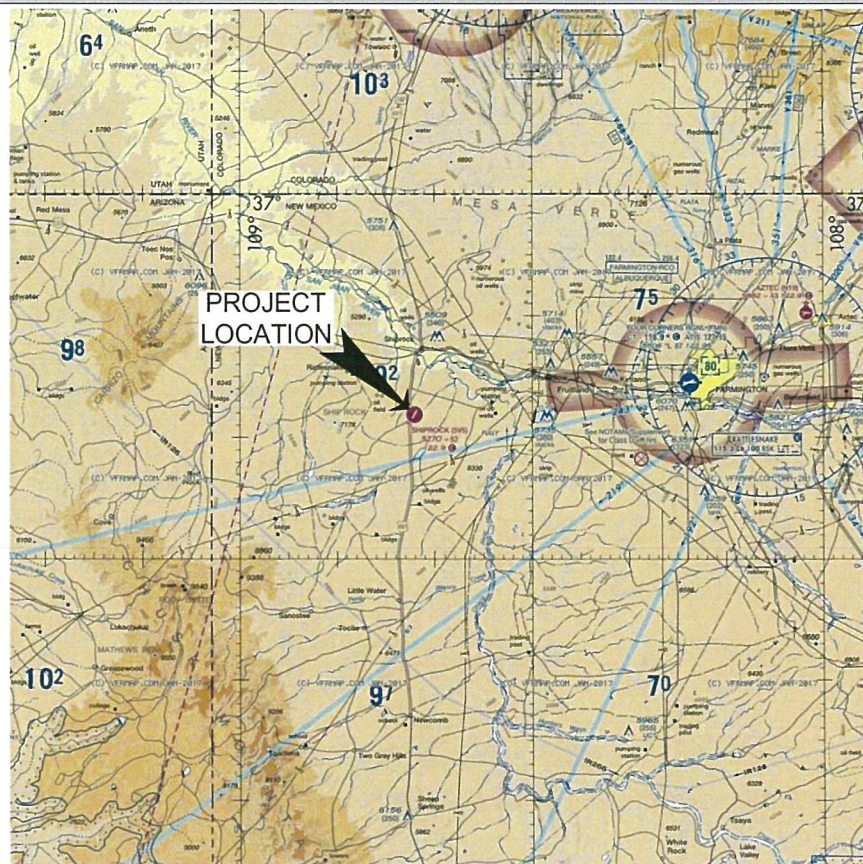




Shiprock Airstrip

Shiprock, New Mexico

CONSTRUCTION DRAWINGS

A.I.P. No. 3-35-0049-005-2017

A.C.I. PROJECT No. 176437

Navajo D.O.T. No. CO11473

N.M.D.O.T. No. 5V5-17-04

PREPARED BY:

ARMSTRONG CONSULTANTS, INC.

JUNE 2017



VICINITY MAP
N.T.S.

SCHEDULE I

RECONSTRUCT RUNWAY 2/20
(APPROX. 5210' x 75')
AND CONNECTOR TAXIWAY A1
(300' x 35')
& NAVAIDS

SCHEDULE II

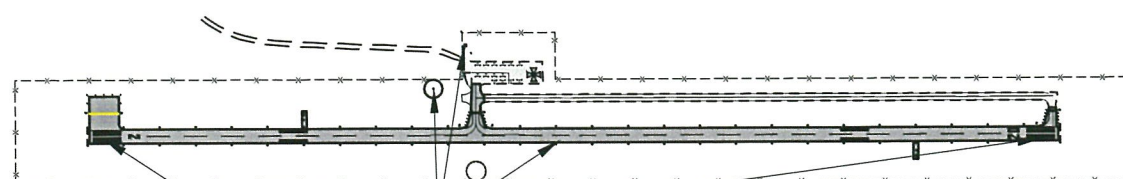
RUNWAY 2/20 AIRFIELD LIGHTING
AND SIGNAGE (INCANDESCENT)

SCHEDULE II ALTERNATE

RUNWAY 2/20 AIRFIELD LIGHTING
AND SIGNAGE (LED)

SCHEDULE III

HOLDING BAY



SCHEDULE I

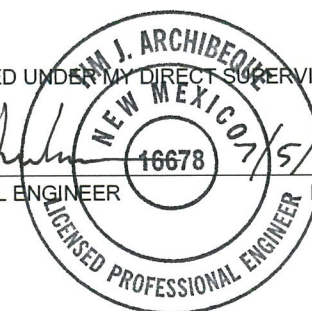


KEY MAP
N.T.S.

REVIEWED BY AND PREPARED UNDER MY DIRECT SUPERVISION:

DESIGNED BY: *[Signature]* 7/5/17
DATE

[Signature] 7/5/2017
REGISTERED PROFESSIONAL ENGINEER DATE



INDEX TO SHEETS

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LIGHTING & SIGNING DETAILS	9.3	CONSTRUCTION SAFETY & PHASING PLAN	ATTACHED

SHEET 1.1



LEGEND

	EXISTING SPOT ELEVATION		PROPOSED FINISHED GRADE ELEVATION
	EXISTING GROUND CONTOUR (5' INTERVAL)		PROPOSED GROUND CONTOUR (1' INTERVAL)
	EXISTING FEATURE NOTED		PROPOSED FEATURE NOTED
	EXISTING RUNWAY EDGE LIGHT		PROPOSED RUNWAY EDGE LIGHT
	EXISTING RETROREFLECTIVE MARKER		PROPOSED TAXIWAY RETROREFLECTIVE MARKER
	EXISTING TAXIWAY EDGE LIGHT		PROPOSED TAXIWAY EDGE LIGHT
	EXISTING SPLICE BASE		PROPOSED SPLICE BASE
	EXISTING AIRFIELD SIGN		PROPOSED AIRFIELD SIGN
	EXISTING BEACON		PROPOSED BEACON AND TOWER
	EXISTING WIND CONE		PROPOSED LIGHTED WIND CONE
	EXISTING SEGMENTED CIRCLE		PROPOSED SEGMENTED CIRCLE
	EXISTING PAPI / VASI		PROPOSED PAPI
	EXISTING REIL		PROPOSED REIL
	EXISTING AWOS/ASOS/UNICOM		PROPOSED AWOS
	EXISTING TIEDOWN ANCHOR		PROPOSED SUPPLEMENTAL WIND CONE
	EXISTING UTILITY POLE		PROPOSED AREA LIGHT (S)
	EXISTING AREA LIGHT		PROPOSED TIEDOWN ANCHOR
	EXISTING TELEPHONE RISER		PROPOSED ELECTRIC TRANSFORMER
	EXISTING PAD MOUNTED TRANSFORMER		PROPOSED FIRE HYDRANT
	EXISTING FIRE HYDRANT		PROPOSED WATER VALVE
	EXISTING WATER VALVE		PROPOSED STORM DRAIN INLET
	EXISTING TREE		PROPOSED SANITARY SEWER CLEAN-OUT
	EXISTING ROAD SIGN(S)		PROPOSED MANHOLE
	EXISTING GUY		PROPOSED SURVEY MONUMENT
	EXISTING PROPERTY CORNER PIN/CAP		PROPOSED AIRFIELD POWER CABLE(S)
	EXISTING BLOW OFF VALVE		PROPOSED CULVERT w/END SECTIONS
	EXISTING AREA INLET		PROPOSED CONCRETE ENCASED DUCT BANK
	EXISTING MANHOLE		PROPOSED BARBED WIRE FENCE
	EXISTING SECTION CORNER		PROPOSED CHAINLINK FENCE
	EXISTING SURVEY CONTROL MONUMENT		PROPOSED WILDLIFE FENCE
	EXISTING POWER CABLE(S)		PROPOSED SANITARY SEWER LINE
	EXISTING DUCT		PROPOSED STORM DRAIN LINE
	EXISTING CULVERT		PROPOSED COUNTERPOISE CABLE
	EXISTING SWALE DIRECTION		PROPOSED WATERLINE
	EXISTING BARB WIRE FENCE		PROPOSED GAS LINE
	EXISTING CHAINLINK FENCE		PROPOSED UNDERGROUND POWER/TELE
	EXISTING WILDLIFE FENCE		PROPOSED UNDERDRAIN
	EXISTING SANITARY SEWER LINE		PROPOSED SEDIMENT LOG
	EXISTING STORM DRAIN LINE		PROPOSED SILT FENCE
	EXISTING OVERHEAD POWER CABLE		PROPOSED SWALE DIRECTION
	EXISTING FIBER OPTIC CABLE		PROPOSED CONCRETE PAVEMENT
	EXISTING WATER LINE		PROPOSED ASPHALT PAVEMENT
	EXISTING GAS LINE		PROPOSED ASPHALT PAVEMENT OVERLAY
	EXISTING UNDERGROUND POWER OR TELE. LINE		PROPOSED ASPHALT REMOVAL
	EXISTING UNDERDRAIN		PROPOSED GRAVEL
	EXISTING ASPHALT PAVEMENT EDGE		PROPOSED ROCK RIPRAP
	EXISTING CONCRETE PAVEMENT EDGE		PROPOSED BUILDING
	EXISTING GRAVEL EDGE		PROPOSED SEEDING AREA
	EXISTING CONCRETE PAVEMENT		PROPOSED GRADING AREA
	EXISTING ASPHALT PAVEMENT		
	EXISTING GRAVEL		
	EXISTING BUILDING		
	EXISTING WETLANDS		

NOTE: LEGEND APPLIES TO ALL SHEETS IN THIS PLAN SET, IS GENERIC, AND NOT ALL SYMBOLS MAY BE IN PLAN SHEETS.

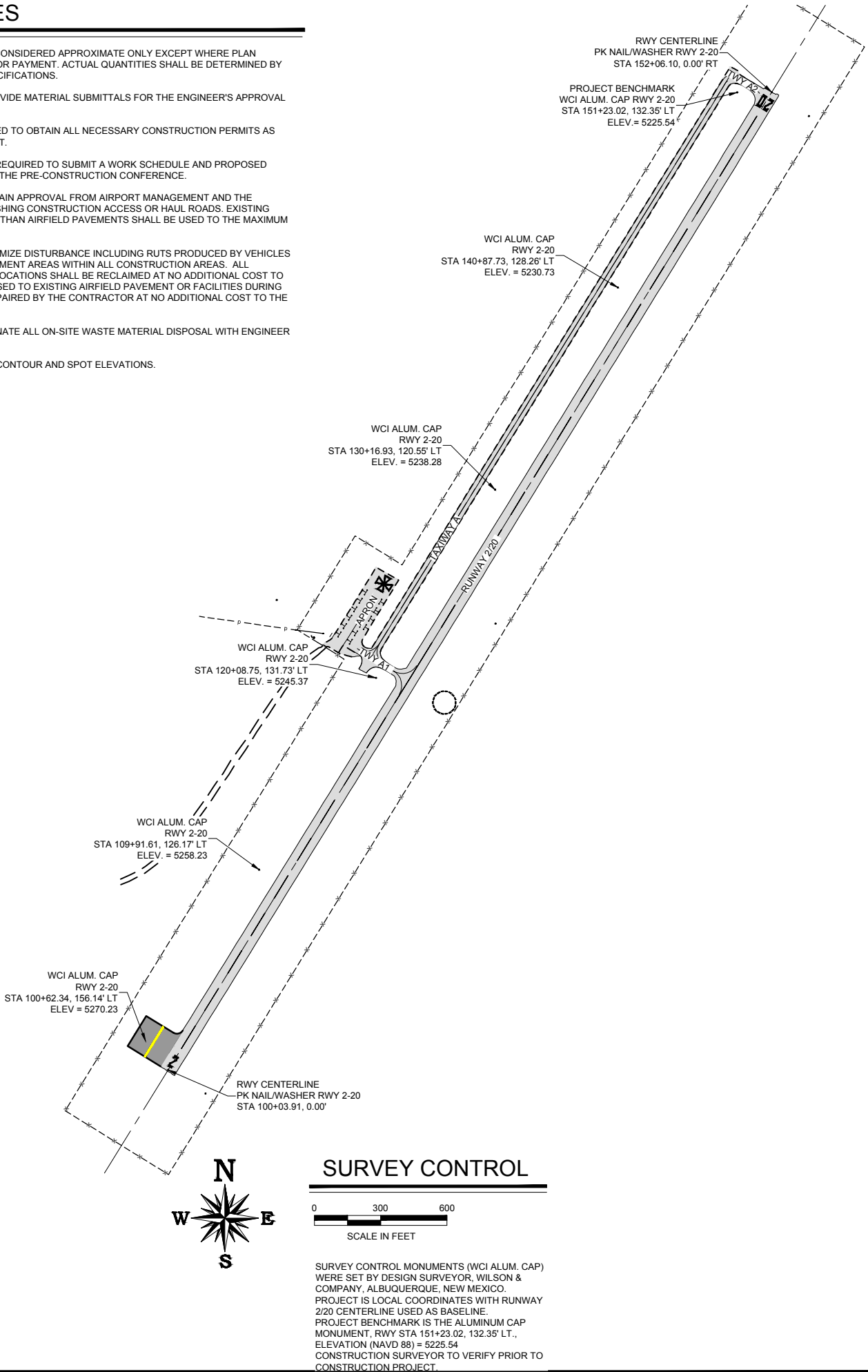
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GENERAL NOTES

1. ESTIMATED QUANTITIES ARE CONSIDERED APPROXIMATE ONLY EXCEPT WHERE PLAN QUANTITIES ARE SPECIFIED FOR PAYMENT. ACTUAL QUANTITIES SHALL BE DETERMINED BY FIELD MEASUREMENT OR SPECIFICATIONS.
2. THE CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS FOR THE ENGINEER'S APPROVAL PRIOR TO ORDERING.
3. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AS NECESSARY FOR THE PROJECT.
4. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A WORK SCHEDULE AND PROPOSED CONSTRUCTION METHODS AT THE PRE-CONSTRUCTION CONFERENCE.
5. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM AIRPORT MANAGEMENT AND THE ENGINEER PRIOR TO ESTABLISHING CONSTRUCTION ACCESS OR HAUL ROADS. EXISTING PAVEMENT SURFACES OTHER THAN AIRFIELD PAVEMENTS SHALL BE USED TO THE MAXIMUM EXTENT POSSIBLE.
6. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE INCLUDING RUTS PRODUCED BY VEHICLES AND EQUIPMENT IN NON-PAVEMENT AREAS WITHIN ALL CONSTRUCTION AREAS. ALL DISTURBED AREAS IN THESE LOCATIONS SHALL BE RECLAIMED AT NO ADDITIONAL COST TO THE SPONSOR. DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT OR FACILITIES DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE SPONSOR.
7. CONTRACTOR SHALL COORDINATE ALL ON-SITE WASTE MATERIAL DISPOSAL WITH ENGINEER AND AIRPORT.
8. ADD 5200' TO ALL PROPOSED CONTOUR AND SPOT ELEVATIONS.



SURVEY CONTROL

SURVEY CONTROL MONUMENTS (WCI ALUM. CAP) WERE SET BY DESIGN SURVEYOR, WILSON & COMPANY, ALBUQUERQUE, NEW MEXICO. PROJECT IS LOCAL COORDINATES WITH RUNWAY 2/20 CENTERLINE USED AS BASELINE. PROJECT BENCHMARK IS THE ALUMINUM CAP MONUMENT, RWY STA 151+23.02, 132.35' LT., ELEVATION (NAVD 88) = 5225.54 CONSTRUCTION SURVEYOR TO VERIFY PRIOR TO CONSTRUCTION PROJECT.



SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO
2017 IMPROVEMENTS
NAVAJO DOT CO11473
A.I.P. No. 3-35-0049-005-2017

No.	Revision	Date	By

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File Name: 166301101

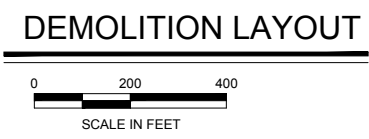
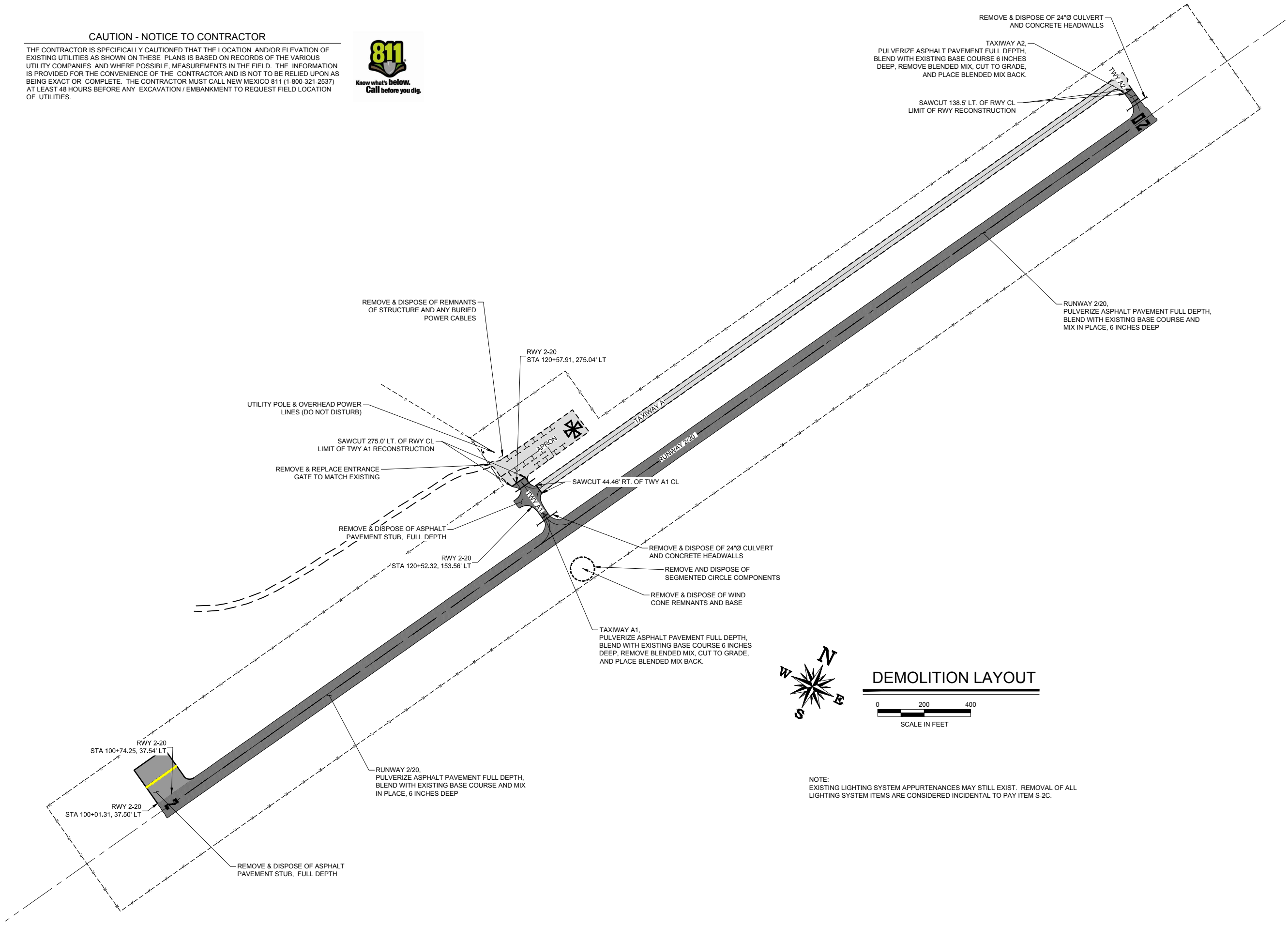
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Approved: TJA

GENERAL
NOTES,
LEGEND &
SURVEY
CONTROL

Sheet: 1.2

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NOTE:
EXISTING LIGHTING SYSTEM APPURTENANCES MAY STILL EXIST. REMOVAL OF ALL LIGHTING SYSTEM ITEMS ARE CONSIDERED INCIDENTAL TO PAY ITEM S-2C.



ARMSTRONG
PLANNING ENGINEERING CONSTRUCTION

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www.armstrongconsultants.com

SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

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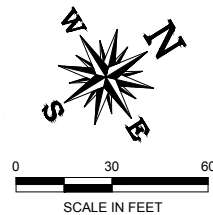
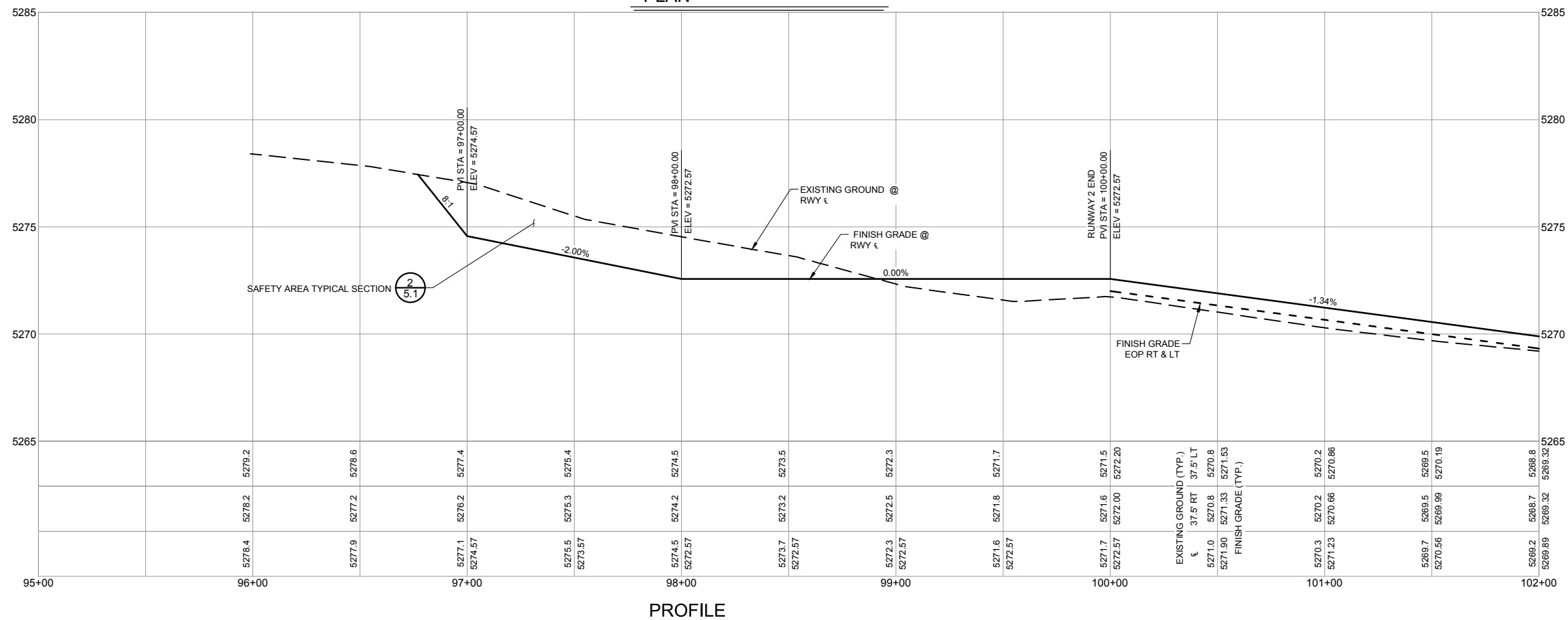
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DEMOLITION
& REMOVALS
LAYOUT



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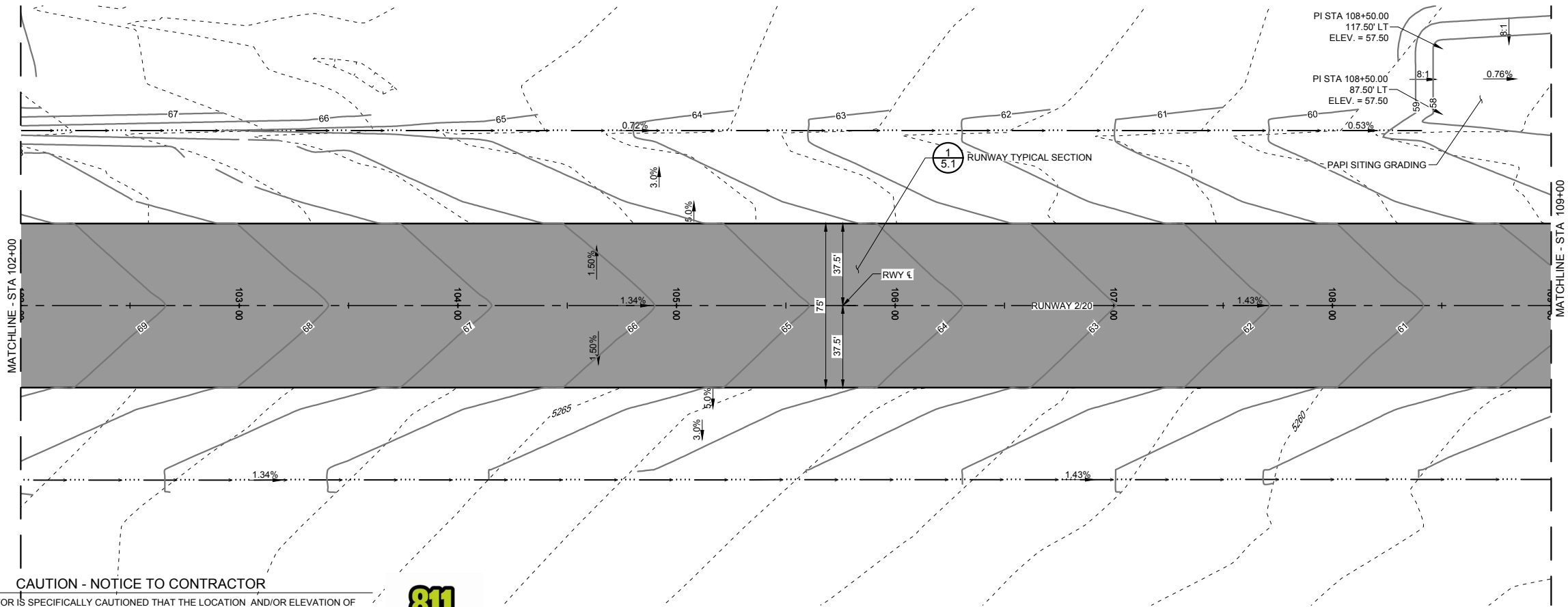
RUNWAY 2/20
PLAN,
PROFILE &
GRADING

Sheet: 3.1

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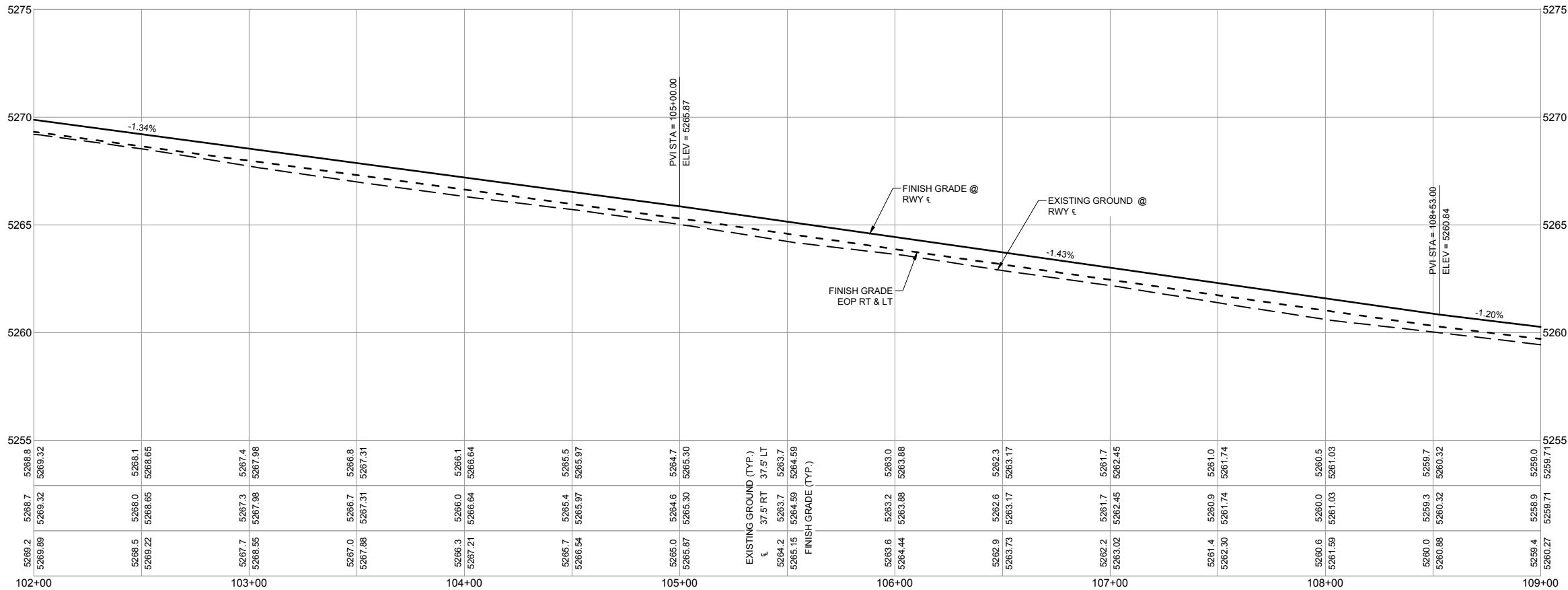


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PLAN



PROFILE

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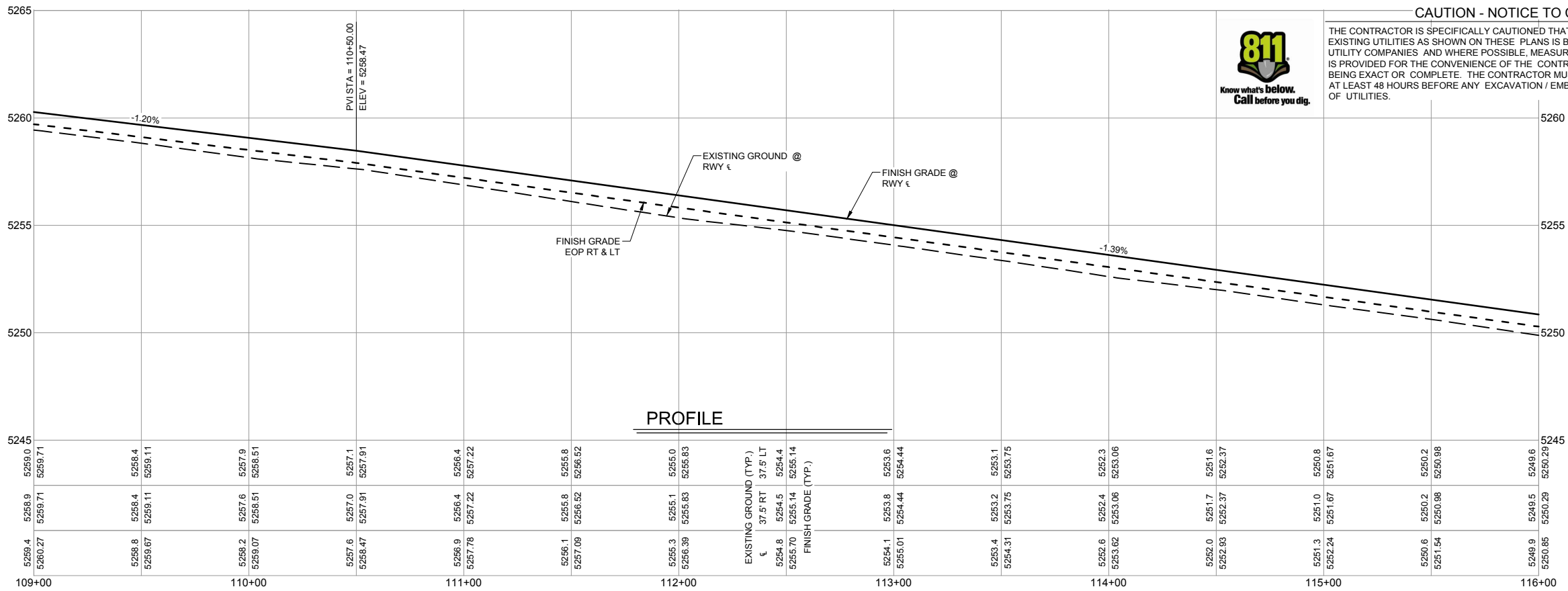
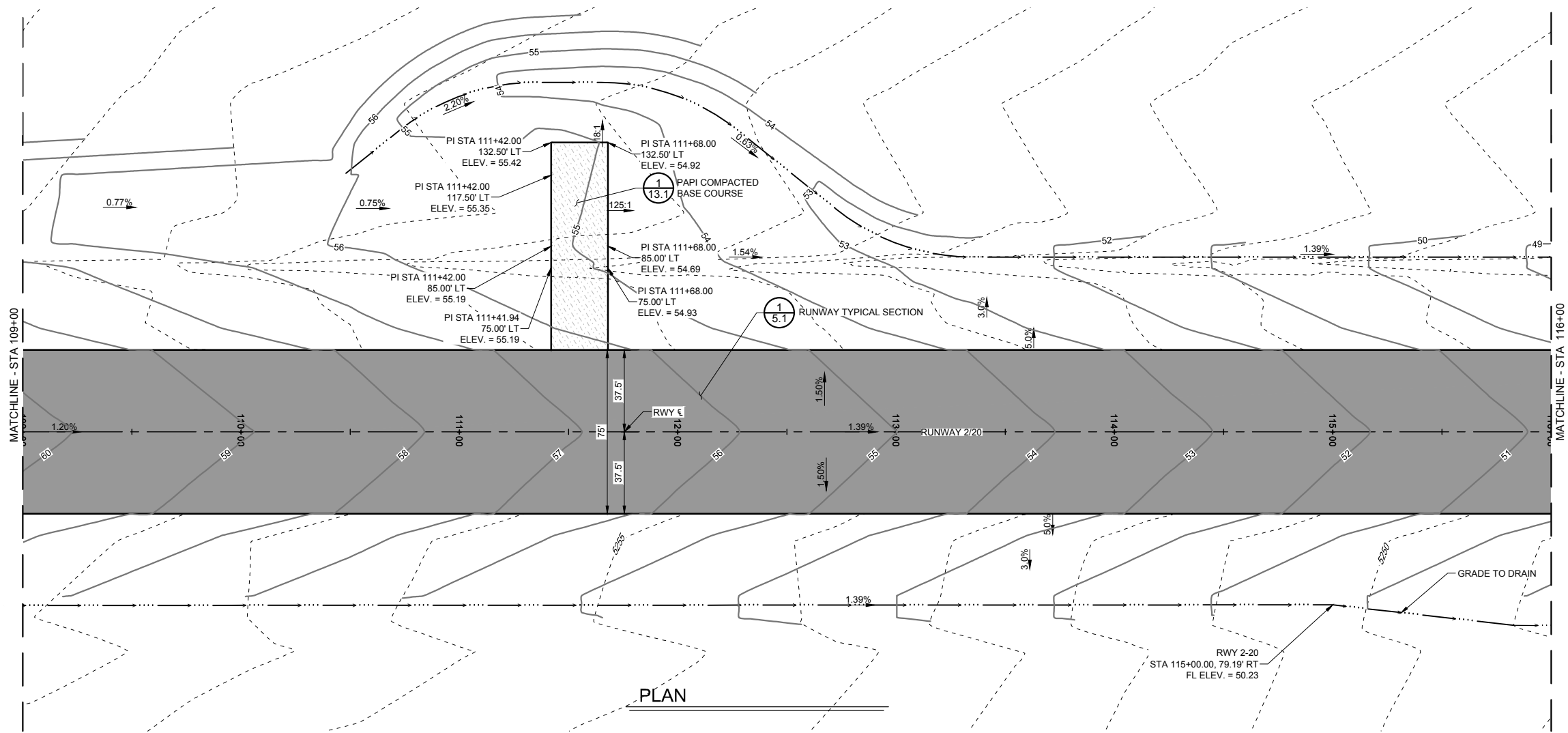
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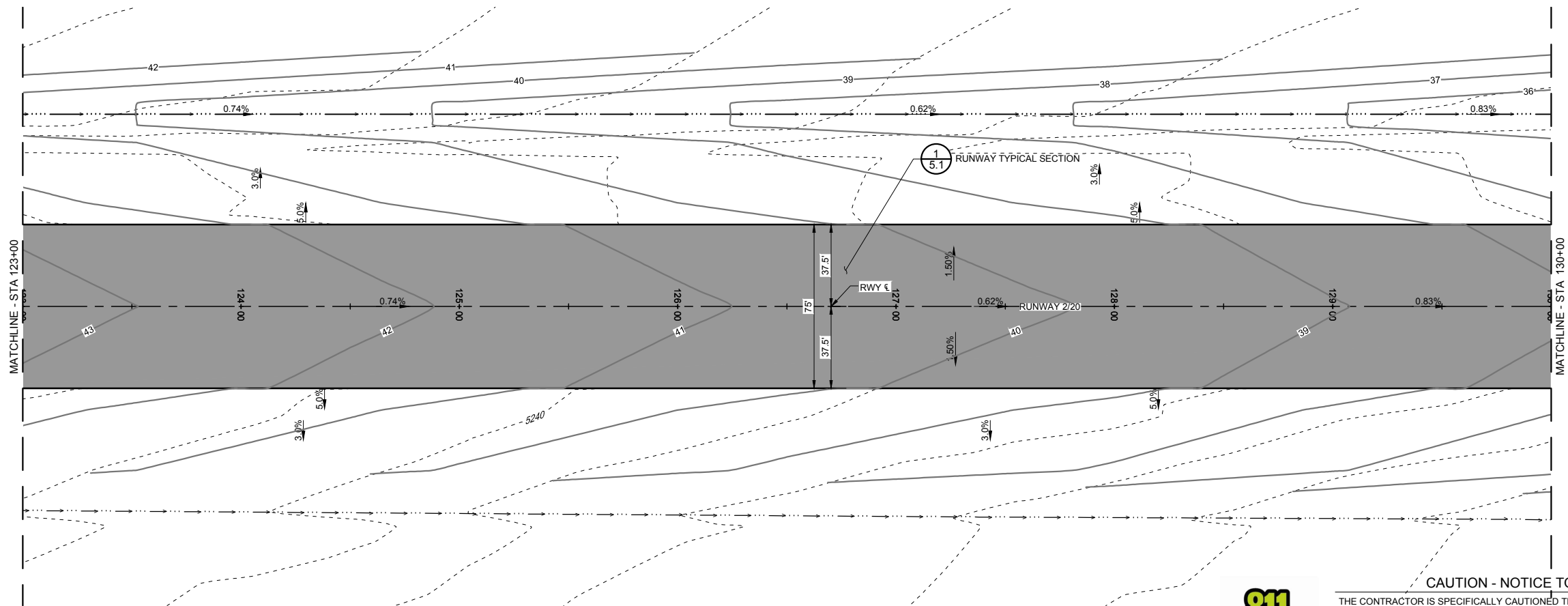


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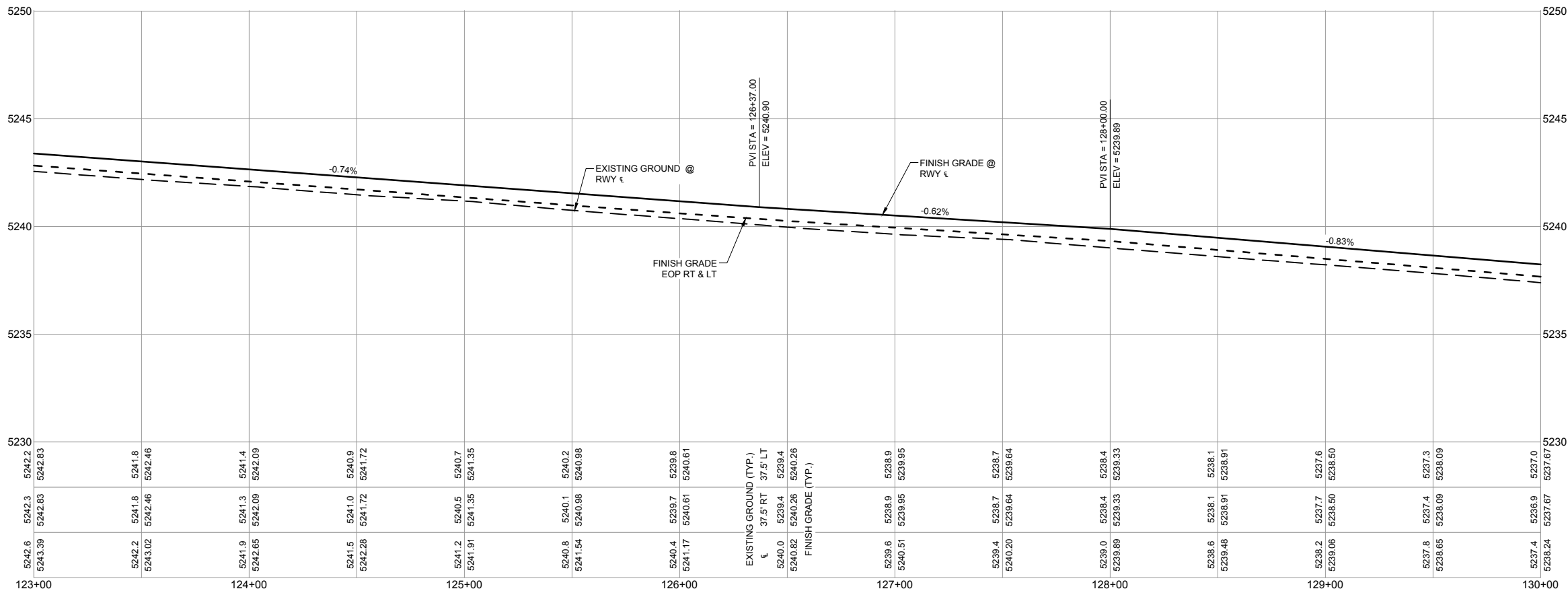
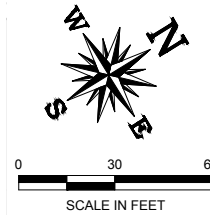


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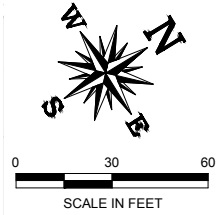
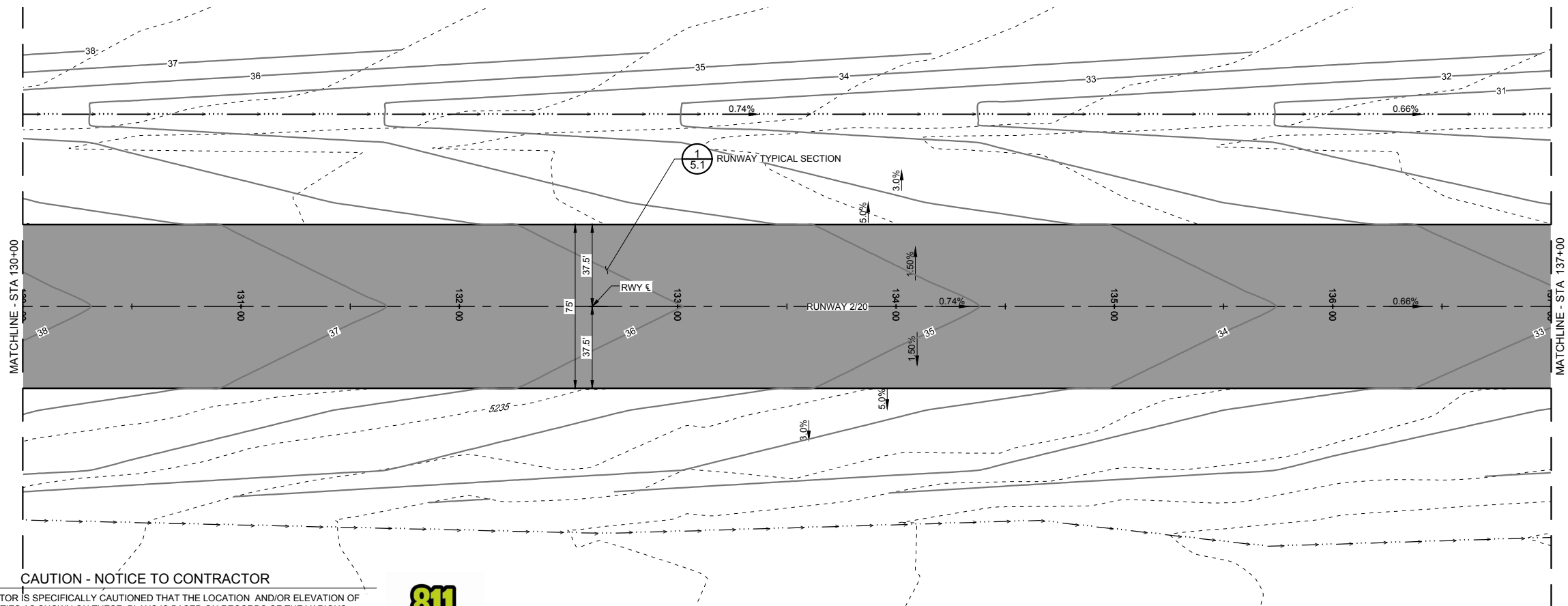
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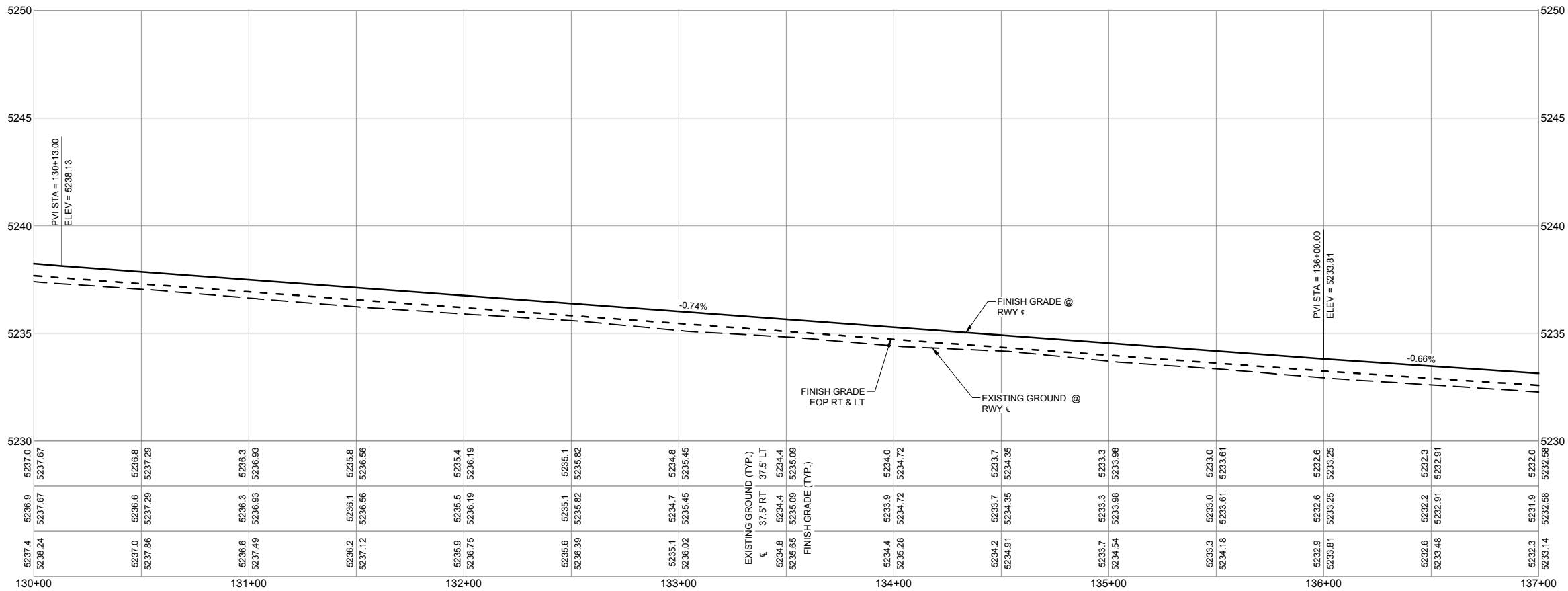
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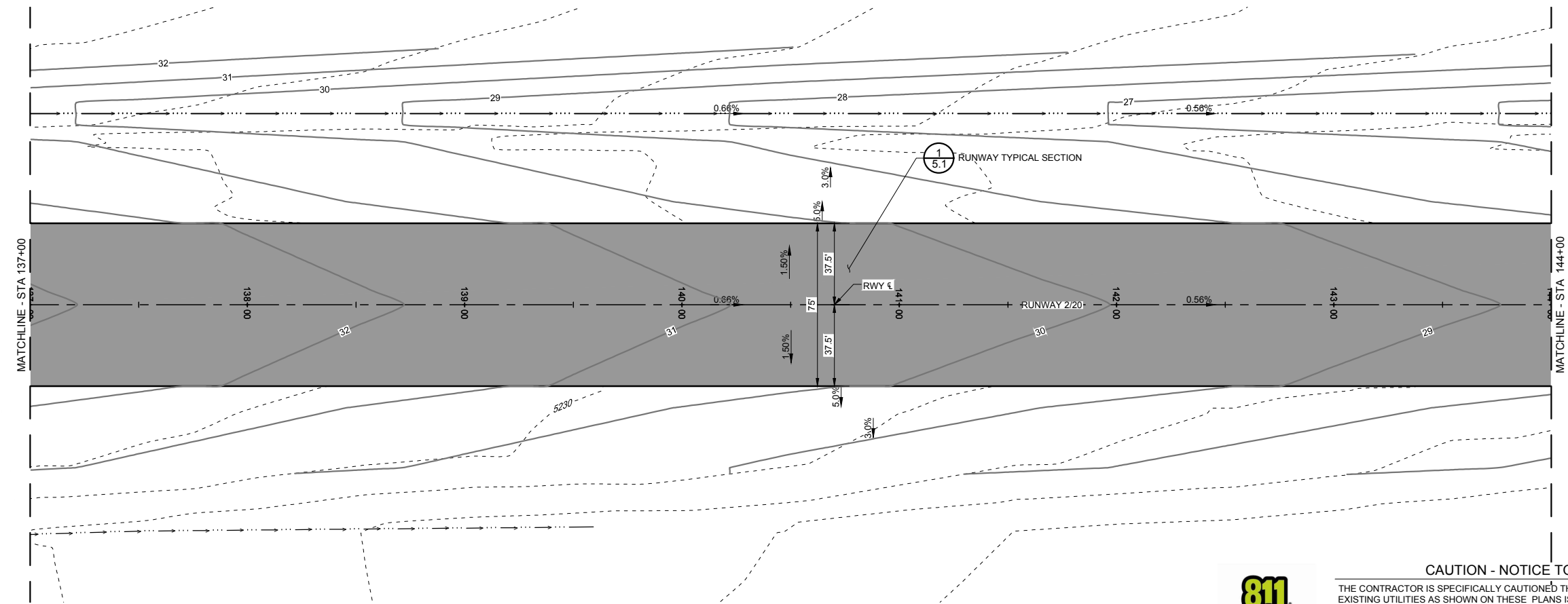


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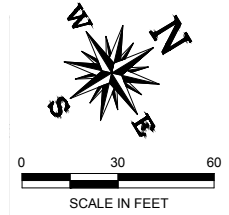
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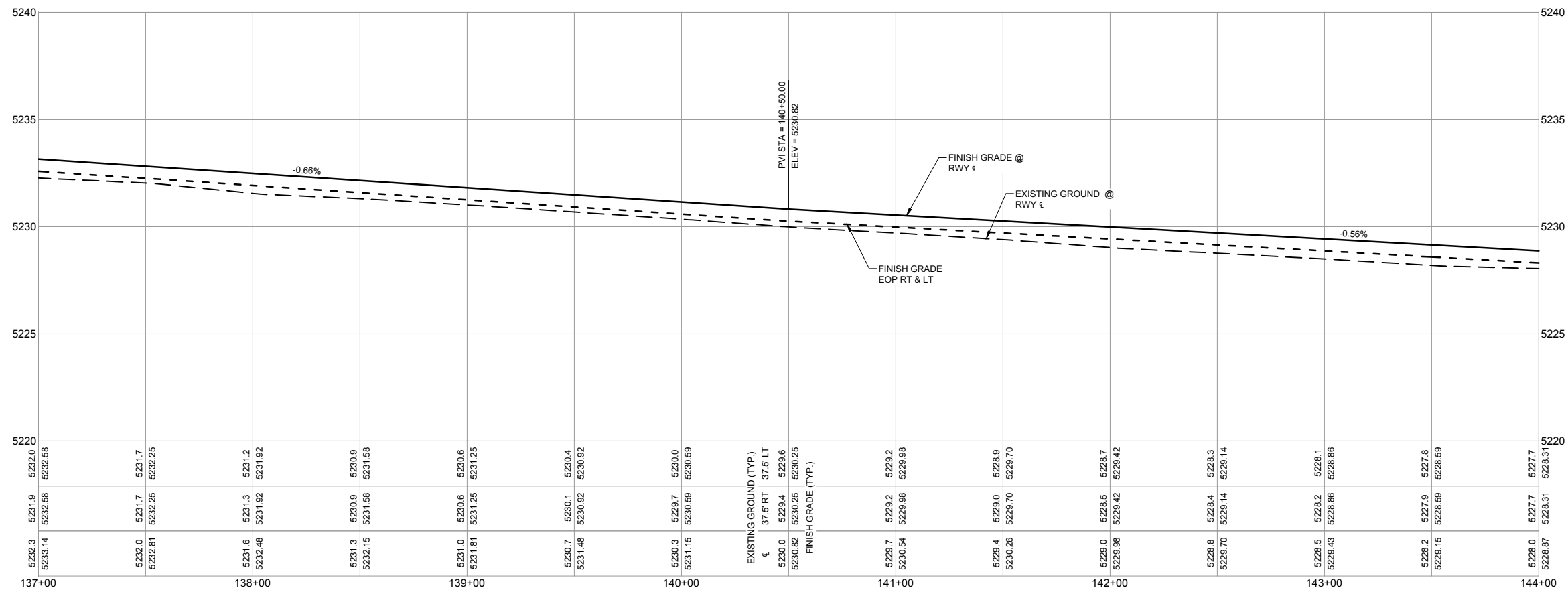


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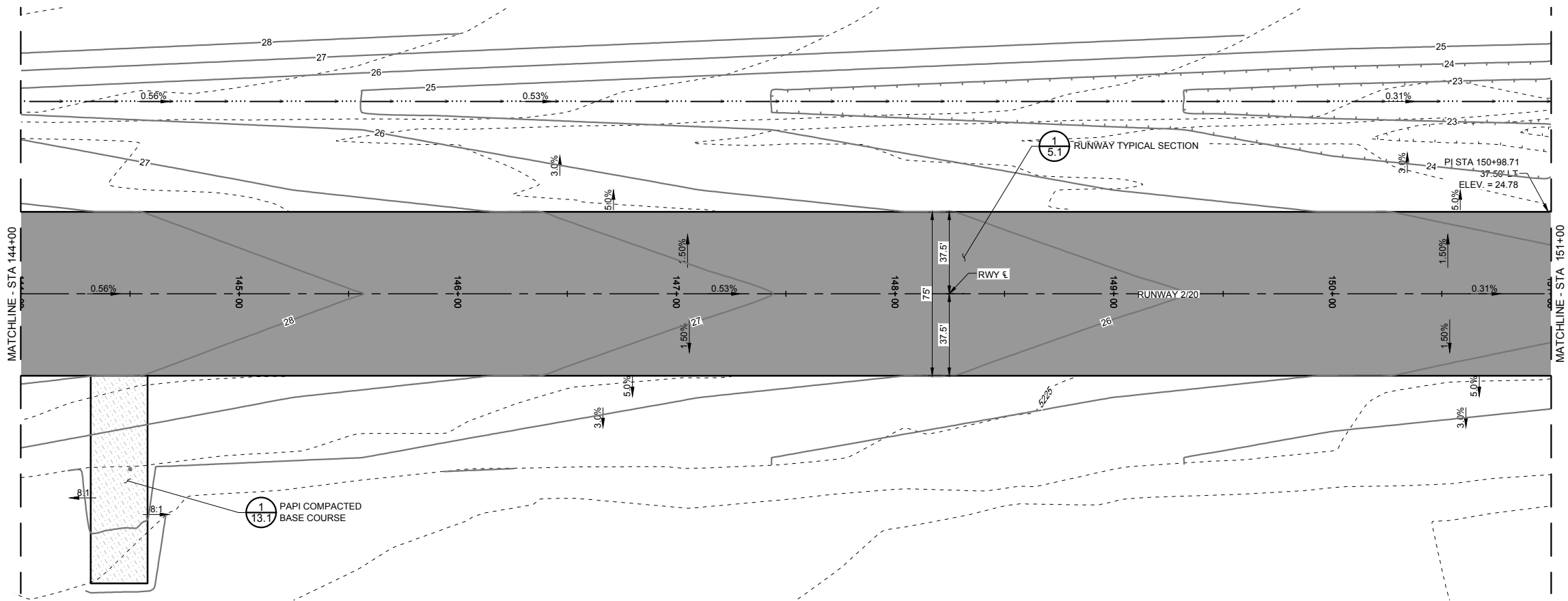
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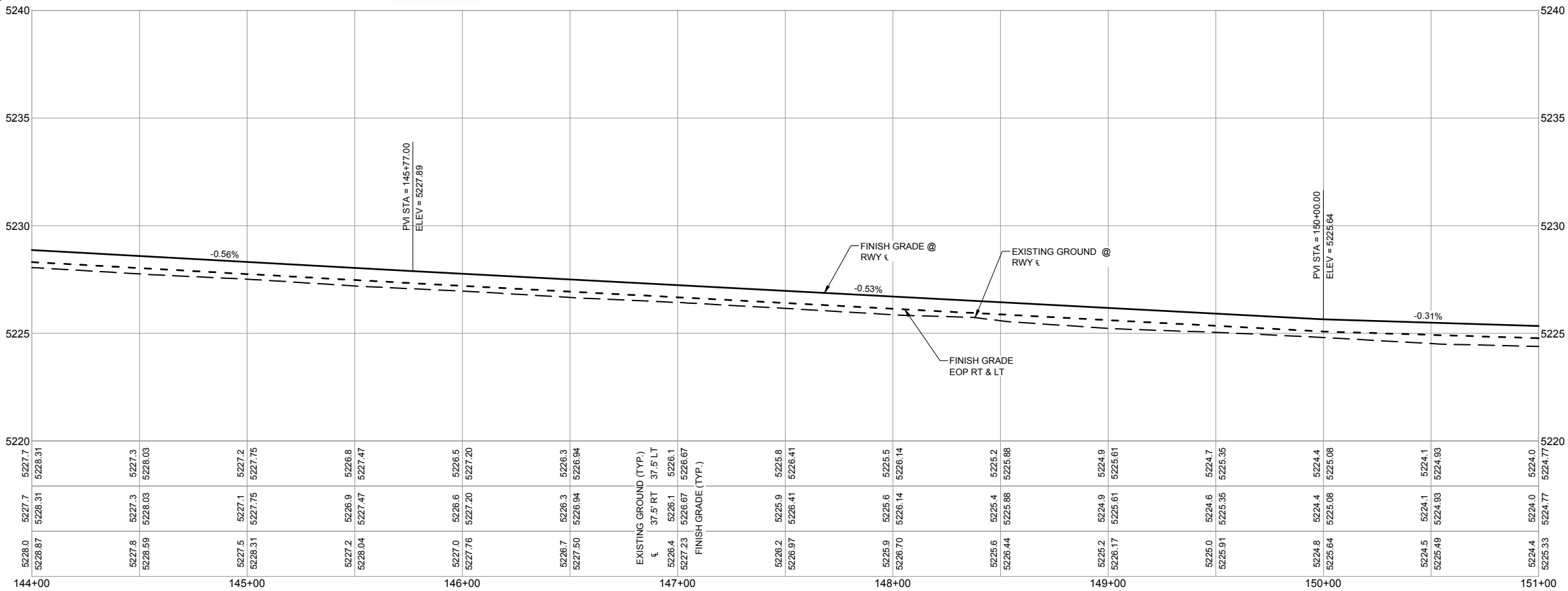


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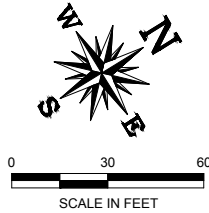
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PLAN



PROFILE



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SHIPROCK, NEW MEXICO

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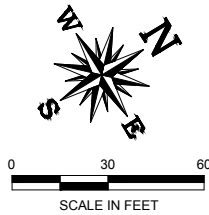
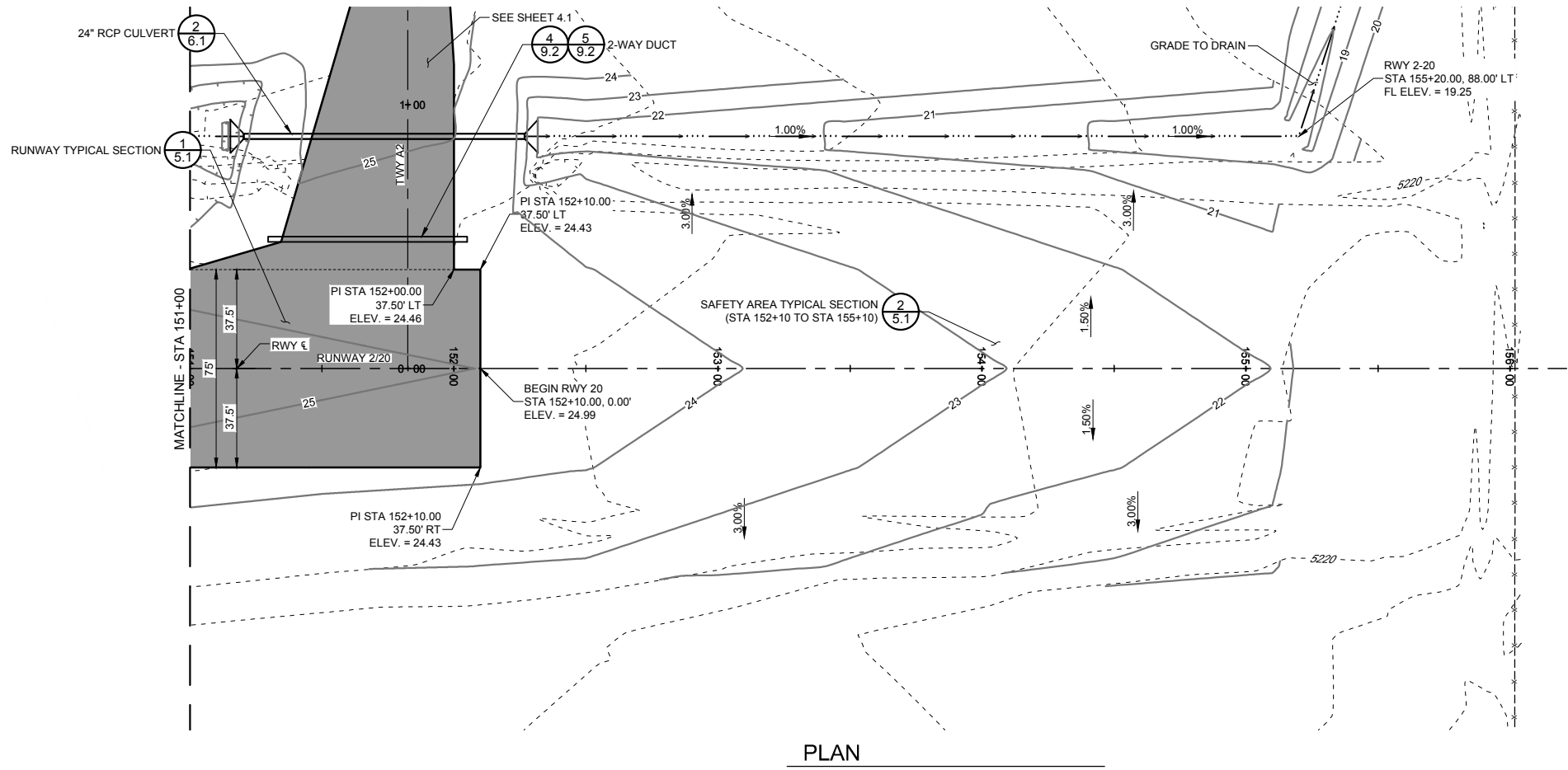
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RUNWAY 2/20
PLAN,
PROFILE &
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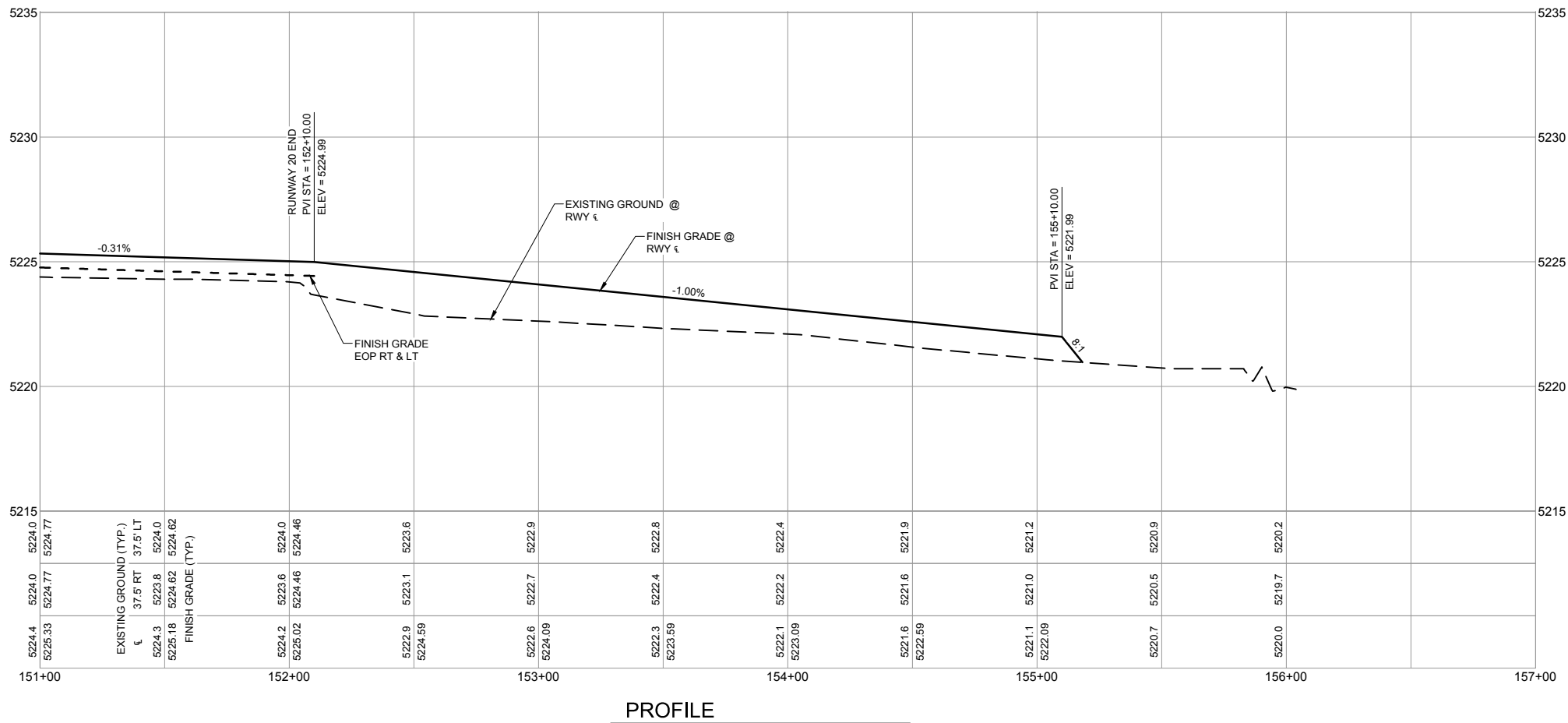


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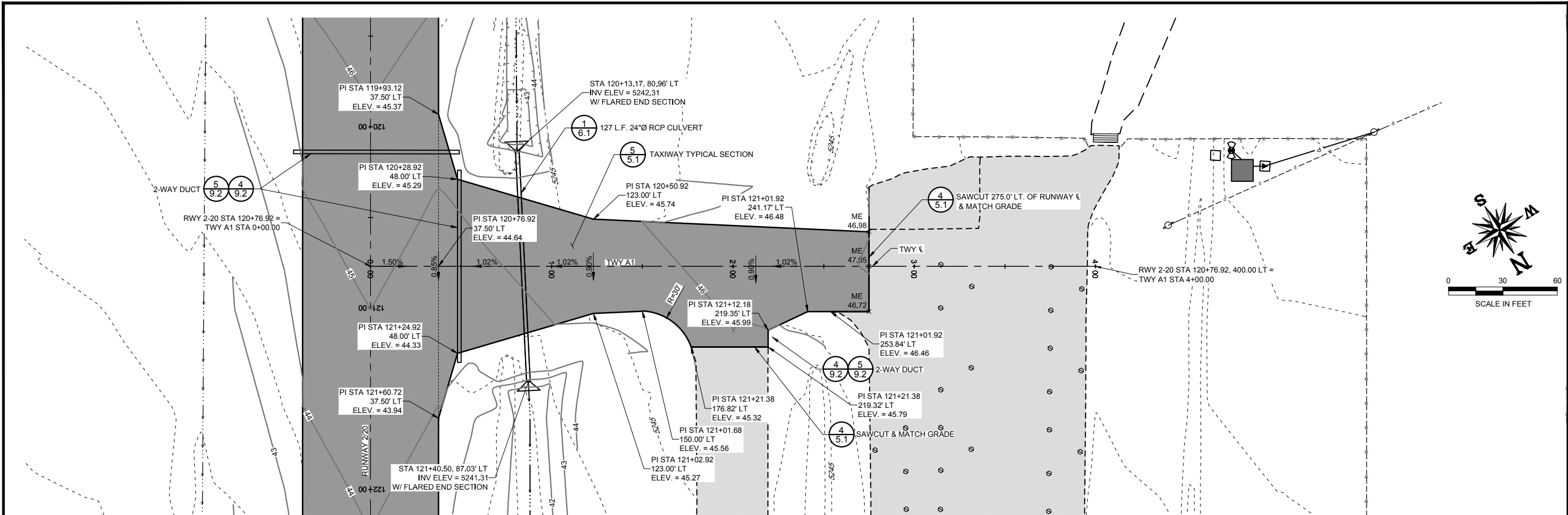


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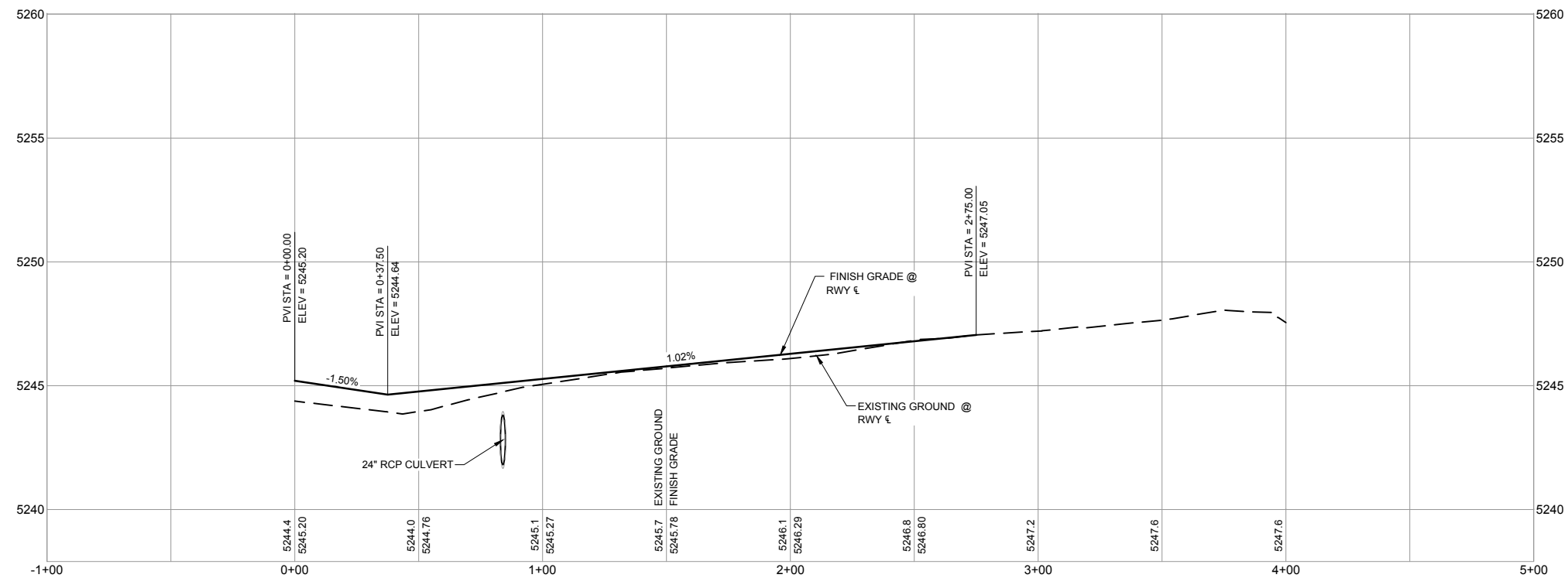
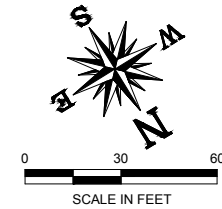
RUNWAY 2/20
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PLAN

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS IN THE FIELD. THE INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL NEW MEXICO 811 (1-800-321-2537) AT LEAST 48 HOURS BEFORE ANY EXCAVATION / EMBANKMENT TO REQUEST FIELD LOCATION OF UTILITIES.



PROFILE

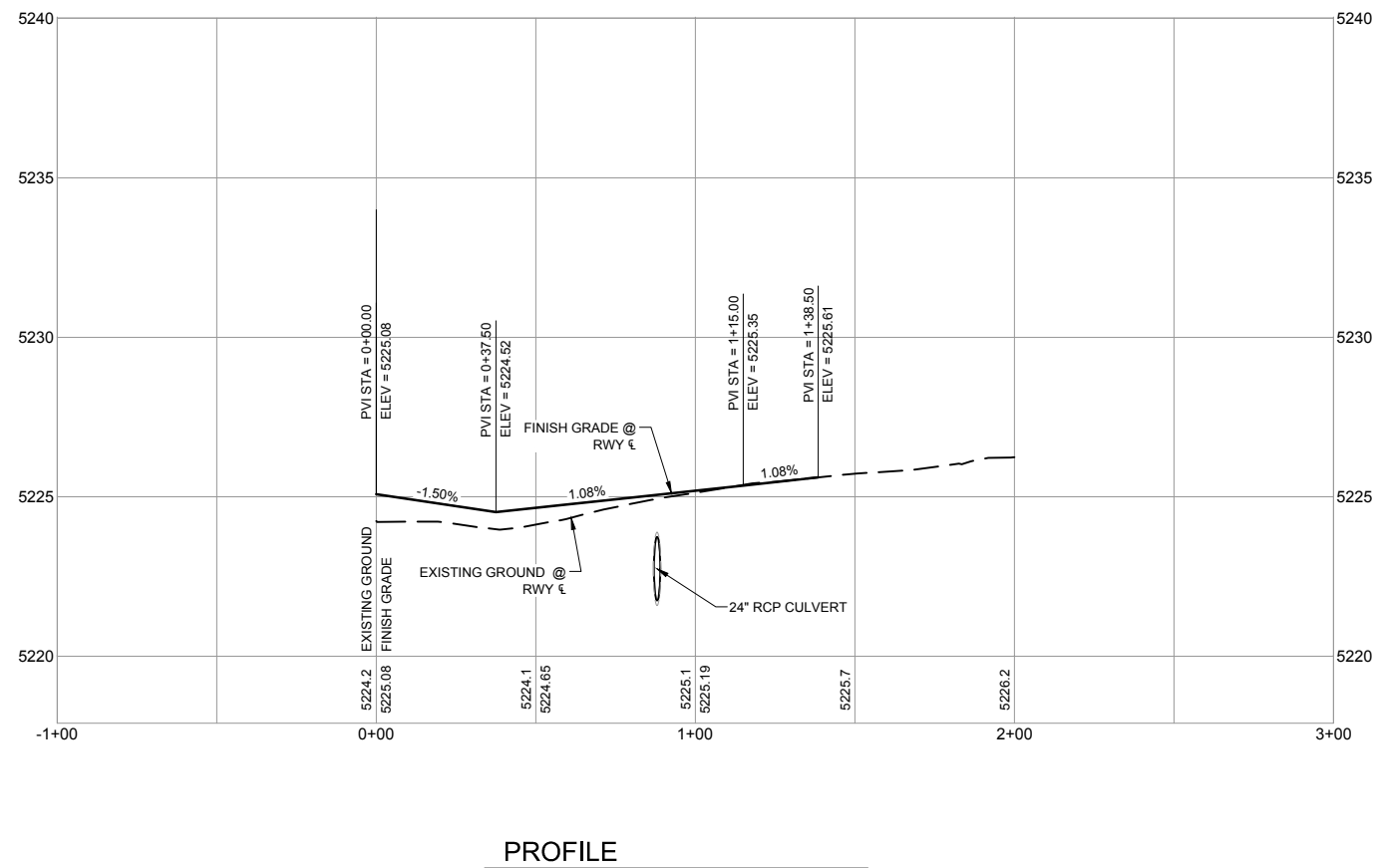
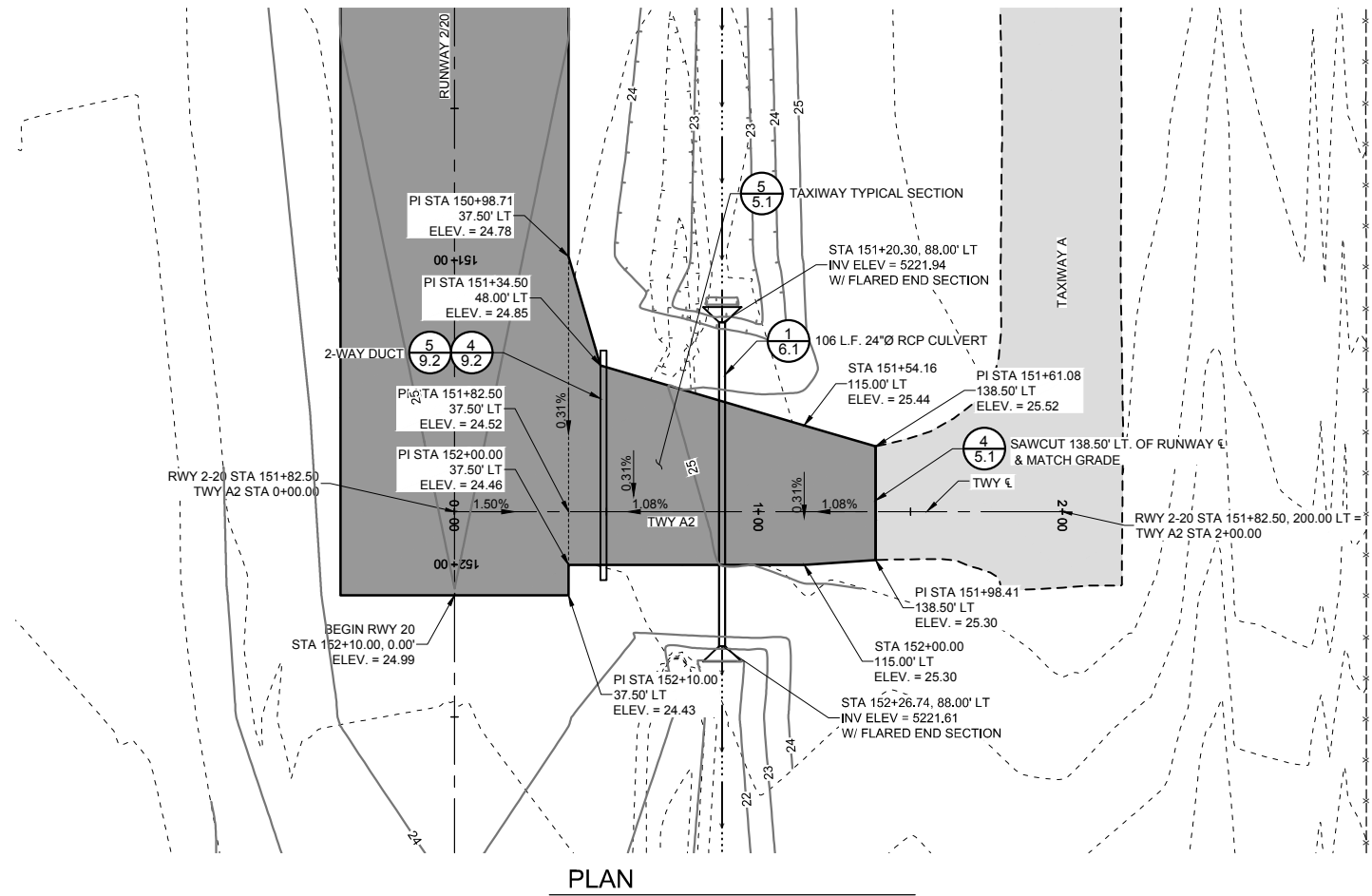
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SHIPROCK, NEW MEXICO
2017 IMPROVEMENTS
NAVAJO DOT CO11473
A.I.P. No. 3-35-0049-005-2017

No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301102

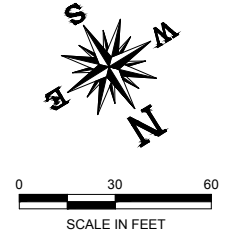
Drawn: BKR/LKB
Checked: JLS
Approved: TJA

TAXIWAY A1
PLAN,
PROFILE &
GRADING



CAUTION - NOTICE TO CONTRACTOR

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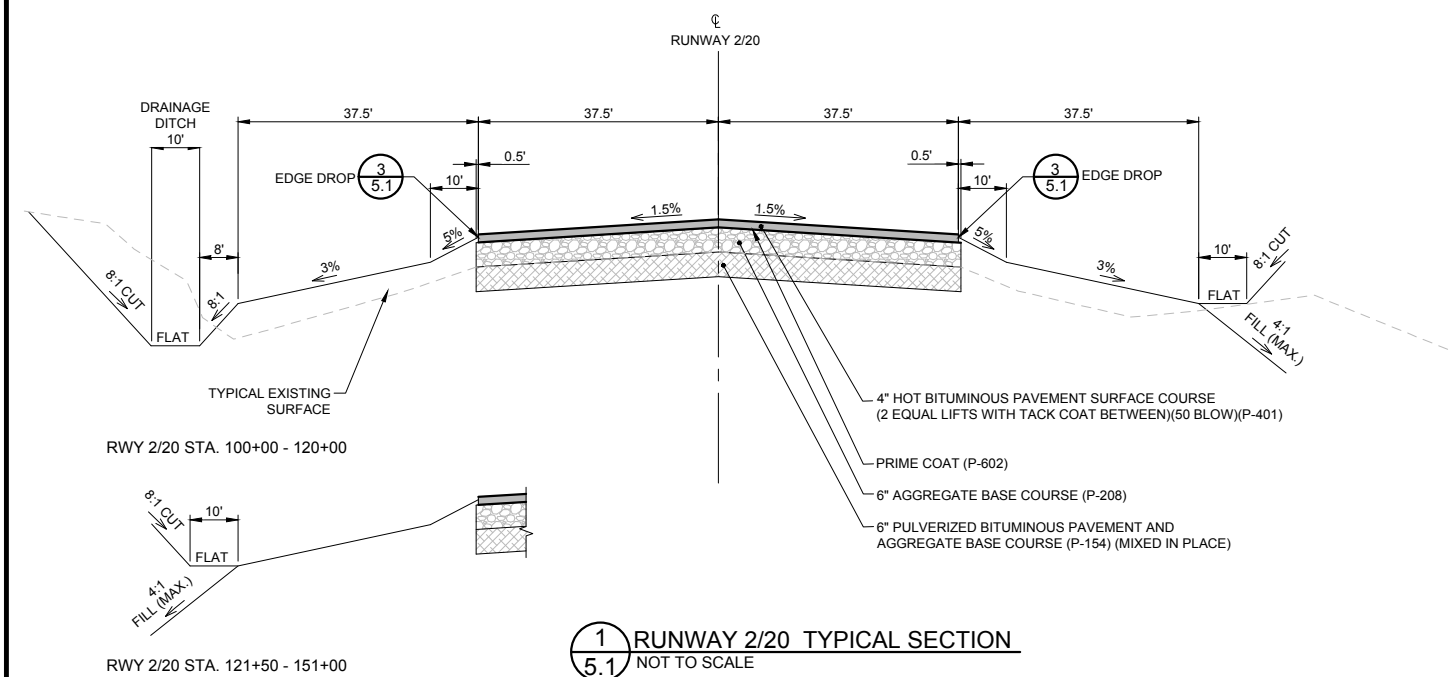
No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301102

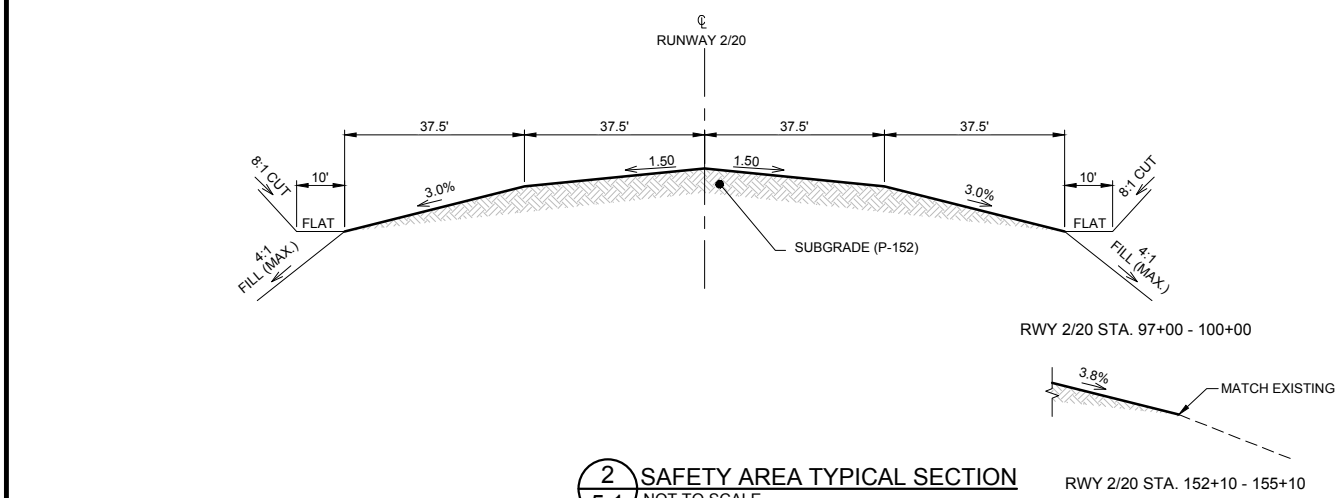
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Checked: JLS
Approved: TJA

TAXIWAY A2
PLAN,
PROFILE &
GRADING

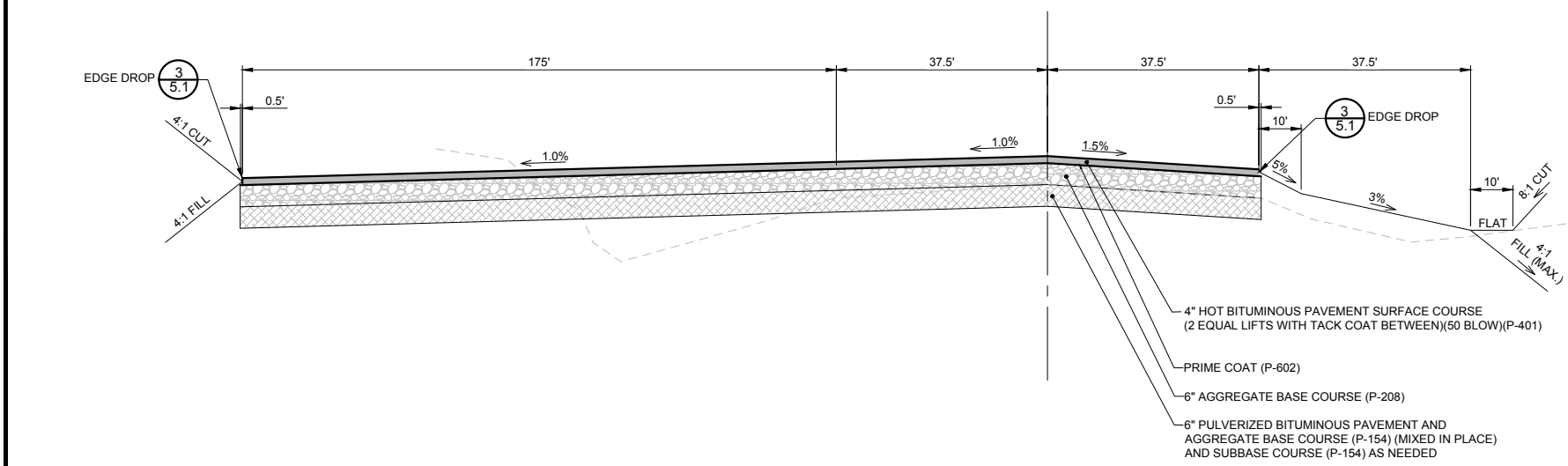
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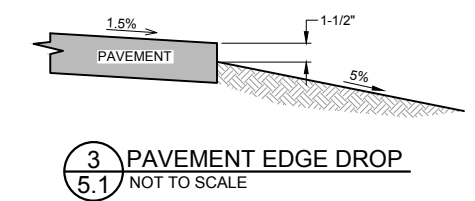
1 RUNWAY 2/20 TYPICAL SECTION
5.1 NOT TO SCALE



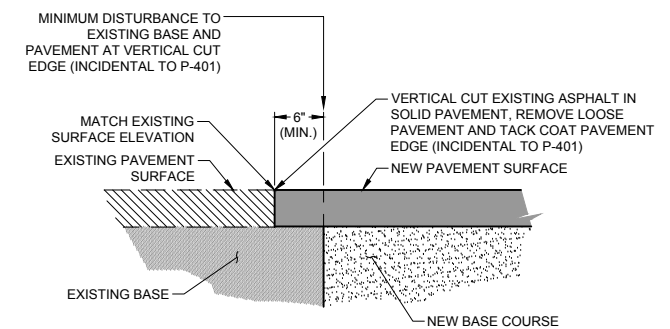
2 SAFETY AREA TYPICAL SECTION
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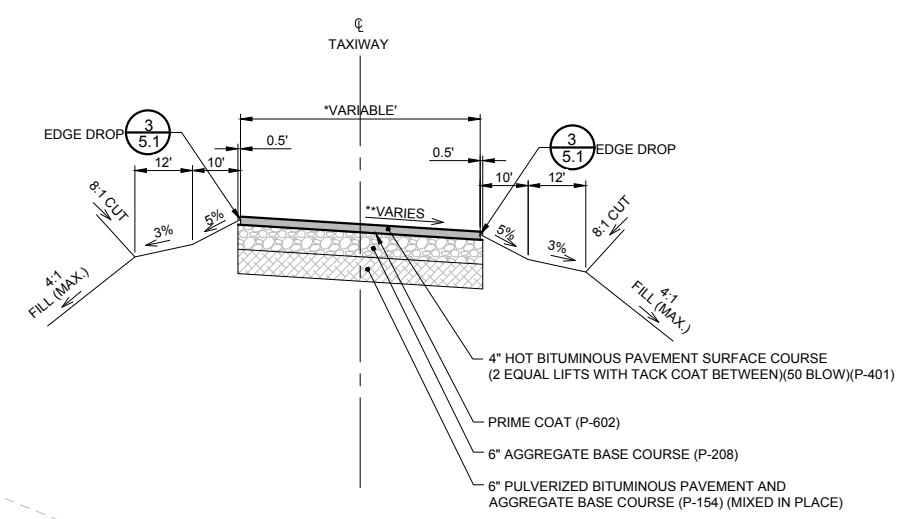
6 HOLD BAY TYPICAL SECTION RUNWAY 2 END
5.1 NOT TO SCALE



3 PAVEMENT EDGE DROP
5.1 NOT TO SCALE



4 JOINT AT EXISTING PAVEMENT EDGE
5.1 NOT TO SCALE



5 TAXIWAY TYPICAL SECTION
5.1 NOT TO SCALE

NOTES:

*WIDTH DIMENSIONS ARE VARIABLE, SEE LAYOUT PLANS.

**GRADING AT INTERSECTIONS WITH RUNWAY IS VARIABLE, SEE GRADING PLANS. 0.9% SLOPE FOR TWY A1 AND 0.31% SLOPE FOR TWY A2 IS NOMINAL ON TAXIWAYS.

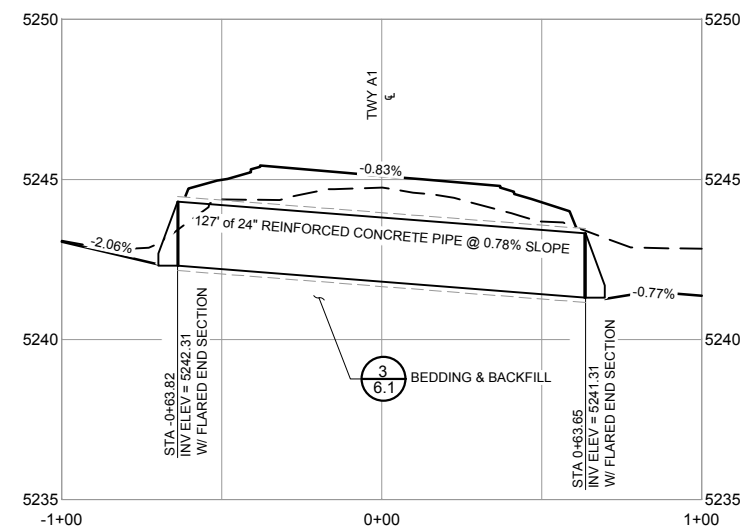
CONTRACTOR WILL BE REQUIRED TO PULVERIZED AND BLEND BITUMINOUS PAVEMENT AND AGGREGATE BASE COURSE, REMOVE BLENDED MIX AND STORE, CUT TO GRADE, AND REBUILD TAXIWAY TYPICAL SECTION AS SHOWN ABOVE

No.	Revision	Date	By

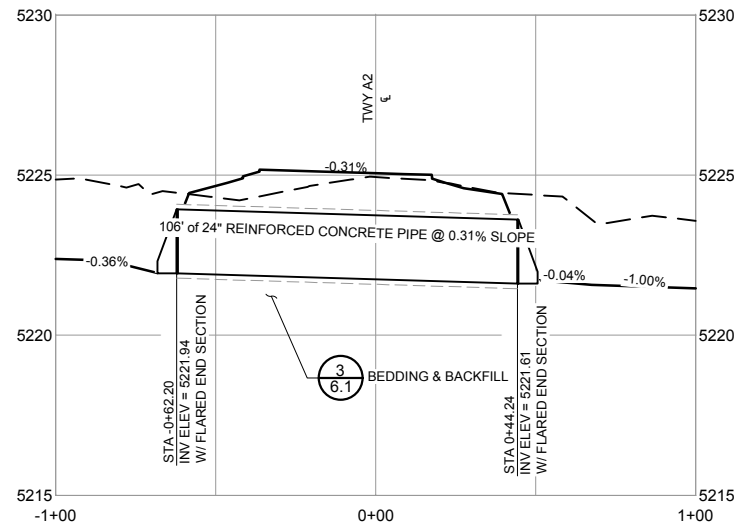
Project No: 166301
Date: 06/2017
File Name: 166301101

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Checked: JLS
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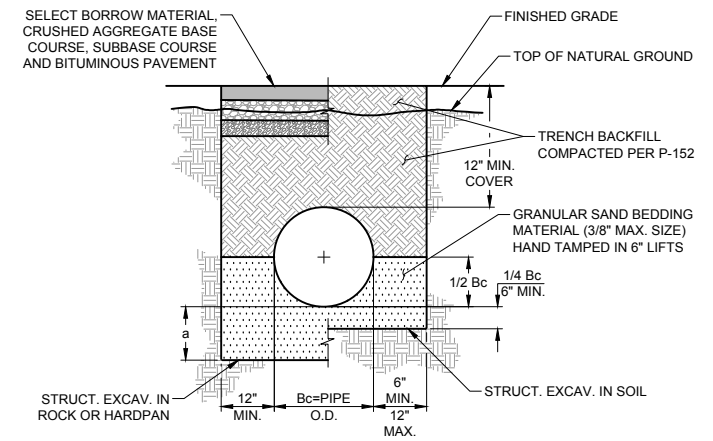
TYPICAL SECTIONS & DETAILS



1 TWY A1 CULVERT
6.1 GRID SCALE

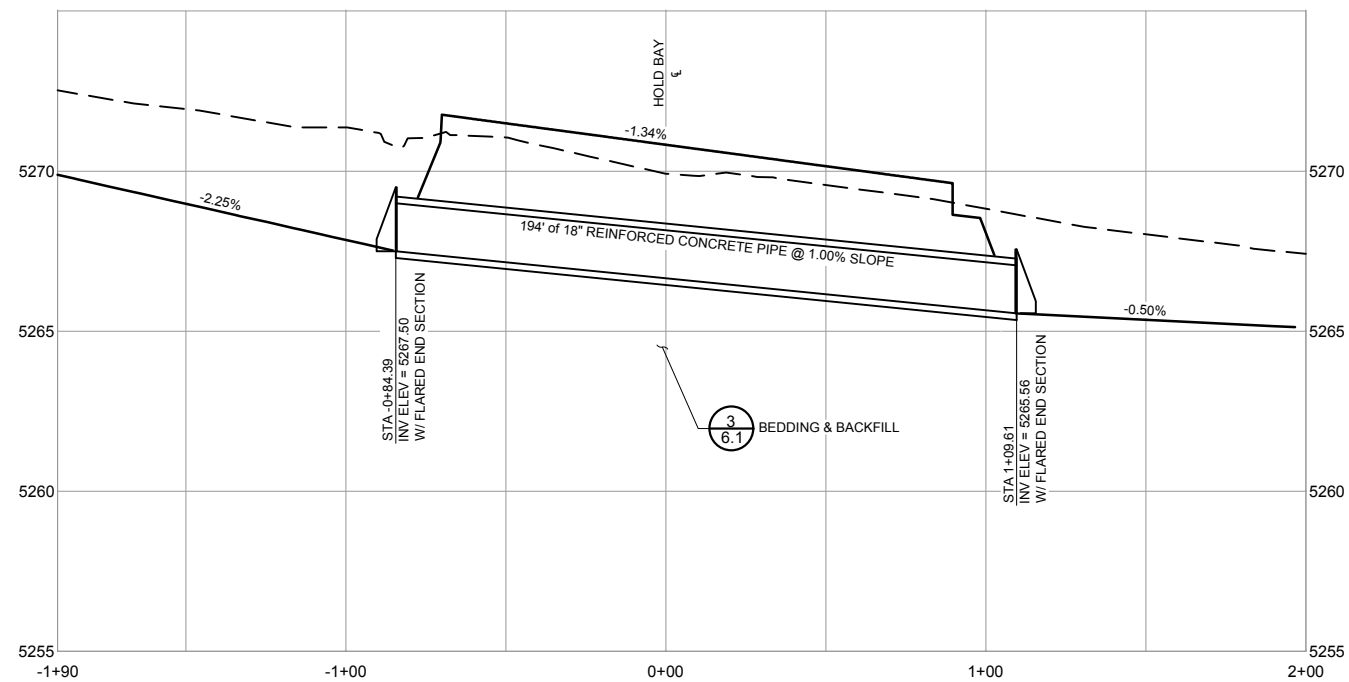


2 TWY A2 CULVERT
6.1 GRID SCALE



a = 12 INCHES MIN. OR 1/2 INCH FOR EACH FOOT OF FILL OVER THE TOP OF THE PIPE WHICHEVER IS GREATER, BUT NOT MORE THAN 3/4 Bc.

3 PIPE CULVERT BEDDING & BACKFILL DETAIL
6.1 NOT TO SCALE



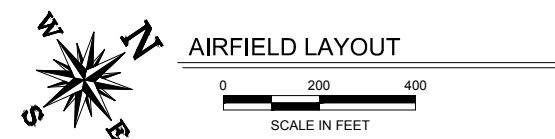
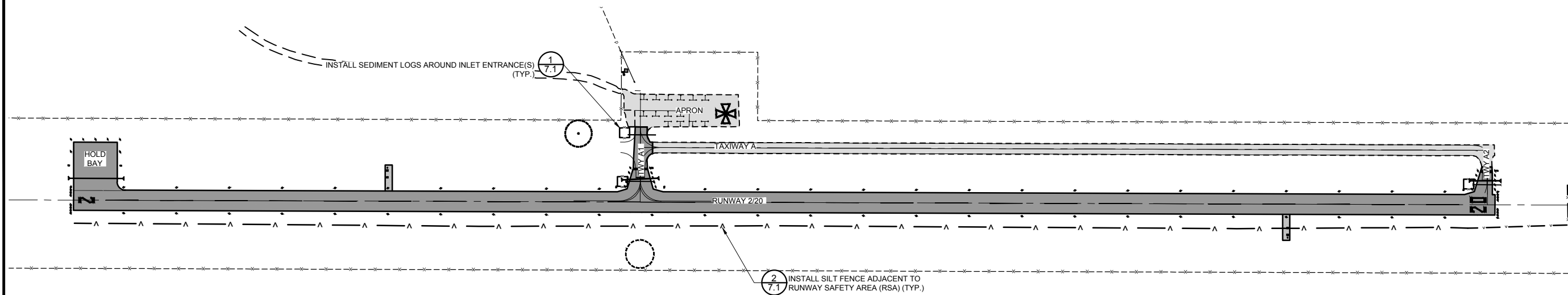
4 HOLD BAY CULVERT
6.1 GRID SCALE

No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301103

Drawn: BKR/LKB
Checked: JLS
Approved: TJA

**DRAINAGE
CULVERTS
PROFILES &
DETAILS**



- LEGEND**
- SEDIMENT LOG
 - A- SILT FENCE
 - >- SWALE DIRECTION

EROSION CONTROL NOTES

EROSION CONTROL OPERATIONS SHALL CONFORM TO THE FAA ADVISORY CIRCULAR, AC 150/5370-10G, ITEM P-156, TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL.

PLACEMENT OF TOPSOIL, SEEDING, AND MULCHING WILL NOT BE DONE IN A SINGLE OPERATION, BUT SHALL BE COMPLETED AFTER EACH CONSTRUCTION PHASE.

WASHING OUT OF CONCRETE TRUCKS SHALL BE LIMITED TO SITES PRE-APPROVED BY THE ENGINEER.

FENCE (SILT) AND EROSION BALES SHALL BE PLACED PRIOR TO WORK COMMENCING. ALL EROSION CONTROL DEVICES LOCATED WITHIN THE RUNWAY OR TAXIWAY SAFETY AREAS WILL BE REMOVED PRIOR TO ACTIVATION OR REACTIVATION OF THE RUNWAY OR TAXIWAY

TO PROVIDE TEMPORARY EROSION CONTROL PRIOR TO SEED APPLICATION, UTILIZE SURFACE ROUGHENING(ON THE CONTOUR OR PERPENDICULAR TO PREVAILING WINDS) AND APPLY MULCH.

CONTRACTOR SHALL NOT STAGE IN A WETLAND OR RIPARIAN AREA.

UPON GRADING COMPLETION, SITE SHALL BE SEEDED WITH THE SPECIFIED MIX AND MULCHED.

SEEDING APPLICATION:

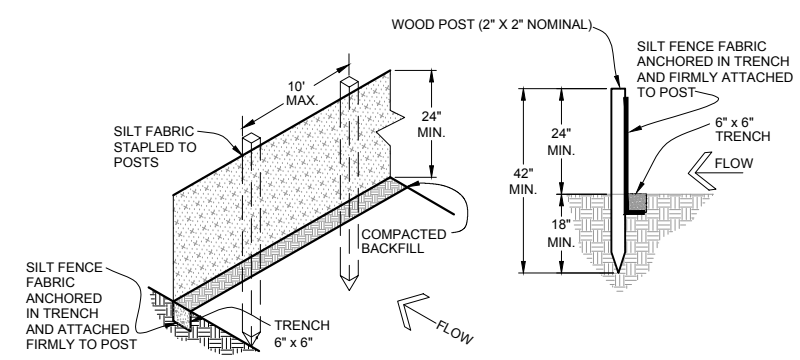
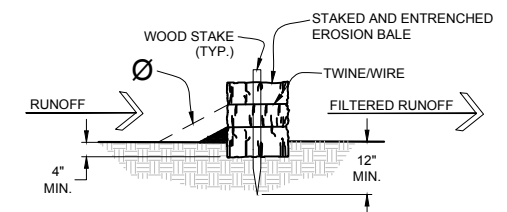
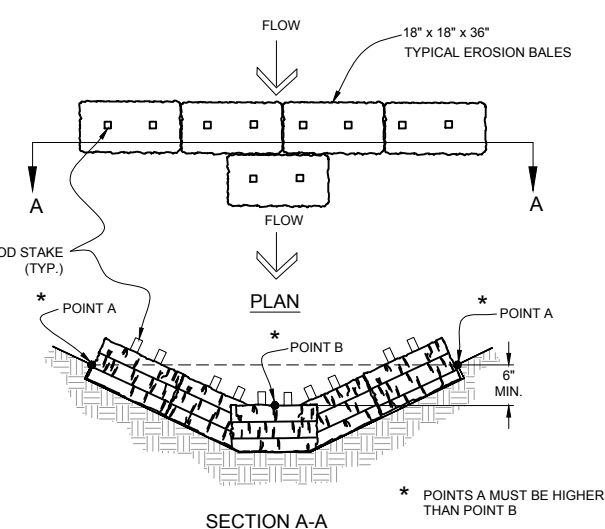
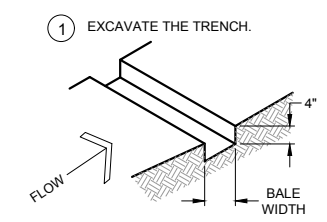
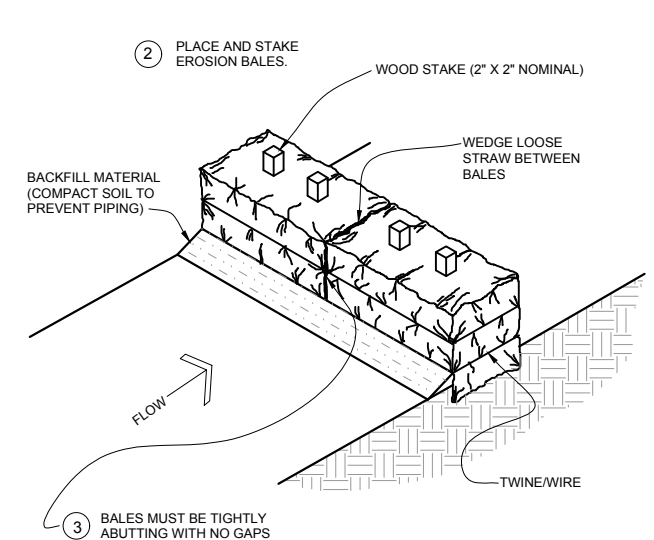
THE APPLIED SEED SHALL NOT BE COVERED BY A SOIL THICKNESS GREATER THAN 0.5" IN DEPTH.

SEEDING SHALL TAKE PLACE WITHIN 14 DAYS OF ACHIEVING FINISH GRADE. SEEDING MUST OCCUR WITHIN 3 DAYS OF TOPSOIL PLACEMENT.

SEED SHALL BE PLANTED WITH DRILL SEEDING EQUIPMENT, WHENEVER POSSIBLE.

AREAS THAT REQUIRE BROADCAST SEEDING SHALL BE MULCHED AND TACKIFIED.

SEED APPLIED HYDRAULICALLY SHALL INCLUDE TACKIFIER IN THE MIX, AS SPECIFIED BY THE MANUFACTURER.



2
7.1 SILT FENCE
NOT TO SCALE

1
7.1 SEDIMENT LOG TRENCHING & STAKING
NOT TO SCALE

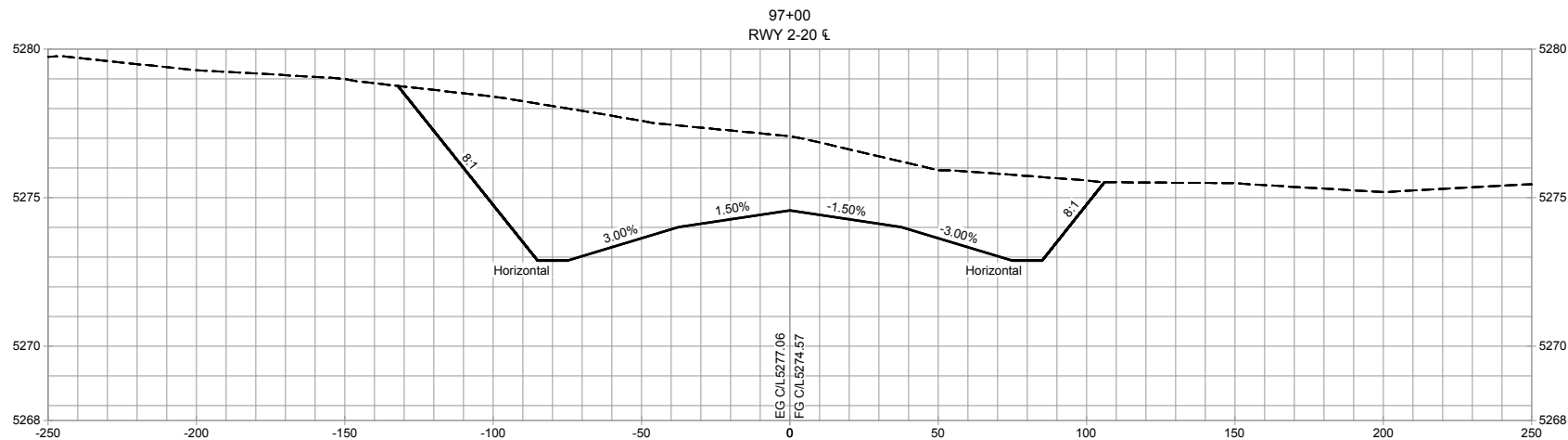
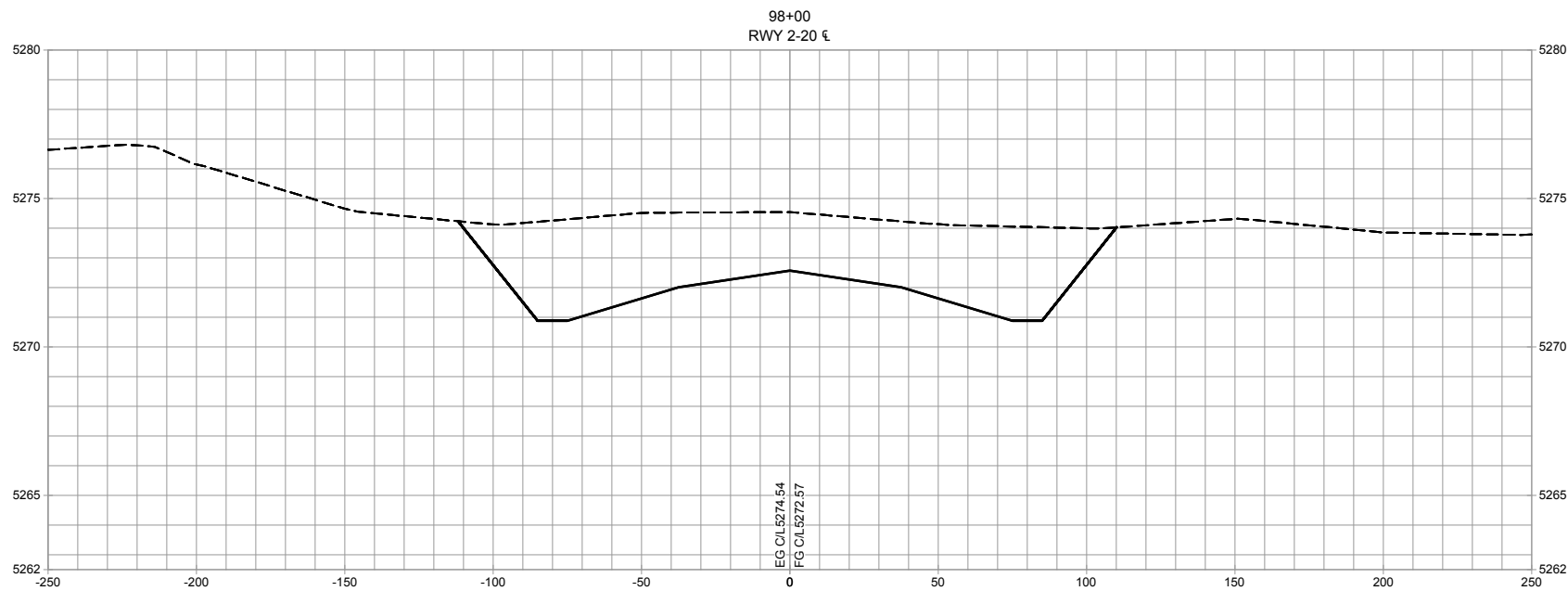
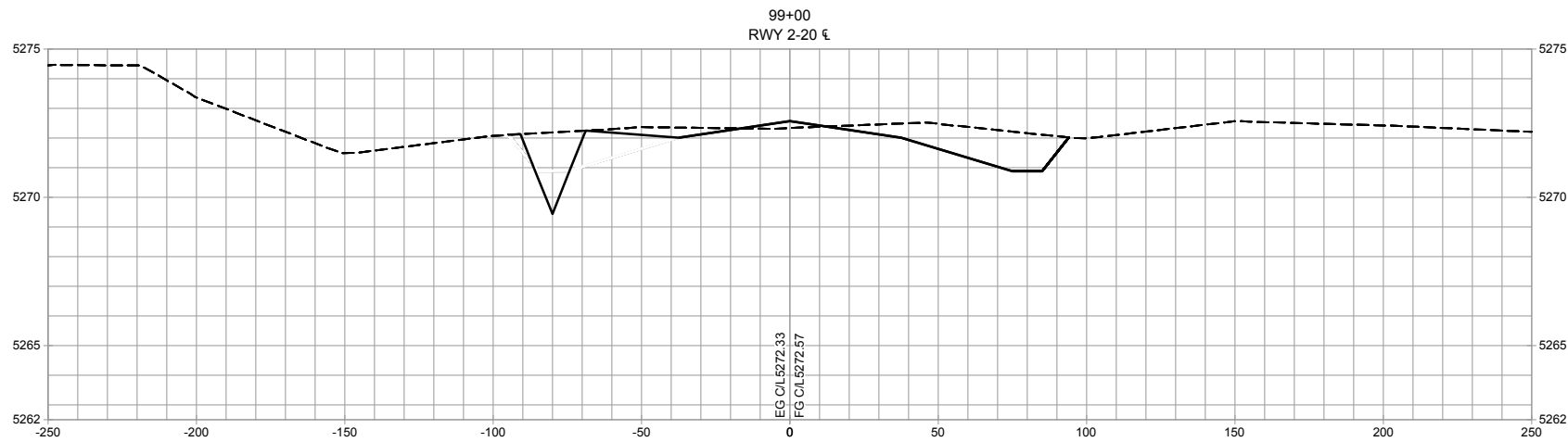
Ø SEDIMENT REMOVAL SHALL BE PERFORMED CONTINUOUSLY FOR PROPER FUNCTION.

No.	Revision	Date	By

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File Name: 166301101

Drawn: BKR/LKB
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**EROSION CONTROL
PLAN &
DETAILS**



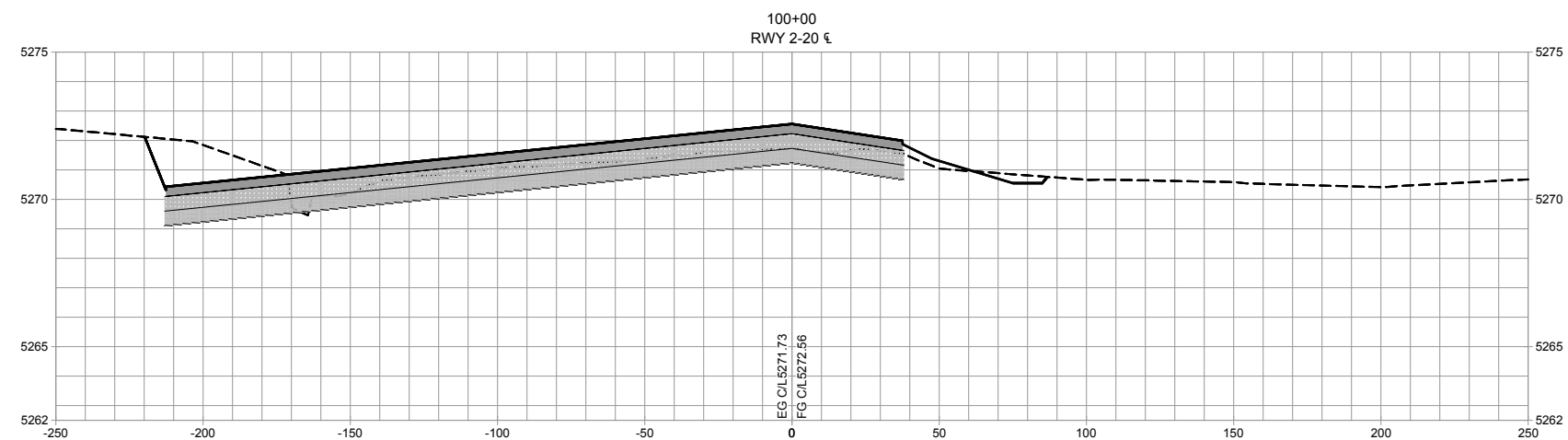
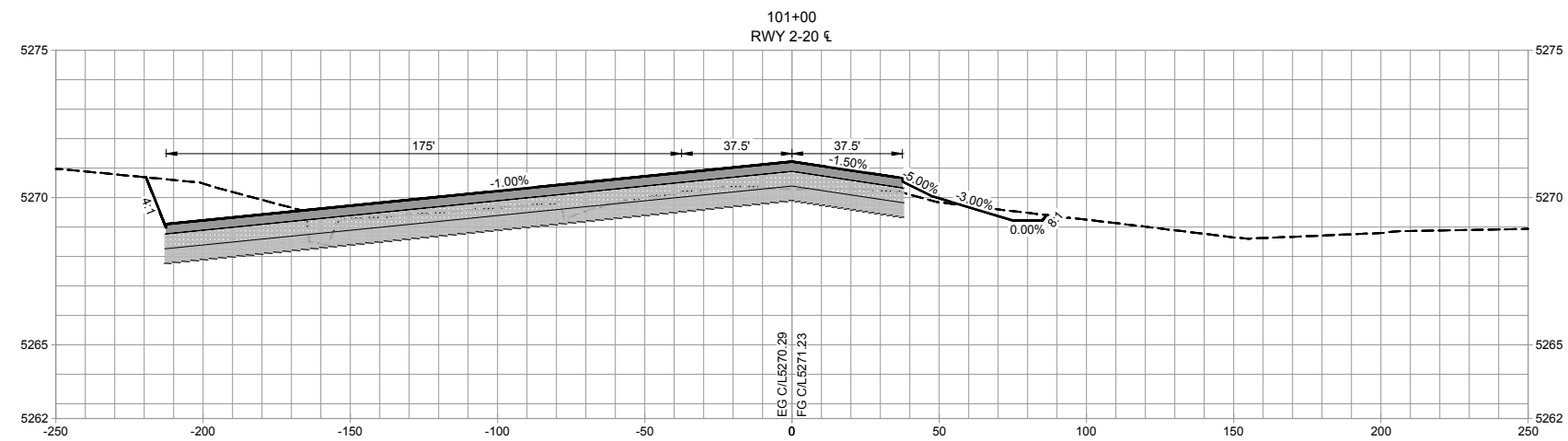
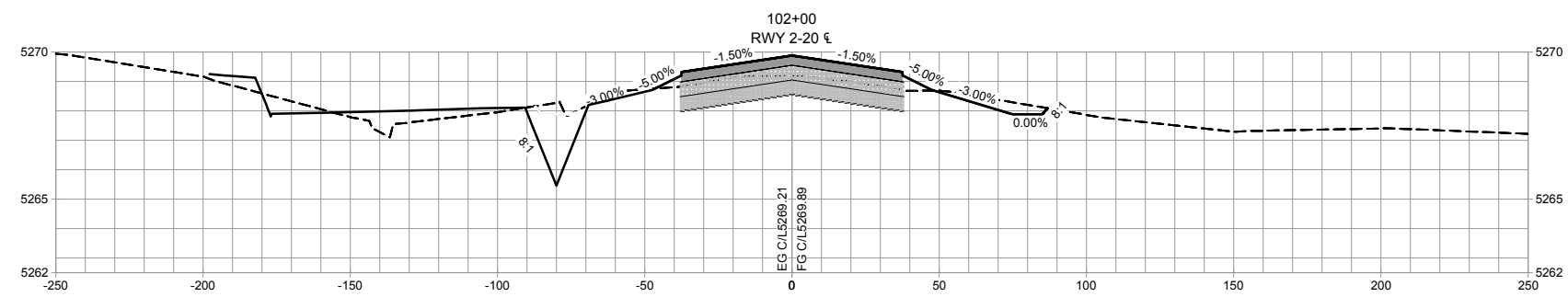
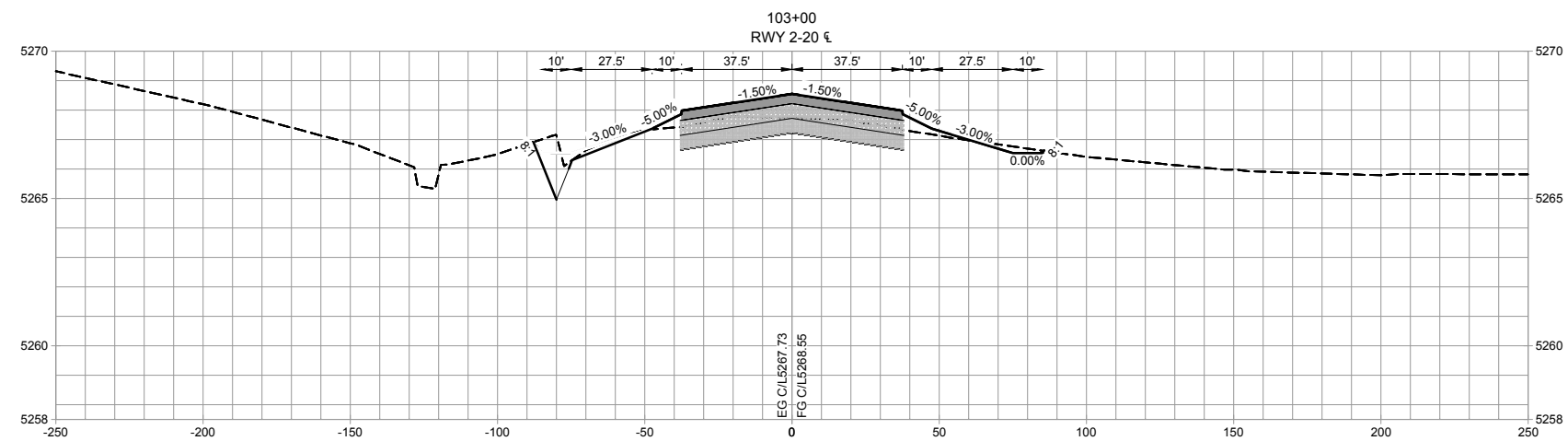
No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS

Sheet: 8.1



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2017 IMPROVEMENTS

NAVAJO DOT CO11473

A.I.P. No. 3-35-0049-005-2017

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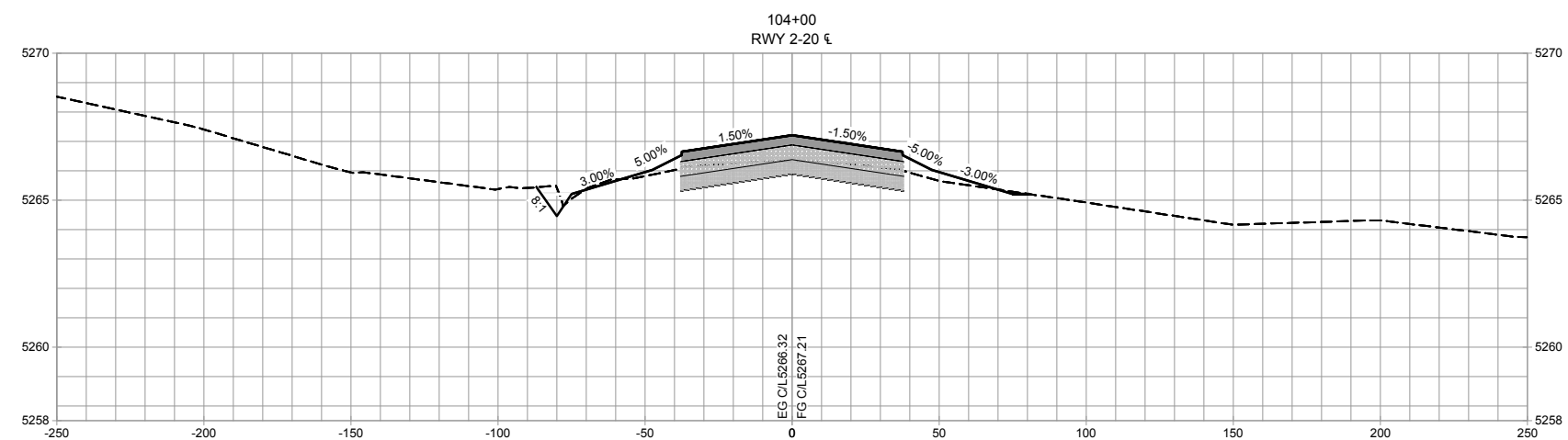
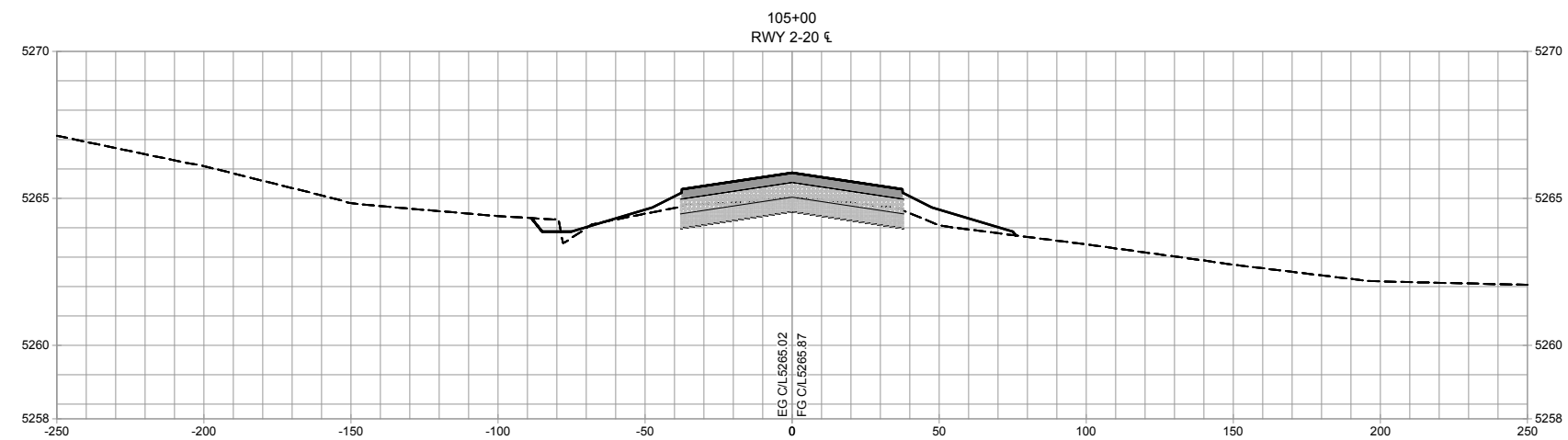
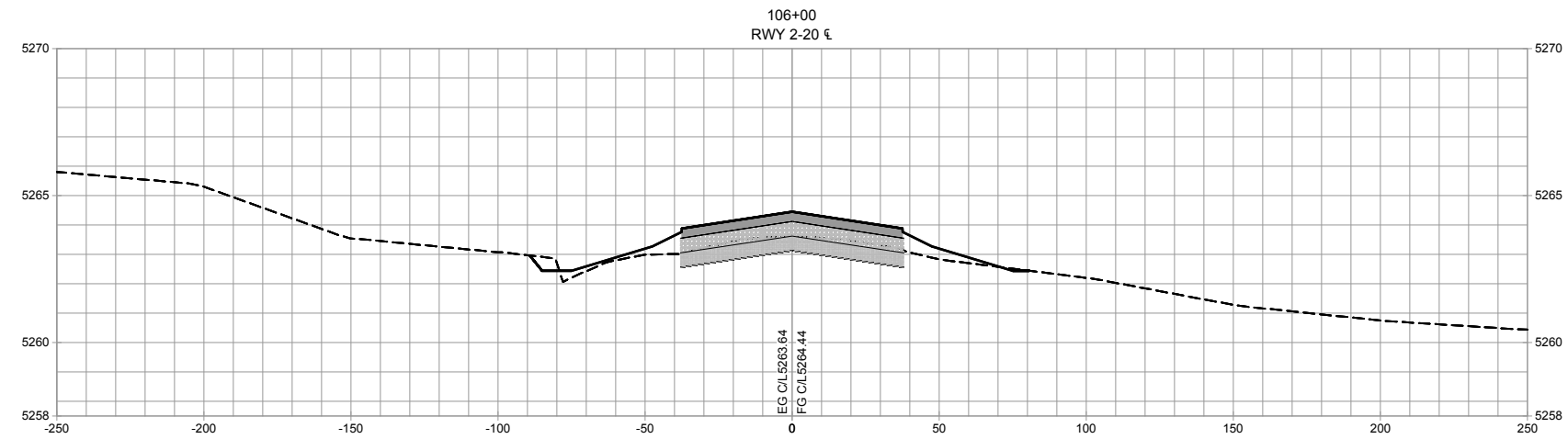
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RUNWAY 2/20 CROSS SECTIONS

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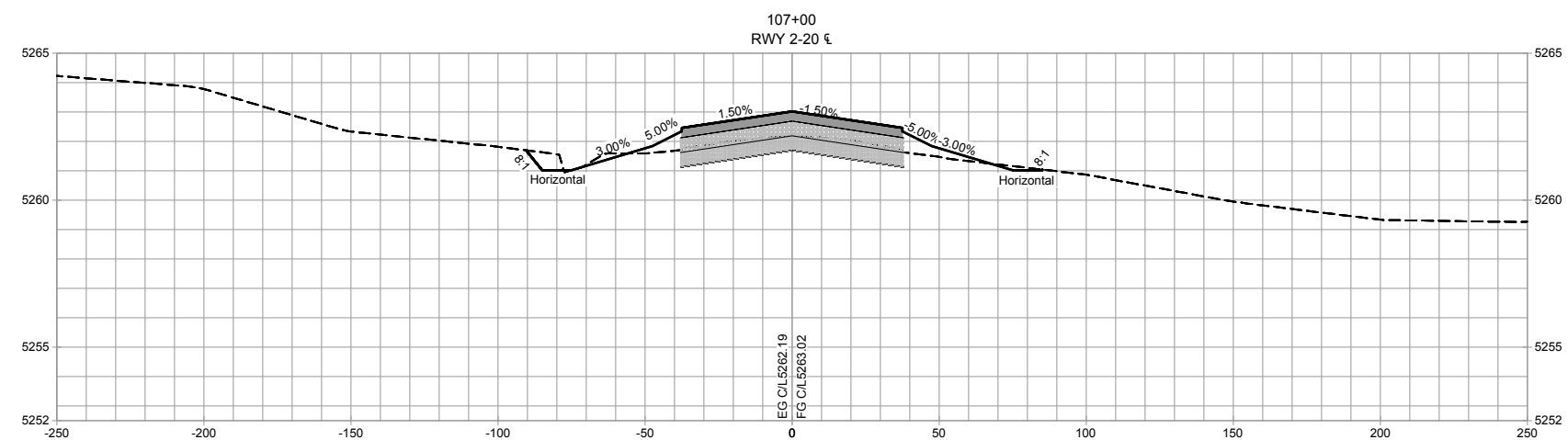
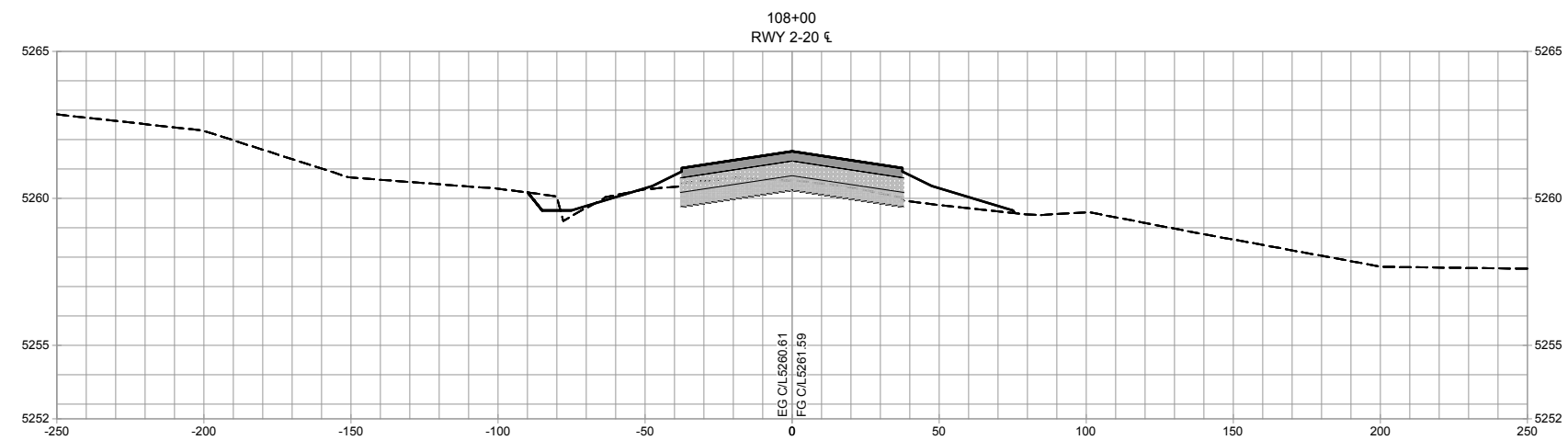
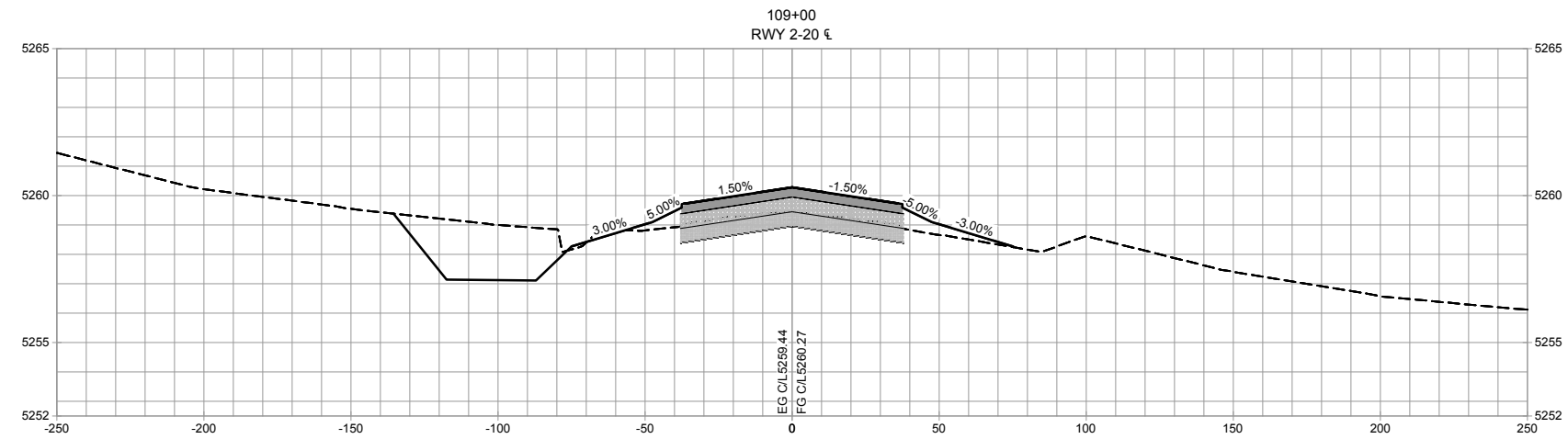


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RUNWAY 2/20
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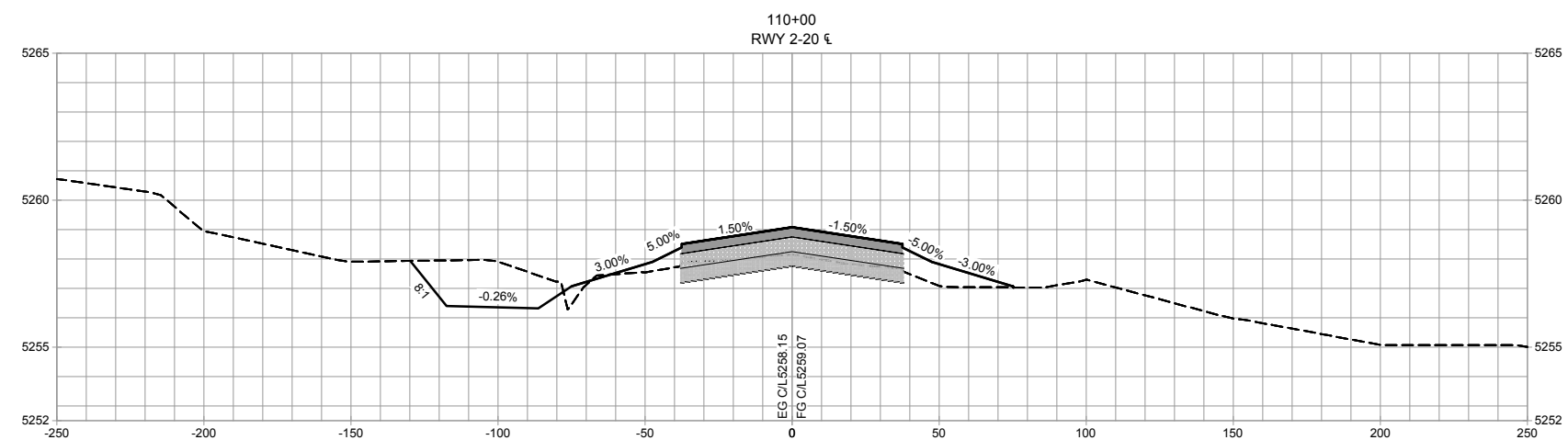
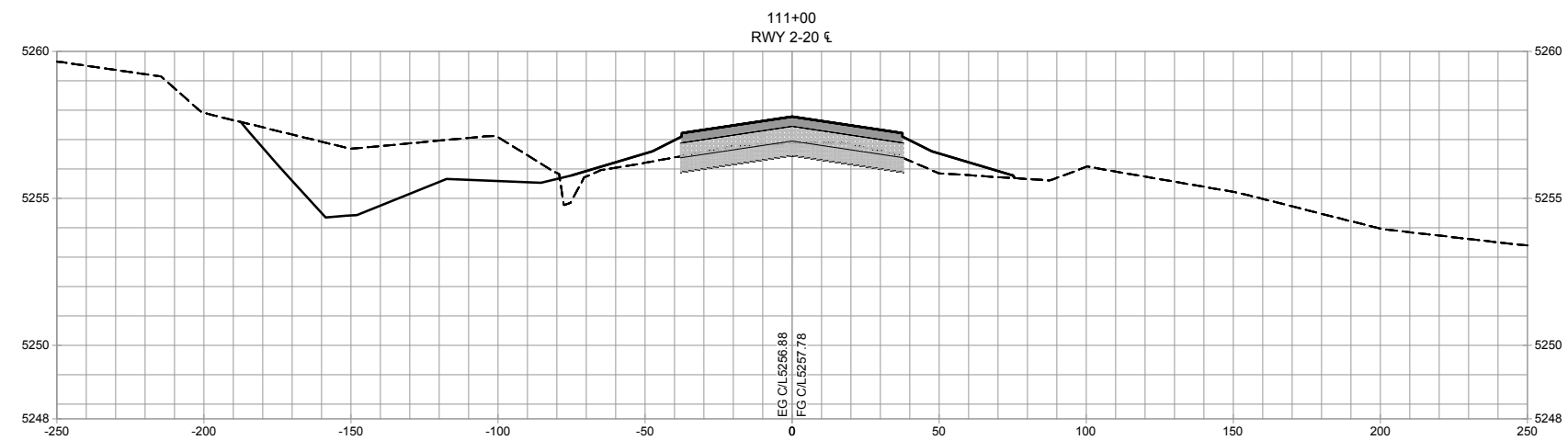
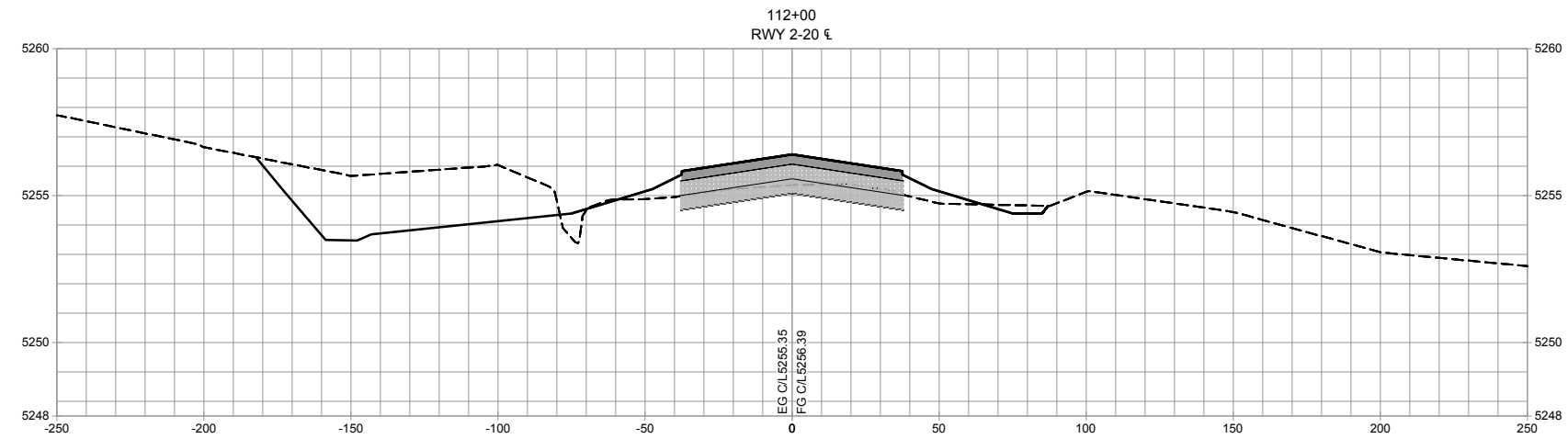


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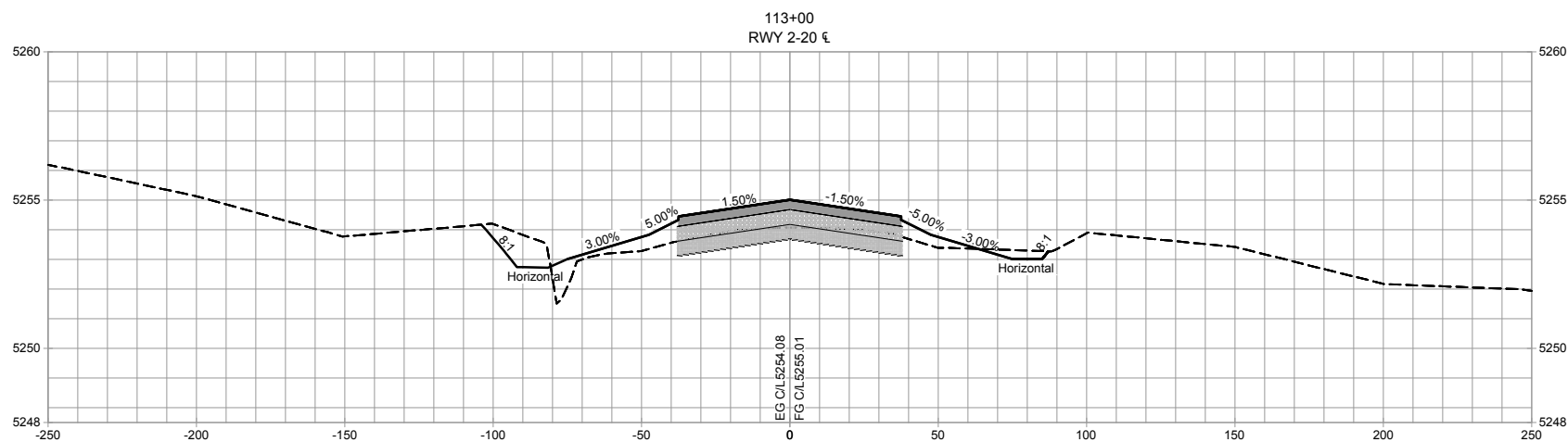
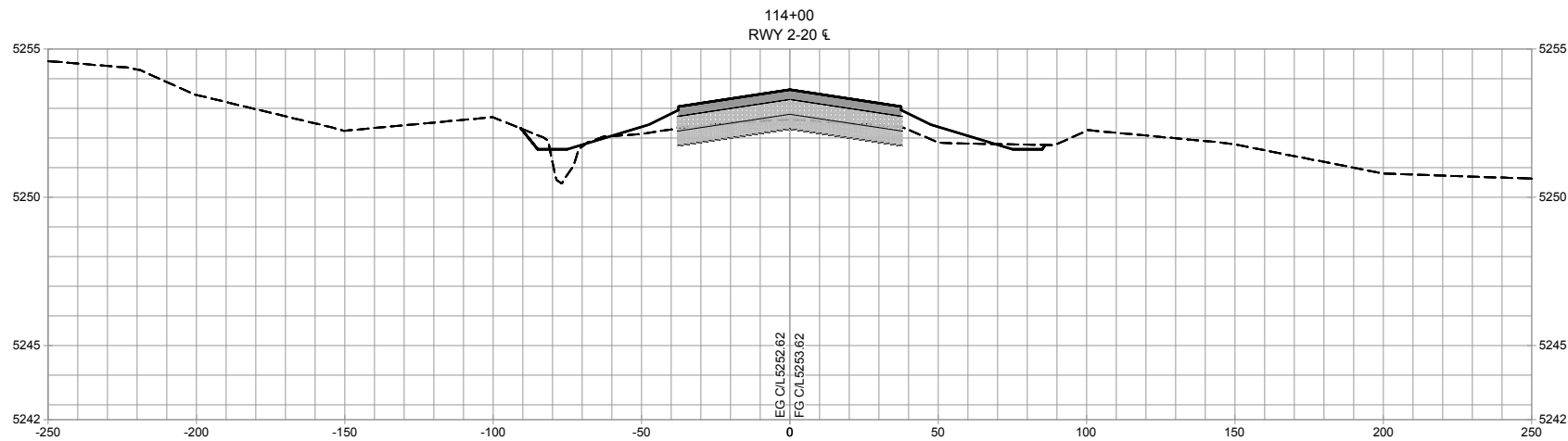
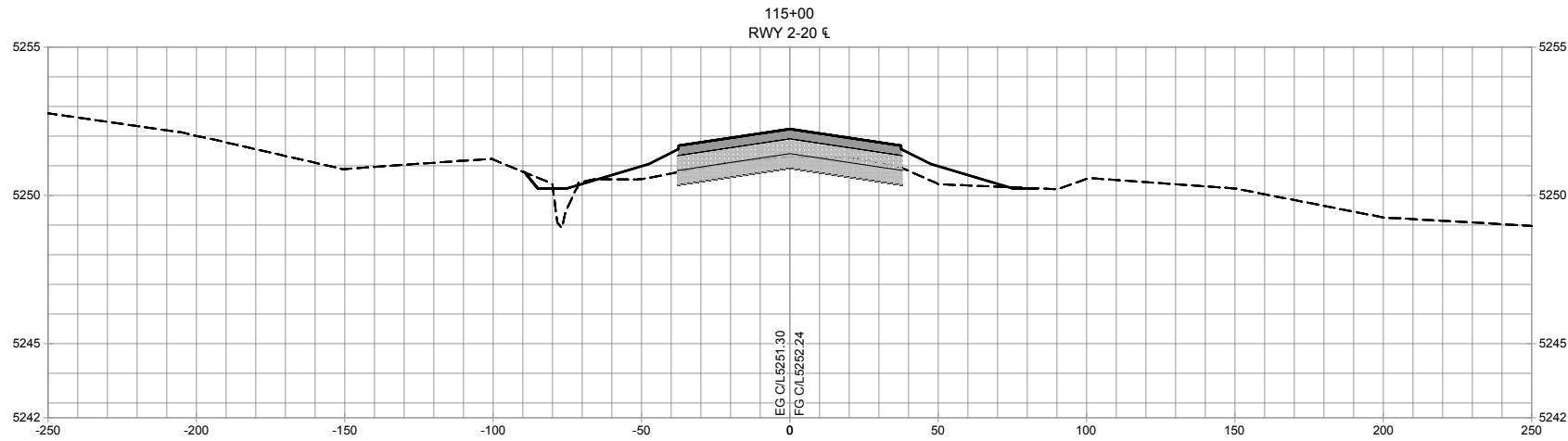


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RUNWAY 2/20
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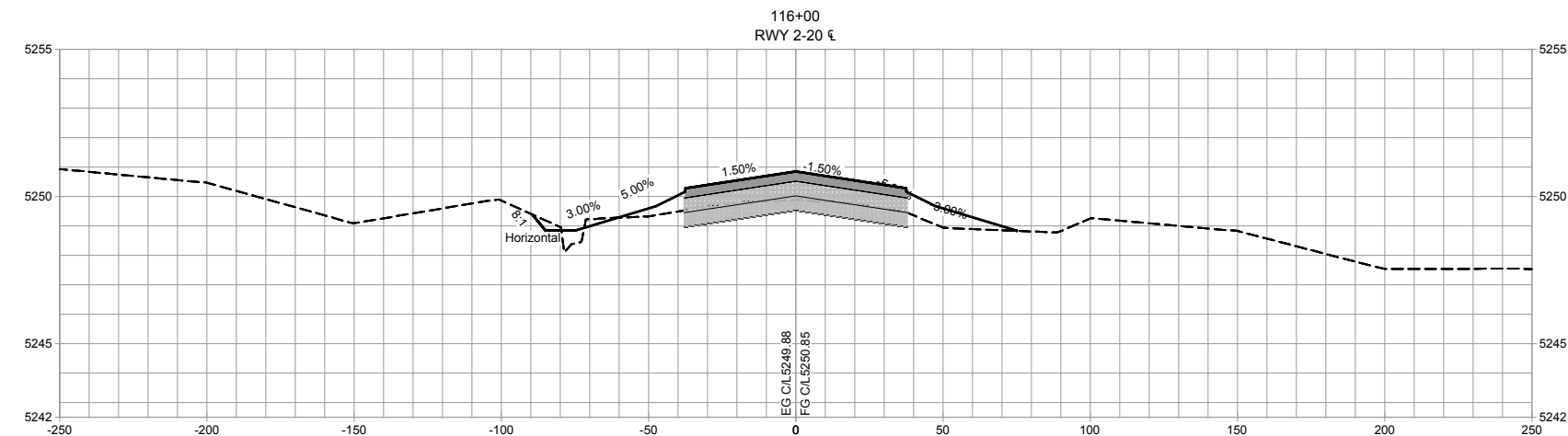
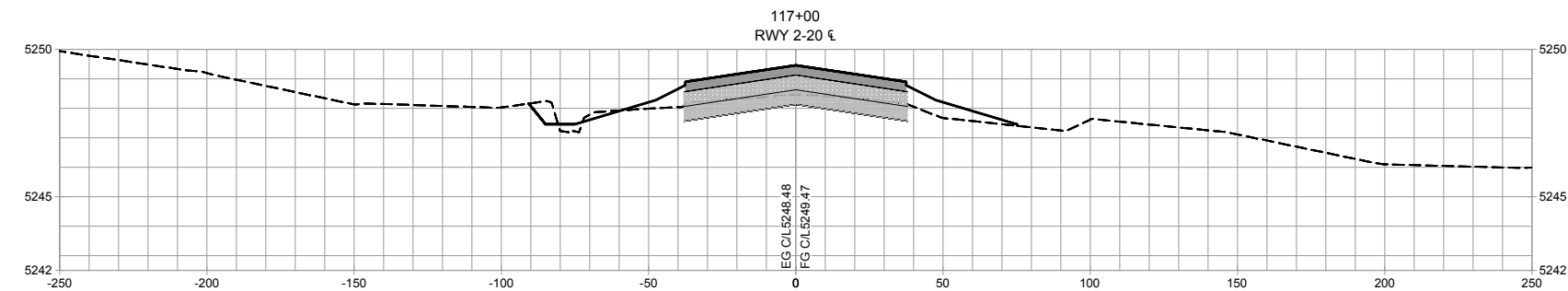
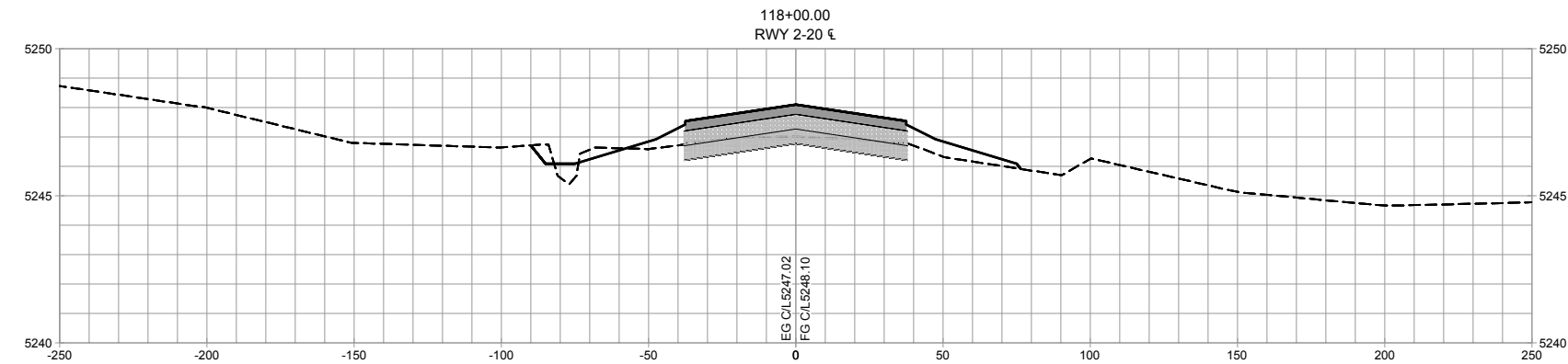
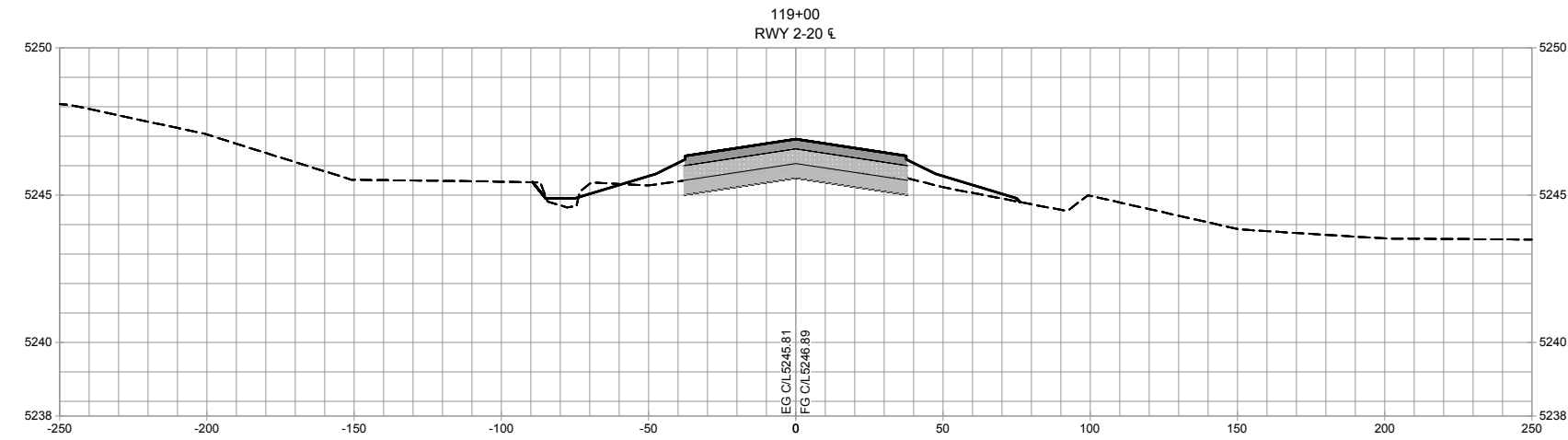


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RUNWAY 2/20
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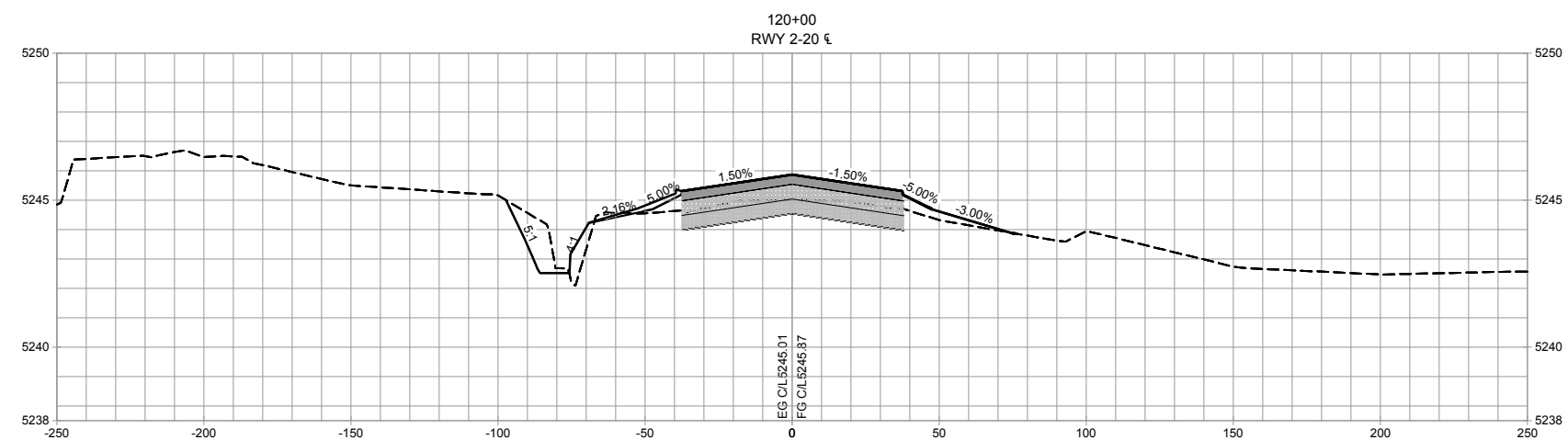
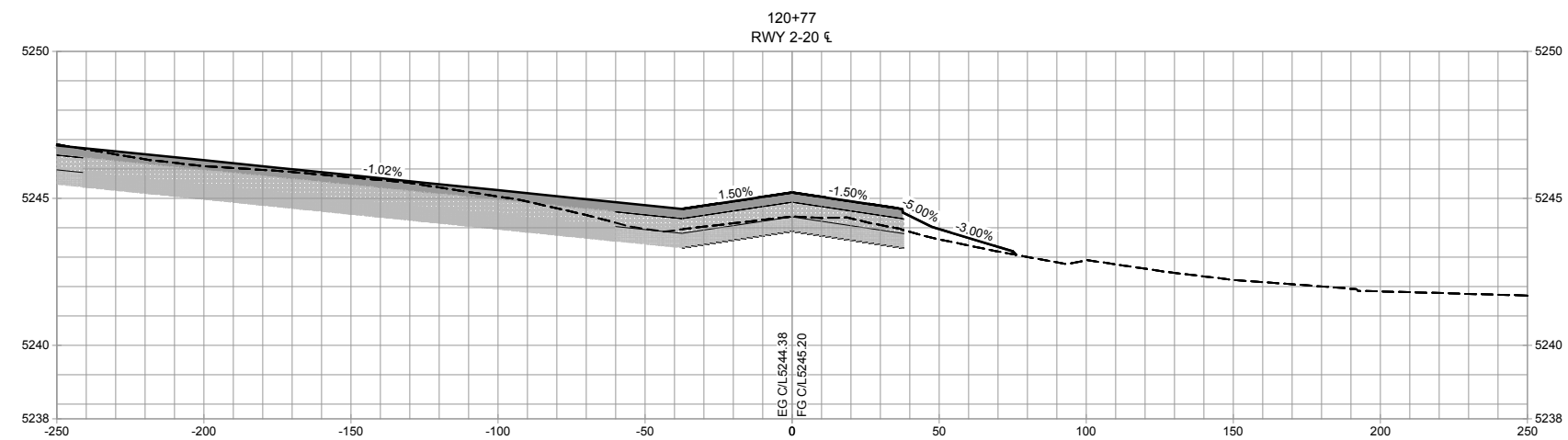
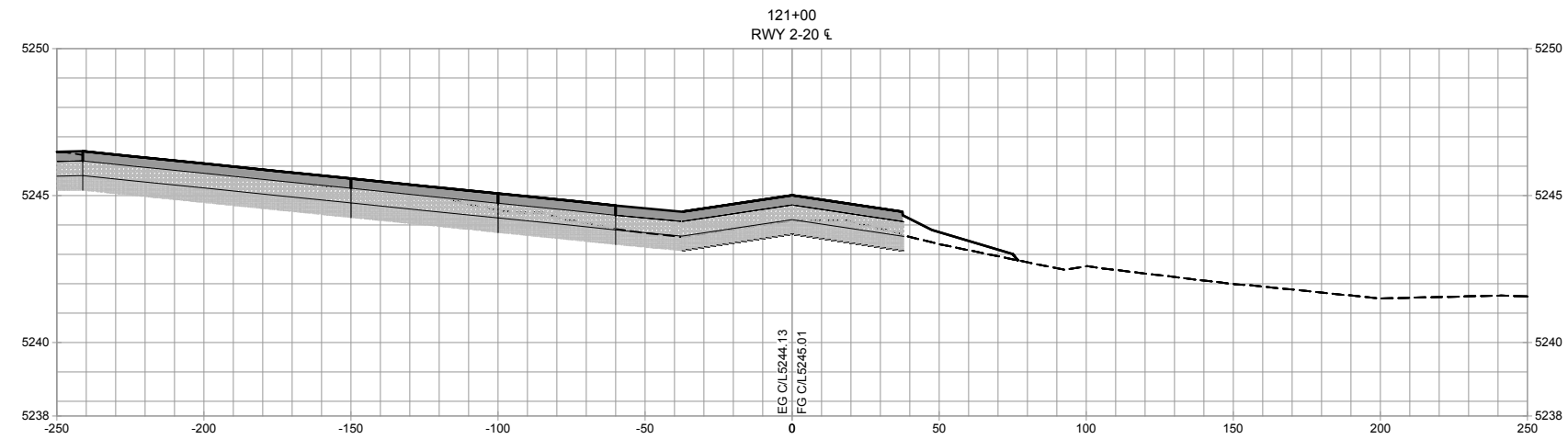
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RUNWAY 2/20
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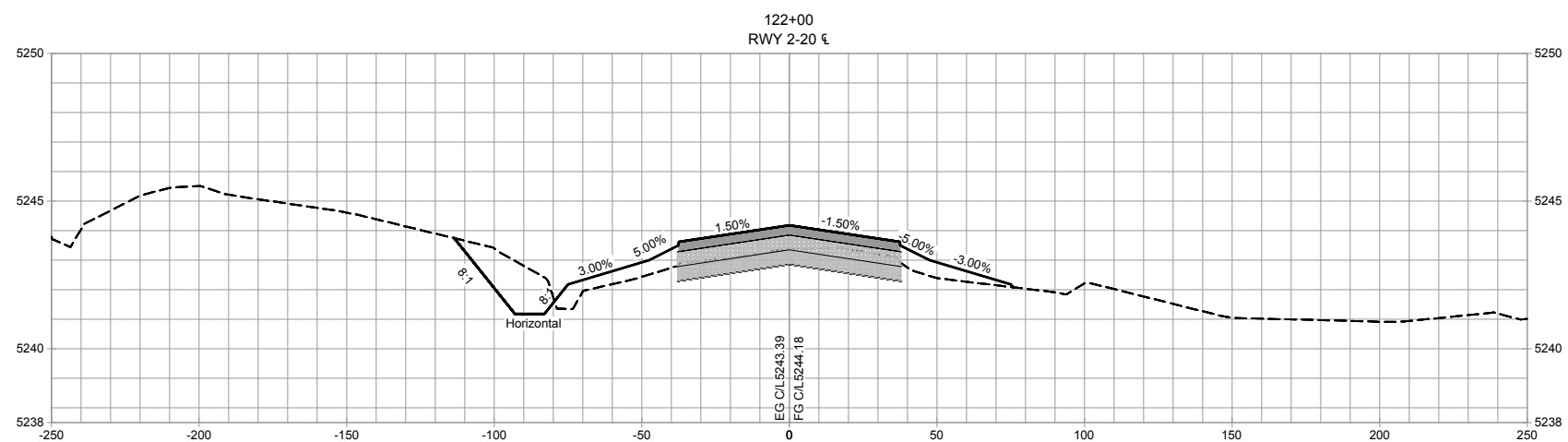
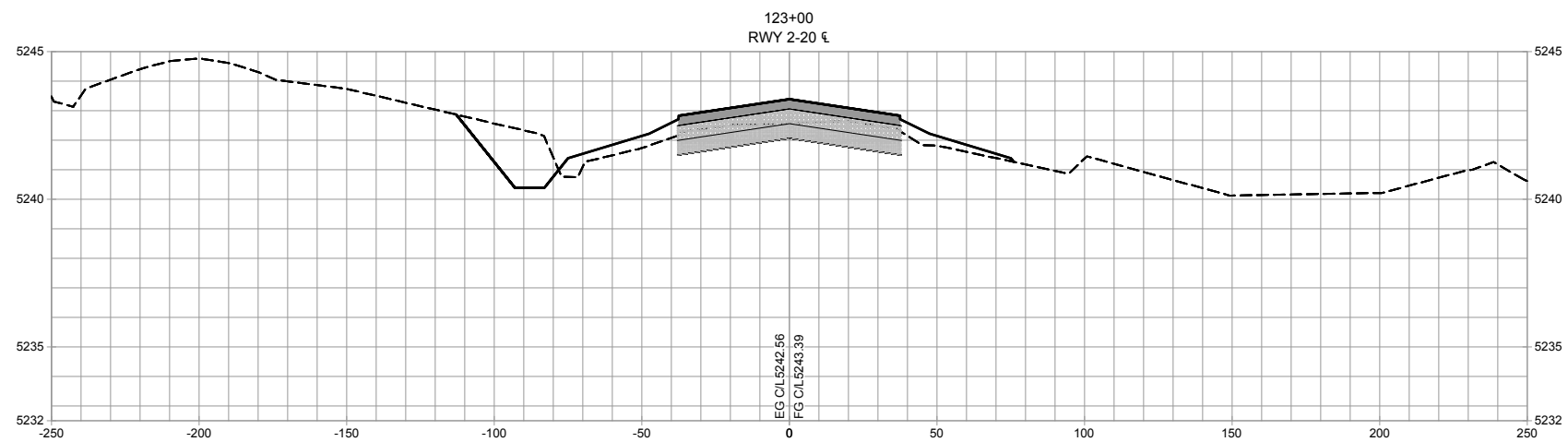
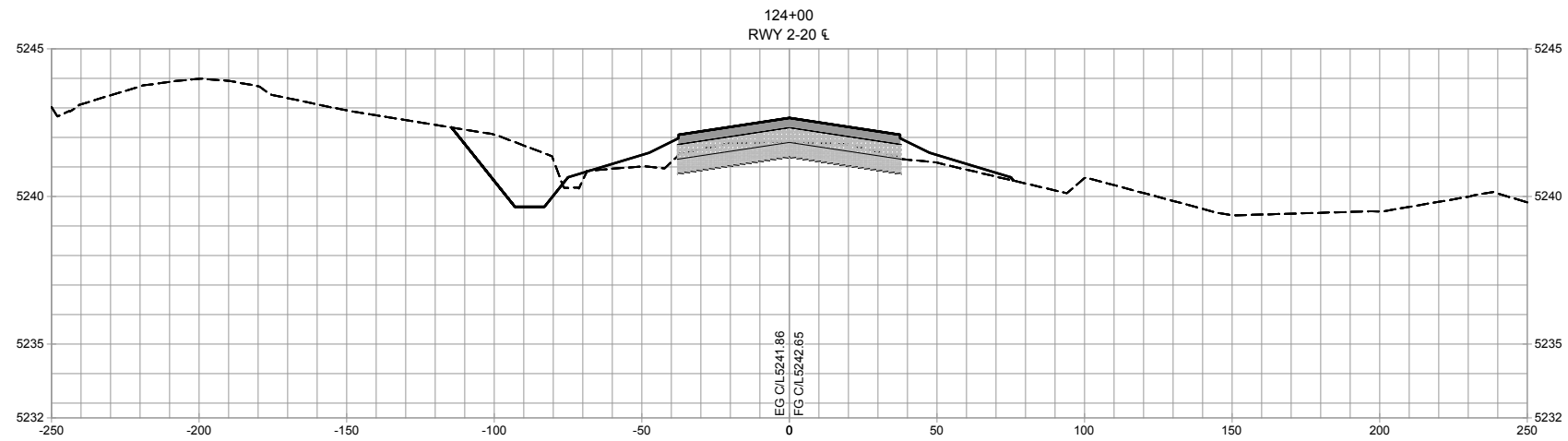


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RUNWAY 2/20
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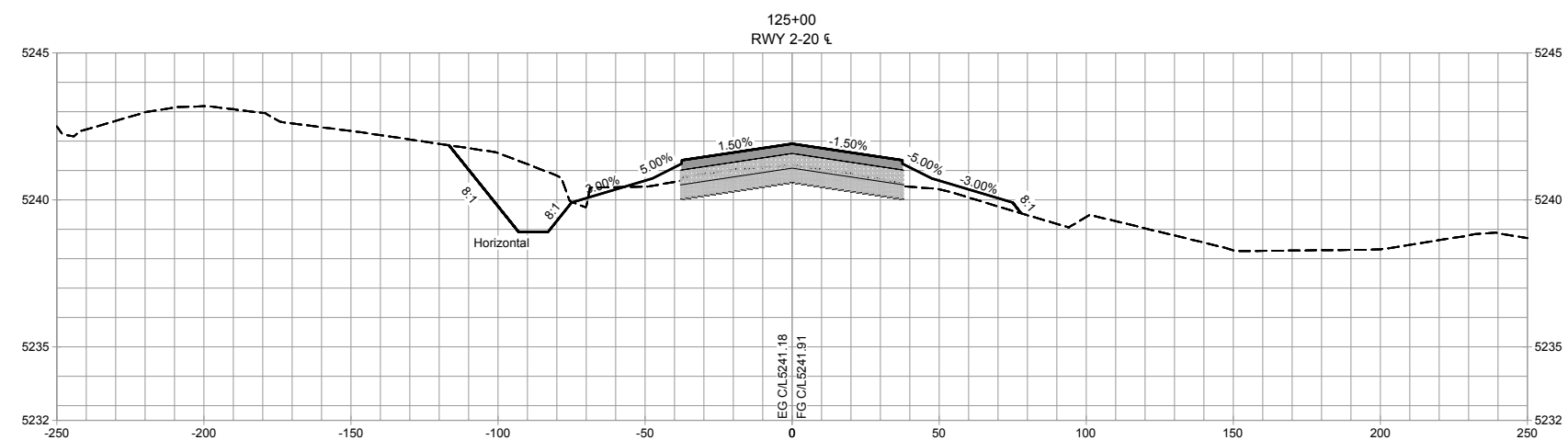
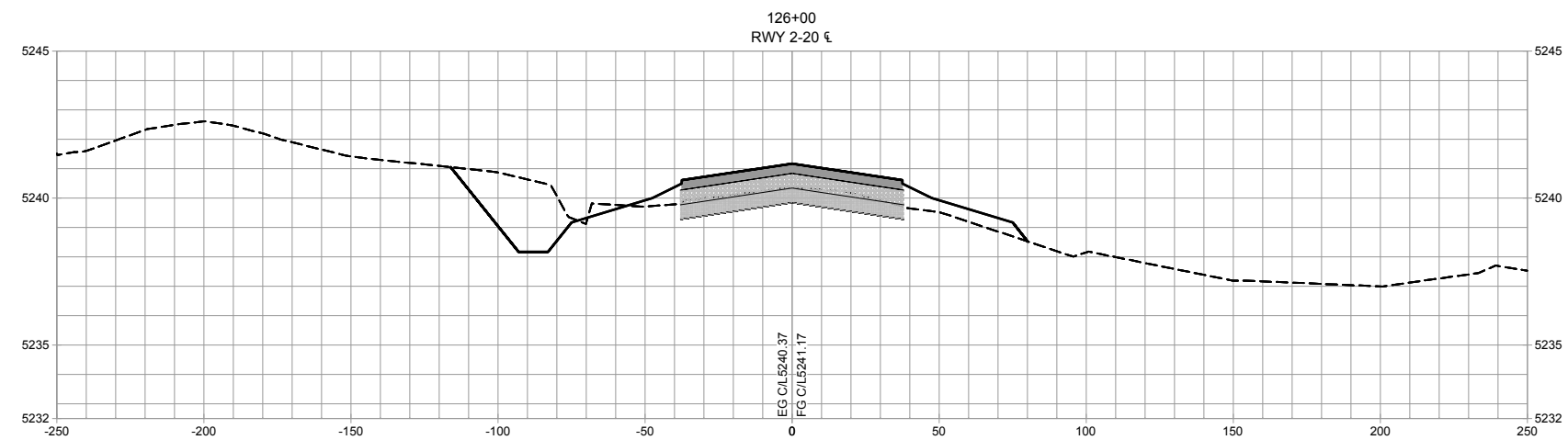
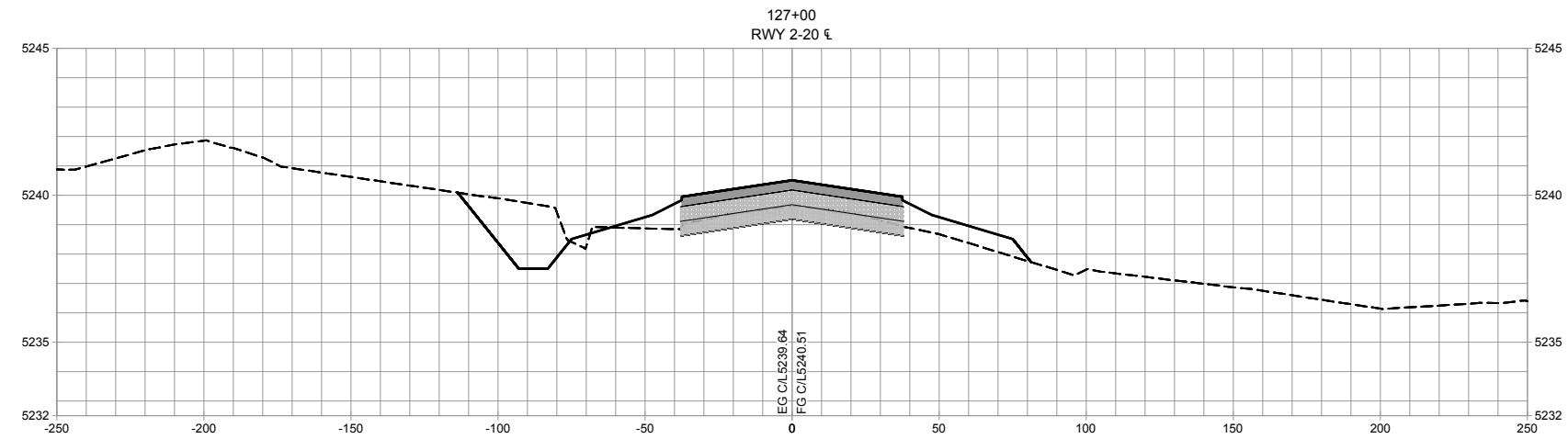


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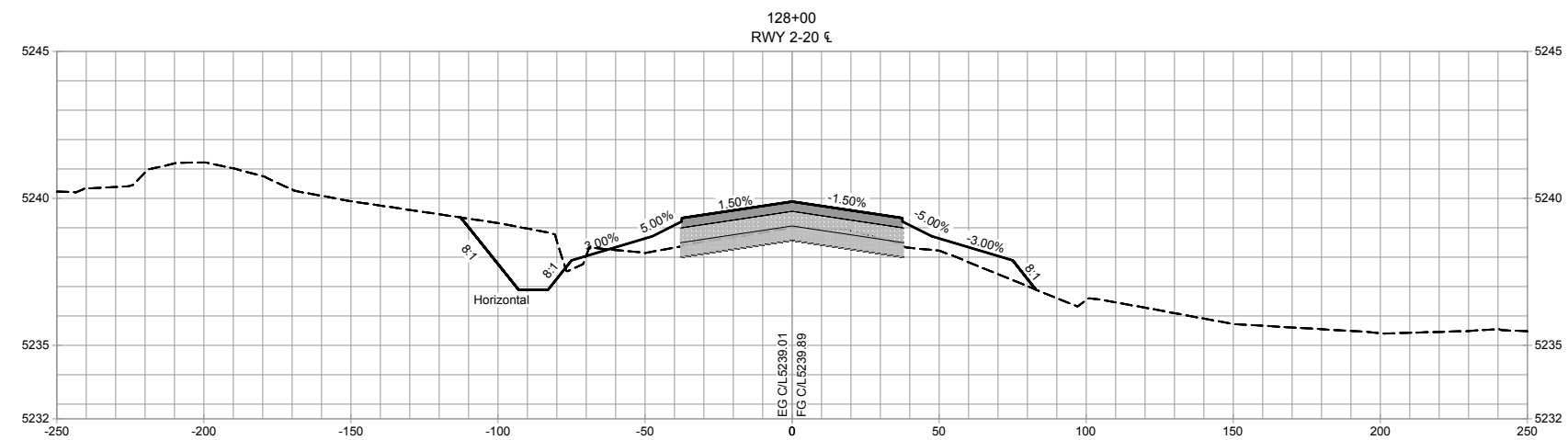
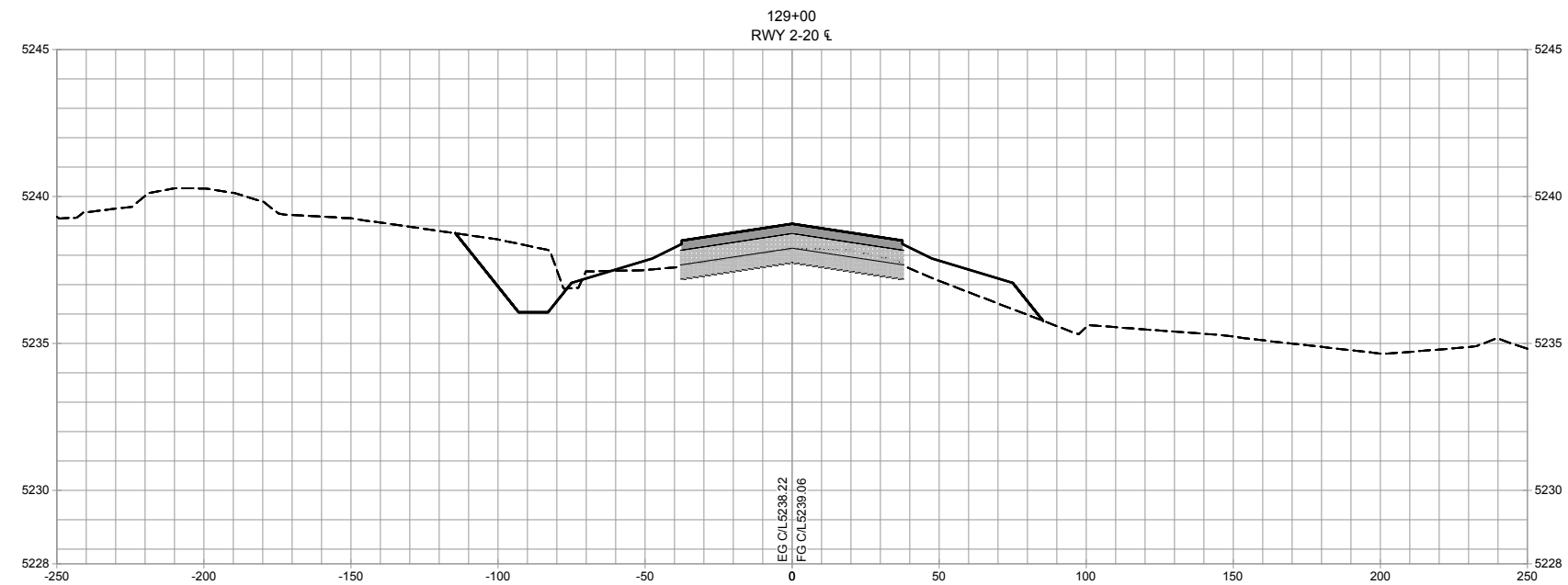
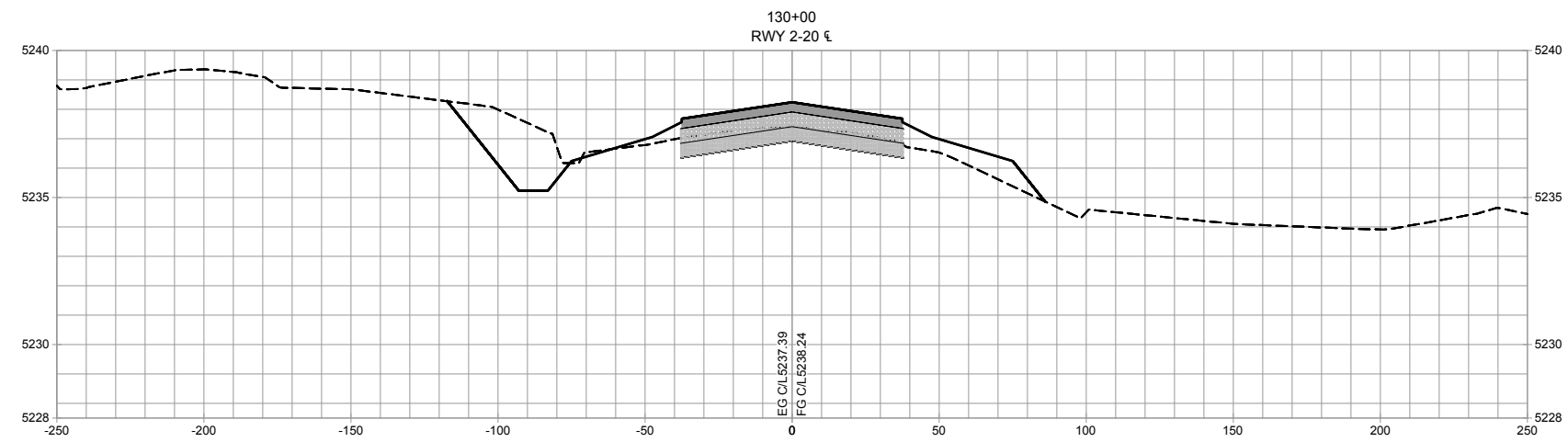
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RUNWAY 2/20
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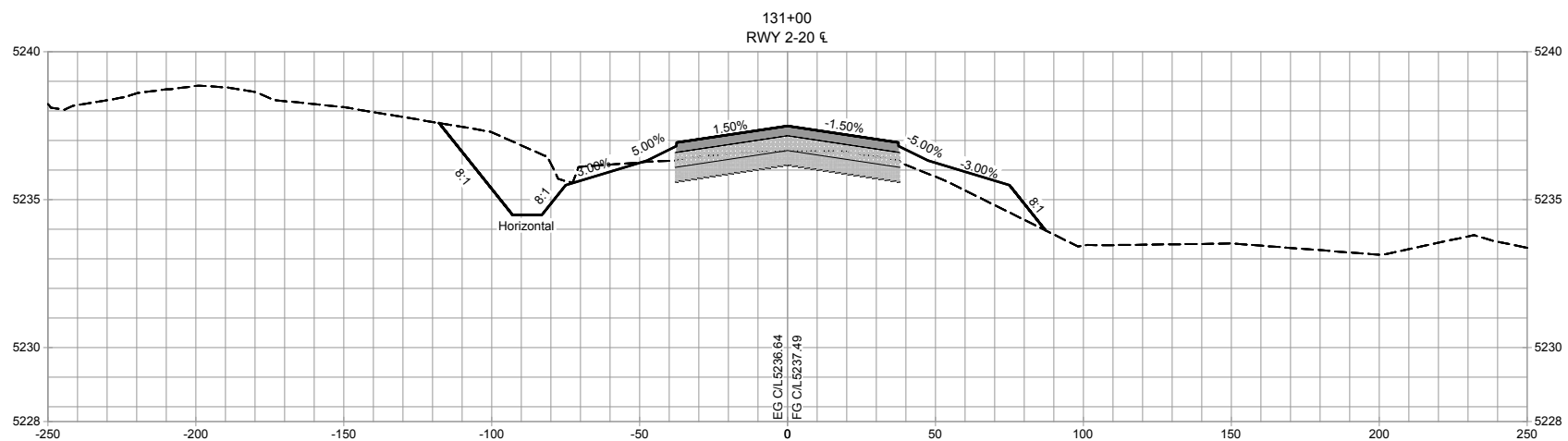
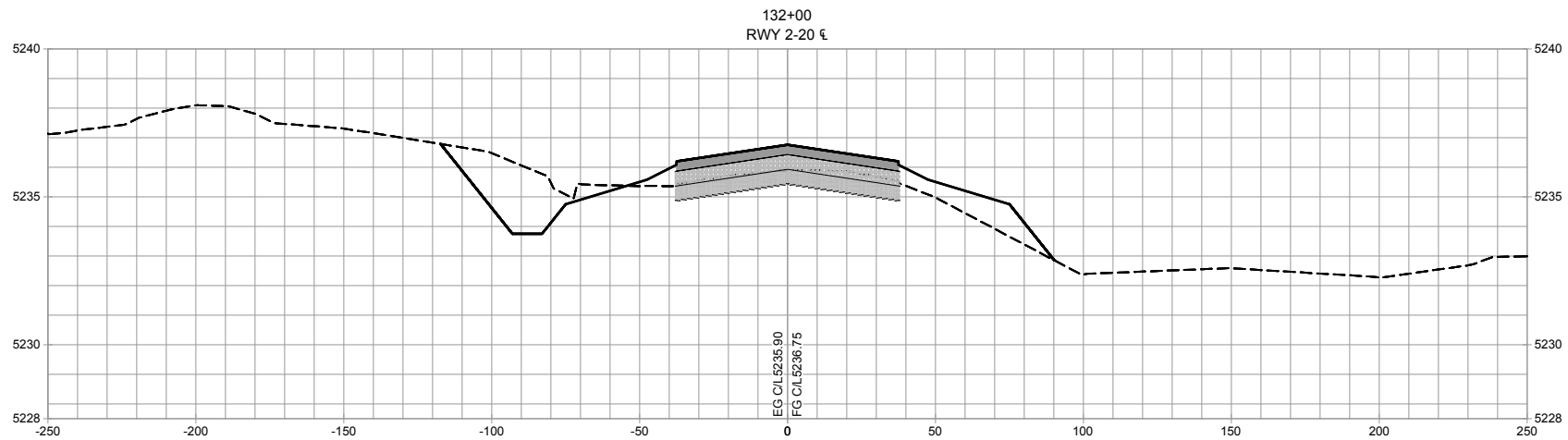
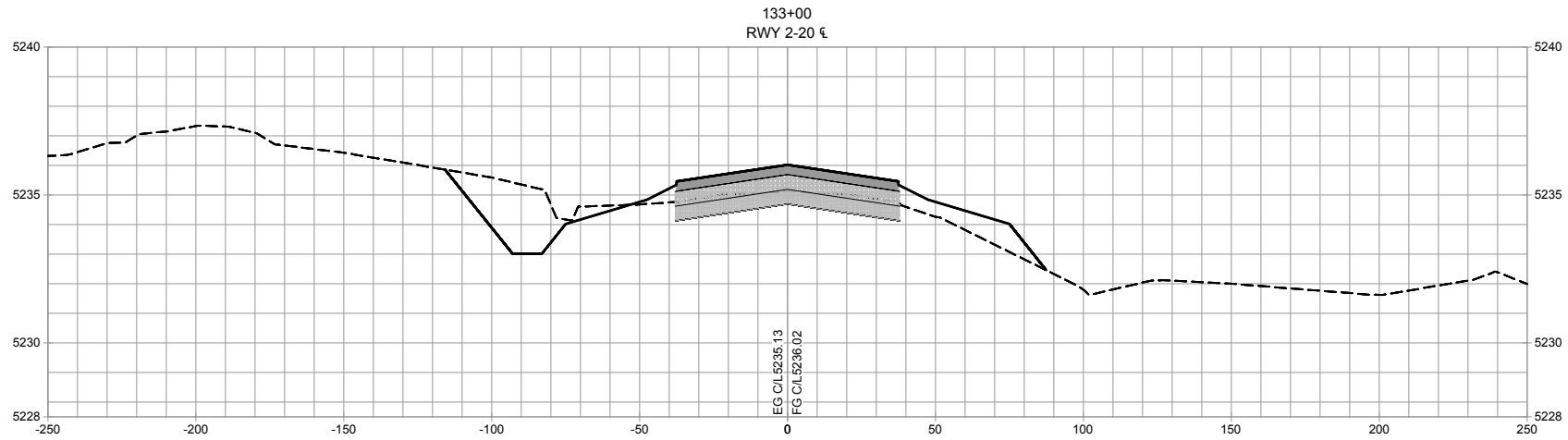


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SECTIONS

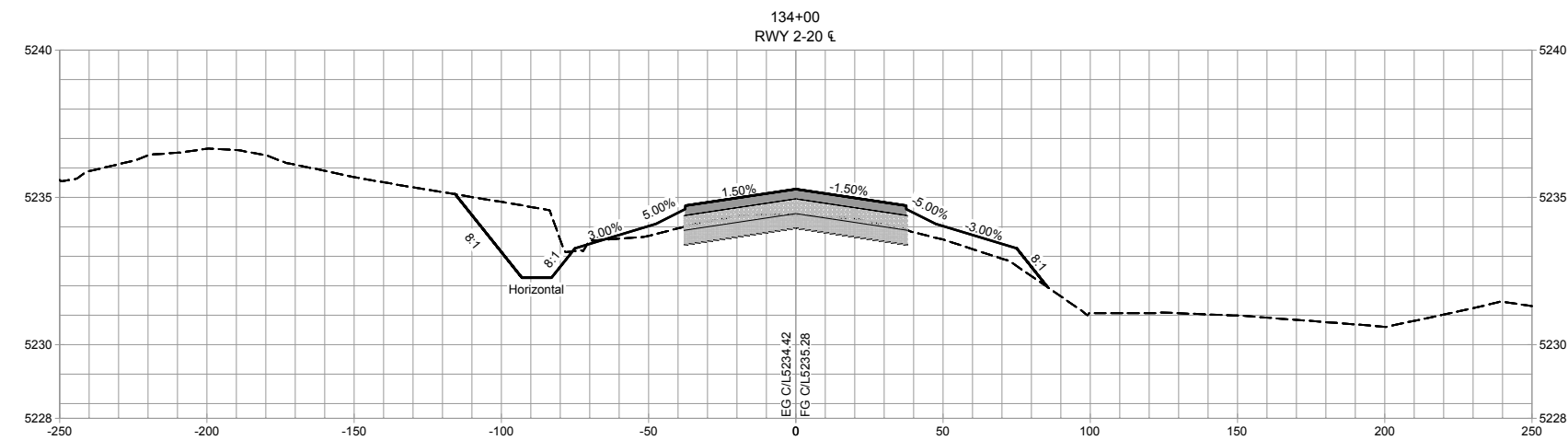
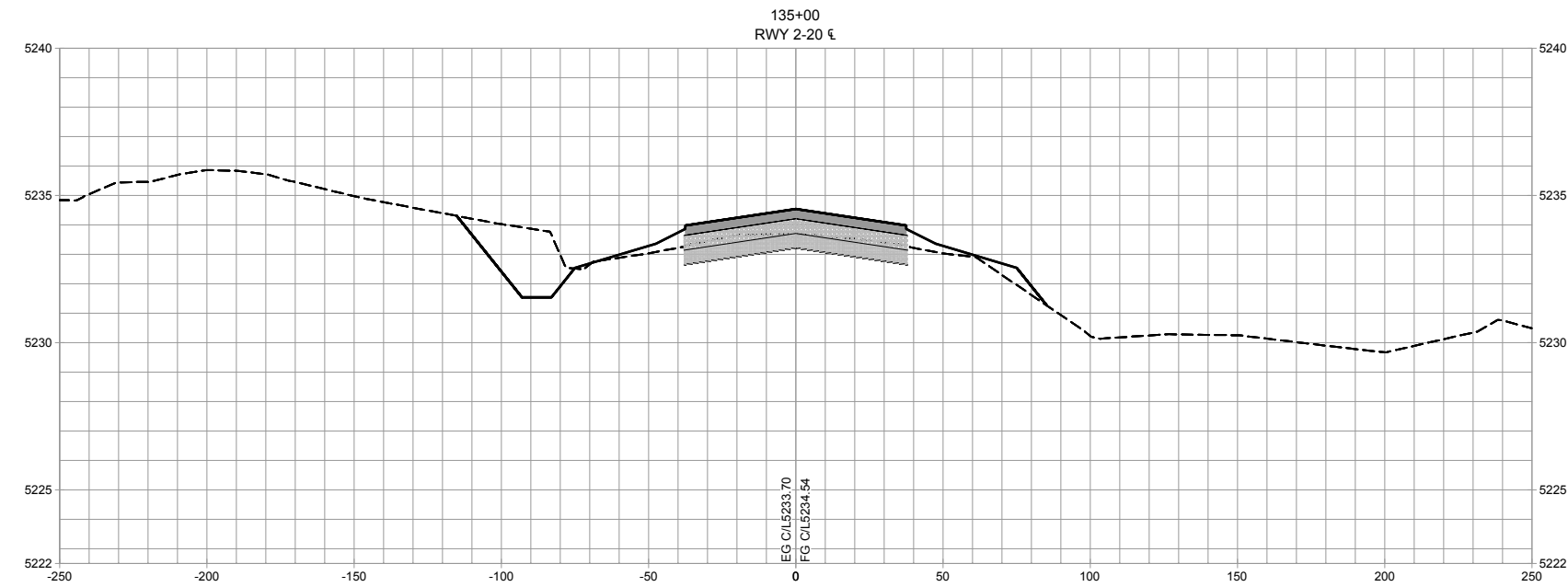
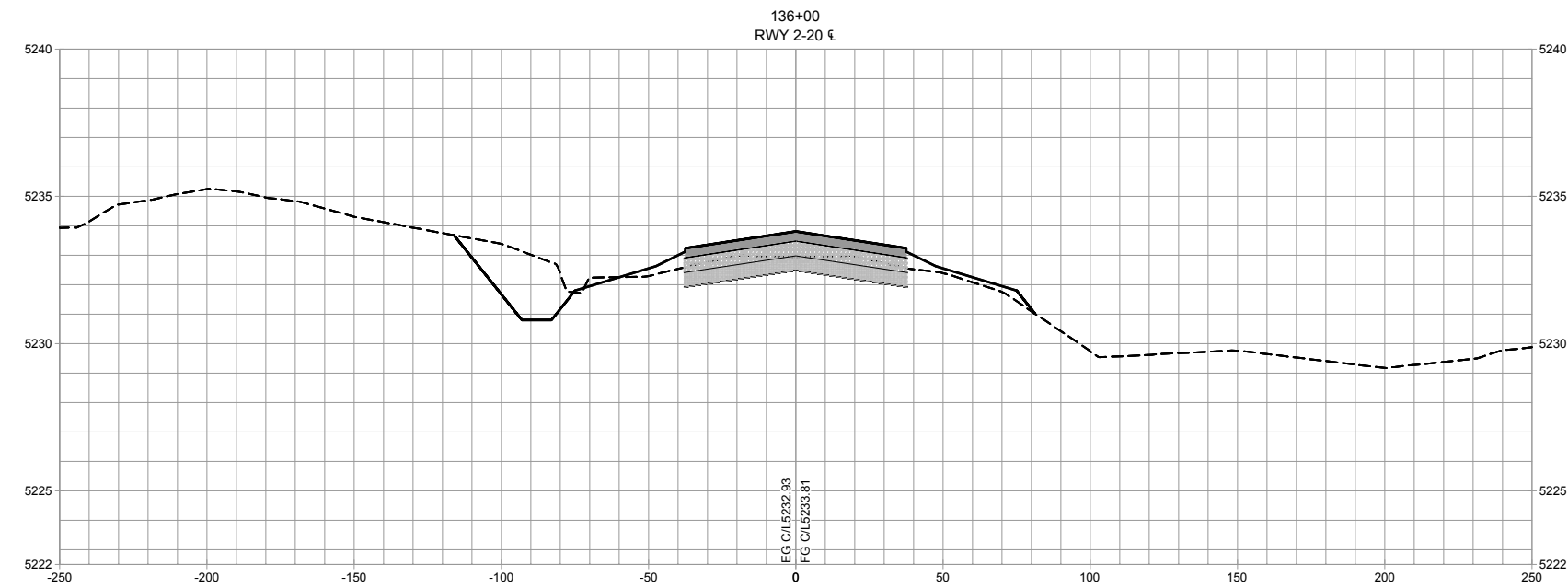


No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS

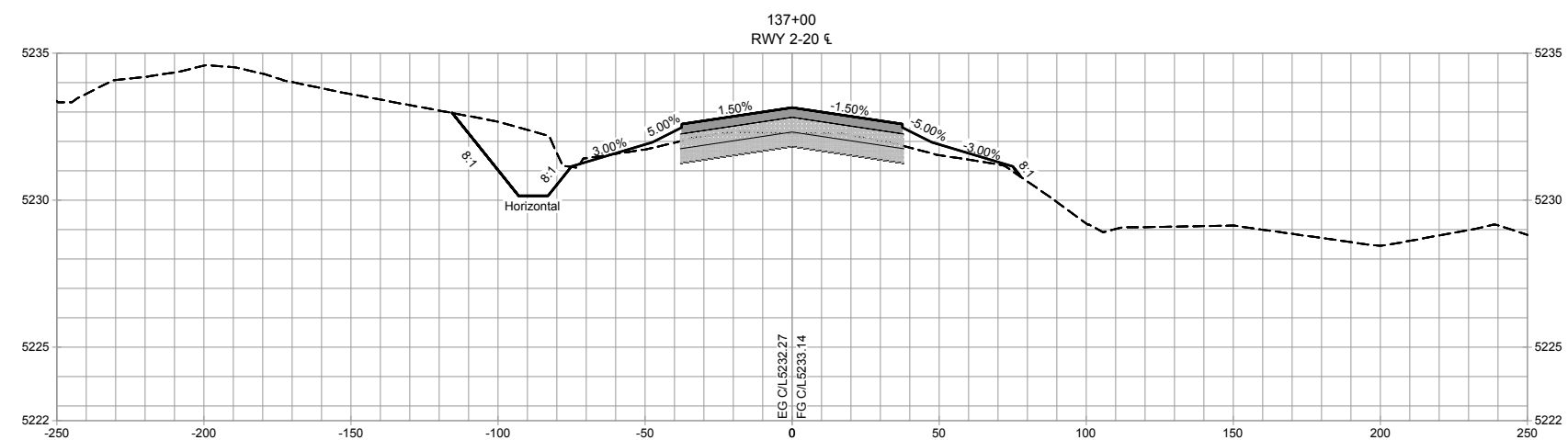
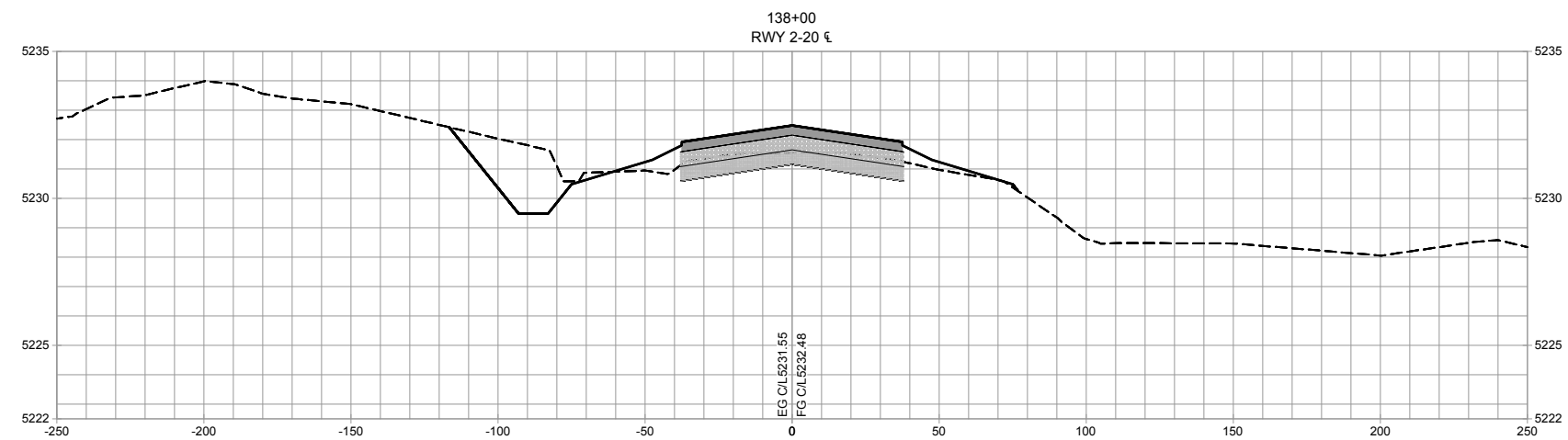
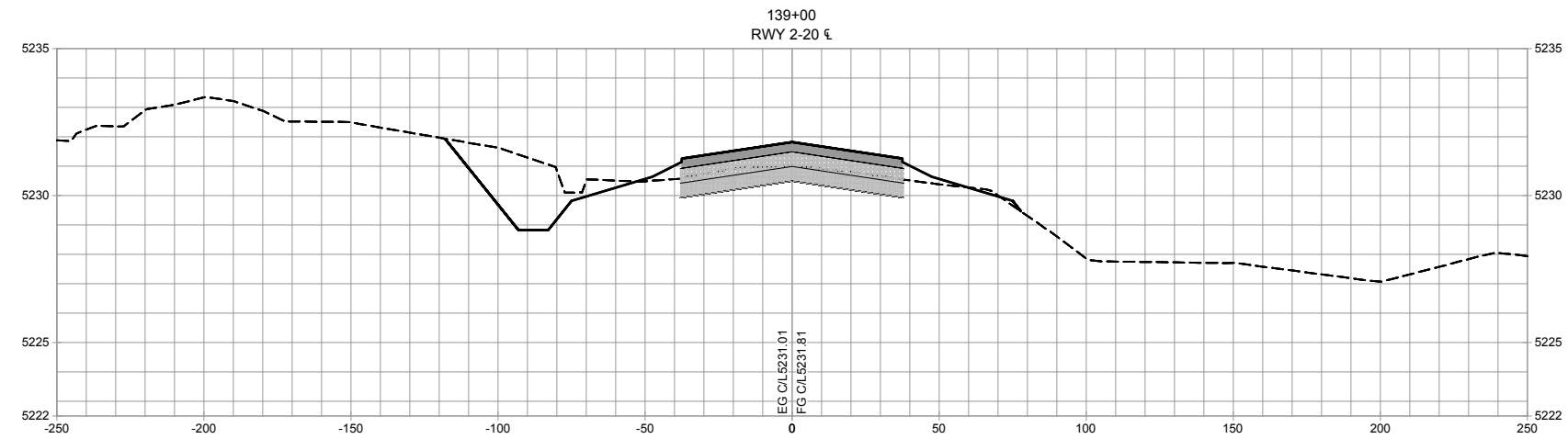


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Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS

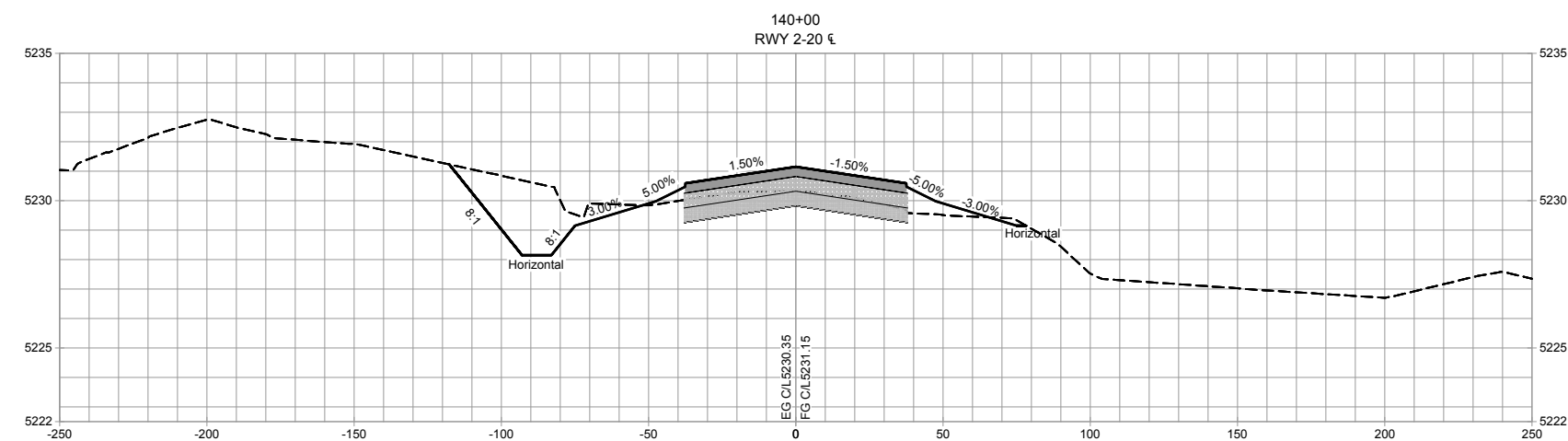
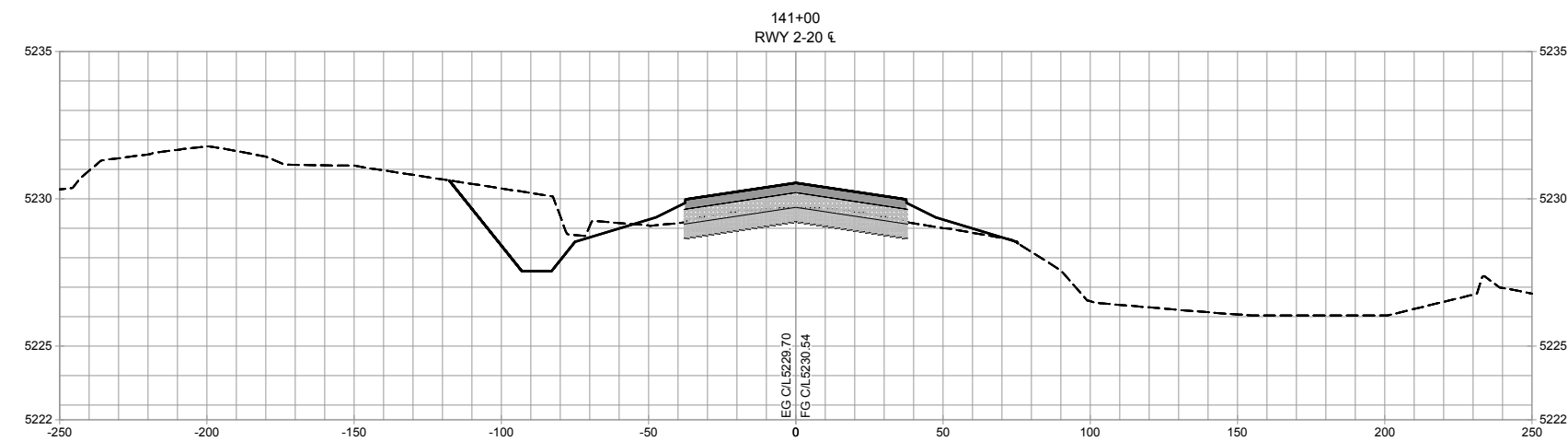
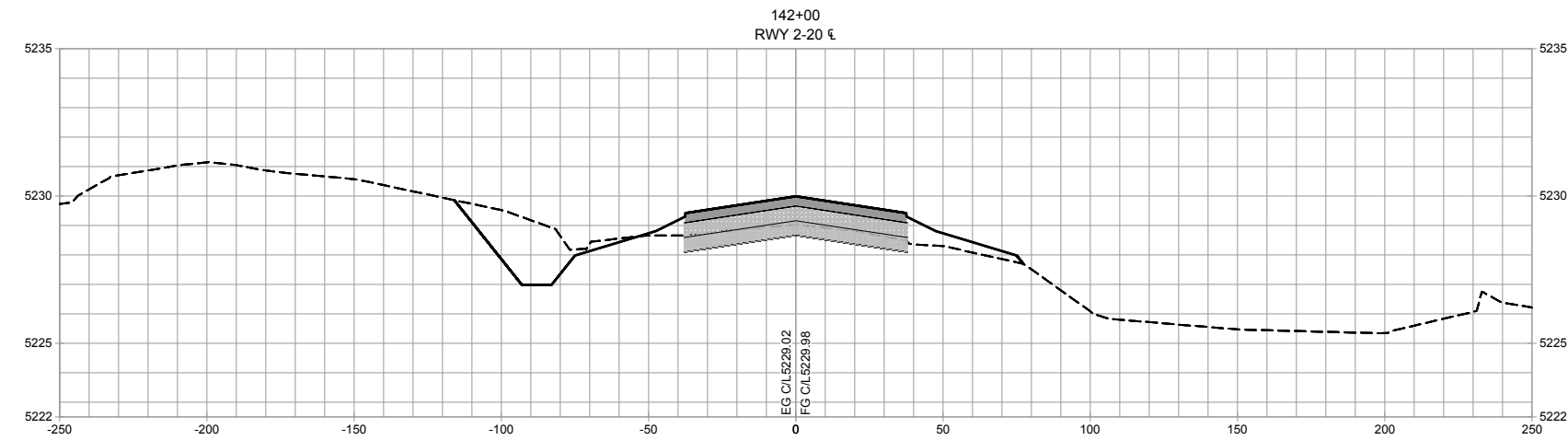


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RUNWAY 2/20
CROSS
SECTIONS



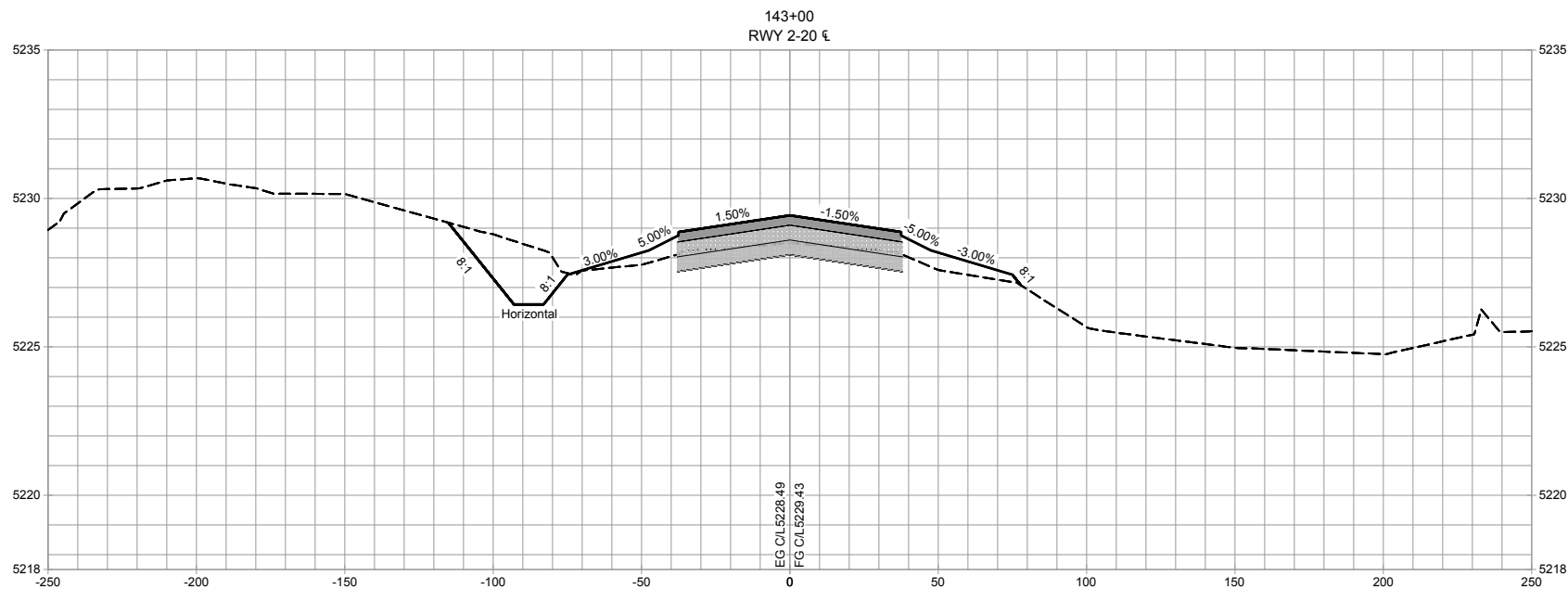
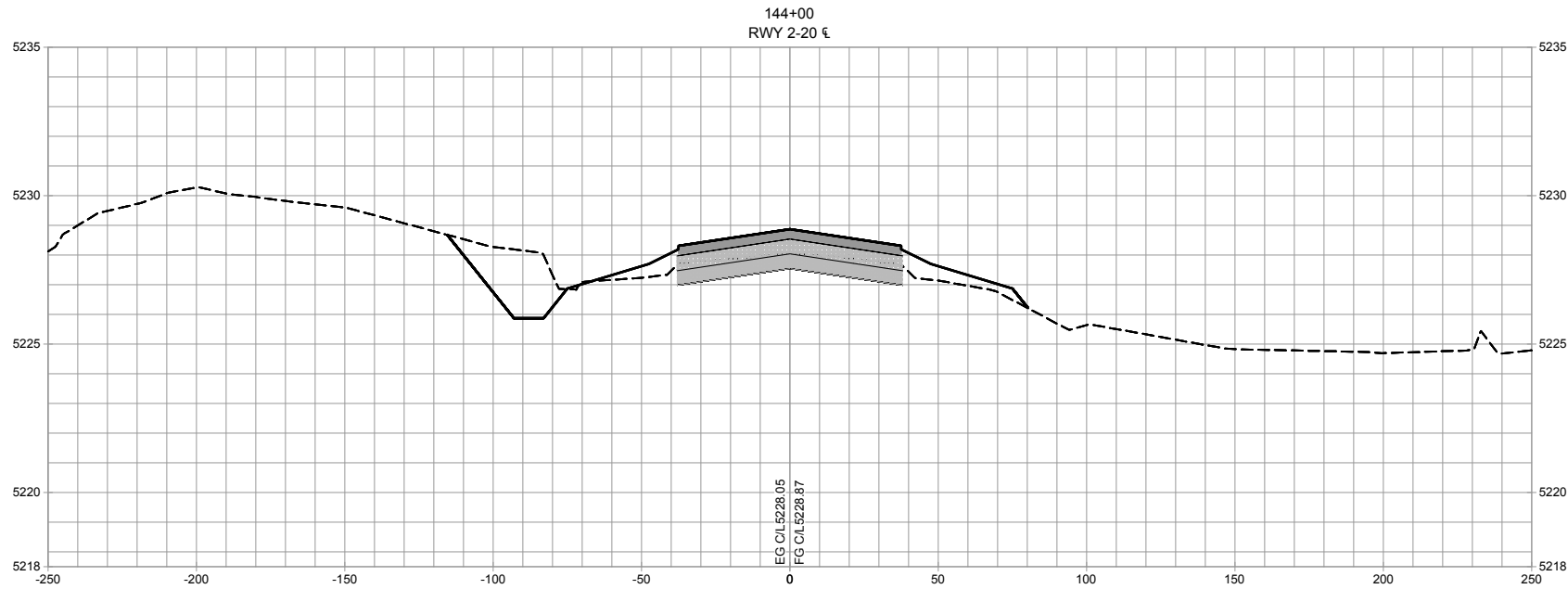
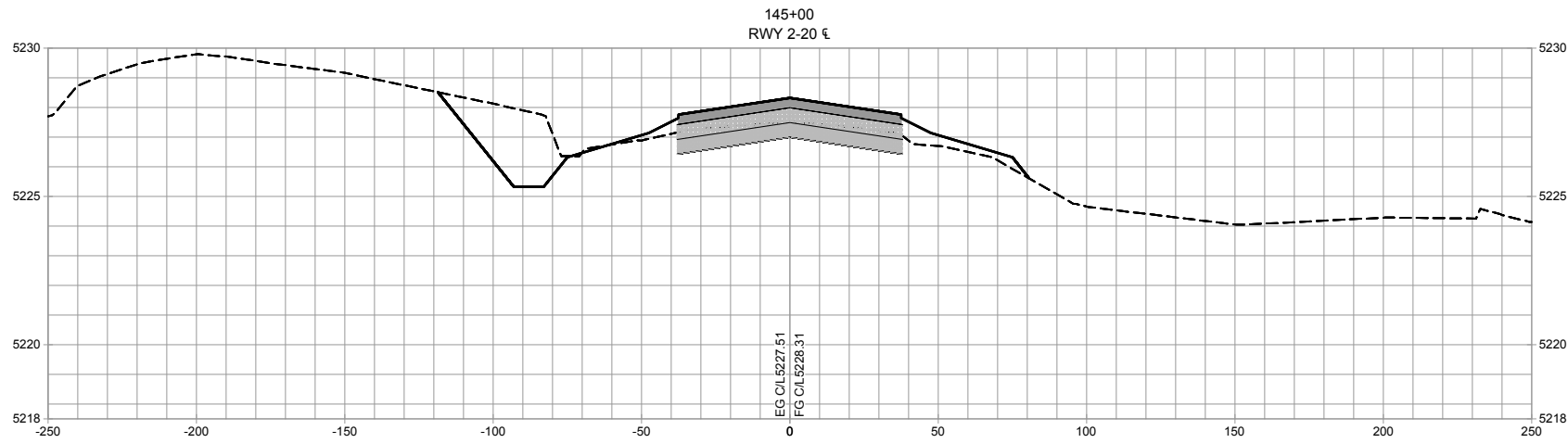
No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS

Sheet: 8.15

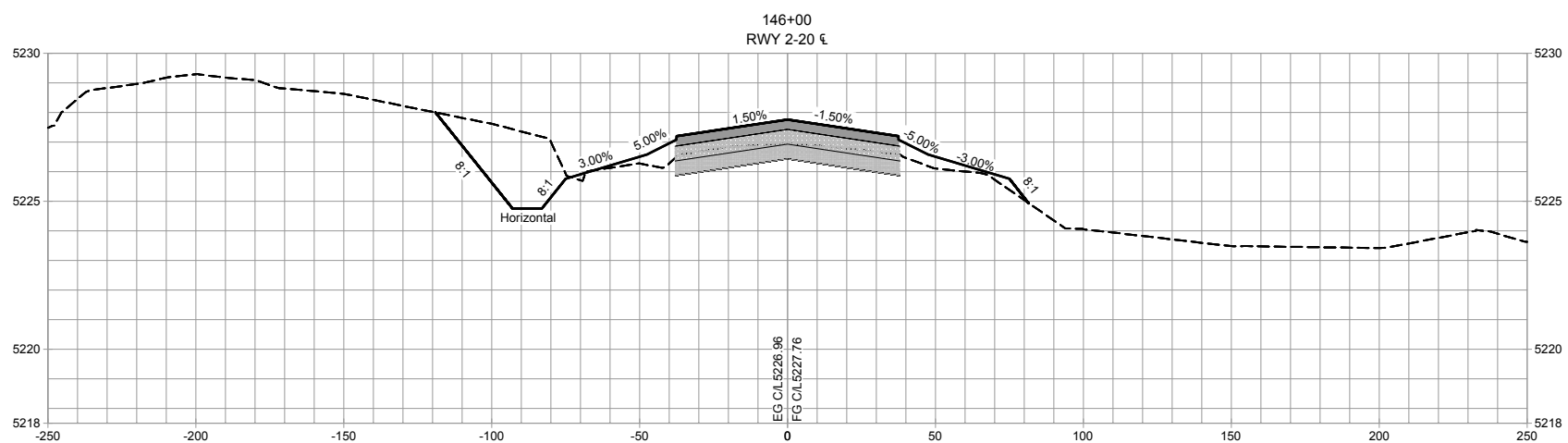
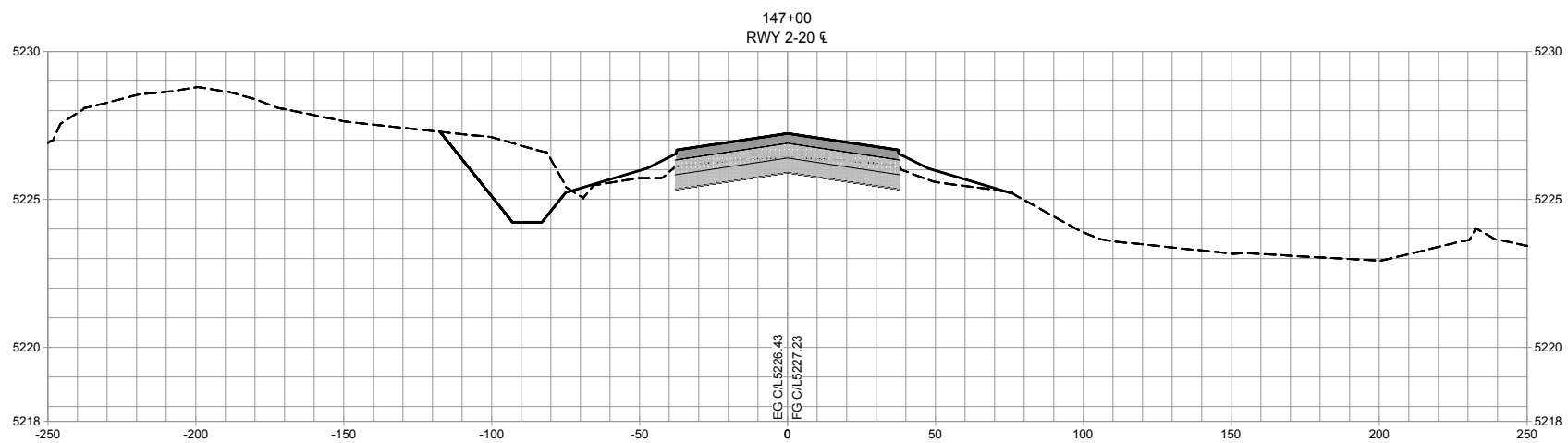
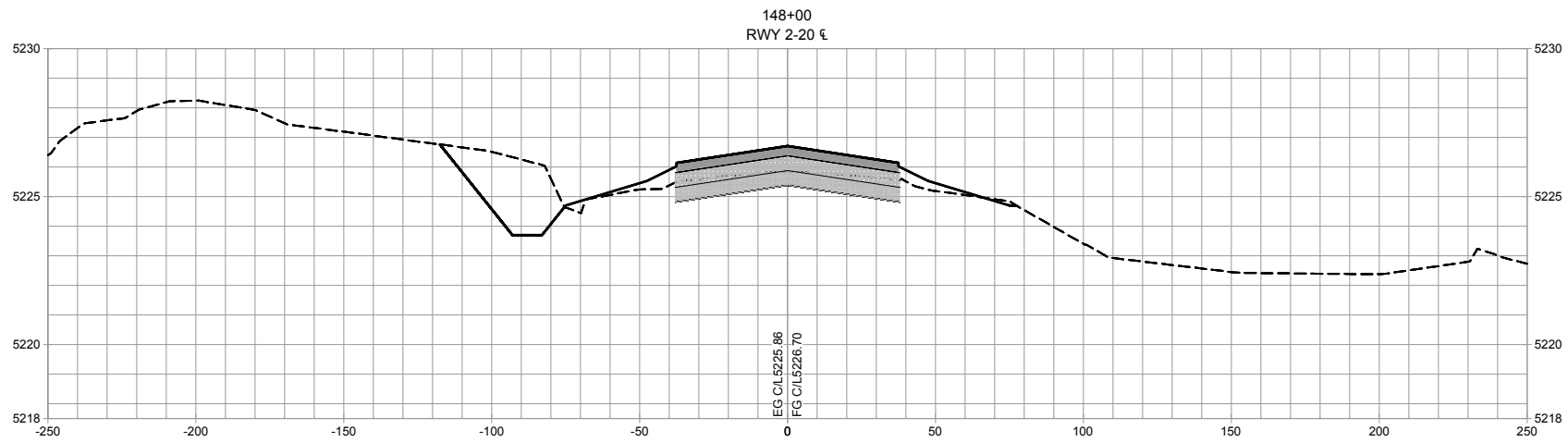


No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS



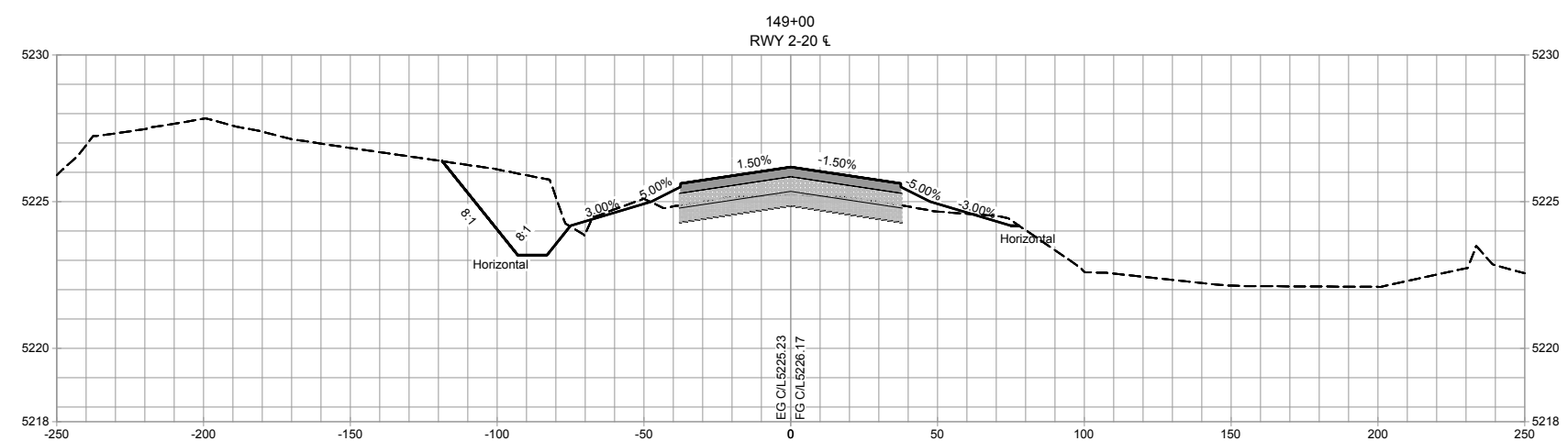
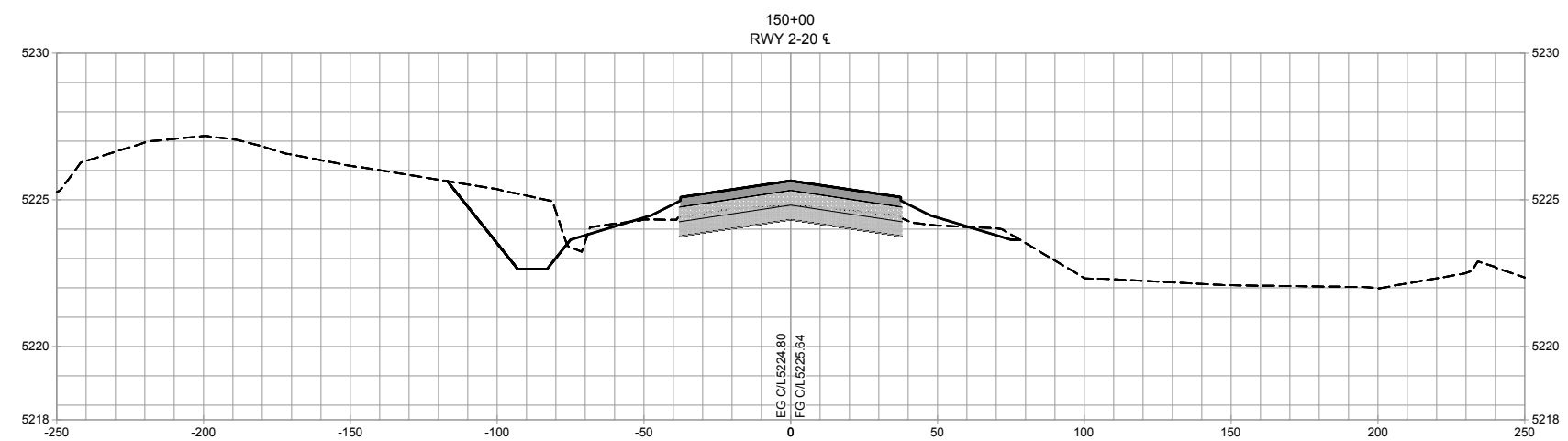
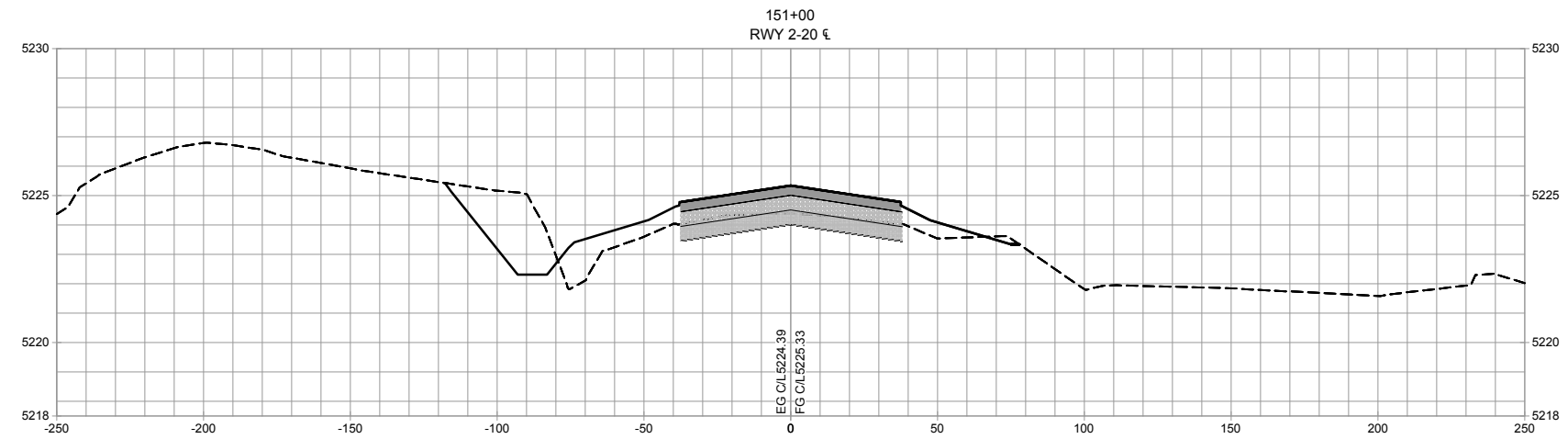
No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS

Sheet: 8.17



PLANNING ENGINEERING CONSTRUCTION

GRAND JUNCTION, CO: 970.242.0101 PHOENIX, AZ: 602.803.7079
DENVER, CO: 303.296.4949 ALBUQUERQUE, NM: 505.508.2192
www.armstrongconsultants.com

SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO
2017 IMPROVEMENTS
NAVAJO DOT CO11473
A.I.P. No. 3-35-0049-005-201

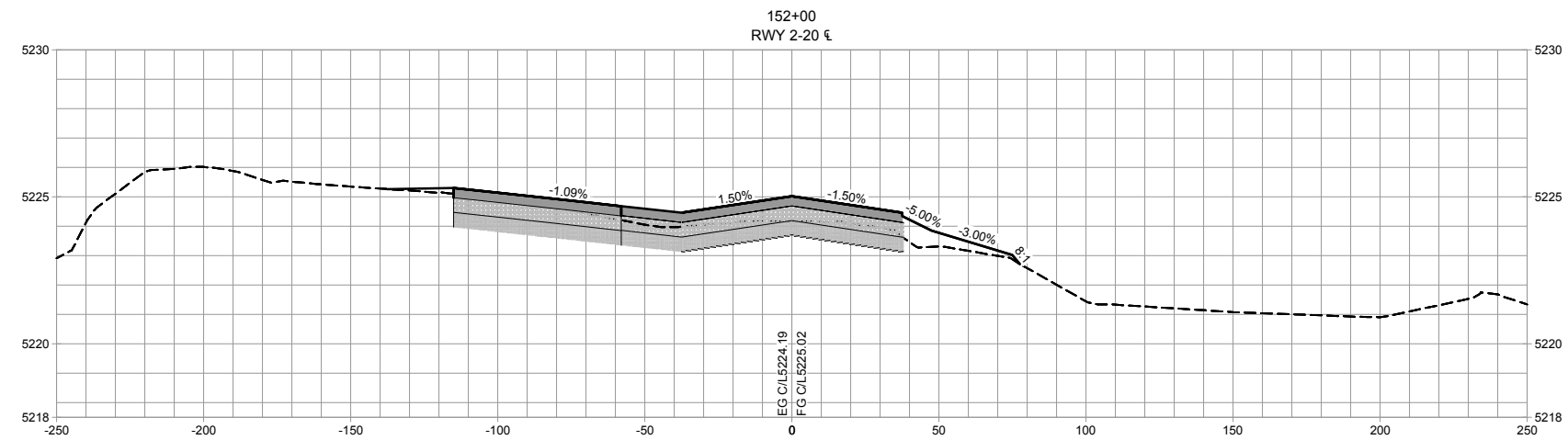
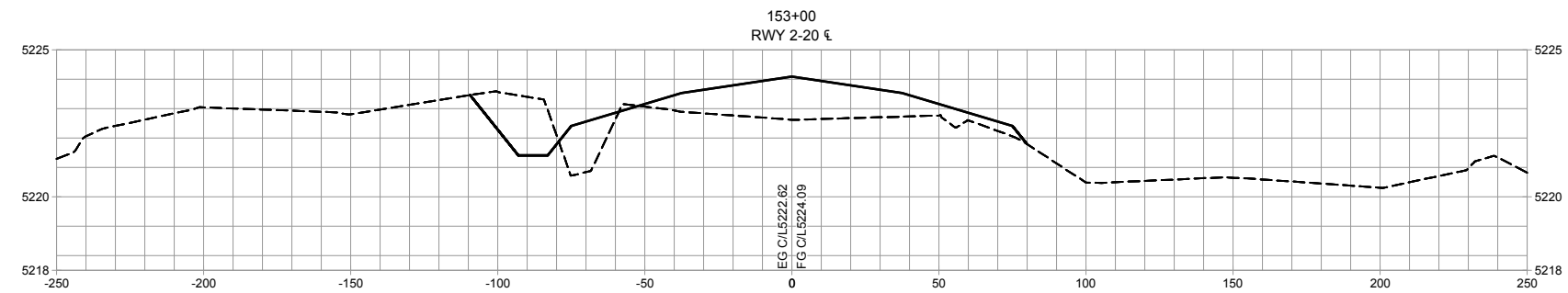
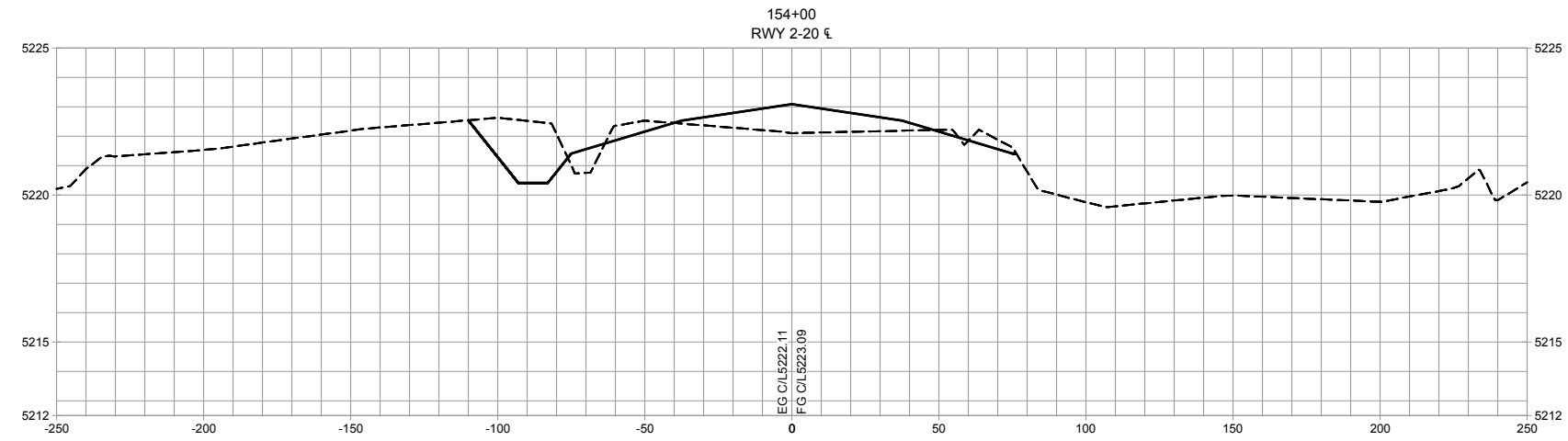
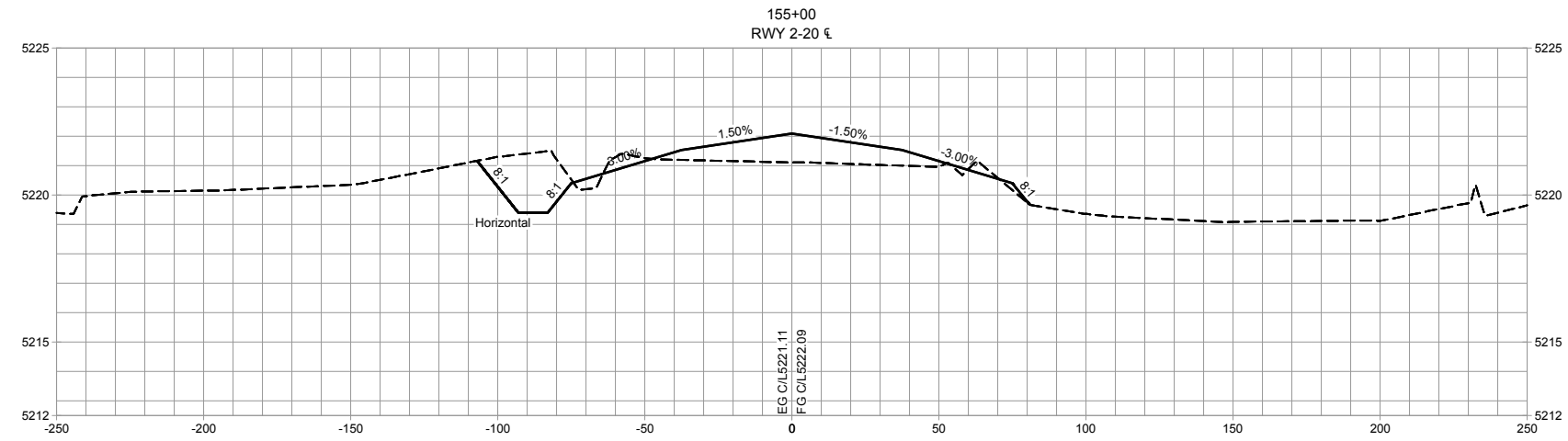
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Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20 CROSS SECTIONS

Sheet: 8.18

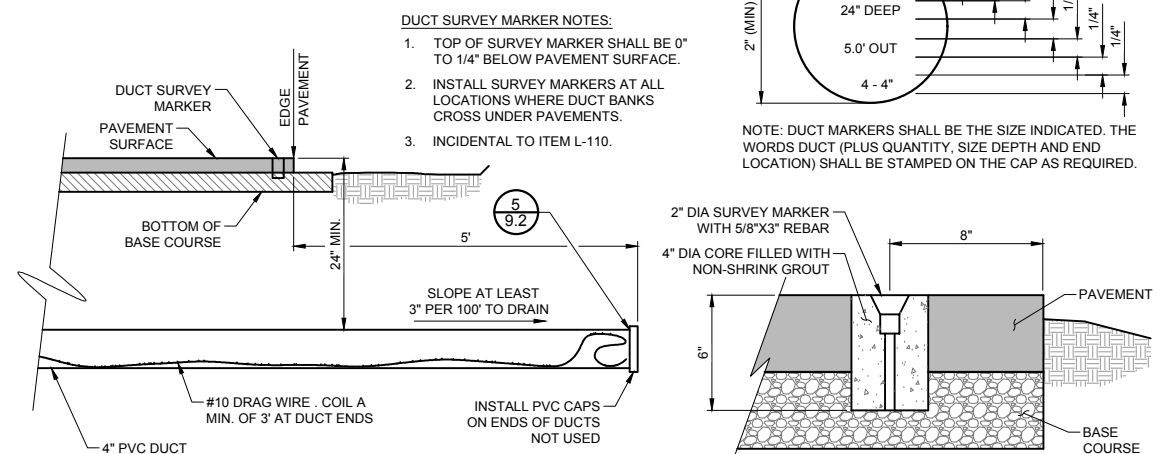
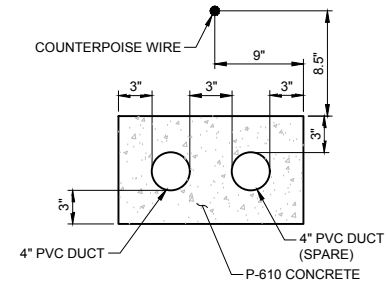
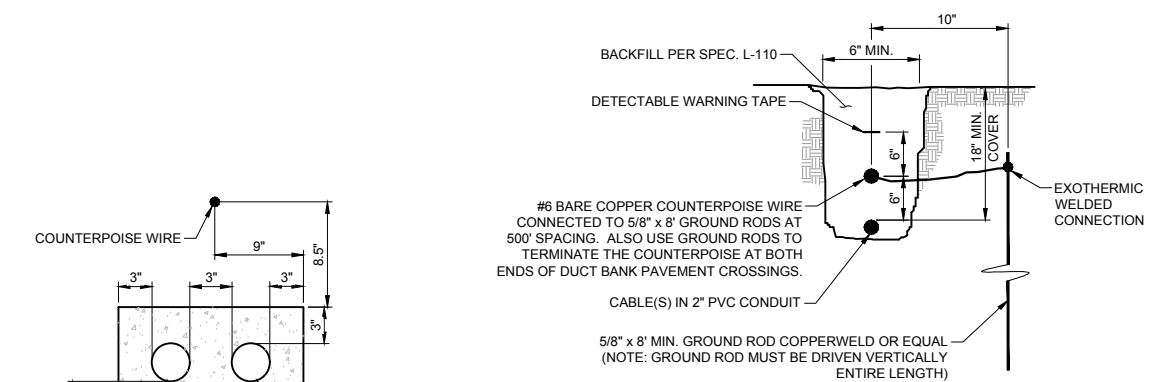
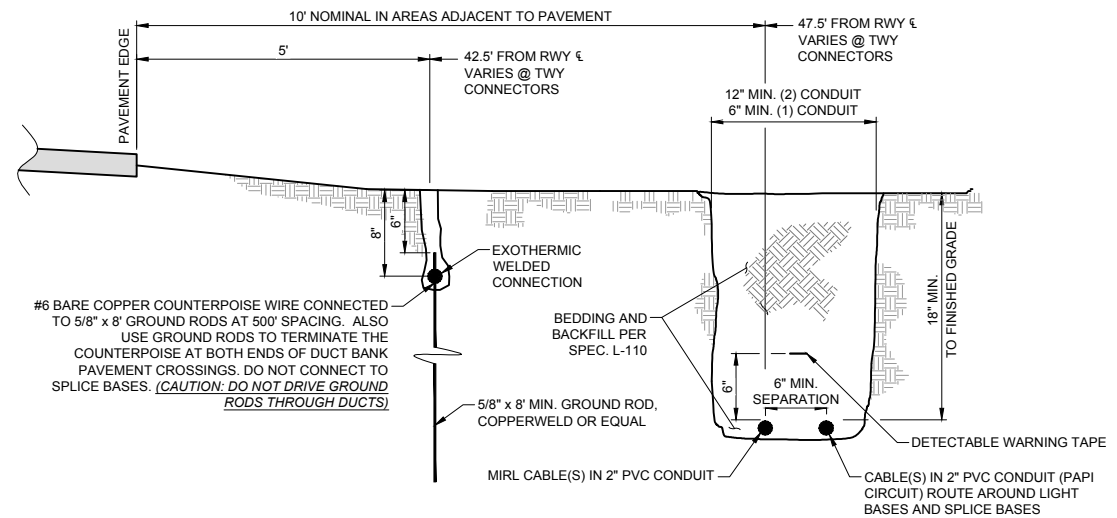
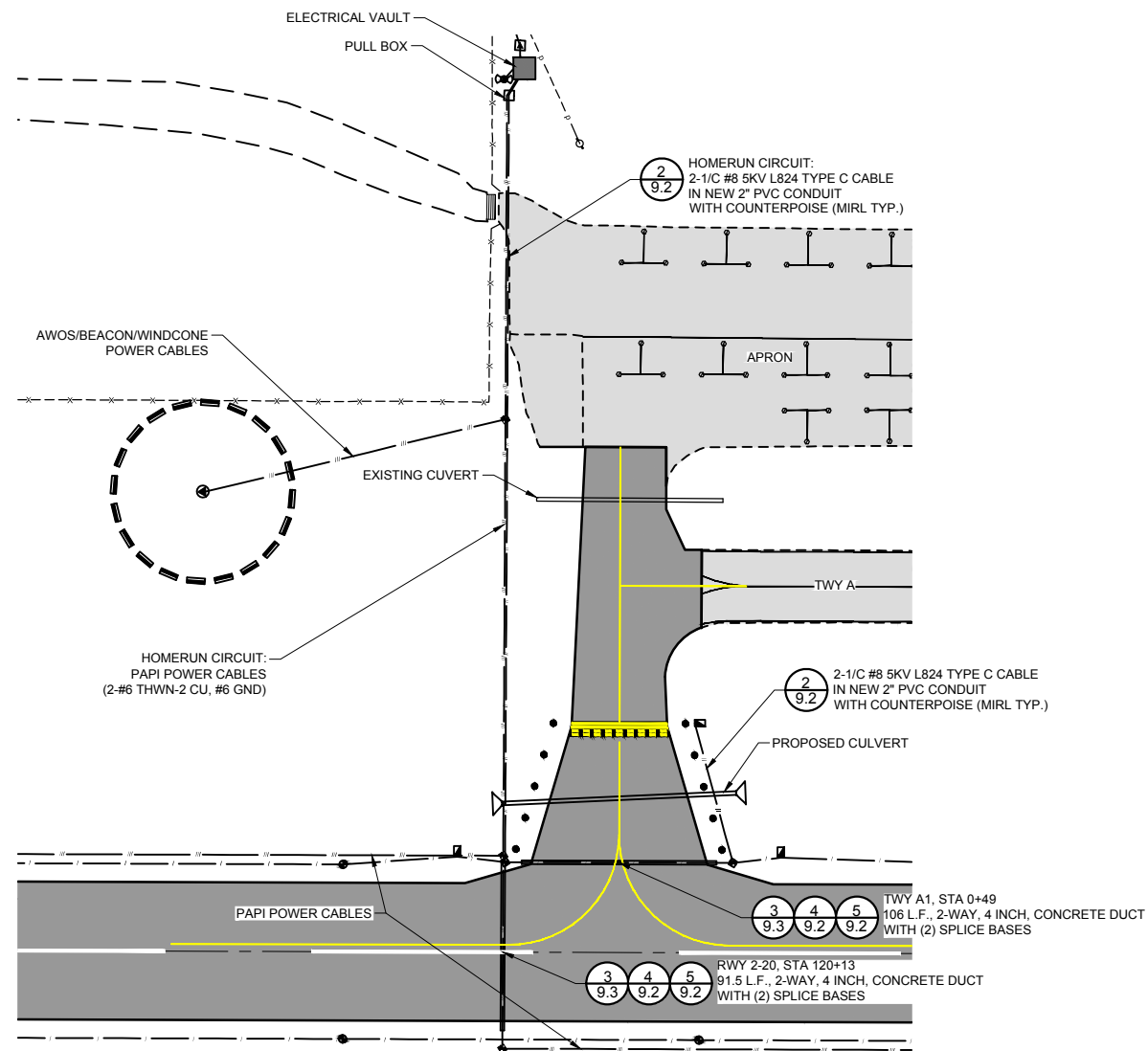


No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301107

Drawn: BKR
Checked: JLS
Approved: TJA

RUNWAY 2/20
CROSS
SECTIONS

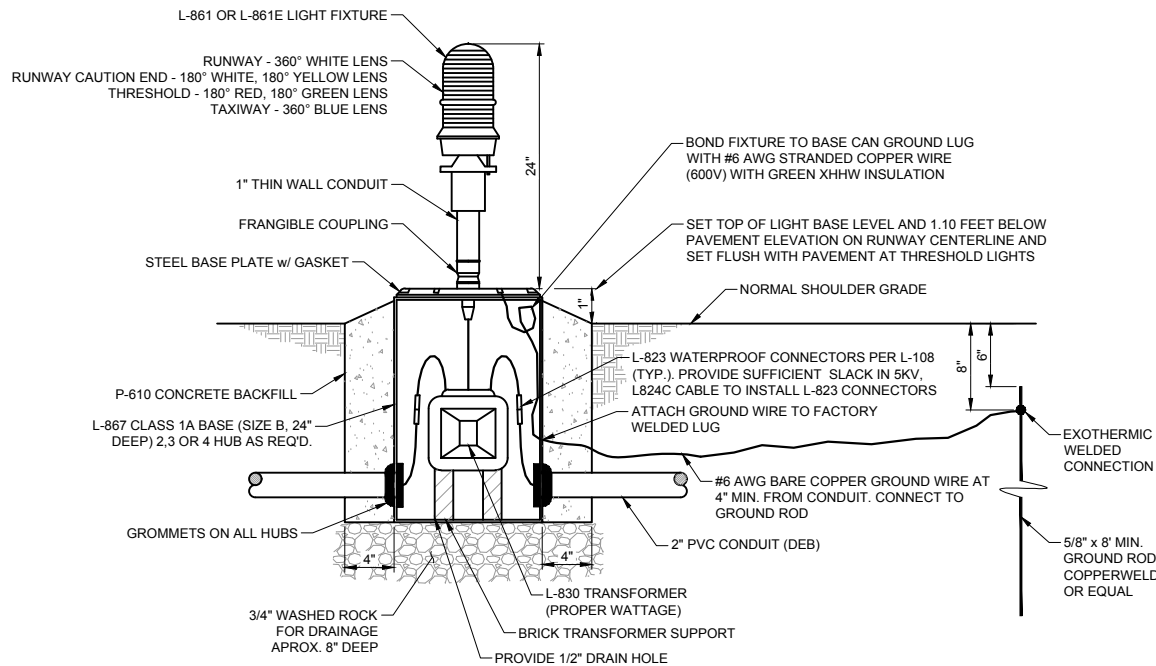


No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301104

Drawn: BKR
Checked: JLS
Approved: TJA

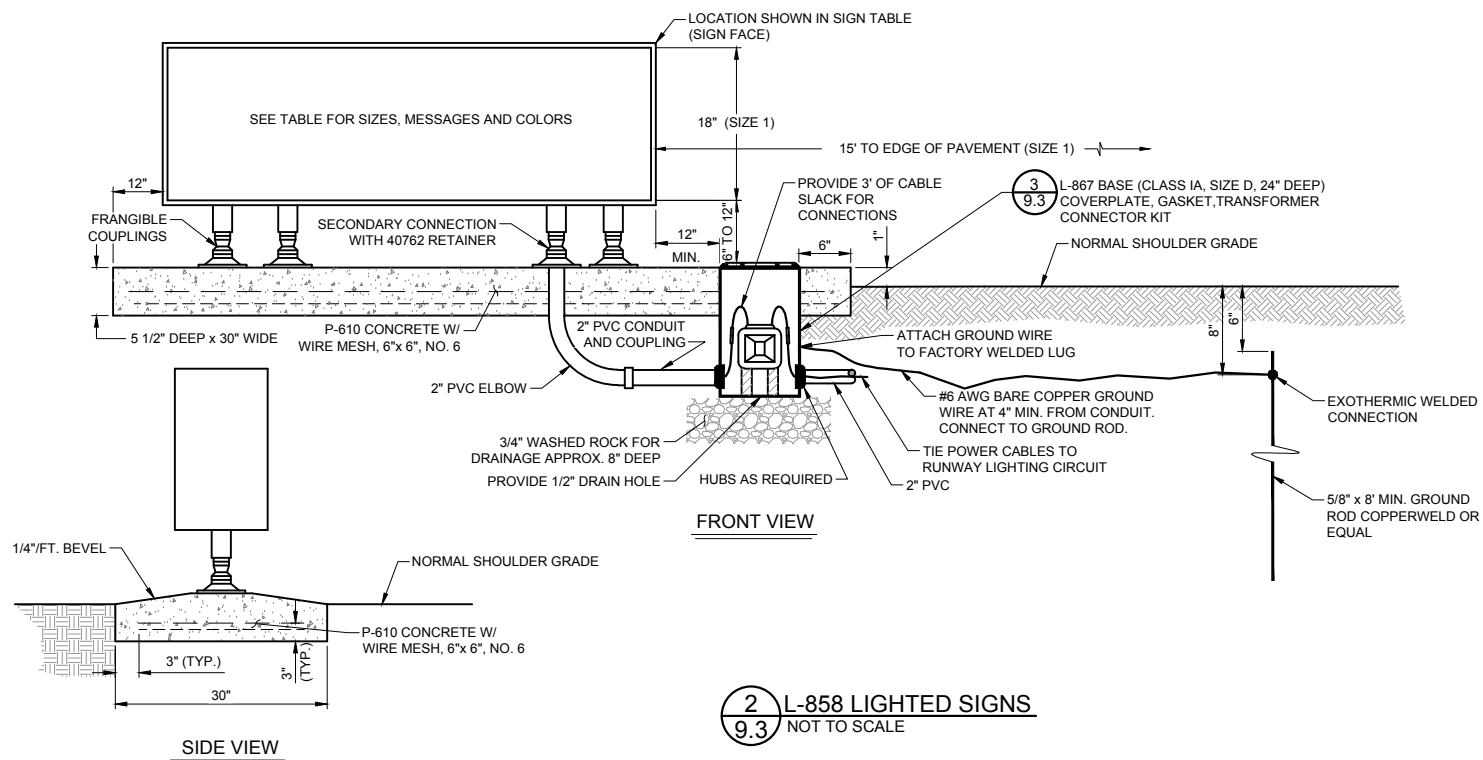
**RUNWAY 2/20,
TWY A1
LIGHTING &
SIGNAGE
LAYOUT**



1
9.3 **BASE MOUNTED L-861 OR L-861E LIGHT**
NOT TO SCALE (MIRL CIRCUIT)
NOTE:
LOCATE RUNWAY EDGE LIGHTS 47.5' FROM CENTERLINE.

LIGHT TABLE							
NUMBER	TYPE	RWY STATION	OFFSET	WATTS	COLOR	QUANTITY	ACTION
1-8	THRESHOLD, L-861E	99+90	17.5', 27.5', 37.5', 47.5' LT. & RT.	115	180° GREEN, 180° RED	8	NEW LIGHT
9-10	EDGE, L-861	101+83.7	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
11-12	EDGE, L-861	103+77.41	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
13-14	EDGE, L-861	105+71.11	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
15-16	EDGE, L-861	107+64.81	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
17-18	EDGE, L-861	109+58.52	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
19-20	EDGE, L-861	111+52.22	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
21-22	EDGE, L-861	113+45.93	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
23-24	EDGE, L-861	115+39.63	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
25-26	EDGE, L-861	117+33.33	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
27-28	EDGE, L-861	119+27.04	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
29	EDGE, L-861	121+20.74	47.5' RT.	45	360° WHITE	1	NEW LIGHT
30-31	EDGE, L-861	123+14.44	47.5' LT. & RT.	45	360° WHITE	2	NEW LIGHT
32-33	EDGE, L-861	125+08.15	47.5' LT. & RT.	45	360° WHITE	2	NEW LIGHT
34-35	EDGE, L-861	127+01.85	47.5' LT. & RT.	45	360° WHITE	2	NEW LIGHT
35-36	EDGE, L-861	128+95.56	47.5' LT. & RT.	45	360° WHITE	2	NEW LIGHT
37-38	EDGE, L-861	130+89.26	47.5' LT. & RT.	45	360° WHITE	2	NEW LIGHT
39-40	EDGE, L-861	132+82.96	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
41-42	EDGE, L-861	134+76.67	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
43-44	EDGE, L-861	136+70.37	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
45-46	EDGE, L-861	138+64.07	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
47-48	EDGE, L-861	140+57.78	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
49-50	EDGE, L-861	142+51.48	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
51-52	EDGE, L-861	144+45.19	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
53-54	EDGE, L-861	146+38.89	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
55-56	EDGE, L-861	148+32.59	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
57-58	EDGE, L-861	150+26.30	47.5' LT. & RT.	45	180° WHITE/180° YELLOW	2	NEW LIGHT
59-66	THRESHOLD, L-861E	152+20	17.5', 27.5', 37.5', 47.5' LT. & RT.	115	180° GREEN, 180° RED	8	NEW LIGHT

NOTE: RUNWAY EDGE LIGHTS 9-28 AND 39-58; THE WHITE LENSES FACE TOWARDS THE CLOSEST THRESHOLD (END OF RUNWAY).



2
9.3 **L-858 LIGHTED SIGNS**
NOT TO SCALE

SIGN TABLE							
SIGN #	LEGEND	TYPE	STYLE	SIZE	MODULES	LOCATION	ACTIONS
1	← A1	(Y)(Y)	2	1	2	P.I. LT. TWY A1 @ RWY	NEW SIGN LIGHTED SIGN
2	A1 →	(Y)(Y)	2	1	2	P.I. LT. TWY A1 @ RWY	NEW SIGN LIGHTED SIGN
3	A1 20 -2	(L)(R)(R)	2	1	3	AT HOLD BAR, TWY A1	NEW SIGN LIGHTED SIGN
4	A2 20	(L)(R)	2	1	2	AT HOLD BAR, TWY A2	NEW SIGN LIGHTED SIGN
5	← A2	(Y)(Y)	2	1	2	P.I. LT. TWY A2 @ RWY	NEW SIGN LIGHTED SIGN
6	2	(L)(R)	2	1	1	AT HOLD BAR, HOLD BAY	NEW SIGN LIGHTED SIGN
7	2	(L)(R)	2	1	1	AT HOLD BAR, HOLD BAY	NEW SIGN LIGHTED SIGN

NOTES:
(R) = TYPE L-858R, MANDATORY INSTRUCTION SIGN,
WHITE LEGEND ON RED BACKGROUND
(L) = TYPE L-858L, LOCATION SIGN,
YELLOW LEGEND ON BLACK BACKGROUND
(Y) = TYPE L-858Y, DIRECTION SIGN,
BLACK LEGEND ON YELLOW BACKGROUND

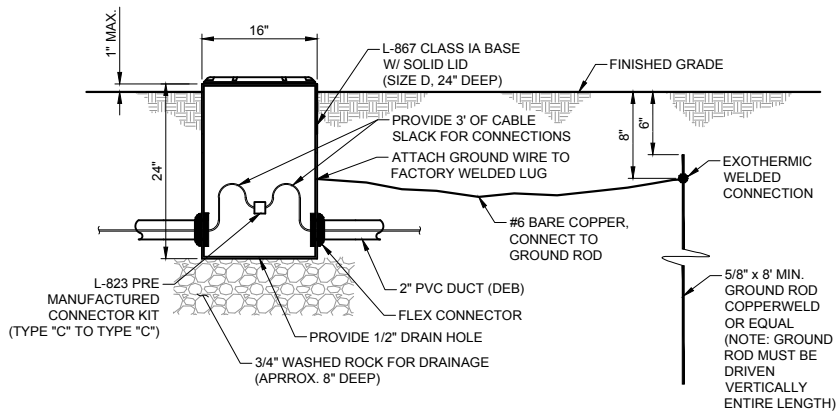
STYLE 2 = INTERNALLY LIGHTED (3 STEP)
(SEE DETAIL ON THIS SHEET FOR INSTALLATION DETAILS)

SIZE 1. (18" PANEL WITH 12" LEGEND)

HOLD POSITION SIGNS ALIGN WITH HOLD BARS.

ESTIMATED ELECTRICAL LOADS ON REGULATOR	
FIXTURE	*POWER REQUIRED (VA)
2 MODULE SIGN (STYLE 2, SIZE 1)	222
3 MODULE SIGN (STYLE 2, SIZE 1)	302
L-861 EDGE LIGHT (45 WATT)	54
L-861E EDGE LIGHT (115 WATT)	115
REIL SET	2995
*BASED ON MANUFACTURER'S LOAD DATA	

CONTRACTOR SHALL NOT INSTALL FIXTURES THAT USE ELECTRICAL LOADS EXCEEDING THOSE LISTED HERE



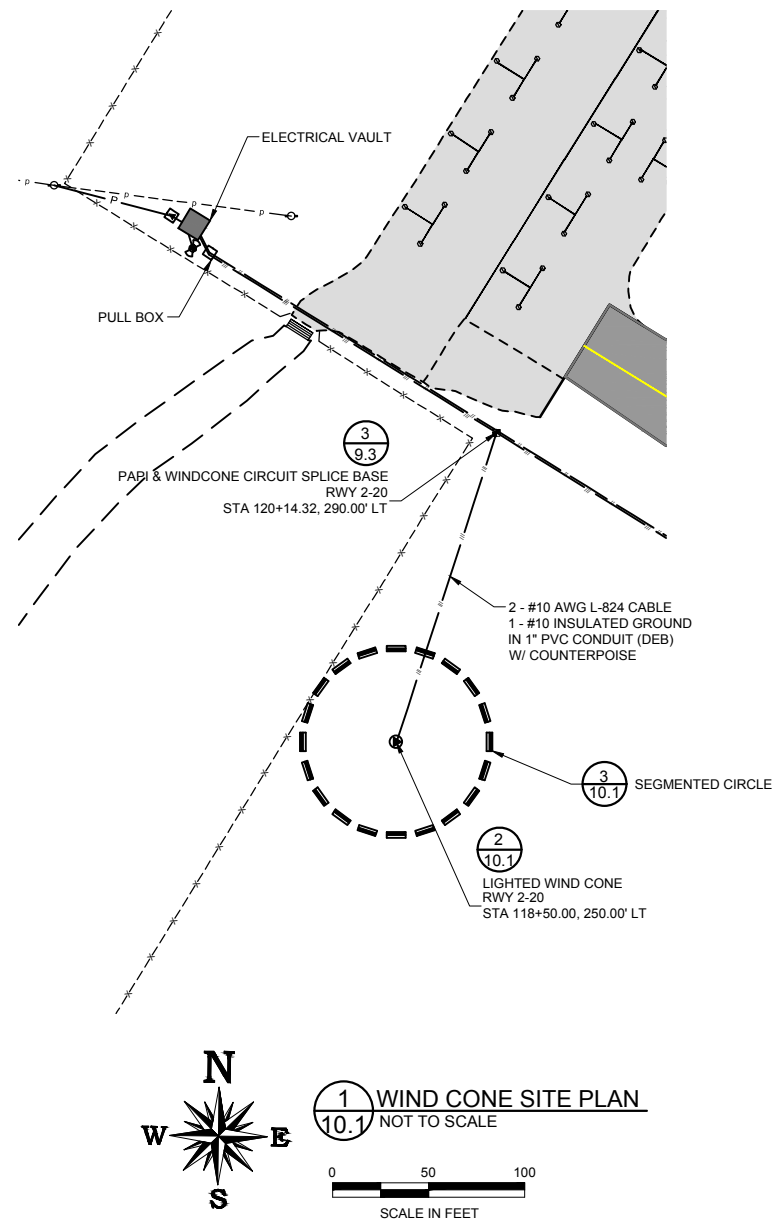
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9.3 **SPLICE BASE DETAIL**
NOT TO SCALE

No.	Revision	Date	By

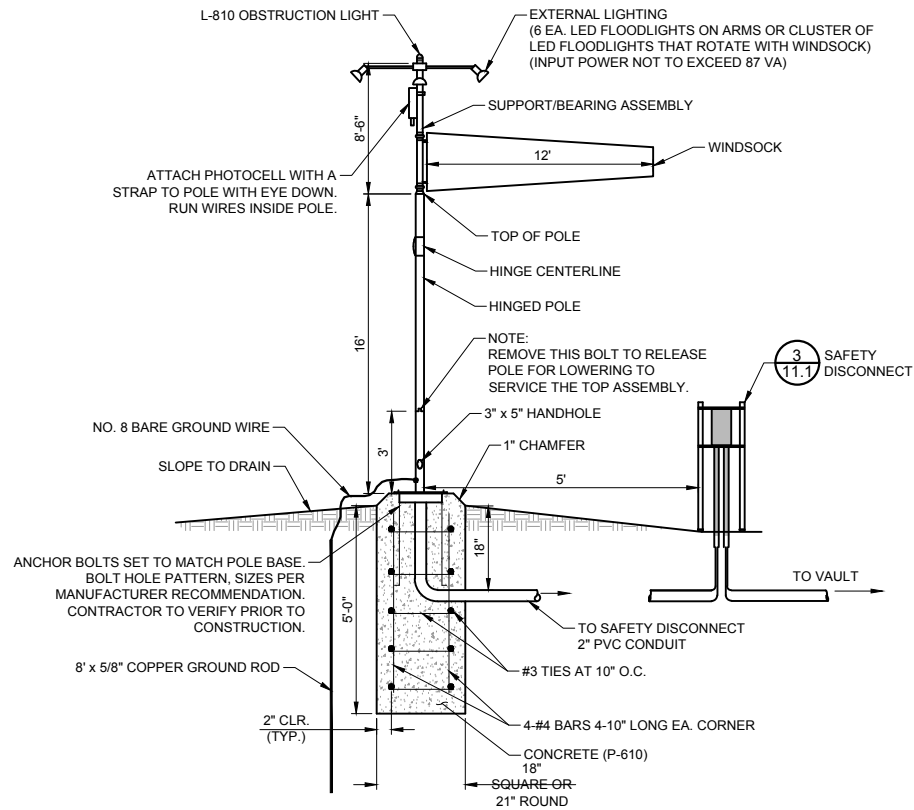
Project No: 166301
Date: 06/2017
File Name: 166301104

Drawn: BKR
Checked: JLS
Approved: TJA

**LIGHTING & SIGNING
DETAILS**

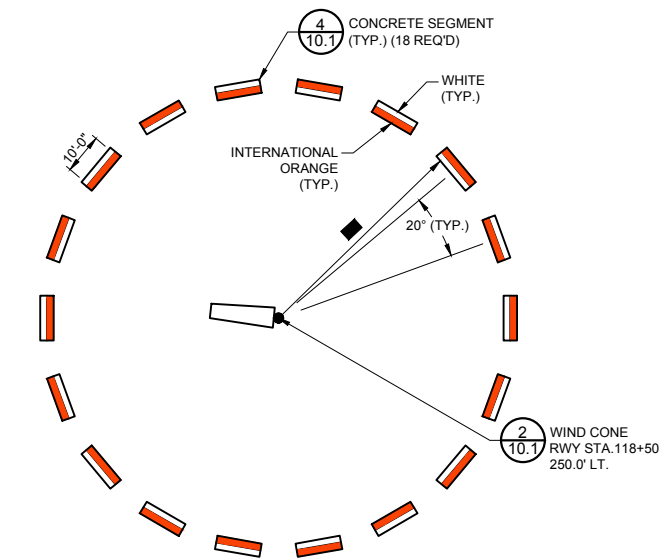


1 WIND CONE SITE PLAN
10.1 NOT TO SCALE

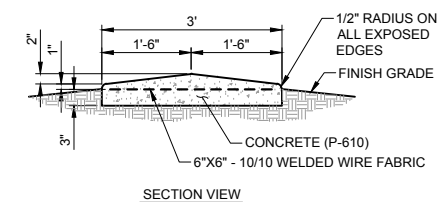
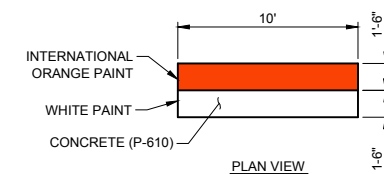


WIND CONE LOCATIONS		
SIZE	TYPE	LOCATION
12'	LIGHTED (STYLE I-A)	

2 LIGHTED WIND CONE DETAIL
10.1 NOT TO SCALE

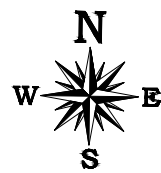
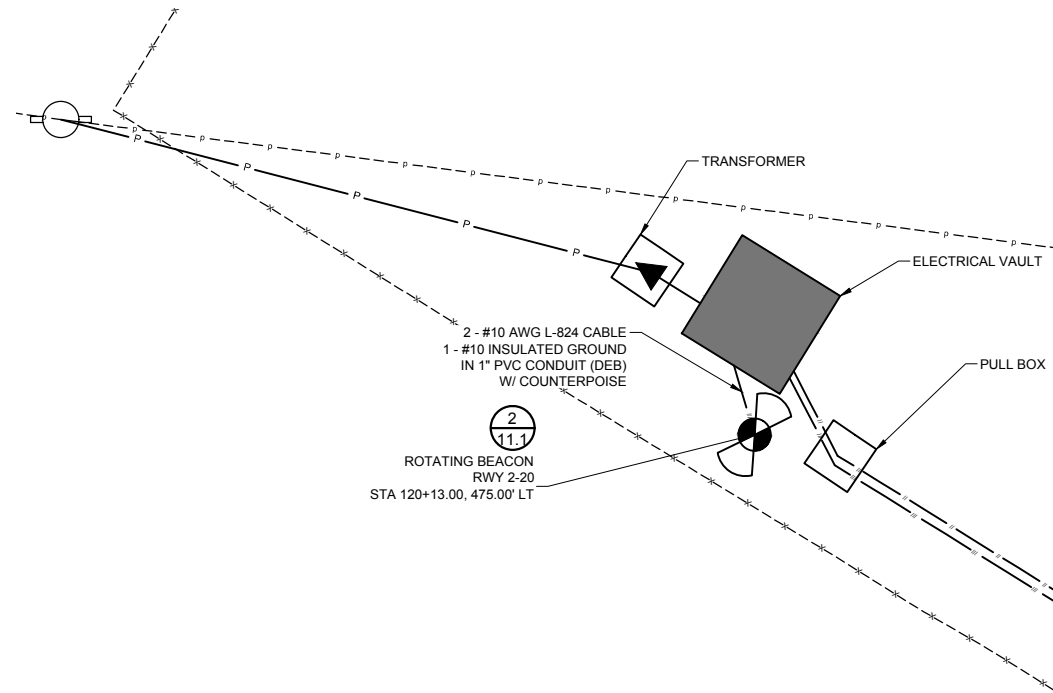


3 WINDCONE & SEGMENTED CIRCLE PLAN
10.1 NOT TO SCALE



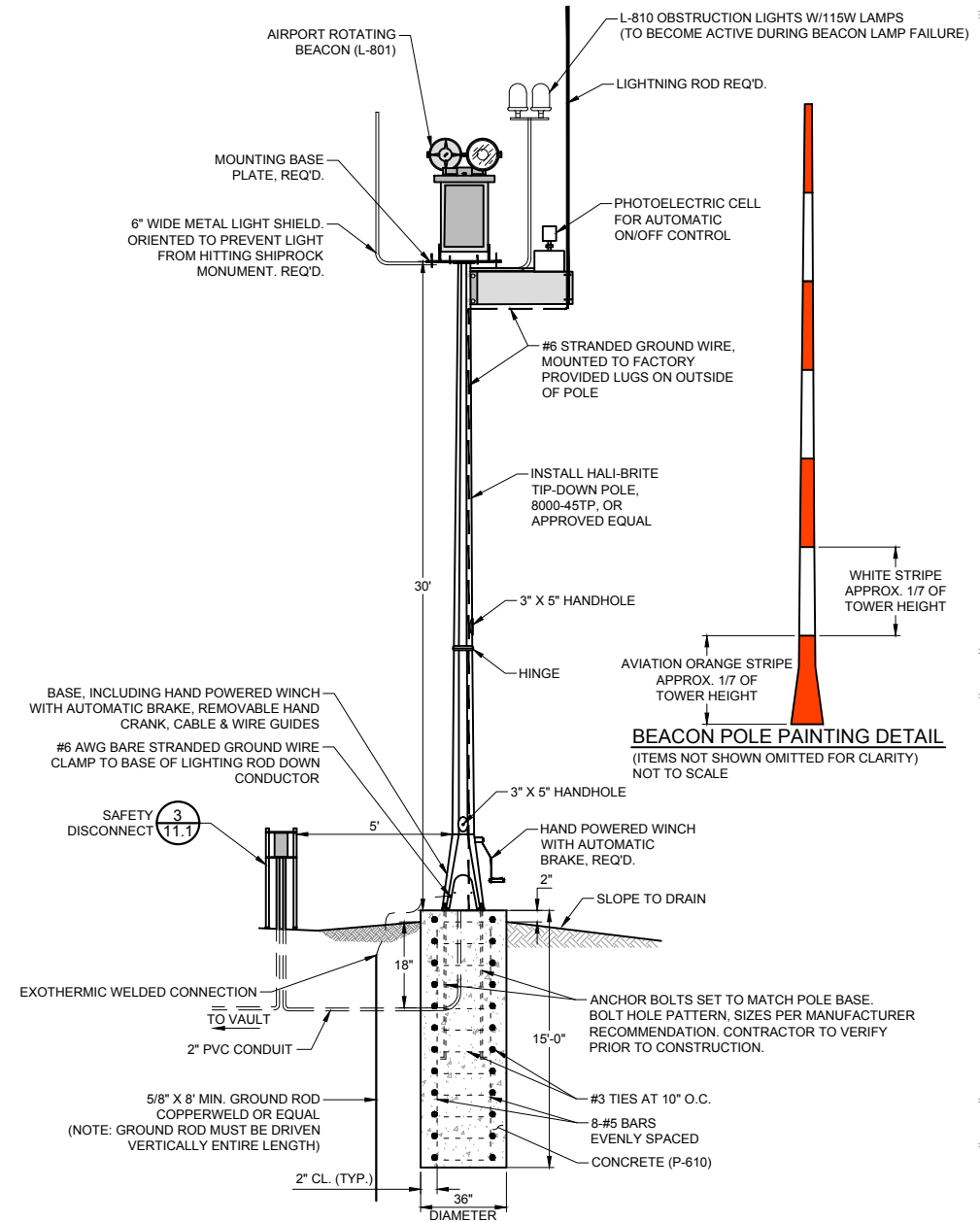
4 CONCRETE SEGMENT
10.1 NOT TO SCALE

No.	Revision	Date	By



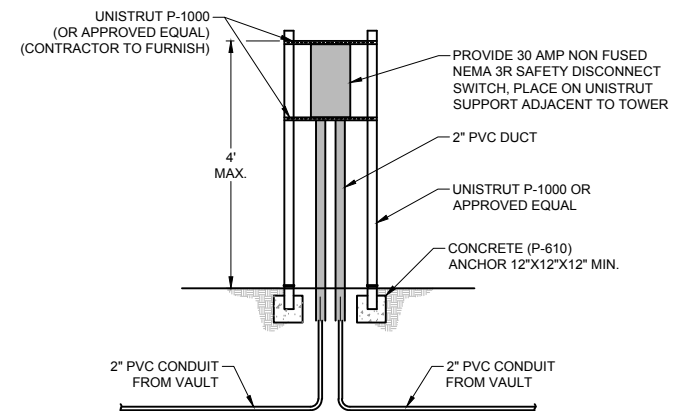
1
11.1 BEACON SITE PLAN
NOT TO SCALE

0 10 20
SCALE IN FEET



2
11.1 AIRPORT ROTATING BEACON & TOWER
NOT TO SCALE

- NOTES:
1. TIP-DOWN TOWER SHOWN IS HALI-BRITE BEACON TIP-DOWN POLE, 8000-45TP OR APPROVED EQUAL. MANUFACTURED BY HALI-BRITE INC., CROSBY, MN. (www.halibrite.com).
 2. LOCATE AND ORIENT BEACON SO THAT WHEN TOP OF TOWER IS FULLY LOWERED IT DOES NOT ENCOUNTER GROUND OBSTRUCTIONS SUCH AS FENCES, TANKS, ETC..



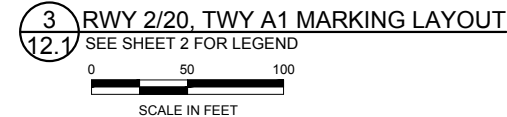
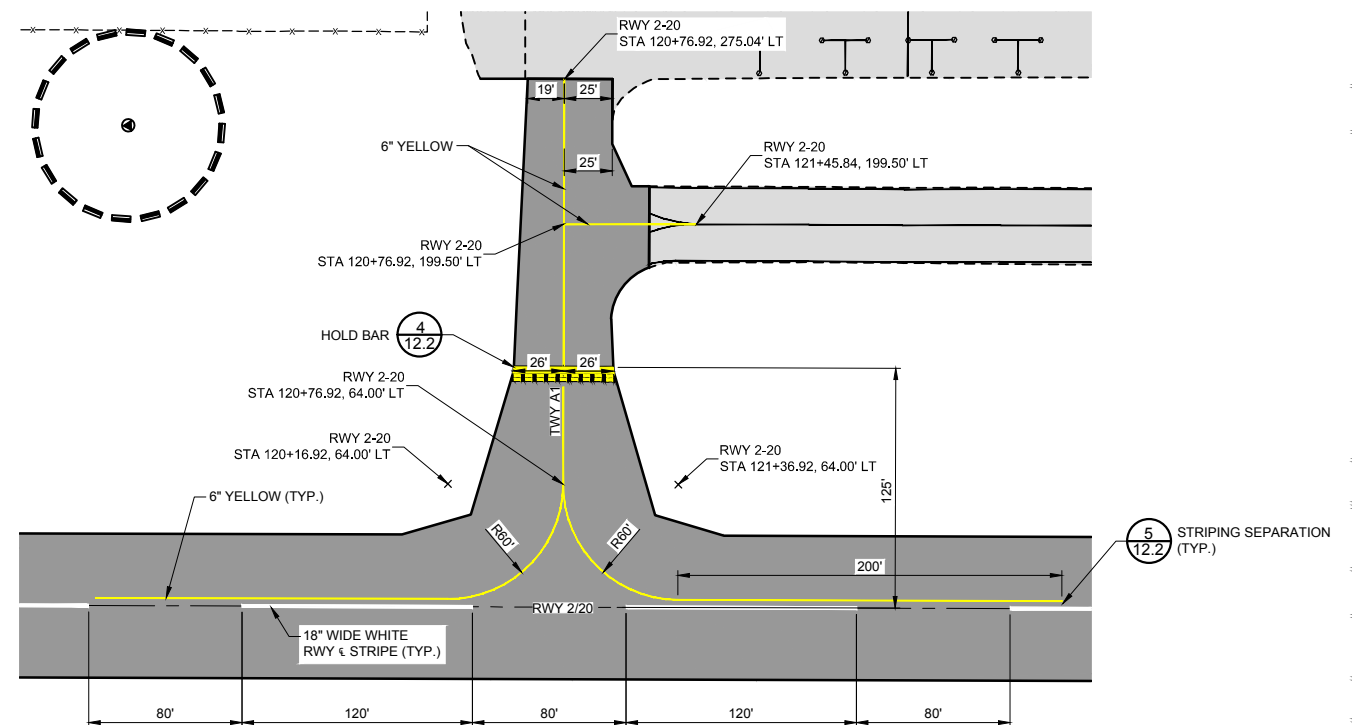
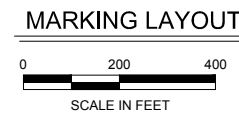
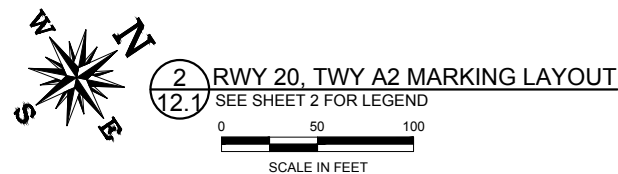
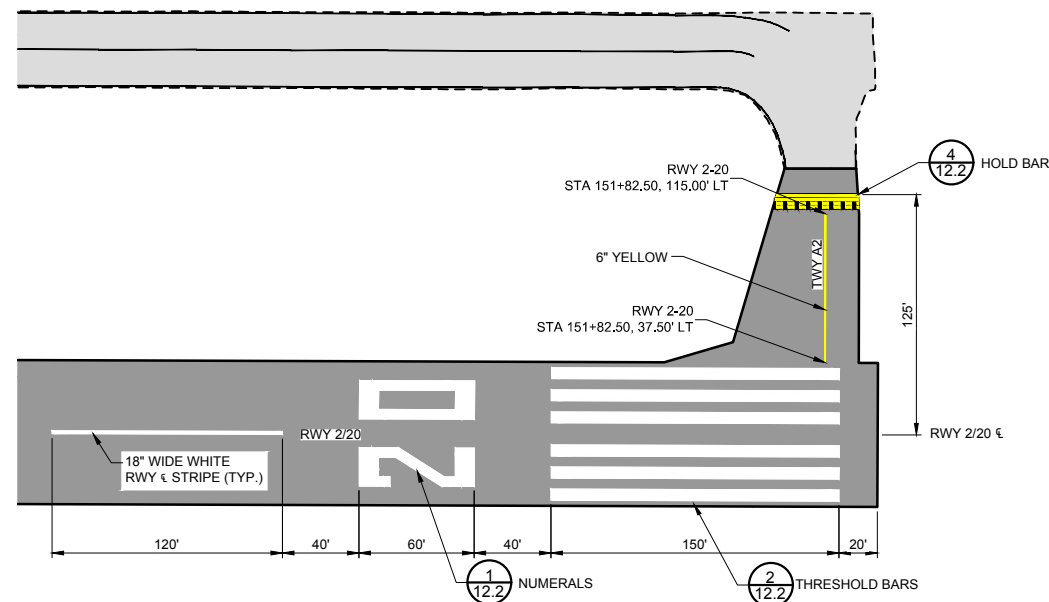
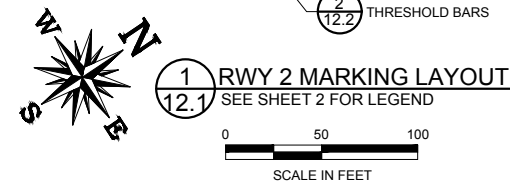
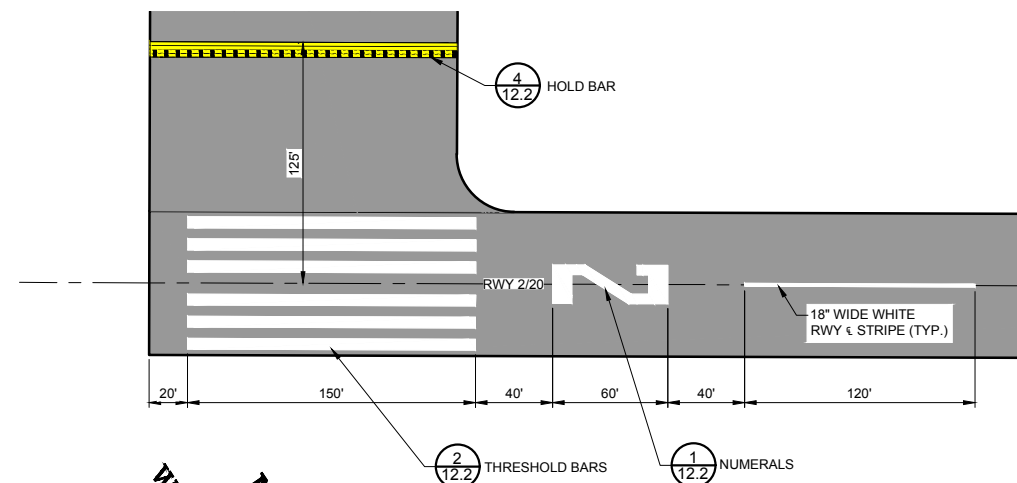
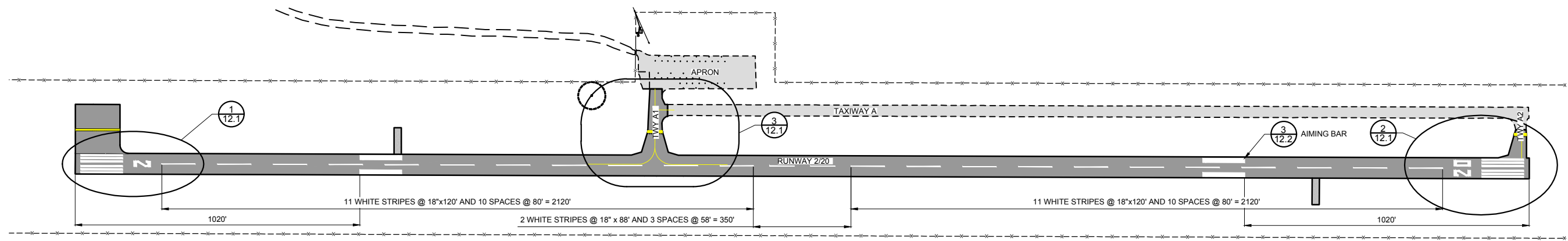
3
11.1 SAFETY DISCONNECT FRAME
NOT TO SCALE

No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301105

Drawn: BKR
Checked: JLS
Approved: TJA

BEACON
LAYOUT &
DETAILS

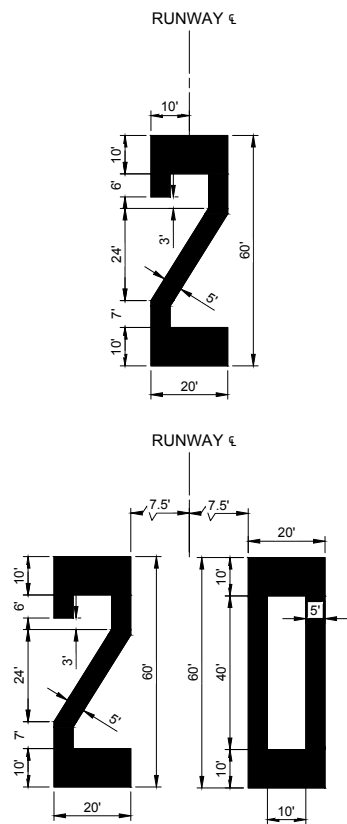


No.	Revision	Date	By

Project No: 166301
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File Name: 166301104

Drawn: BKR
Checked: JLS
Approved: TJA

**RUNWAY 2/20,
TWY A1
MARKING
LAYOUT**



1 NUMERAL DETAILS
12.2 NOT TO SCALE

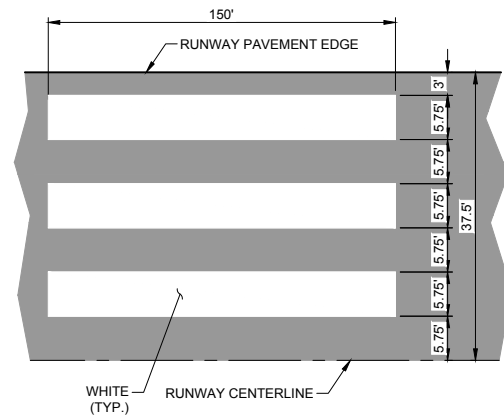
NOTES:

ALL NUMERALS ARE SOLID WHITE

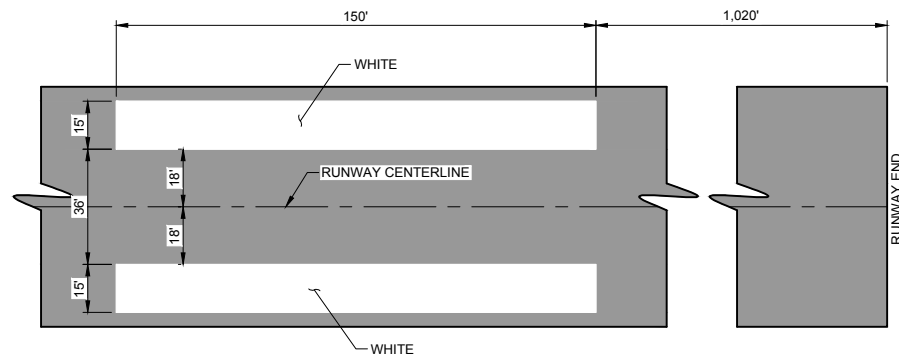
ALL DIMENSIONS SHOWN ARE TO WHITE

HORIZONTAL STRIPES ARE 10' WIDE

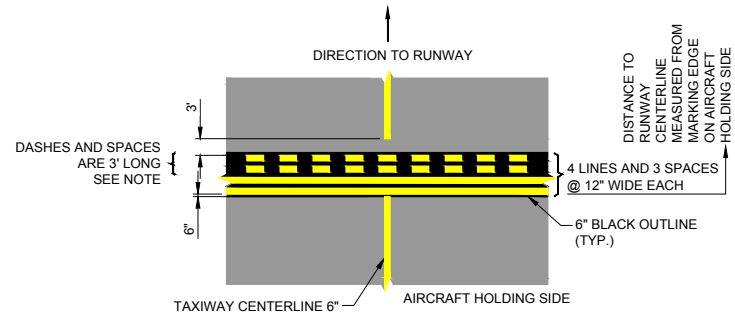
VERTICAL STRIPES ARE 5' WIDE



2 THRESHOLD BARS DETAIL
12.2 NOT TO SCALE



3 AIMING POINT MARKING
12.2 NOT TO SCALE

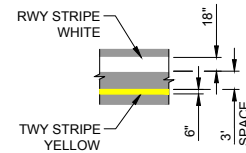


4 RUNWAY HOLDING POSITION MARKING - PATTERN A
12.2 NOT TO SCALE

NOTES:

UNLESS OTHERWISE NOTED ALL LINES ARE YELLOW.

BLACK BACKGROUND TO BE CONTINUOUS BETWEEN LINES & STRIPES.



5 STRIPING SEPARATION
12.2 NOT TO SCALE

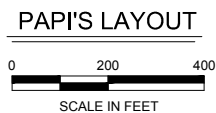
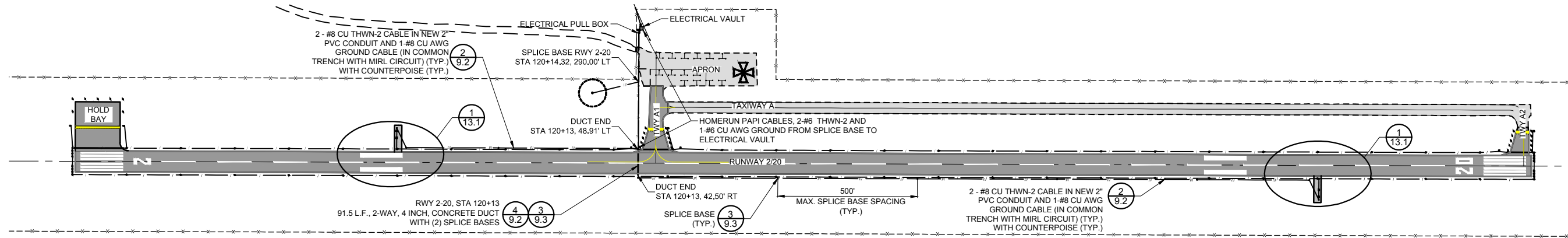
No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301104

Drawn: BKR
Checked: JLS
Approved: TJA

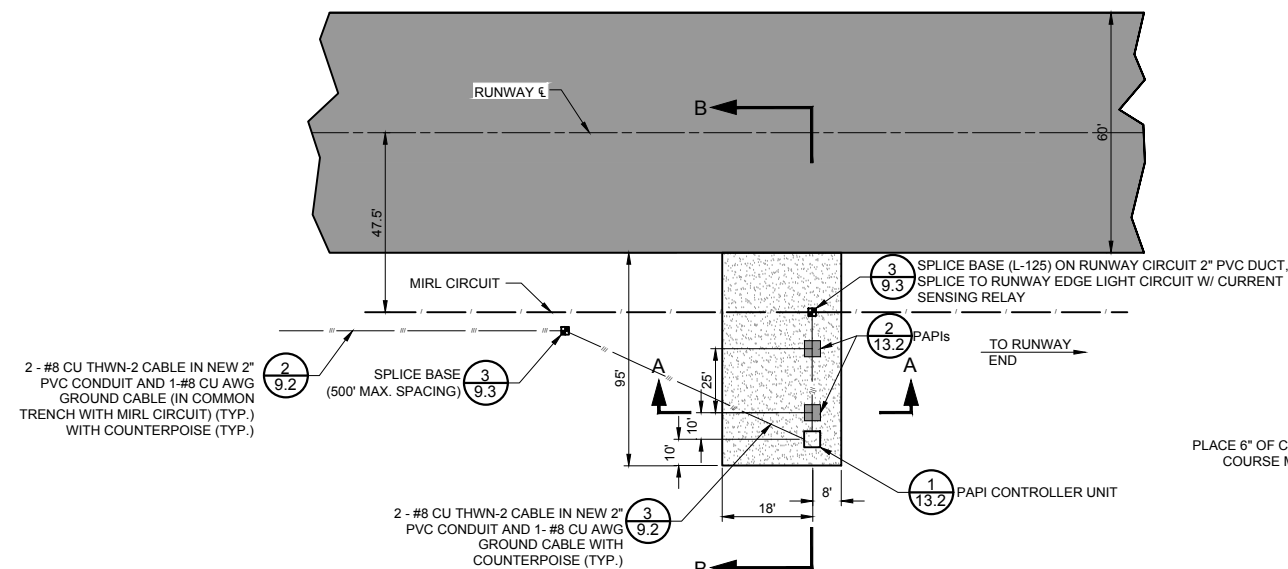
MARKING
DETAILS

Sheet: 12.2

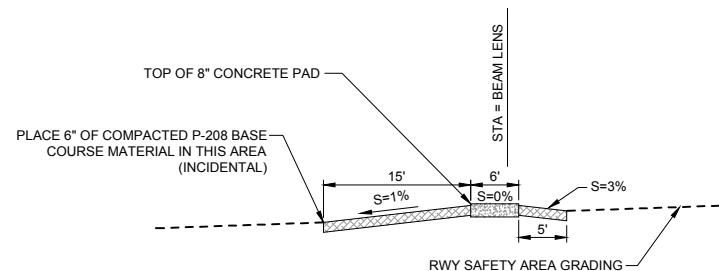


PAPI SIGHTING DETAILS								
RUNWAY END	PAPI (L-881)	BEAM LENS STATION	LOCATION	RUNWAY ϵ ELEVATION	TOP OF CONCRETE PAD EL.	PAPI BEAM ELEVATION	AIMING ANGLE	THRESHOLD CROSSING HT.
2	BOX #1 CLOSEST TO RWY	111+50	87.5' LT. RWY ϵ	5257.09 *	5255.10	5257.59	3° 15'	40.26'
	BOX #2 FARTHEST FROM RWY		112.5' LT. RWY ϵ		5255.27		2° 45'	
20	BOX #1 CLOSEST TO RWY	144+50	87.5' RT. RWY ϵ	5228.59 *	5226.39	5228.59	3° 15'	40.11'
	BOX #2 FARTHEST FROM RWY		112.5' RT. RWY ϵ		5225.89		2° 45'	

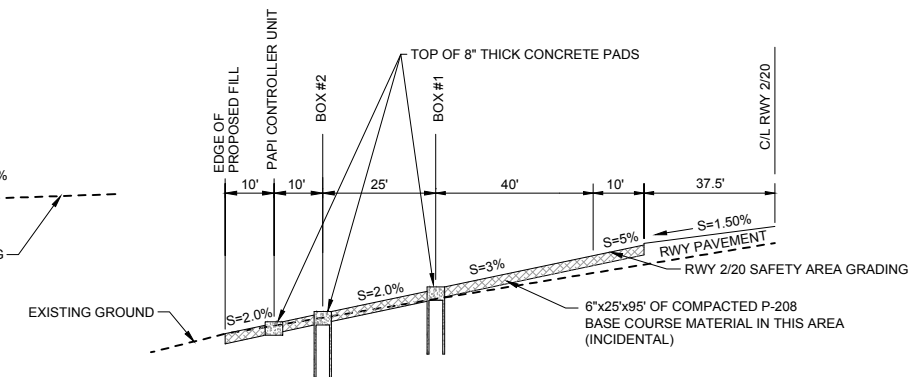
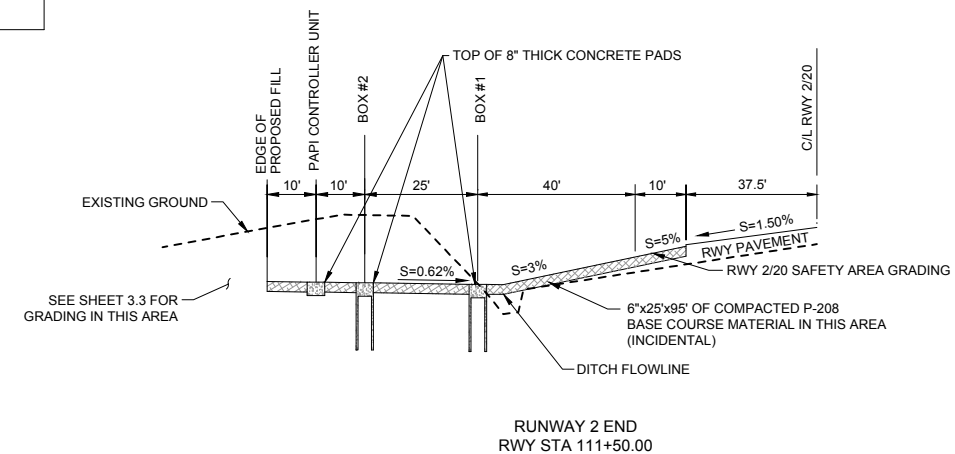
* CONTRACTOR TO VERIFY RUNWAY CENTERLINE AND END ELEVATIONS PRIOR TO CONSTRUCTION. ENGINEER MAY ADJUST ELEVATION AT PAPI'S IF THERE IS A DISCREPANCY. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF ELEVATIONS ARE ADJUSTED.



1 PAPI SITE PLAN
13.1 NOT TO SCALE



SECTION A-A
N.T.S.



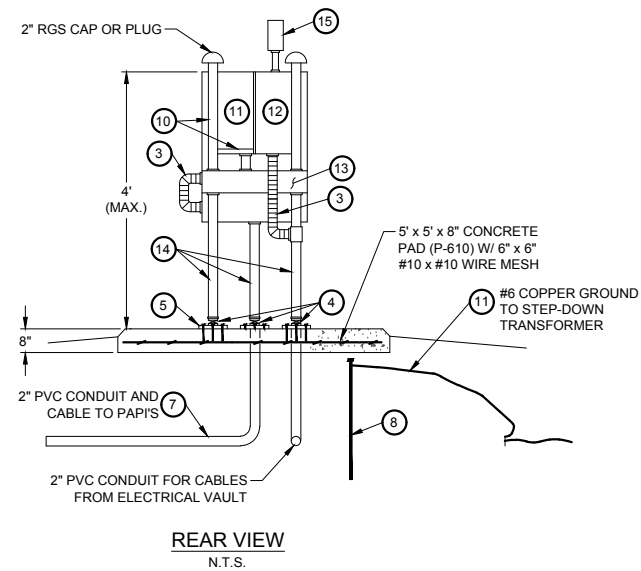
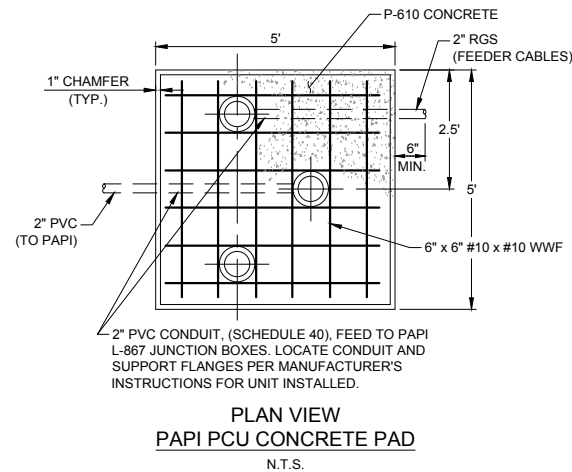
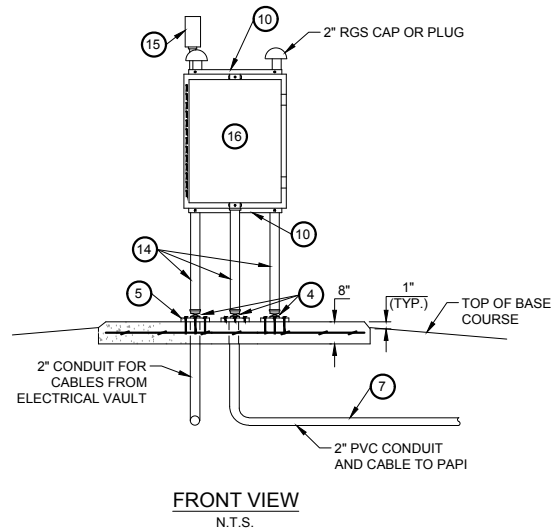
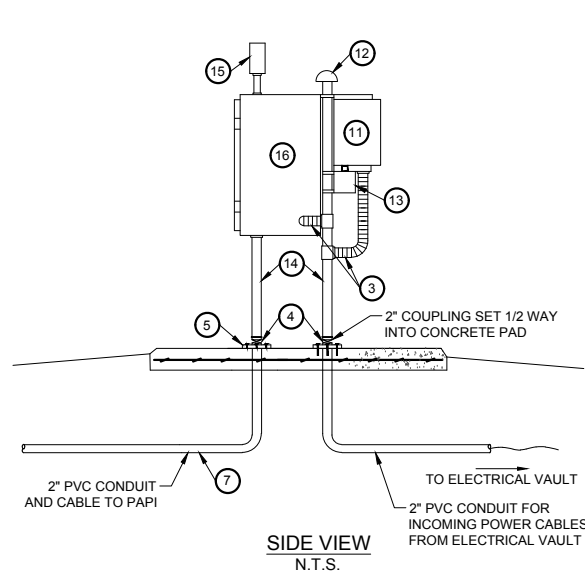
SECTION B-B
N.T.S.

No.	Revision	Date	By

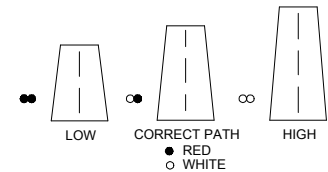
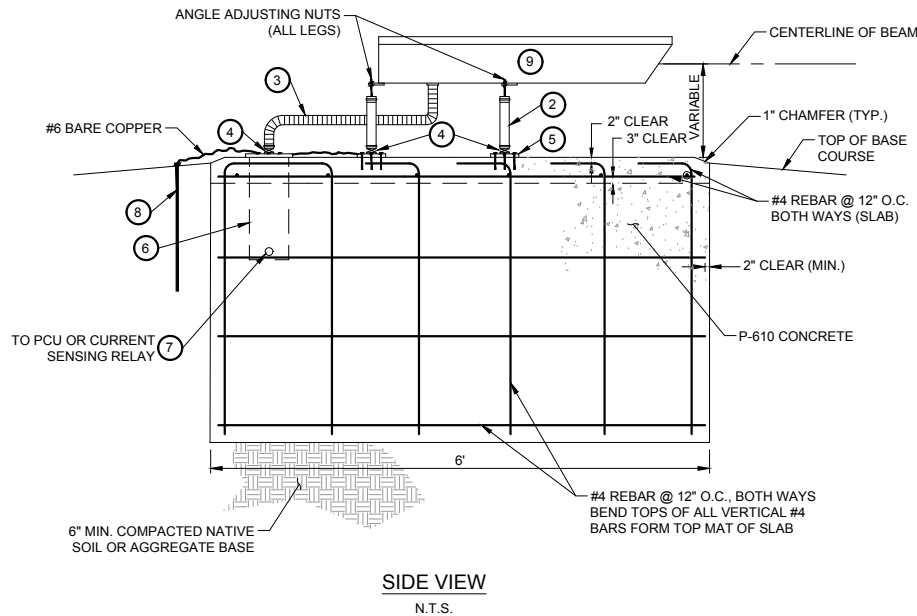
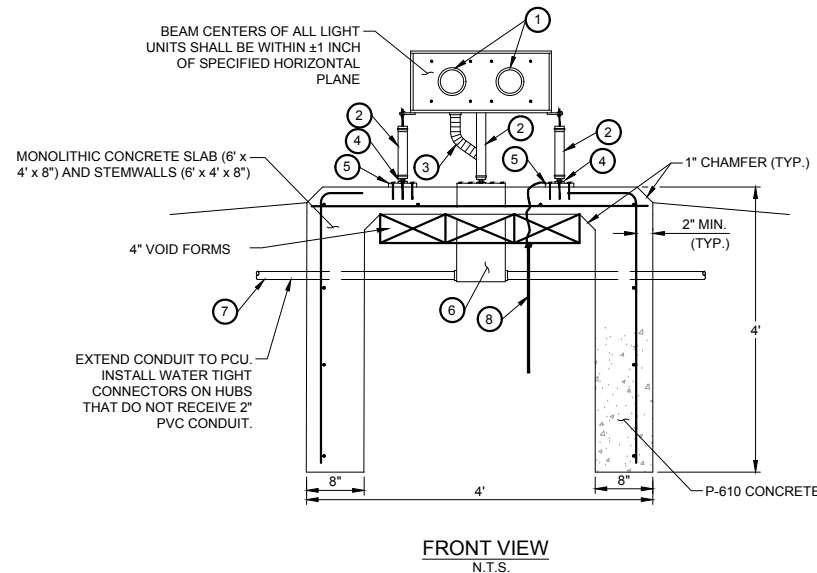
Project No: 166301
Date: 06/2017
File Name: 1663011105

Drawn: BKR
Checked: JLS
Approved: TJA

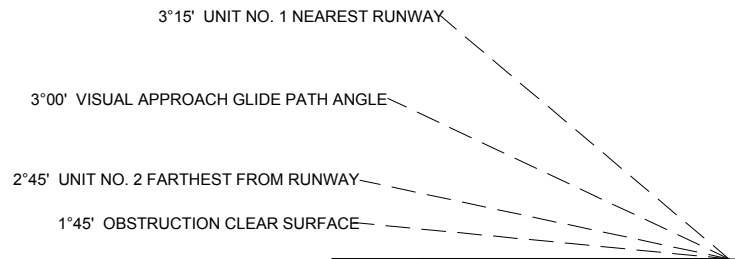
RUNWAY 2/20
PAPI LAYOUT



1
13.2 PAPI POWER CONTROL UNIT (PCU)
NOT TO SCALE



4
13.2 PAPI VISUAL APPROACH INDICATIONS
NOT TO SCALE



3
13.2 PAPI AIMING & OBSTRUCTION CLEARANCE
NOT TO SCALE

PAPI NOTES

- PAPI BOXES ARE SUPPORTED WITH 3 OR 4 LEGS.
- ALL CABLES ENTERING OR LEAVING L-867 BASES SHALL BE PROVIDED WITH L-823 CONNECTORS WITH WATERPROOFING KIT.
- SONOTUBE OR SIMILAR FORMS MAY BE USED ONLY IN THE TOP 12" OF PEDESTAL. IT IS MANDATORY THAT THE CONCRETE BE EXPOSED TO IRREGULAR SURFACES OF THE HOLE FOR ANCHORING PURPOSES TO PREVENT FROST MOVEMENT.
- CONTRACTOR SHALL INSTALL 2" PVC CONDUIT, SCHEDULE 40, (DEB) BETWEEN L-867 JUNCTION BOXES.

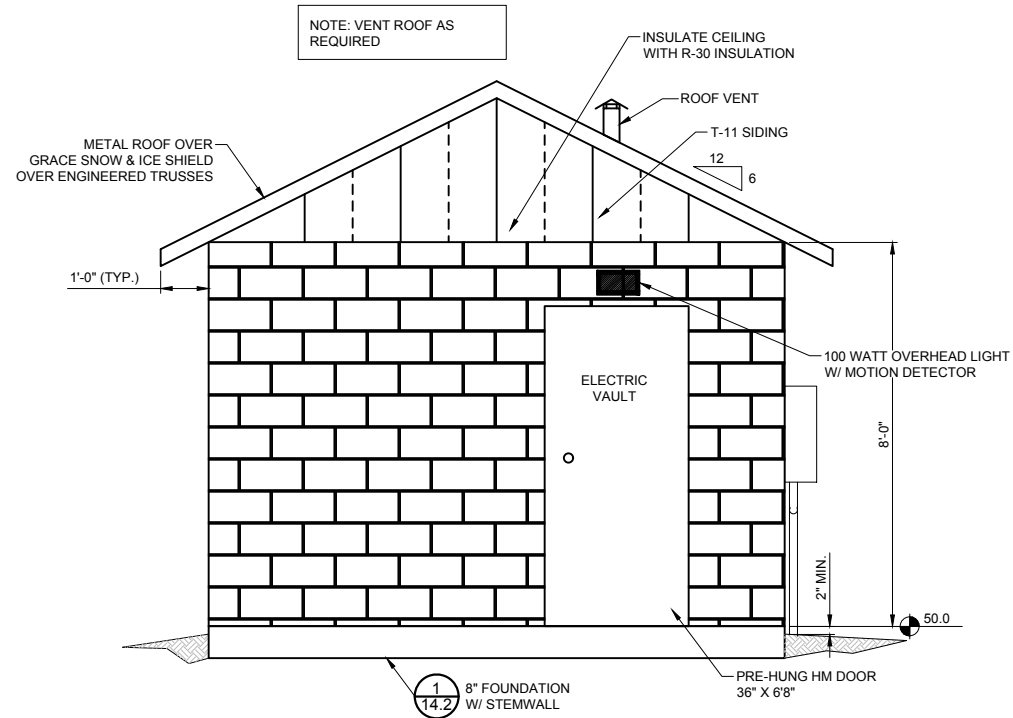
PAPI ITEM EQUIPMENT	
ITEM	DESCRIPTION
1	PAPI LAMPS 200 WATT, 1000 HR AS REQUIRED PER MANUFACTURER 2 OR 3 LAMPS PER PAPI BOX
2	2" EMT CONDUIT
3	2" FLEXIBLE SEALTITE CONDUIT. ALL EXPOSED CABLES TO BE IN CONDUIT. NUMBER OF ENTRANCE CABLES MAY VARY PER MFG.
4	FRANGIBLE COUPLINGS, 2" THREAD FOR EMT, RGS OR SEALTITE CONDUIT. ALL SUPPORTS INCLUDING ENTRANCE TO TOP OF BASES SHALL HAVE BREAKABLE COUPLINGS. DISCONNECT PLUGS SHALL BE INSTALLED AT EACH PAPI LIGHT UNIT AT THE BREAKABLE GROOVE. THE NUMBER OF ENTRANCE CABLES VARY PER MFG.
5	2" GALVANIZED FLOOR FLANGE WITH 5/16" x 4" EXP ANCHOR BOLTS.
6	JUNCTION BOX (L-867 LIGHT BASE, CLASS 1-A, SIZE D-16" DIA, 24" DEEP WITH 1/4" GALV BASE PLATE & GASKET).
7	2" PVC CONDUIT (SCHEDULE 40, DEB) FOR PAPI CABLES CONNECTING BETWEEN PAPI LIGHT BASES AND PCU JUNCTION BOXES.
8	3/4" x 10'-0" GROUND ROD, COPPER OR COPPER-CLAD STEEL. GROUND CLAMP AND #6 BARE COPPER WIRE (SOLID)
9	L-881 PRECISION APPROACH PATH INDICATOR LAMP HOUSING WITH LAMPS AND TILT SWITCH. (2 PROJECTOR UNITS) CLASS II SYSTEM.
10	UNISTRUT P-1000 (OR APPROVED EQUAL).
11	STEP-DOWN TRANSFORMER, 3KVA, 1-PHASE, 480-120/240 V, 115° C RISE, 2-2.5% FCBM & 2-2.5% FCAN TAPS REQ'D. NEMA-3R ENCLOSURE.
12	30A, 480V DISCONNECT SWITCH, HEAVY DUTY H361NRB OR APPROVED EQUAL. FUSE @ 15 AMP, FRN-DUAL ELEMENT FUSE.
13	4" x 4" RAINTIGHT GUTTER.
14	2" EMT CONDUIT (TYP.)
15	AVIATION TYPE PHOTOELECTRIC CELL, FACING NORTH. ACTIVATES @ 35 & 58 CANDELAS.
16	L-881 STYLE "A" POWER AND CONTROL UNIT-CLASS II SYSTEM.

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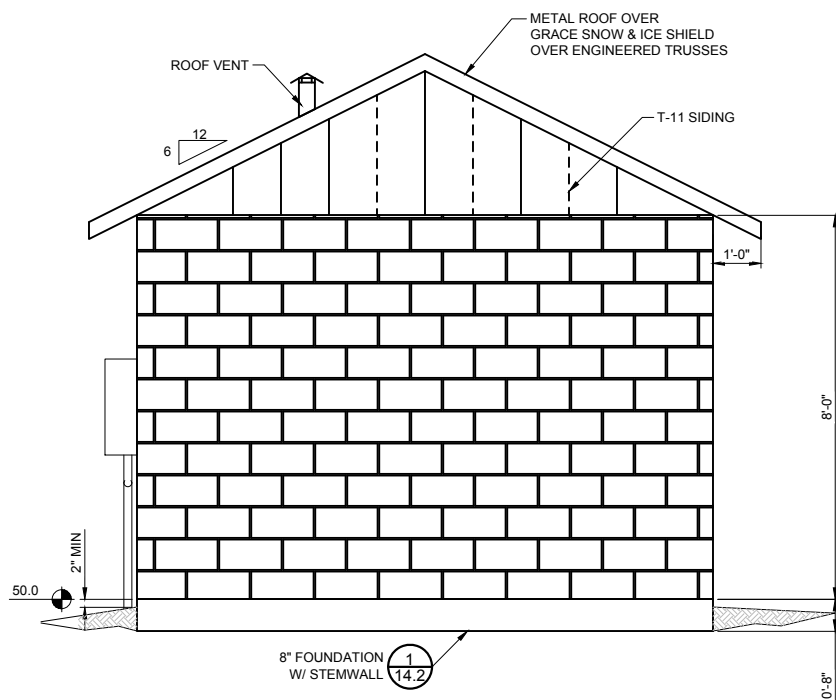
Drawn: BKR
Checked: JLS
Approved: TJA

PAPI DETAILS



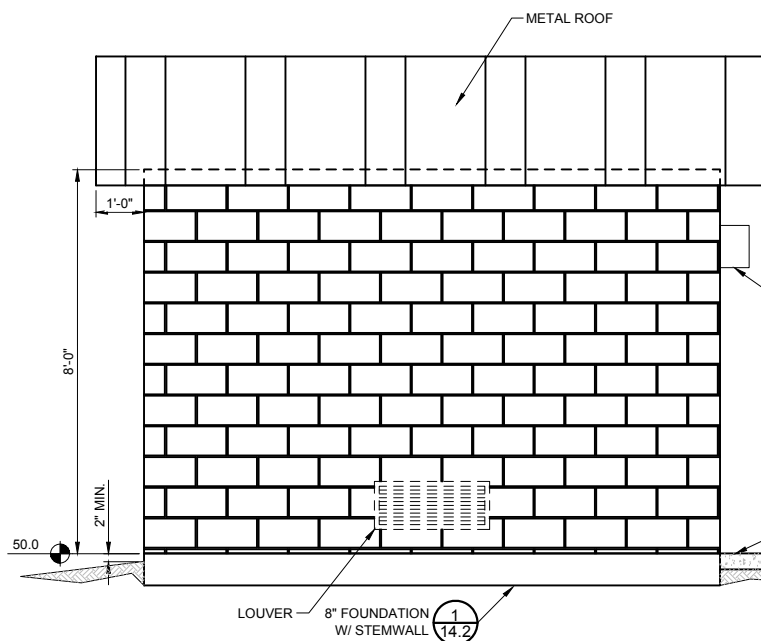
NE ELEVATION

0 1' 2'
SCALE IN FEET



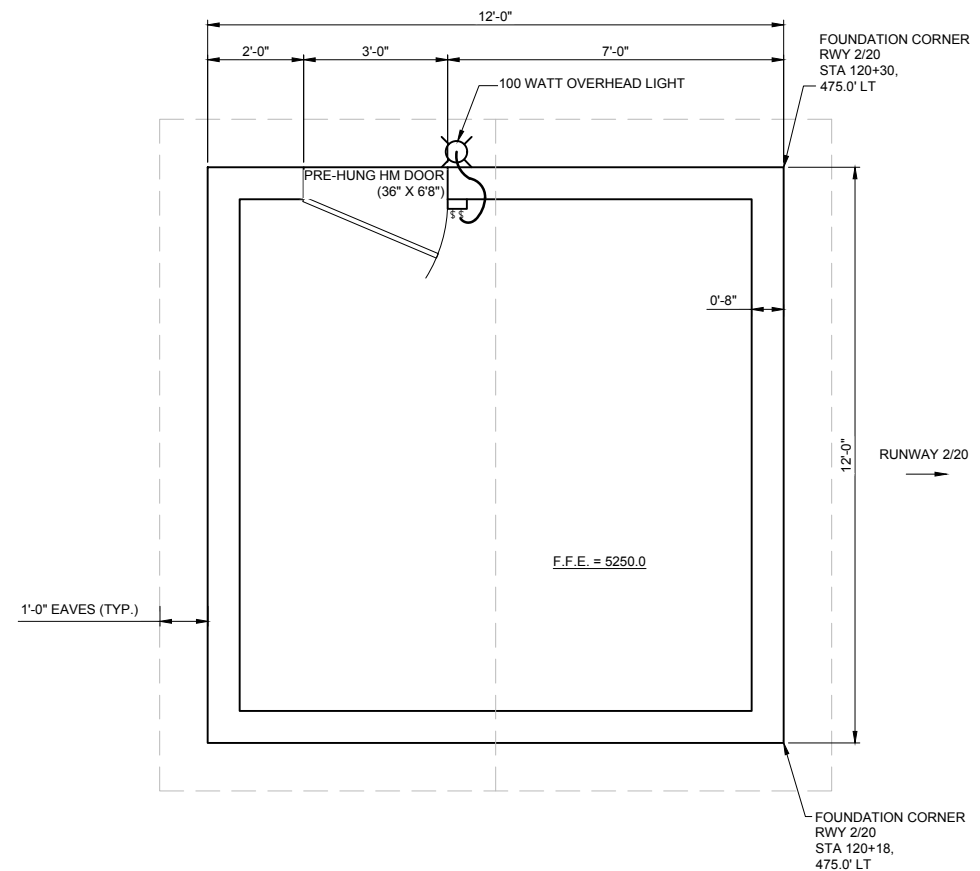
SW ELEVATION

0 1' 2'
SCALE IN FEET



SE ELEVATION

0 1' 2'
SCALE IN FEET



ELECTRICAL VAULT PLAN



STRUCTURAL NOTE

- MASONRY OVER 8" CONCRETE SLAB, OVER 4" ABC.
- REBAR 12" O.C. BOTH WAYS.
- INSTALL #4 REBAR IN WALLS IN CORNER CELLS, END CELLS AND EVERY OTHER CELL ALONG WALL.
- GROUT CELLS WITH REBAR ONLY.
- ANCHOR BOLTS AT T.O.W. ARE 1/2" DIA.
- 12' X 12' MASONRY BUILDING.
- INSULATE & DRYWALL CEILING, PAINTED INTERIOR.

INTERIOR FINISH:

- FLOOR = SEALED CONCRETE
- WALLS = PAINTED MASONRY
- CEILING = PAINTED SMOOTH FINISH DRYWALL

EXTERIOR FINISH:

- WALLS = TAN, SPLIT FACE MASONRY
- ROOF = 26 ga RIBBED METAL ROOF PANELS BRICK RED, 25 YR. COLOR WARRANTY

ROOF LIVE LOAD = 40 LBS / S.F.
WIND = 90 M.P.H.
SEISMIC ZONE = EXPOSURE B

SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

2017 IMPROVEMENTS
NAVAJO DOT CO11473

A.I.P. No. 3-35-0049-005-2017

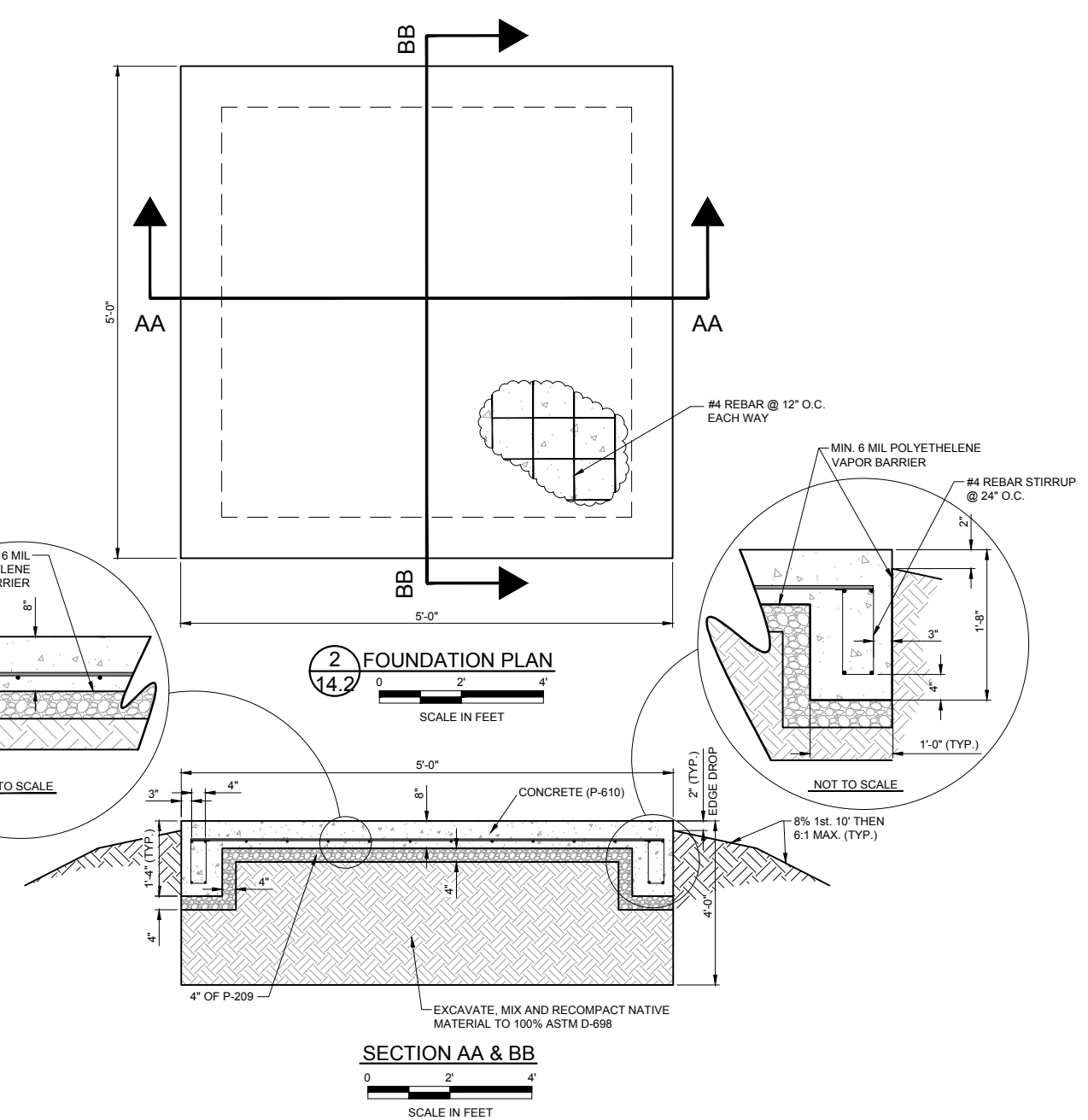
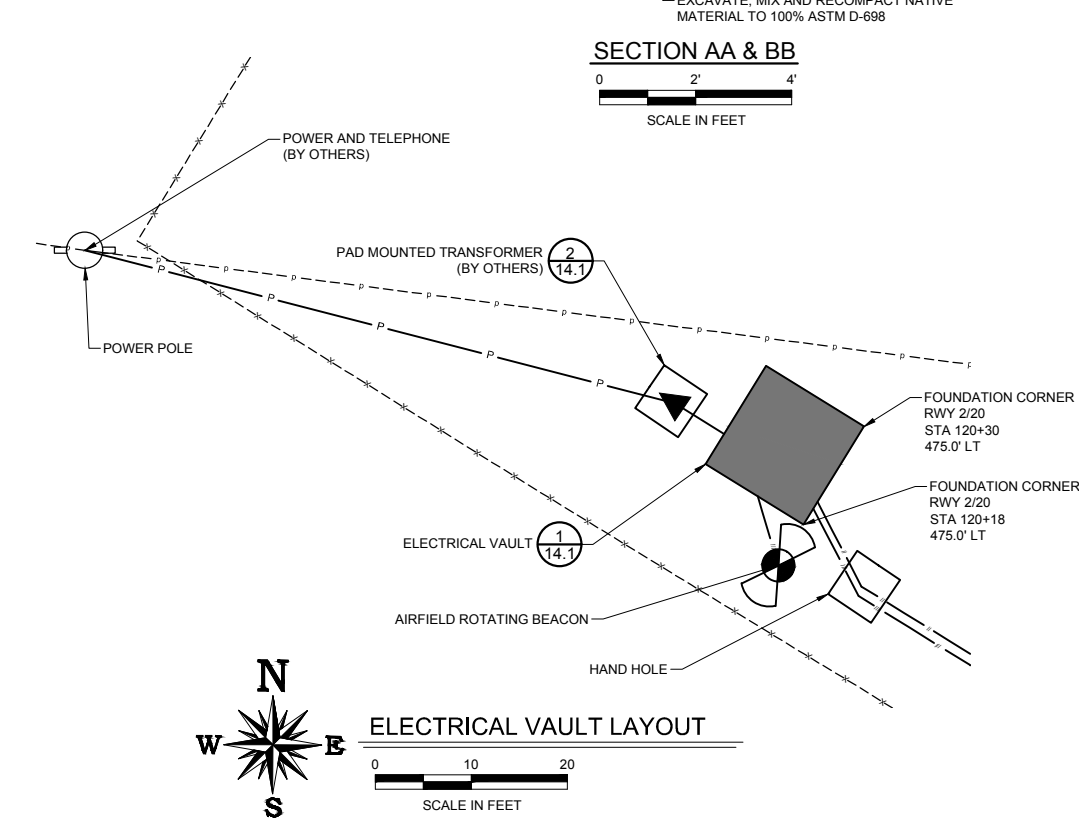
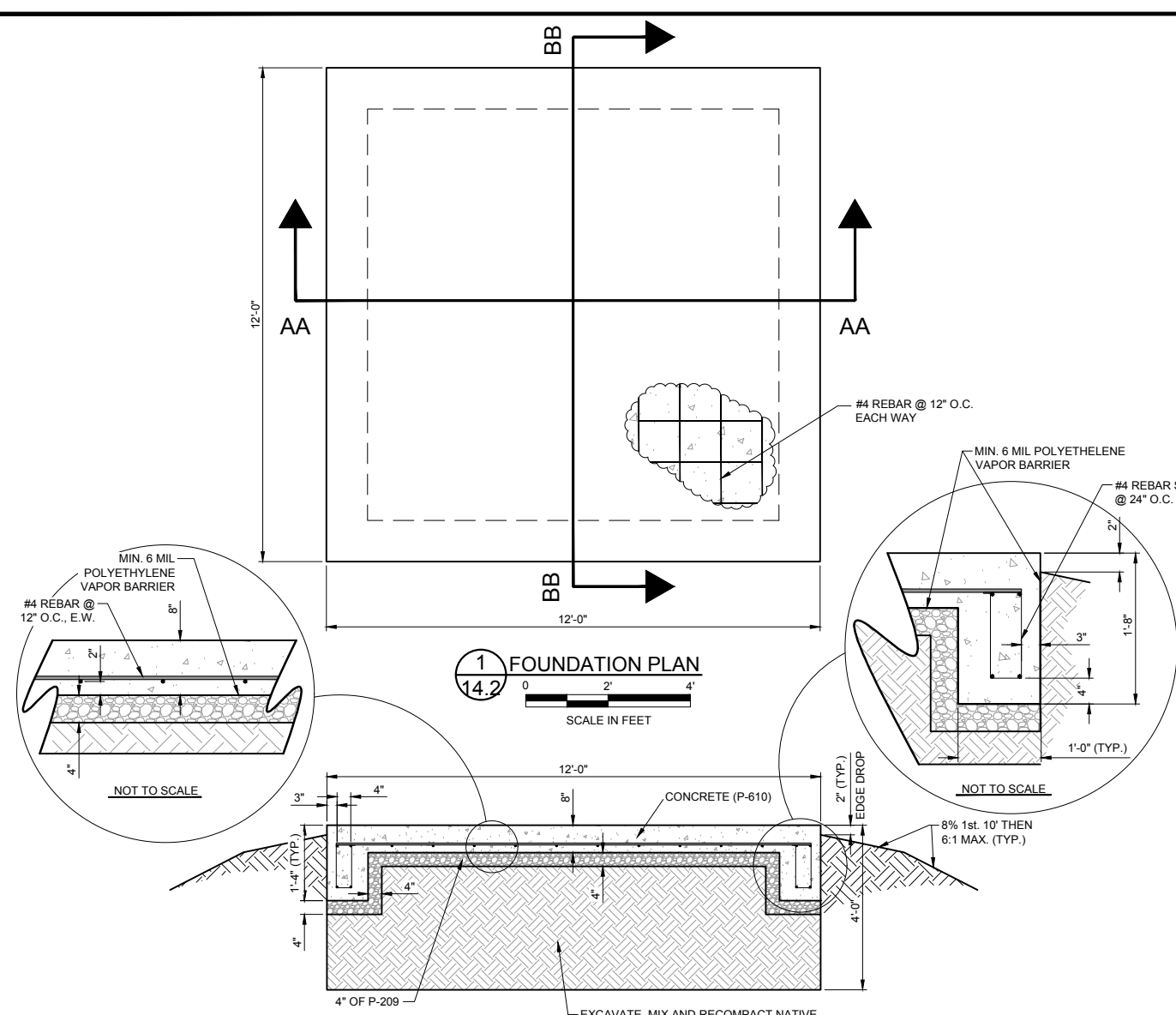
No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301106

Drawn: BKR
Checked: JLS
Approved: TJA

ELECTRICAL
VAULT PLAN
&
ELEVATIONS

Sheet: 14.1



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PLANNING ENGINEERING CONSTRUCTION

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SHIPROCK AIRSTRIP
SHIPROCK, NEW MEXICO

2017 IMPROVEMENTS
NAVAJO DOT CO11473

A.I.P. No. 3-35-0049-005-2017

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Project No: 166301

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Drawn: BKR

Checked: JLS

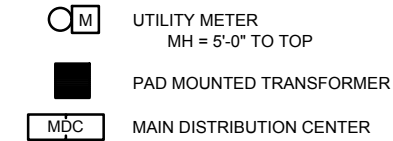
Approved: TJA

ELECTRICAL VAULT SITE LAYOUT & FOUNDATION DETAILS

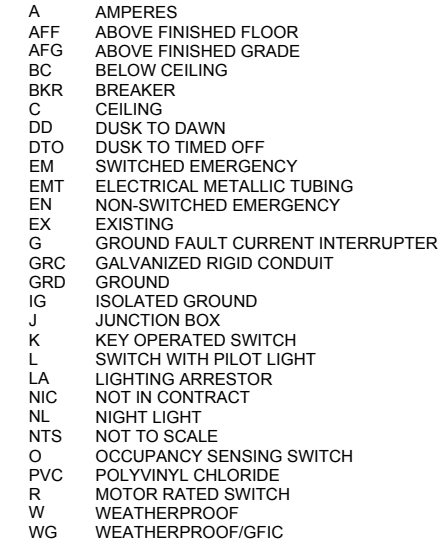
Sheet: **14.2**

ELECTRICAL LEGEND

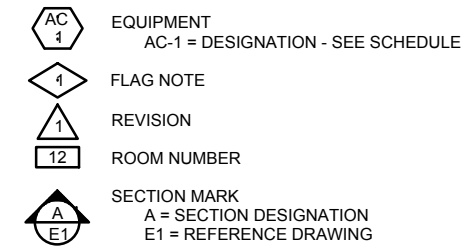
SERVICE ENTRANCE



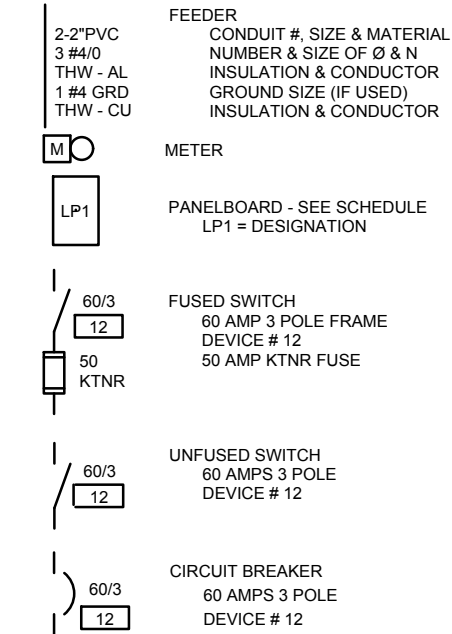
ABBREVIATIONS



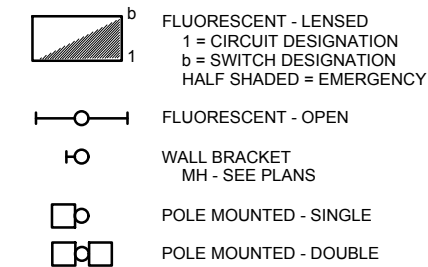
GENERAL SYMBOLS



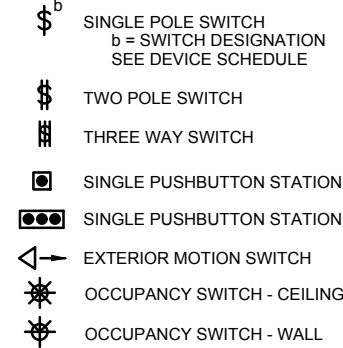
ONE LINE DIAGRAM



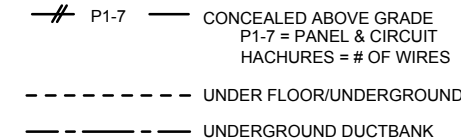
LIGHTING FIXTURES



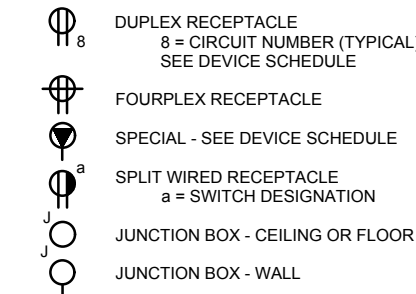
SWITCHES MH = 3'-10" TO CENTER



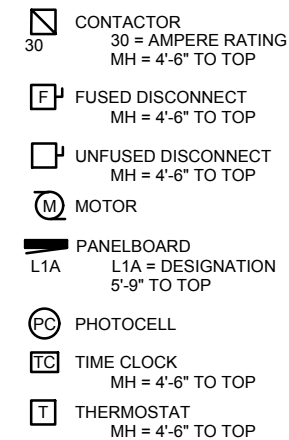
CONDUIT



OUTLETS MH = 1'-6" TO CENTER



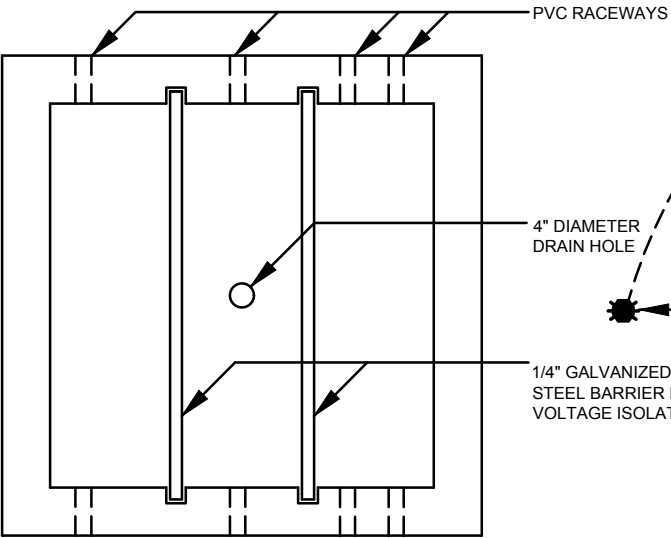
EQUIPMENT



PROVIDE A #4 COPPER
GROUND TO 2 5/8"x8'
COPPER CLAD STEEL
GROUND RODS SPACED 8'
APART.
PROVIDE A #4 COPPER
GROUND TO ALL OF THE
FOLLOWING IF PRESENT:
FOUNDATION REINFORCING
STEEL (UFER)
UNDERGROUND METAL
WATER PIPES
METAL FRAME OF BUILDING

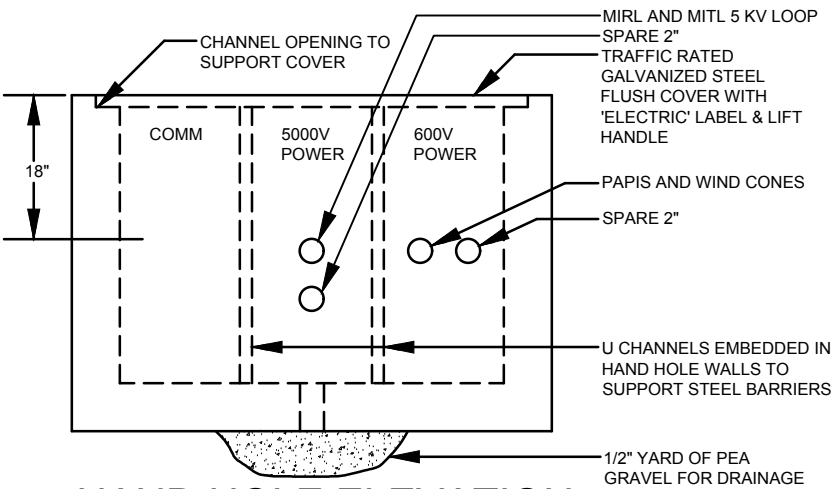
ONE LINE DIAGRAM

NO SCALE



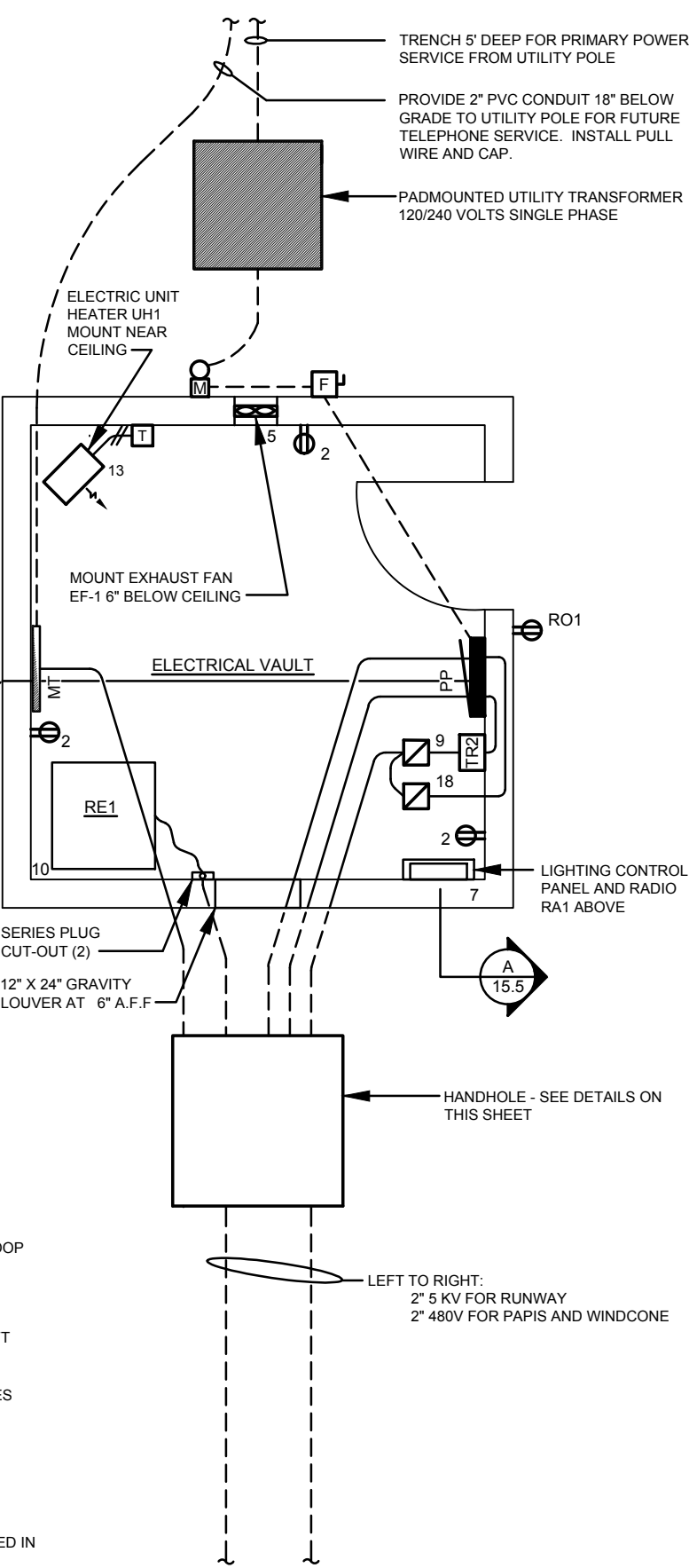
HAND HOLE PLAN

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



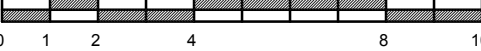
HAND HOLE ELEVATION

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



POWER PLAN

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



No.	Revision	Date	By

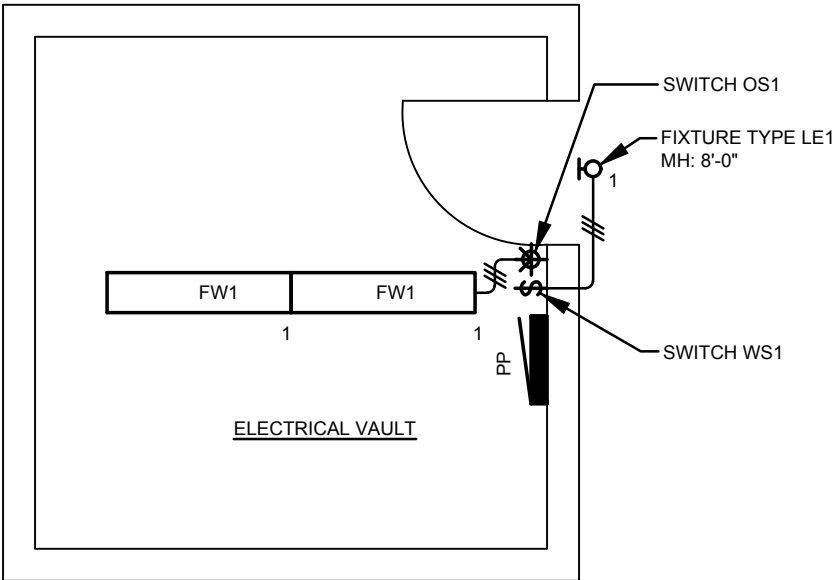
Project No: 166301
Date: 06/2017
File Name: 166301106

Drawn: BKR
Checked: JLS
Approved: TJA

LEGEND,
POWER PLAN
& DETAILS

WIRING DEVICES SCHEDULE						
DEVICE		BOX		COVER		ASSEMBLY
DESIGNATION	MANUFACTURER CATALOG NUMBER ALTERNATE MFG ALTERNATE MFG	ENVIRONMENT COLOR POWER / CURRENT VOLTAGE	SIZE MATERIAL MOUNTING DEPTH / CONNECTIONS	MOUNTING SIZE OPENING SIZE COLLAR DEPTH COLLAR MATERIAL	ENVIRONMENT MATERIAL OPENING COLOR	
OS1 OCC SENSOR	LEVITON OSSMT-MD HUBBELL PASS & SEYMOUR	ABOVE 50F & DRY WHITE 1200W / --- 120V	2 GANG PRESSED STEEL FLUSH 2-1/8" / 1/2" & 3/4" KO'S	2 GANG 1 GANG 5/8" PRESSED STEEL	ABOVE 50F & DRY 302 STAINLESS STEEL DECORA SILVER	OS1: OCC SENSOR DEVICE GRADE: COMMERCIAL DEVICE STYLE: DECORA FAR SIDE BOX SUPPORT: REQUIRED MOUNTING: WALL COVERAGE: 2400 SQUARE FEET FIELD OF VIEW: ADJUSTABLE 32 TO 180 DEGREES AMBIENT LIGHT OVERRIDE: PHOTOCELL
RD1 RECEPTACLE: DUPLEX	LEVITON BR20 PASS & SEYMOUR HUBBELL	ABOVE 32F & DRY WHITE --- / 20A 125V	2 GANG PRESSED STEEL FLUSH 2-1/8" / 1/2" & 3/4" KO'S	2 GANG 1 GANG 5/8" PRESSED STEEL	ABOVE 32F & DRY 302 STAINLESS STEEL OVAL SILVER	RD1: RECEPTACLE: DUPLEX DEVICE GRADE: COMMERCIAL DEVICE STYLE: OVAL DEVICE NEMA CONFIGURATION: 5-20R DEVICE POLES: 2-POLE 3-WIRE GRND FAR SIDE BOX SUPPORT: REQUIRED NEMA ENCLOSURE: TYPE 1
RO1 RECEPTACLE: OUTDOOR	LEVITON W7899 PASS & SEYMOUR HUBBELL	-20F TO 120F & WET WHITE --- / 20A 125V	2 GANG PRESSED STEEL FLUSH 2-1/8" / 1/2" & 3/4" KO'S	2 GANG 1 GANG 5/8" PRESSED STEEL	-20F TO 120F & WET CAST ALUMINUM DECORA SILVER	RO1: RECEPTACLE: OUTDOOR DEVICE GRADE: COMMERCIAL DEVICE STYLE: DECORA DEVICE NEMA CONFIGURATION: 5-20R DEVICE POLES: 2-POLE 3-WIRE GRND FAR SIDE BOX SUPPORT: REQUIRED NEMA ENCLOSURE: TYPE 1 GFCI PROVIDE LOCKABEL METAL IN-USE COVER AND CORROSION RESISTANT RATING.
WS1 SWITCH: SPST	LEVITON CSB1-15 PASS & SEYMOUR HUBBELL	ABOVE 32F & DRY WHITE --- / 15A 120/277V	2 GANG PRESSED STEEL FLUSH 2-1/8" / 1/2" & 3/4" KO'S	2 GANG 1 GANG 5/8" PRESSED STEEL	ABOVE 32F & DRY 302 STAINLESS STEEL TOGGLE SILVER	WS1: SWITCH: SPST DEVICE GRADE: COMMERCIAL DEVICE STYLE: TOGGLE FAR SIDE BOX SUPPORT: REQUIRED NEMA ENCLOSURE: TYPE 1

PP - PANELBOARD									
RATINGS:		REQUIRED OPTIONS & ACCESSORIES:			REQUIRED OPTIONS & ACCESSORIES:				
240/120 VOLTS SINGLE PHASE 3 WIRE NEMA1 ENCLOSURE 200 AMP BUS		COPPER BUS FLUSH MOUNTING 14800 AIC			GROUND BUS				
LOAD TYPE AND CIRCUIT DESCRIPTION	#/VA	AMPS		AMPS	#/VA	LOAD TYPE AND CIRCUIT DESCRIPTION			
LIGHTING: VAULT	1 130	20		20	2 720	OUTLET: VAULT			
MOTOR: BEACON (BE1)	3 1155	20		20	4 1200	SPARE: UNALLOCATED FUTURE			
MOTOR: EXHAUST FAN (EF1)	5 120	20		20	6 1200	SPARE: UNALLOCATED FUTURE			
PROCESS: RADIO (RA1)	7 500	20		20	8 1200	SPARE: UNALLOCATED FUTURE			
PROCESS: PAPI	9 1650	20		60	10 5000	PROCESS: REGULATOR (RE1)			
PROCESS: ---	11 1650				12 5000	PROCESS: ---			
ELECTRIC HEAT: UNIT HEATER (UH1)	13 1500	20		40	14 3840	PROCESS: FUTURE AWOS			
ELECTRIC HEAT: ---	15 1500				16 3840	PROCESS: ---			
SPARE: UNALLOCATED FUTURE	17 1200	20		20	18 276	PROCESS: WINDCONE (WC1)			
SPARE: UNALLOCATED FUTURE	19 1200	20			20 276	PROCESS: ---			
SPACE: ---	21 0				22 0	SPACE: ---			
SPACE: ---	23 0				24 0	SPACE: ---			
LOADS BY TYPE (KVA) CONNECTED	DEMAND		A	B	TOTAL	LOAD BY TYPE (KVA) CONNECTED	DEMAND		
LIGHTING	0.1	0.2	CONNECTED AMPS:	130.3	146.4	138.3	KITCHEN	0.0	0.0
RECEPTACLE	0.7	0.7	DEMAND AMPS:	130.7	146.5	138.6	PROCESS	22.0	22.0
MOTOR - HEATING	0.0	0.0	CONNECTED KVA:	15.6	17.6	33.2	MISCELLANEOUS	0.0	0.0
MOTOR - COOLING	0.1	0.1	DEMAND KVA:	15.7	17.6	33.3	SPACE	0.0	0.0
MOTOR - YR RND	0.0	0.0				SPARE	7.2	7.2	
ELECTRIC HEAT	3.0	3.0				LARGEST MOTOR	0.1	0.0	
BALANCE % :			89.0						



LIGHTING PLAN

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



No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301106

Drawn: BKR
Checked: JLS
Approved: TJA

LIGHTING
PLAN &
SCHEDULE

LIGHTING SCHEDULE

LIGHTING FIXTURE			LAMP		BALLAST / DRIVER TYPE 1		BALLAST / DRIVER TYPE 2		DESCRIPTION	
DESIGNATION	MANUFACTURER CATALOG # FIRST HALF CATALOG # SECOND HALF APPROVED ALTERNATES HOUSING MATERIAL	MOUNTING AIMING DIFFUSER REFLECTOR HOUSING FINISH	QUANTITY - TYPE MANUFACTURER CATALOG NUMBER		QUANTITY - TYPE MANUFACTURER CATALOG NUMBER		QUANTITY - TYPE MANUFACTURER CATALOG NUMBER			
DESCRIPTION DIMENSIONS			LUMENS	COLOR TEMPERATURE	STARTING METHOD	BALLAST FACTOR	STARTING METHOD	BALLAST FACTOR		
			C. R. I.	LAMP LIFE	MIN START TEMP	HARMONICS	START TEMP	HARMONICS		
FW1 FLUORESCENT: WRAPAROUND 2.5" H X 9" W X 4' PRJ	COLUMBIA WC 4-2 32-E U --- LITHONIA, METALUX SHEET STEEL	WALL SURFACE DIRECT .125" ACRYLIC PRISMATIC --- PAINTED WHITE	2 - 32 WATT 48" T8 LINEAR FLUORESCENT G.E. F32T8/LX/SPX35/HL/ECO		1 - FLUOR: 3-LAMP 42 KHz ELECTRONIC ADVANCE REL-3P32-SC		SECOND BALLAST / DRIVER TYPE NOT REQUIRED --- ---		FW1: FLUORESCENT: WRAPAROUND 120 V 65 W ENVIRONMENT: ABOVE 50F & DRY.	
LE1 L.E.D: SECURITY 7.25" H X 9" W X 9.5" PRJ	KIM LCC-12LU-5K-1-PC1 --- ANTIQUE ST LIGHT, A.A.L. CAST ALUMINUM	WALL SURFACE CUT-OFF NONE L.E.D. MICROEMITTER ARRAY MEDIUM BRONZE PAINTED	3100 L	3500 DEG K	INSTANT	>=1.00	---	---		LE1: L.E.D: SECURITY 120 V 12 W ENVIRONMENT: -20F TO 120 DEG F & WET. PROVIDE BUTTON PHOTOCELL.
			>=85	>=36,000 HOURS	0 DEG F	<=20%	---	---		
			1 - 12 WATT L.E.D. ARRAY SELECTED BY FIXTURE MANUFACTURER SELECTED BY FIXTURE MANUFACTURER		1 - L.E.D. DRIVER SELECTED BY FIXTURE MANUFACTURER SELECTED BY FIXTURE MANUFACTURER		SECOND BALLAST / DRIVER TYPE NOT REQUIRED --- ---			
			802 L	5000 DEG K	INSTANT	>=1.00	---	---		
			>=67.5	>=25,000 HOURS	0 DEG F	<=20%	---	---		
GENERAL NOTES: 1. IF THE FIXTURE CATALOG NUMBER CONFLICTS WITH THE FIXTURE DESCRIPTION, THE FIXTURE DESCRIPTION TAKES PRECEDENCE. 2. THE FIXTURE MANUFACTURER SHALL SUPPLY LAMPS AND ALL ACCESSORIES NECESSARY FOR THE INSTALLATION OF HIS FIXTURES. 3. BATTERIES IN BATTERY BACKED FLUORESCENT FIXTURES SHALL BE SIZED TO PROVIDE 50% OF A SINGLE LAMP RATED LUMEN OUTPUT FOR 90 MINUTES. 4. BALLASTS PROVIDED SHALL HAVE THE LOWEST SOUND RATING AVAILABLE FOR THEIR TYPE. 5. LAMPS PROVIDED SHALL HAVE THE LOWEST MERCURY CONTENT AVAILABLE FOR THEIR TYPE, AND SHALL BE TCPL COMPLIANT IF AVAILABLE. 6. SUBMIT AND RECEIVE APPROVAL FROM THE ENGINEER FOR ALL LIGHT FIXTURES, BALLASTS, AND BACK-UP BATTERIES PRIOR TO RELEASING FUTXURES FOR MANUFACTURE.										

GENERAL EQUIPMENT SCHEDULE

EQUIPMENT		BRANCH CIRCUIT	OVERCURRENT	CONTROLLER	DISCONNECT @ CONTROLLER	DISCONNECT @ EQUIPMENT	CONTROL DEVICE	EQUIPMENT DESIGNATION & DESCRIPTION
DESIGNATION	RATINGS SUPPLIED BY INSTALLED BY WIRED BY	RACEWAY PHASE WIRE NEUTRAL WIRE GROUND WIRE	DEVICE RATING DEVICE TYPE DEVICE LOCATION	TYPE ENCLOSURE SUPPLIED BY INSTALLED BY WIRED BY	TYPE ENCLOSURE SUPPLIED BY INSTALLED BY WIRED BY	TYPE ENCLOSURE SUPPLIED BY INSTALLED BY WIRED BY	TYPE ENCLOSURE SUPPLIED BY INSTALLED BY WIRED BY	
EF1 FAN: EXHAUST	120V 1.0A 1PH 2W ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	0.50" EMT #12 COPPER #12 COPPER #12 COPPER	20 CIRCUIT BREAKER PANELBOARD	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	THERMOSTAT NEMA 1 ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	EF1: FAN: EXHAUST EXHAUST FAN SHALL BE DAYTON #1HLA2 OR EQUAL. THERMOSTAT SHALL BE GRAINGER #2E340 OR EQUAL.
BE1 BEACON	120V 9.6A 1PH 2W GENERAL GENERAL ELECTRICAL SUB	0.75" PVC #12 COPPER #12 COPPER #12 COPPER	20 CIRCUIT BREAKER PANELBOARD	NONE REQUIRED --- --- --- ---	NR-CONTROLLER W/EQUIP --- --- --- ---	NON-FUSED SWITCH NEMA 3R ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	NONE REQUIRED --- --- --- ---	BE1: BEACON
PAPI PRECISION APPROACH PATH INDICATOR	240V 15.0A 1PH 2W ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	2" PVC #12 COPPER #N/R COPPER #12 COPPER	20 CIRCUIT BREAKER PANELBOARD	NONE REQUIRED --- --- --- ---	NR-CONTROLLER W/EQUIP --- --- --- ---	FUSED SWITCH NEMA 3R ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	NONE REQUIRED --- --- --- ---	PAPI: PRECISION APPROACH PATH INDICATOR PROVIDE STEP-UP AND STEP-DOWN TRANSFORMERS - SEE SCHEMATIC WIRING DIAGRAM FOR 480 VOLT CONDUIT AND WIRE SIZE.
RD1 RADIO RECEIVER	120V 1.6A 1PH 2W GENERAL ELECTRICAL SUB ELECTRICAL SUB	0.50" EMT #12 COPPER #12 COPPER #12 COPPER	20 CIRCUIT BREAKER PANELBOARD	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	RD1: RADIO RECEIVER MOUNT AND WIRE ANTENNA ON ROOF PER MANUFACTURERS INSTALLATION DRAWINGS. SEE AIRFIELD LIGHTING CONTROL SCHEMATIC FOR USE IN CONTROL OF REGULATORS.
RE1 CONSTANT CURRENT VOLTAGE REGULATOR	240V 42A 1PH 2W ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	.75" EMT #6 COPPER #N/R COPPER #10 COPPER	60 CIRCUIT BREAKER PANELBOARD	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	FUSED SWITCH NEMA 3R ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	NONE REQUIRED --- --- --- ---	RE1: CONSTANT CURRENT VOLTAGE REGULATOR SEE AIRFIELD LIGHTING CONTROL SCHEMATIC FOR CONTROL OF REGULATORS.
UH1 HEATING: ELECTRIC UNIT HEATER	240V 12.5A 1PH 2W ELECTRICAL SUB ELECTRICAL SUB ELECTRICAL SUB	0.50" EMT #12 COPPER #N/R COPPER #12 COPPER	20 CIRCUIT BREAKER PANELBOARD	MAG CONTACTOR NEMA 1 EQUIP. MFGR EQUIP. MFGR EQUIP. MFGR	NONE REQUIRED --- --- --- ---	NONFUSED SWITCH NEMA 1 EQUIP. MFGR EQUIP. MFGR EQUIP. MFGR	THERMOSTAT NEMA 1 EQUIP. MFGR EQUIP. MFGR EQUIP. MFGR	UH1: HEATING: ELECTRIC UNIT HEATER UNIT SHALL BE MARKEL #691055 WITH WALL MOUNTING BRACKET AND BUILT-IN THERMOSTAT OR APPROVED EQUAL.
WC1 WIND CONE	120V 4.6A 1PH 2W GENERAL GENERAL ELECTRICAL SUB	1" PVC #8 COPPER #8 COPPER #12 COPPER	20 CIRCUIT BREAKER PANELBOARD	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	NONE REQUIRED --- --- --- ---	WC1: WIND CONE
GENERAL NOTES: 1. CONFRIM EQUIPMENT VOLTAGE, PHASES, OVERCURRENT DEVICE TYPE AND RATING WITH EQUIPMENT SUBMITTALS PRIOR TO ELECTRICAL ROUGH-IN. 2. RACEWAY MATERIAL SHOWN IS THE PRIMARY TYPE REQUIRED. SEE PLANS AND SPECIFICATIONS FOR OTHER RACEWAY TYPES WHICH MAY BE REQUIRED.								



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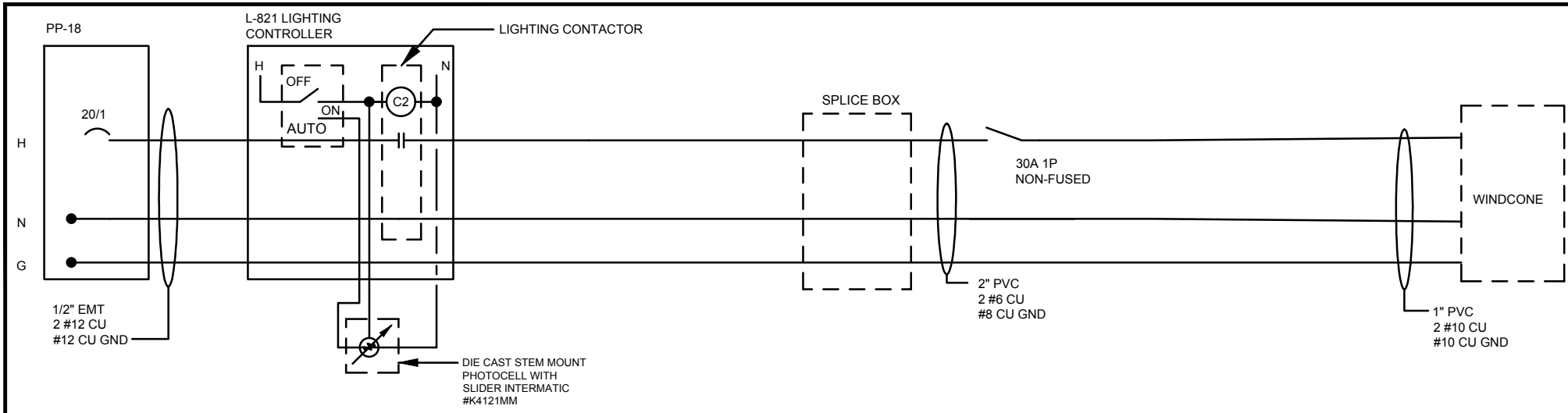
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2017 IMPROVEMENTS
NAVAJO DOT CO11473
A.I.P. No. 3-35-0049-005-2017

						By
						Date
						Revision
						No.

Project No: 166301
Date: 06/2017
File Name: 166301106

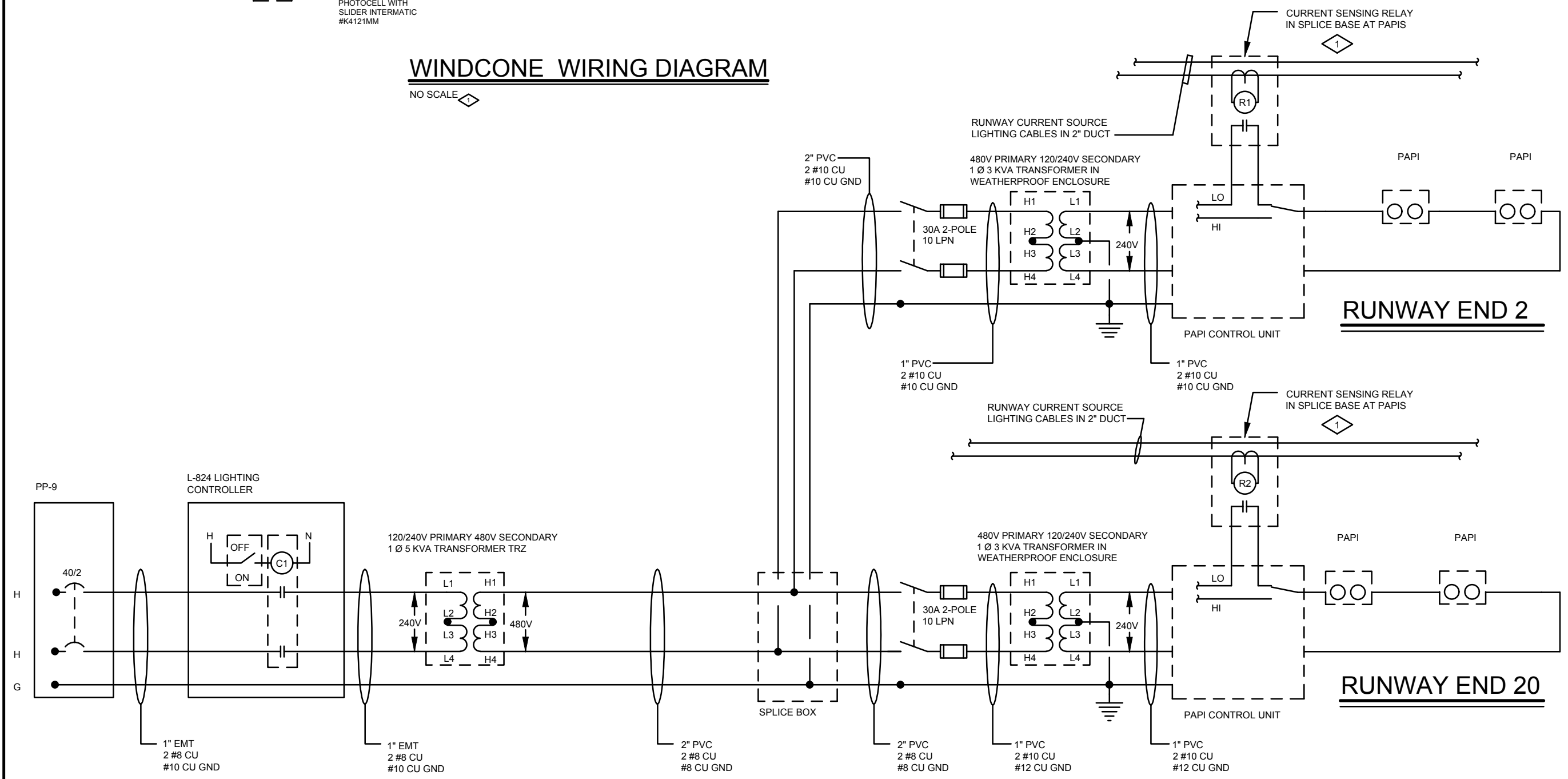
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Checked: JLS
Approved: TJA

SCHEDULES



WINDCONE WIRING DIAGRAM
NO SCALE

- FLAG NOTES:**
- 1 WIRE THE SET OF CURRENT SENSING RELAY CONTRACT FOR CONTROL OF PAPI LIGHTS AS FOLLOWS:
 - A. DAY TIME - INTERNAL SWITCH IN PAPI CONTROL UNIT IS SET TO HIGH. PAPI LIGHTS ARE ON CONSTANTLY AT HIGH BRIGHTNESS.
 - B. NIGHT TIME - INTERNAL SWITCH IN PAPI CONTROL UNIT IS SET TO LOW. PAPI LIGHTS ARE ON AT LOW BRIGHTNESS ONLY WHEN RUNWAY LIGHTS ARE ENERGIZED. OTHERWISE RELAY CONTACTS ARE OPEN AND PAPI LIGHTS ARE OFF.
 - 2 ALL WIRING SHALL BE INSULATED USING THWN-2 INSULATION. INSULATION ON NEUTRALS SHALL BE WHITE, INSULATION ON UNGROUNDED CONDUCTORS SHALL BE BLACK, AND EQUIPMENT GROUND CONDUCTORS SHALL HAVE GREEN INSULATION.



PAPI WIRING DIAGRAM
NO SCALE

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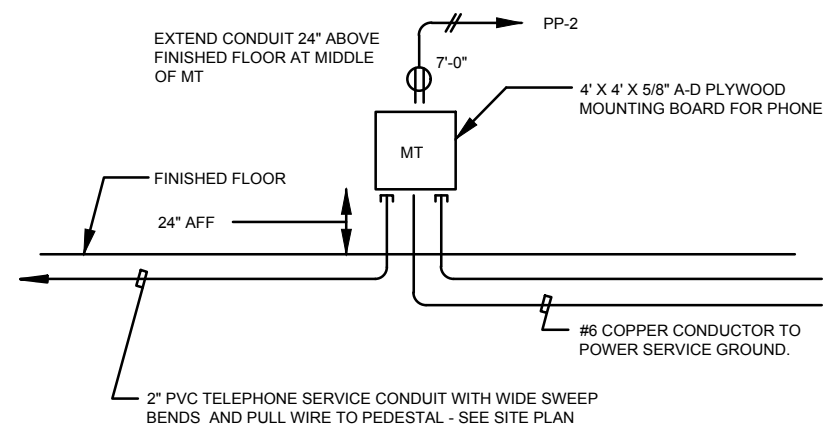
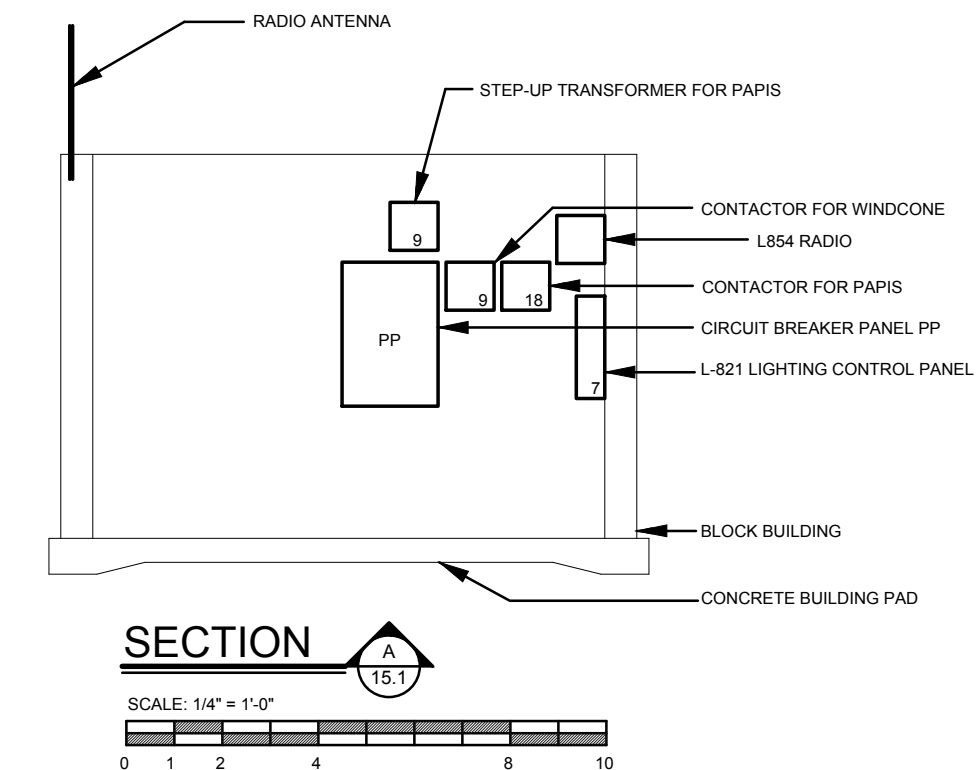
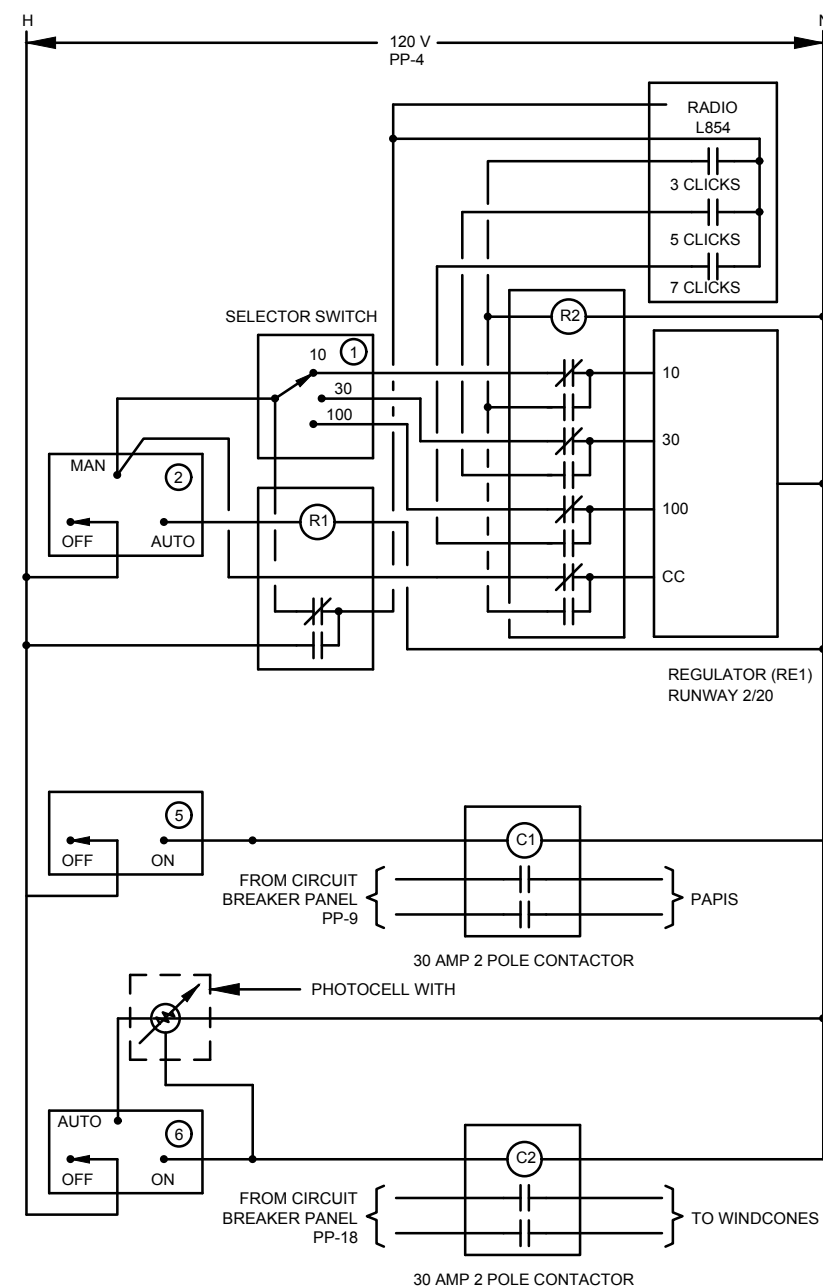
No.	Revision	Date	By

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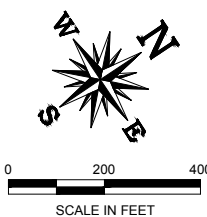
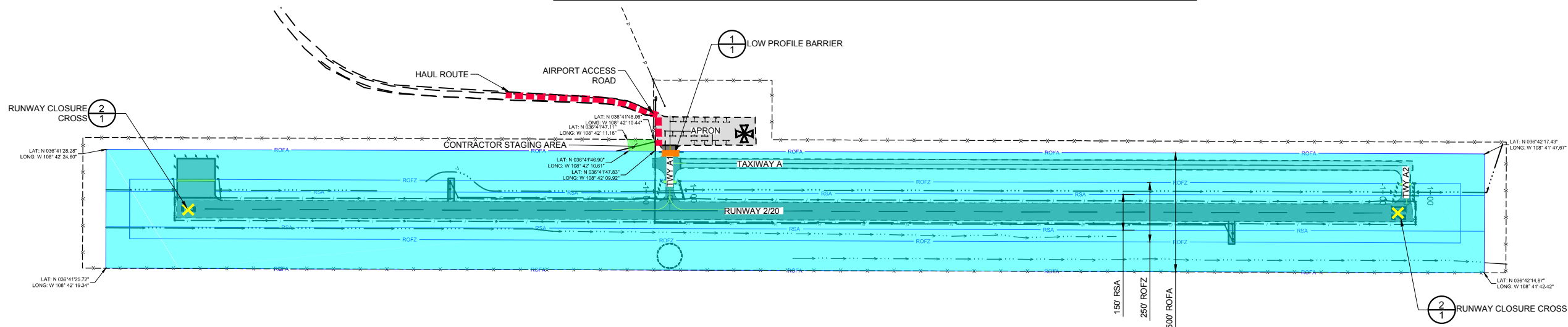
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WIRING
DIAGRAMS

Sheet: 15.4

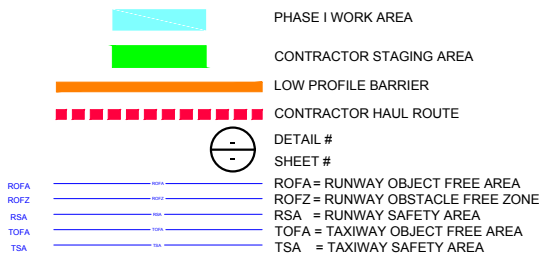
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AIRPORT WILL BE CLOSED DURING CONSTRUCTION

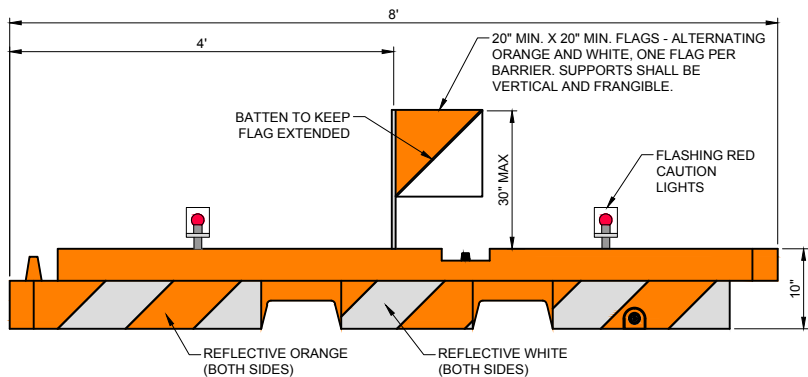


PLAN

LEGEND



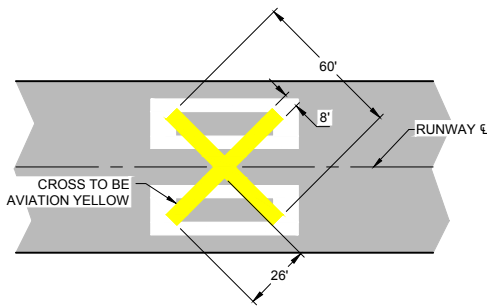
LATITUDE AND LONGITUDES (LAT/LONG) DELINEATION OF THE CONSTRUCTION AREA AND CONTRACTOR STAGING AREA LIMITS



1 LOW PROFILE SAFETY BARRIER
1 NOT TO SCALE

NOTES:

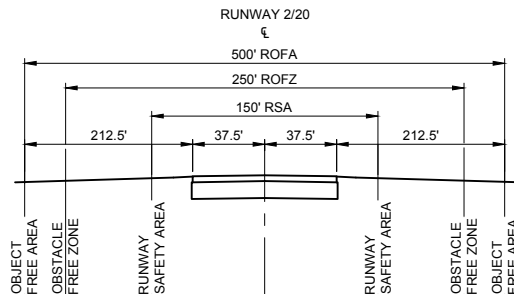
1. BARRIER SHALL BE SHERWIN INDUSTRIES, 10" x 96" LOW PROFILE AIRPORT BARRIER, AS SHOWN, OR APPROVED EQUAL.
2. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED WITH SMOOTH SURFACE TYPE REFLECTIVE SHEETING.
3. LIGHTS MUST BE MOUNTED ON BARRIERS AND SPACED AT NO MORE THAN 10 FT.
4. THE BARRIERS SHALL BE WEIGHTED AGAINST PROPWASH AND CAPABLE OF WITHSTANDING UP TO 100 M.P.H. WIND FORCES.
5. FLASHING RED CAUTION LIGHTS SHALL BE BATTERY OPERATED AND SHALL MAINTAIN SUCH INTENSITY SO AS TO BE READILY IDENTIFIED FROM DISTANCES OF AT LEAST 200 FEET DURING DARKNESS.
6. THE CONTRACTOR SHALL CHECK ALL BARRIERS AND LIGHTS EACH DAY BEFORE LEAVING THE AIRPORT TO ENSURE LIGHTS ARE WORKING PROPERLY AND MAY NOT LEAVE WITHOUT ALL BARRIERS AND LIGHTS BEING IN PROPER WORKING ORDER.



2 RUNWAY CLOSURE CROSS
1 NOT TO SCALE

NOTE:

2 EACH REQUIRED PER CLOSED RUNWAY- INCIDENTAL. TO BE APPLIED OVER RUNWAY NUMERALS ON RUNWAY OR AT RUNWAY ENDS PRIOR TO RUNWAY CLOSURE. CROSSES TO BE CONSTRUCTED OF PLYWOOD OR OTHER FLAT MATERIALS WHICH SHALL BE SECURELY FASTENED TO PAVEMENT AND/OR ADEQUATELY WEIGHTED WITH SAND BAGS.



ALL STATIONARY CONSTRUCTION EQUIPMENT AND STOCKPILES MUST REMAIN CLEAR OF ANY OPEN RUNWAY OBJECT FREE AREA. ALL CONSTRUCTION EQUIPMENT AND TRAFFIC MUST REMAIN CLEAR OF ANY OPEN RUNWAY OBSTACLE FREE ZONE.

3 SAFETY AREAS
1 NOT TO SCALE

No.	Revision	Date	By

Project No: 166301
Date: 06/2017
File Name: 166301150

Drawn: BKR
Checked: JLS
Approved: TJA