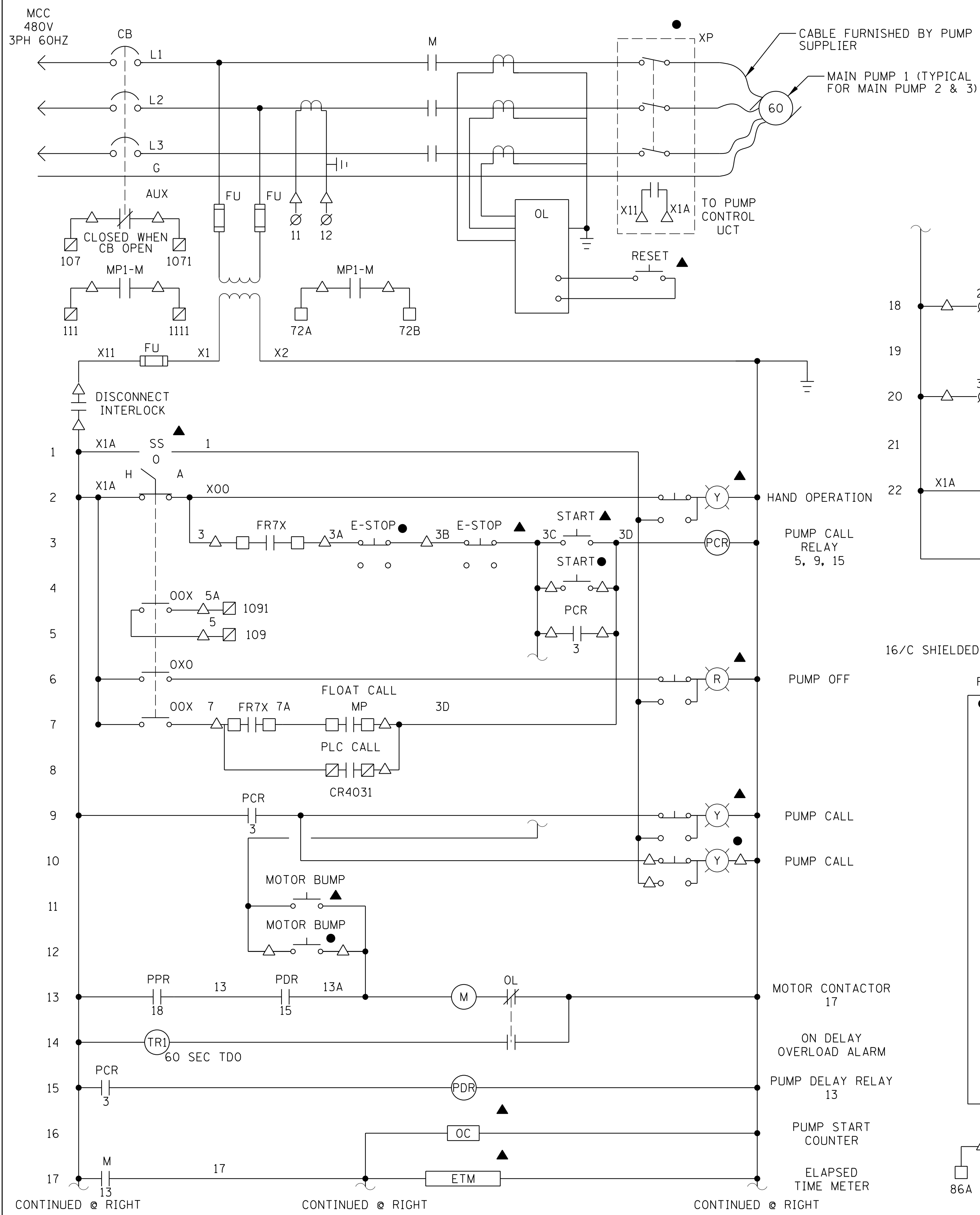


DOOR MOUNTED DEVICE LAYOUT
(TYPICAL FOR LOW FLOW PUMP AND MAIN PUMPS 1, 2 & 3 BUCKETS 4M, 5M, 6E, 6M)

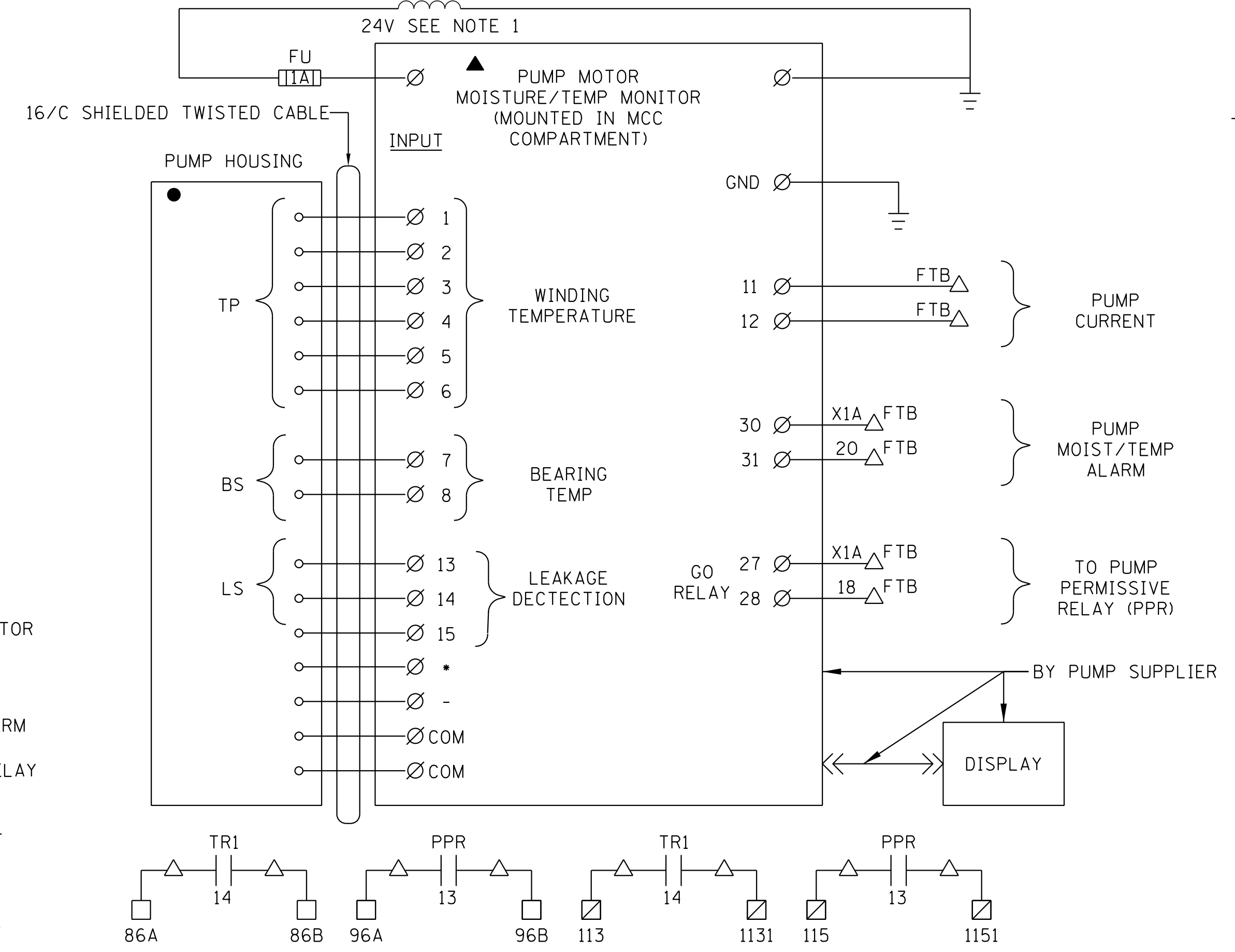
NAMEPLATE SCHEDULE 3" WIDE		
ITEM	ENGRAVING	
MCC	MOTOR CONTROL CENTER IL-104 PS	
1C	-	
1E	POWER METER	
1M	UTILITY MAIN	
2B	BLANK	
2E	BLANK	
2M	GENERATOR MAIN	
3C	BLANK	
3M	AUTOMATIC TRANSFER SWITCH	
4B	BLANK	
4DL	UH-3 ELEC. ROOM	
4DR	UH-2 PUMP ROOM	
4M	MAIN PUMP NO. 3	
5BL	UH-1 PUMP ROOM	
5BR	HOIST RECEPTACLE	
5DL	SPARE	
5DR	SPARE	
5E	SPACE	
5M	MAIN PUMP NO. 2	
6B	AUXILIARY TRANSFORMER/PANEL	
6E	LOW FLOW PUMP NO. 1	
6M	MAIN PUMP NO. 1	

NAMEPLATE SCHEDULE		
ITEM	ENGRAVING	
A	POWER DISCONNECT	
B	ELAPSED RUN TIME	
C	PUMP STARTS	
D	PUMP RUNNING	
E	PUMP OFF	
F	PUMP CALL	
G	START	
H	MOTOR BUMP	
I	E-STOP	
J	NOT USED	
K	HAND OPERATION	
L	HAND-OFF-AUTO SWITCH	
M	OVERLOAD RESET	
N	PUMP OVERTEMP (LFP)	
O	PUMP MOIST/TEMP (MP), PUMP MOIST (LFP)	
P	MOTOR MOIST/TEMP MONITOR	

DEVICE LEGEND (Ⓢ)		
ITEM	DEVICE DESCRIPTION	COLOR
1	MOTOR CIRCUIT PROTECTOR	
2	ELAPSED TIME METER	
3	PUMP START COUNTER	
4	INDICATING LIGHT	GREEN
5	INDICATING LIGHT	RED
6	INDICATING LIGHT	YELLOW
7	NOT USED	
8	PUSHBUTTON	BLACK
9	PUSHBUTTON	RED
10	3 POSITION SELECTOR SWITCH	BLACK
11	AUTO TRANSFER SWITCH SE RATED	
12	MUSHROOM HEAD PUSHBUTTON, MAINTAINED	RED
13	NOT USED	BLACK
14	CIRCUIT BREAKER	
15	MOTOR TEMP/MOIST DISPLAY	



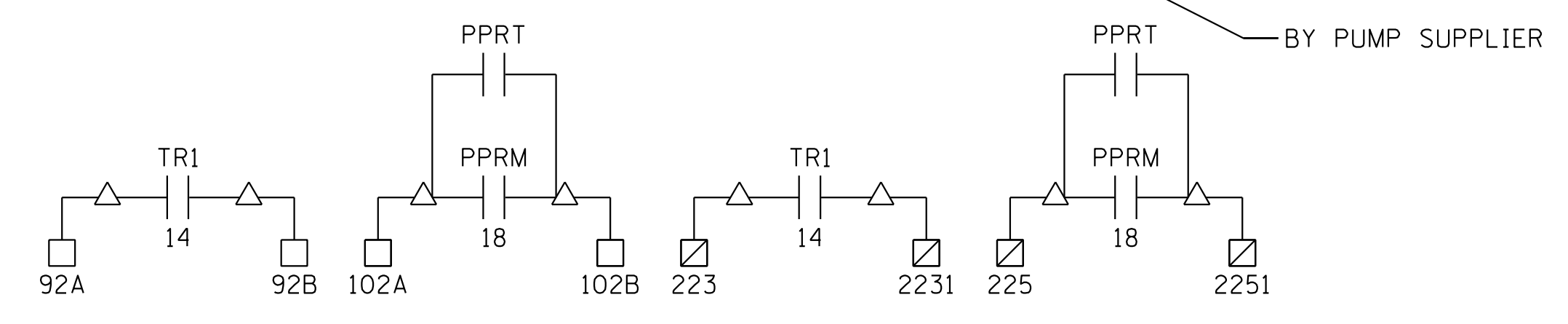
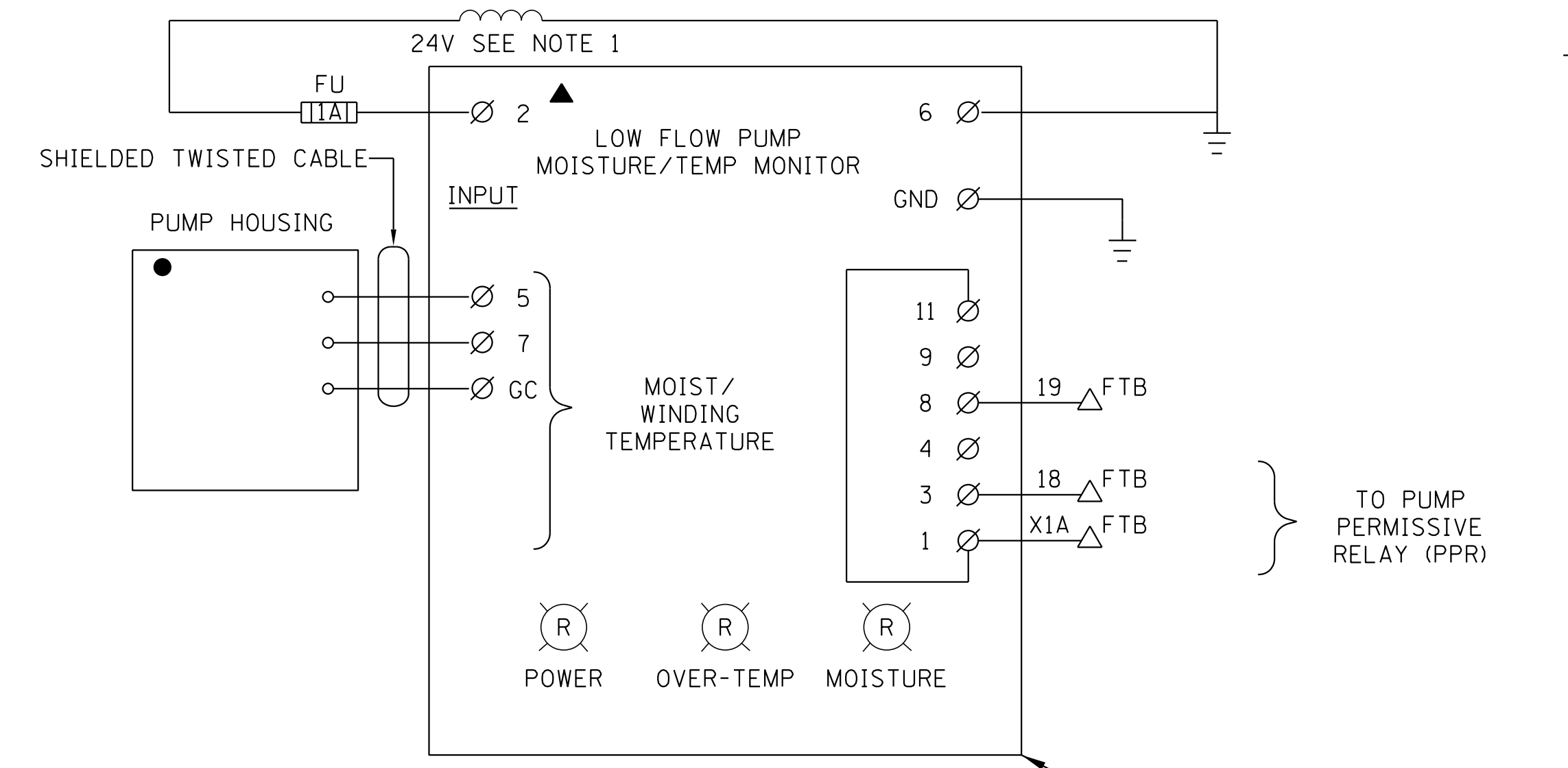
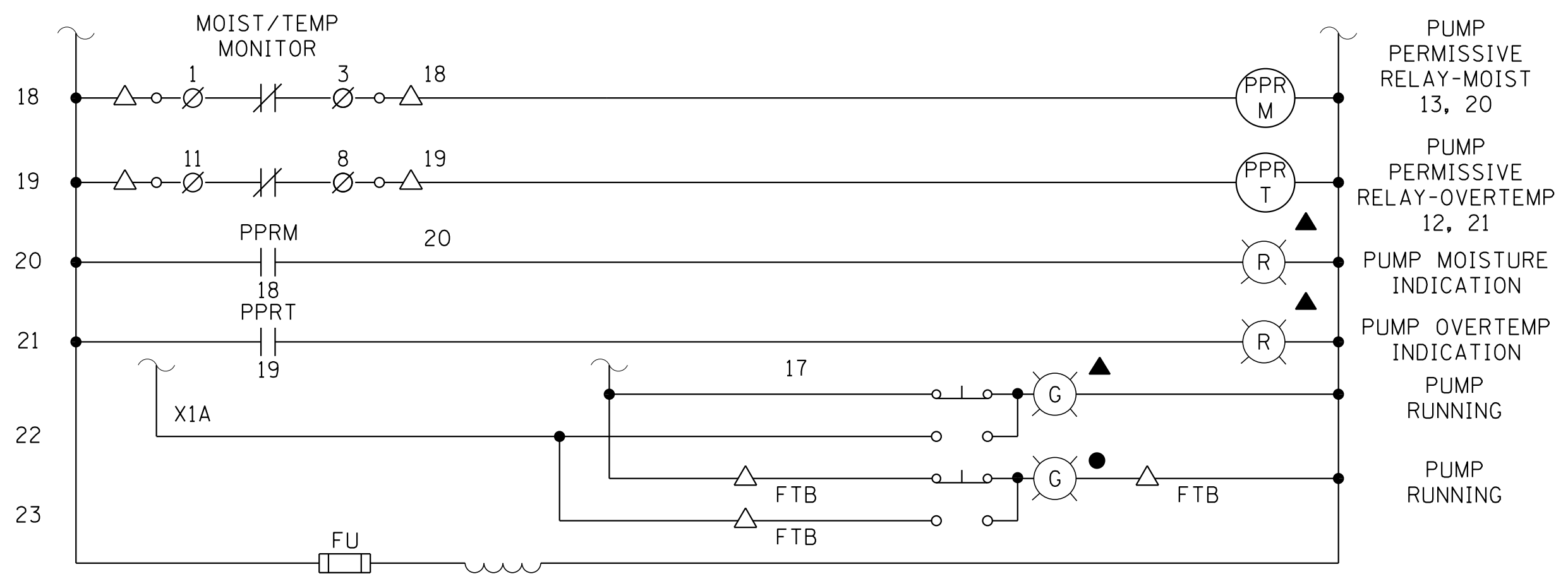
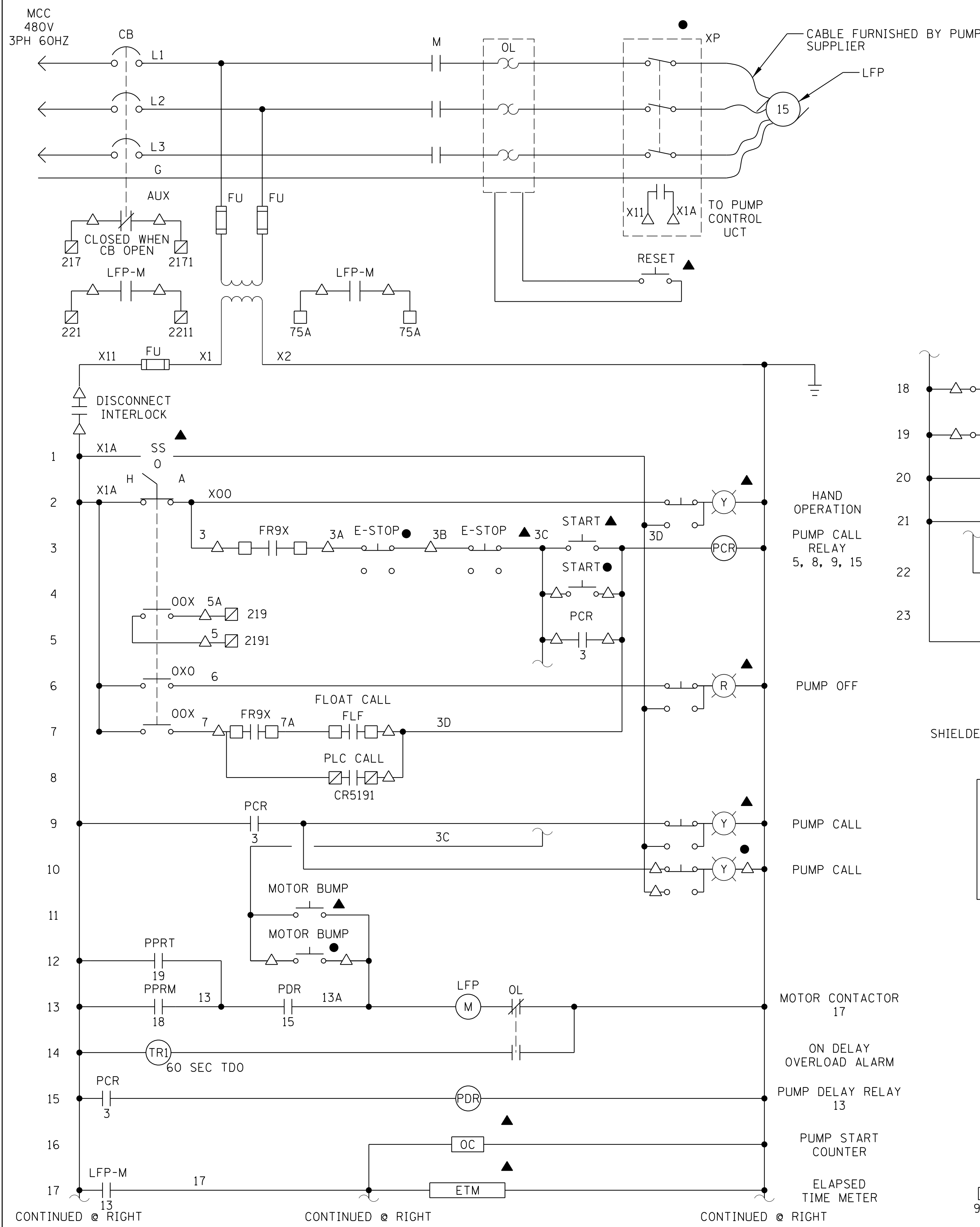
- LEGEND**
- △ TERMINAL IN MOTOR STARTER
 - TERMINAL IN CONTROL PANEL
 - ▣ PLC TERMINAL IN CONTROL PANEL
 - ⊗ TERMINAL IN PUMP MONITOR
 - DEVICE LOCALLY MOUNTED
 - ▲ DEVICE LOCATED ON MCC COMPARTMENT DOOR
 - DEVICE IN CONTROL PANEL
 - ◇ COMBUSTIBLE GAS DETECTOR PANEL TERMINAL
 - ◇ FIRE ALARM PANEL TERMINAL
 - ◇ INTRUSION ALARM PANEL TERMINAL
 - ▣ VENTILATION PANEL TERMINAL
 - ▤ GENERATOR CONTROL PANEL TERMINAL



- NOTES:**
1. COORDINATE WITH PUMP SUPPLIER, INSTALL MONITOR IN MCC COMPARTMENT, INSTALL DISPLAY ON DOOR, AND PROVIDE CONTROL TRANSFORMER AND SENSOR WIRING FOR THE INSTALLED EQUIPMENT. BEARING TEMPERATURE SWITCHES MAY BE PROVIDED IN LIEU OF BEARING TEMPERATURE SENSORS SHOWN.
 2. WIRE NUMBERS SHOWN FOR MP-1. TYPICAL FOR MP-2 AND MP-3.

WIRE NUMBER PREFIX TABLE	
PUMP	PREFIX
MAIN PUMP 1	MP1- ##
MAIN PUMP 2	MP2- ##
MAIN PUMP 3	MP3- ##
LOW FLOW PUMP	LFP- ##

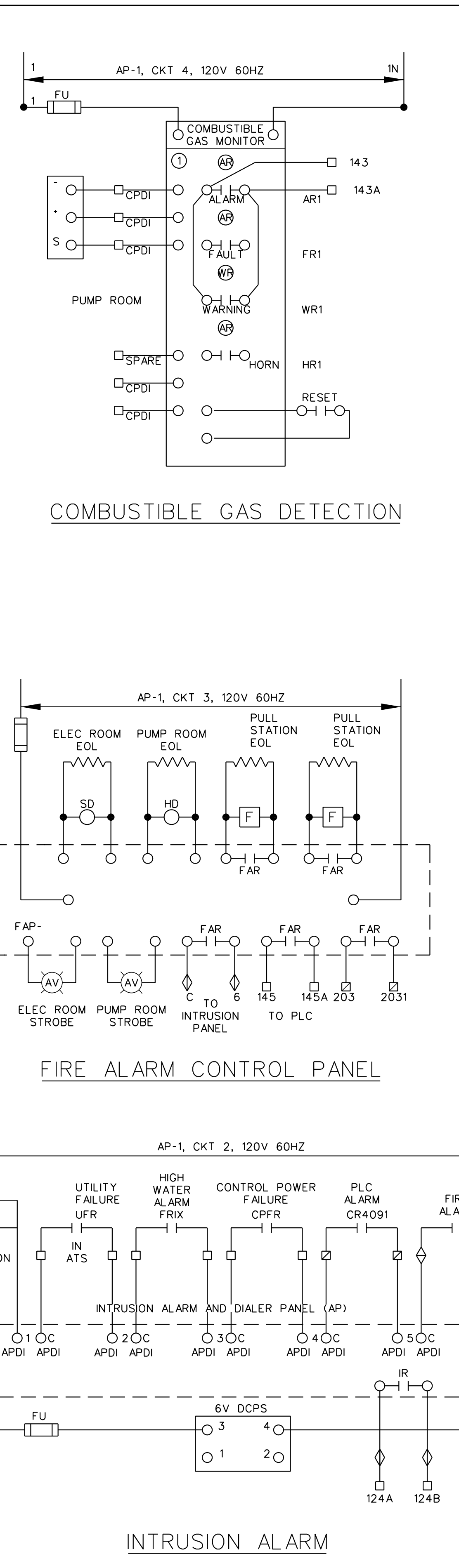
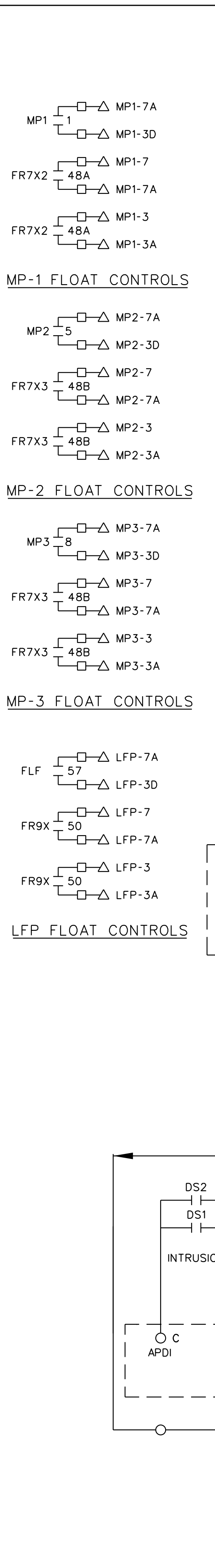
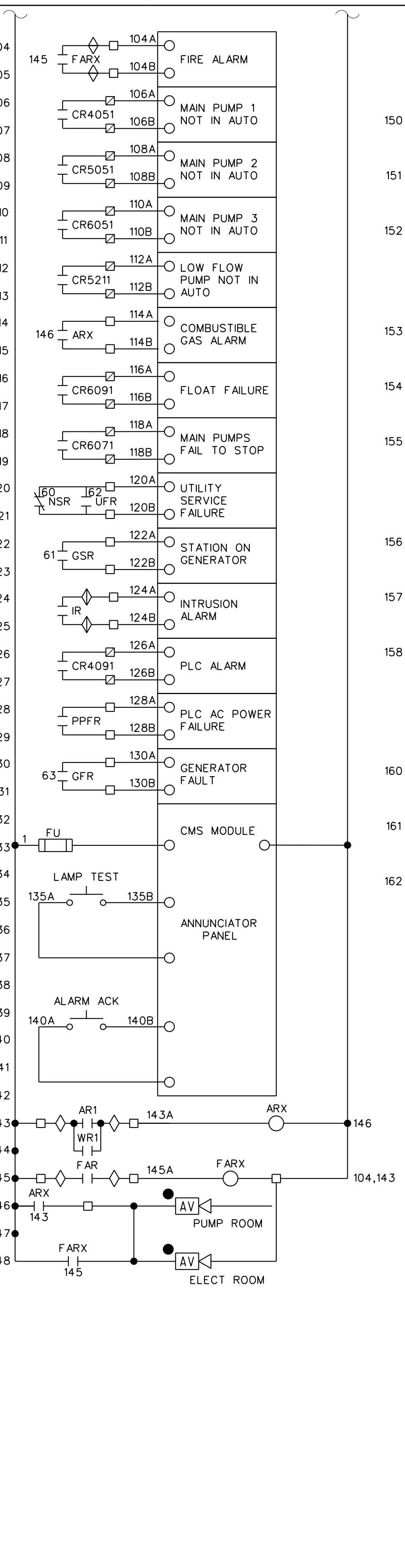
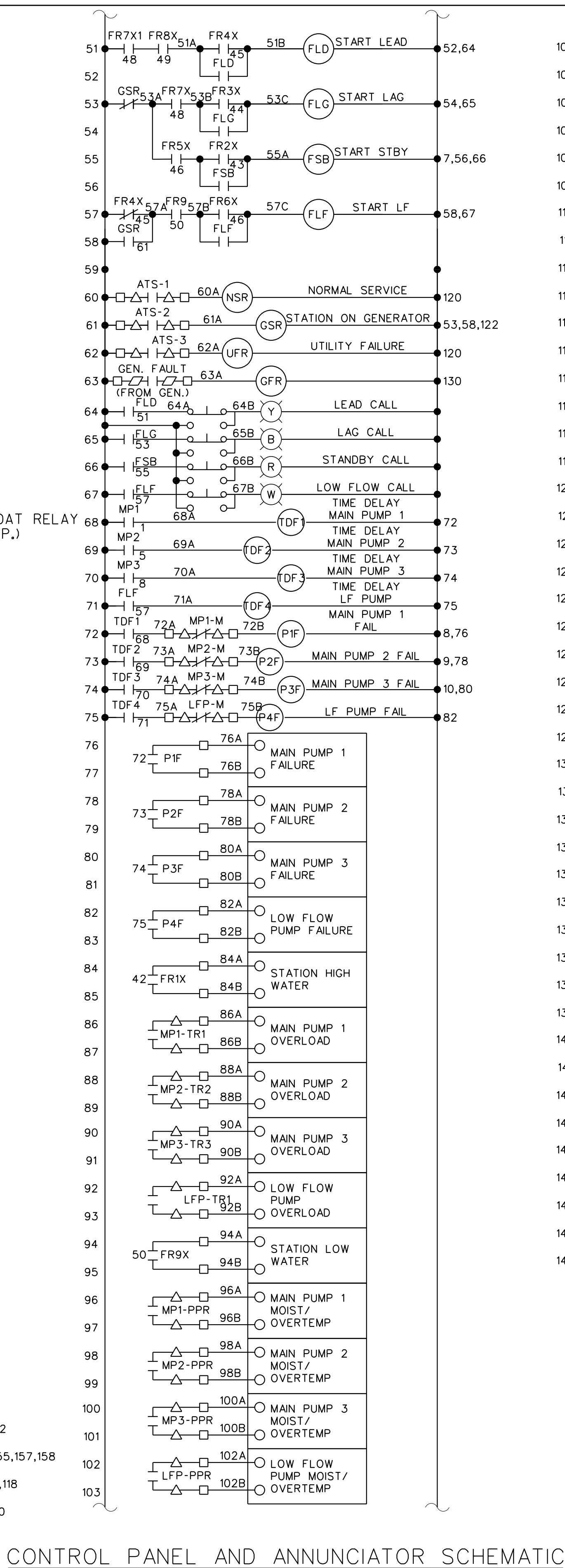
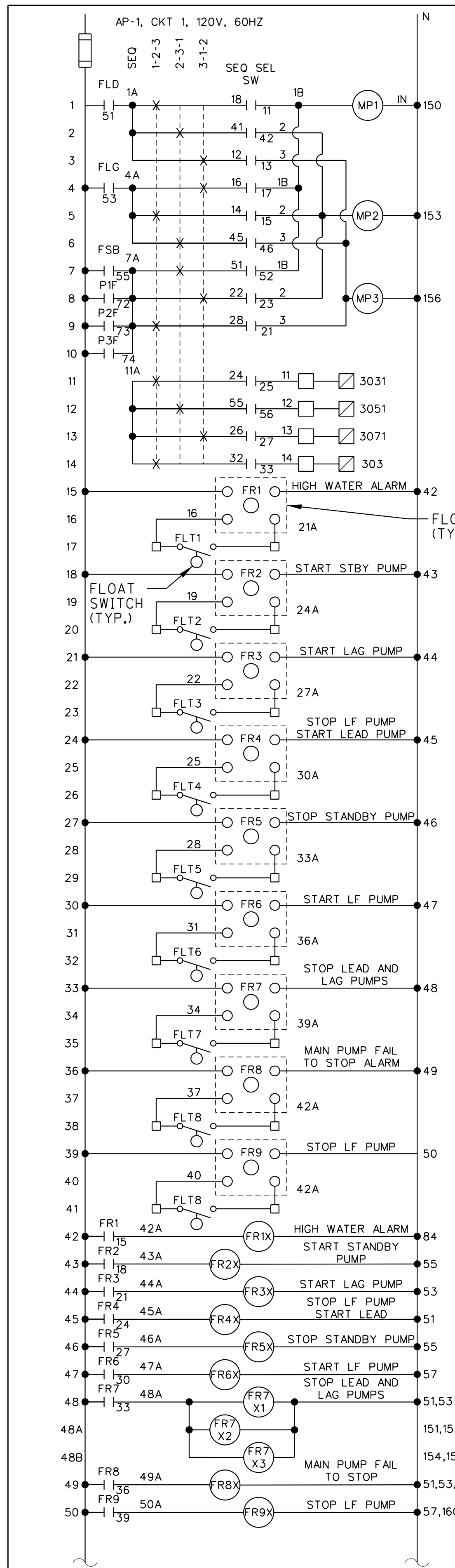
MAIN PUMP NO. 1 CONTROL SCHEMATIC (TYPICAL FOR OTHER MAIN PUMPS)



- LEGEND**
- △ TERMINAL IN MOTOR STARTER
 - TERMINAL IN CONTROL PANEL
 - ▣ PLC TERMINAL IN CONTROL PANEL
 - ∅ TERMINAL IN PUMP MONITOR
 - DEVICE LOCALLY MOUNTED
 - ▲ DEVICE LOCATED ON MCC COMPARTMENT DOOR
 - DEVICE IN CONTROL PANEL
 - ◇ COMBUSTIBLE GAS DETECTOR PANEL TERMINAL
 - ◊ FIRE ALARM PANEL TERMINAL
 - ◑ INTRUSION ALARM PANEL TERMINAL
 - ⊠ VENTILATION PANEL TERMINAL
 - ▤ GENERATOR CONTROL PANEL TERMINAL

- NOTES:**
1. COORDINATE WITH PUMP SUPPLIER, INSTALL MONITOR IN MCC DOOR, AND PROVIDE CONTROL TRANSFORMER AND SENSOR WIRING FOR THE INSTALLED EQUIPMENT.
 2. SEE E-5 FOR WIRE PREFIX DESIGNATION FOR LOW FLOW PUMP.

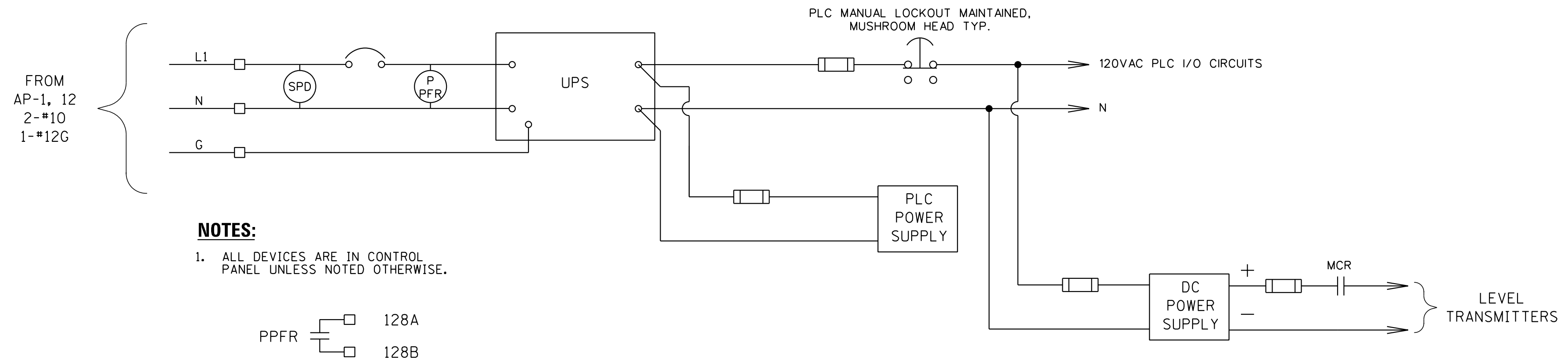
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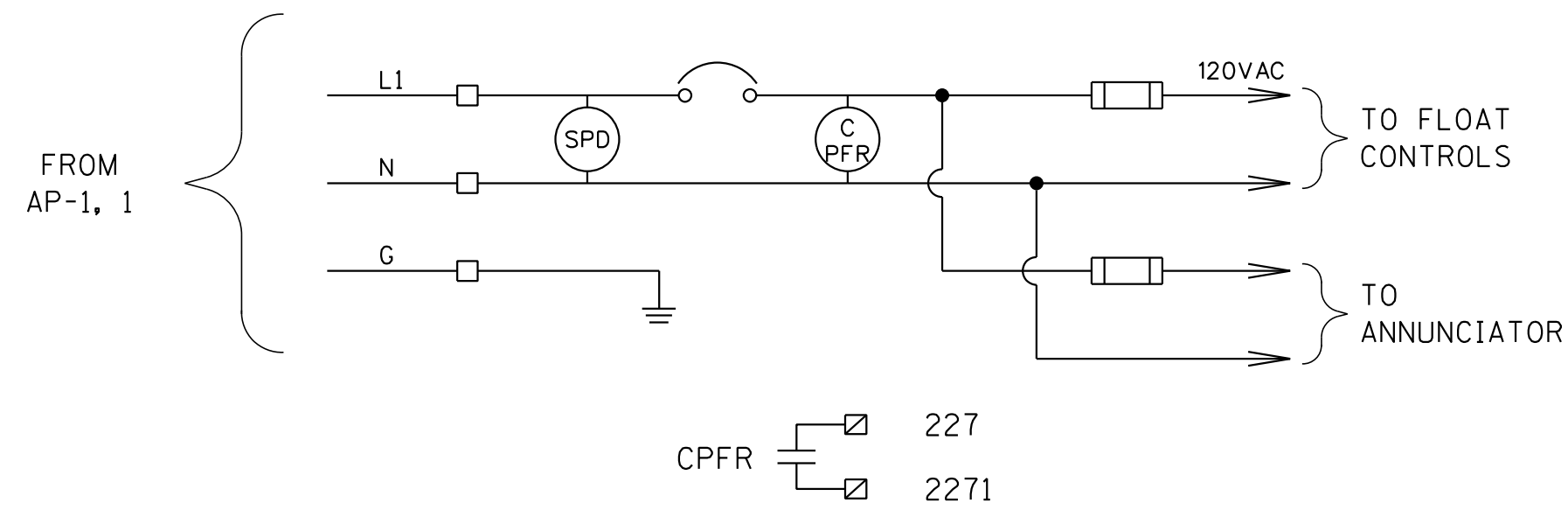
- LEGEND**
- △ TERMINAL IN MOTOR STARTER
 - TERMINAL IN CONTROL PANEL
 - ▣ PLC TERMINAL IN CONTROL PANEL
 - ⊗ TERMINAL IN PUMP MONITOR
 - DEVICE LOCALLY MOUNTED
 - ▲ DEVICE LOCATED ON MCC COMPARTMENT DOOR
 - DEVICE IN CONTROL PANEL
 - ◇ COMBUSTIBLE GAS DETECTOR PANEL TERMINAL
 - ◊ FIRE ALARM PANEL TERMINAL
 - ◊ INTRUSION ALARM PANEL TERMINAL
 - ▣ VENTILATION PANEL TERMINAL
 - ▤ GENERATOR CONTROL PANEL TERMINAL

NOTES:

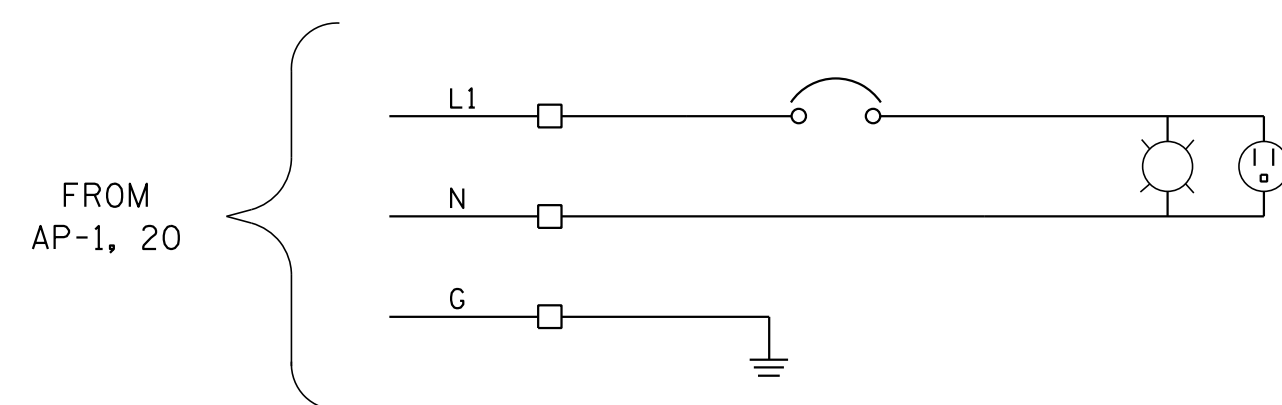
- SEE M-4 FOR CONTROL ELEVATIONS OF FLOAT SWITCHES AND LEVEL TRANSMITTERS.



PLC POWER WIRING DIAGRAM



CONTROL PANEL POWER WIRING

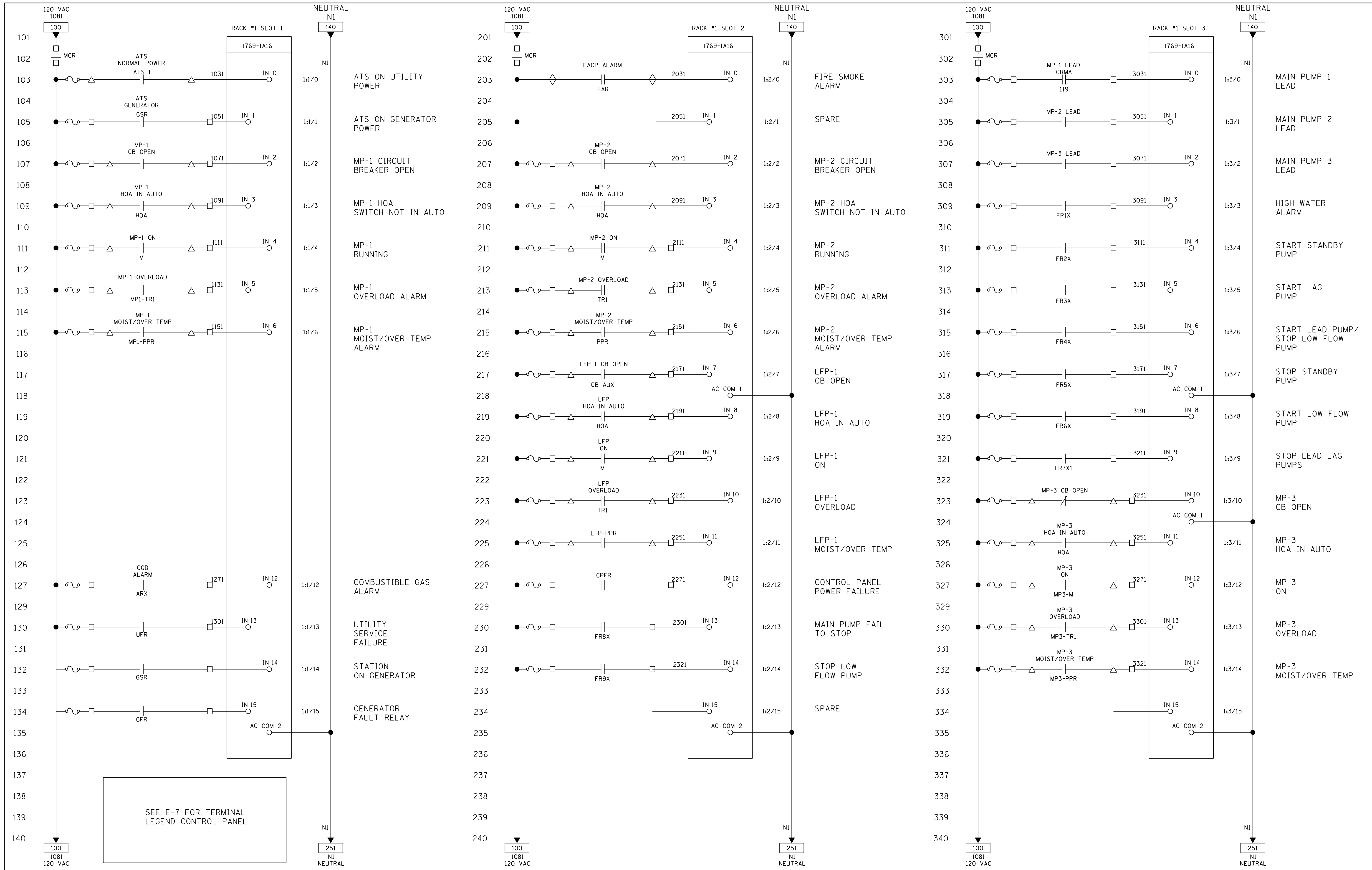


CONTROL PANEL LIGHT AND RECEPTACLE

GENERAL NOTES:

1. THE SURGE PROTECTIVE DEVICES FOR CONTROL AND PLC POWER SHALL BE EMERSON ISLATROL IE-120 OR EQUAL.

SEE E-7 FOR TERMINAL LEGEND



SEE E-7 FOR TERMINAL LEGEND CONTROL PANEL

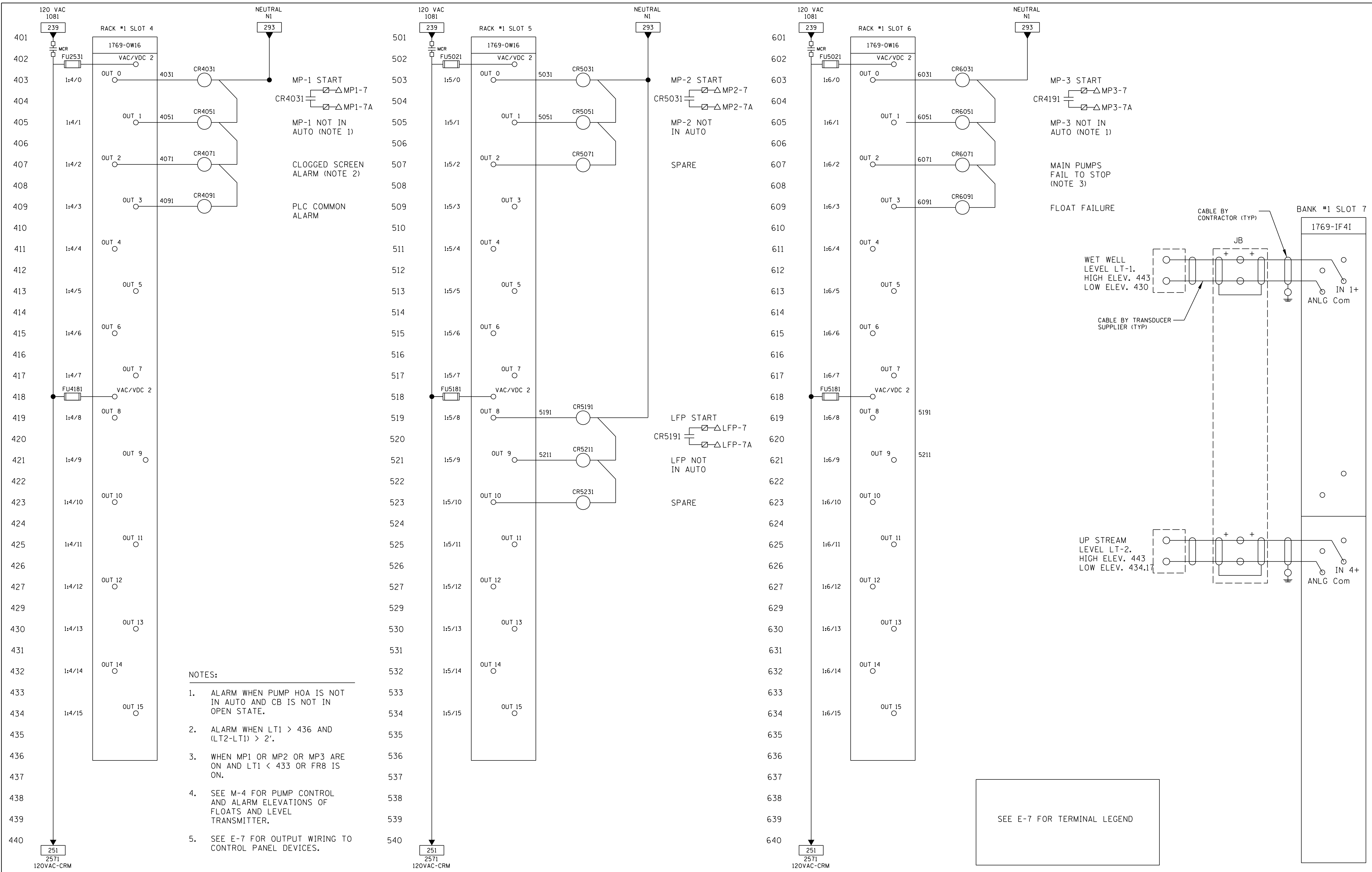
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	PLOT SCALE = AS SHOWN	DRAWN - RV	REVISED -
	PLOT DATE = 08/05/2014	CHECKED - JC	REVISED -
		APPROVED - JZ	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
PLC I/O WIRING, SHEET 1 OF 2**

SCALE: SHEET NO. E-9 OF 18 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	638
CONTRACT NO. 72B58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



- NOTES:**
- ALARM WHEN PUMP HOA IS NOT IN AUTO AND CB IS NOT IN OPEN STATE.
 - ALARM WHEN LT1 > 436 AND (LT2-LT1) > 2'.
 - WHEN MP1 OR MP2 OR MP3 ARE ON AND LT1 < 433 OR FR8 IS ON.
 - SEE M-4 FOR PUMP CONTROL AND ALARM ELEVATIONS OF FLOATS AND LEVEL TRANSMITTER.
 - SEE E-7 FOR OUTPUT WIRING TO CONTROL PANEL DEVICES.

SEE E-7 FOR TERMINAL LEGEND

FILE NAME = E-10.dgn	USER NAME = jburto	DESIGNED - RV	REVISED -
		DRAWN - RV	REVISED -
	PLOT SCALE = AS SHOWN	CHECKED - JC	REVISED -
	PLOT DATE = 08/05/2014	APPROVED - JZ	REVISED -

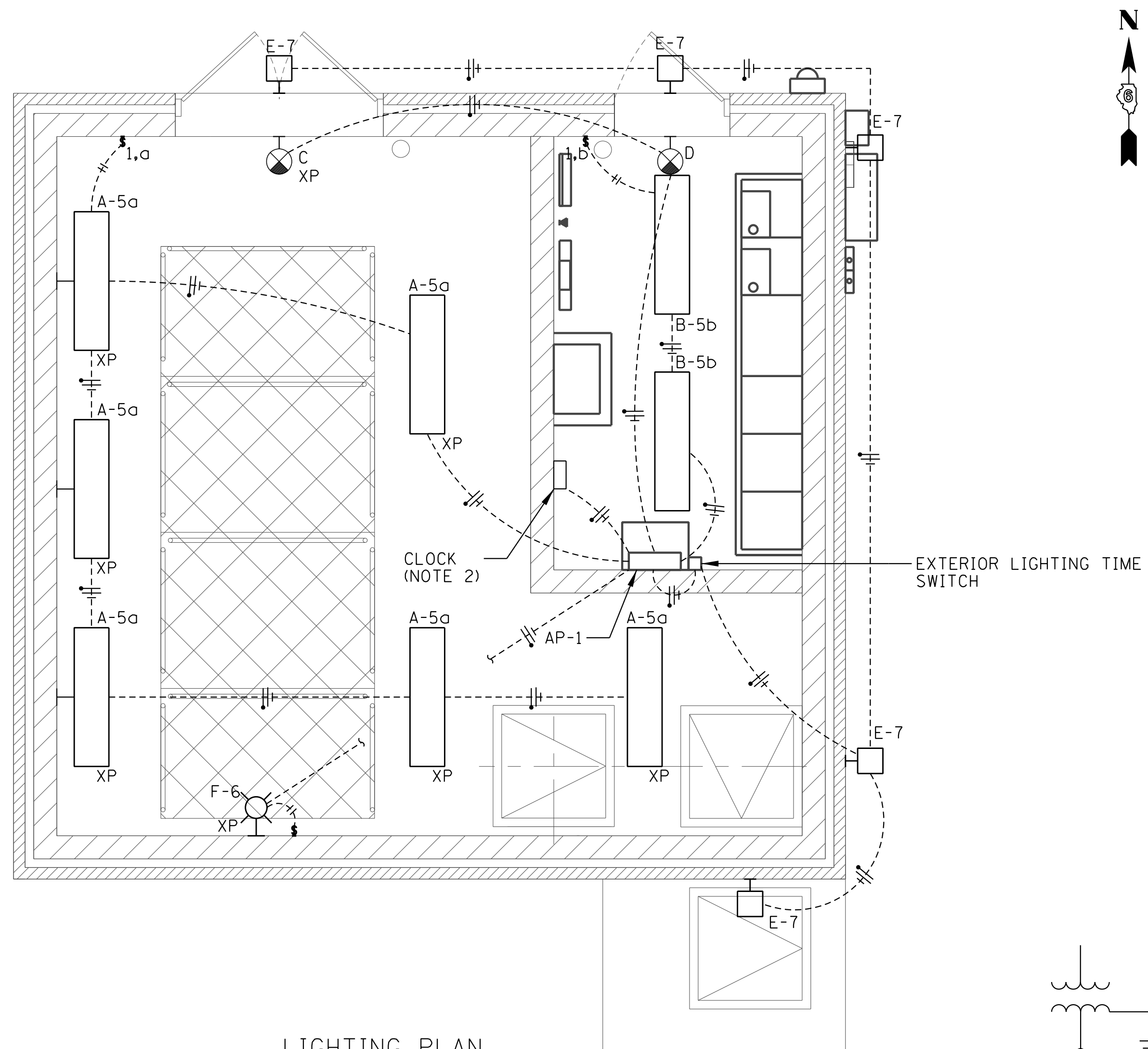
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
PLC I/O WIRING, SHEET 2 OF 2**

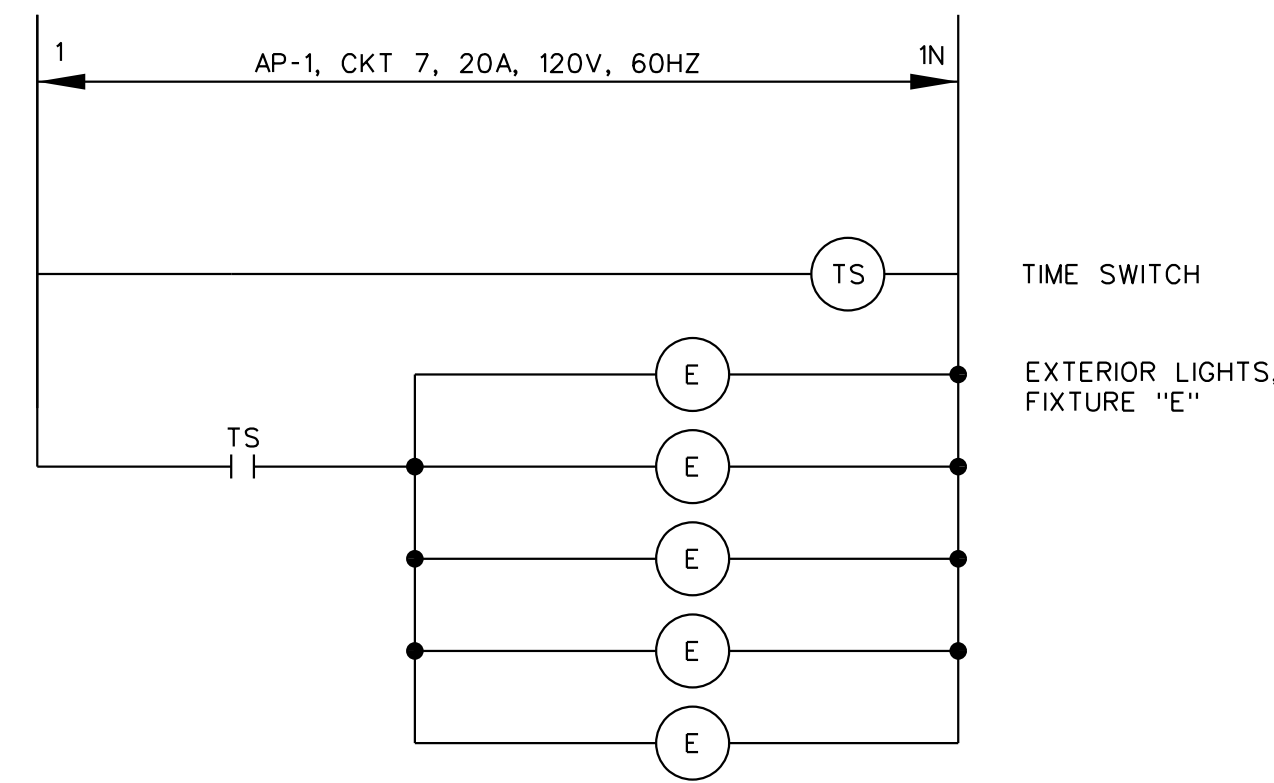
SCALE: SHEET NO. E-100F 18 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	639
CONTRACT NO. 72B58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

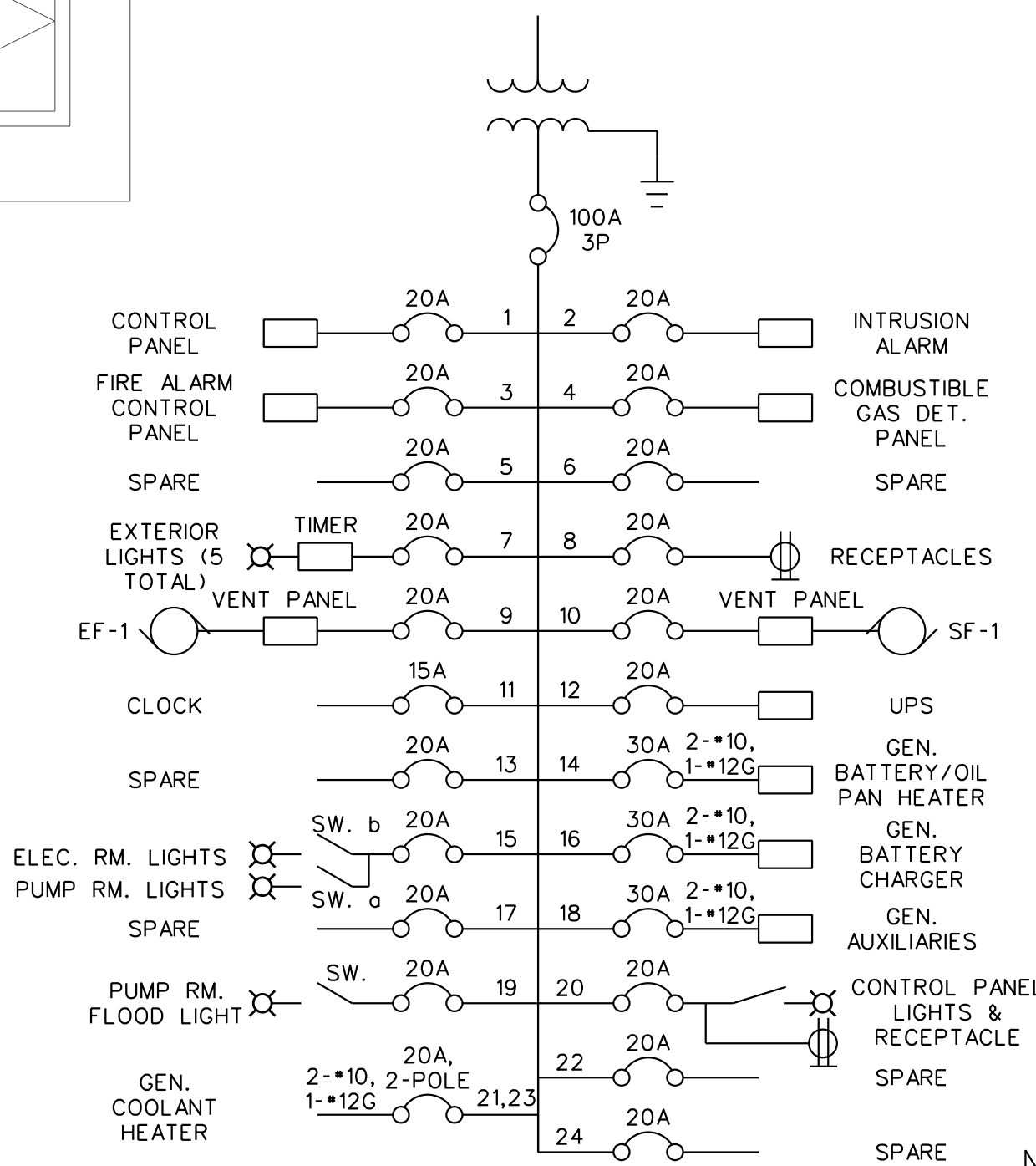




LIGHTING PLAN
SCALE: 3/8" = 1'-0"



EXTERIOR LIGHTING SCHEMATIC



AP-1 CIRCUIT WIRING DIAGRAM

LIGHTING FIXTURE SCHEDULE										
NOTE: PROVIDE OPTIONS AND ACCESSORIES AS NEEDED. MANUFACTURERS LISTED AS ACCEPTABLE SHALL MEET ALL REQUIREMENTS AND FEATURES INDICATED. ACCEPTABLE MANUFACTURERS MUST MEET PHOTOMETRIC PERFORMANCE OF THE LISTED UNIT.										
TAG	DESCRIPTION/USAGE	QTY.	LAMP TYPE	TOTAL WATTS	VOLT	MOUNTING	LUMINAIRE		OPTIONS/ ACCESSORIES	SEE NOTES
							MANUFACTURER	CATALOG SERIES		
A	1'X4' CLASS I, DIVISION II LINEAR FIXTURE	NA	LED	66	120	WALL & PENDANT MOUNT	DIALIGHT OR EQUAL	LTD3C4H2D	1, 2, 3, 6	1, 2, 4, 7
B	1'X4' LINEAR FIXTURE	NA	LED	66	120	PENDANT	DIALIGHT OR EQUAL	LTM3C4H2D	1, 2, 3, 6	1, 2, 4, 7
C	CLASS I, DIVISION II BATTERY OPERATED EXT-UNIT COMBO	2	HALOGEN W/ LED FOR SIGN	18	120	WALL	LIGHTOLIER OR EQUAL	HX618R2H6SD2	5, 7	1, 3
D	EXT-UNIT COMBO	2	HALOGEN W/ LED FOR SIGN	12	120	WALL	COOPER OR EQUAL	CHX-DH SERIES	5, 7	1, 3
E	EXTERIOR WALL MOUNTED FIXTURE (WITH RECESSED DRIVER HOUSING)	NA	LED	36	120	WALL	COOPER OR EQUAL	303-W1-LEDB1-4000-UNV-T4	2, 3, 4, 6	2, 5, 6, 7
F	INTERIOR CLASS I, DIVISION II FLOOD LIGHT	1	175W METAL HALIDE	175	120	WALL	PHILIPS GARDCO OR EQUAL	F SERIES INDUSTRIAL FLOODLIGHT	2, 3, 6	3, 4, 6

OPTIONS/ACCESSORIES CODE LISTING:
 1. PROVIDE WITH RIGID STEMS FOR PENDANT MOUNT FIXTURES. MOUNT TO RAFTERS WITH BEAM CLAMPS.
 2. PROVIDE ELECTRONIC BALLAST.
 3. PROVIDE WITH GLR FUSE.
 4. WET LOCATION APPROVED.
 5. PROVIDE WITH 120MIN. BATTERY TEST SWITCH AND PILOT LIGHT
 6. FIXTURES TO BE MOUNTED AT 8' AFF.
 7. EXT UNIT COMBO SHALL BE MOUNTED AT 76" AFF.

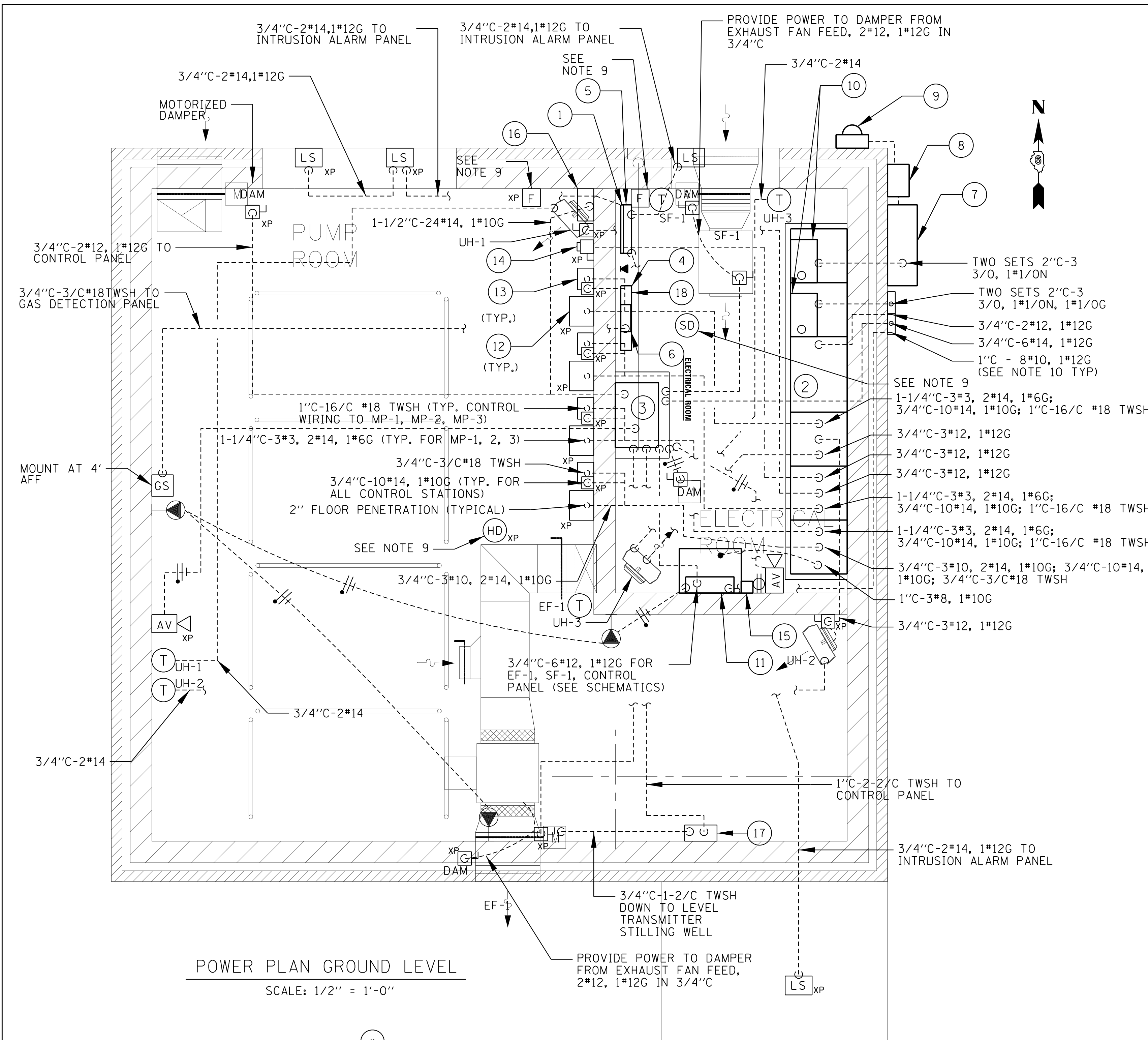
NOTES:
 1. PROVIDE WITH LAMPS.
 2. REFER TO DRAWING FOR CEILING TYPE, PROVIDE MOUNTING ACCORDINGLY.
 3. PROVIDE WITH SINGLE FACE, DOUBLE FACE AND ARROW AS SPECIFIED ON DRAWINGS.
 4. ALL SPECIFIED FLOURESCENT LIGHTING LAMPS SHALL BE 3500K COLOR TEMPERATURE.
 5. PROVIDE WITH TIME SWITCH.
 6. FIXTURE WITH PREMIUM FINISH. SUBMIT FINISH FOR ENGINEER'S REVIEW.
 7. COORDINATE LOCATION TO AVOID OBSTRUCTION TO HVAC EQUIPMENT, HOIST BEAM, AND PUMP REMOVAL.

PHOTOMETRIC COMPLIANCE NOTES:
 DESIGN LIGHTING PHOTOMETRIC BASED ON ABOVE LISTED FIRST MANUFACTURE MODEL NUMBER. EC SHALL PROVIDE PHOTOMETRIC, IF OTHER ABOVE LISTED LIGHT FIXTURE USED.

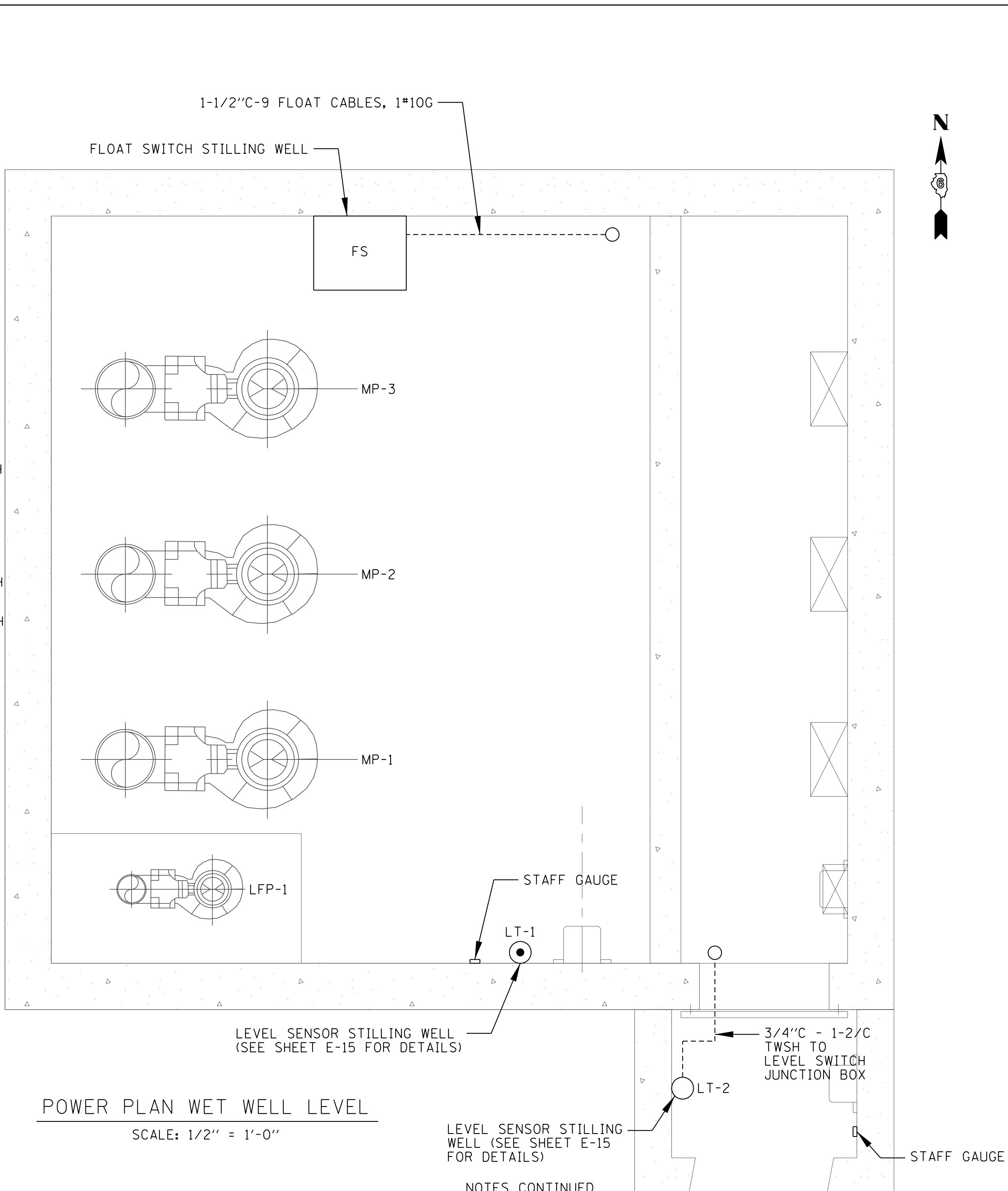
PANEL SCHEDULE															
DESIGNATION: AP-1						MAINS: 100A									
LOCATION: ELECTRICAL ROOM						BUS SIZE 225A									
VOLTAGE: 208/120 VOLT						ALL BREAKERS:									
PHASE: 3 PHASE, 4 WIRE															
CKT. NO.	LOAD DESCRIPTION	LOAD CATEGORY	VA	CKT. BKR. AMPS	POLE	VA	A	B	C	CKT. BKR. AMPS	POLE	LOAD CATEGORY	LOAD DESCRIPTION	CKT. NO.	
1	CONTROL PANEL	2	1000	20	1	1,100				20	1	100	2	INTRUSION ALARM PANEL	2
3	FIRE ALARM CONTROL PANEL	2	100	20	1			200		20	1	100	2	COMBUSTIBLE GAS DETECTION PANEL	4
5	EXIT LIGHTS	1	50	20	1				50	20	1	0	0	SPARE	6
7	EXTERIOR LIGHTS AND TIMECLOCK	1	200	20	1	200				20	1	0	2	RECEPTACLES	8
9	EXHAUST FAN EF-1	0	500	20	1			1,000		20	1	500	0	SUPPLY FAN SF-1	10
11	CLOCK	2	5	15	1				1,005	20	1	1000	5	UPS	12
13	SPARE	0	0	20	1	200				30	1	200	5	GENERATOR BATTERY BATTERY/OIL PAN	14
15	INTERIOR LIGHTS	1	528	20	1			1,528		30	1	1000	5	GENERATOR BATTERY CHARGER	16
17	SPARE	0	0	20	1				1,000	30	1	1000	5	GENERATOR AUXILIARY	18
19	INTERIOR FLOODLIGHT	1	225	20	1	325				20	1	100	2	CONTROL PANEL LIGHTS/ RECEPTACLE	20
21	GENERATOR COOLANT HEATER	0	750					750		20	1	0	0	SPARE	22
23	SPARE	0	750							20	1	0	0	SPARE	24
TOTAL CONNECTED LOAD:						VA	1,825	3,478	750	TOTAL =		8.11		KVA	
						AMPERE	15	29	23	TOTAL =		23		AMP	
LOAD CATEGORIES:		CAT. TOTALS	KVA	KW											
1 - LIGHTING		1	1003	902.7											
2 - POWER/RECEPTACLE		2	1405	1264.5											
3 - MOTORS		3	0	0											
4 - HEATING		4	0	0											
5 - VAC		5	3200	2880											
6- SPECIAL RECEPTACLE & POWER		6	0	0											
0 - SPARE/BLANK															

- NOTES:
- CONDUIT SIZE SHALL BE 3/4" (MINIMUM) UNLESS NOTED OTHERWISE.
 - ALL WIRE SIZES SHALL BE 2-*12, 1-*12G (MINIMUM) UNLESS NOTED OTHERWISE.

- NOTES:
- PUMP ROOM, WET WELL AND TRASH RACK CHAMBER ARE CLASSIFIED CLASS 1 DIVISION II GROUP D AREAS IN ACCORDANCE WITH NFPA 820 2012. ALL EQUIPMENT IN THOSE AREAS SHALL BE LISTED FOR USE IN CLASS 1 DIVISION II GROUP D AREA AND INSTALLATION SHALL COMPLY WITH 2011 NEC ARTICLE 501.
 - PROVIDE RECEPTACLE, RECESSED IN WALL AT 80" AFF, AND WALL-MOUNTED CLOCK.



POWER PLAN GROUND LEVEL
SCALE: 1/2" = 1'-0"



POWER PLAN WET WELL LEVEL
SCALE: 1/2" = 1'-0"

- KEY NOTES:**
1. TELEPHONE SERVICE BACKBOARD @ 2'-6 AFF.
 2. ELECTRIC SERVICE EQUIPMENT AND MCC (ON PAD)
 3. CONTROL PANEL (ON 4" PAD)
 4. FIRE ALARM CONTROL PANEL (WALL MOUNT)
 5. INTRUSION ALARM PANEL (WALL MOUNT) AND KEYPAD.
 6. COMBUSTIBLE GAS DETECTION PANEL AND KEYPAD (WALL MOUNT)
 7. CT CABINET, NEMA 3R.
 8. PT CABINET, NEMA 3R.
 9. ELECTRIC SERVICE METER AND FITTING

- KEY NOTES CONT:**
10. SURGE PROTECTIVE DEVICE (TWO DEVICES TOTAL, MOUNTED ON TOP OF MCC)
 11. AUXILIARY PANEL AP-1 AND TRANSFORMER.
 12. PUMP DISCONNECT SWITCH.
 13. PUMP CONTROL WIRING JB (NEMA 4X, SS) PUMP POWER WIRING JB, NEMA 7, AND LOCAL START/STOP STATION (NEMA 7, SEE SHEET E-14 FOR DETAILS).
 14. 3P, 480V HOIST RECEPTACLE.
 15. EXTERIOR LIGHTING TIMESWITCH.
 16. FLOAT SWITCH JB WITH 2-20 POINT TB AND TERMINATE FLOAT WIRING.

- KEY NOTES CONT:**
17. LEVEL TRANSMITTER JB
 18. VENTILATION PANEL

- NOTES:**
1. SEE SITE PLAN FOR UTILITY TRANSFORMER AND STANDBY GENERATOR
 2. ALL EQUIPMENT AND DEVICES IN THE PUMP ROOM AND TRASH RACK CHAMBER SHALL BE LISTED FOR USE IN CLASS 1, DIVISION 2 GROUPS C AND D LOCATIONS, UNLESS NOTED OTHERWISE.
 3. UNLESS NOTED OTHERWISE, PROVIDE 3/4\"/>

- NOTES CONTINUED**
5. PROVIDE THERMOSTATS AND 3/4\"/>

FILE NAME = E-12.dgn

USER NAME = jburto
 PLOT SCALE = AS SHOWN
 PLOT DATE = 08/05/2014

DESIGNED - RV
 DRAWN - RV
 CHECKED - JC
 APPROVED - JZ

REVISED -
 REVISED -
 REVISED -
 REVISED -

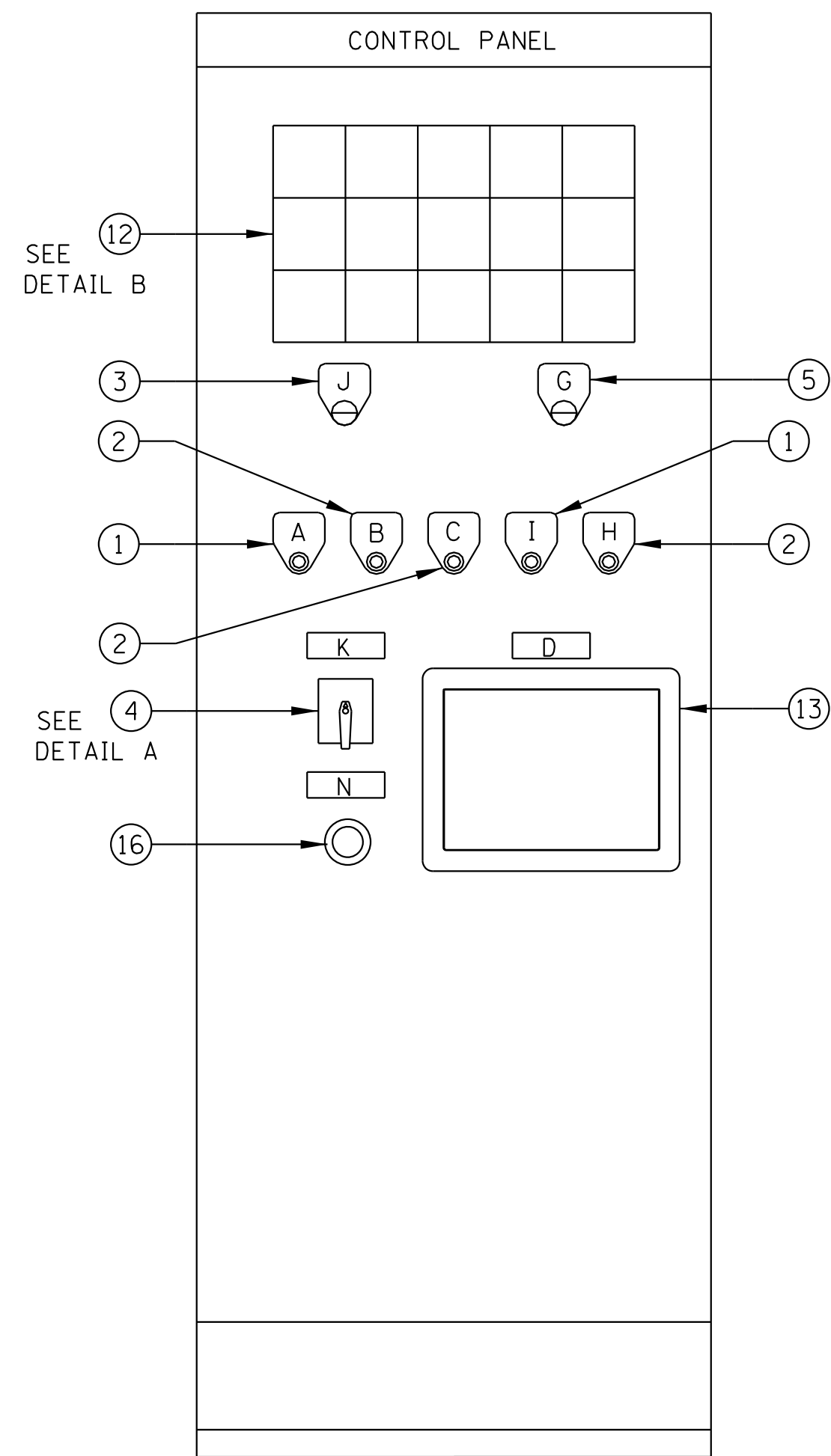
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL-104 PUMP STATION
 POWER PLAN**

SCALE: SHEET NO. E-12 OF 18 SHEETS STA. TO STA.

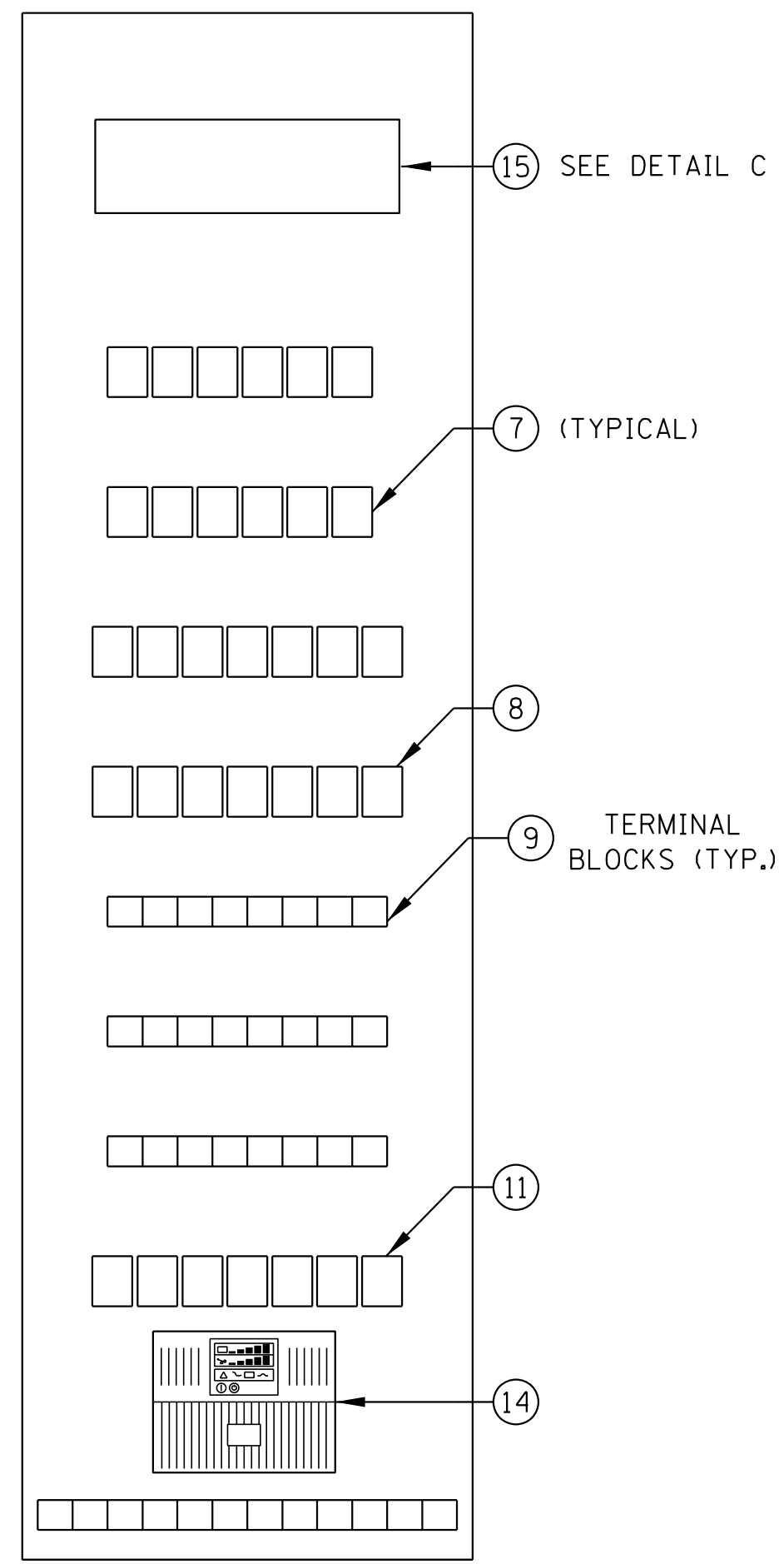
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	641

CONTRACT NO. 72B58
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



FRONT VIEW

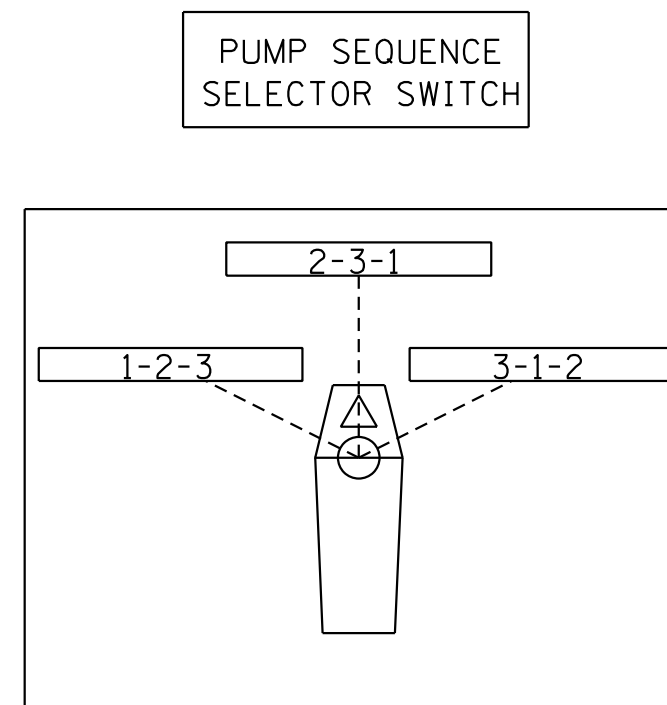
CONTROL PANEL
NOT TO SCALE



INSIDE SUBPANEL

NOTES:

- CONTROL PANEL DEPTH SHALL NOT EXCEED 16" TO FIT IN THE SPACE AND MAINTAIN REQUIRED NEC CLEARANCES.
- PANEL MUST BE CONSTRUCTED USING WIREWAYS TO ALLOW SEPARATION OF DIFFERENT VOLTAGE AND INTRINSICALLY SAFE WIRING.

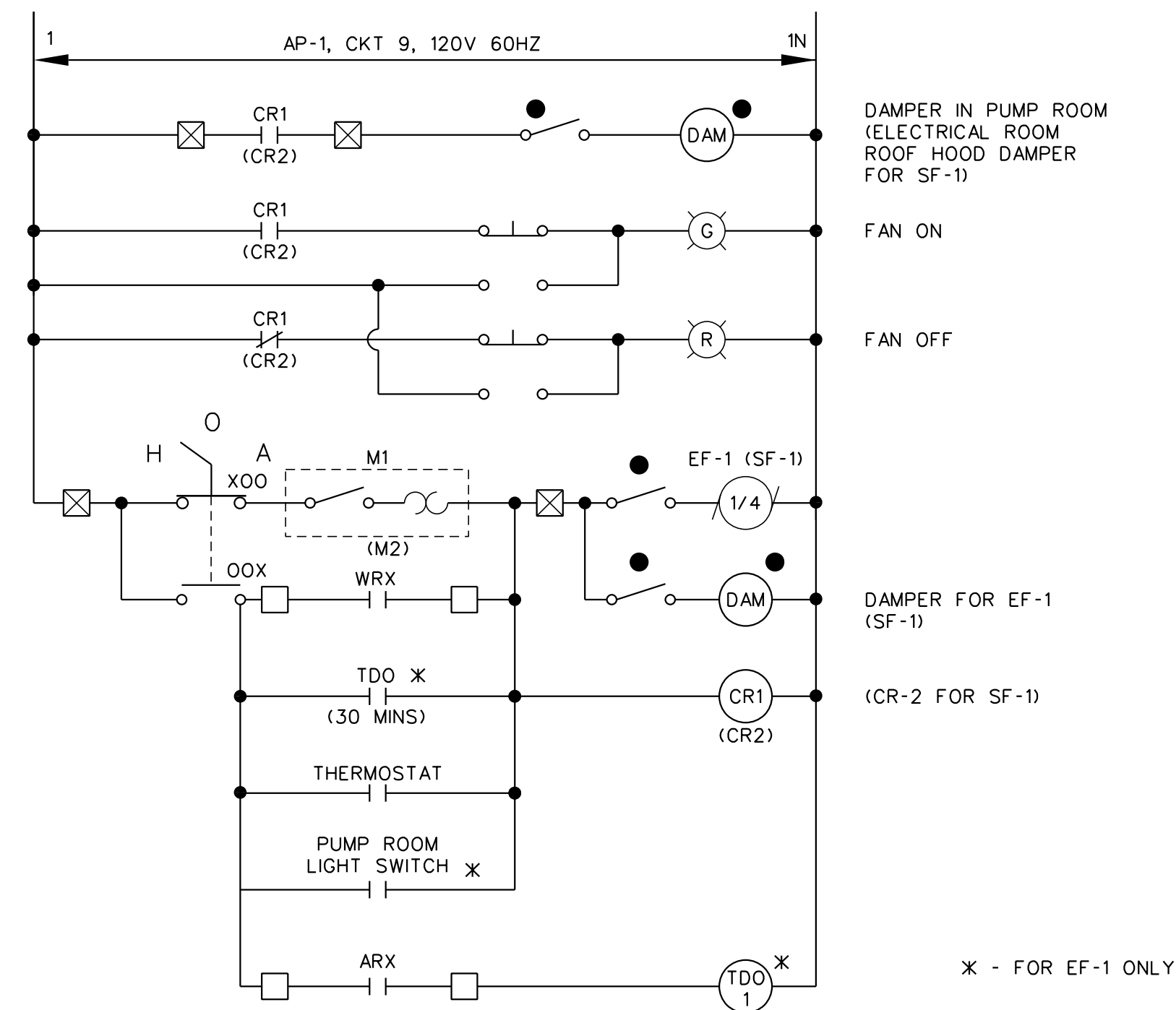


DETAIL A

MAIN PUMP 1 FAILURE	MAIN PUMP 2 FAILURE	MAIN PUMP 3 FAILURE	LOW FLOW PUMP FAILURE	STATION HIGH WATER
MAIN PUMP 1 OVERLOAD	MAIN PUMP 2 OVERLOAD	MAIN PUMP 3 OVERLOAD	LOW FLOW PUMP OVERLOAD	STATION LOW WATER
MAIN PUMP 1 MOIST/OVERTEMP	MAIN PUMP 2 MOIST/OVERTEMP	MAIN PUMP 3 MOIST/OVERTEMP	LOW FLOW PUMP MOIST/OVERTEMP	FIRE ALARM
MAIN PUMP 1 NOT IN AUTO	MAIN PUMP 2 NOT IN AUTO	MAIN PUMP 3 NOT IN AUTO	LOW FLOW PUMP NOT IN AUTO	COMBUSTIBLE GAS ALARM
FLOAT FAILURE	MAIN PUMPS FAIL TO STOP	UTILITY SERVICE FAILURE	STATION ON GENERATOR	INTRUSION ALARM
PLC ALARM	PLC AC POWER FAILURE	GENERATOR FAULT	SPARE	SPARE

DETAIL B - ANNUNCIATOR PANEL

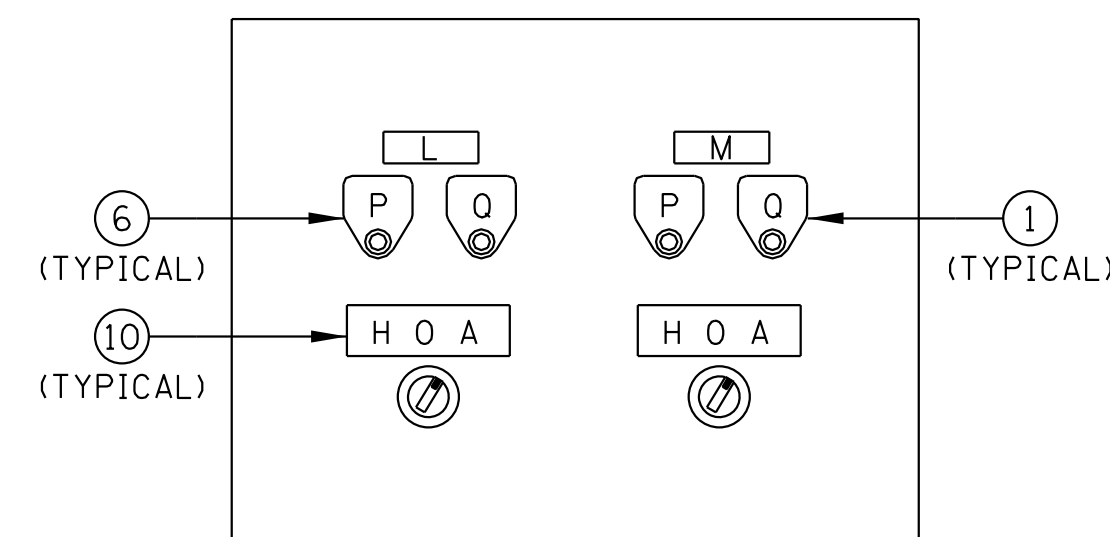
DEVICE LEGEND #		
ITEM	DEVICE DESCRIPTION	DEVICE COLOR
1	INDICATING LIGHT	RED
2	INDICATING LIGHT	WHITE
3	PUSH BUTTON	YELLOW
4	3 POSITION SELECTOR SWITCH	BLACK
5	PUSHBUTTON	BLACK
6	INDICATING LIGHT	GREEN
7	CONTROL RELAY	-
8	TIME DELAY RELAY	-
9	4-PT. TERMINAL BLOCK	-
10	3 POSITION H-O-A SELECTOR SWITCH	-
11	INTRINSICALLY SAFE FLOAT CONTROL RELAYS	-
12	ANNUNCIATOR PANEL	-
13	OPERATOR INTERFACE PANEL	-
14	UPS	-
15	PLC	-
16	SCADA MANUAL LOCKOUT PB, MUSHROOM HEAD	RED



EXHAUST FAN EF-1 SCHEMATIC
(TYPICAL FOR SUPPLY FAN SF-1)

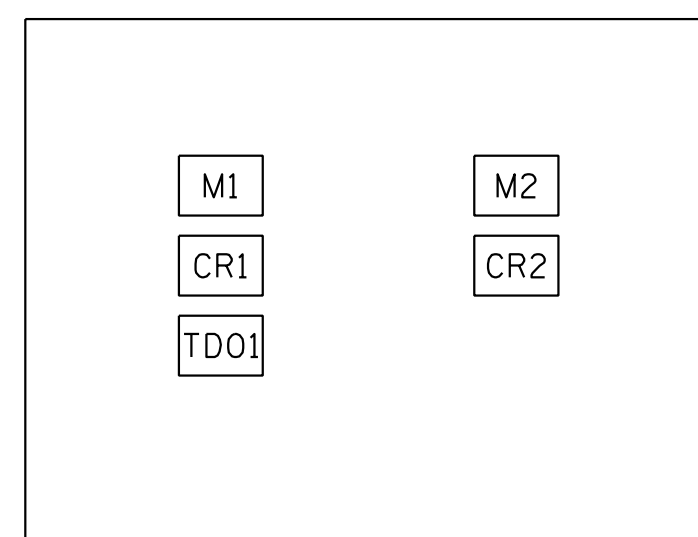
NOTES:

- PROVIDE DISCONNECTS FOR ALL DAMPER MOTORS, SUPPLY FAN, AND EXHAUST FAN.
- PROVIDE THERMOSTATS, 4' AFF, FOR FANS AND UNIT HEATERS.

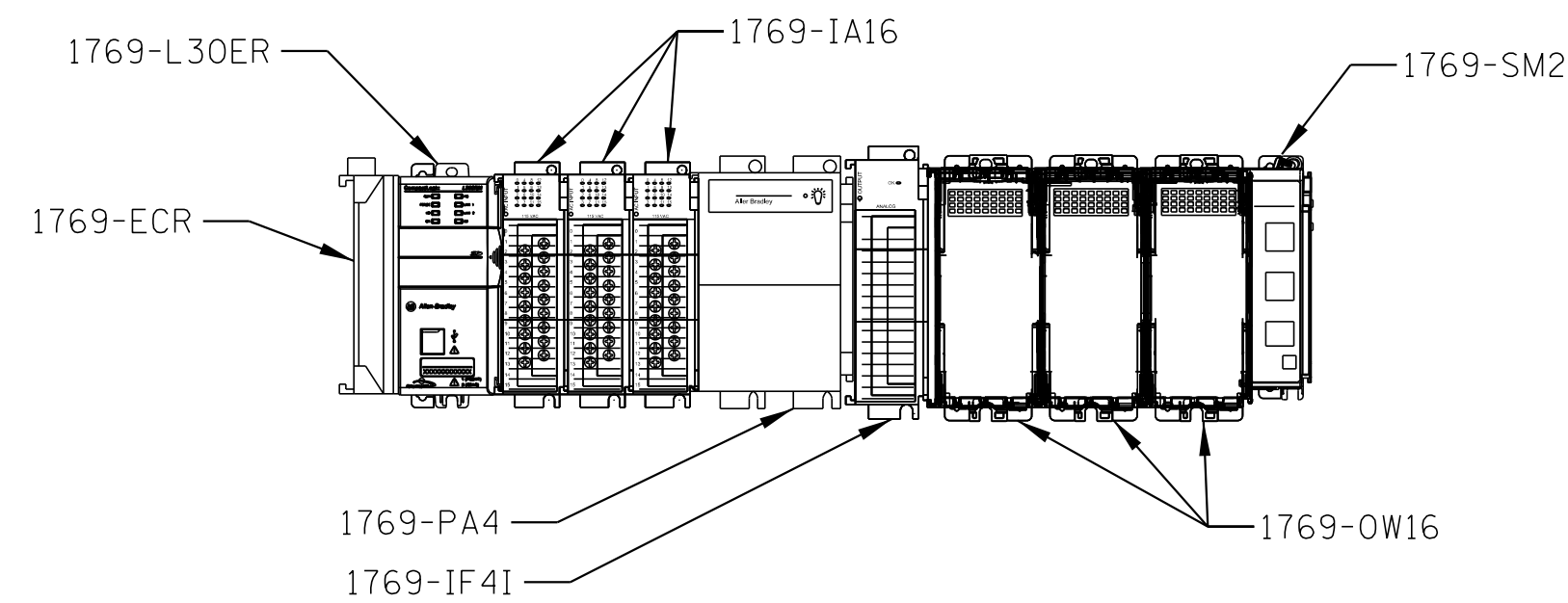


FRONT VIEW

VENTILATION PANEL
NOT TO SCALE



INSIDE SUBPANEL



DETAIL C - PLC
NOT TO SCALE

ITEM	NAME PLATE SCHEDULE
A	HI WATER LEVEL AND STANDBY PUMP CALLED
B	LAG 1 PUMP CALLED
C	LEAD PUMP CALLED
D	WET WELL LEVEL
E	
F	
G	LAMP TEST
H	LOW FLOW PUMP CALLED
I	LOW WATER LEVEL
J	ALARM ACKNOWLEDGE
K	STAND-BY PUMP SELECTOR SWITCH
L	EXHAUST FAN EF-1 PUMP ROOM
M	SUPPLY FAN SF-1 ELEC. ROOM
N	SCADA MANUAL LOCKOUT
O	
P	FAN ON
Q	FAN OFF

SEE E-7 FOR TERMINAL LEGEND

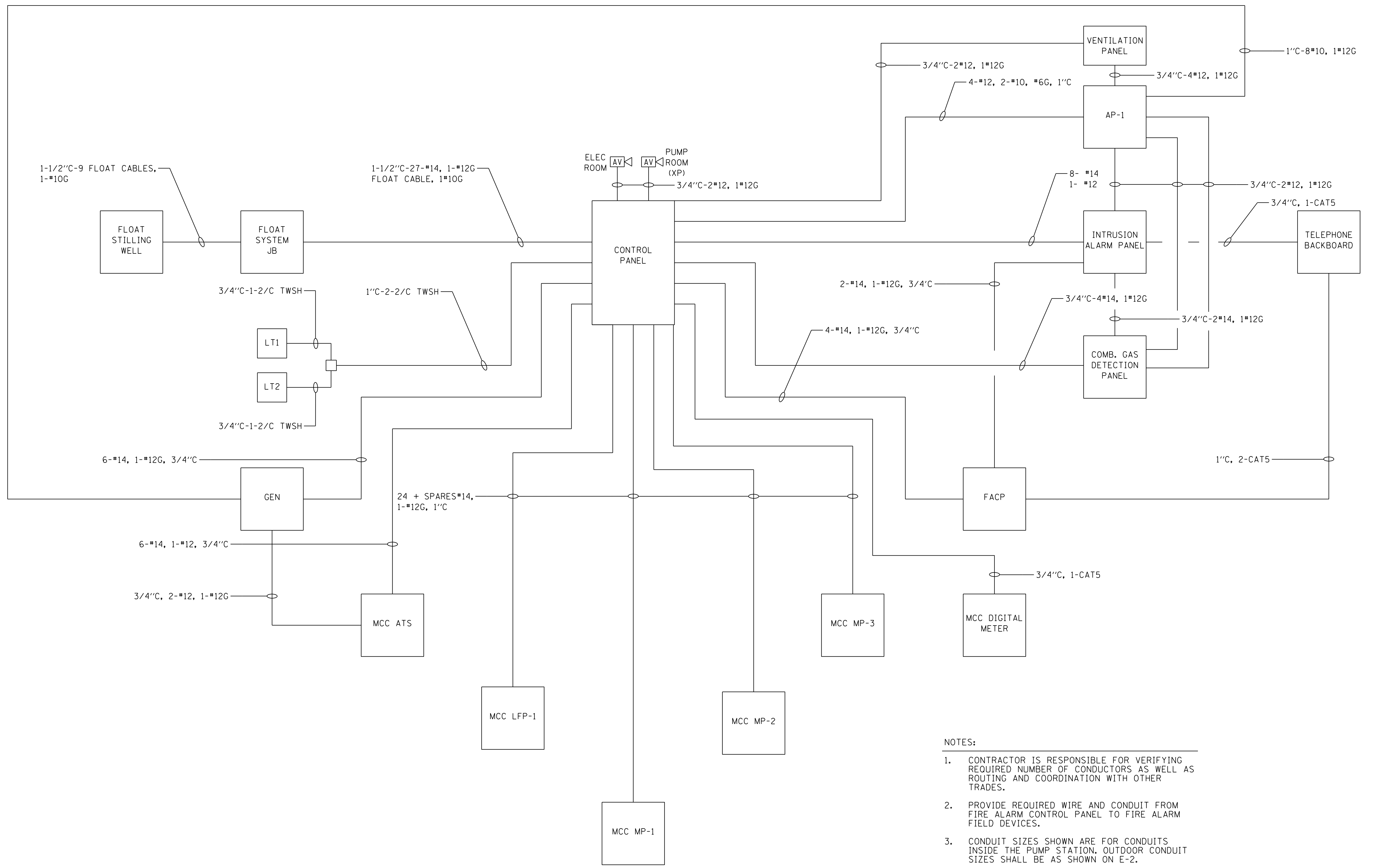
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		DRAWN - JC	REVISED -
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	PLOT DATE = 08/05/2014	APPROVED - RV	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL-104 PUMP STATION
CONTROL PANEL LAYOUT AND DETAILS

SCALE: SHEET NO. E-13OF 18 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	642
CONTRACT NO. 72B58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING REQUIRED NUMBER OF CONDUCTORS AS WELL AS ROUTING AND COORDINATION WITH OTHER TRADES.
2. PROVIDE REQUIRED WIRE AND CONDUIT FROM FIRE ALARM CONTROL PANEL TO FIRE ALARM FIELD DEVICES.
3. CONDUIT SIZES SHOWN ARE FOR CONDUITS INSIDE THE PUMP STATION. OUTDOOR CONDUIT SIZES SHALL BE AS SHOWN ON E-2.

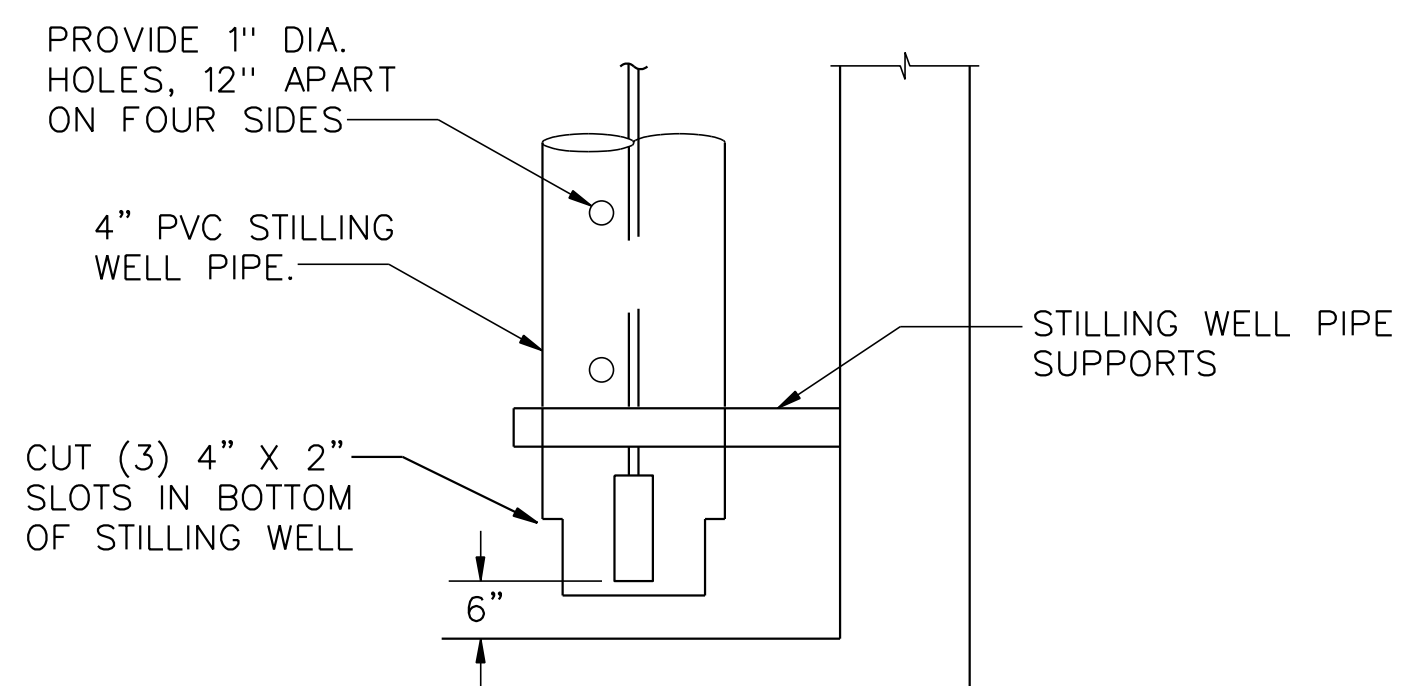
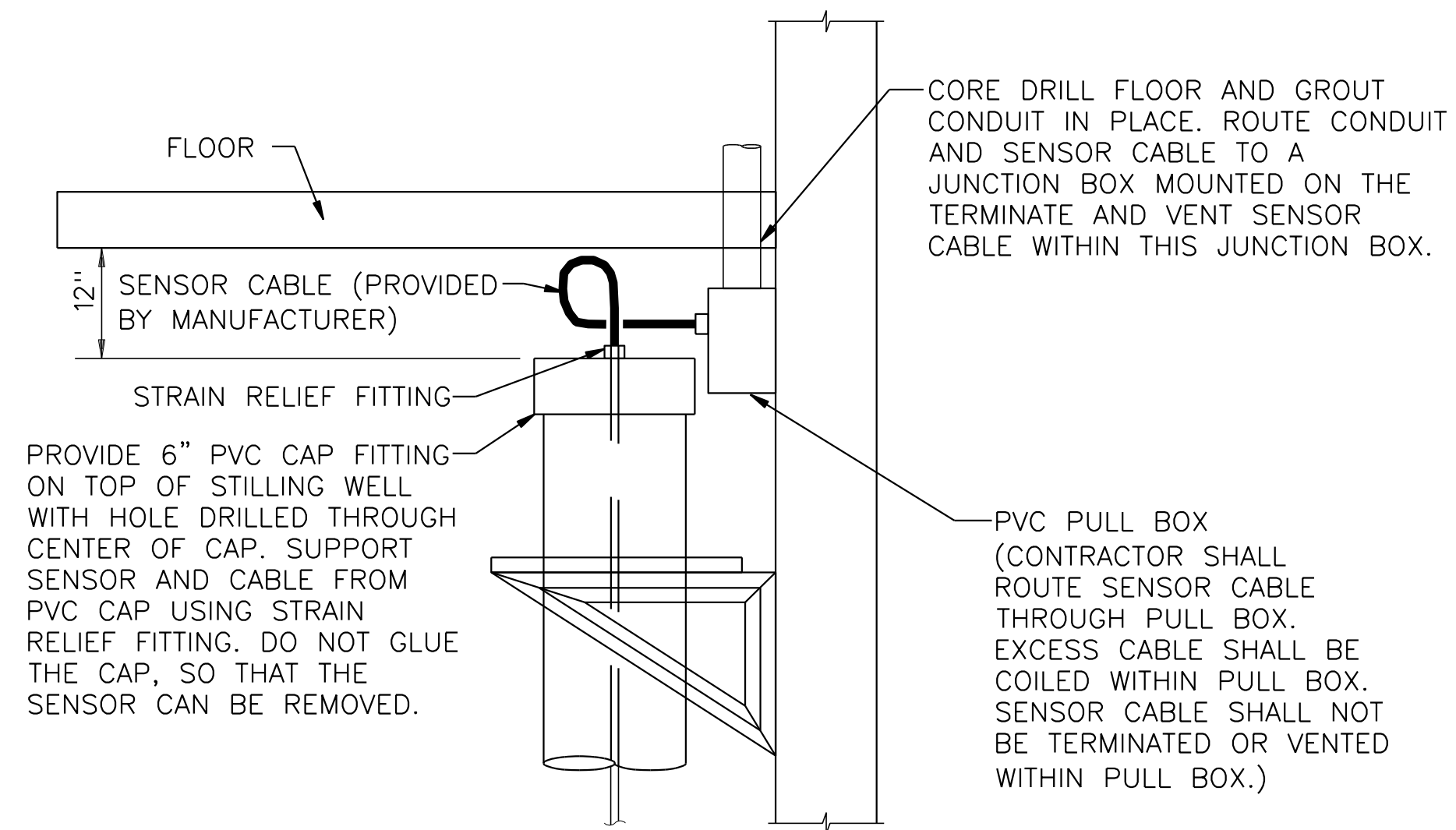
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	DRAWN - JC	CHECKED - JZ	REVISED -
	PLOT SCALE = AS SHOWN	APPROVED - RV	REVISED -
	PLOT DATE = 08/05/2014		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

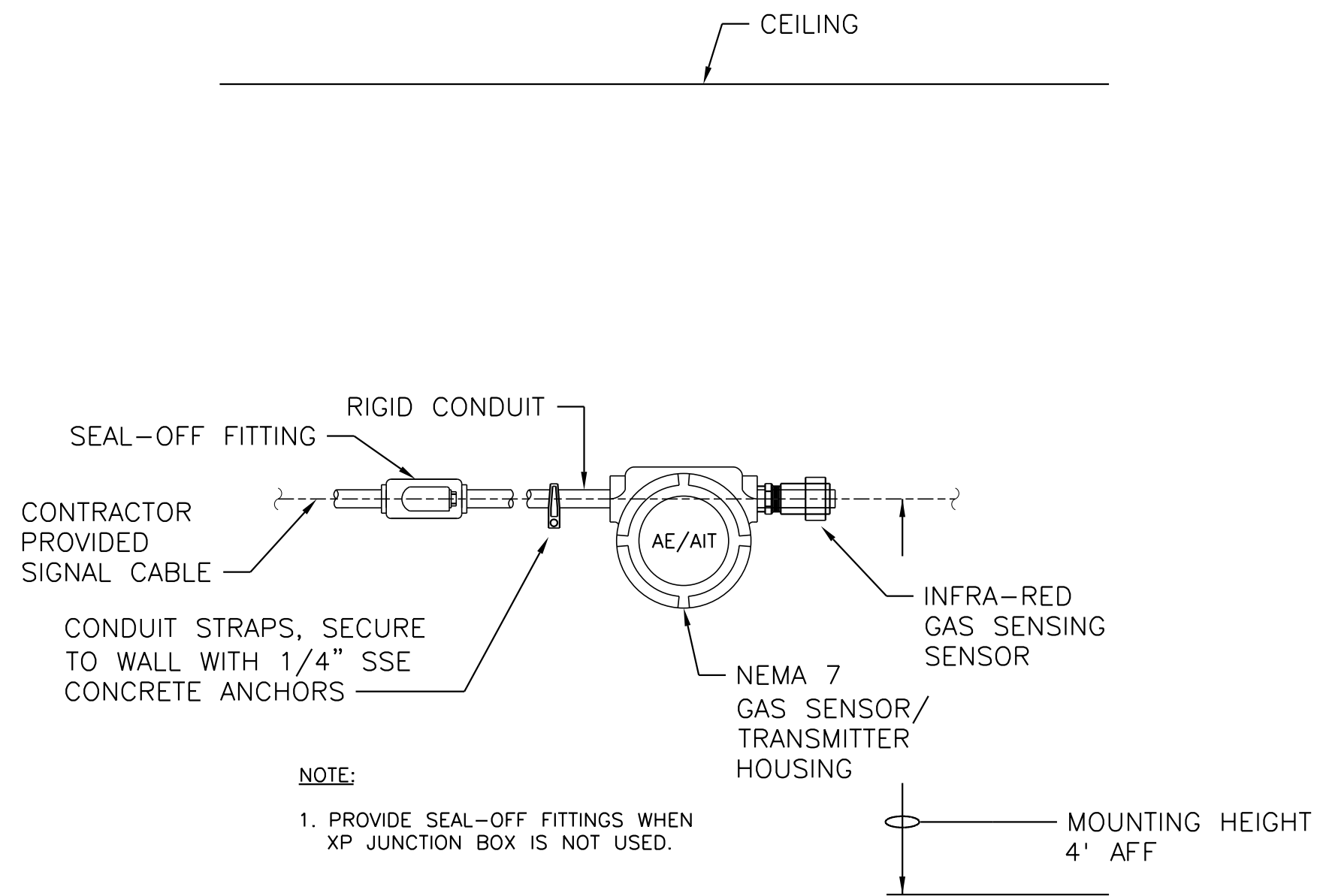
**IL-104 PUMP STATION
CONTROL PANEL INTERCONNECTION DIAGRAM**

SCALE: SHEET NO. E-14OF 18 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	643
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 72B58	



**SUBMERSIBLE LEVEL SENSOR
INSTALLATION DETAIL (2 REQUIRED)**
SCALE: NOT TO SCALE



NOTE:
1. PROVIDE SEAL-OFF FITTINGS WHEN XP JUNCTION BOX IS NOT USED.

**COMBUSTIBLE GAS SENSOR/
TRANSMITTER - INFRA - RED**

SCALE: NOT TO SCALE

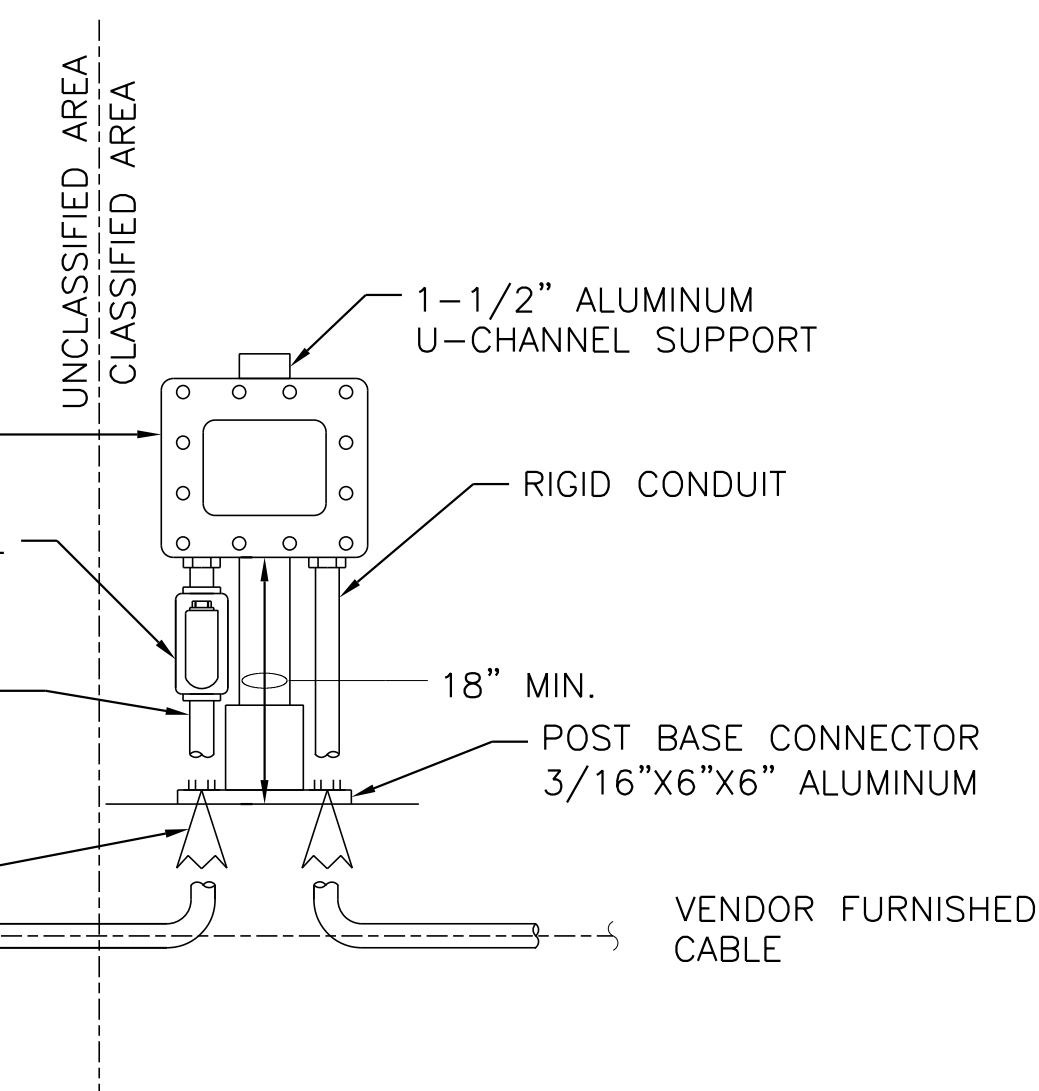
PROVIDE JUNCTION BOX WITH TERMINAL STRIP.* TERMINAL STRIP TO ACT AS INTERFACE POINT BETWEEN VENDOR FURNISHED CABLE AND CONTRACTOR FURNISHED CABLE.

RIGID CONDUIT EMBEDDED IN SLAB

SECURE TO SLAB W/4-3/8"X0'-5" SS CONCRETE ANCHORS

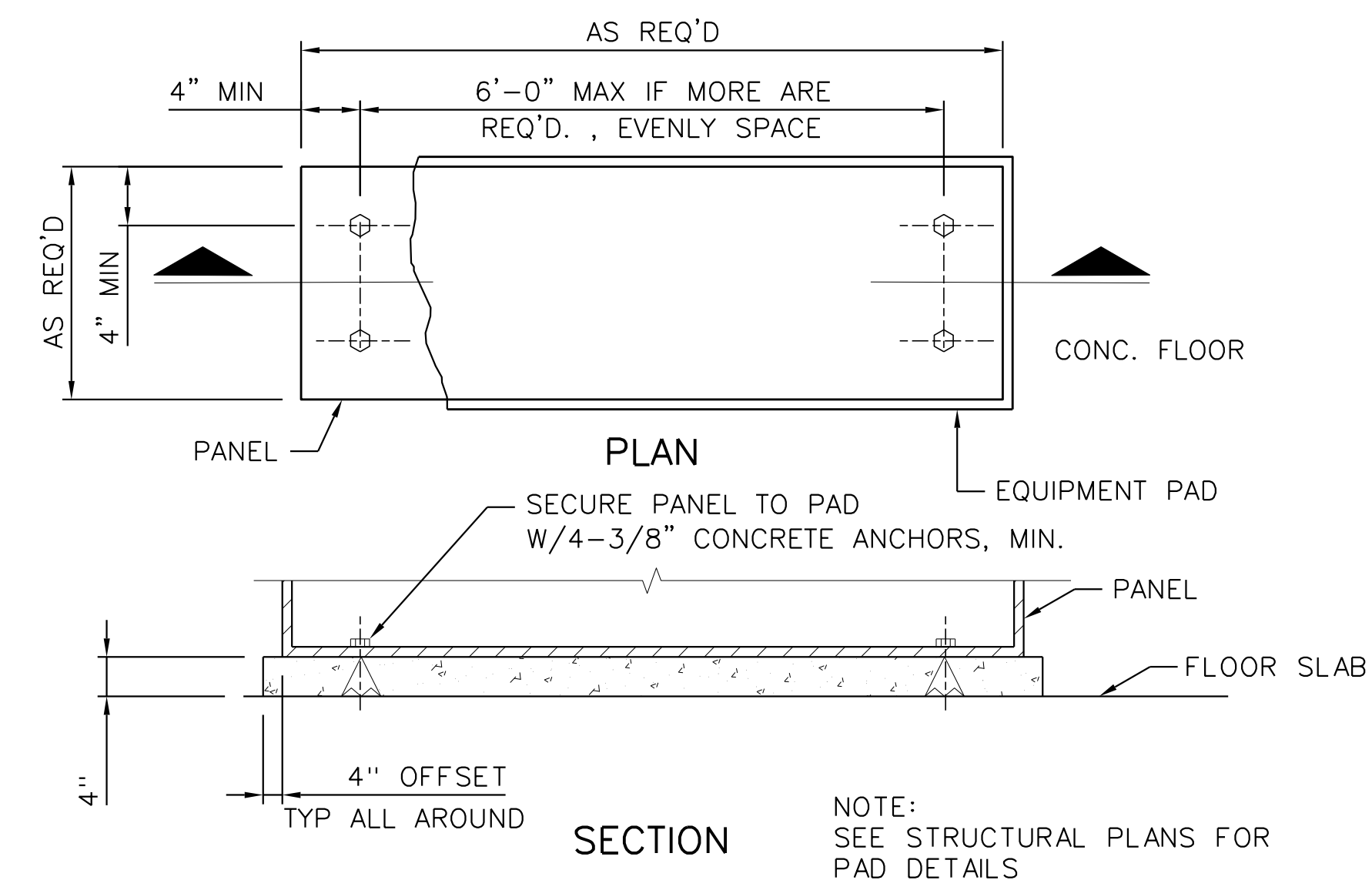
CONTRACTOR FURNISHED CABLE OUT

* PROVIDE NEMA 7 EXPLOSION-PROOF JUNCTION BOXES AND SEALOFF FITTINGS WHERE CLASSIFIED OR CORROSIVE LOCATIONS ARE IDENTIFIED ON DRAWINGS



JUNCTION BOX INSTALLATION

SCALE: NOT TO SCALE



**INSTALLATION OF FLOOR
MOUNT CONTROL PANEL**

SCALE: NOT TO SCALE

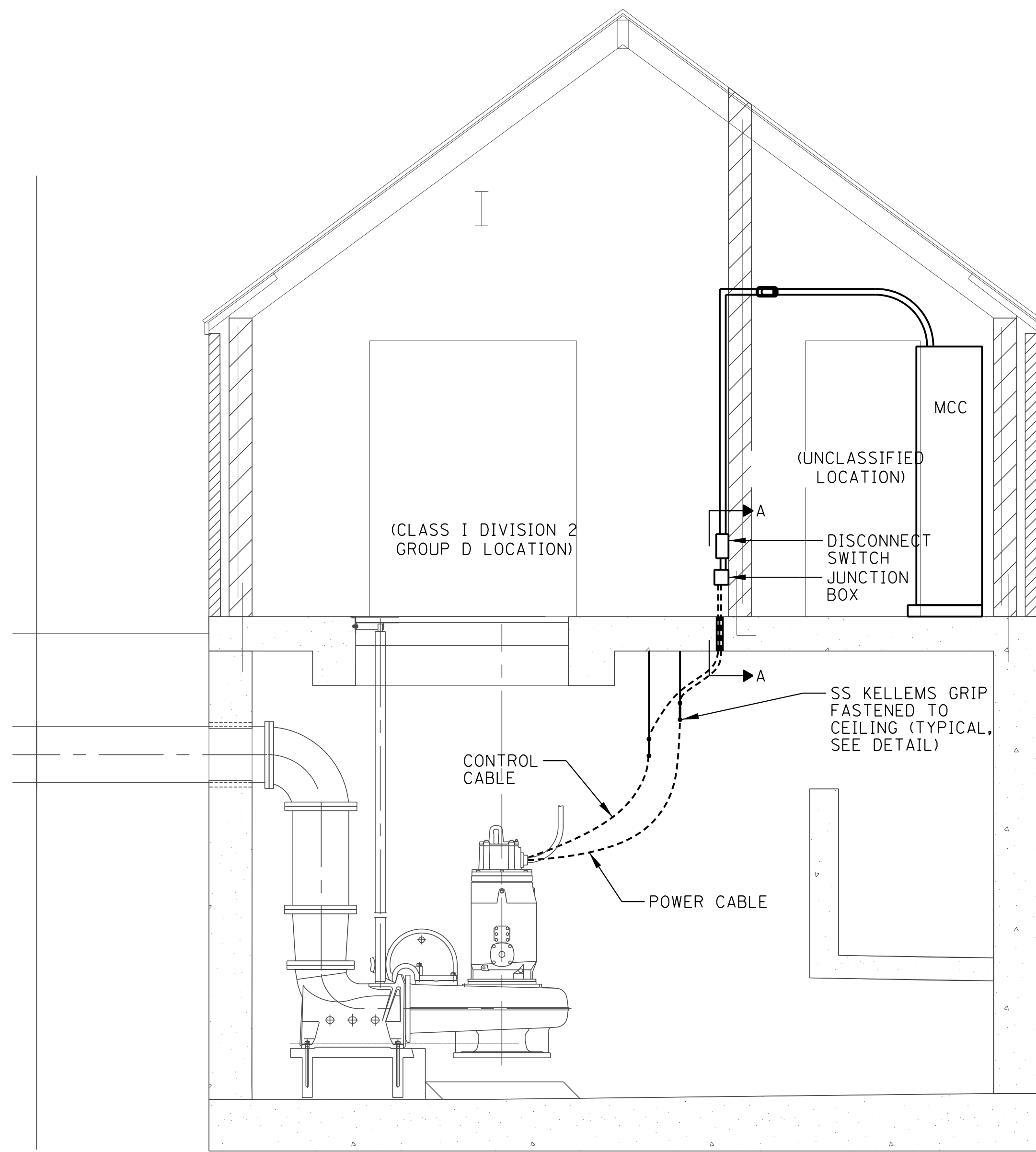
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

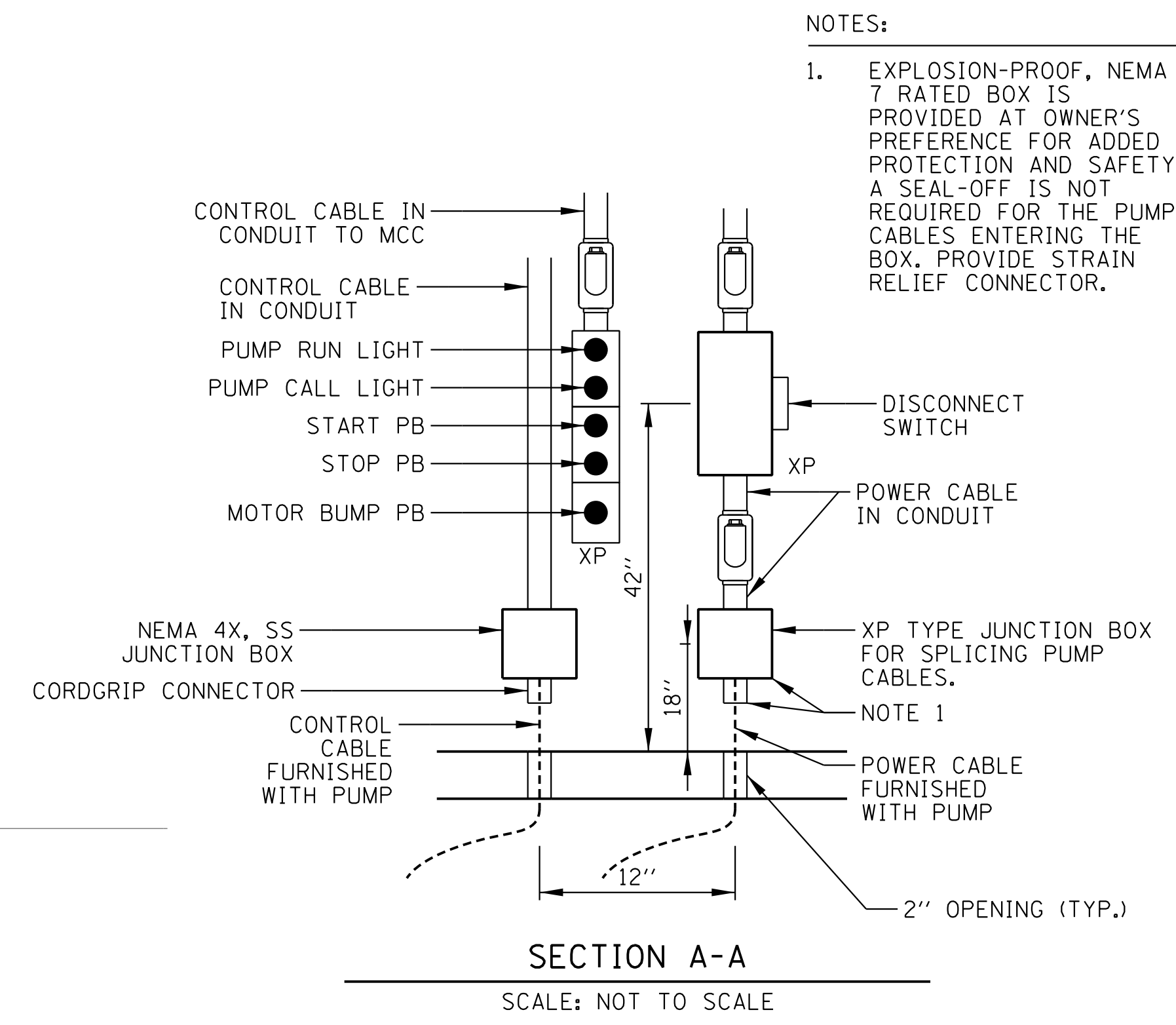
**IL-104 PUMP STATION
ELECTRICAL INSTRUMENTATION & CONTROL DETAILS**

SCALE: SHEET NO. E-150F 18 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN	782	644
CONTRACT NO. 72B58				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

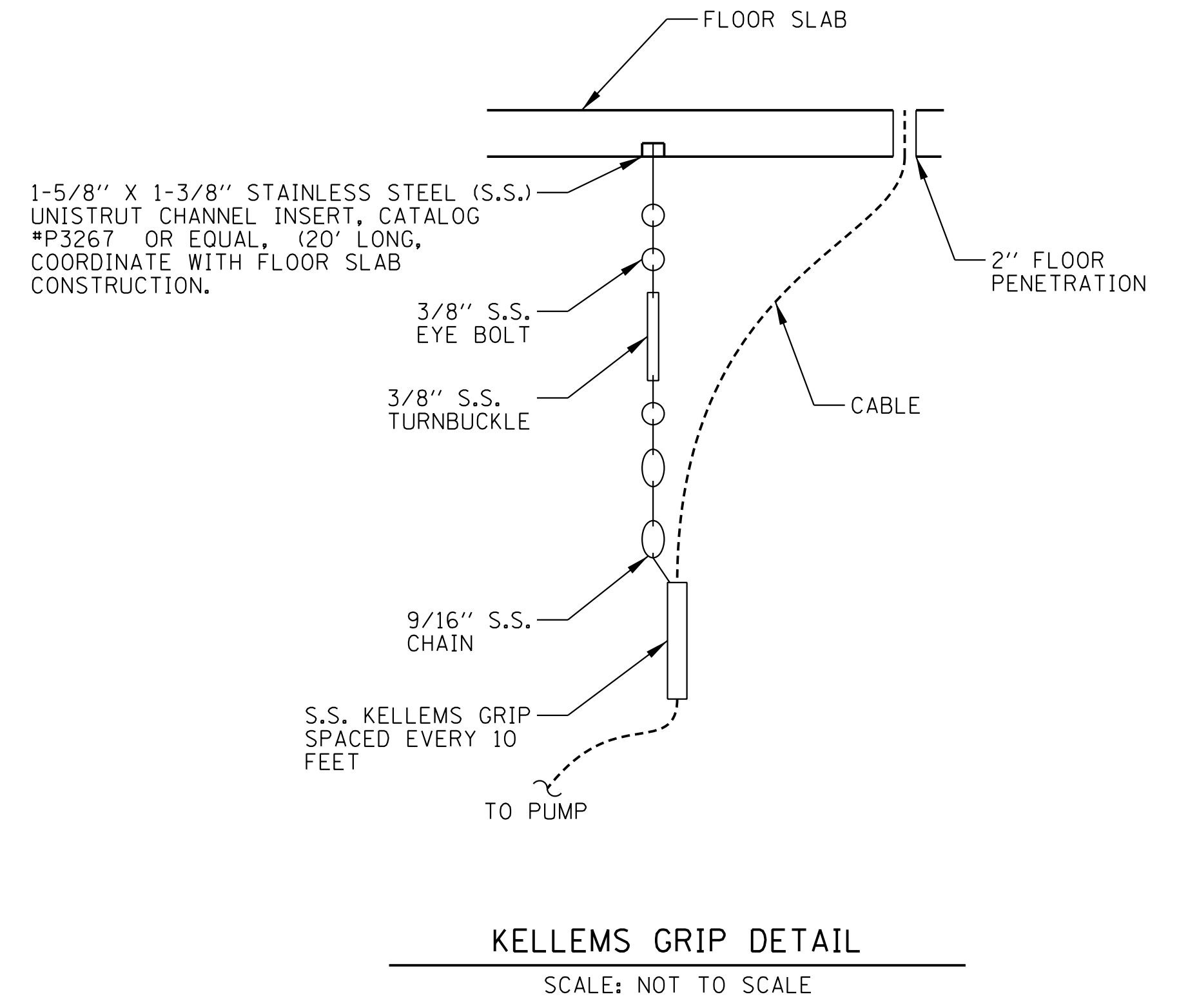


TYPICAL PUMP CABLE ROUTING DETAIL
SCALE: NOT TO SCALE

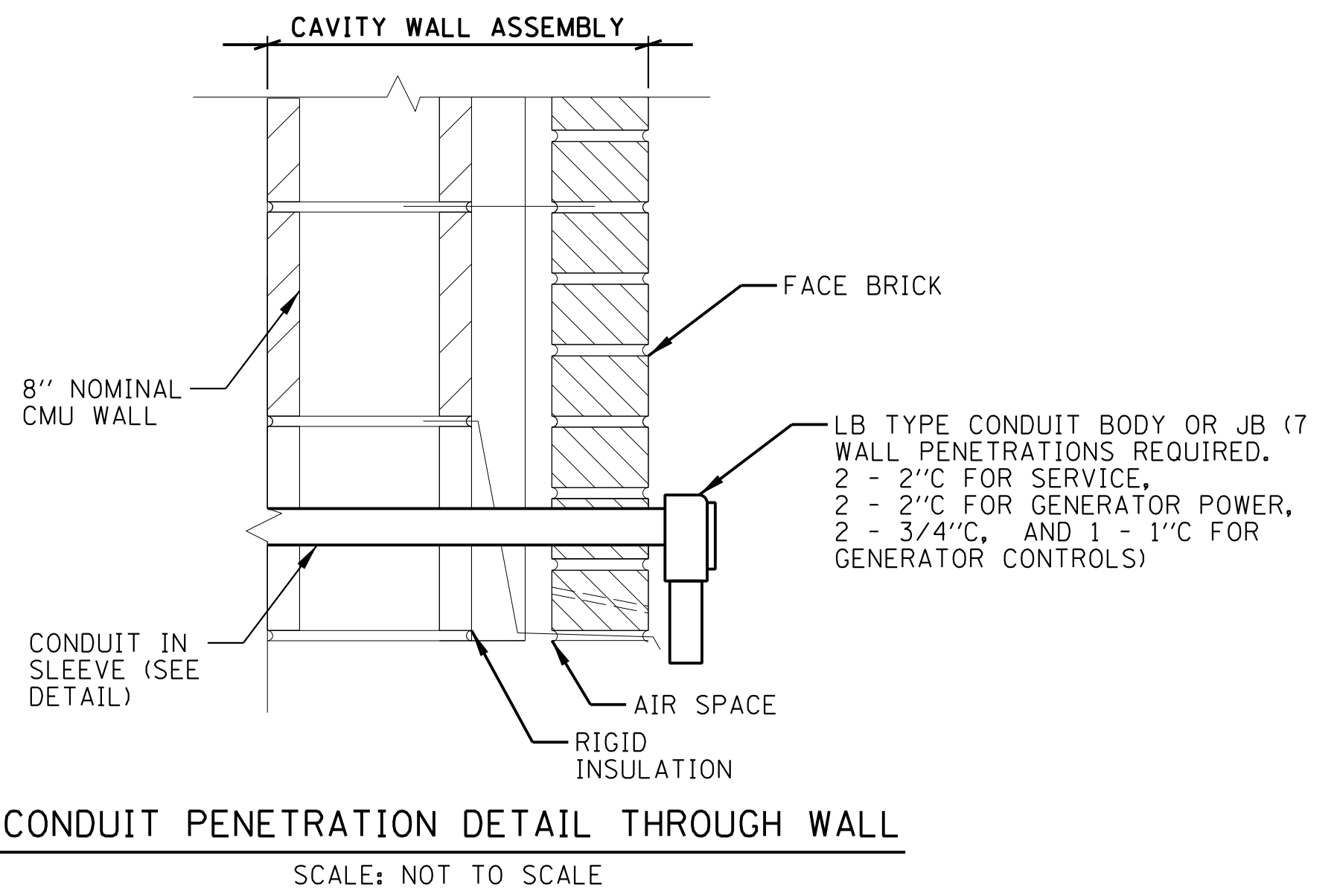


SECTION A-A
SCALE: NOT TO SCALE

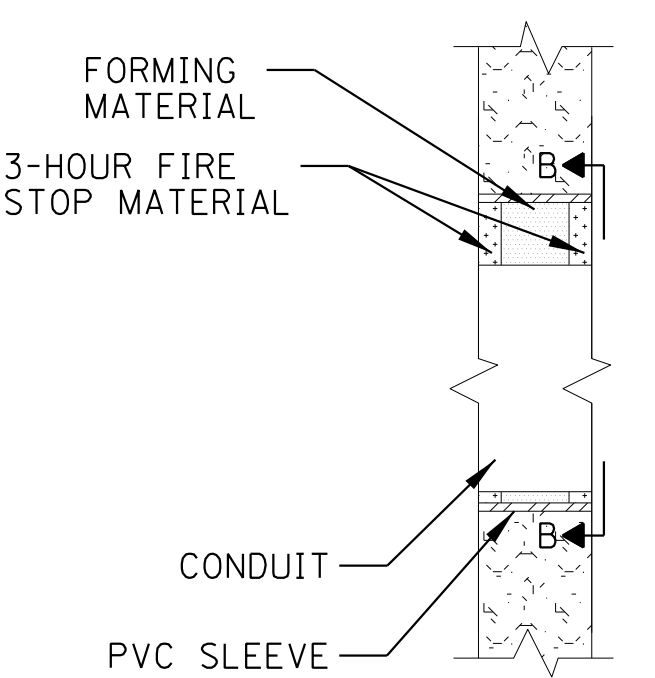
NOTES:
1. EXPLOSION-PROOF, NEMA 7 RATED BOX IS PROVIDED AT OWNER'S PREFERENCE FOR ADDED PROTECTION AND SAFETY. A SEAL-OFF IS NOT REQUIRED FOR THE PUMP CABLES ENTERING THE BOX. PROVIDE STRAIN RELIEF CONNECTOR.



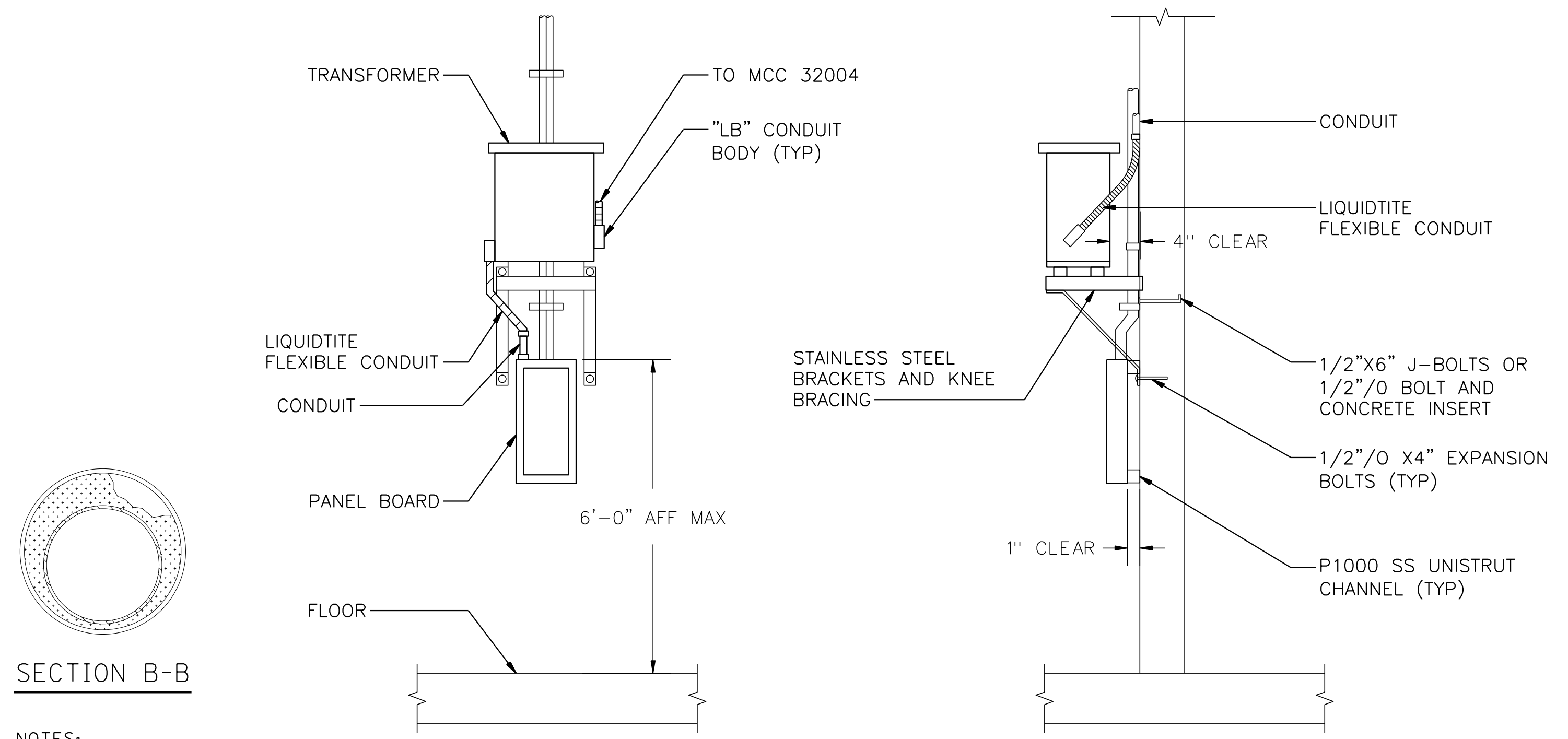
KELLEMS GRIP DETAIL
SCALE: NOT TO SCALE



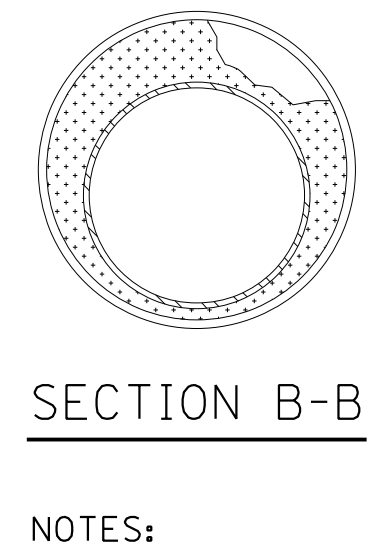
CONDUIT PENETRATION DETAIL THROUGH WALL
SCALE: NOT TO SCALE



CONDUIT SLEEVE DETAIL
SCALE: NOT TO SCALE

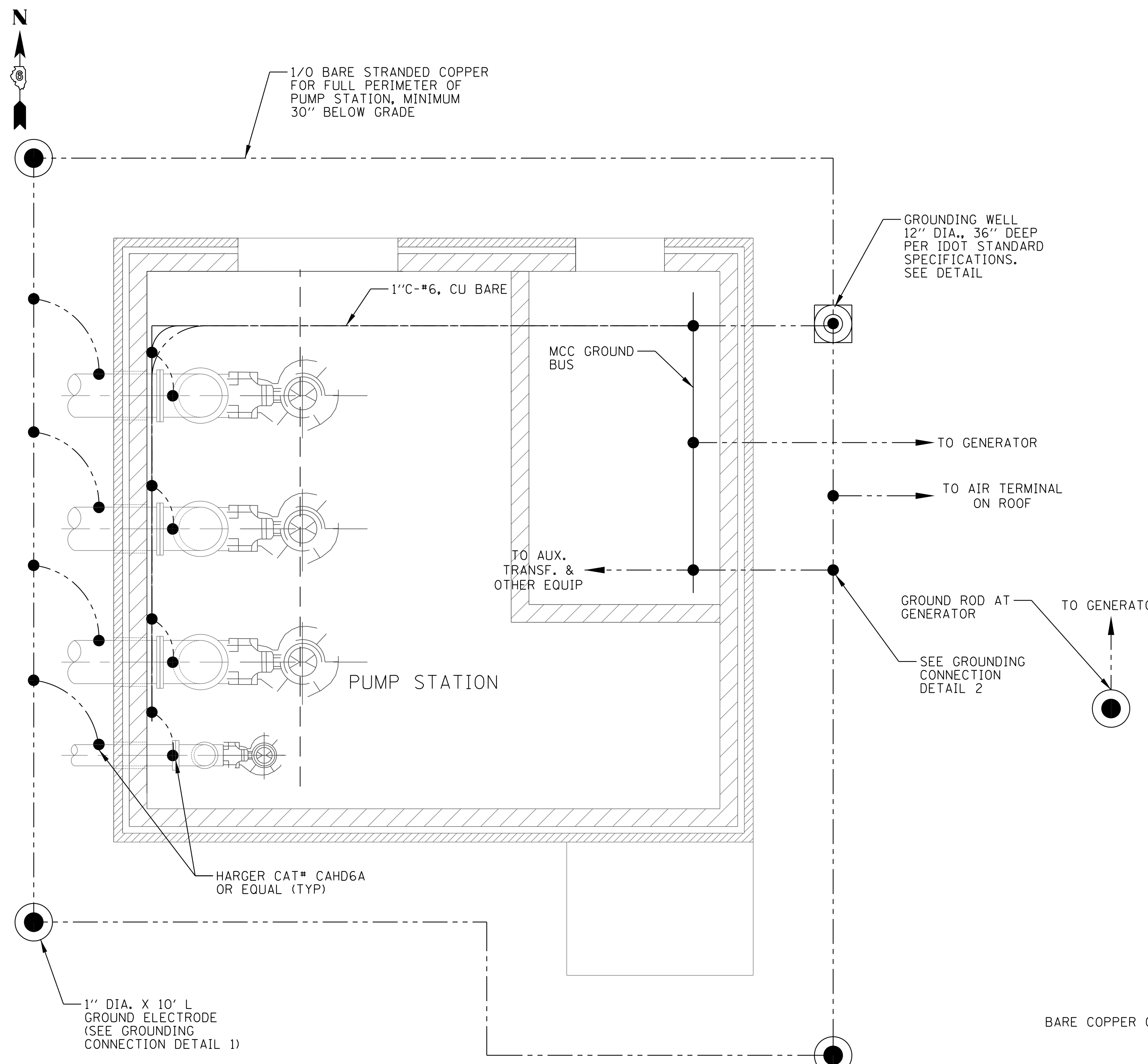


WALL MOUNTED TRANSFORMER AND PANEL BOARD AP-1
SCALE: NOT TO SCALE



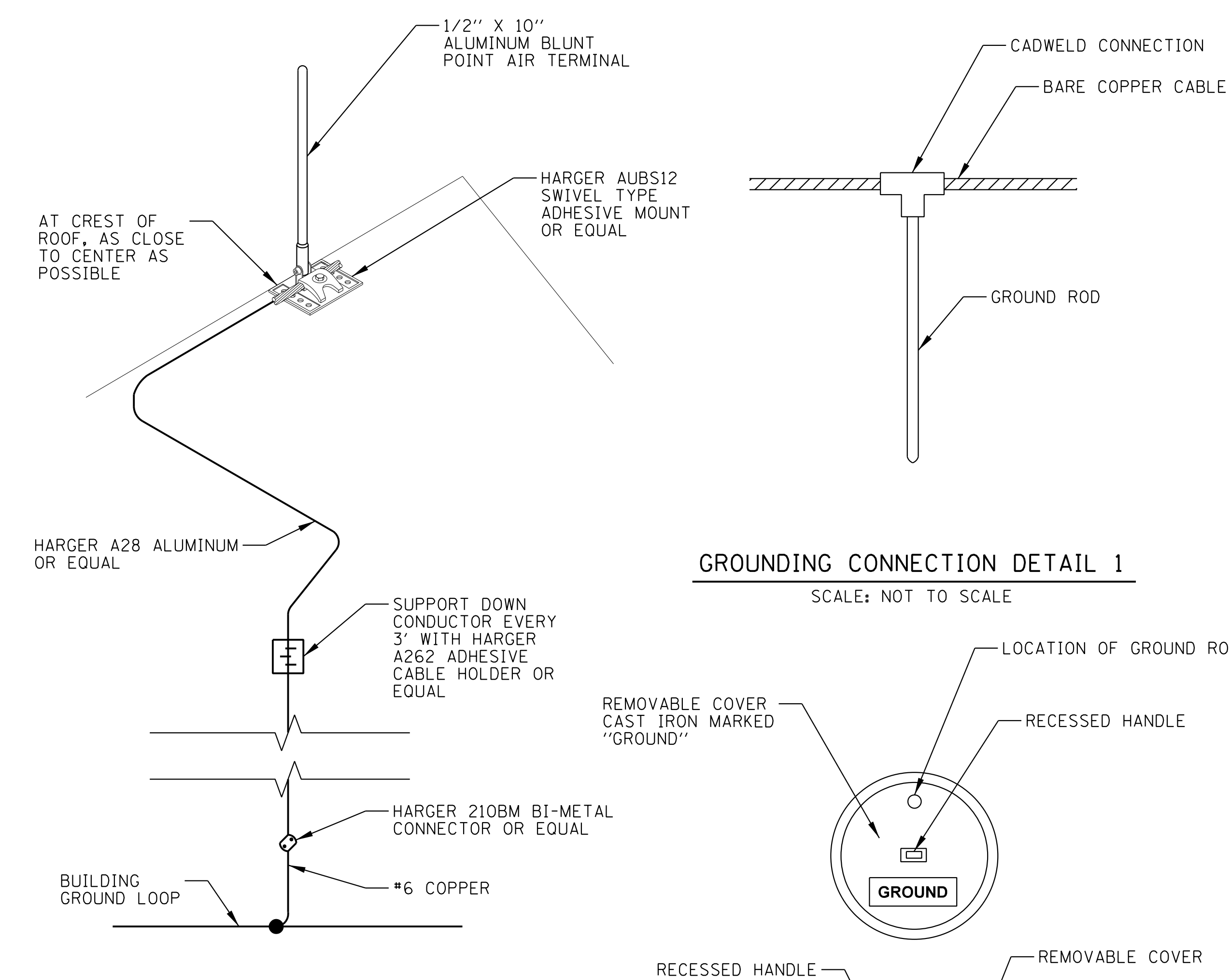
SECTION B-B

NOTES:
1. COORDINATE WITH MASONRY WALL CONSTRUCTION AND PROVIDE PVC SLEEVE FOR CONDUIT RUN THROUGH THE WALL
2. MOUNT JUNCTION BOX ON UNISTRUT.
3. GROUT CONDUIT IN AND PATCH WALL TO MATCH EXISTING IN THE EVENT THAT CONDUIT IS CORED IN.



SITE GROUNDING PLAN

SCALE: NOT TO SCALE

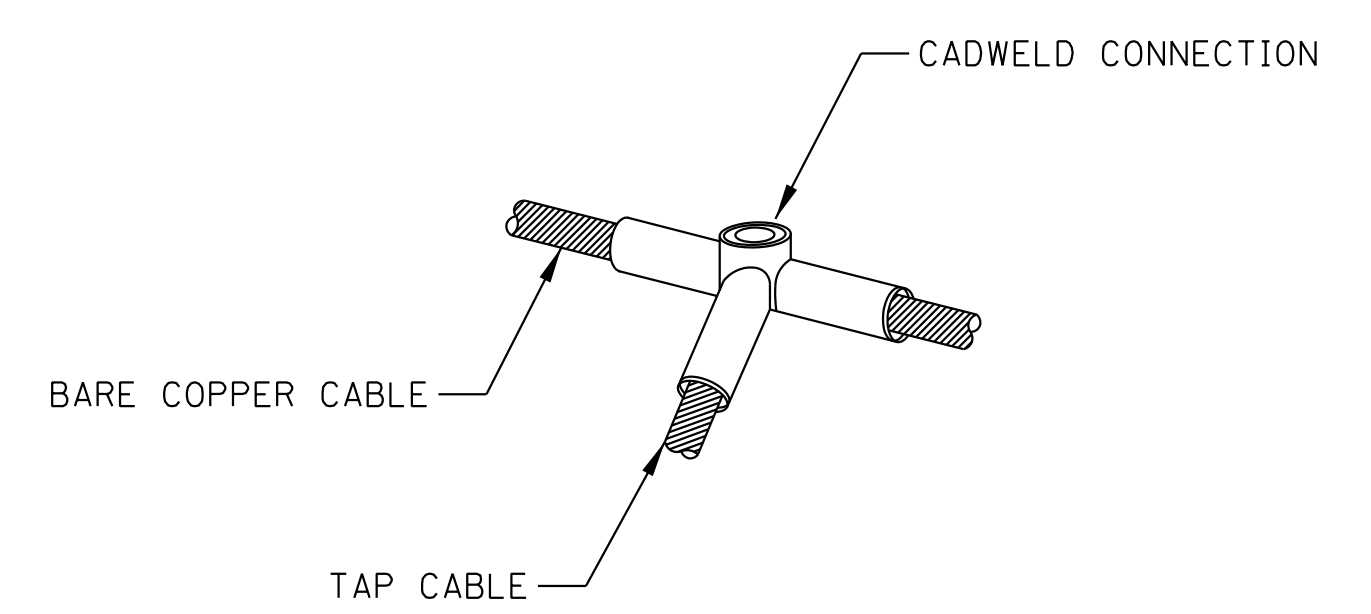


GROUNDING CONNECTION DETAIL 1

SCALE: NOT TO SCALE

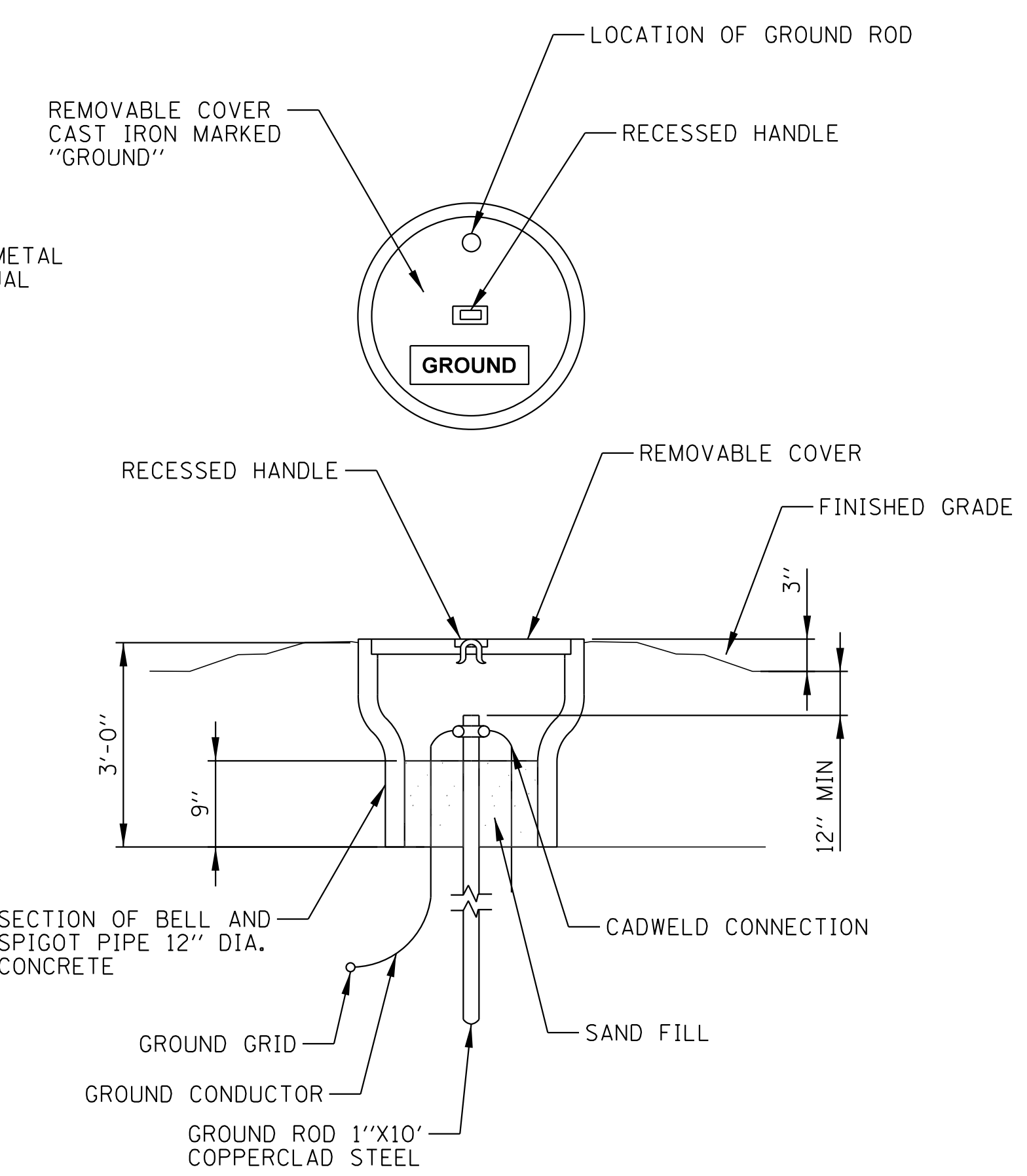
AIR TERMINAL DETAIL

SCALE: NOT TO SCALE



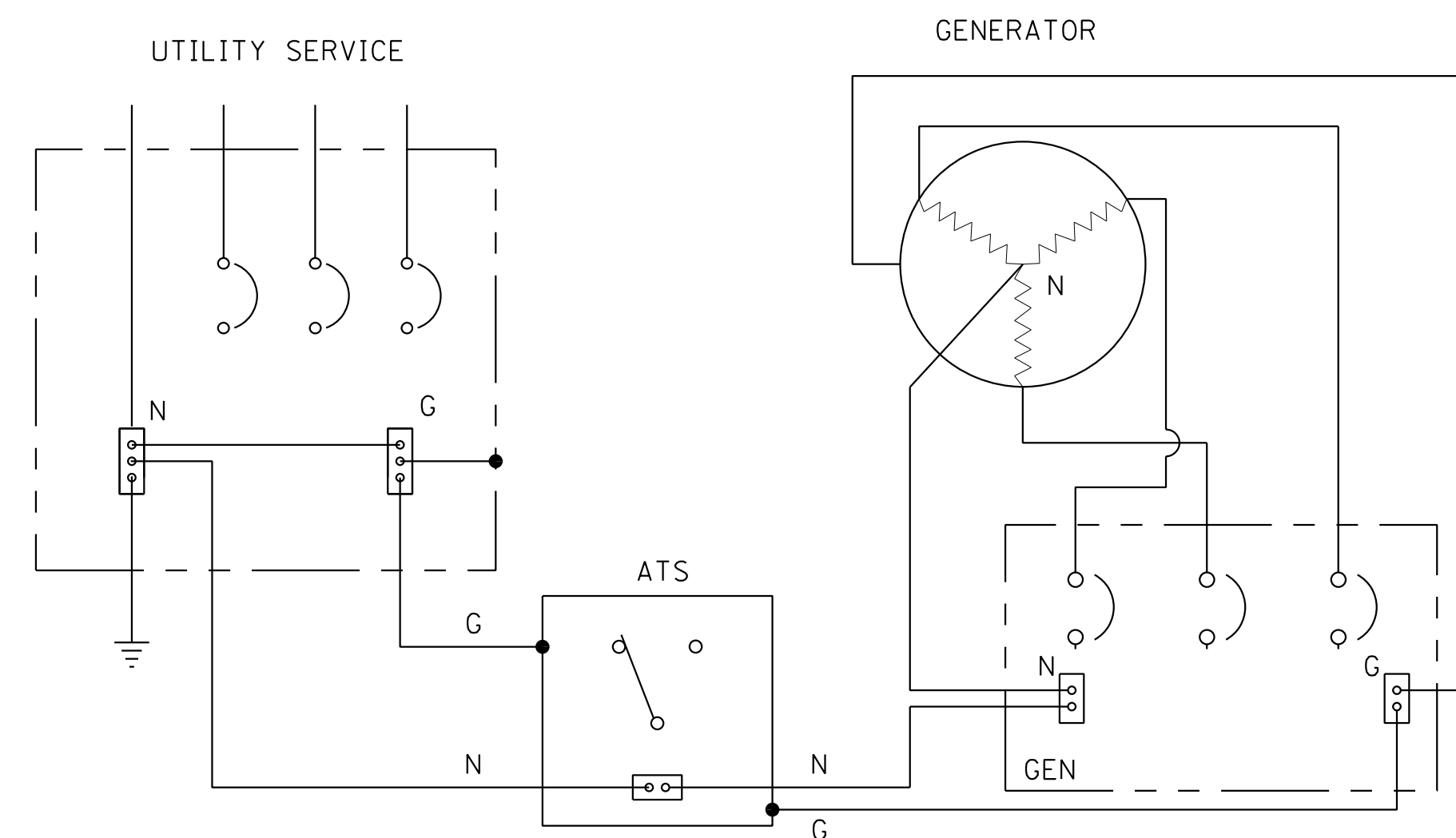
GROUNDING CONNECTION DETAIL 2

SCALE: NOT TO SCALE



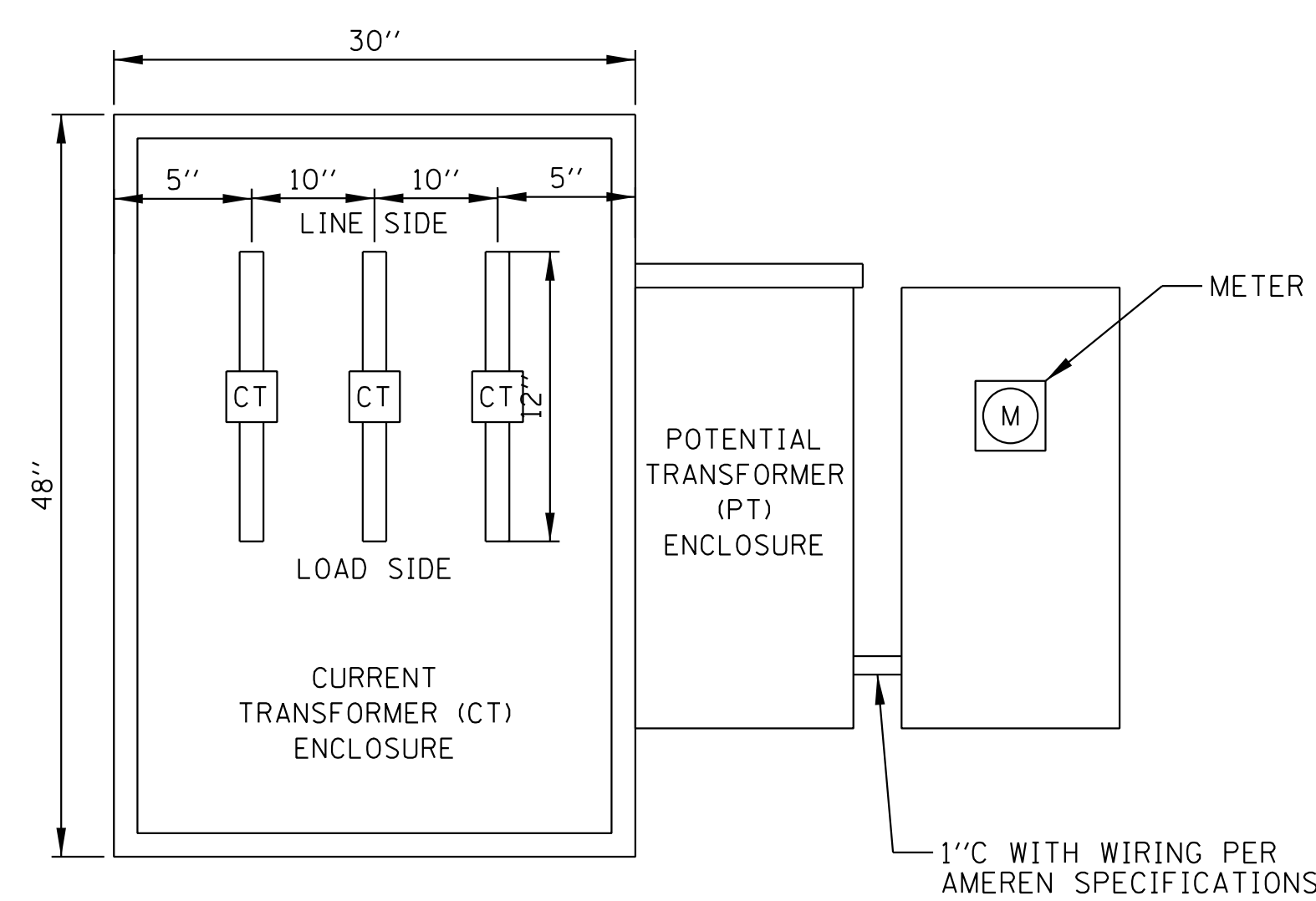
GROUNDING WELL DETAIL

SCALE: NOT TO SCALE



GROUNDING AND BONDING DETAIL FOR NOT A SEPARATELY DERIVED SYSTEM

SCALE: NOT TO SCALE

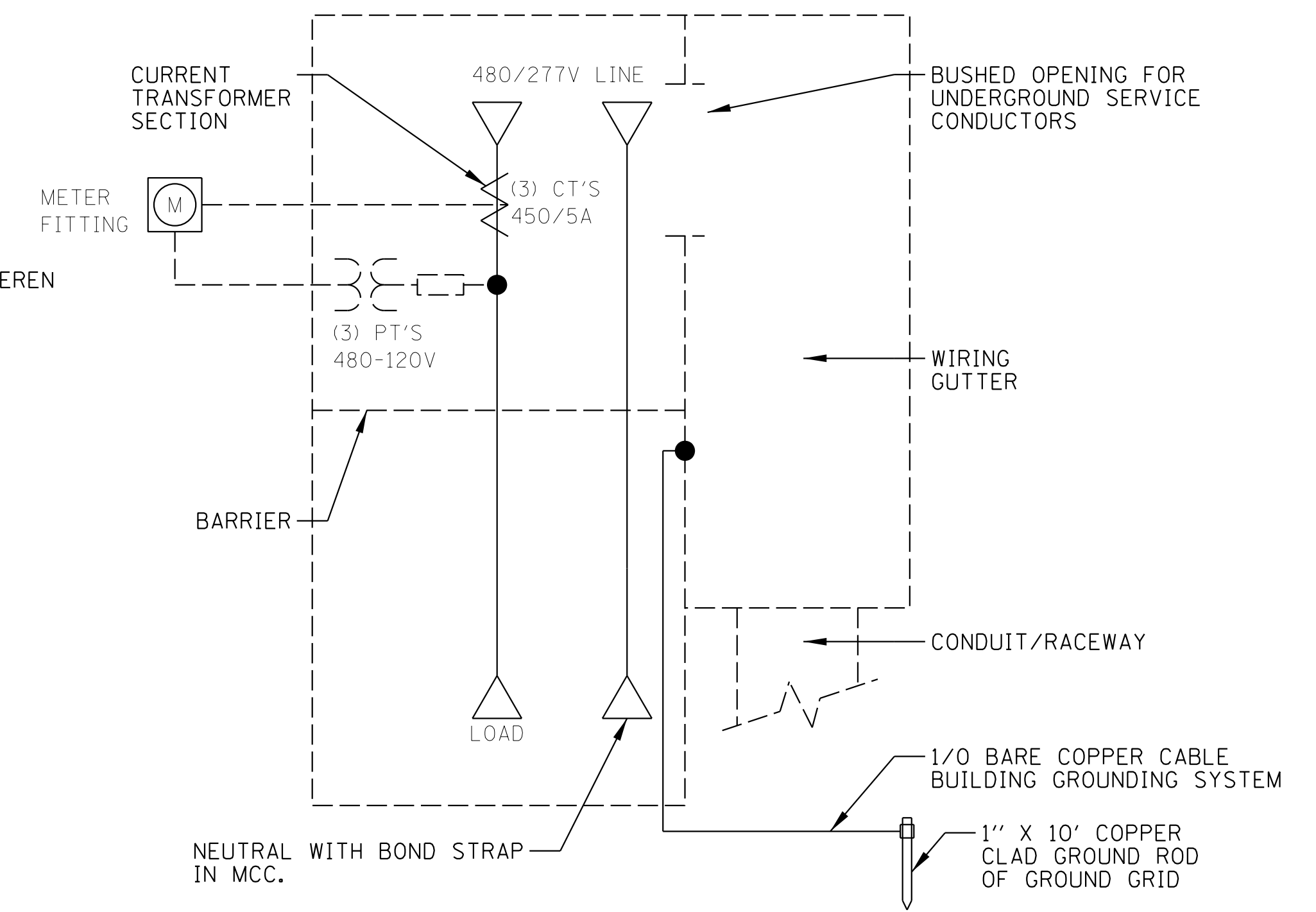


NOTES:

1. CT, PT, AND METER WILL BE FURNISHED BY AMEREN AND SHALL BE INSTALLED AND WIRED BY CONTRACTOR PER AMEREN SPECIFICATIONS. ENCLOSURES SHALL BE PROVIDED BY THE CONTRACTOR.

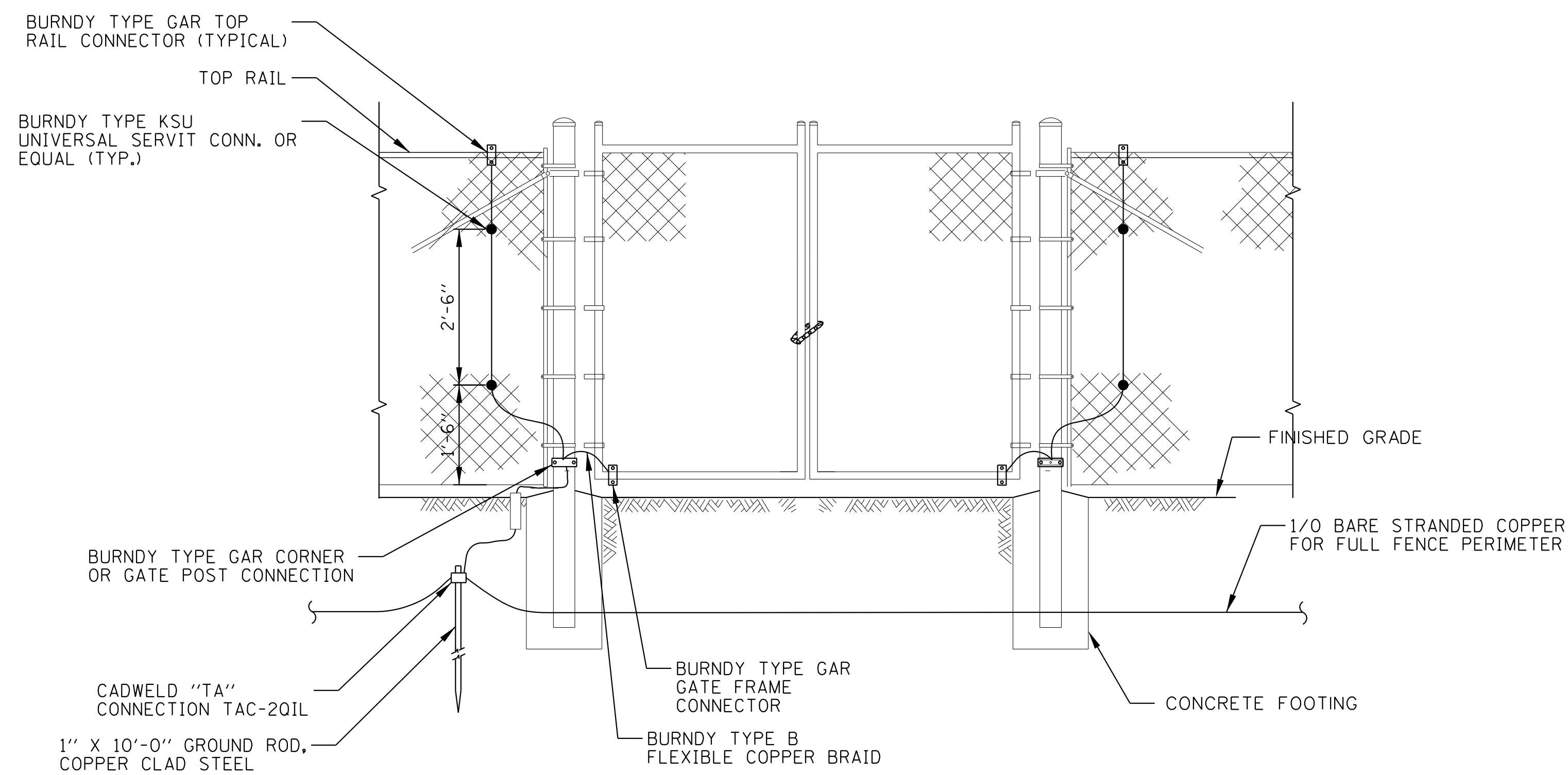
CT/PT CABINET LAYOUT

SCALE: NOT TO SCALE



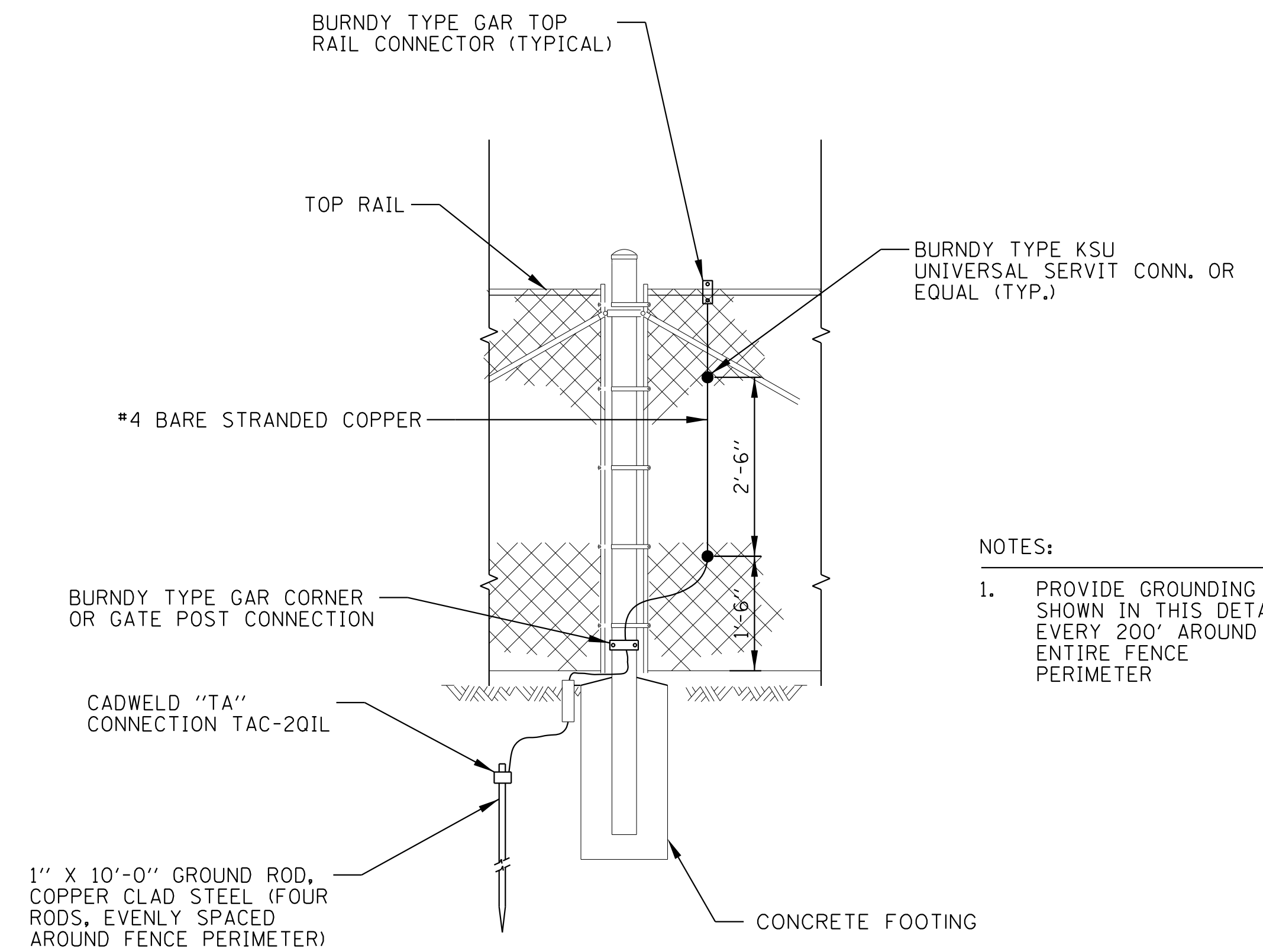
CT/PT CABINET SINGLE LINE DIAGRAM

SCALE: NOT TO SCALE



GATE AND HINGE POST GROUNDING

SCALE: NOT TO SCALE



LINE POST GROUNDING

SCALE: NOT TO SCALE

NOTES:

1. PROVIDE GROUNDING AS SHOWN IN THIS DETAIL EVERY 200' AROUND ENTIRE FENCE PERIMETER

APPENDIX E
BORING LOCATION PLANS
AND SOIL PROFILES

ROADWAY GEOTECHNICAL REPORT

ILLINOIS ROUTE 104 (FAP 745) RECONSTRUCTION
IDOT D-96-018-08, SECTION 123B-2,
PTB 146/ITEM 029
STATION 16+83 to STATION 230+00
MORGAN AND PIKE COUNTIES, ILLINOIS

FOR

exp US SERVICES, INC.
205 N MICHIGAN AVENUE
CHICAGO, IL 60601

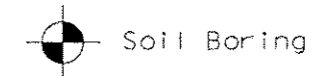
Prepared by
WANG ENGINEERING
1145 NORTH MAIN STREET
LOMBARD, IL 60148



December 5, 2013

WANG PROJECT 341-05-01

LEGEND:



SB-01
433.418 ft
37+0298, 02.38 RT

Borehole Number
Elevation
Station, Offset

Borehole Lithology

N--N-value, (blw/12 in)
Qu--UC Strength, (tsf)
MC--Moisture Content, (%)

- ∇ Water Level Reading at time of drilling.
- ∇ Water Level Reading 24-hr after drilling or at end of drilling

Lithology Graphics

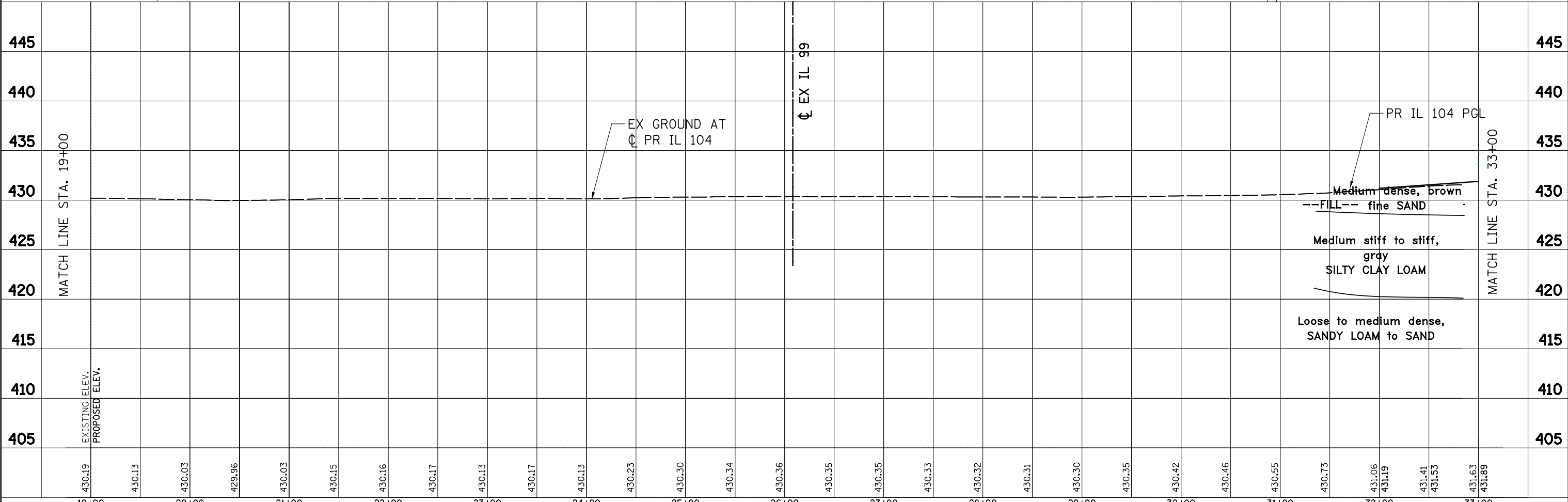
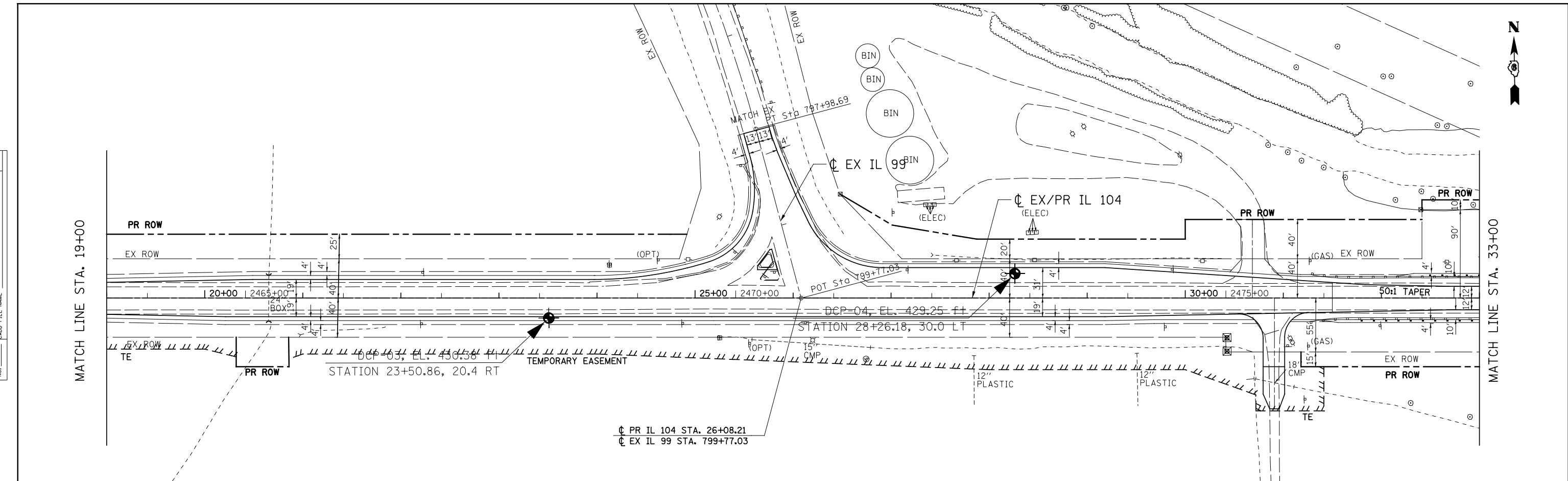
- Topsoil
- ▨ Pavement
- ▧ Crushed stone
- ▩ Gravelly sand, sandy gravel
- IDH Sand, Sandy Loam
- ▨ IDH Loam
- ▨ IDH Silt, Silty Loam
- ▨ IDH Sandy Clay, Sandy Clay Loam
- ▨ IDH Silty Clay, Silty Clay Loam



M. L. Snider
DATE: 7/30/14
EXPIRES: 11/30/15

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	PLOTTED		
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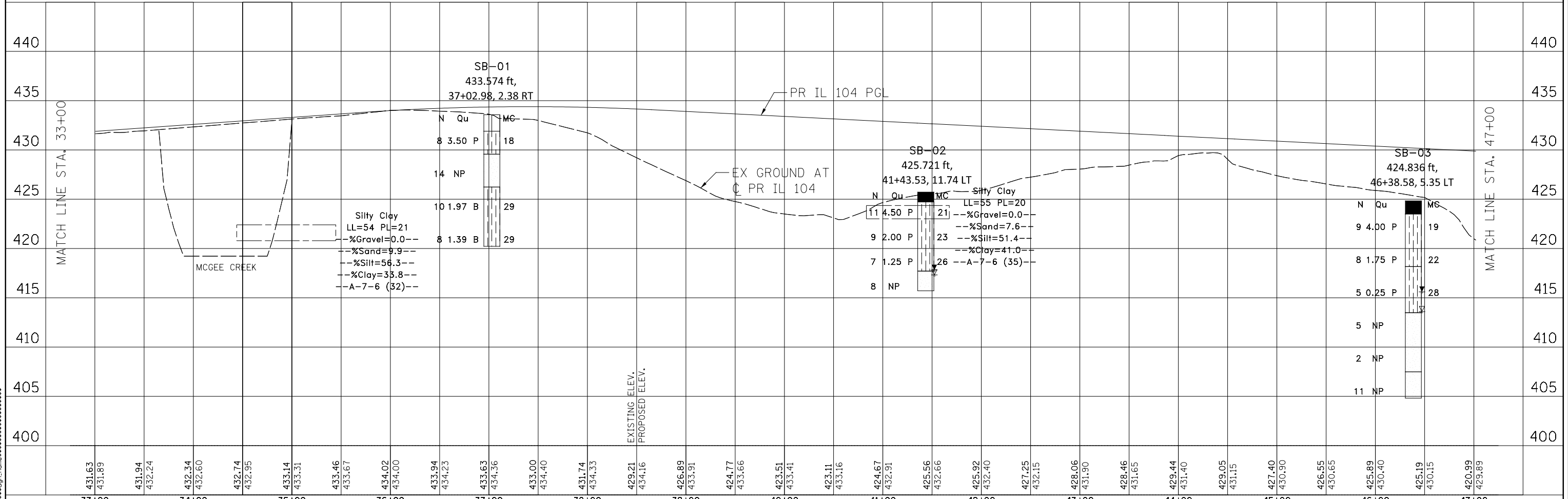
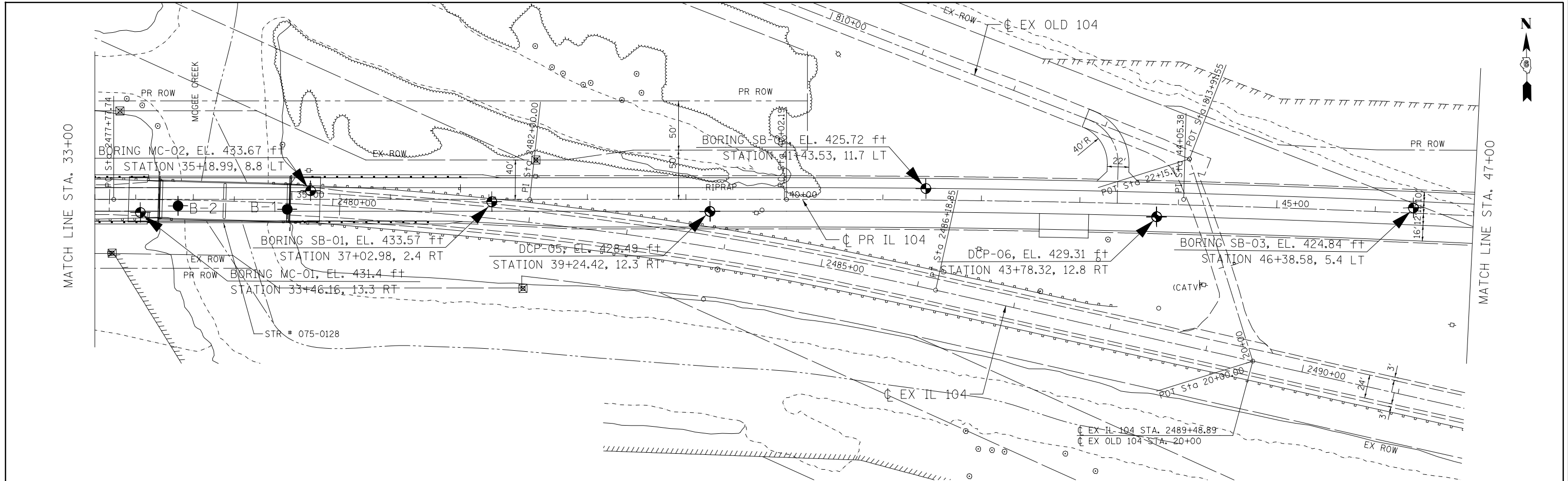
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FILEL	PLOT SCALE = *SCALE*	DRAWN -	REVISED -			SCALE: HORIZ. 1"=50' VERT. 1"=5' STA. 19+00.00 TO STA. 33+00.00		CONTRACT NO. 72B58		ILLINOIS FED. AID PROJECT		
		CHECKED -	REVISED -	DATE -		DATE -						

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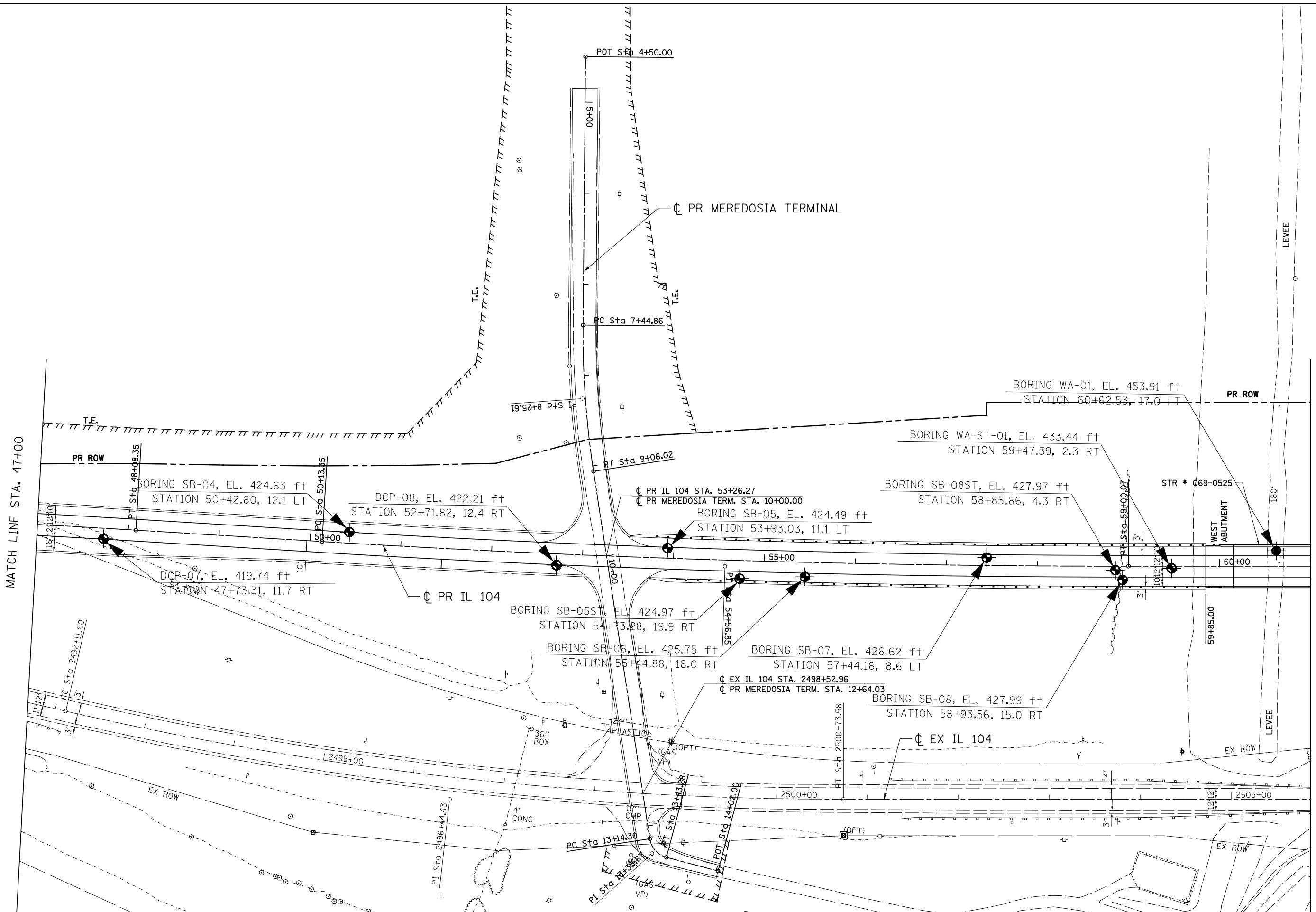
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FILE.L		DRAWN -	REVISED -		SCALE: HORIZ. 1"=50' VERT. 1"=5'		STA. 33+00.00 TO STA. 47+00.00		CONTRACT NO. 72B58		ILLINOIS FED. AID PROJECT	
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PLOT DATE = \$DATE\$		DATE -	REVISED -									





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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

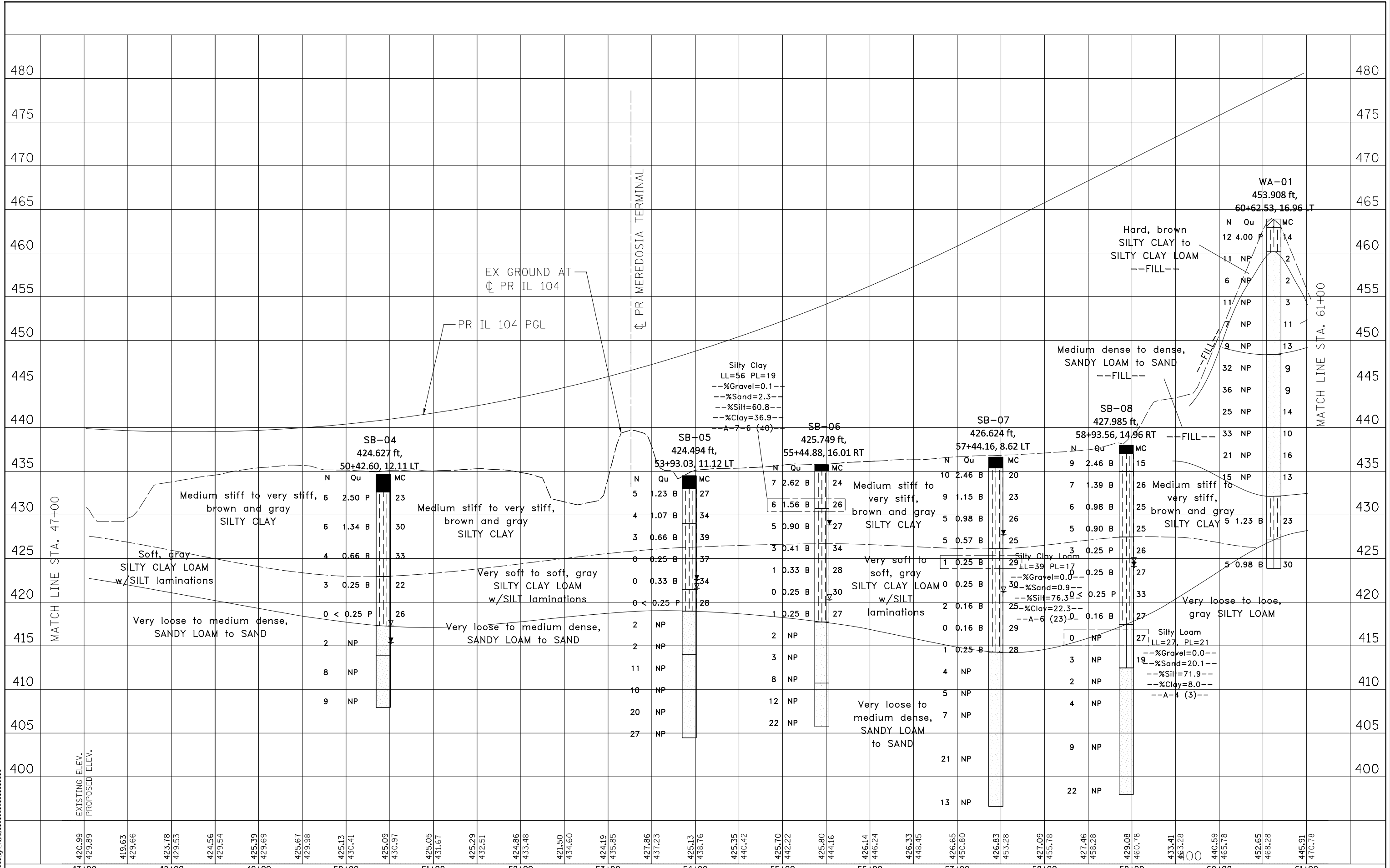
SOIL BORING LOCATION PLAN
IL 104

SCALE: 1"=50' SHEET ___ OF ___ SHEETS STA. 47+00.00 TO STA. 61+00.00

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	652
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	DATE
	GRADES CHECKED	
	ALIGNED	
	STRUCTURE	
	NOTATRS CHKD	
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PROFILE	SURVEYED	DATE
	GRADES CHECKED	
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	NOTATRS CHKD	
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FILEL		DRAWN -	REVISED -			IL 104		745	123B-2	MORGAN/PIKE	782	653	
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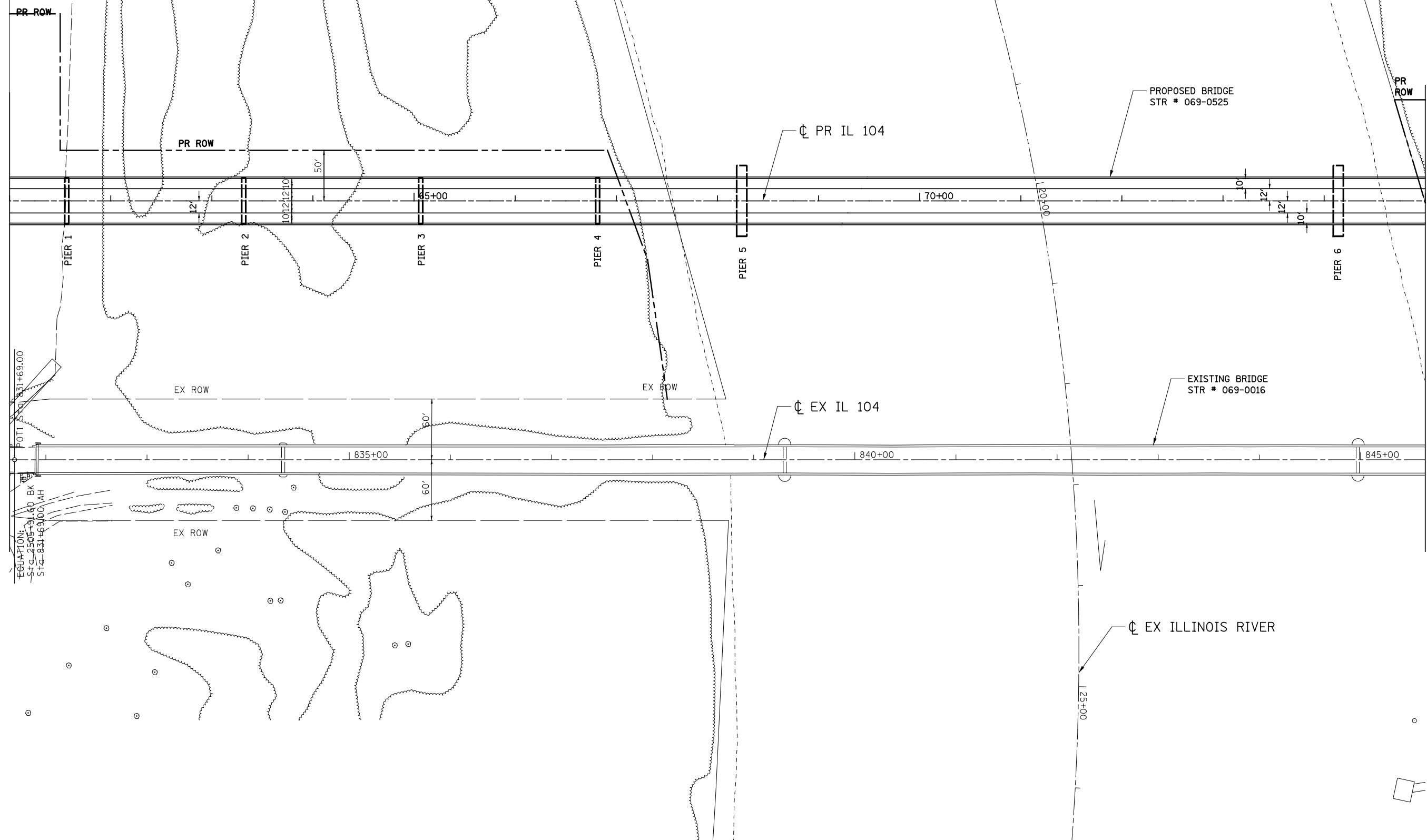


ILLINOIS FED. AID PROJECT



MATCH LINE STA. 61+00

MATCH LINE STA. 75+00



EQUATION:
 STATION: 831+69.00 BK
 STATION: 831+63.00 AH

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 USER = *****
 DATE = *****
 SCALE = *****

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

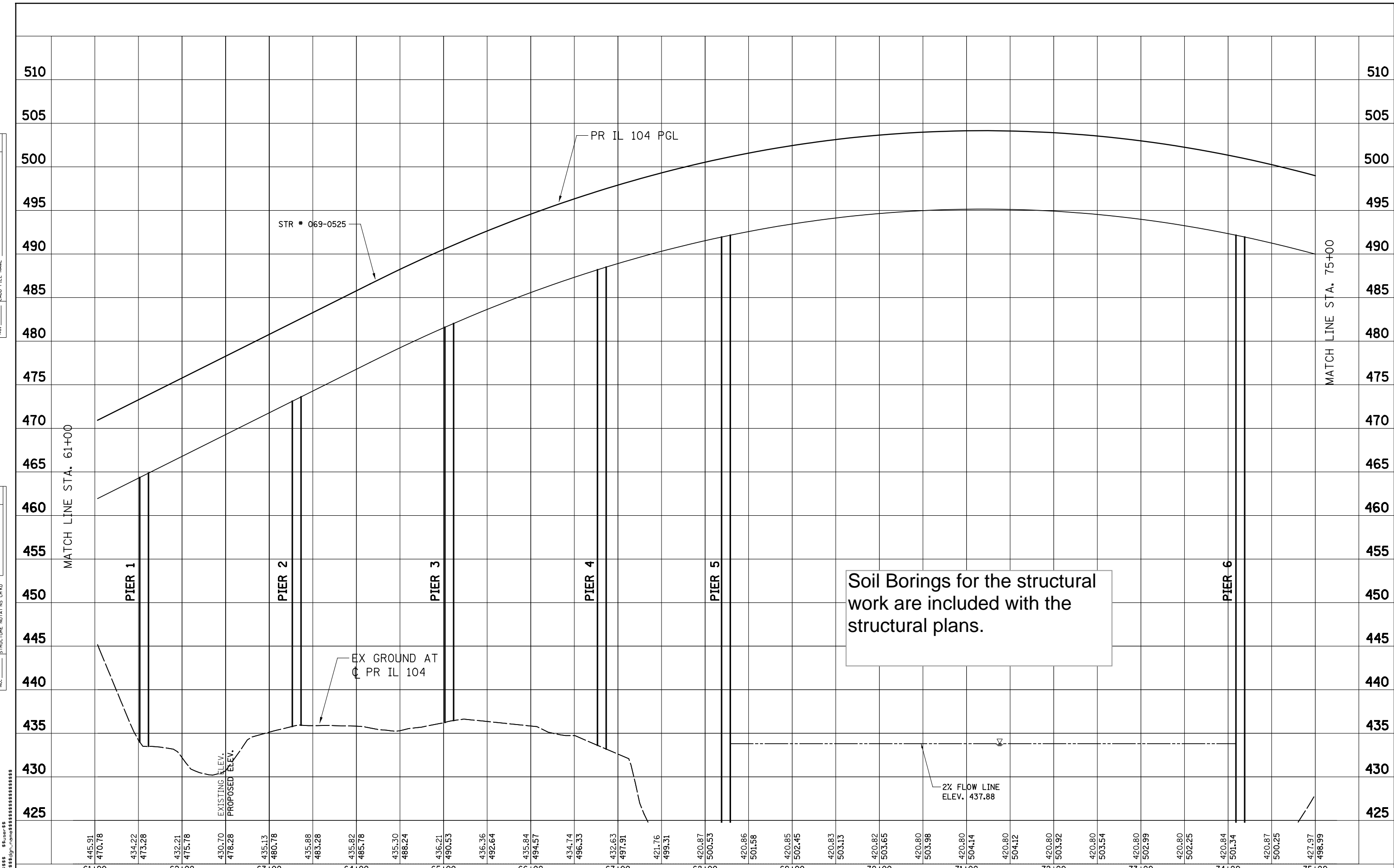
SOIL BORING LOCATION PLAN
IL 104

SCALE: 1"=50' SHEET ___ OF ___ SHEETS STA. 61+00.00 TO STA. 75+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	654
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	NOTE BOOK		
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	CHECKED		
	AT		
	FILE NAME		

PROFILE	SURVEYED	BY	DATE
	GRADES CHECKED		
	NOTE BOOK		
	NO.		
	STRUCTURE		
	NOTATIS CHKD		



445.91	470.78	434.22	473.28	432.21	475.78	430.70	478.28	435.13	480.78	435.88	483.28	435.82	485.78	435.30	488.24	436.21	490.53	436.36	492.64	435.84	494.57	434.74	496.33	432.63	497.91	421.76	499.31	420.87	500.53	420.96	501.58	420.85	502.45	420.83	503.13	420.82	503.65	420.80	503.98	420.80	504.14	420.80	504.12	420.80	503.92	420.80	503.54	420.80	502.99	420.80	502.25	420.84	501.34	420.87	500.25	427.97	496.99
61+00		62+00		63+00		64+00		65+00		66+00		67+00		68+00		69+00		70+00		71+00		72+00		73+00		74+00		75+00																													

Soil Borings for the structural work are included with the structural plans.

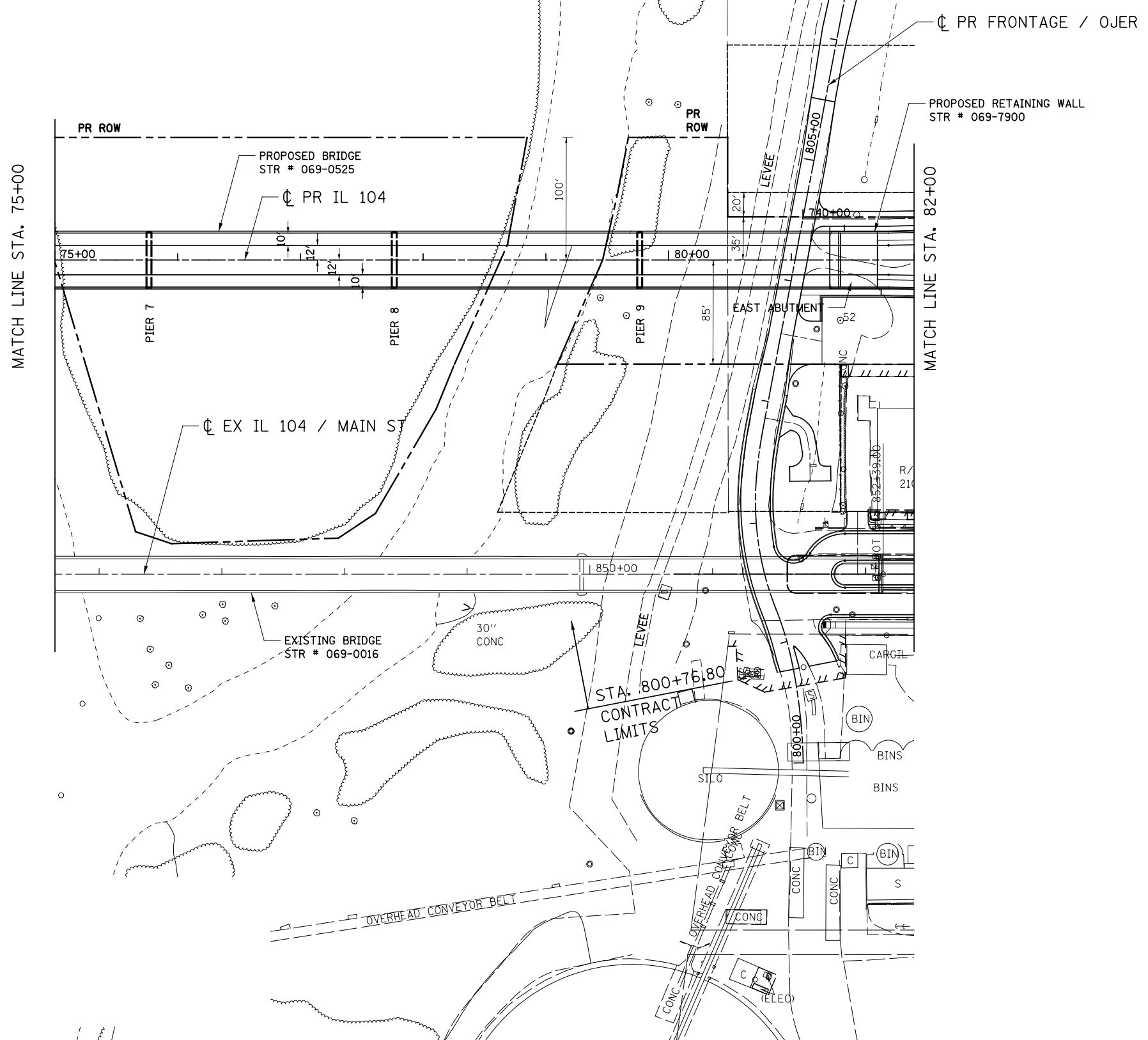
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

SOIL PROFILE	
IL 104	
SCALE: HORIZ. 1"=50'	VERT. 1"=5'
STA. 61+00.00	TO STA. 75+00.00

F.A.P. RTE. 745	SECTION 123B-2	COUNTY MORGAN/PIKE	TOTAL SHEETS 782	SHEET NO. 655
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

SOIL BORING LOCATION PLAN
IL 104

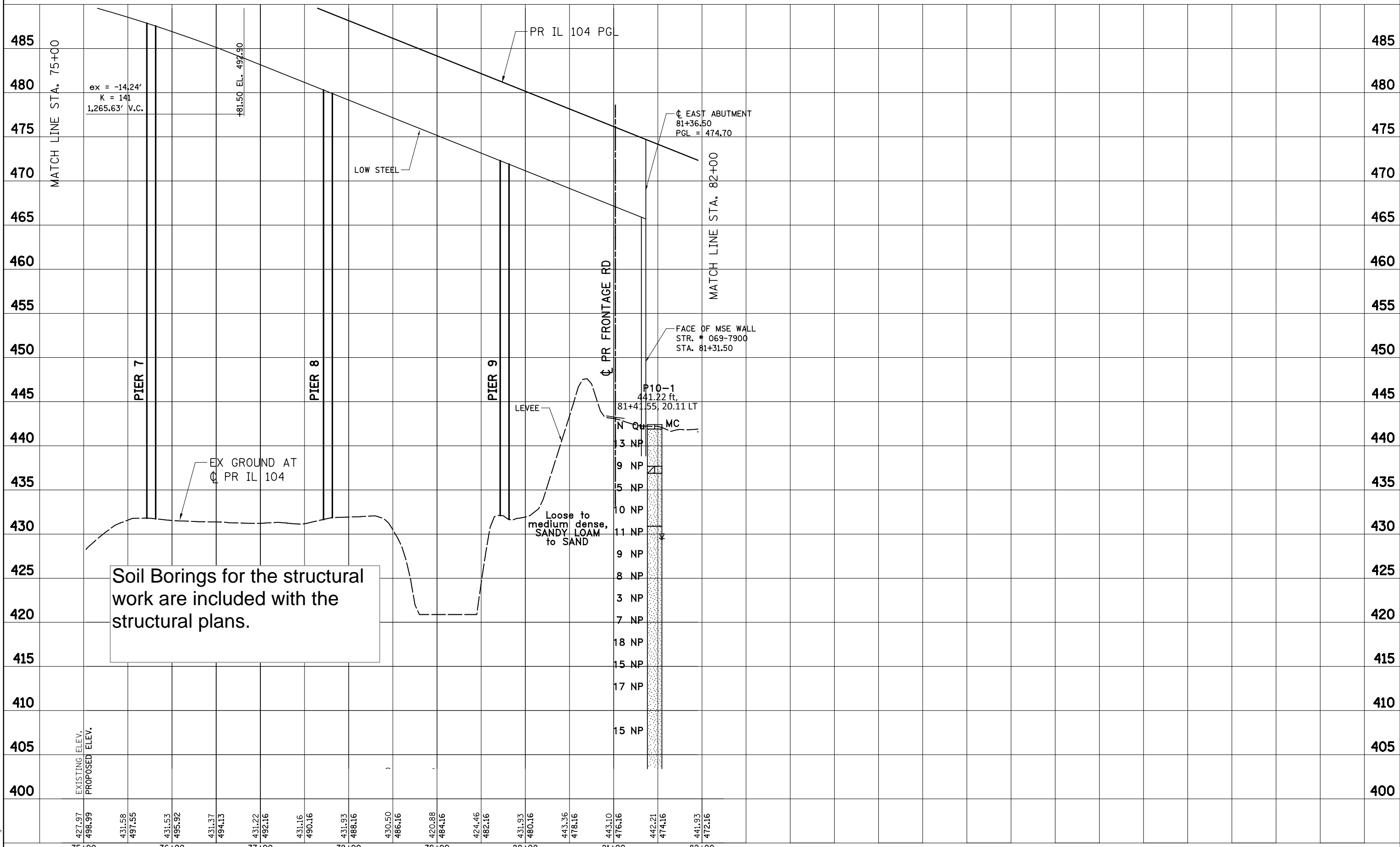
SCALE: 1"=50' SHEET ___ OF ___ SHEETS STA. 75+00.00 TO STA. 82+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	656
CONTRACT NO. 72B58				

ILLINOIS FED. AID PROJECT

PLAN	SURVEYED	DATE
	PLOTTED	BY
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK NO.	
	CADD FILE NAME	

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	NOTE BOOK NO.	
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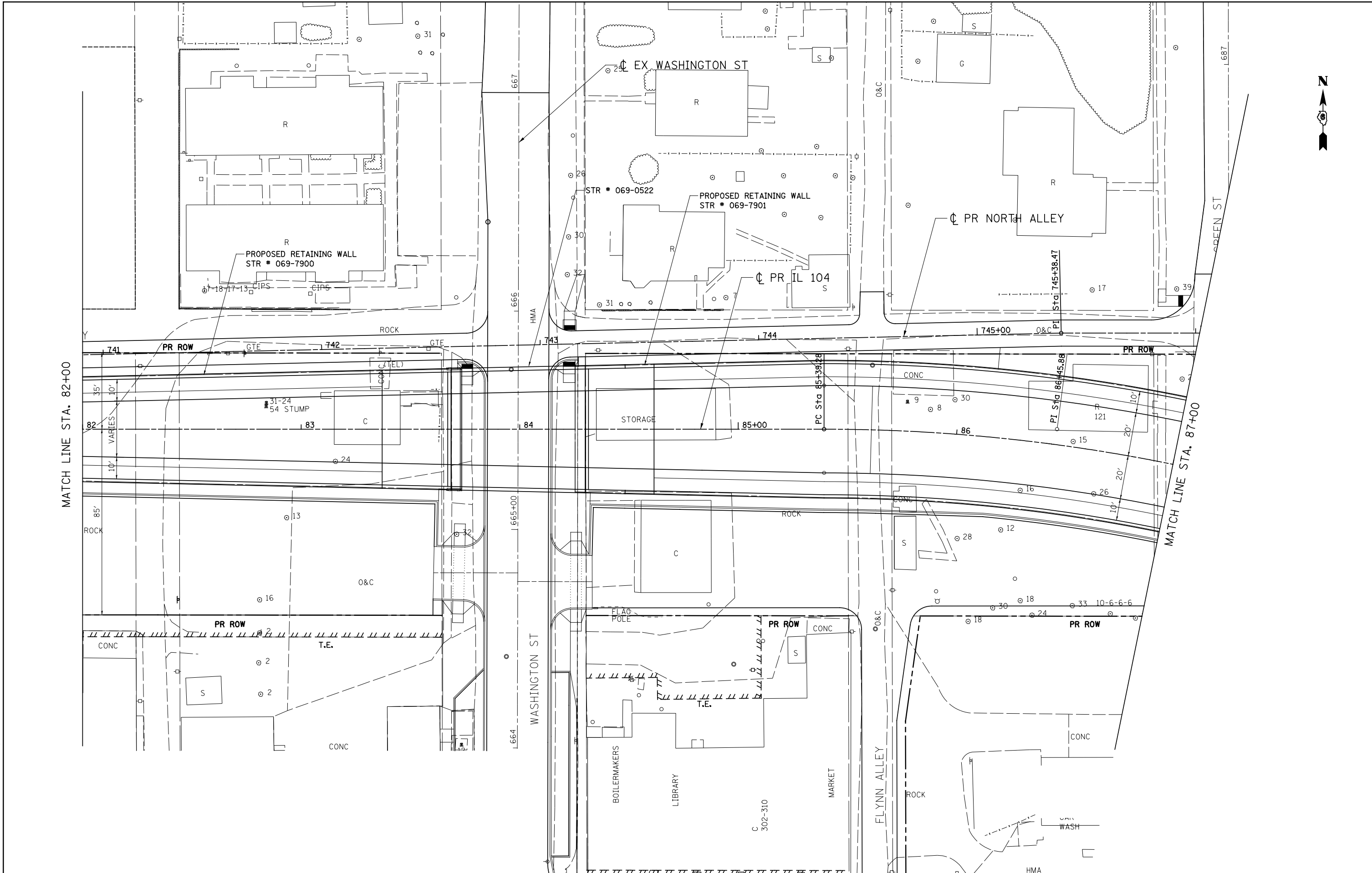
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		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

SOIL PROFILE
IL 104

SCALE: HORIZ. 1"=50' VERT. 1"=5'
 STA. 75+00.00 TO STA. 82+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	657
				CONTRACT NO. 72B58
ILLINOIS FED. AID PROJECT				



MATCH LINE STA. 82+00

MATCH LINE STA. 87+00

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

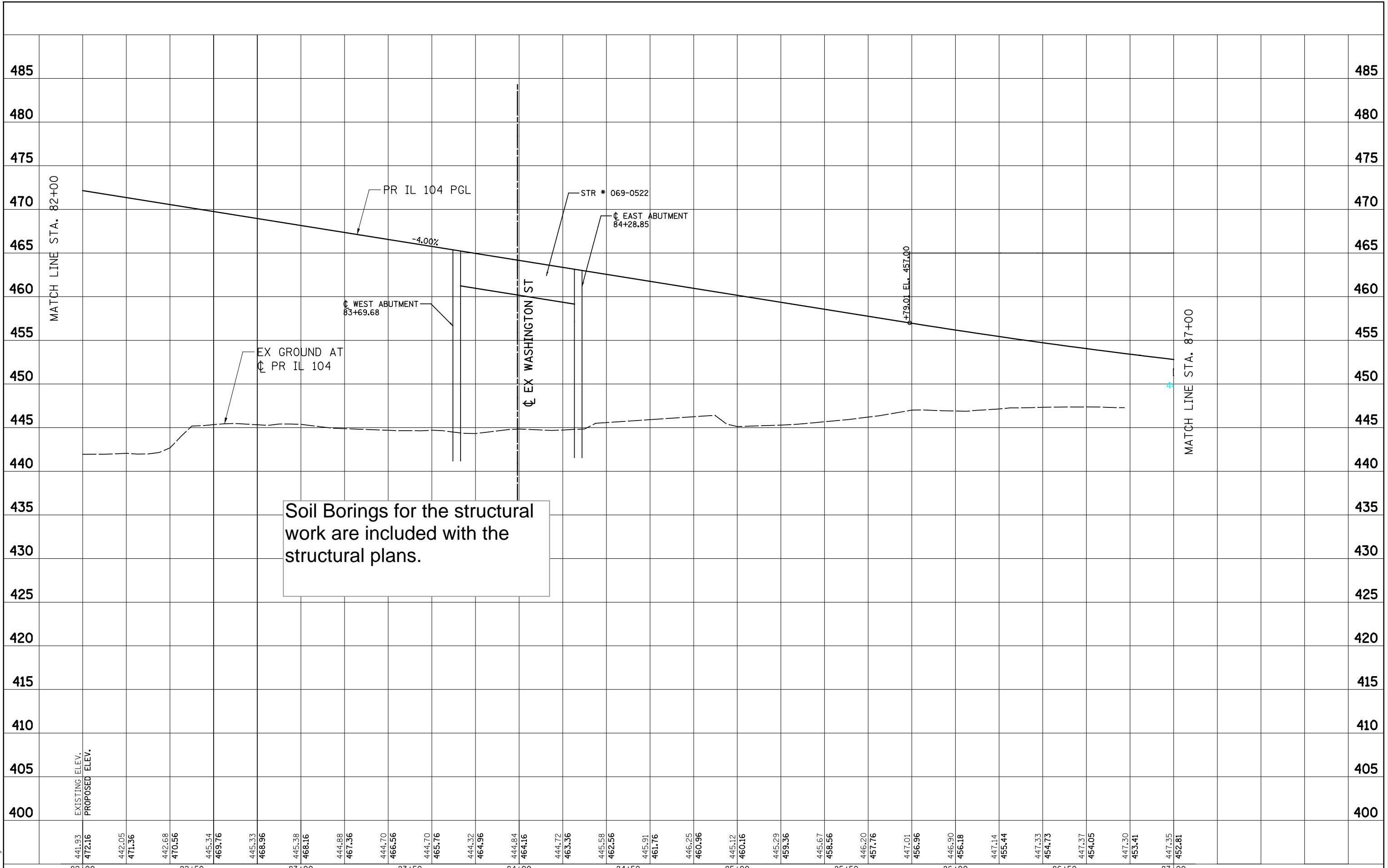
SOIL BORING LOCATION PLAN
IL 104

SCALE: 1"=20' SHEET ___ OF ___ SHEETS STA. 82+00.00 TO STA. 87+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	658
				CONTRACT NO. 72B58
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
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	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		



441.93 472.16	442.05 471.36	442.68 470.56	445.34 469.76	445.33 468.96	445.38 468.16	444.88 467.36	444.70 466.56	444.70 465.76	444.32 464.96	444.84 464.16	444.72 463.36	445.58 462.56	445.91 461.76	446.25 460.96	445.12 460.16	445.29 459.36	445.67 458.56	446.20 457.76	447.01 456.96	446.90 456.18	447.14 455.44	447.33 454.73	447.37 454.05	447.30 453.41	447.35 452.81	
82+00	82+50	83+00	83+50	84+00	84+50	85+00	85+50	86+00	86+50	87+00																

FILE NAME =	USER NAME = *USER*	DESIGNED -	REVISED -
FILEL		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

SOIL PROFILE
IL 104

SCALE: HORIZ. 1"=20' VERT. 1"=5' STA. 82+00.00 TO STA. 87+00.00

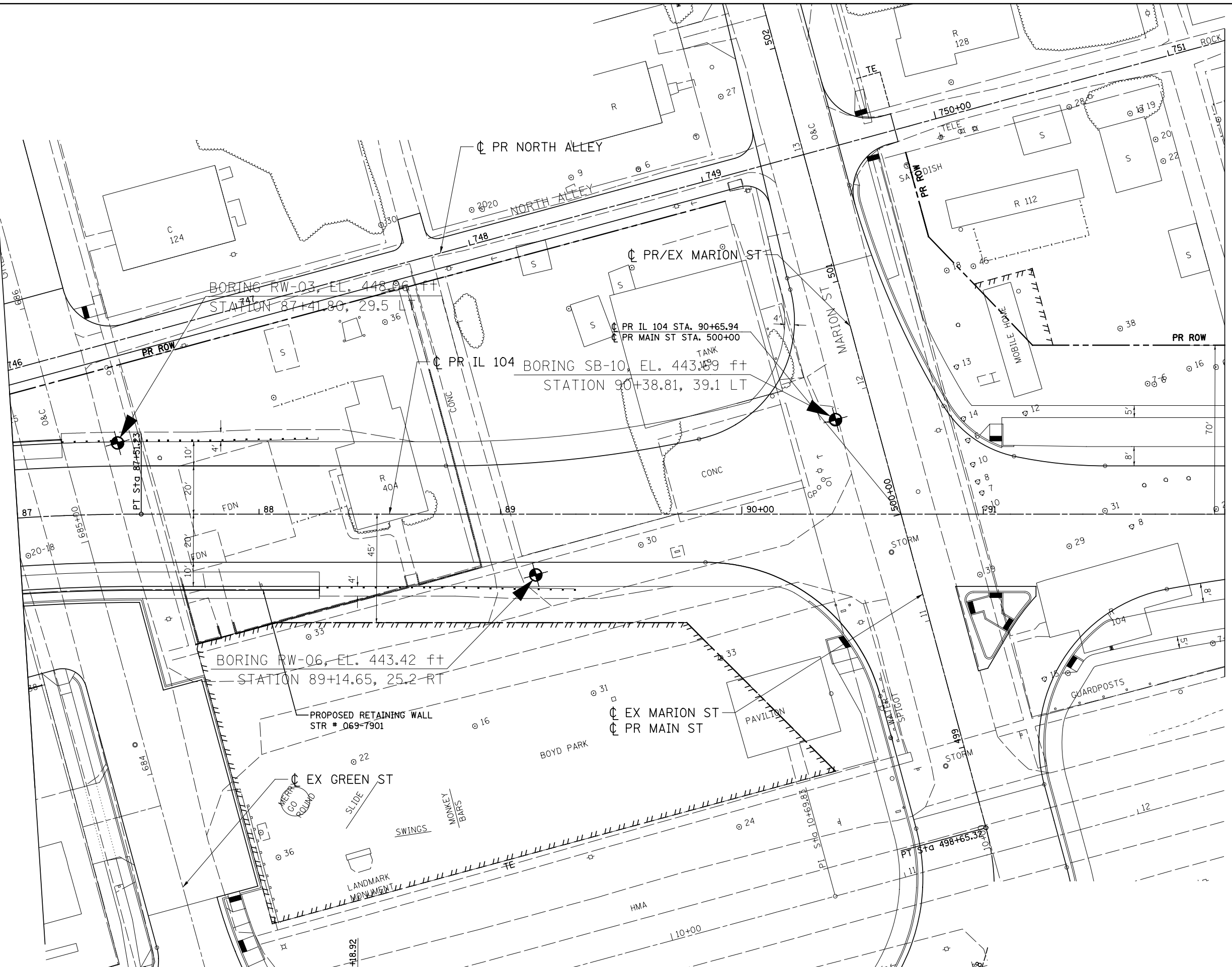
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/ZPIKE	782	659
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	





MATCH LINE STA. 87+00

MATCH LINE STA. 92+00



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

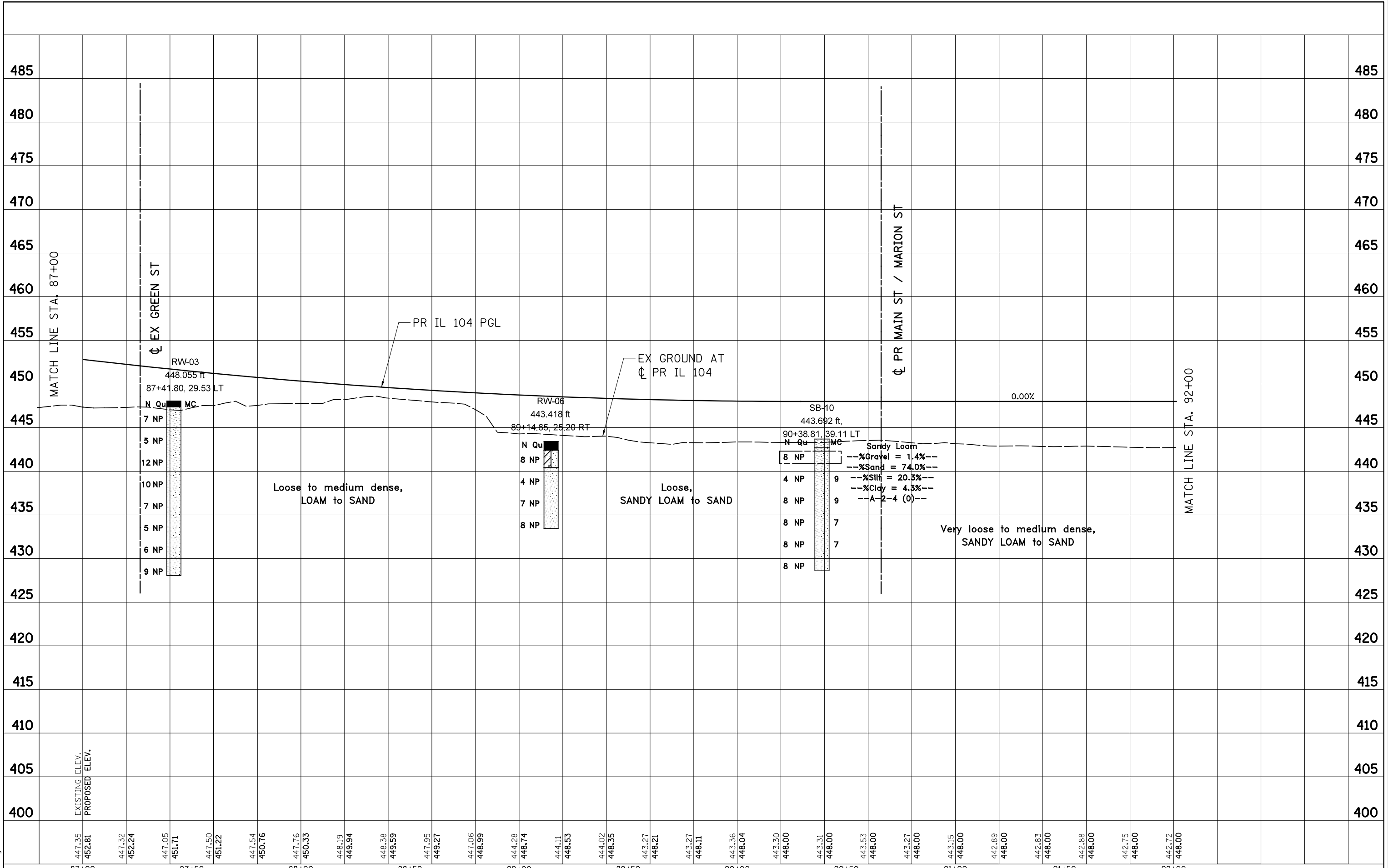
SOIL BORING LOCATION PLAN
IL 104

SCALE: 1"=20' SHEET ___ OF ___ SHEETS STA. 87+00.00 TO STA. 92+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	660
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	

PLAN	SURVEYED	BY	DATE
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	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
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	STRUCTURE NOTATIONS CHECKED		
	NOTE BOOK NO.		
	CADD FILE NAME		



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FILEL		DRAWN -	REVISED -		745	123B-2	MORGAN/PIKE	782	661		
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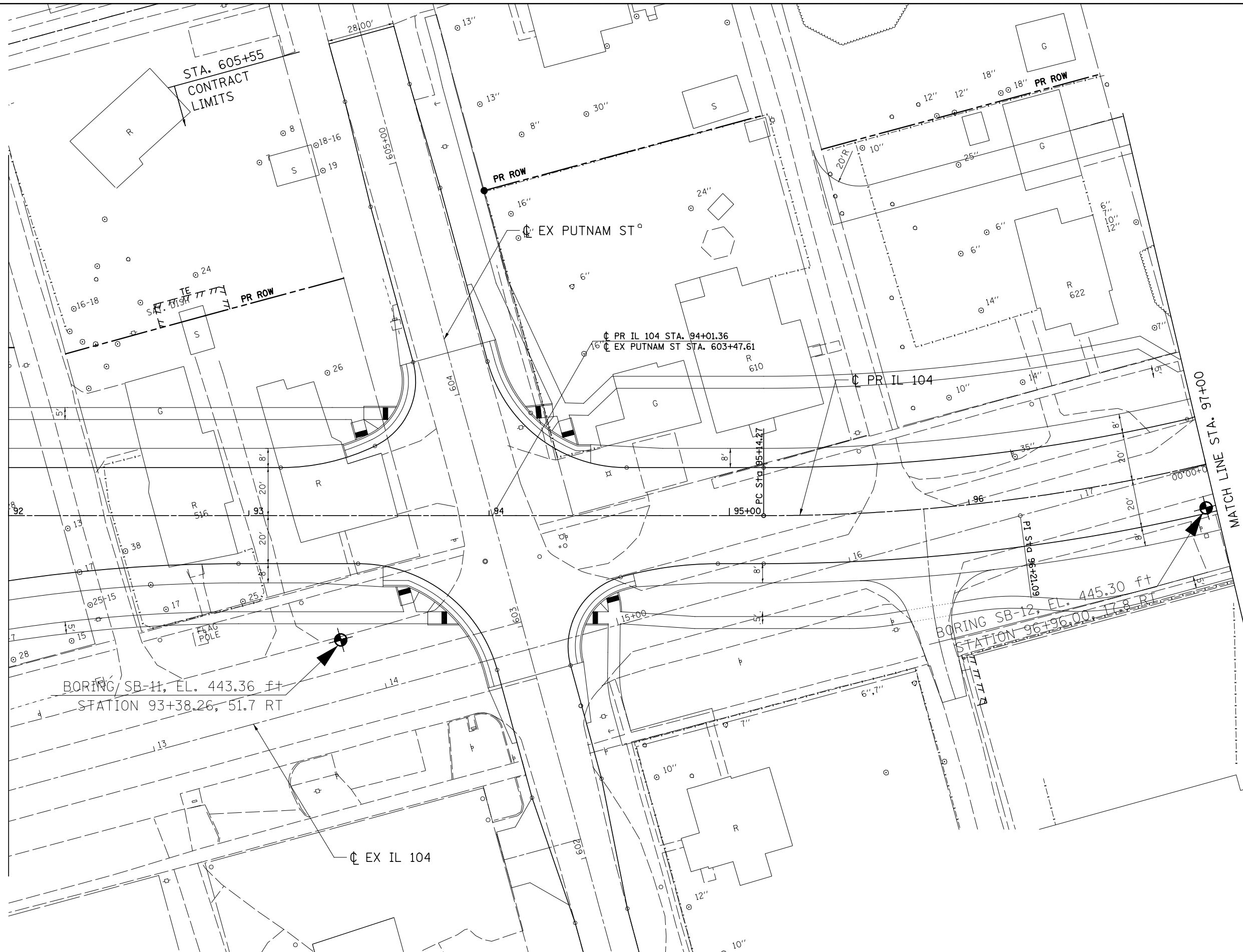


SCALE: HORIZ. 1"=20' VERT. 1"=5' STA. 87+00.00 TO STA. 92+00.00



MATCH LINE STA. 92+00

MATCH LINE STA. 97+00



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAP ROUTE 745 / IL ROUTE 104

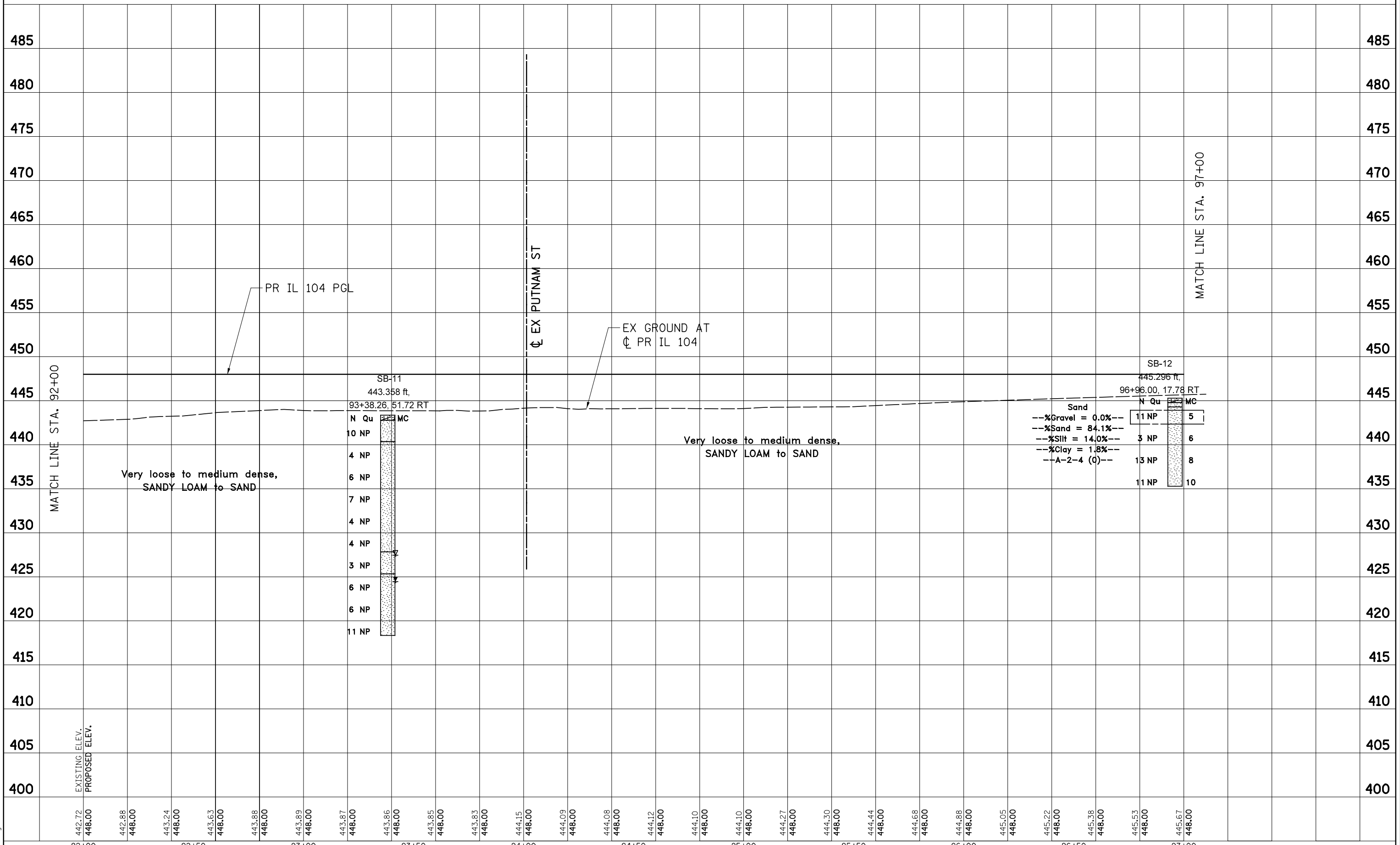
SOIL BORING LOCATION PLAN
IL 104

SCALE: 1"=20' SHEET ___ OF ___ SHEETS STA. 92+00.00 TO STA. 97+00.00

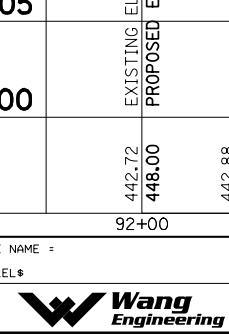
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	662
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHKD		
	NO.		
	NOTE BOOK		
	NO.		
	FILE NAME		

PROFILE	SURVEYED	BY	DATE
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	NOTE BOOK		
	NO.		
	FILE NAME		



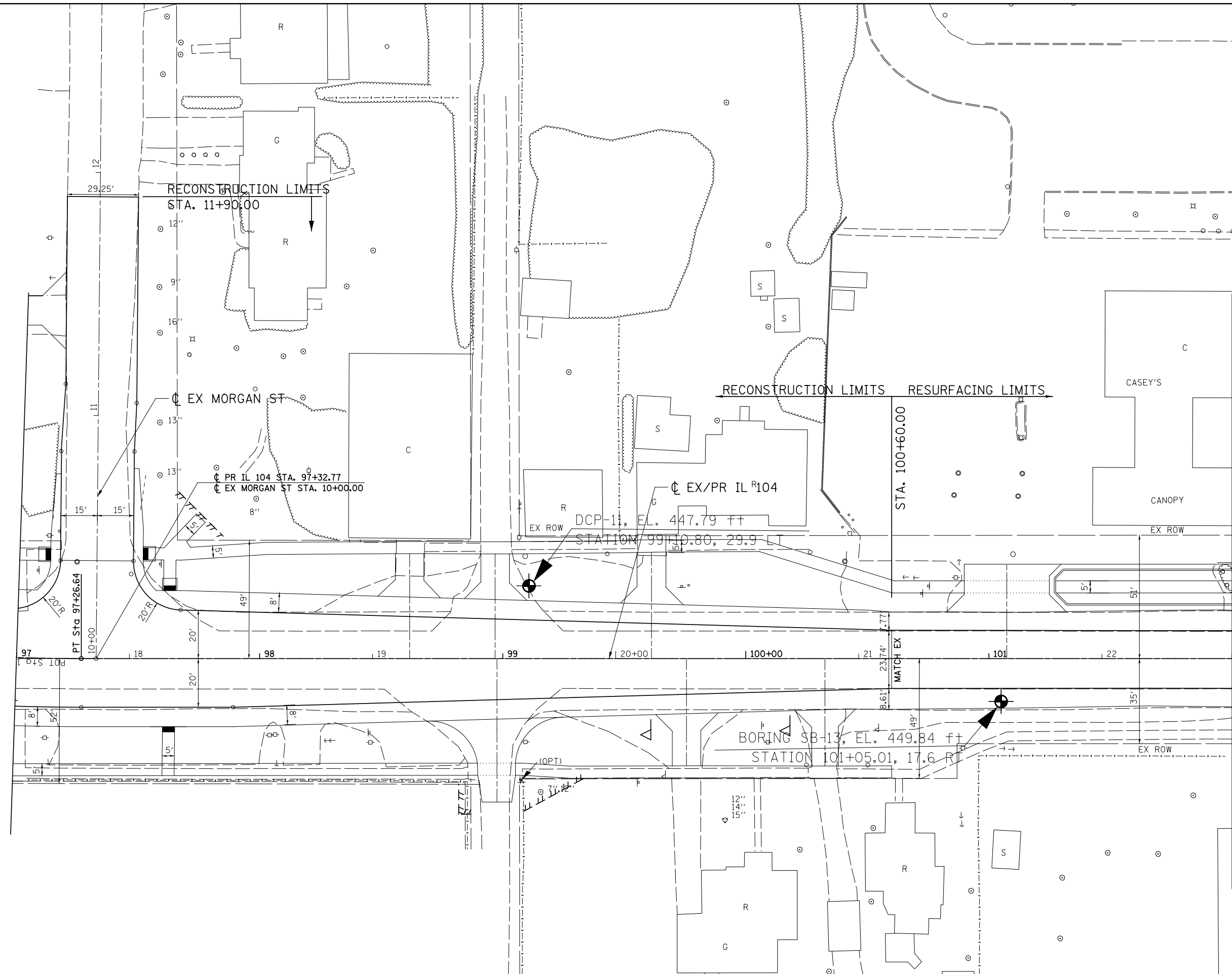
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FILEL		DRAWN -	REVISED -		IL 104		745	123B-2	MORGAN/PIKE	782	663
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PLOT DATE = *DATE*		DATE -	REVISED -				ILLINOIS FED. AID PROJECT				





MATCH LINE STA. 97+00

MATCH LINE STA. 102+00



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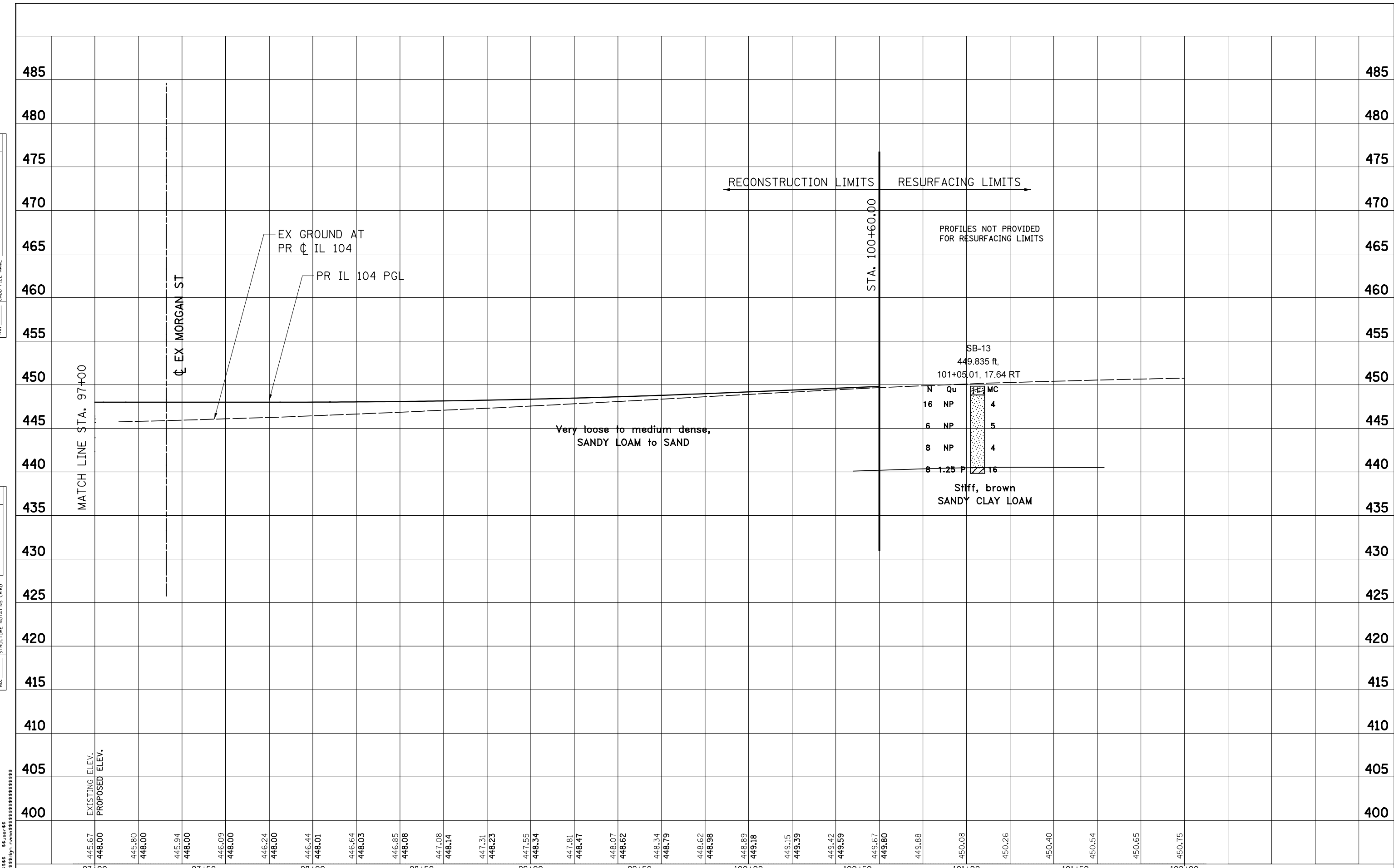
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

SOIL BORING LOCATION PLAN
IL 104
 SCALE: 1"=20' SHEET ___ OF ___ SHEETS STA. 97+00.00 TO STA. 102+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	664
CONTRACT NO. 72B58				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NO.		
	NOTE BOOK		
	NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
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	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NO.		
	NOTE BOOK		
	NO.		



445.67 448.00	445.80 448.00	445.94 448.00	446.09 448.00	446.24 448.00	446.44 448.01	446.64 448.03	446.85 448.08	447.08 448.14	447.31 448.23	447.55 448.34	447.81 448.47	448.07 448.62	448.34 448.79	448.62 448.98	448.89 449.18	449.15 449.39	449.42 449.59	449.67 449.80	449.88	450.08	450.26	450.40	450.54	450.65	450.75	
97+00	97+50	98+00	98+50	99+00	99+50	100+00	100+50	101+00	101+50	102+00																

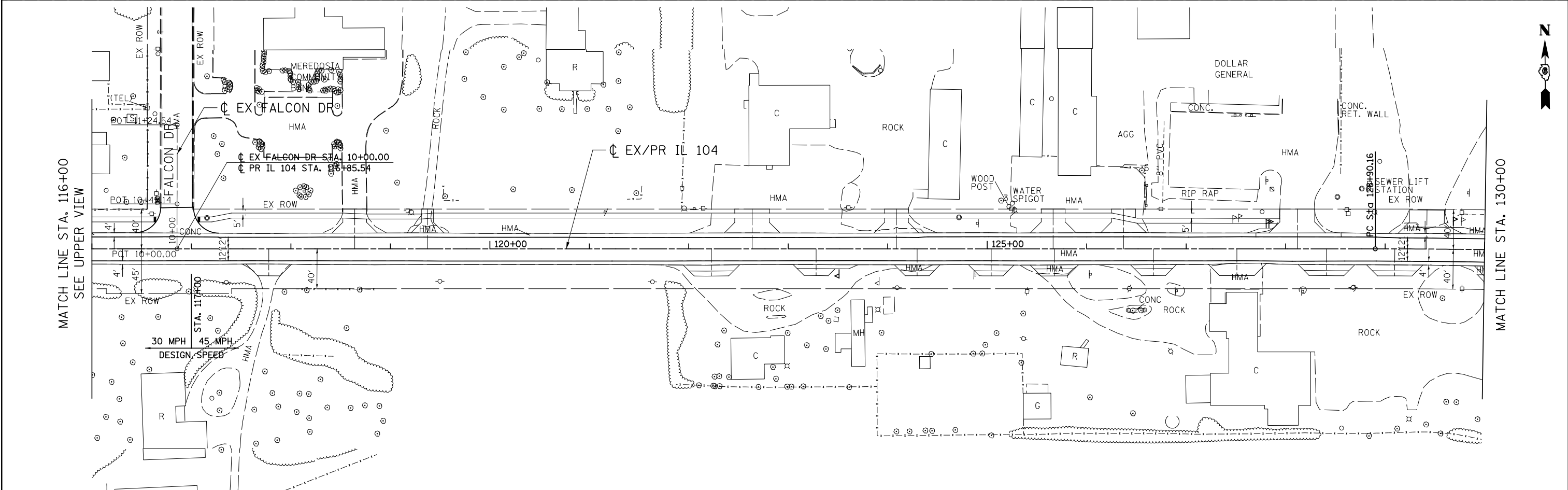
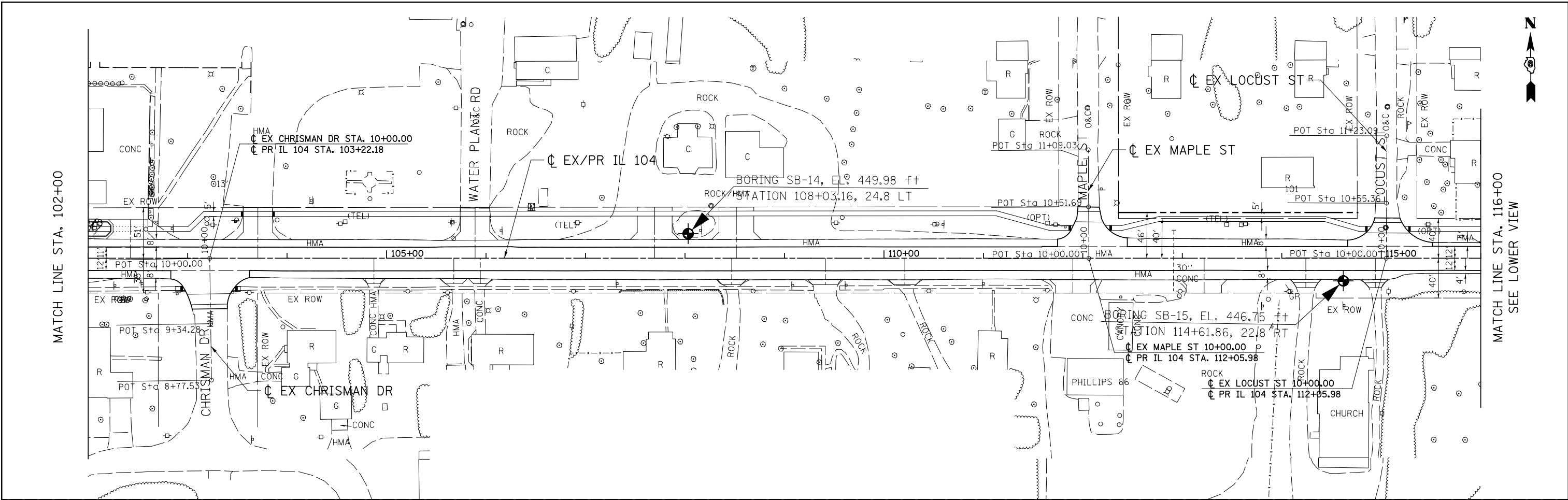
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PLOT SCALE = *SCALE*	CHECKED -	REVISED -
PLOT DATE = *DATE*	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
 FAP ROUTE 745 / IL ROUTE 104

SOIL PROFILE	
IL 104	
SCALE: HORIZ. 1"=20'	VERT. 1"=5'
STA. 97+00.00 TO STA. 102+00.00	

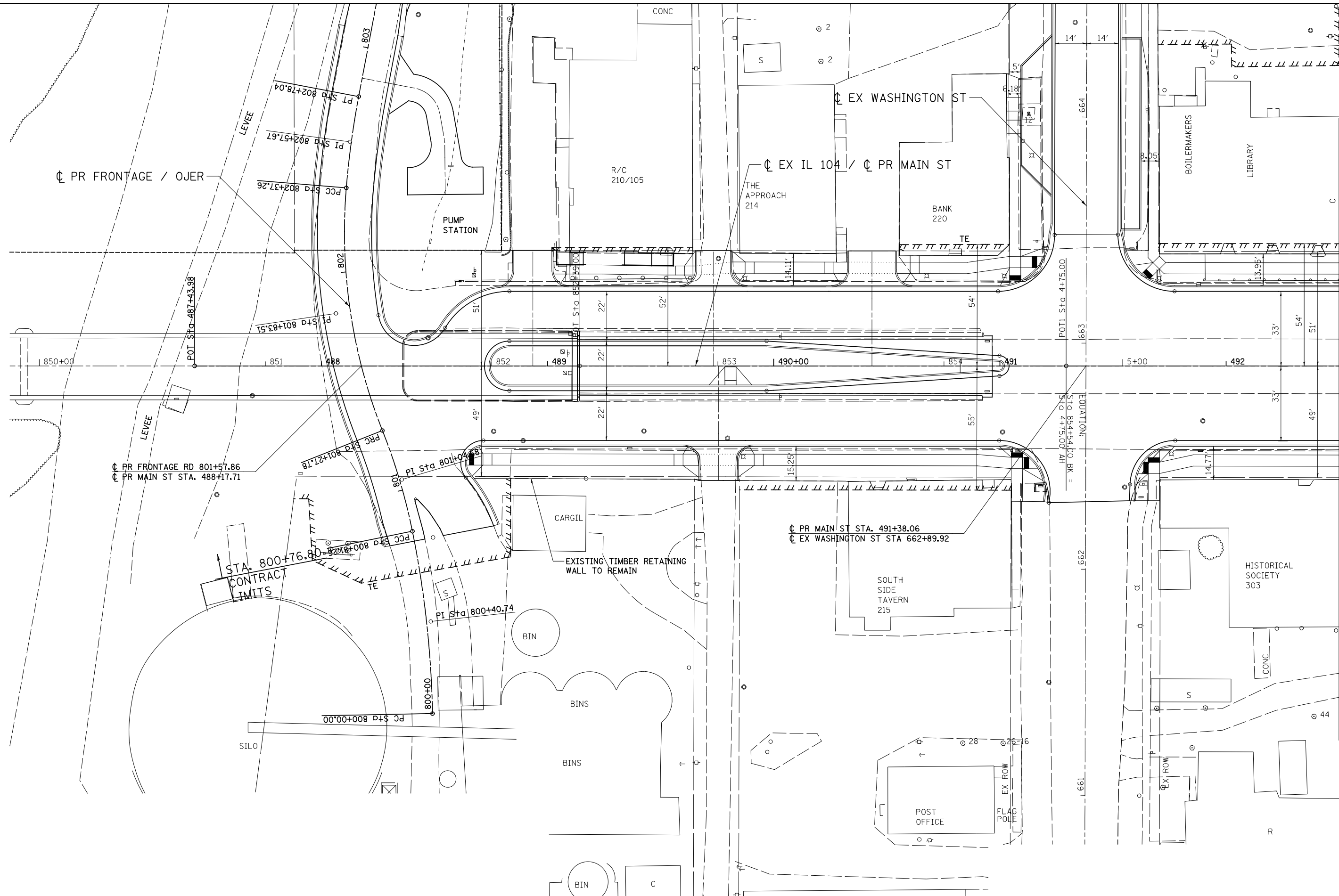
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/ZPIKE	782	665
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	



FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - _____	REVISED - _____	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION FAP ROUTE 745 / IL ROUTE 104	SOIL BORING LOCATION PLAN IL 104	F.A.P. RTE. 745	SECTION 123B-2	COUNTY MORGAN/ZIKE	TOTAL SHEETS 782	SHEET NO. 666
	PLOT SCALE = #SCALE#	CHECKED - _____	REVISED - _____			SCALE: 1"=50'	SHEET _____ OF _____ SHEETS	STA. 102+00.00 TO STA. 130+00.00	CONTRACT NO. 72B58	
PLOT DATE = #DATE#	DATE - _____	REVISED - _____	REVISED - _____	ILLINOIS FED. AID PROJECT						

8888-ref_list_name8888
 8888-date_time8888
 8888-edgn_name8888
 8888-user88





MATCH LINE STA. 492+50

\$\$\$\$\$-ref_list_name\$\$\$\$\$
\$\$\$\$\$-date_time\$\$\$\$\$
\$\$\$\$\$-user\$\$\$\$\$

FILE NAME =	USER NAME = *USER*	DESIGNED -	REVISED -
FILEL		DRAWN -	REVISED -
Wang Engineering	PLOT SCALE = *SCALE*	CHECKED -	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAP ROUTE 745 / IL ROUTE 104

SOIL BORING LOCATION PLAN
MARION STREET / MAIN STREET 1

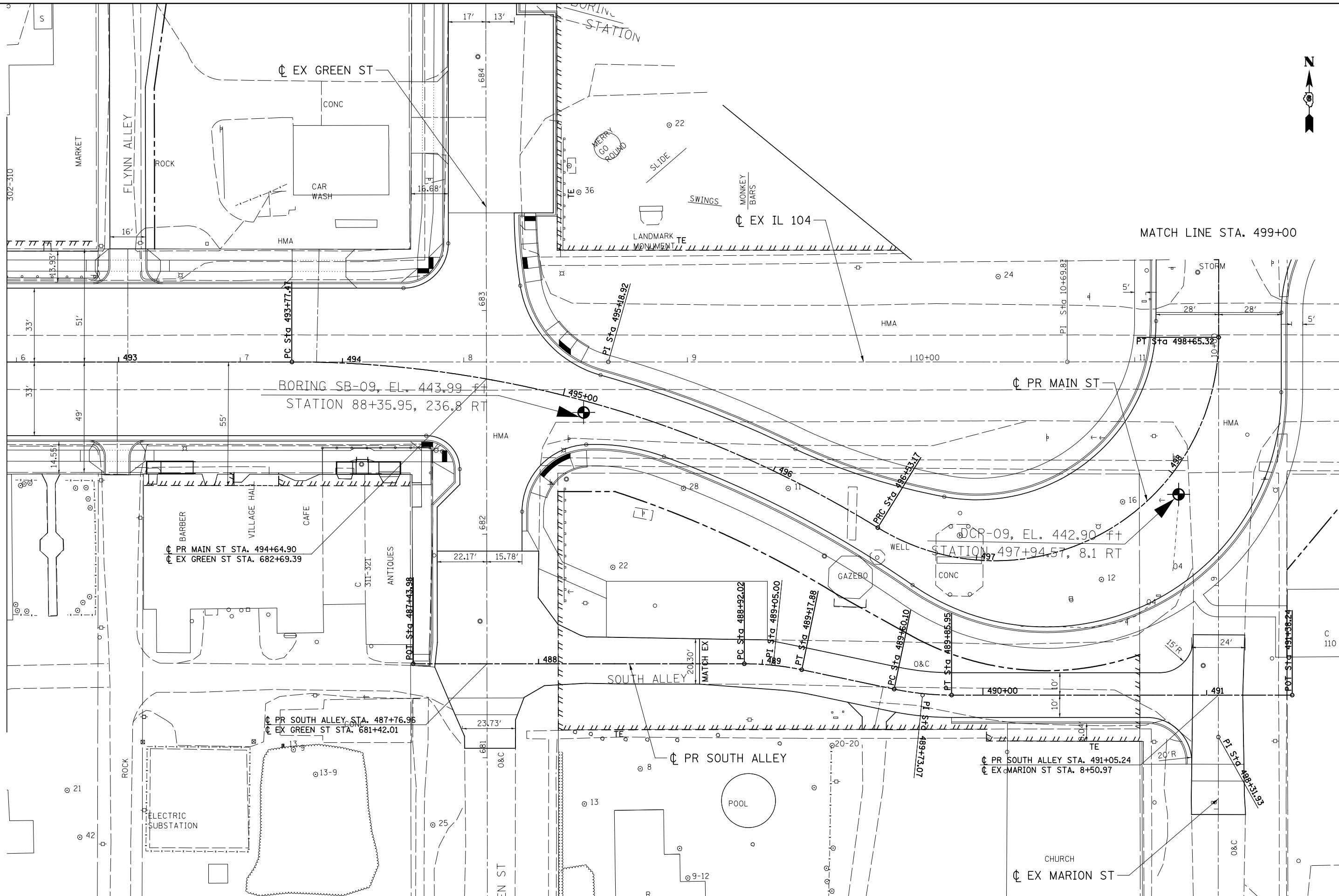
SCALE: 1"=20' SHEET ___ OF ___ SHEETS STA. 487+43.98 TO STA. 492+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	667
				CONTRACT NO. 72B58
ILLINOIS FED. AID PROJECT				



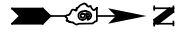
MATCH LINE STA. 492+50

MATCH LINE STA. 499+00



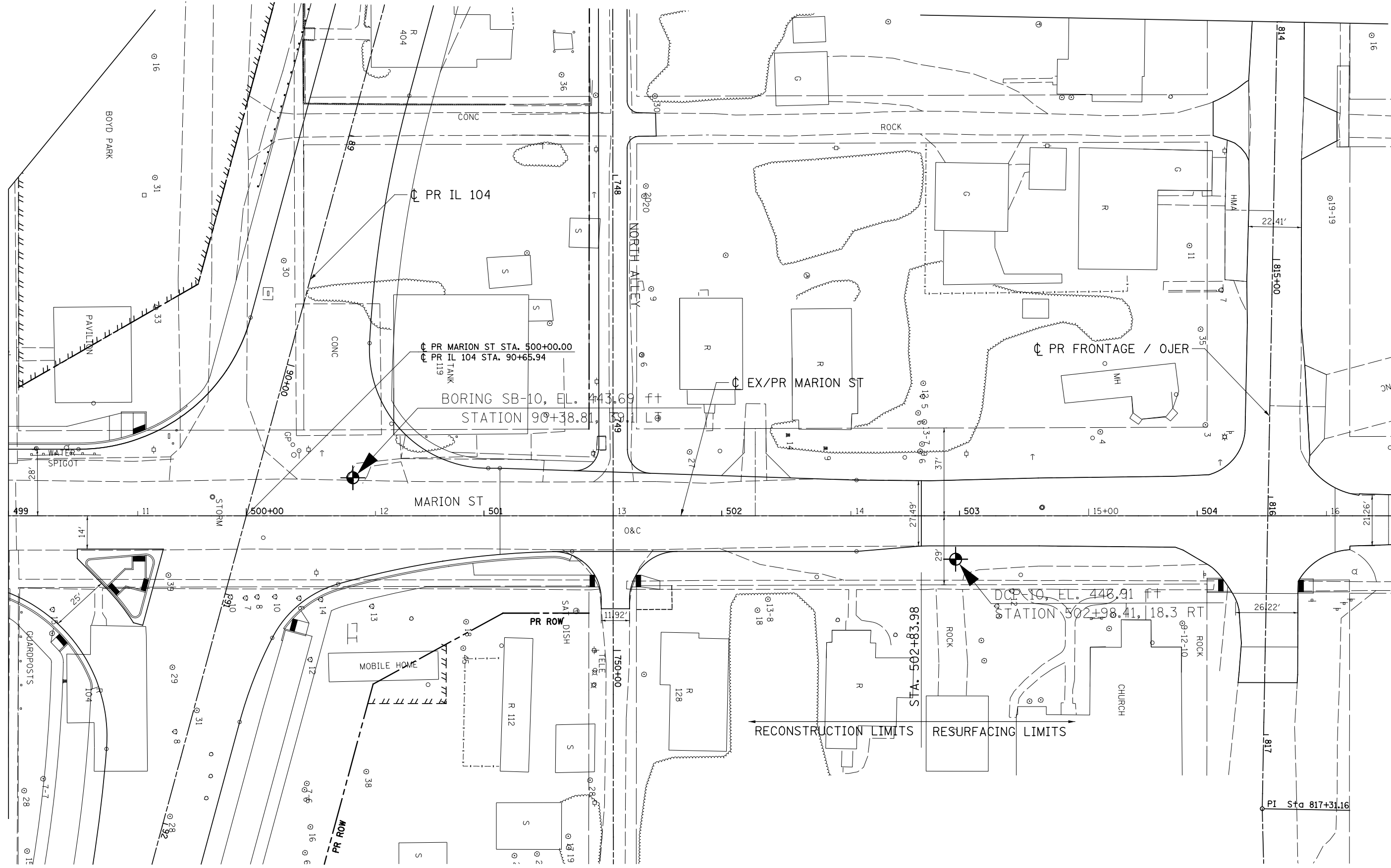
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 9888-date_time8888 \$User-88
 9888-ref_list_name8888
 9888-date_time8888 \$User-88

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION FAP ROUTE 745 / IL ROUTE 104	SOIL BORING LOCATION PLAN MARION STREET / MAIN STREET 2 SOUTH ALLEY	F.A.P. RTE. 745	SECTION 123B-2	COUNTY MORGAN/ZIPIKE	TOTAL SHEETS 782	SHEET NO. 668
Wang Engineering	PLOT SCALE = #SCALE#	CHECKED -	REVISED -			SCALE: 1"=20'	SHEET ___ OF ___ SHEETS	STA. 492+50.00 TO STA. 499+00.00	CONTRACT NO. 72B58	
	PLOT DATE = #DATE#	DATE -	REVISED -					ILLINOIS FED. AID PROJECT		



MATCH LINE STA. 814+00

MATCH LINE STA. 499+00



FILE NAME =	USER NAME = *USER*	DESIGNED -	REVISÉ -
FILEL		DRAWN -	REVISÉ -
PLOT SCALE = *SCALE*		CHECKED -	REVISÉ -
PLOT DATE = *DATE*		DATE -	REVISÉ -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
FAP ROUTE 745 / IL ROUTE 104

SCALE: 1"=20'
SHEET ___ OF ___ SHEETS
STA. 499+00.00 TO STA. 504+85.00

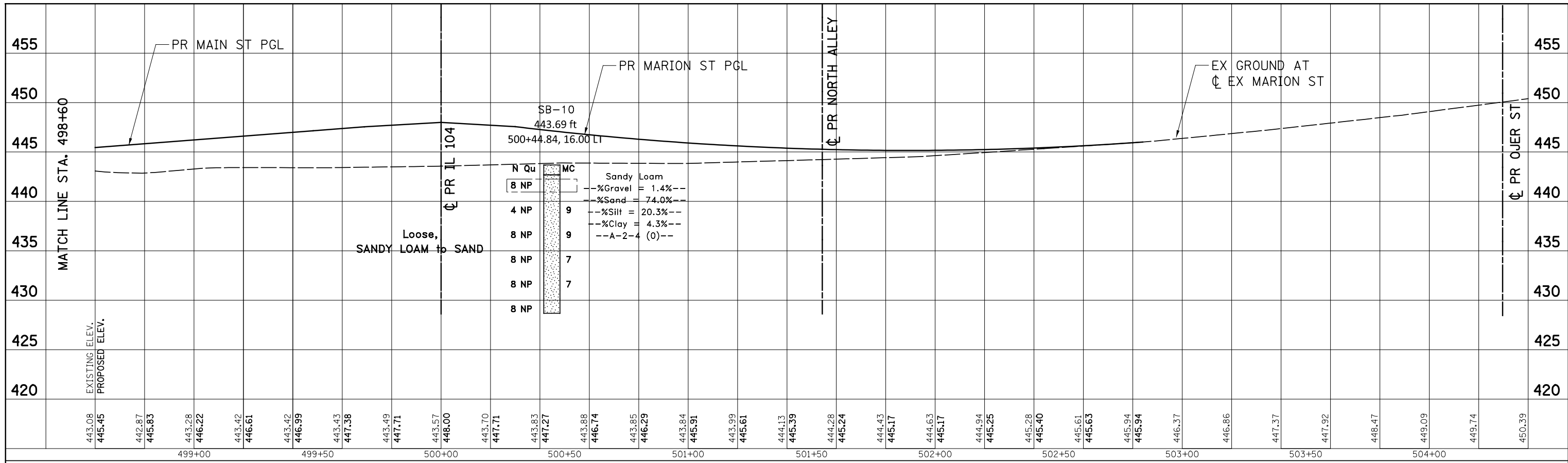
SOIL BORING LOCATION PLAN
MARION STREET / MAIN STREET 2

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	123B-2	MORGAN/PIKE	782	669
CONTRACT NO. 72B58			ILLINOIS FED. AID PROJECT	

PLT 2024/06/27 10:00 AM

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT		
	STRUCTURE		
	NOTATIS CHKD		
	NO.		

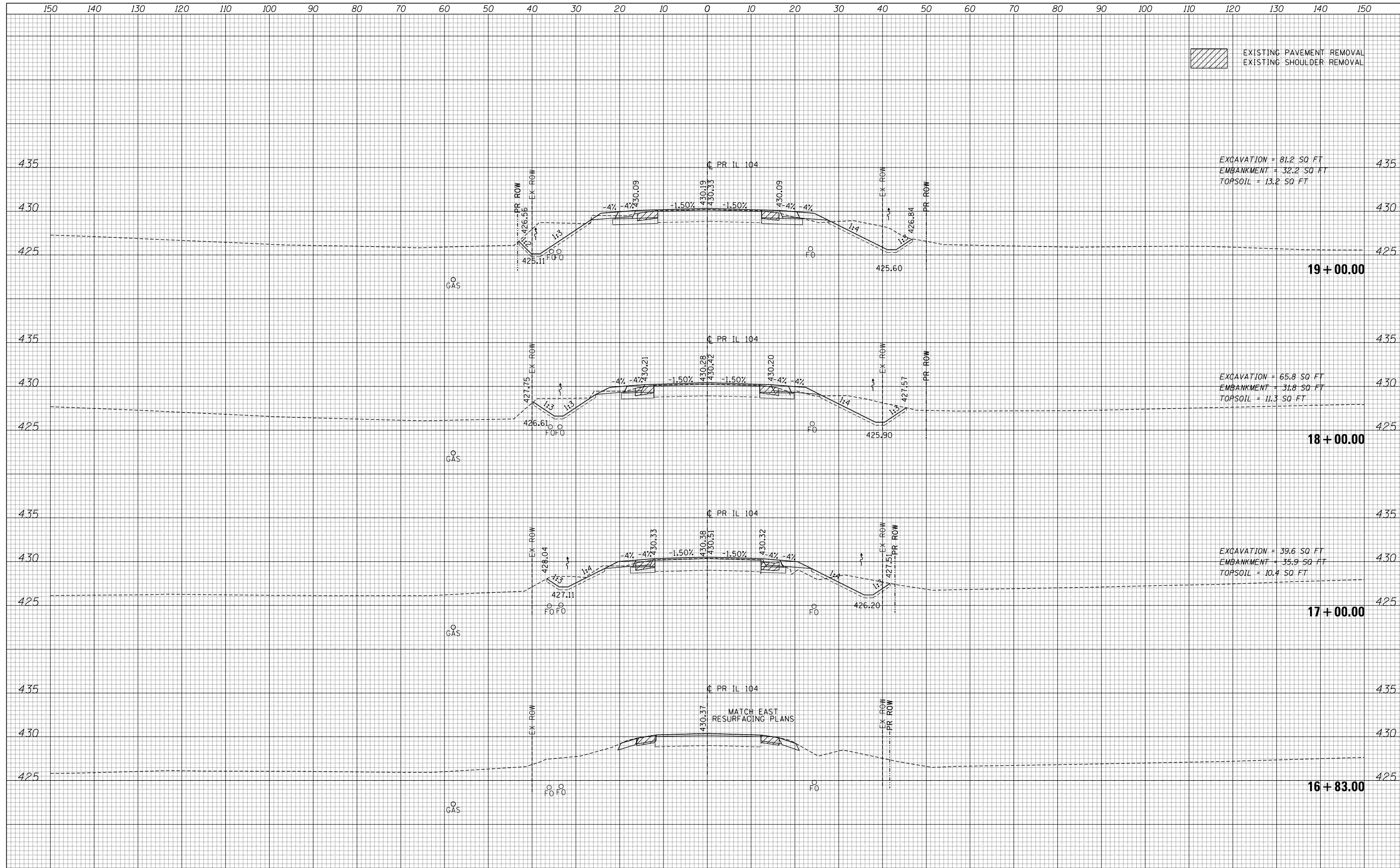
PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	ALIGNMENT		
	STRUCTURE		
	NOTATIS CHKD		
	NO.		



*****do not change***** \$\$\$\$\$\$

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



EXCAVATION = 81.2 SQ FT
 EMBANKMENT = 32.2 SQ FT
 TOPSOIL = 13.2 SQ FT

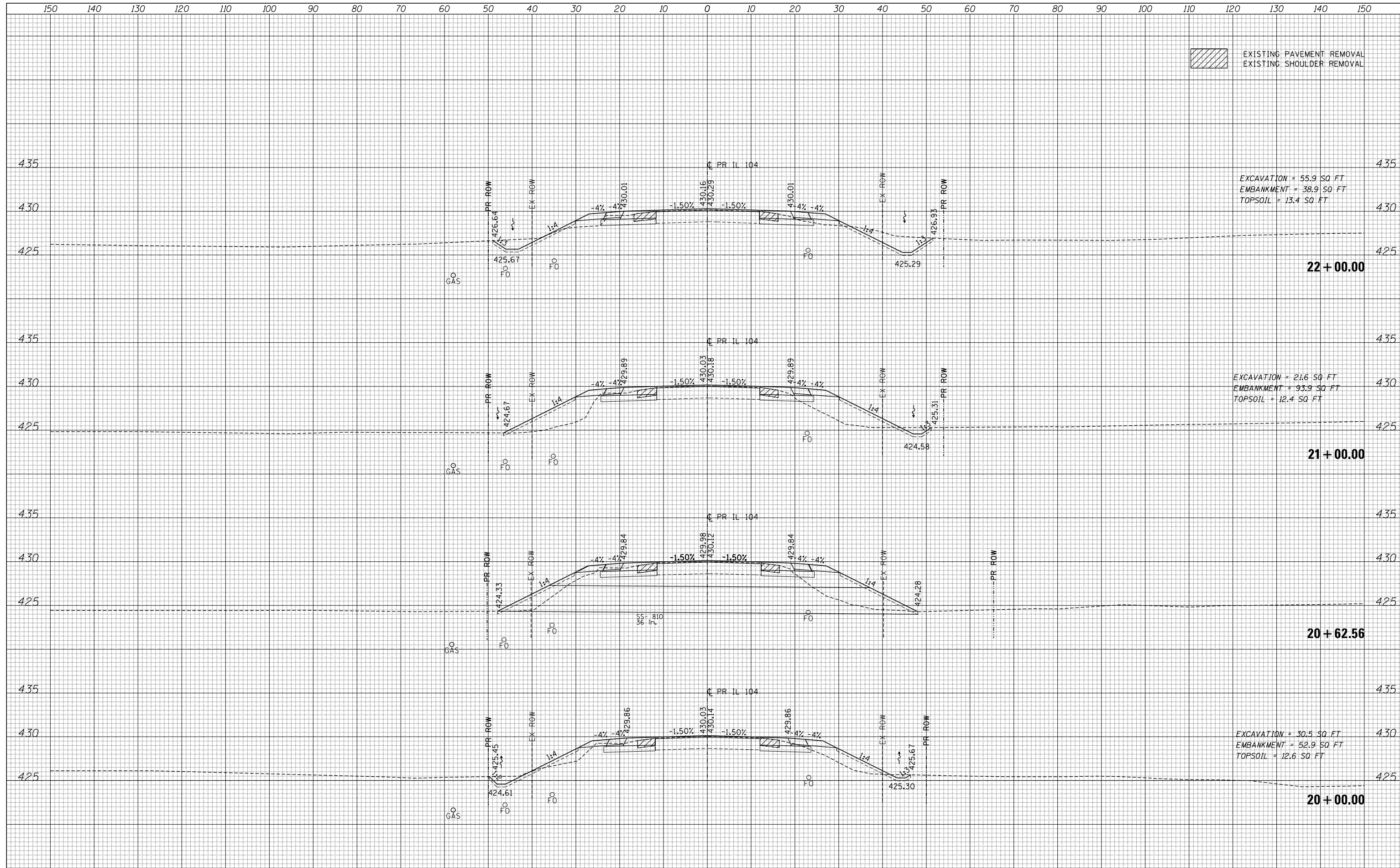
EXCAVATION = 65.8 SQ FT
 EMBANKMENT = 31.8 SQ FT
 TOPSOIL = 11.3 SQ FT

EXCAVATION = 39.6 SQ FT
 EMBANKMENT = 35.9 SQ FT
 TOPSOIL = 10.4 SQ FT

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	672	
MODELNAME		CHECKED - MD	REVISED -			• 123B-2, 124RS-8		CONTRACT NO.	72B58		
		DATE - 9/12/2014	REVISED -			ILLINOIS FED. AID PROJECT					
SCALE:						SHEET 1	OF 65 SHEETS	STA. 16+83.00	TO STA. 19+00.00		

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

EXCAVATION = 55.9 SQ FT
EMBANKMENT = 38.9 SQ FT
TOPSOIL = 13.4 SQ FT

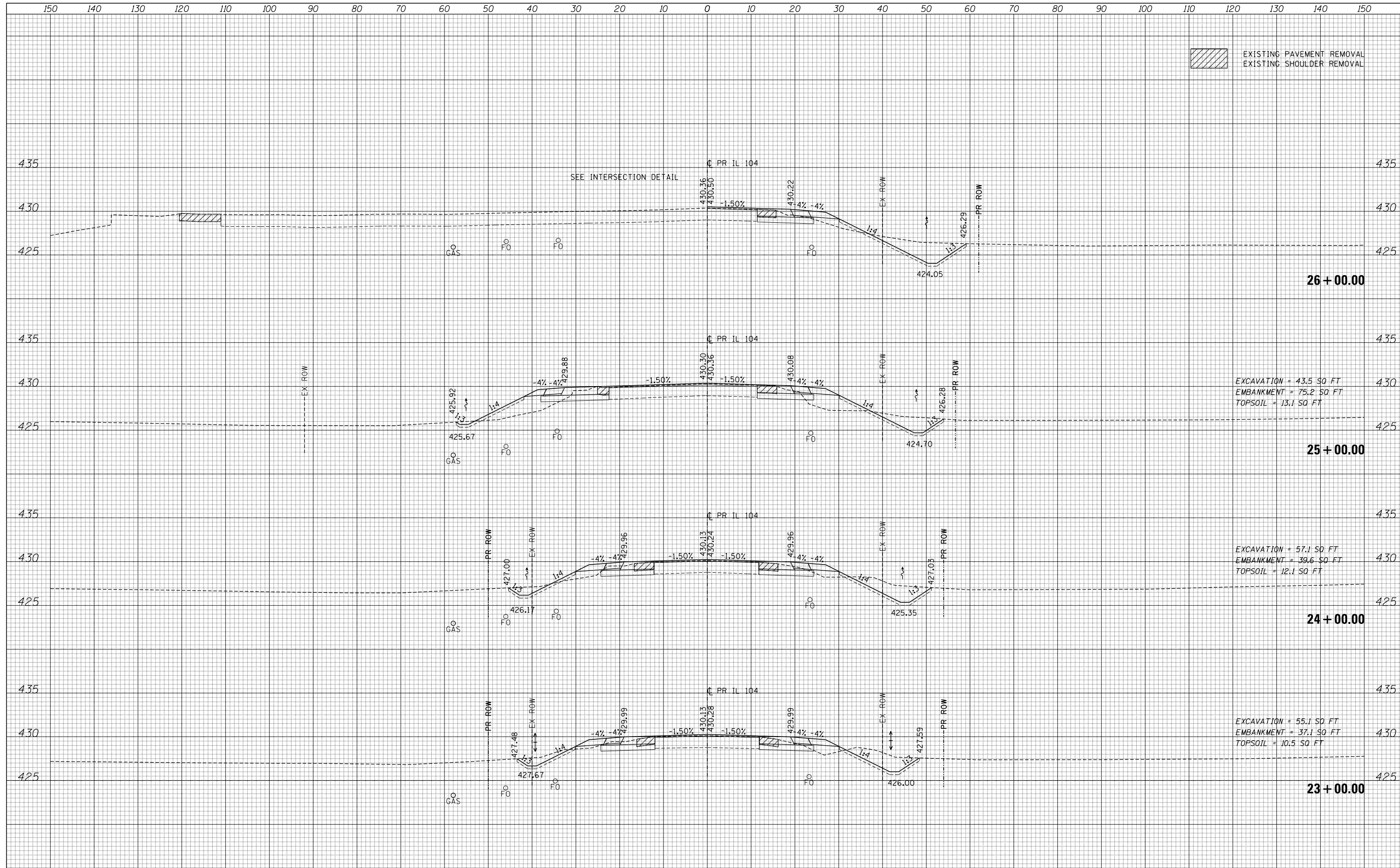
EXCAVATION = 21.6 SQ FT
EMBANKMENT = 93.9 SQ FT
TOPSOIL = 12.4 SQ FT

EXCAVATION = 30.5 SQ FT
EMBANKMENT = 52.9 SQ FT
TOPSOIL = 12.6 SQ FT

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL



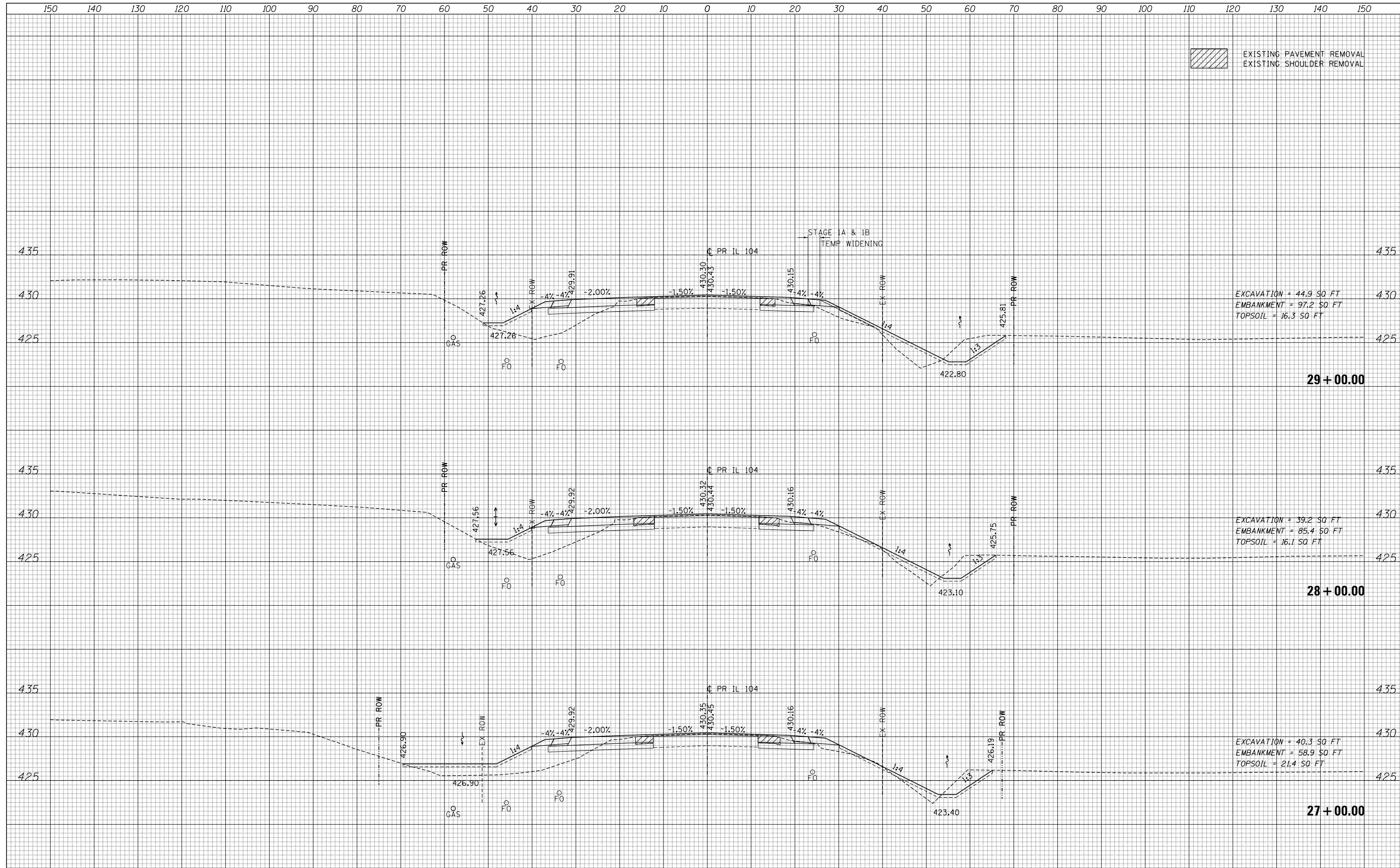
EXCAVATION = 43.5 SQ FT
EMBANKMENT = 75.2 SQ FT
TOPSOIL = 13.1 SQ FT

EXCAVATION = 57.1 SQ FT
EMBANKMENT = 39.6 SQ FT
TOPSOIL = 12.1 SQ FT

EXCAVATION = 55.1 SQ FT
EMBANKMENT = 37.1 SQ FT
TOPSOIL = 10.5 SQ FT

DATE	
BY	
FINAL SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

EXCAVATION = 44.9 SQ FT
EMBANKMENT = 97.2 SQ FT
TOPSOIL = 16.3 SQ FT

29 + 00.00

EXCAVATION = 39.2 SQ FT
EMBANKMENT = 85.4 SQ FT
TOPSOIL = 16.1 SQ FT

28 + 00.00

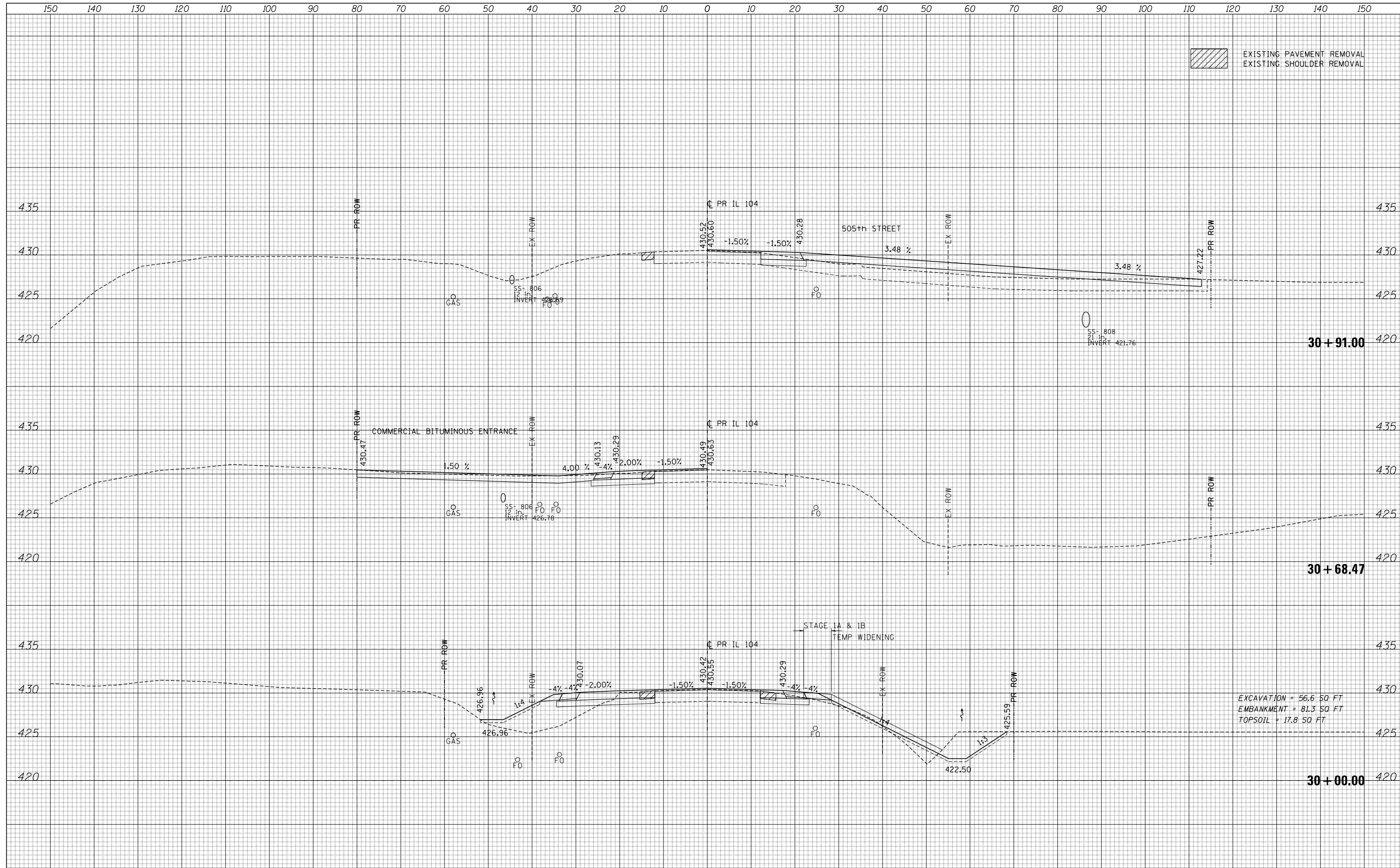
EXCAVATION = 40.3 SQ FT
EMBANKMENT = 58.9 SQ FT
TOPSOIL = 21.4 SQ FT

27 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	675
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
MODELNAME		DATE - 9/12/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:						SHEET 4	OF 65 SHEETS	STA. 27+00.00	TO STA. 29+00.00	

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	TEMPLATE
	AREAS CHECKED



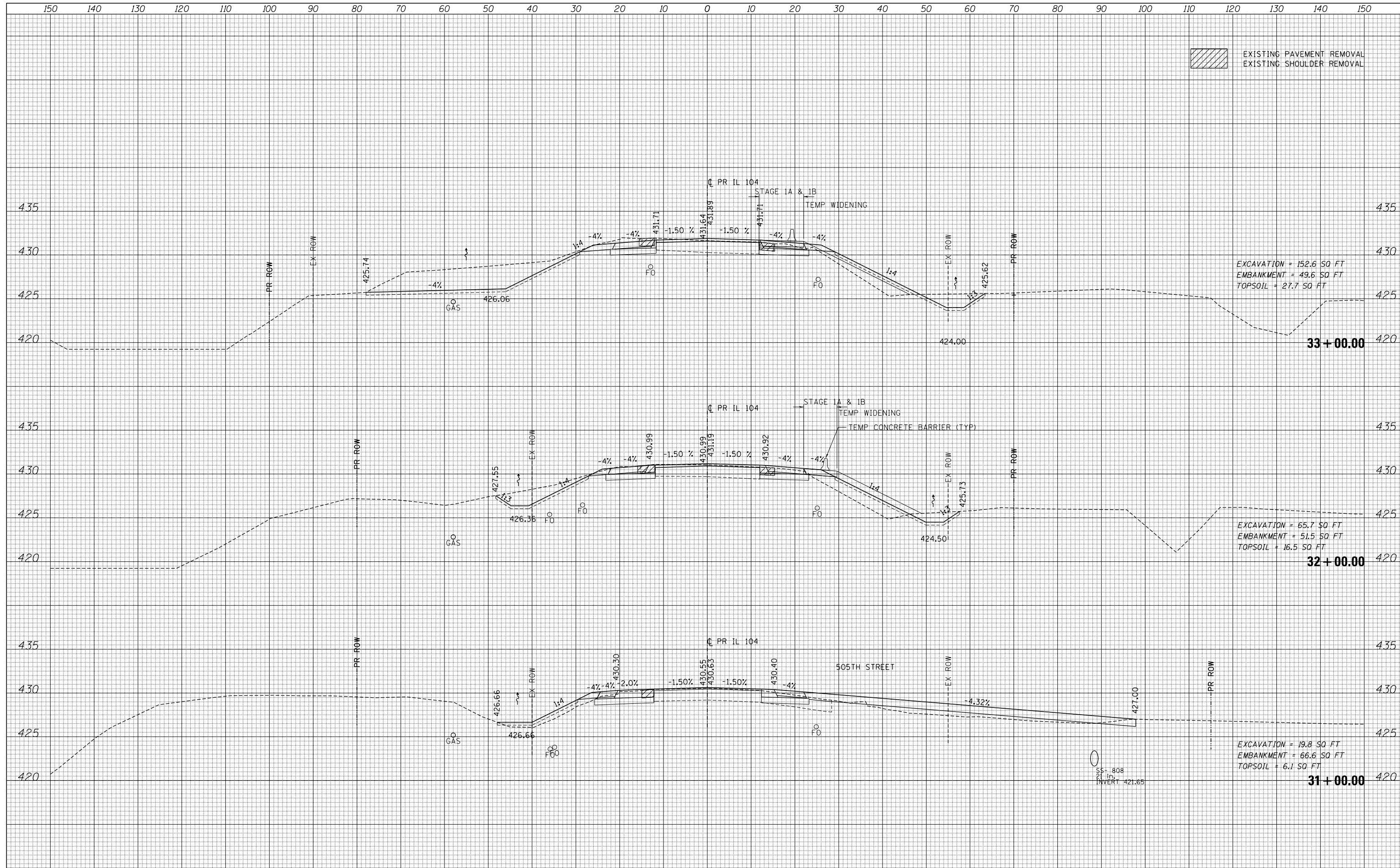
EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

EXCAVATION = 56.6 SQ. FT
EMBANKMENT = 81.3 SQ. FT
TOPSOIL = 17.8 SQ. FT

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	676
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
MODELNAME		DATE - 9/12/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET 5 OF 65 SHEETS	STA. 30+00.00 TO STA. 30+91.00				

DATE	
BY	
NO.	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
AREAS CHECKED	TEMPLATE
	AREAS CHECKED

DATE	
BY	
NO.	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
AREAS CHECKED	TEMPLATE
	AREAS CHECKED



EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

EXCAVATION = 152.6 SQ FT
EMBANKMENT = 49.6 SQ FT
TOPSOIL = 27.7 SQ FT

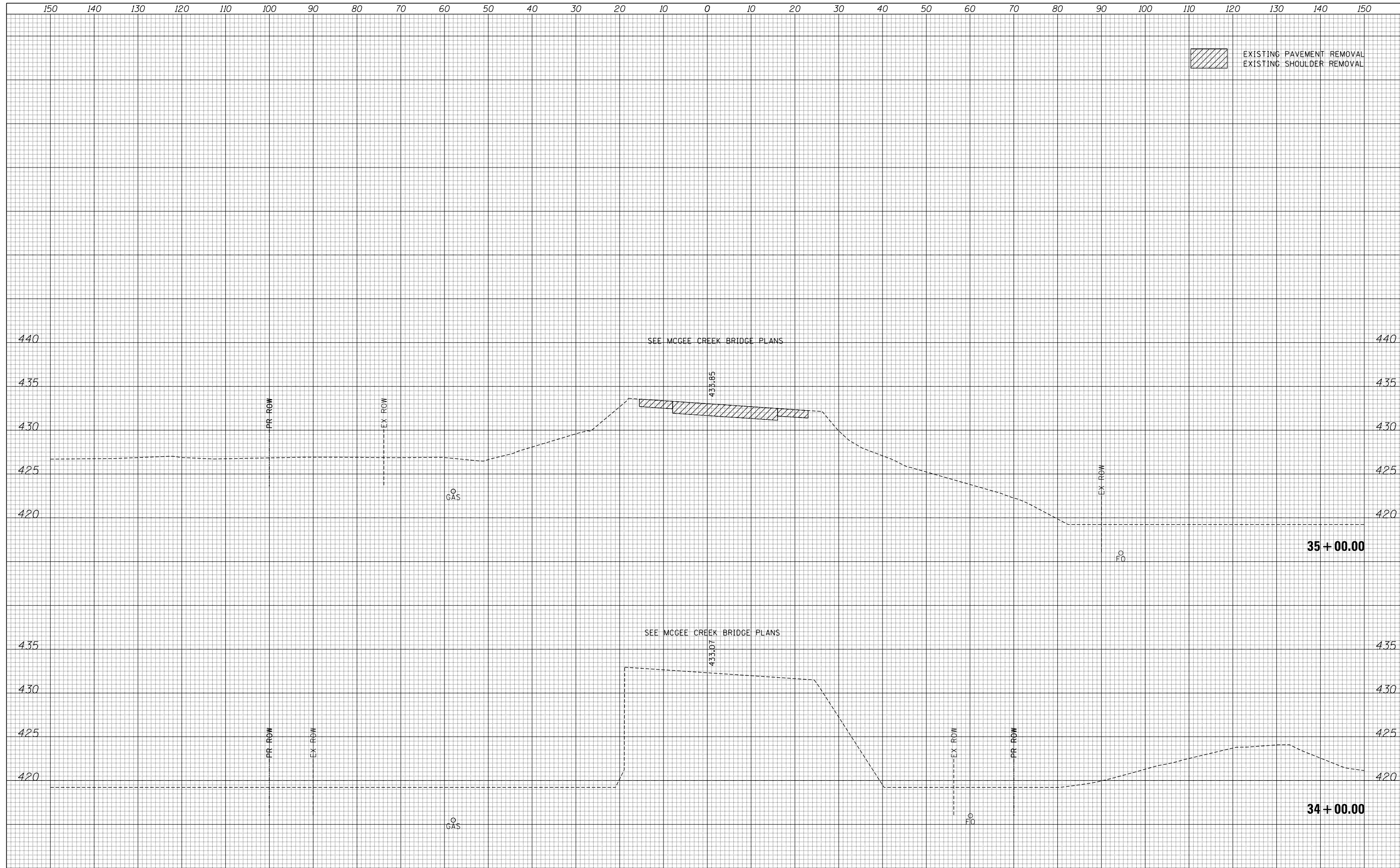
EXCAVATION = 65.7 SQ FT
EMBANKMENT = 51.5 SQ FT
TOPSOIL = 16.5 SQ FT

EXCAVATION = 19.8 SQ FT
EMBANKMENT = 66.6 SQ FT
TOPSOIL = 6.1 SQ FT

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	677
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 9/12/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:						SHEET 6	OF 65 SHEETS	STA. 31+00.00	TO STA. 33+00.00	

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

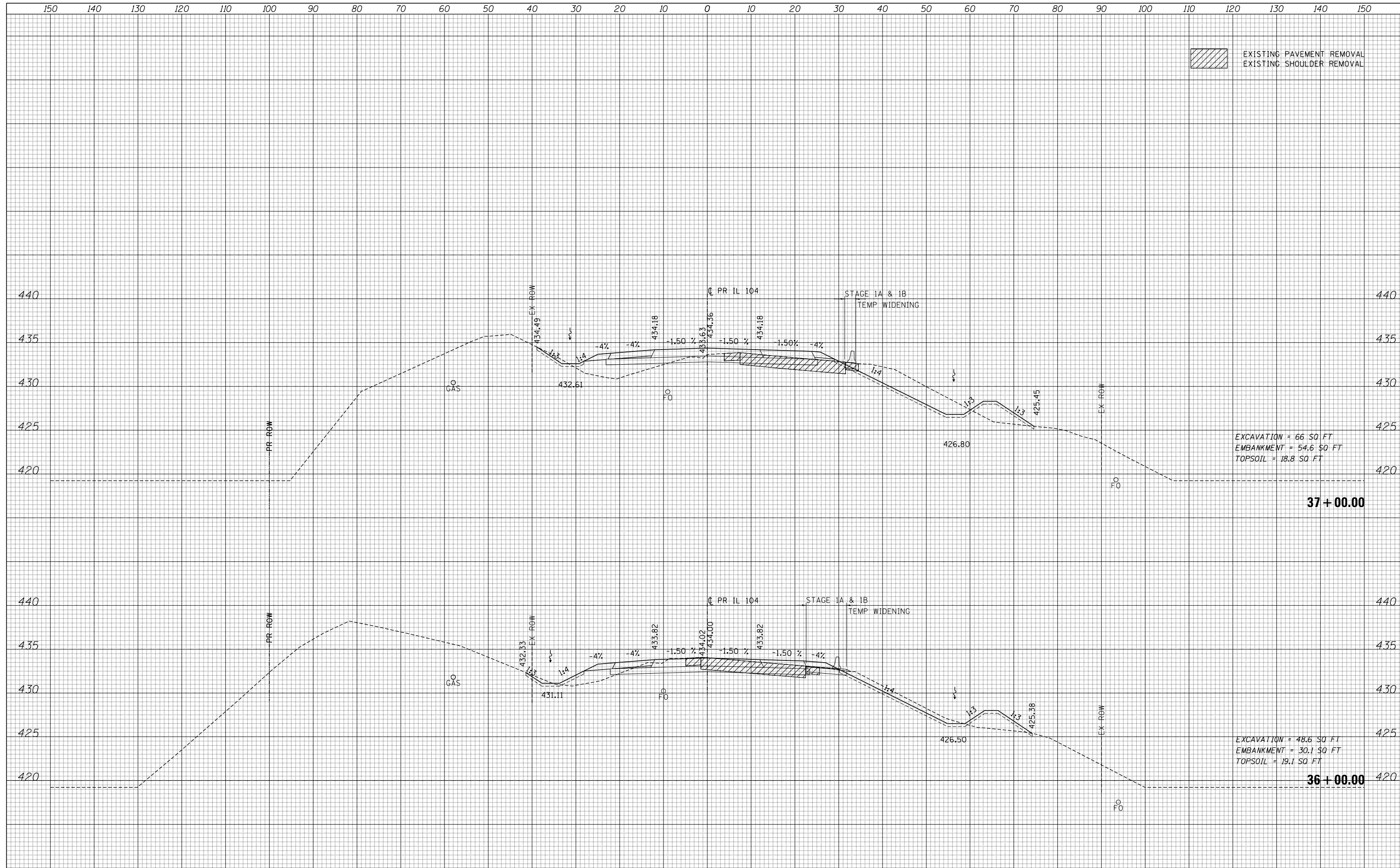


EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	678
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO. 72B58		
MODELNAME		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
		SCALE:		SHEET 7 OF 65 SHEETS		STA. 34+00.00 TO STA. 35+00.00				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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FILE NAME =	USER NAME = *USER*
FILEL	DESIGNED - JB
	DRAWN - MN
	CHECKED - MD
	DATE - 8/5/2014
MODELNAME	REVISIED -
	REVISIED -
	REVISIED -
	REVISIED -

DESIGNED - JB	REVISIED -
DRAWN - MN	REVISIED -
CHECKED - MD	REVISIED -
DATE - 8/5/2014	REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

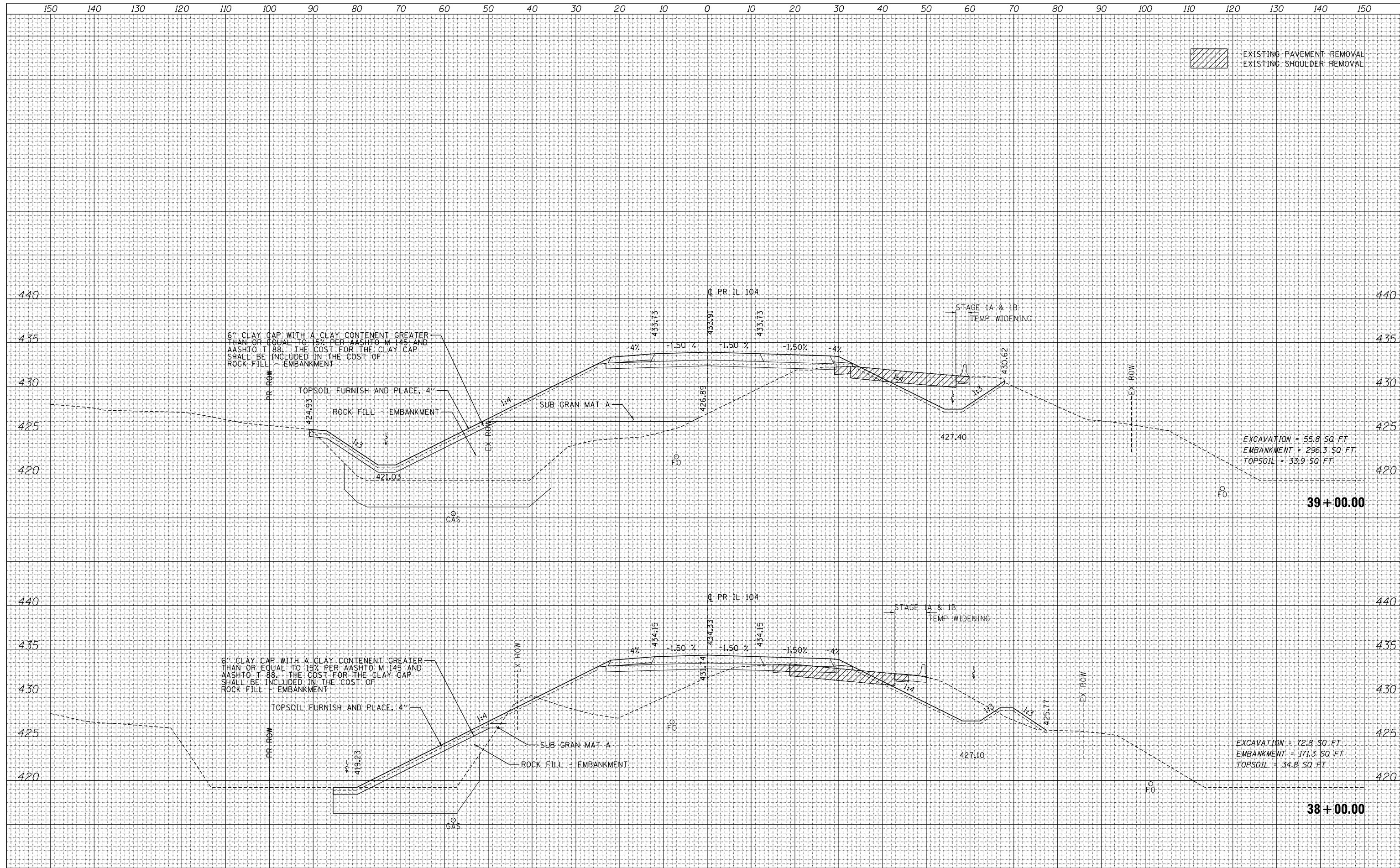
SCALE:	SHEET 8 OF 65 SHEETS	STA. 36+00.00 TO STA. 37+00.00
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, * * 123B-2, 124RS-8	MORGAN/PIKE	782	679
			CONTRACT NO.	72B58
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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DATE	
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SURVEYED	
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TEMPLATE	
NOTE BOOK	
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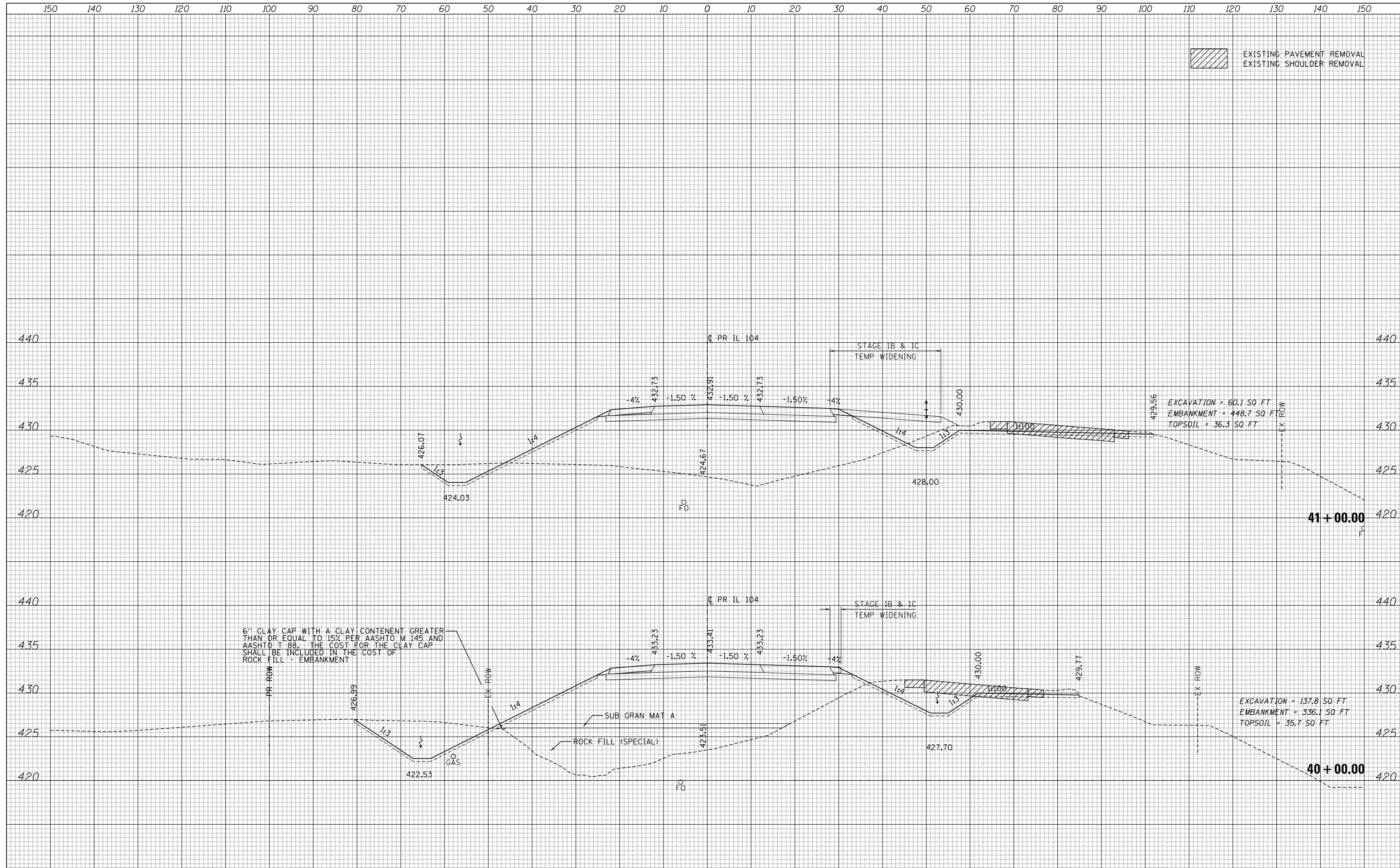
EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL



DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	TEMPLATE
	AREAS CHECKED

EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL



FILE NAME	USER NAME	DESIGNED	REVIS
FILEL	*USER*	- JB	-
		DRAWN	REVIS
		- MN	-
		CHECKED	REVIS
		- MD	-
		DATE	REVIS
		- 8/5/2014	-

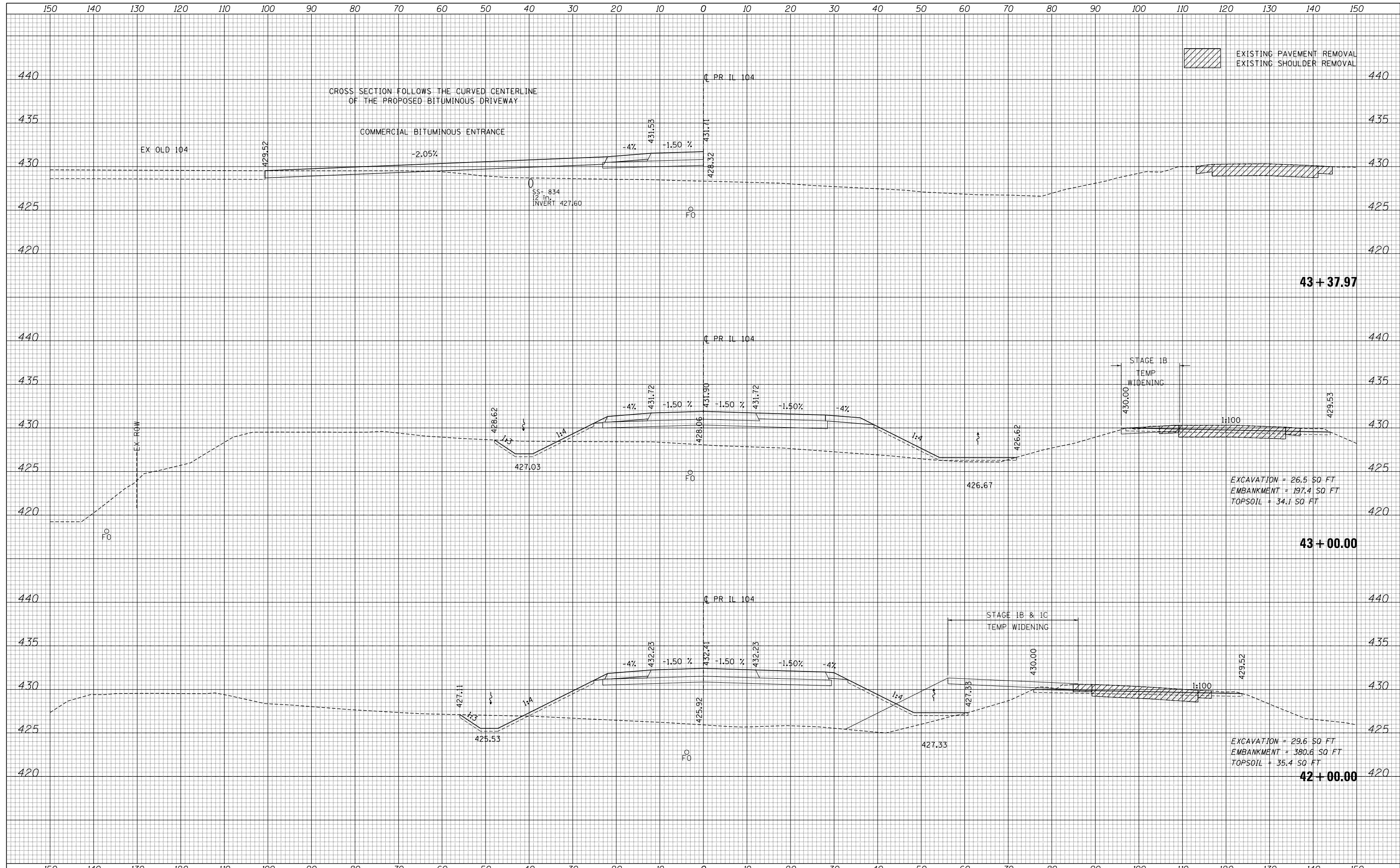
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

IL 104
 SCALE: SHEET 10 OF 65 SHEETS STA. 40+00.00 TO STA. 41+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, 123B-2, 124RS-8	MORGAN/PIKE	782	681
			CONTRACT NO.	72B58
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

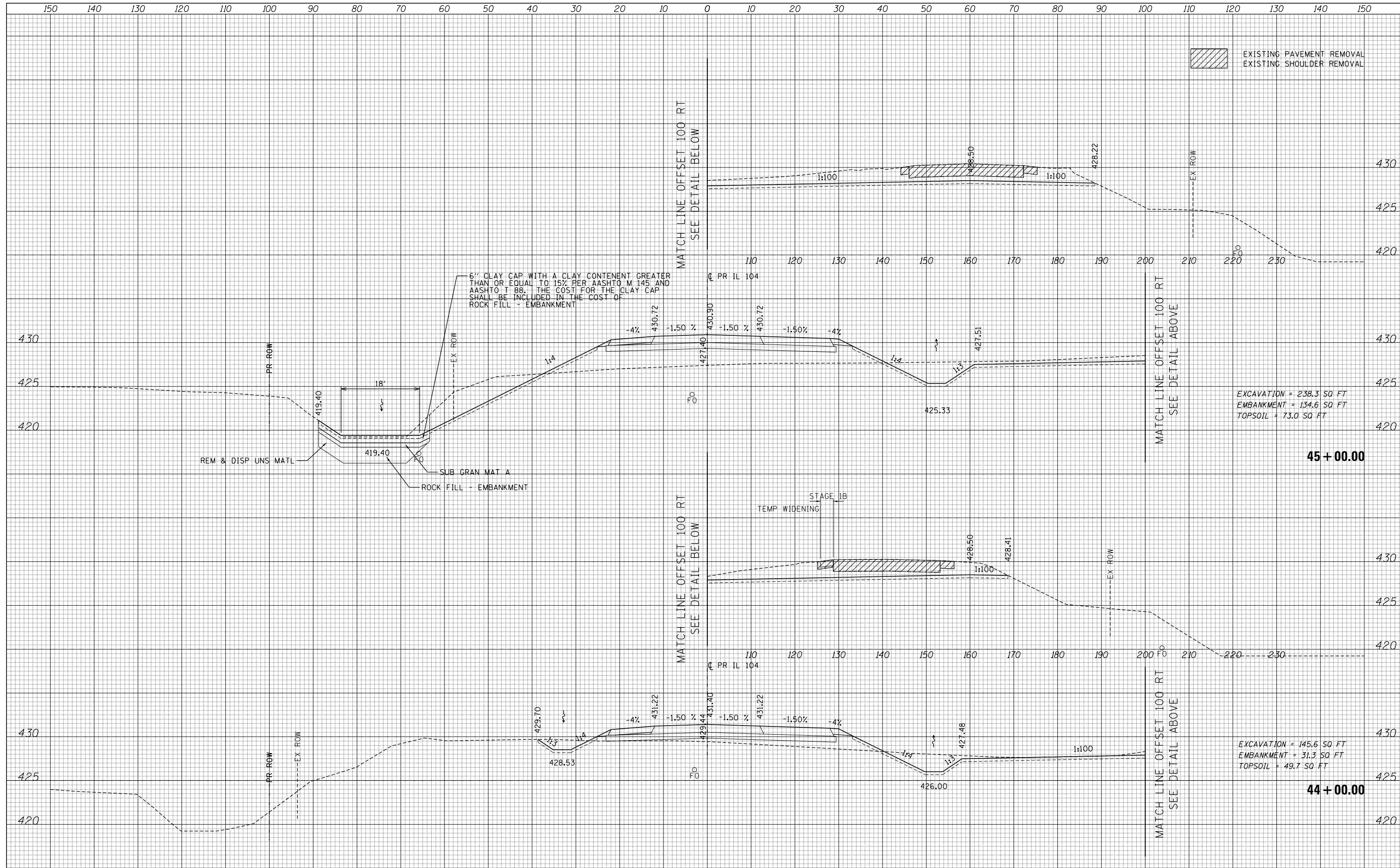
DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	682
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET 11 OF 65 SHEETS	STA. 42+00.00 TO STA. 43+37.97				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

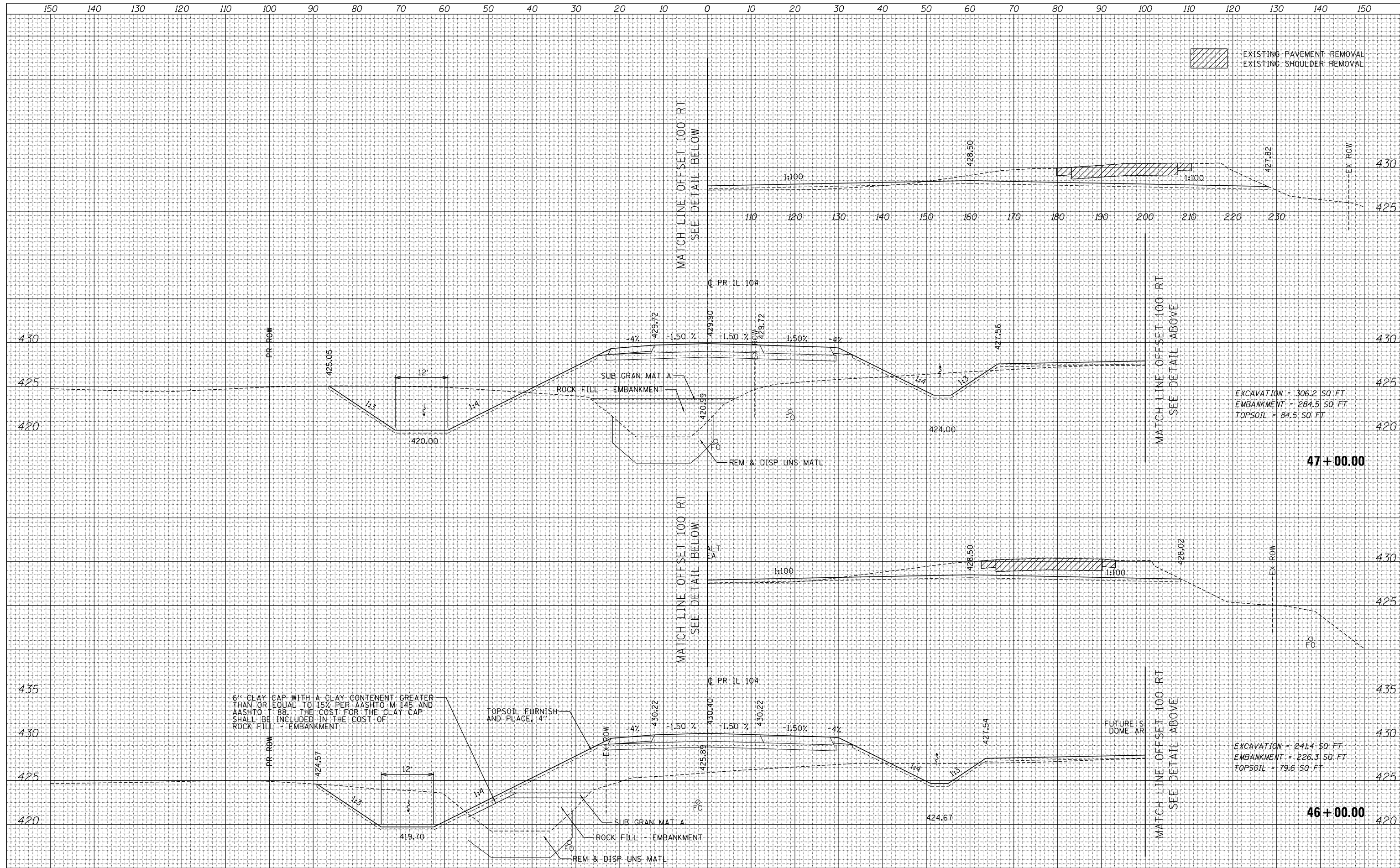
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	683
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:						SHEET 12 OF 65 SHEETS		STA. 44+00.00 TO STA. 45+00.00		

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



EXISTING PAVEMENT REMOVAL
 EXISTING SHOULDER REMOVAL

EXCAVATION = 306.2 SQ. FT
 EMBANKMENT = 284.5 SQ. FT
 TOPSOIL = 84.5 SQ. FT

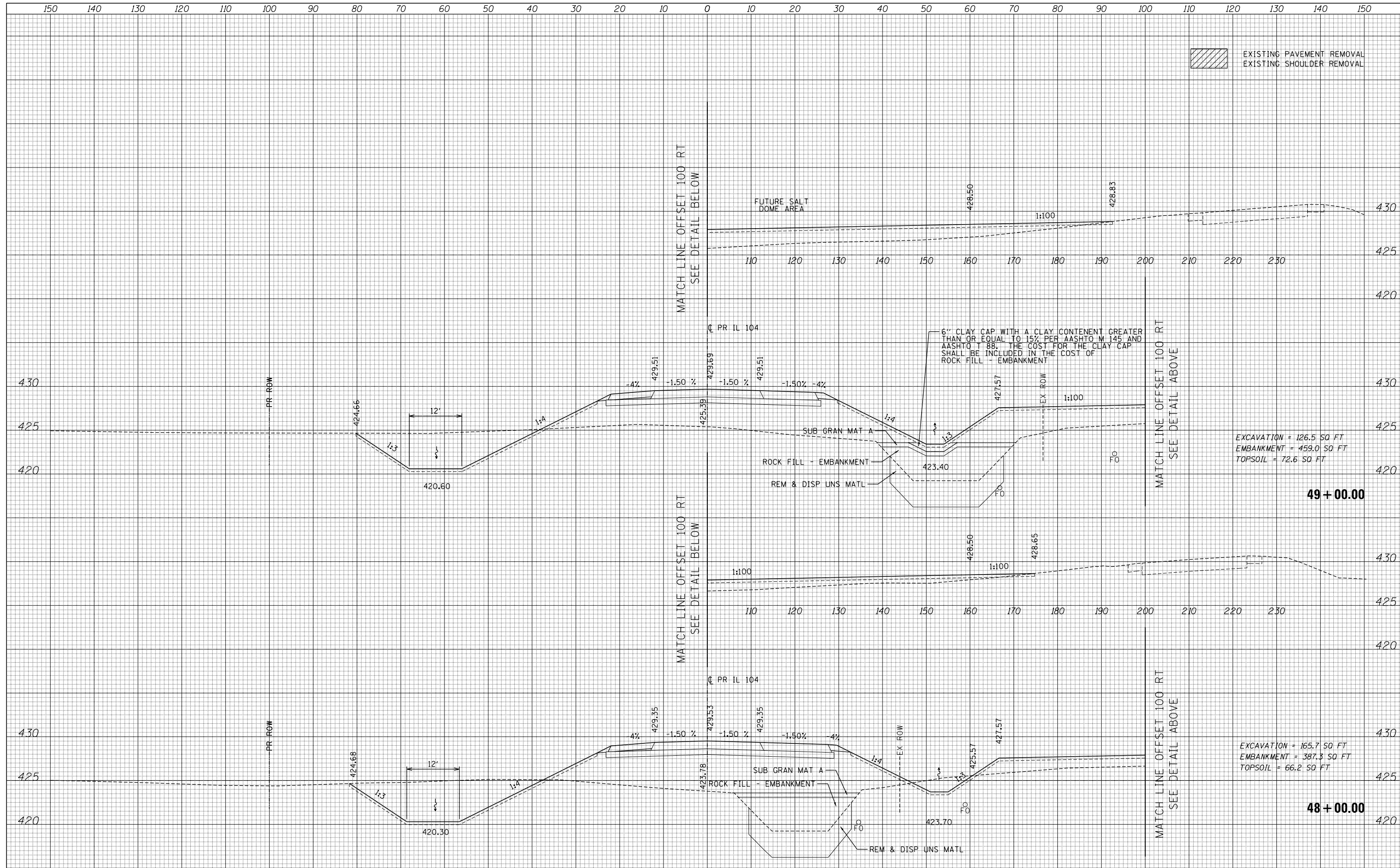
EXCAVATION = 241.4 SQ. FT
 EMBANKMENT = 226.3 SQ. FT
 TOPSOIL = 79.6 SQ. FT

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	684
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8				CONTRACT NO. 72B58
MODELNAME		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				

SCALE: SHEET 13 OF 65 SHEETS STA. 46+00.00 TO STA. 47+00.00

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

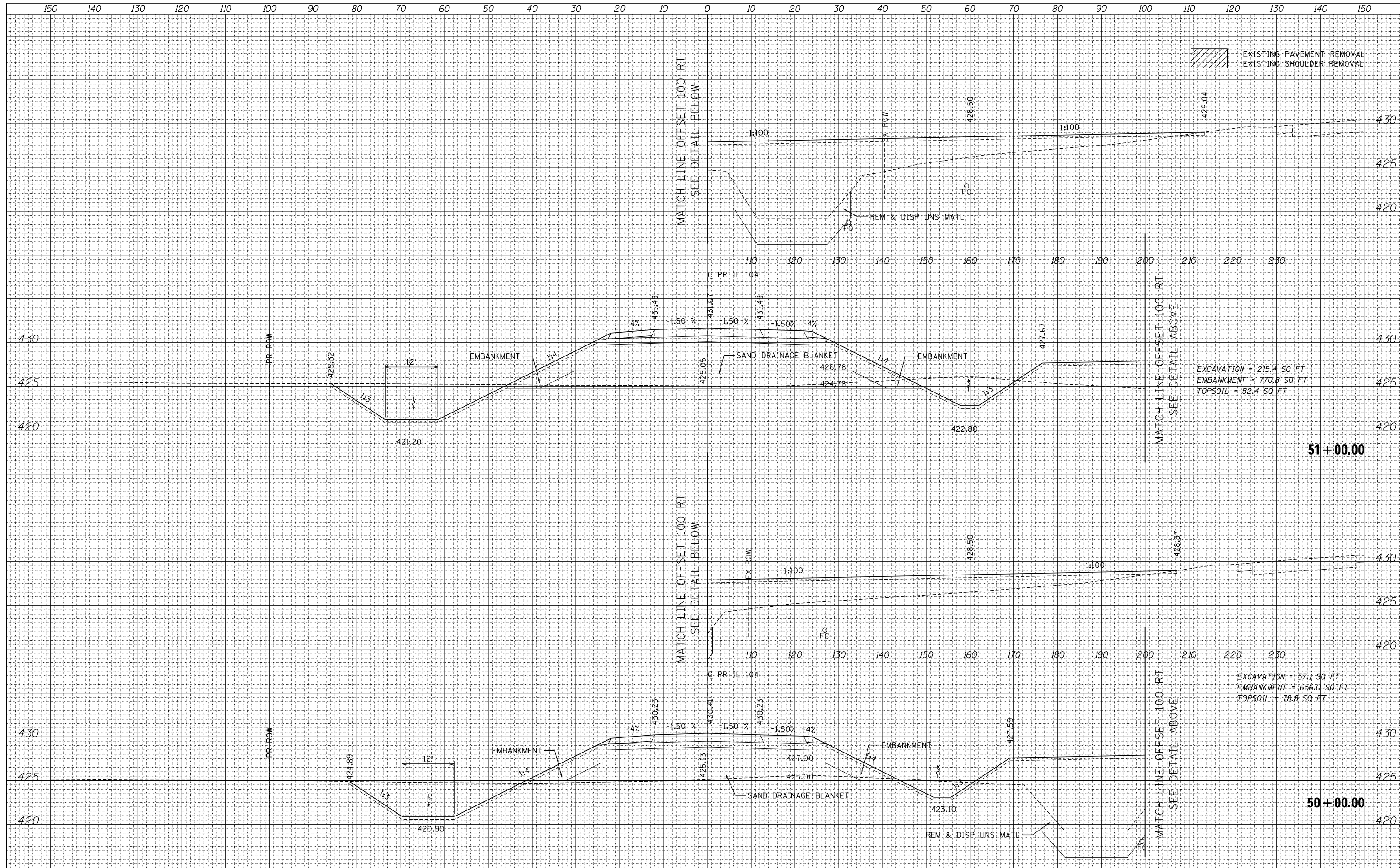
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	685
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
MODELNAME		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:						SHEET 14 OF 65 SHEETS		STA. 48+00.00 TO STA. 49+00.00		

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -
FILEL		DRAWN - MN	REVISED -
		CHECKED - MD	REVISED -
MODELNAME		DATE - 8/5/2014	REVISED -

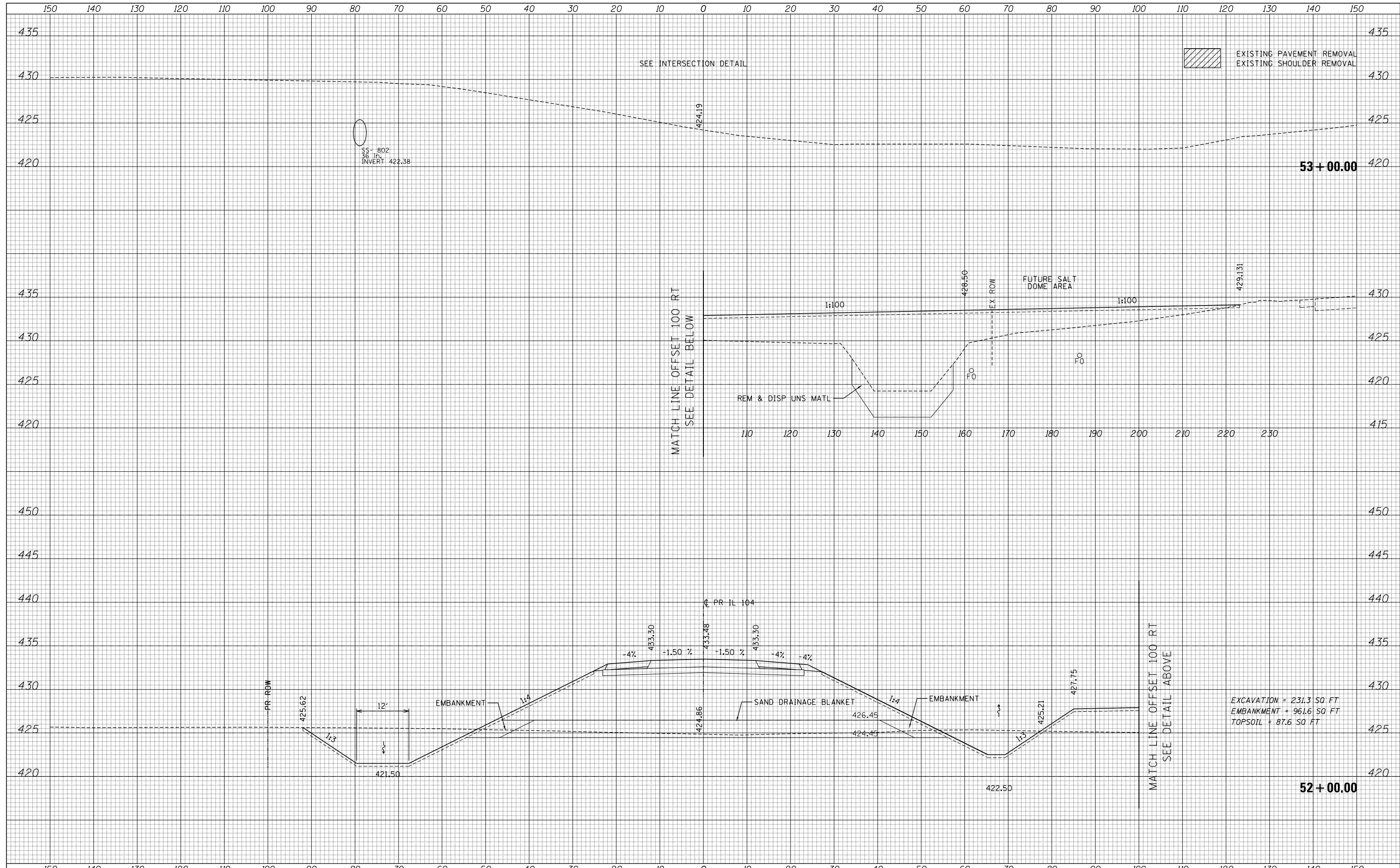
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE:		SHEET 15 OF 65 SHEETS		STA. 50+00.00 TO STA. 51+00.00	
		IL 104			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	686
		* 123B-2, 124RS-8	CONTRACT NO. 72B58	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

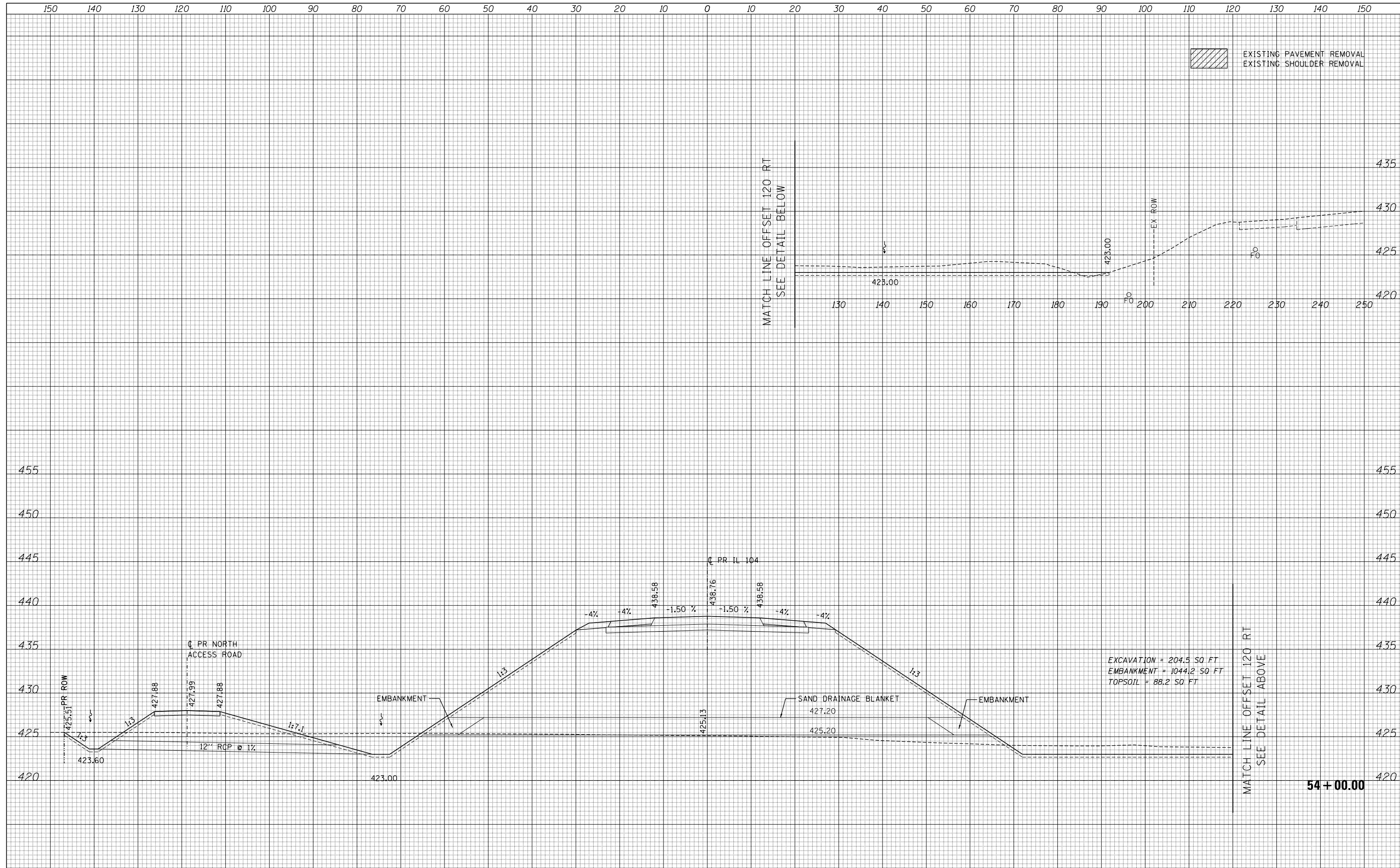
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	687
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
MODELNAME		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:		SHEET 16 OF 65 SHEETS		STA. 52+00.00 TO STA. 53+00.00						

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

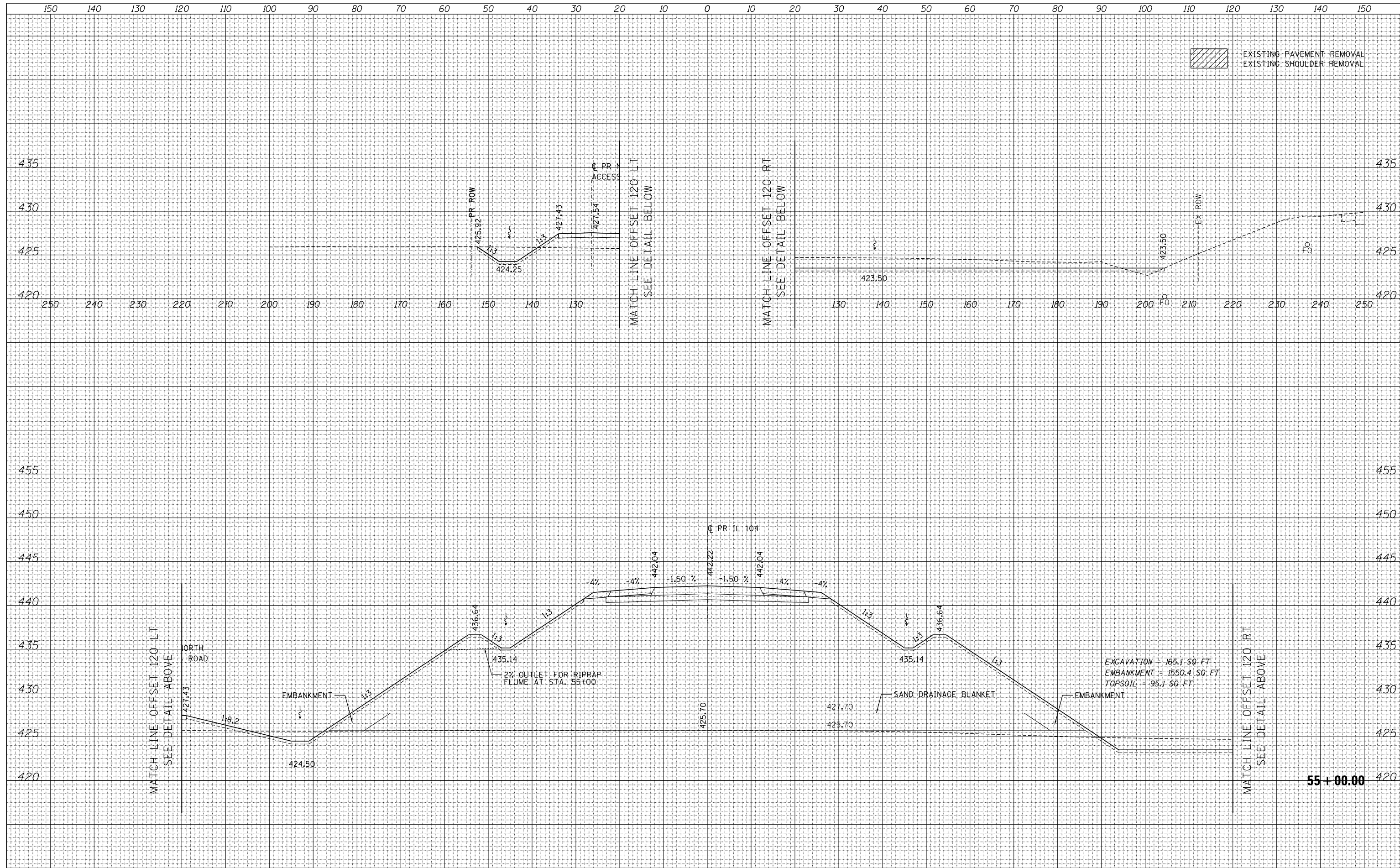
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	688
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:		SHEET 17 OF 65 SHEETS		STA. 54+00.00 TO STA. 54+00.00		

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

FILE NAME	
FILEL	
MODELNAME	

USER NAME	*USER*
DESIGNED	- JB
DRAWN	- MN
CHECKED	- MD
DATE	- 8/5/2014

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

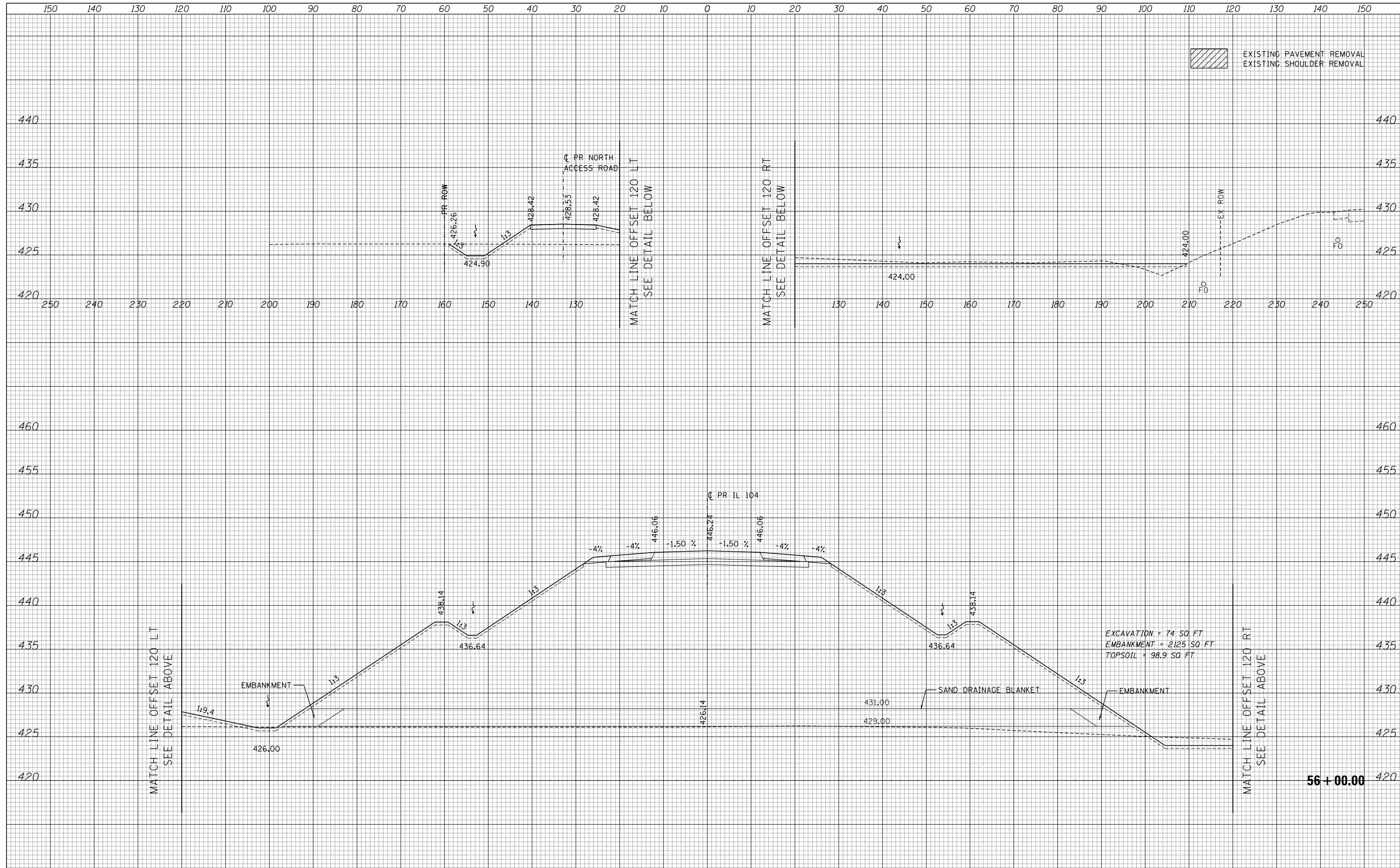
SCALE: SHEET 18 OF 65 SHEETS STA. 55+00.00 TO STA. 55+00.00

IL 104

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, * * 123B-2, 124RS-8	MORGAN/PIKE	782	689
			CONTRACT NO.	72B58
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -
FILEL		DRAWN - MN	REVISED -
		CHECKED - MD	REVISED -
MODELNAME		DATE - 8/5/2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

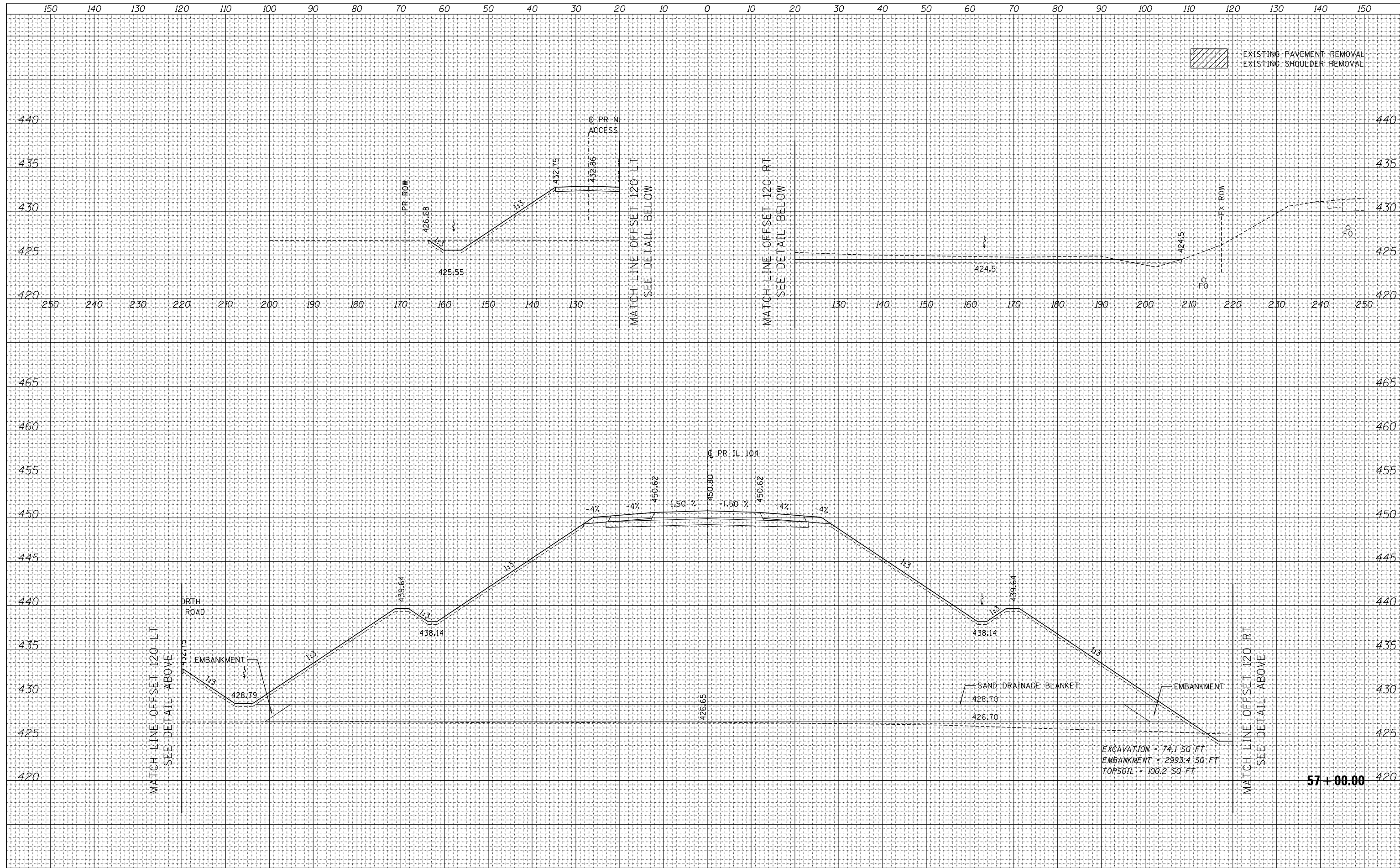
SCALE:		SHEET 19	OF 65	SHEETS	STA. 56+00.00	TO STA. 56+00.00
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, * * 123B-2, 124RS-8	MORGAN/PIKE	782	690
			CONTRACT NO.	72B58
ILLINOIS FED. AID PROJECT				

56 + 00.00

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



EXCAVATION = 74.1 SQ FT
 EMBANKMENT = 2993.4 SQ FT
 TOPSOIL = 100.2 SQ FT

57+00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -
FILEL		DRAWN - MN	REVISED -
		CHECKED - MD	REVISED -
MODELNAME		DATE - 8/5/2014	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

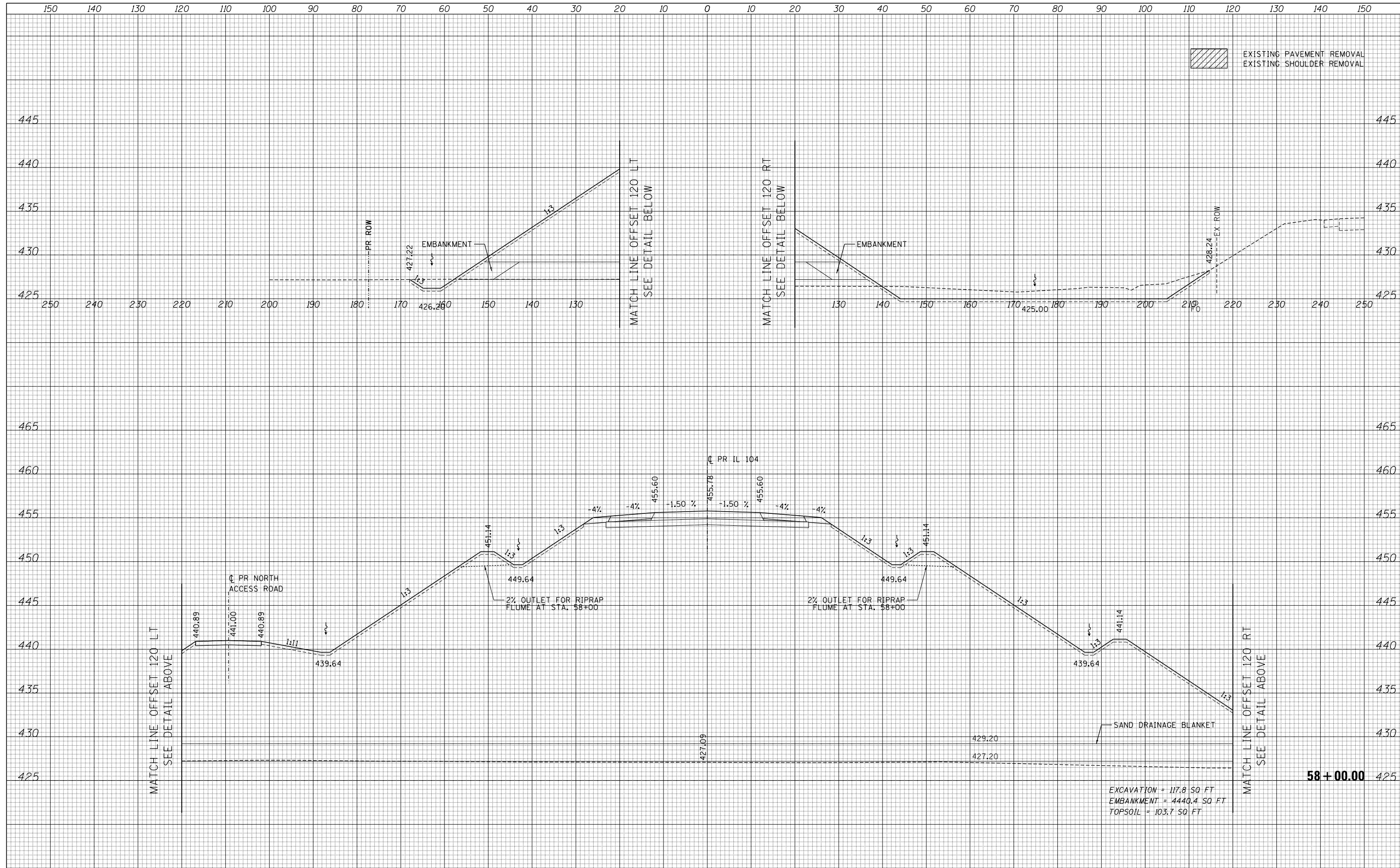
SCALE:		SHEET 20	OF 65	SHEETS	STA. 57+00.00	TO STA. 57+00.00
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IL 104

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	691
* 123B-2, 124RS-8		CONTRACT NO.	72B58	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	
NO.	

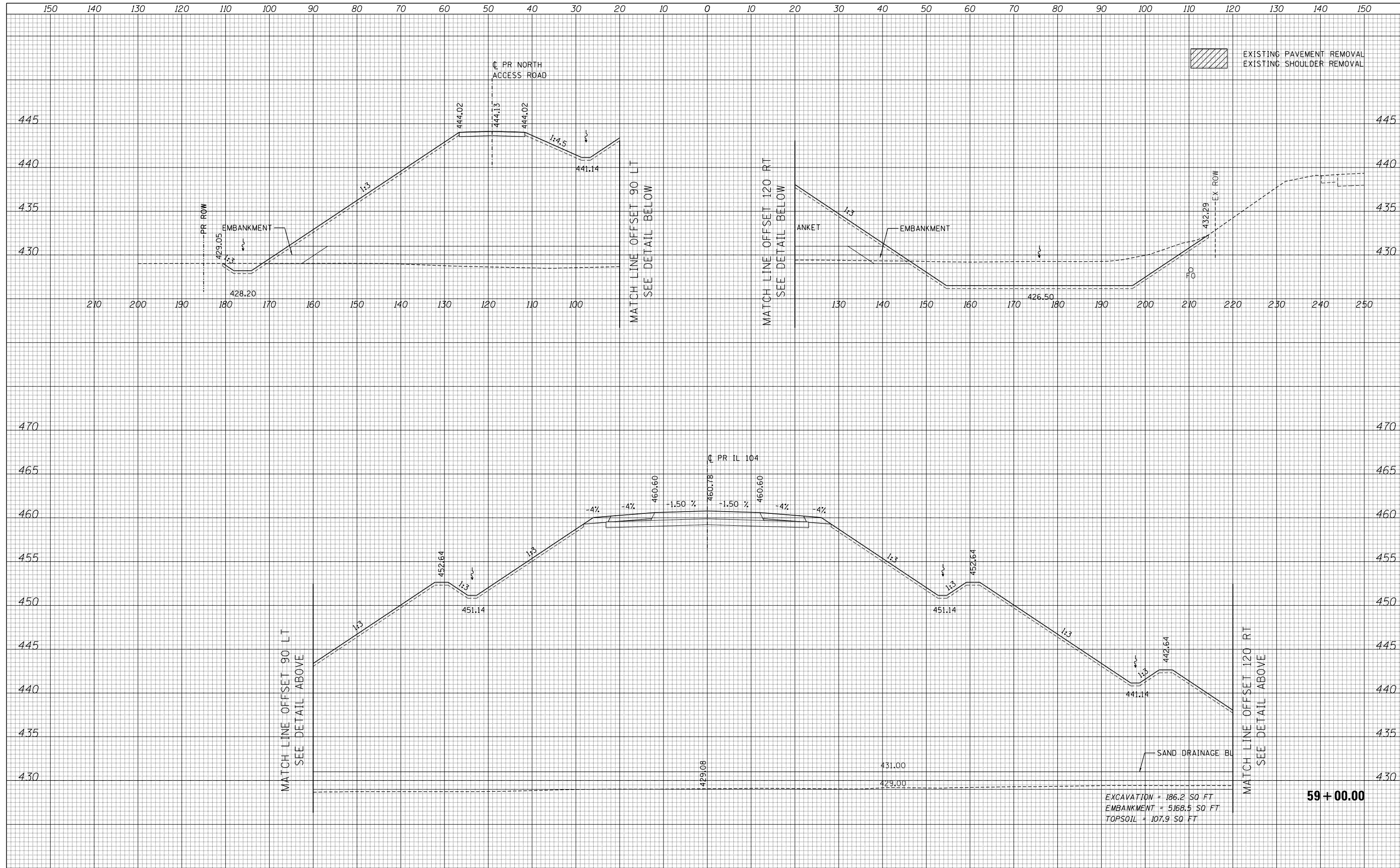


EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	692
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
MODELNAME		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:						SHEET 21 OF 65 SHEETS		STA. 58+00.00 TO STA. 58+00.00		

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



EXCAVATION = 186.2 SQ FT
 EMBANKMENT = 5168.5 SQ FT
 TOPSOIL = 107.9 SQ FT

59 + 00.00

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -
FILEL		DRAWN - MN	REVISED -
		CHECKED - MD	REVISED -
MODELNAME	PLOT DATE = *DATE*	DATE - 8/5/2014	REVISED -

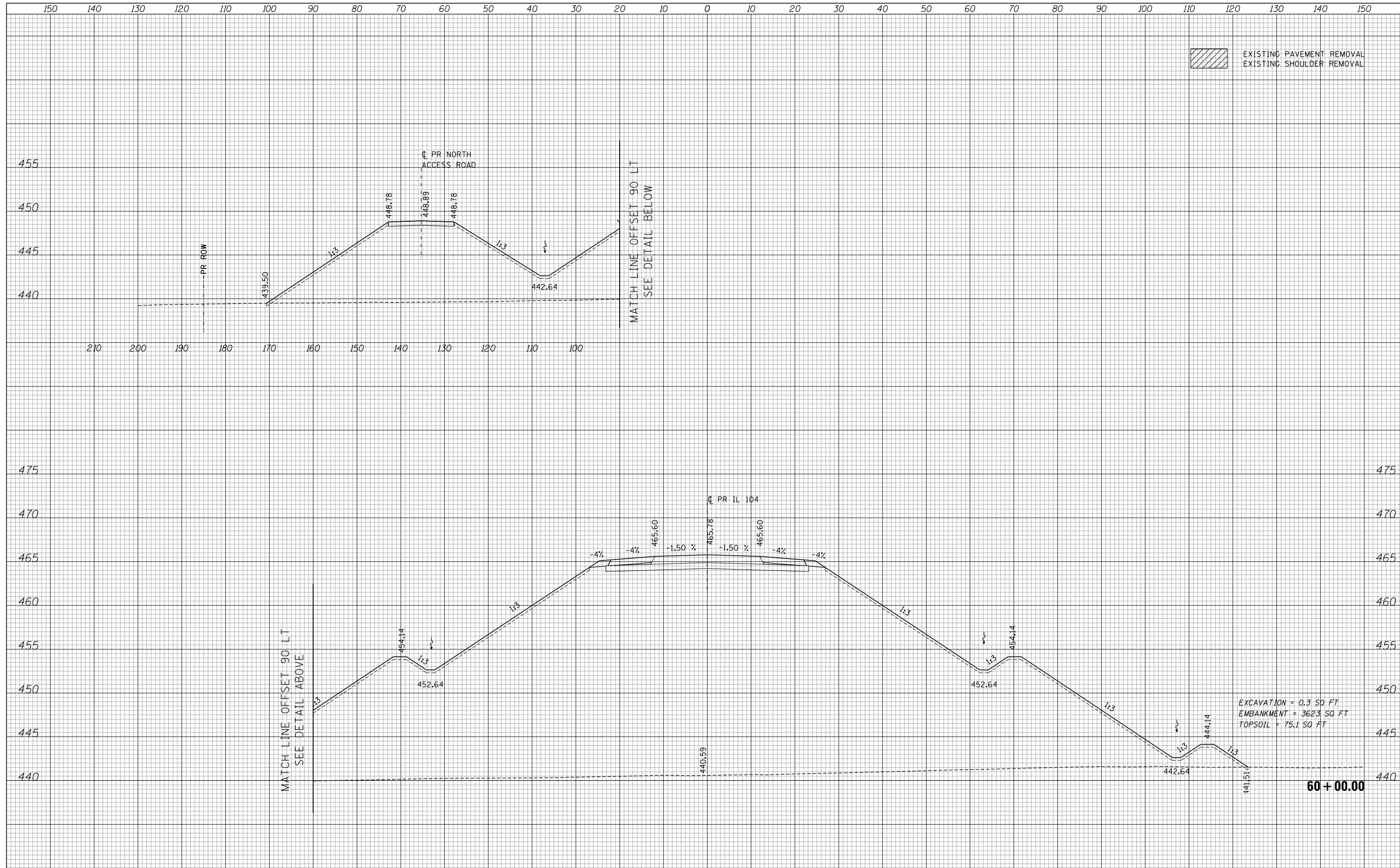
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET 22 OF 65 SHEETS	STA. 59+00.00 TO STA. 59+00.00
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	693
	* 123B-2, 124RS-8	CONTRACT NO.	72B58	
ILLINOIS FED. AID PROJECT				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
NO.	



FILE NAME	
FILEL	
MODELNAME	

USER NAME	*USER*
DESIGNED	- JB
DRAWN	- MN
CHECKED	- MD
DATE	- 8/5/2014

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE:	SHEET 23 OF 65 SHEETS	STA. 60+00.00 TO STA. 60+00.00
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IL 104

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, * * 123B-2, 124RS-8	MORGAN/PIKE	782	694
			CONTRACT NO.	72B58
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED PLOTTED AREAS CHECKED	
NOTE BOOK NO.	
TEMPLATE AREAS CHECKED	

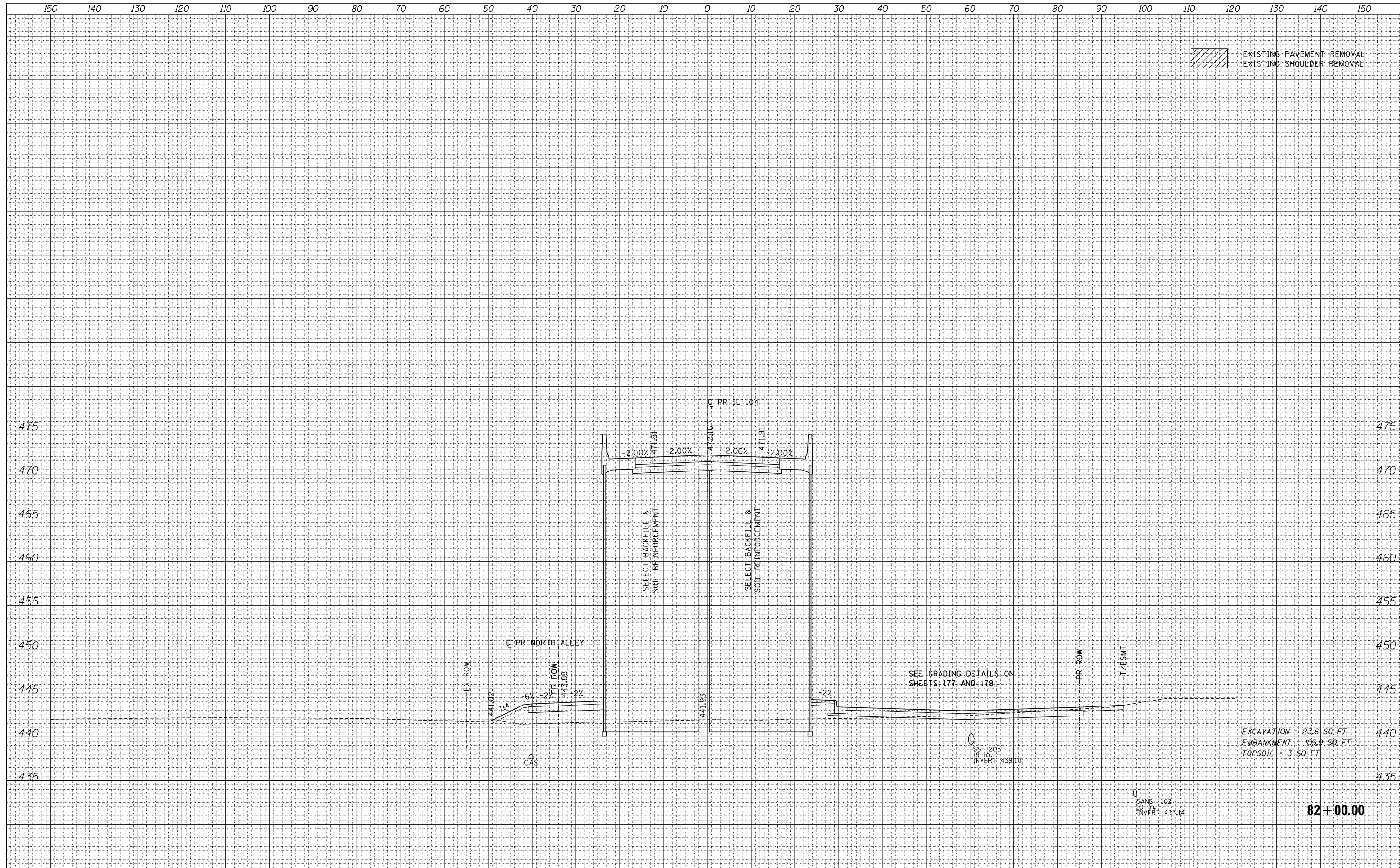
DATE	
BY	
ORIGINAL SURVEY NO.	
SURVEYED PLOTTED AREAS CHECKED	
NOTE BOOK NO.	
TEMPLATE AREAS CHECKED	



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	695
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET 24 OF 65 SHEETS	STA. 81+50.00 TO STA. 81+50.00				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



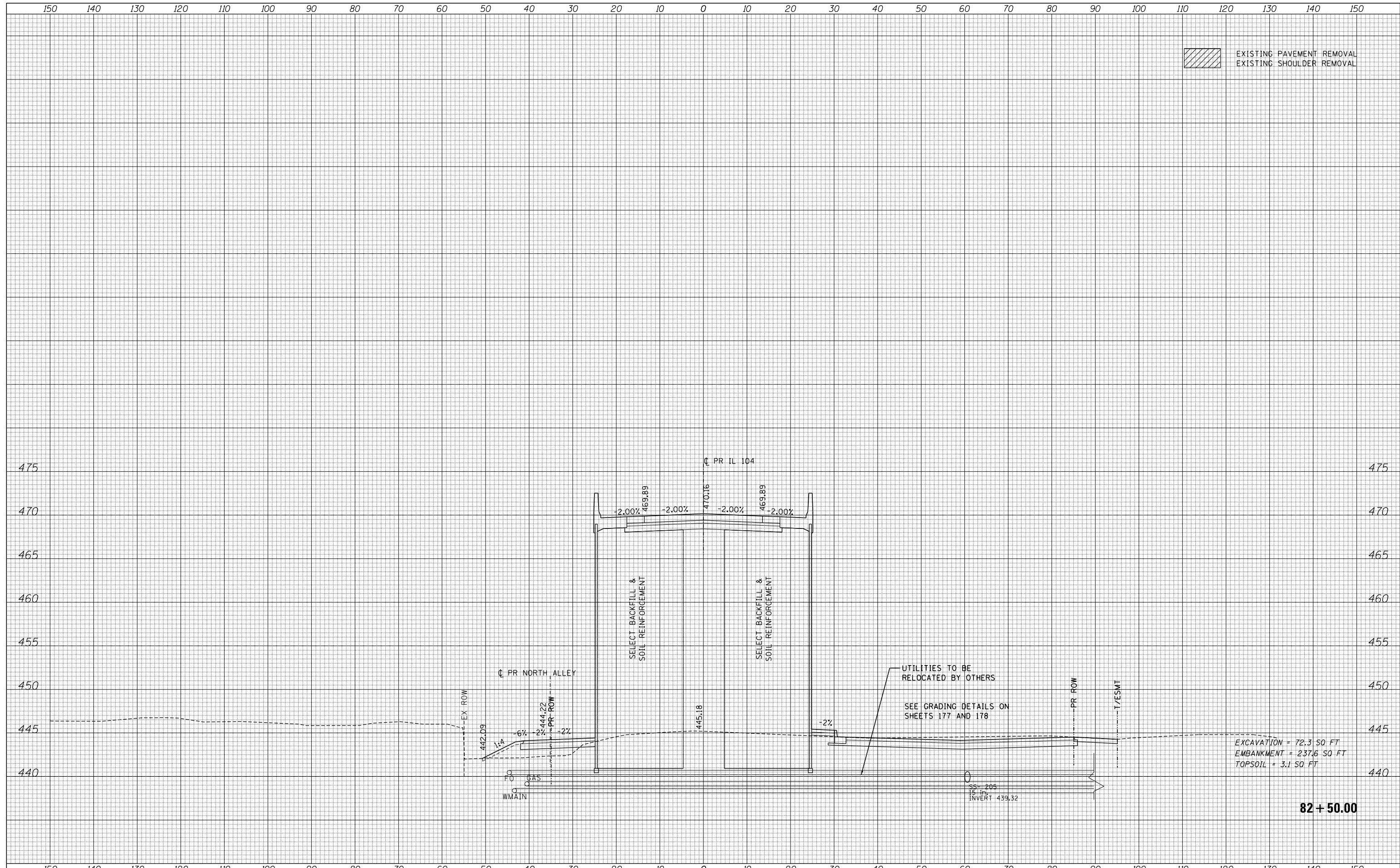
EXCAVATION = 23.6 SQ. FT.
 EMBANKMENT = 109.9 SQ. FT.
 TOPSOIL = 3 SQ. FT.

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	696
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:		SHEET 25 OF 65 SHEETS		STA. 82+00.00 TO STA. 82+00.00		

DATE	
BY	
FINAL SURVEY NO.	
SURVEYED PLOTTED TEMPLATE AREAS CHECKED	
NOTE BOOK AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY NO.	
PLOTTED TEMPLATE AREAS CHECKED	
NOTE BOOK AREAS CHECKED	

EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

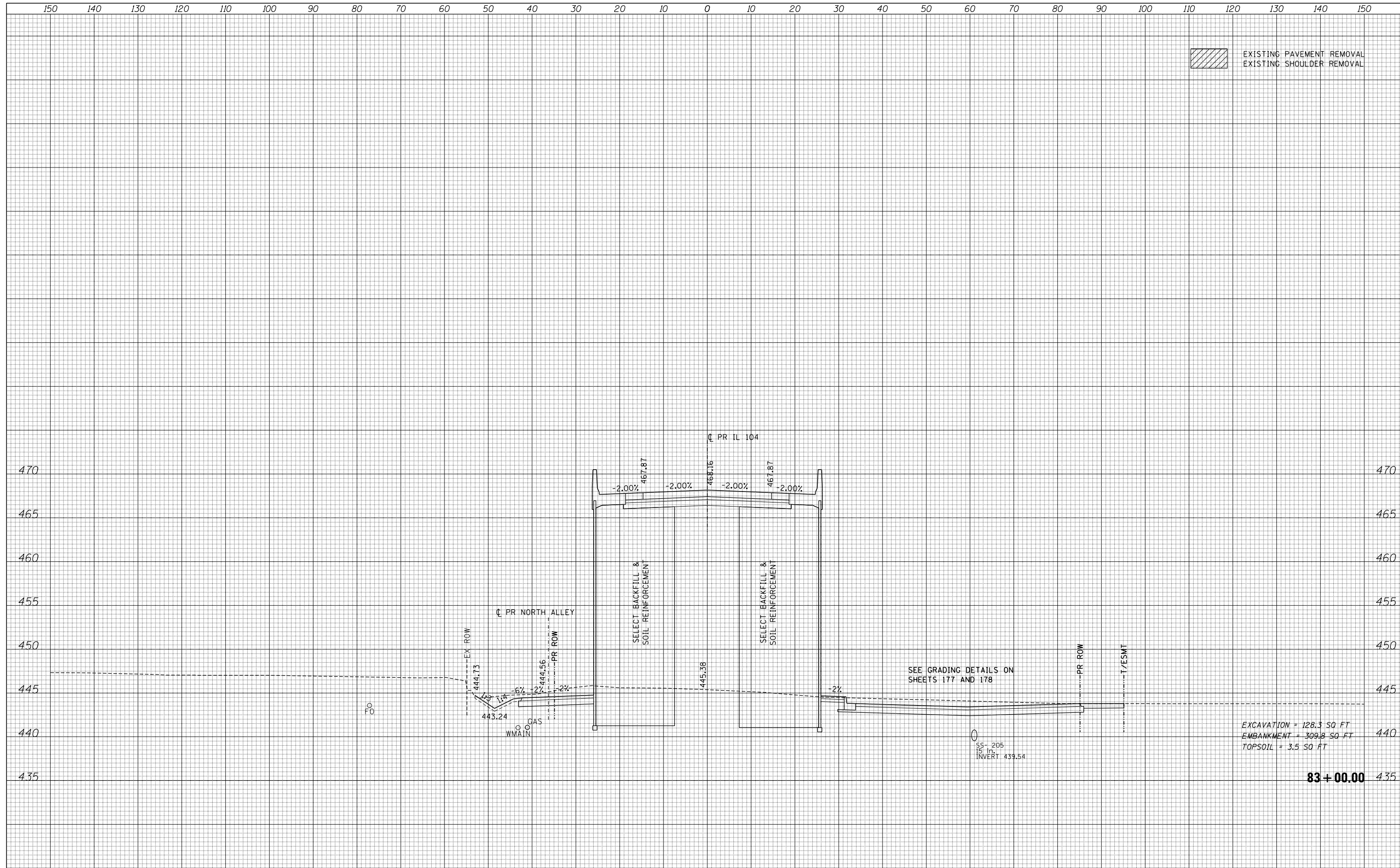


FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	697
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE:		SHEET 26 OF 65 SHEETS		STA. 82+50.00 TO STA. 82+50.00						

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

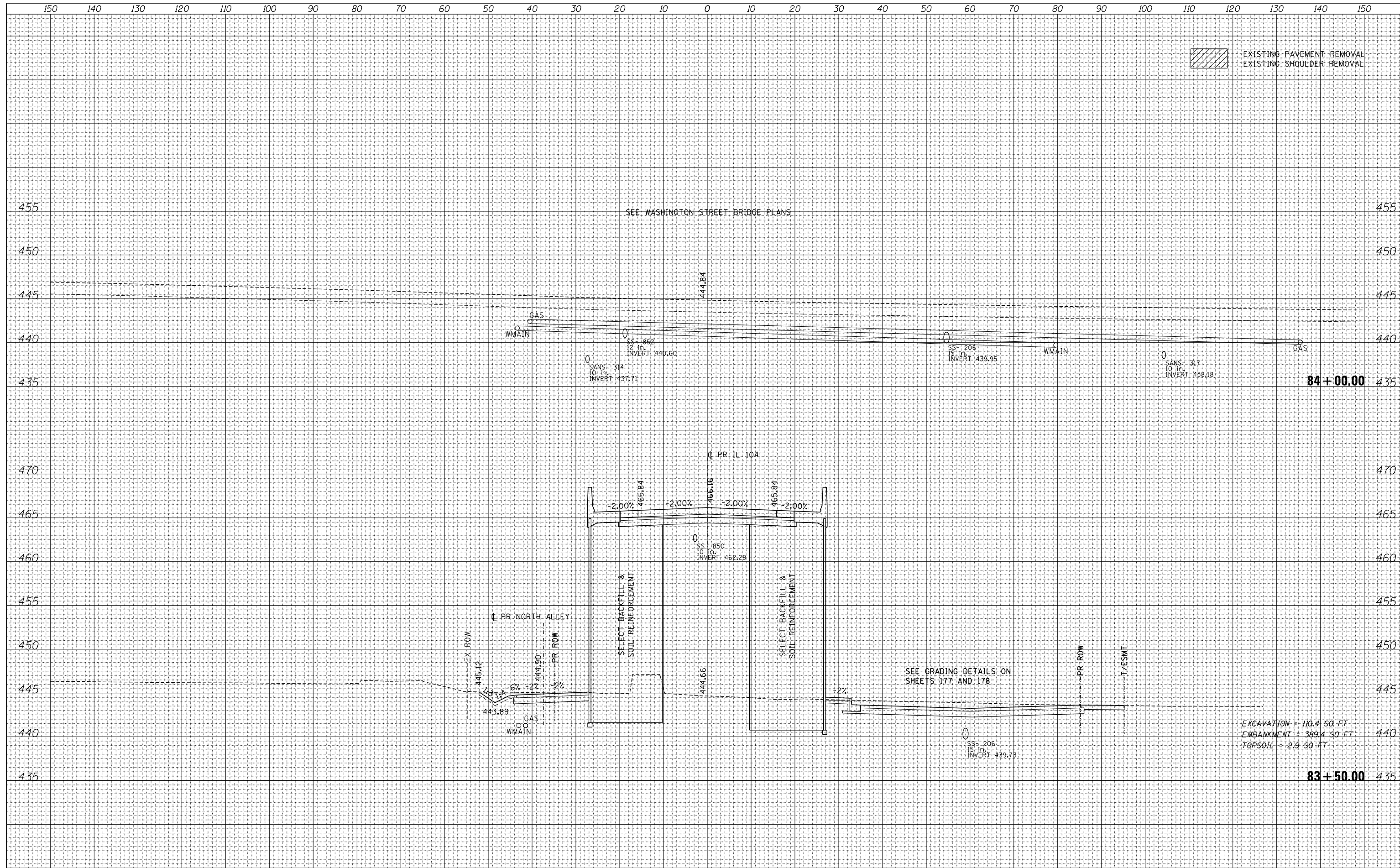
EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL



FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	698
MODELNAME		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO.	72B58	
		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:	SHEET 27 OF 65 SHEETS	STA. 83+00.00 TO STA. 83+00.00				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
FINAL SURVEY NOTE BOOK NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
ORIGINAL SURVEY NOTE BOOK NO.	

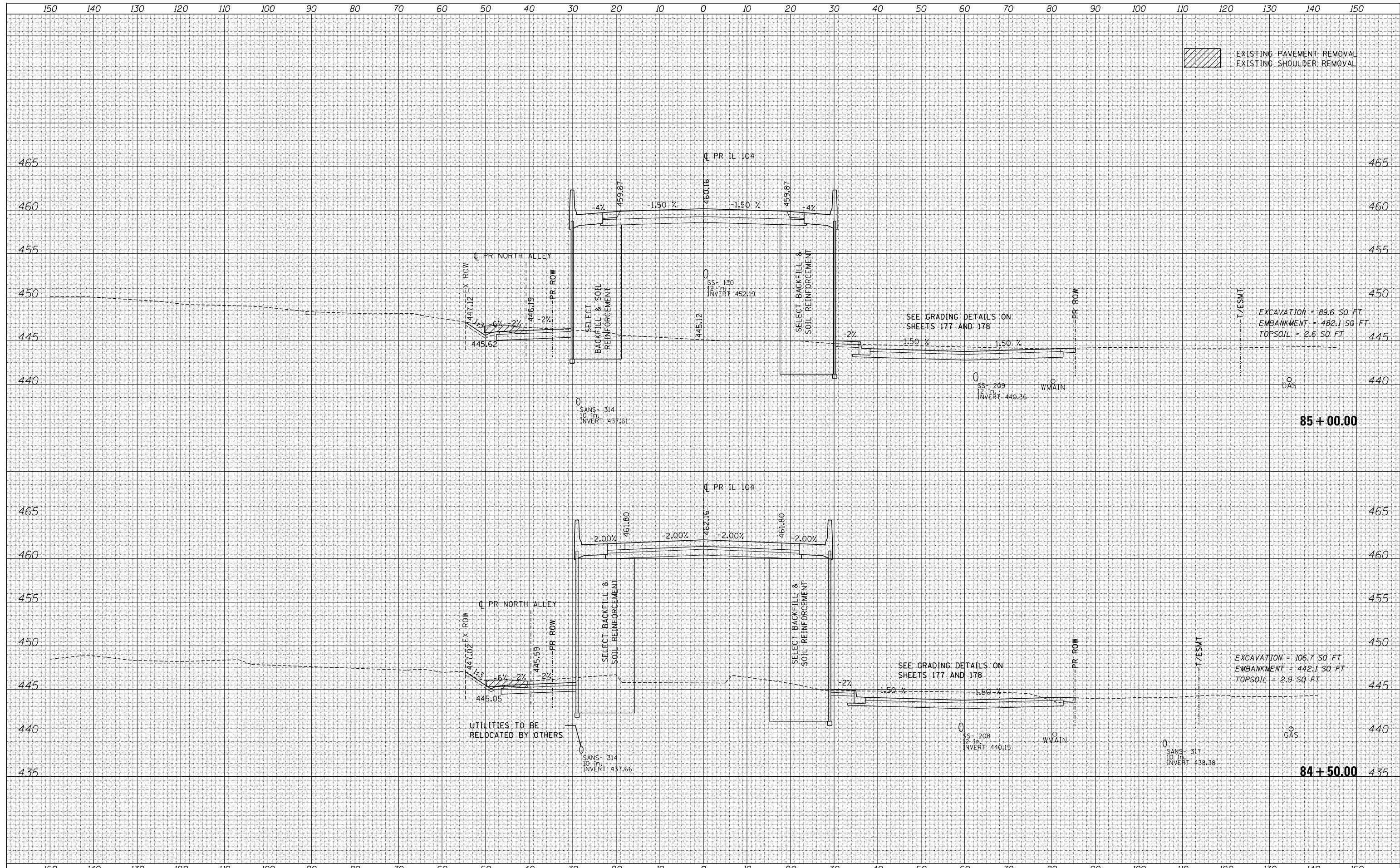


EXCAVATION = 110.4 SQ FT
 EMBANKMENT = 389.4 SQ FT
 TOPSOIL = 2.9 SQ FT

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 104	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN - MN	REVISED -			745	109RS-6, 123RS-3, *	MORGAN/PIKE	782	699
		CHECKED - MD	REVISED -			* 123B-2, 124RS-8		CONTRACT NO. 72B58		
MODELNAME		DATE - 8/5/2014	REVISED -			ILLINOIS FED. AID PROJECT				
				SCALE:		SHEET 28 OF 65 SHEETS		STA. 83+50.00 TO STA. 84+00.00		

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



EXISTING PAVEMENT REMOVAL
EXISTING SHOULDER REMOVAL

EXCAVATION = 89.6 SQ. FT
EMBANKMENT = 482.1 SQ. FT
TOPSOIL = 2.6 SQ. FT

EXCAVATION = 106.7 SQ. FT
EMBANKMENT = 442.1 SQ. FT
TOPSOIL = 2.9 SQ. FT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 104

FILE NAME =	USER NAME = *USER*	DESIGNED - JB	REVISED -	SCALE: SHEET 29 OF 65 SHEETS STA. 84+50.00 TO STA. 85+00.00 ILLINOIS FED. AID PROJECT
FILEL		DRAWN - MN	REVISED -	
MODELNAME		CHECKED - MD	REVISED -	
		DATE - 8/5/2014	REVISED -	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
745	109RS-6, 123RS-3, * * 123B-2, 124RS-8	MORGAN/PIKE	782	700
CONTRACT NO. 72B58				