





CONSTRUCTION SAFETY PLAN

- SCOPE OF WORK** - THE PROPOSED WORK CONSISTS OF RECONSTRUCTING THE EAST HALF OF TAXIWAY "B" BY CONCRETE RUBBLIZATION AND ASPHALT RESURFACING. ASSOCIATED WORK ITEMS INCLUDE PCC PAVEMENT RUBBLIZATION, PAVEMENT MILLING, ASPHALT PAVING, UNDERDRAINS, PAVEMENT MARKING, SHOULDER ADJUSTMENT, SEEDING, AND MULCHING.
- GENERAL** - THE COLES COUNTY MEMORIAL AIRPORT IS A FAA PART 139, NON-TOWER CONTROLLED, GENERAL AVIATION AIRPORT COMPRISED OF TWO PAVED RUNWAYS AND ONE SOD SHORT TAKEOFF AND LANDING (STOL) RUNWAY. THE PROPOSED EAST PROJECT AREA CONSTRUCTION WILL NECESSITATE THE CLOSING OF THE EAST HALF OF TAXIWAY B, B2 AND B3 FOR THE DURATION OF THE WORK, AND THE PERIODIC CLOSURES OF RUNWAYS 11-29 AND 6-24.
- PROJECT SCHEDULE** - THE CONTRACTOR WILL NOT RECEIVE NOTICE-TO-PROCEED WORK UNTIL THE WEEK FOLLOWING THE AIRPORT'S BIENNIAL AIRSHOW ON AUGUST 29, 2020 AT THE EARLIEST. DUE TO ANTICIPATED PROJECT START DATE AND SEASONAL WEATHER/TEMPERATURE CONCERNS, ONLY UNDERDRAIN INSTALLATION WORK ASSOCIATED WITH PHASES 1-3 WILL BE PERMITTED TO TAKE PLACE IN THE FALL OF 2020. UPON COMPLETION OF UNDERDRAIN INSTALLATION, THE PROJECT SITE SHALL BE RESTORED TO AN ACCEPTABLE TO CONDITION TO REOPEN ALL PAVEMENTS TO AIRFIELD TRAFFIC, AND THE PROJECT SUSPENDED UNTIL SPRING 2021.
- AT NO TIME MAY RUNWAY 11/29 AND 6/24 BE CLOSED CONCURRENTLY, EXCEPT DURING PHASE 3 WHILE WORKING WITHIN THE RUNWAY INTERSECTION.

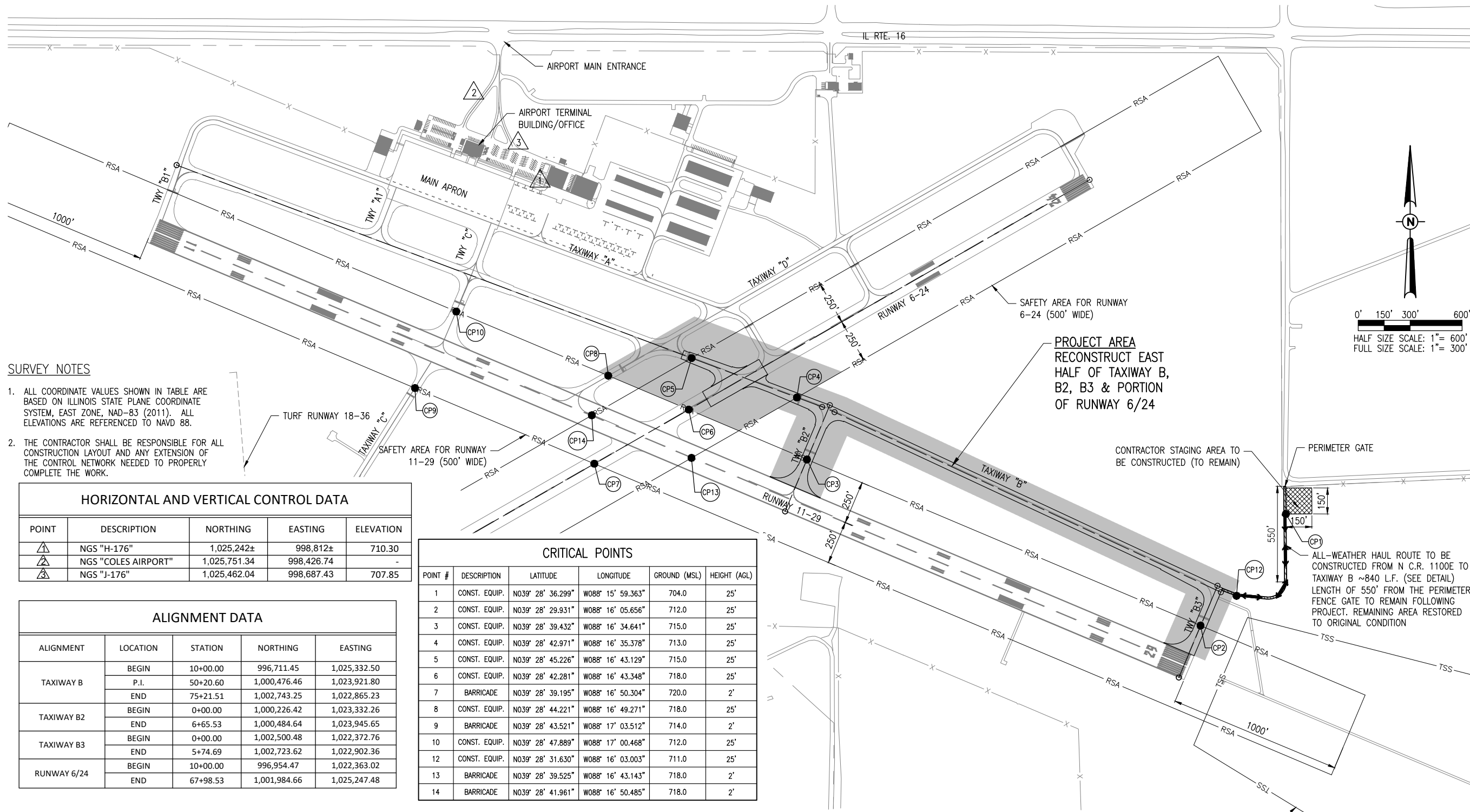
- AIRFIELD SAFETY ASSURANCE** - AIRFIELD SAFETY SHALL BE HELD PARAMOUNT AT ALL TIMES. ANY INDIVIDUALS RESPONSIBLE FOR INCURSIONS OR POTENTIAL INCURSIONS WITH AIR TRAFFIC DUE TO NON-COMPLIANCE WITH REQUIREMENTS SET FORTH IN THESE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND FAA ADVISORY CIRCULAR 150/5370-2 (CURRENT EDITION) WILL BE SUBJECT TO AN IMMEDIATE SUSPENSION OF DRIVING PRIVILEGES ON THE AIRPORT OR A COMPLETE RESTRICTION FROM ENTERING THE AIR OPERATIONS AREA ALTOGETHER. THE AIRPORT MANAGER OR RESIDENT ENGINEER/TECHNICIAN MAY STOP THE WORK AT ANY TIME THEY BELIEVE AIRFIELD SAFETY IS BEING COMPROMISED.
- AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. ONLY CONTRACTOR EMPLOYEES SHALL BE ALLOWED WITHIN THE PROJECT LIMITS. GATES SHALL BE CLOSED AT ALL TIMES UNLESS THE CONTRACTOR IS IN A CONTINUOUS HAULING OPERATIONS, DURING WHICH TIME HE WILL PROVIDE A PERSON TO MONITOR THE GATE AREA.
- RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT WITH THE AIRPORT UNICOM (122.70 MHz) ANY TIME THERE ARE WORKERS OR EQUIPMENT ON THE AIRFIELD.



Offices Nationwide  
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Illinois Licensed  
Professional Service Corporation  
#184-001084



SURVEY NOTES

- ALL COORDINATE VALUES SHOWN IN TABLE ARE BASED ON ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD-83 (2011). ALL ELEVATIONS ARE REFERENCED TO NAVD 88.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND ANY EXTENSION OF THE CONTROL NETWORK NEEDED TO PROPERLY COMPLETE THE WORK.

HORIZONTAL AND VERTICAL CONTROL DATA				
POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
△	NGS "H-176"	1,025,242±	998,812±	710.30
△	NGS "COLES AIRPORT"	1,025,751.34	998,426.74	-
△	NGS "J-176"	1,025,462.04	998,687.43	707.85

ALIGNMENT DATA				
ALIGNMENT	LOCATION	STATION	NORTHING	EASTING
TAXIWAY B	BEGIN	10+00.00	996,711.45	1,025,332.50
	P.I.	50+20.60	1,000,476.46	1,023,921.80
	END	75+21.51	1,002,743.25	1,022,865.23
TAXIWAY B2	BEGIN	0+00.00	1,000,226.42	1,023,332.26
	END	6+65.53	1,000,484.64	1,023,945.65
TAXIWAY B3	BEGIN	0+00.00	1,002,500.48	1,022,372.76
	END	5+74.69	1,002,723.62	1,022,902.36
RUNWAY 6/24	BEGIN	10+00.00	996,954.47	1,022,363.02
	END	67+98.53	1,001,984.66	1,025,247.48

CRITICAL POINTS					
POINT #	DESCRIPTION	LATITUDE	LONGITUDE	GROUND (MSL)	HEIGHT (AGL)
1	CONST. EQUIP.	N039° 28' 36.299"	W088° 15' 59.363"	704.0	25'
2	CONST. EQUIP.	N039° 28' 29.931"	W088° 16' 05.656"	712.0	25'
3	CONST. EQUIP.	N039° 28' 39.432"	W088° 16' 34.641"	715.0	25'
4	CONST. EQUIP.	N039° 28' 42.971"	W088° 16' 35.378"	713.0	25'
5	CONST. EQUIP.	N039° 28' 45.226"	W088° 16' 43.129"	715.0	25'
6	CONST. EQUIP.	N039° 28' 42.281"	W088° 16' 43.348"	718.0	25'
7	BARRICADE	N039° 28' 39.195"	W088° 16' 50.304"	720.0	2'
8	CONST. EQUIP.	N039° 28' 44.221"	W088° 16' 49.271"	718.0	25'
9	BARRICADE	N039° 28' 43.521"	W088° 17' 03.512"	714.0	2'
10	CONST. EQUIP.	N039° 28' 47.889"	W088° 17' 00.468"	712.0	25'
12	CONST. EQUIP.	N039° 28' 31.630"	W088° 16' 03.003"	711.0	25'
13	BARRICADE	N039° 28' 39.525"	W088° 16' 43.143"	718.0	2'
14	BARRICADE	N039° 28' 41.961"	W088° 16' 50.485"	718.0	2'

PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-101-SOW.DWG  
DESIGN BY: KBS 05/2019  
DRAWN BY: JAP 05/2019  
REVIEWED BY: KBS 03/19/2020

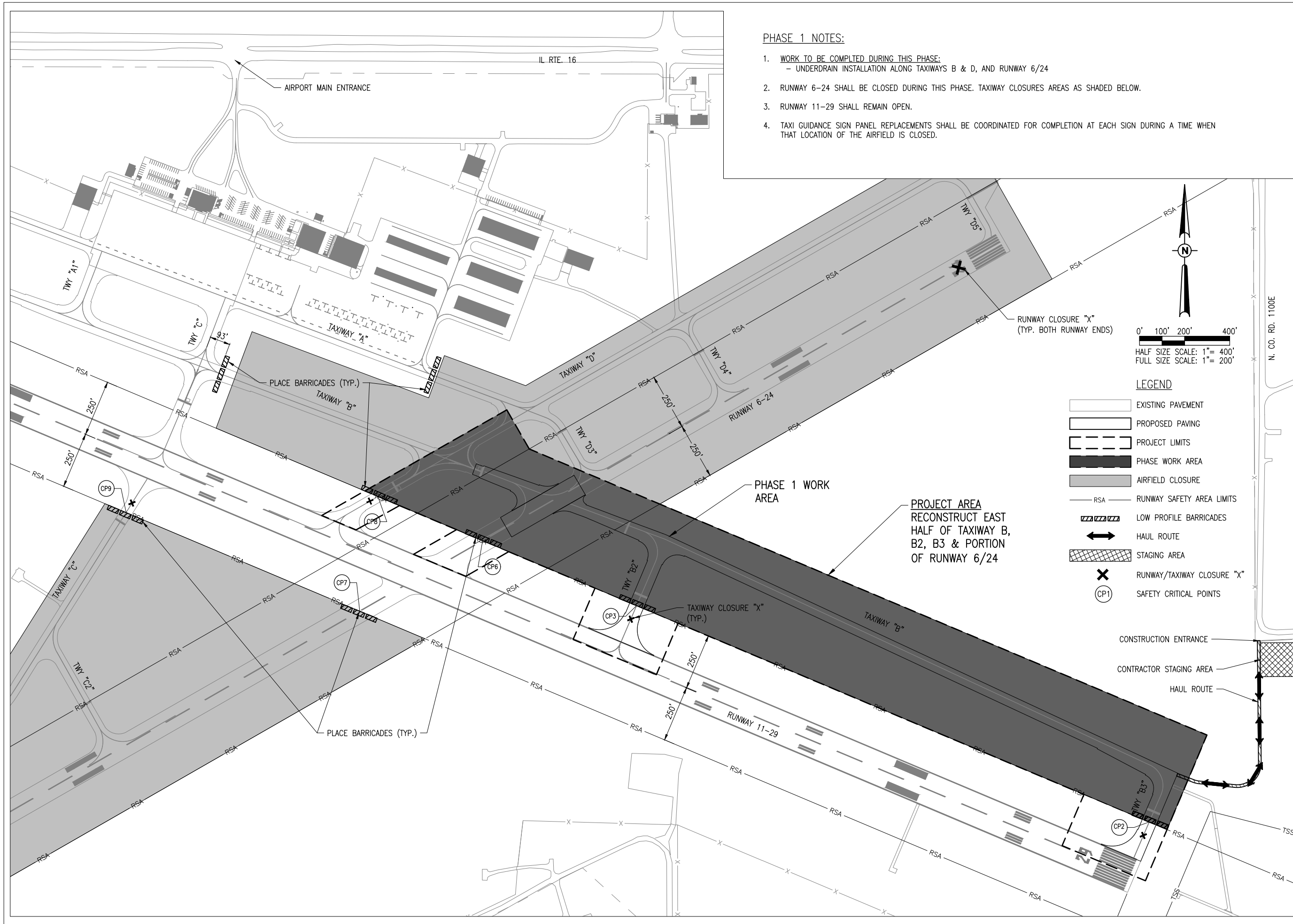
SHEET TITLE

SCOPE OF WORK  
AND SAFETY PLAN

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**PHASE 1 NOTES:**

1. WORK TO BE COMPLETED DURING THIS PHASE:  
- UNDERDRAIN INSTALLATION ALONG TAXIWAYS B & D, AND RUNWAY 6/24
2. RUNWAY 6-24 SHALL BE CLOSED DURING THIS PHASE. TAXIWAY CLOSURES AREAS AS SHADED BELOW.
3. RUNWAY 11-29 SHALL REMAIN OPEN.
4. TAXI GUIDANCE SIGN PANEL REPLACEMENTS SHALL BE COORDINATED FOR COMPLETION AT EACH SIGN DURING A TIME WHEN THAT LOCATION OF THE AIRFIELD IS CLOSED.



**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING
- PROJECT LIMITS
- PHASE WORK AREA
- AIRFIELD CLOSURE
- RSA RUNWAY SAFETY AREA LIMITS
- LOW PROFILE BARRICADES
- HAUL ROUTE
- STAGING AREA
- RUNWAY/TAXIWAY CLOSURE "X"
- SAFETY CRITICAL POINTS

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

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SBG Project No:  
3-17-SBGP-156/159  
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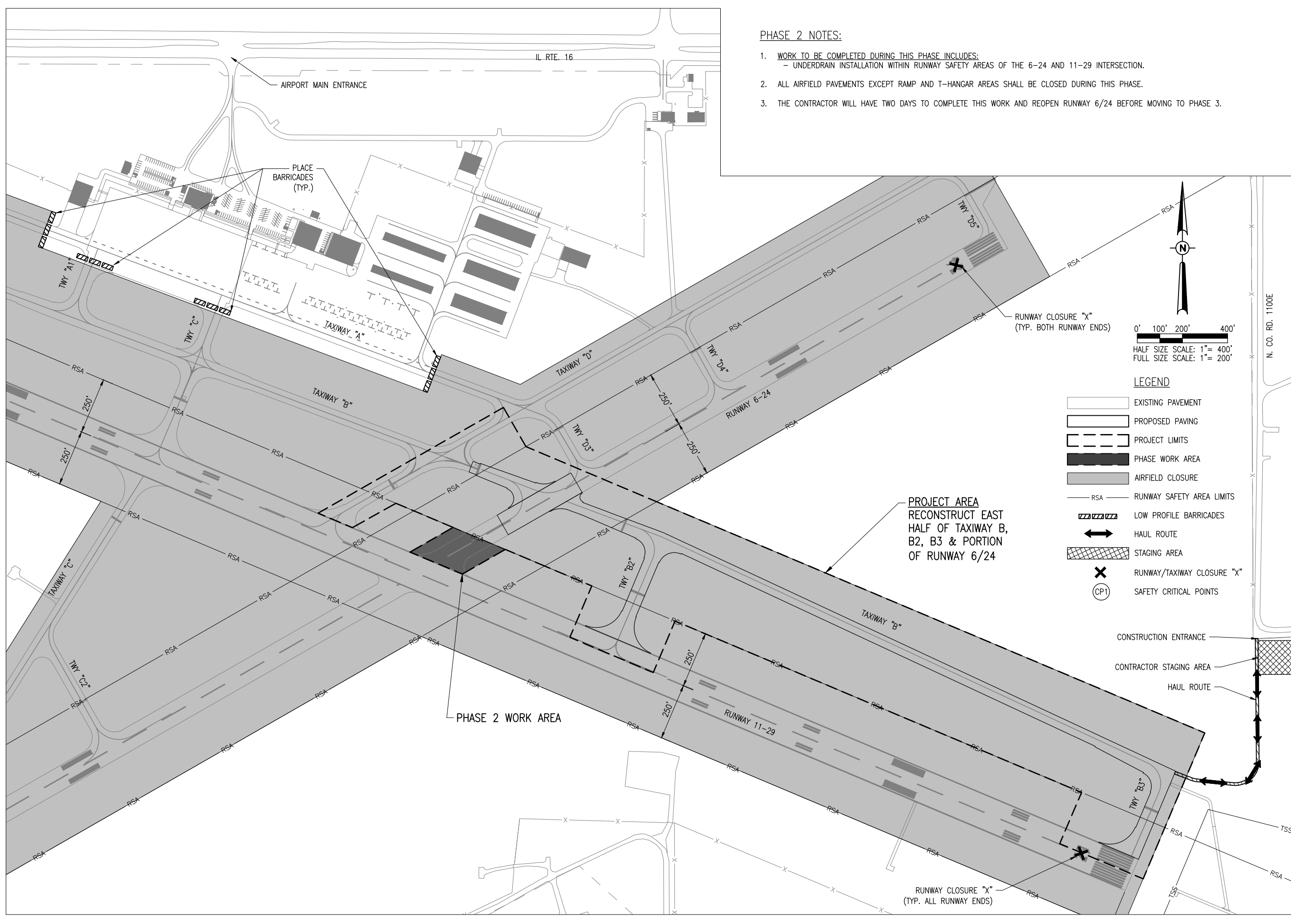
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REVIEWED BY: KBS 03/19/2020

**CONSTRUCTION  
PHASING PLAN -  
PHASE 1**

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**PHASE 2 NOTES:**

1. WORK TO BE COMPLETED DURING THIS PHASE INCLUDES:  
- UNDERDRAIN INSTALLATION WITHIN RUNWAY SAFETY AREAS OF THE 6-24 AND 11-29 INTERSECTION.
2. ALL AIRFIELD PAVEMENTS EXCEPT RAMP AND T-HANGAR AREAS SHALL BE CLOSED DURING THIS PHASE.
3. THE CONTRACTOR WILL HAVE TWO DAYS TO COMPLETE THIS WORK AND REOPEN RUNWAY 6/24 BEFORE MOVING TO PHASE 3.



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**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

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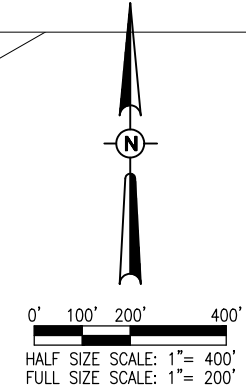
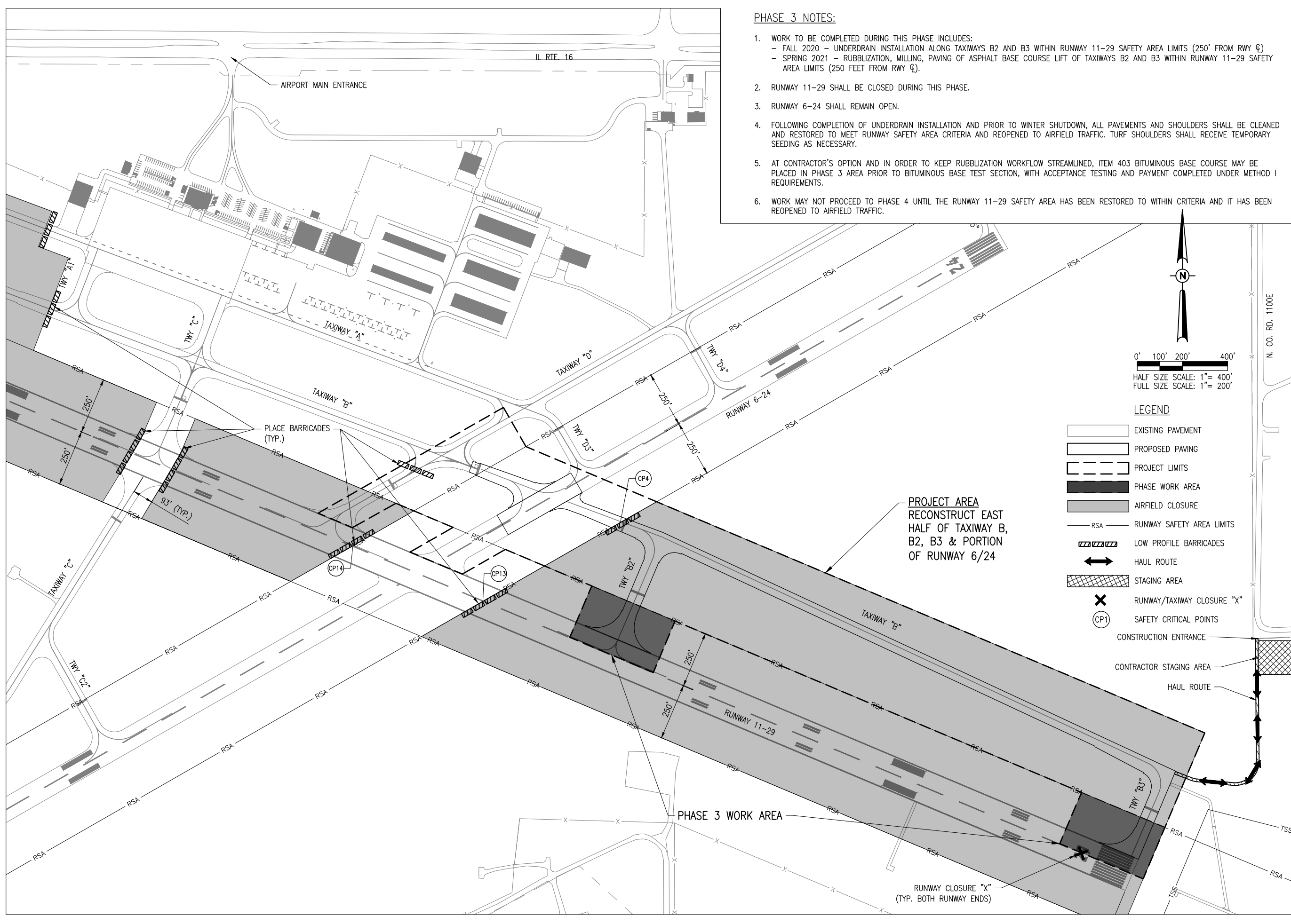
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**CONSTRUCTION  
PHASING PLAN -  
PHASE 2**

**PHASE 3 NOTES:**

1. WORK TO BE COMPLETED DURING THIS PHASE INCLUDES:
  - FALL 2020 - UNDERDRAIN INSTALLATION ALONG TAXIWAYS B2 AND B3 WITHIN RUNWAY 11-29 SAFETY AREA LIMITS (250' FROM RWY C)
  - SPRING 2021 - RUBBLIZATION, MILLING, PAVING OF ASPHALT BASE COURSE LIFT OF TAXIWAYS B2 AND B3 WITHIN RUNWAY 11-29 SAFETY AREA LIMITS (250 FEET FROM RWY C).
2. RUNWAY 11-29 SHALL BE CLOSED DURING THIS PHASE.
3. RUNWAY 6-24 SHALL REMAIN OPEN.
4. FOLLOWING COMPLETION OF UNDERDRAIN INSTALLATION AND PRIOR TO WINTER SHUTDOWN, ALL PAVEMENTS AND SHOULDERS SHALL BE CLEANED AND RESTORED TO MEET RUNWAY SAFETY AREA CRITERIA AND REOPENED TO AIRFIELD TRAFFIC. TURF SHOULDERS SHALL RECEIVE TEMPORARY SEEDING AS NECESSARY.
5. AT CONTRACTOR'S OPTION AND IN ORDER TO KEEP RUBBLIZATION WORKFLOW STREAMLINED, ITEM 403 BITUMINOUS BASE COURSE MAY BE PLACED IN PHASE 3 AREA PRIOR TO BITUMINOUS BASE TEST SECTION, WITH ACCEPTANCE TESTING AND PAYMENT COMPLETED UNDER METHOD 1 REQUIREMENTS.
6. WORK MAY NOT PROCEED TO PHASE 4 UNTIL THE RUNWAY 11-29 SAFETY AREA HAS BEEN RESTORED TO WITHIN CRITERIA AND IT HAS BEEN REOPENED TO AIRFIELD TRAFFIC.



**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING
- PROJECT LIMITS
- PHASE WORK AREA
- AIRFIELD CLOSURE
- RSA - RUNWAY SAFETY AREA LIMITS
- LOW PROFILE BARRICADES
- HAUL ROUTE
- STAGING AREA
- RUNWAY/TAXIWAY CLOSURE "X"
- SAFETY CRITICAL POINTS
- CONSTRUCTION ENTRANCE
- CONTRACTOR STAGING AREA
- HAUL ROUTE

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

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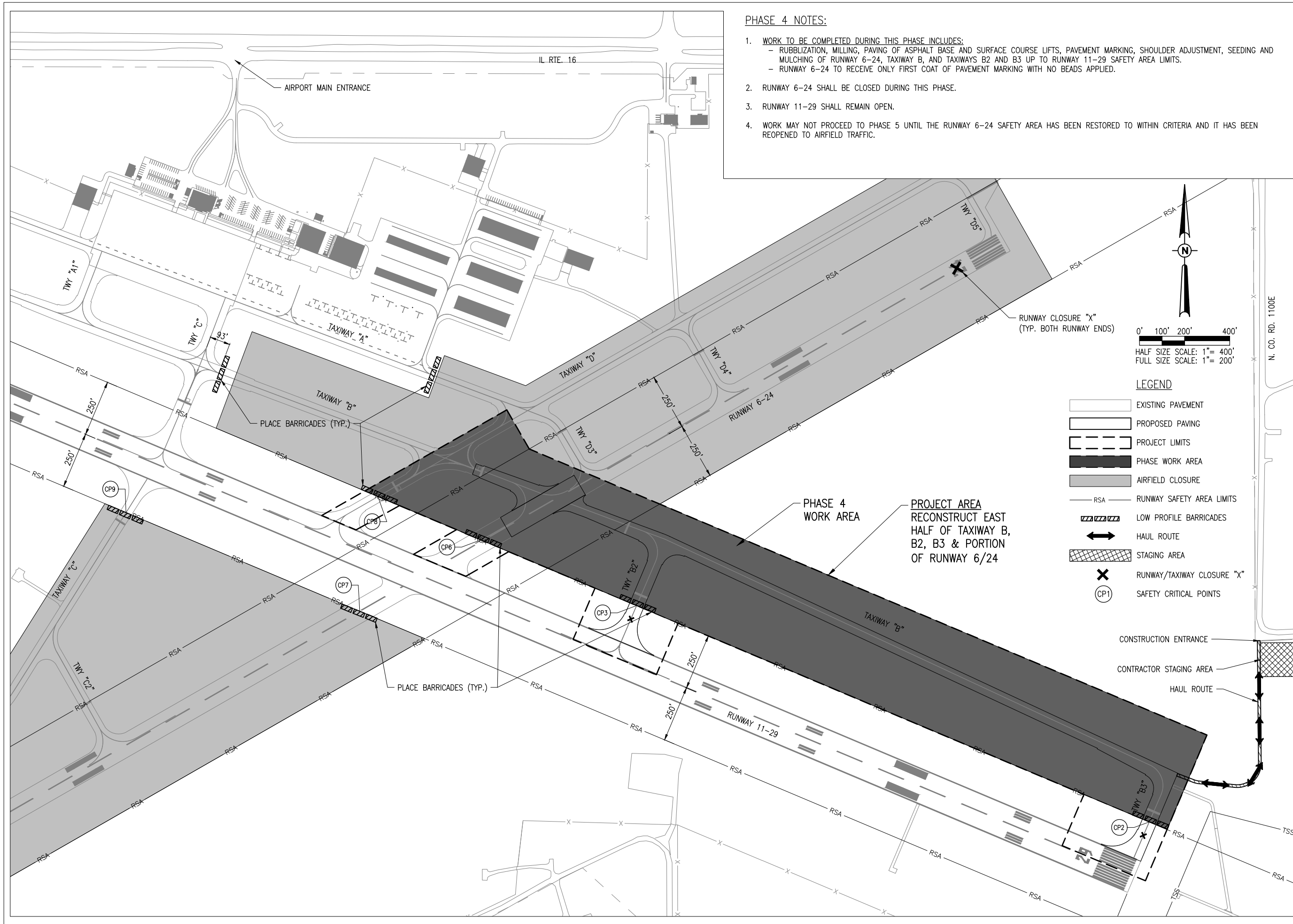

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**CONSTRUCTION  
PHASING PLAN -  
PHASE 3**

**PHASE 4 NOTES:**

1. WORK TO BE COMPLETED DURING THIS PHASE INCLUDES:
  - RUBBLIZATION, MILLING, PAVING OF ASPHALT BASE AND SURFACE COURSE LIFTS, PAVEMENT MARKING, SHOULDER ADJUSTMENT, SEEDING AND MULCHING OF RUNWAY 6-24, TAXIWAY B, AND TAXIWAYS B2 AND B3 UP TO RUNWAY 11-29 SAFETY AREA LIMITS.
  - RUNWAY 6-24 TO RECEIVE ONLY FIRST COAT OF PAVEMENT MARKING WITH NO BEADS APPLIED.
2. RUNWAY 6-24 SHALL BE CLOSED DURING THIS PHASE.
3. RUNWAY 11-29 SHALL REMAIN OPEN.
4. WORK MAY NOT PROCEED TO PHASE 5 UNTIL THE RUNWAY 6-24 SAFETY AREA HAS BEEN RESTORED TO WITHIN CRITERIA AND IT HAS BEEN REOPENED TO AIRFIELD TRAFFIC.



**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING
- PROJECT LIMITS
- PHASE WORK AREA
- AIRFIELD CLOSURE
- RSA - RUNWAY SAFETY AREA LIMITS
- LOW PROFILE BARRICADES
- HAUL ROUTE
- STAGING AREA
- RUNWAY/TAXIWAY CLOSURE "X"
- SAFETY CRITICAL POINTS

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

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3-17-SBGP-156/159  
Contract No. CO067

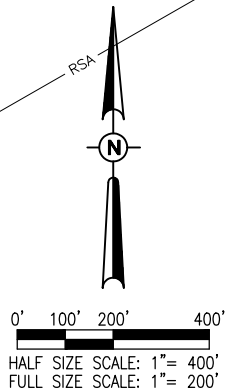
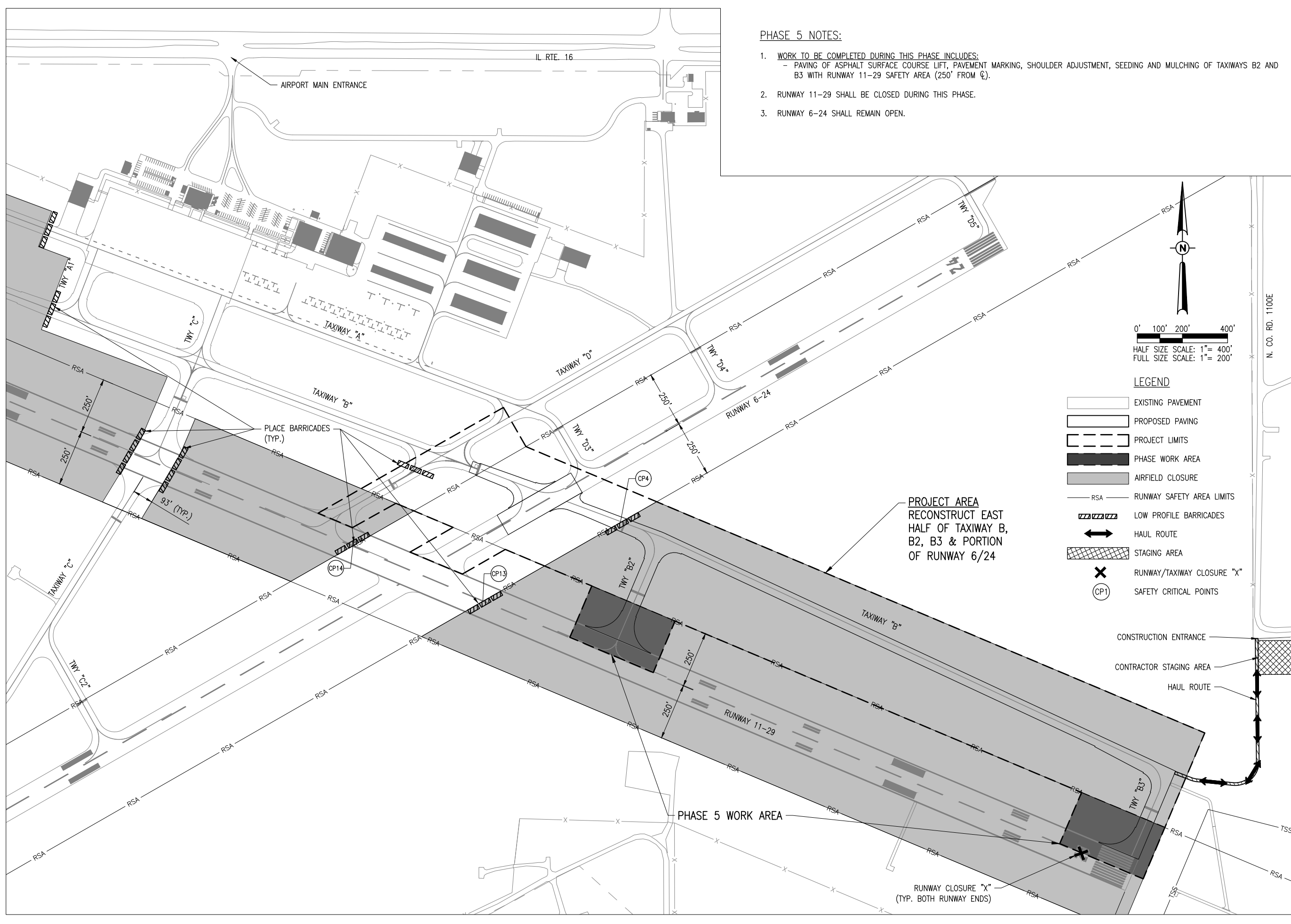

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**CONSTRUCTION  
PHASING PLAN -  
PHASE 4**

**PHASE 5 NOTES:**

1. WORK TO BE COMPLETED DURING THIS PHASE INCLUDES:
  - PAVING OF ASPHALT SURFACE COURSE LIFT, PAVEMENT MARKING, SHOULDER ADJUSTMENT, SEEDING AND MULCHING OF TAXIWAYS B2 AND B3 WITH RUNWAY 11-29 SAFETY AREA (250' FROM C).
2. RUNWAY 11-29 SHALL BE CLOSED DURING THIS PHASE.
3. RUNWAY 6-24 SHALL REMAIN OPEN.



**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING
- PROJECT LIMITS
- PHASE WORK AREA
- AIRFIELD CLOSURE
- RSA RUNWAY SAFETY AREA LIMITS
- LOW PROFILE BARRICADES
- HAUL ROUTE
- STAGING AREA
- RUNWAY/TAXIWAY CLOSURE "X"
- SAFETY CRITICAL POINTS

PROJECT AREA  
RECONSTRUCT EAST  
HALF OF TAXIWAY B,  
B2, B3 & PORTION  
OF RUNWAY 6/24

PHASE 5 WORK AREA

RUNWAY CLOSURE "X"  
(TYP. BOTH RUNWAY ENDS)

CONSTRUCTION ENTRANCE  
CONTRACTOR STAGING AREA  
HAUL ROUTE

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

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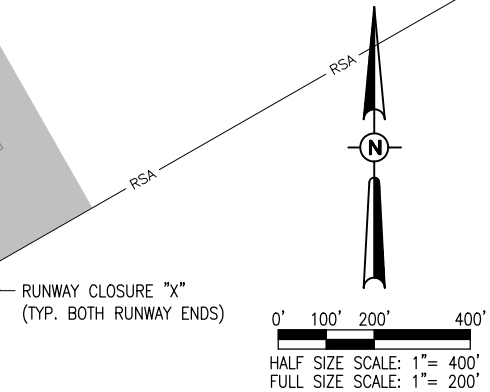
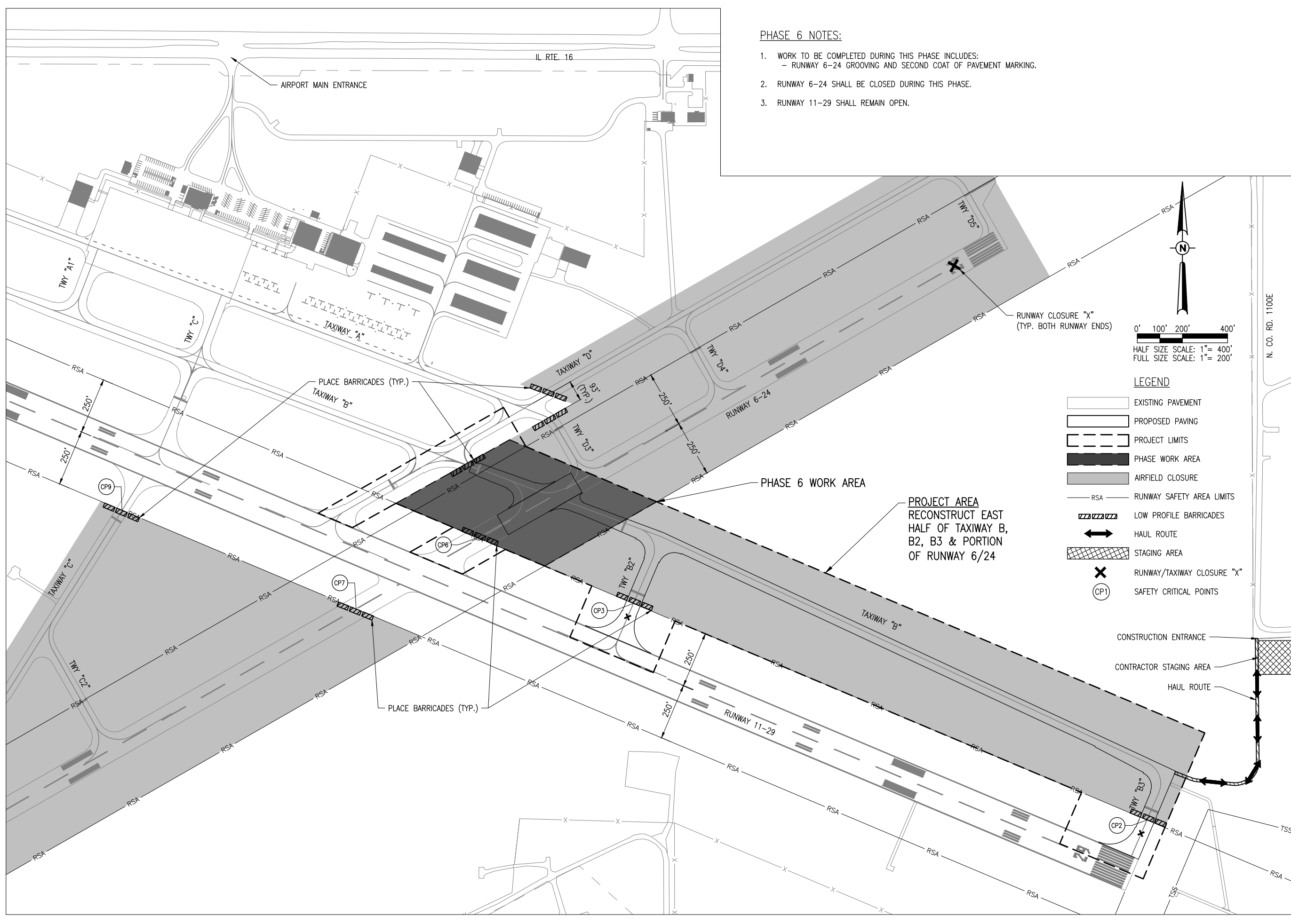
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**CONSTRUCTION  
PHASING PLAN -  
PHASE 5**



**PHASE 6 NOTES:**

1. WORK TO BE COMPLETED DURING THIS PHASE INCLUDES:
  - RUNWAY 6-24 GROOVING AND SECOND COAT OF PAVEMENT MARKING.
2. RUNWAY 6-24 SHALL BE CLOSED DURING THIS PHASE.
3. RUNWAY 11-29 SHALL REMAIN OPEN.



**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING
- PROJECT LIMITS
- PHASE WORK AREA
- AIRFIELD CLOSURE
- RSA RUNWAY SAFETY AREA LIMITS
- LOW PROFILE BARRICADES
- HAUL ROUTE
- STAGING AREA
- RUNWAY/TAXIWAY CLOSURE "X"
- SAFETY CRITICAL POINTS

**PROJECT AREA**  
RECONSTRUCT EAST  
HALF OF TAXIWAY B,  
B2, B3 & PORTION  
OF RUNWAY 6/24

PHASE 6 WORK AREA

- CONSTRUCTION ENTRANCE
- CONTRACTOR STAGING AREA
- HAUL ROUTE

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

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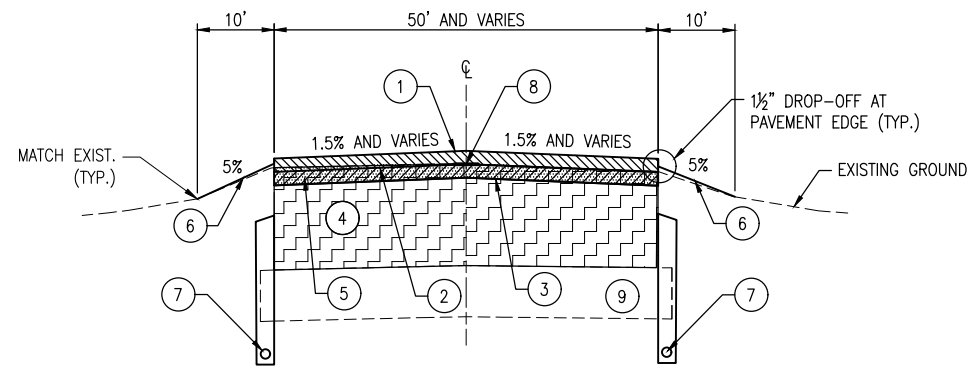
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**CONSTRUCTION  
PHASING PLAN -  
PHASE 6**

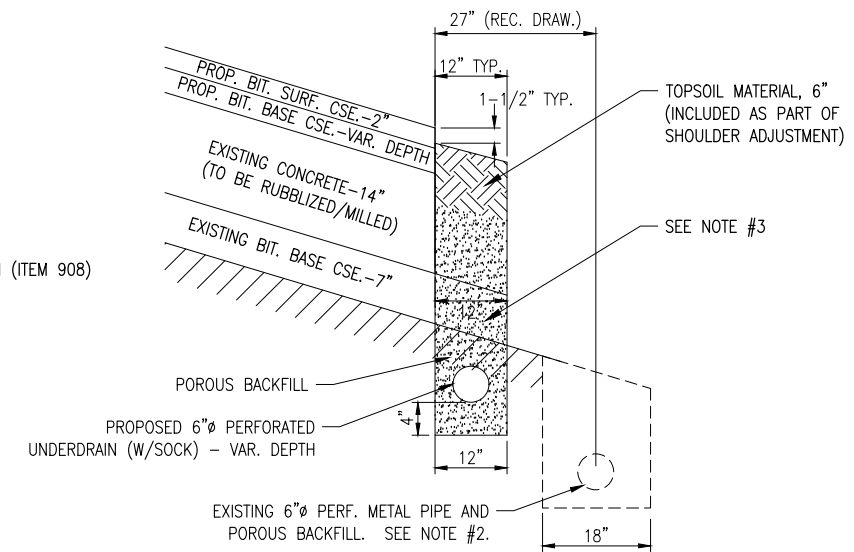


**LEGEND FOR TYPICAL SECTION A-A**

- ① PROPOSED BITUMINOUS SURFACE COURSE - 2" DEPTH (ITEM 401)
- ② PROPOSED BITUMINOUS TACK COAT APPLIED AT 0.05-0.15 GAL./S.Y. (ITEM 603)
- ③ PROPOSED BITUMINOUS BASE COURSE - 2" DEPTH (ITEM 403)
- ④ PROPOSED CONCRETE PAVEMENT RUBBLIZATION - 14" DEPTH (ITEM 501120)
- ⑤ PROPOSED VAR.-DEPTH CONCRETE PAVEMENT MILLING (FOLLOWING RUBBLIZATION) (ITEM 501550)
- ⑥ PROPOSED SHOULDER ADJUSTMENT (ITEM 152), SEEDING (ITEM 901), & HYDRO-MULCH (ITEM 908)
- ⑦ PROPOSED UNDERDRAIN - SEE DETAIL (ITEM 705)
- ⑧ PROPOSED LONGITUDINAL JOINT SEALANT (ITEM 401663) - CENTERLINE JOINT ONLY
- ⑨ EXISTING BITUMINOUS BASE, 7"



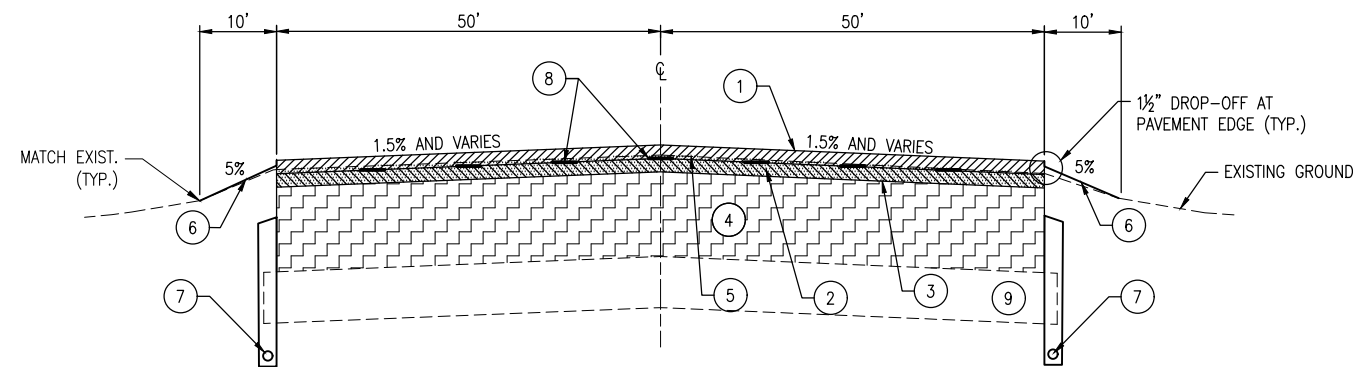
**TYPICAL SECTION "A-A" - TAXIWAY B**  
NOT TO SCALE



**TYPICAL SECTION FOR EDGE DRAINS**  
NOT TO SCALE

**LEGEND FOR TYPICAL SECTION B-B**

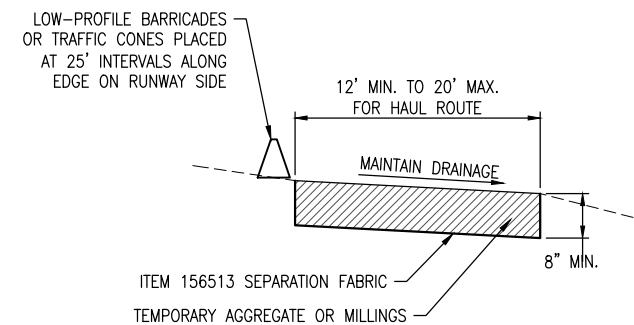
- ① PROPOSED BITUMINOUS SURFACE COURSE - 2" DEPTH (ITEM 401)
- ② PROPOSED BITUMINOUS TACK COAT APPLIED AT 0.05-0.15 GAL./S.Y. (ITEM 603)
- ③ PROPOSED BITUMINOUS BASE COURSE - 2" DEPTH (ITEM 403)
- ④ PROPOSED CONCRETE PAVEMENT RUBBLIZATION - 14" DEPTH (ITEM 501120)
- ⑤ PROPOSED VAR.-DEPTH CONCRETE PAVEMENT MILLING (FOLLOWING RUBBLIZATION) (ITEM 501550)
- ⑥ PROPOSED SHOULDER ADJUSTMENT (ITEM 152), SEEDING (ITEM 901), & HYDRO-MULCH (ITEM 908)
- ⑦ PROPOSED UNDERDRAIN - SEE DETAIL (ITEM 705)
- ⑧ PROPOSED LONGITUDINAL JOINT SEALANT (ITEM 401663) - ALL PAVING JOINTS
- ⑨ EXISTING BITUMINOUS BASE, 7"



**TYPICAL SECTION "B-B" - RUNWAY 6-24**  
NOT TO SCALE

**NOTES:**

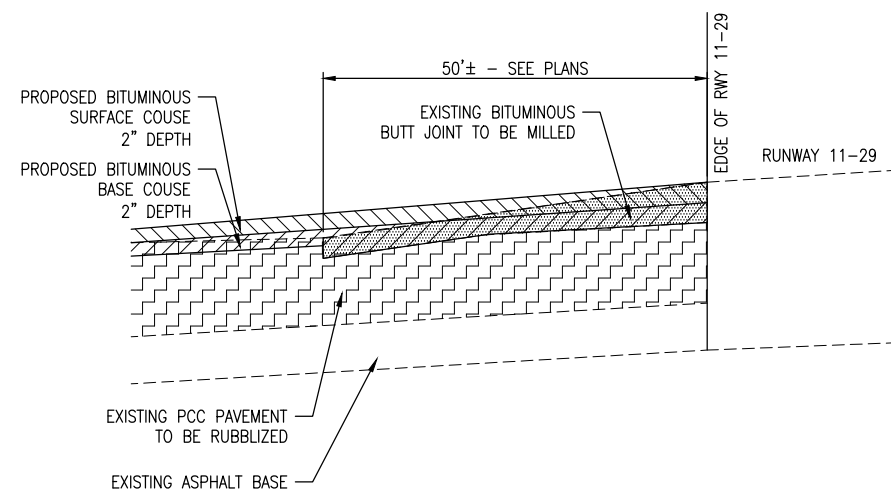
1. MILLING OF CONCRETE PAVEMENT TO GRADE SHALL TAKE PLACE FOLLOWING PAVEMENT RUBBLIZATION.
2. EXISTING UNDERDRAINS SHALL BE REMOVED AND PAID FOR WHERE CALLED OUT IN THE PLANS. THEY SHALL BE PLUGGED AND ABANDONED IN ANY OTHER AREAS WHERE ENCOUNTERED AS AN INCIDENTAL ITEM.
3. REMOVAL OR TRENCHING THROUGH EXISTING EXTENDED 12" WIDE BITUMINOUS BASE, AND THE ORIGINAL BITUMINOUS RUNWAY PAVEMENT UNDER TAXIWAY B SHALL BE INCIDENTAL TO THE PROPOSED UNDERDRAIN INSTALLATION.



**HAUL ROUTE/STAGING AREA DETAIL**  
N.T.S.

**NOTES:**

1. HAUL ROUTE TO BE REMOVED AND RESTORED TO ORIGINAL CONDITION AT COMPLETION OF PROJECT UNLESS OTHERWISE SHOWN TO REMAIN. RESTORATION INCLUDES TILLAGE OF ANY EXISTING FARM GROUND NECESSARY DUE TO COMPACTION.
2. RESIDENT ENGINEER/TECHNICIAN WILL CONFIRM HAUL ROUTE LIMITS/LOCATION PRIOR TO INSTALLATION. CONTRACTOR MAY INCREASE WIDTH/DEPTH OF HAUL ROUTE AT THEIR EXPENSE IF NECESSARY. MAX SIZE OF STAGING AREA IS 150' X 150'.
3. ALL WORK AND MATERIALS INVOLVING HAUL ROUTE SHALL BE PAID FOR UNDER ITEM AR150540 "HAUL ROUTE" - PER LUMP SUM.

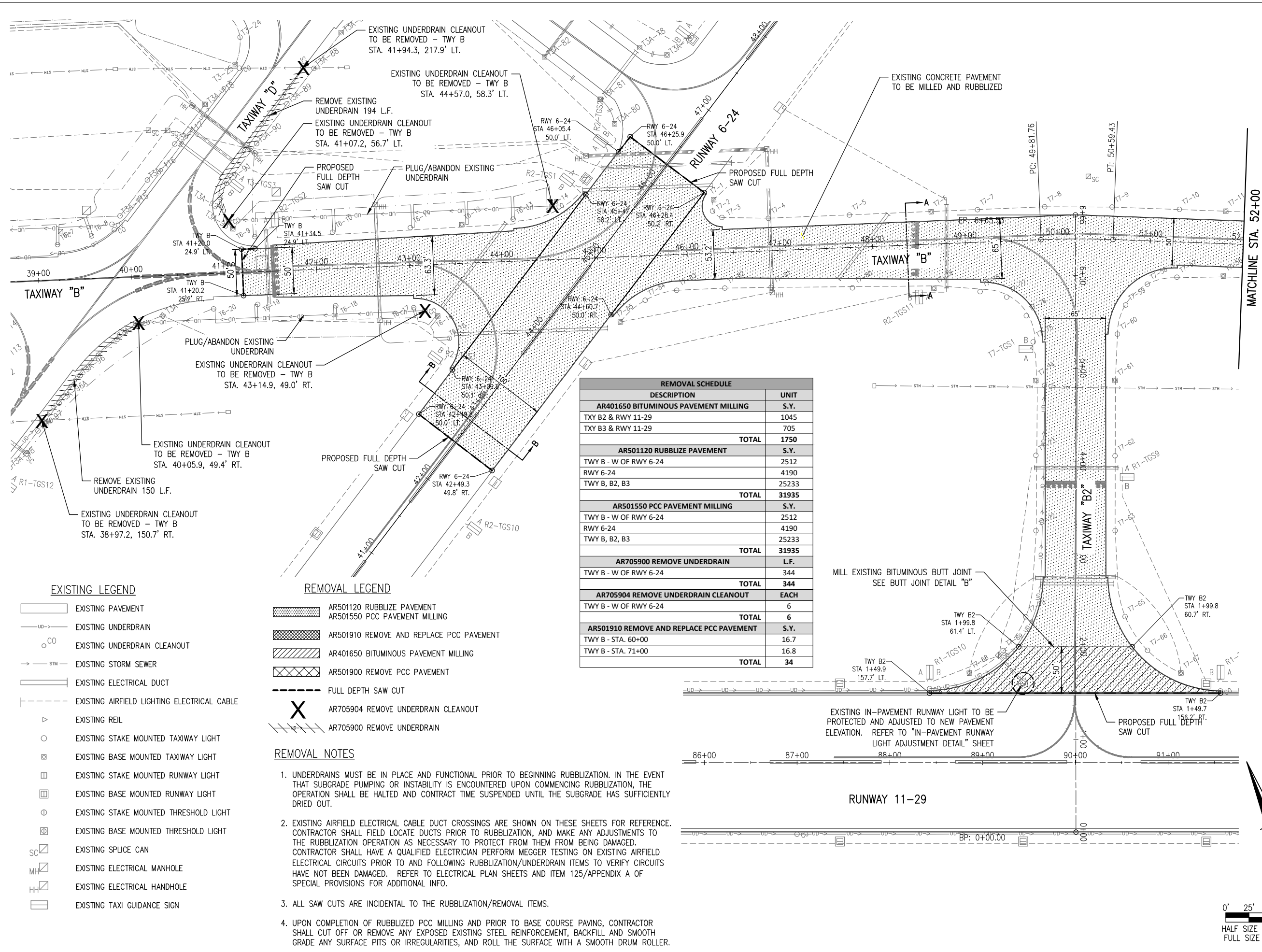


**BUTT JOINT DETAIL "B"**  
**TXY B2/RWY 11-29 AND TXY B3/RWY 11-29**  
NOT TO SCALE

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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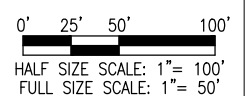
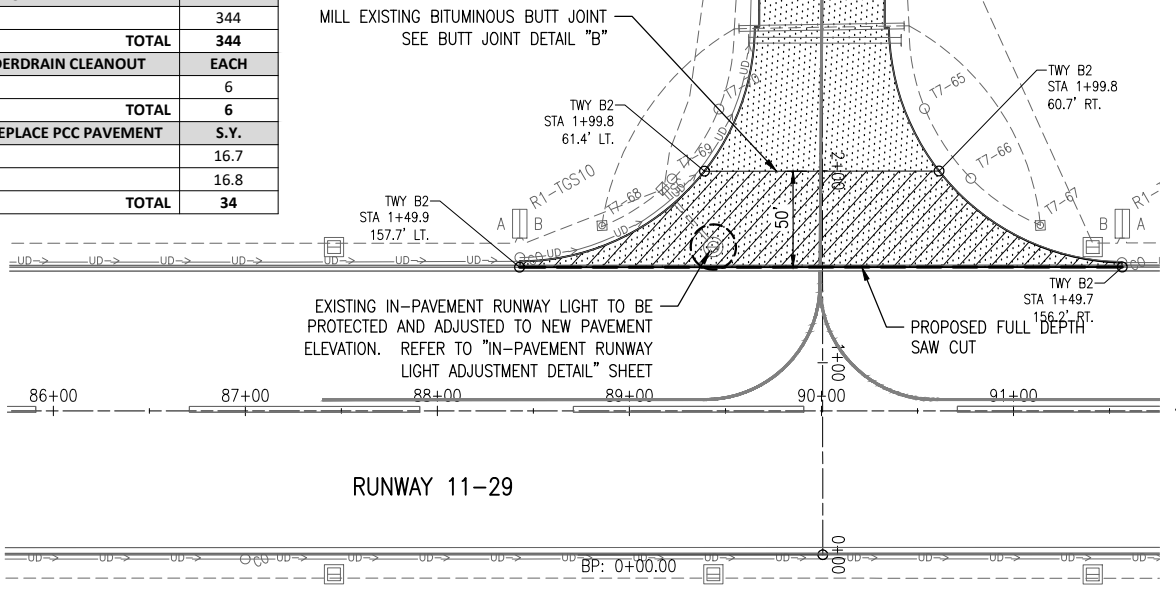


REMOVAL SCHEDULE	
DESCRIPTION	UNIT
<b>AR401650 BITUMINOUS PAVEMENT MILLING</b>	<b>S.Y.</b>
TXY B2 & RWY 11-29	1045
TXY B3 & RWY 11-29	705
<b>TOTAL</b>	<b>1750</b>
<b>AR501120 RUBBLIZE PAVEMENT</b>	<b>S.Y.</b>
TWY B - W OF RWY 6-24	2512
RWY 6-24	4190
TWY B, B2, B3	25233
<b>TOTAL</b>	<b>31935</b>
<b>AR501550 PCC PAVEMENT MILLING</b>	<b>S.Y.</b>
TWY B - W OF RWY 6-24	2512
RWY 6-24	4190
TWY B, B2, B3	25233
<b>TOTAL</b>	<b>31935</b>
<b>AR705900 REMOVE UNDERDRAIN</b>	<b>L.F.</b>
TWY B - W OF RWY 6-24	344
<b>TOTAL</b>	<b>344</b>
<b>AR705904 REMOVE UNDERDRAIN CLEANOUT</b>	<b>EACH</b>
TWY B - W OF RWY 6-24	6
<b>TOTAL</b>	<b>6</b>
<b>AR501910 REMOVE AND REPLACE PCC PAVEMENT</b>	<b>S.Y.</b>
TWY B - STA. 60+00	16.7
TWY B - STA. 71+00	16.8
<b>TOTAL</b>	<b>34</b>

- EXISTING LEGEND**
- EXISTING PAVEMENT
  - EXISTING UNDERDRAIN
  - EXISTING UNDERDRAIN CLEANOUT
  - EXISTING STORM SEWER
  - EXISTING ELECTRICAL DUCT
  - EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
  - EXISTING REIL
  - EXISTING STAKE MOUNTED TAXIWAY LIGHT
  - EXISTING BASE MOUNTED TAXIWAY LIGHT
  - EXISTING STAKE MOUNTED RUNWAY LIGHT
  - EXISTING BASE MOUNTED RUNWAY LIGHT
  - EXISTING STAKE MOUNTED THRESHOLD LIGHT
  - EXISTING BASE MOUNTED THRESHOLD LIGHT
  - EXISTING SPLICE CAN
  - EXISTING ELECTRICAL MANHOLE
  - EXISTING ELECTRICAL HANDHOLE
  - EXISTING TAXI GUIDANCE SIGN

- REMOVAL LEGEND**
- AR501120 RUBBLIZE PAVEMENT
  - AR501550 PCC PAVEMENT MILLING
  - AR501910 REMOVE AND REPLACE PCC PAVEMENT
  - AR401650 BITUMINOUS PAVEMENT MILLING
  - AR501900 REMOVE PCC PAVEMENT
  - FULL DEPTH SAW CUT
  - AR705904 REMOVE UNDERDRAIN CLEANOUT
  - AR705900 REMOVE UNDERDRAIN

- REMOVAL NOTES**
- UNDERDRAINS MUST BE IN PLACE AND FUNCTIONAL PRIOR TO BEGINNING RUBBLIZATION. IN THE EVENT THAT SUBGRADE PUMPING OR INSTABILITY IS ENCOUNTERED UPON COMMENCING RUBBLIZATION, THE OPERATION SHALL BE HALTED AND CONTRACT TIME SUSPENDED UNTIL THE SUBGRADE HAS SUFFICIENTLY DRIED OUT.
  - EXISTING AIRFIELD ELECTRICAL CABLE DUCT CROSSINGS ARE SHOWN ON THESE SHEETS FOR REFERENCE. CONTRACTOR SHALL FIELD LOCATE DUCTS PRIOR TO RUBBLIZATION, AND MAKE ANY ADJUSTMENTS TO THE RUBBLIZATION OPERATION AS NECESSARY TO PROTECT FROM THEM FROM BEING DAMAGED. CONTRACTOR SHALL HAVE A QUALIFIED ELECTRICIAN PERFORM MEGGER TESTING ON EXISTING AIRFIELD ELECTRICAL CIRCUITS PRIOR TO AND FOLLOWING RUBBLIZATION/UNDERDRAIN ITEMS TO VERIFY CIRCUITS HAVE NOT BEEN DAMAGED. REFER TO ELECTRICAL PLAN SHEETS AND ITEM 125/APPENDIX A OF SPECIAL PROVISIONS FOR ADDITIONAL INFO.
  - ALL SAW CUTS ARE INCIDENTAL TO THE RUBBLIZATION/REMOVAL ITEMS.
  - UPON COMPLETION OF RUBBLIZED PCC MILLING AND PRIOR TO BASE COURSE PAVING, CONTRACTOR SHALL CUT OFF OR REMOVE ANY EXPOSED EXISTING STEEL REINFORCEMENT, BACKFILL AND SMOOTH GRADE ANY SURFACE PITS OR IRREGULARITIES, AND ROLL THE SURFACE WITH A SMOOTH DRUM ROLLER.



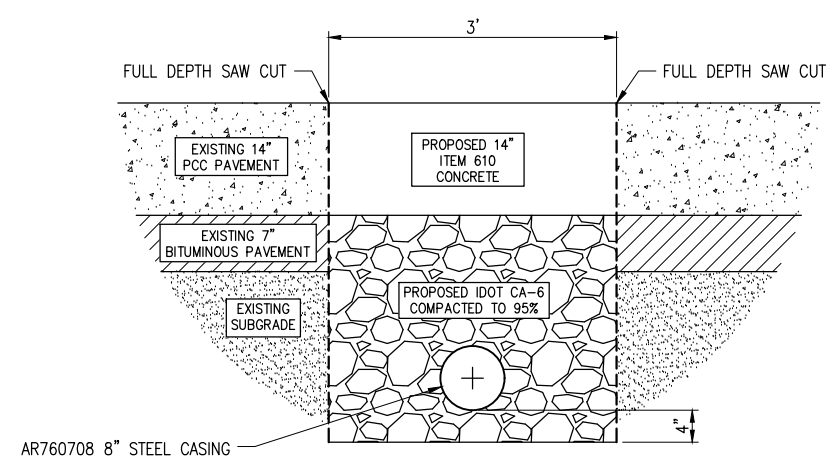
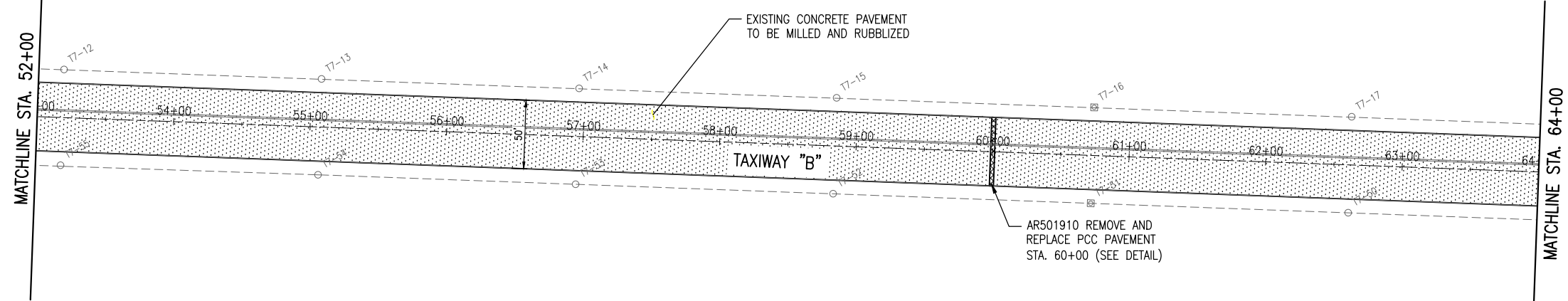
**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

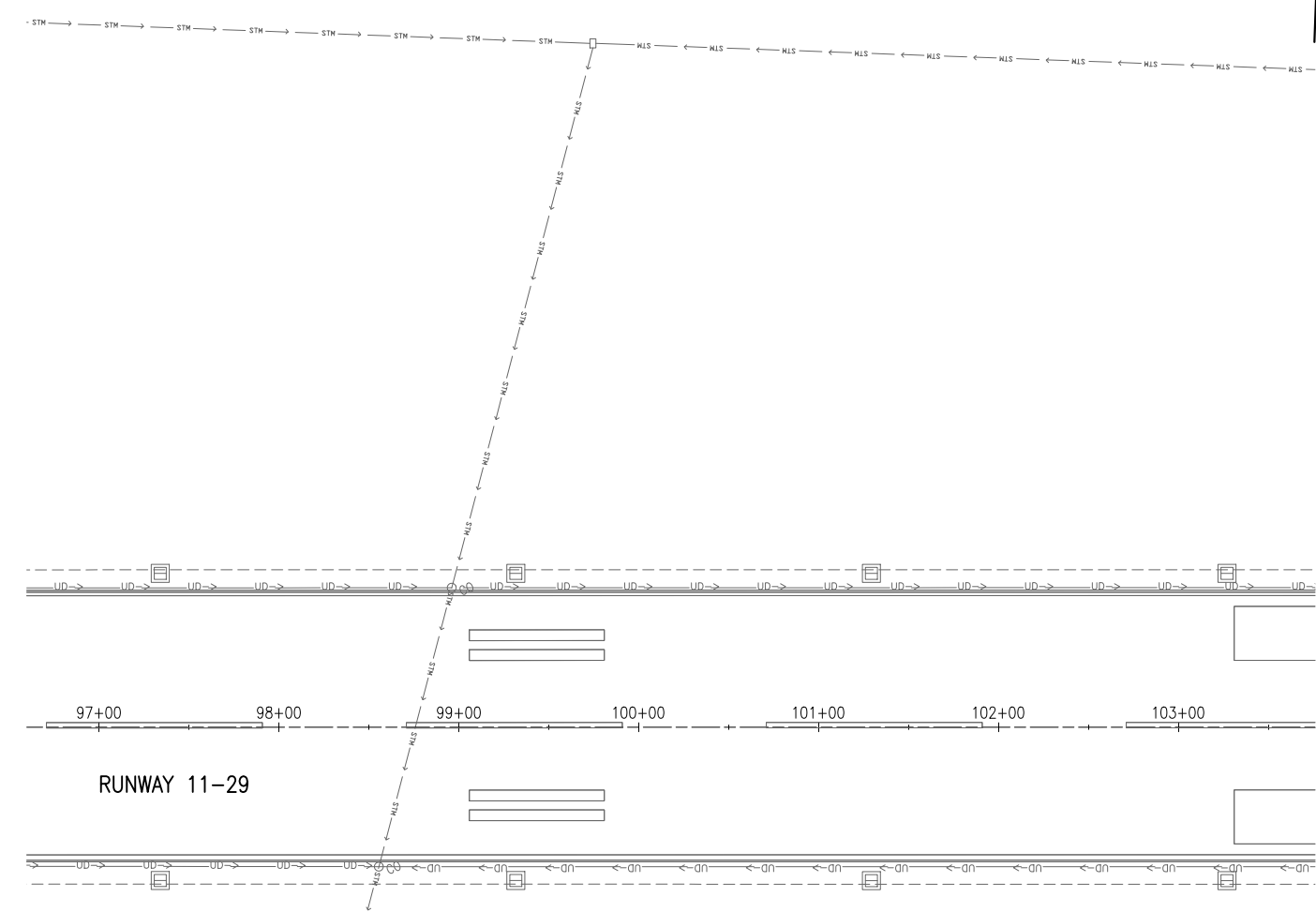

NO.	DATE	DESCRIPTION
		DES DWN REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-111-REM.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

**REMOVAL PLAN  
TAXIWAY B STA.  
40+00 TO 52+00 AND  
TAXIWAY B2**



**REMOVE AND REPLACE PCC PAVEMENT DETAIL**  
(AR501910)



**RUNWAY 11-29**

**EXISTING LEGEND**

- EXISTING PAVEMENT
- EXISTING UNDERDRAIN
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING STORM SEWER
- EXISTING ELECTRICAL DUCT
- EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
- EXISTING REIL
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED THRESHOLD LIGHT
- EXISTING BASE MOUNTED THRESHOLD LIGHT
- EXISTING SPLICE CAN
- EXISTING ELECTRICAL MANHOLE
- EXISTING ELECTRICAL HANDHOLE
- EXISTING TAXI GUIDANCE SIGN

**REMOVAL LEGEND**

- AR501120 RUBBLIZE PAVEMENT
- AR501550 PCC PAVEMENT MILLING
- AR501910 REMOVE AND REPLACE PCC PAVEMENT
- AR401650 BITUMINOUS PAVEMENT MILLING
- AR501900 REMOVE PCC PAVEMENT
- FULL DEPTH SAW CUT
- AR705904 REMOVE UNDERDRAIN CLEANOUT
- AR705900 REMOVE UNDERDRAIN

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

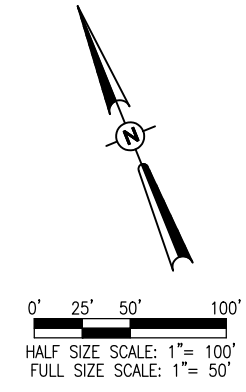
IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-111-REM.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**REMOVAL PLAN  
TAXIWAY B STA.  
52+00 TO 63+00**



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**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

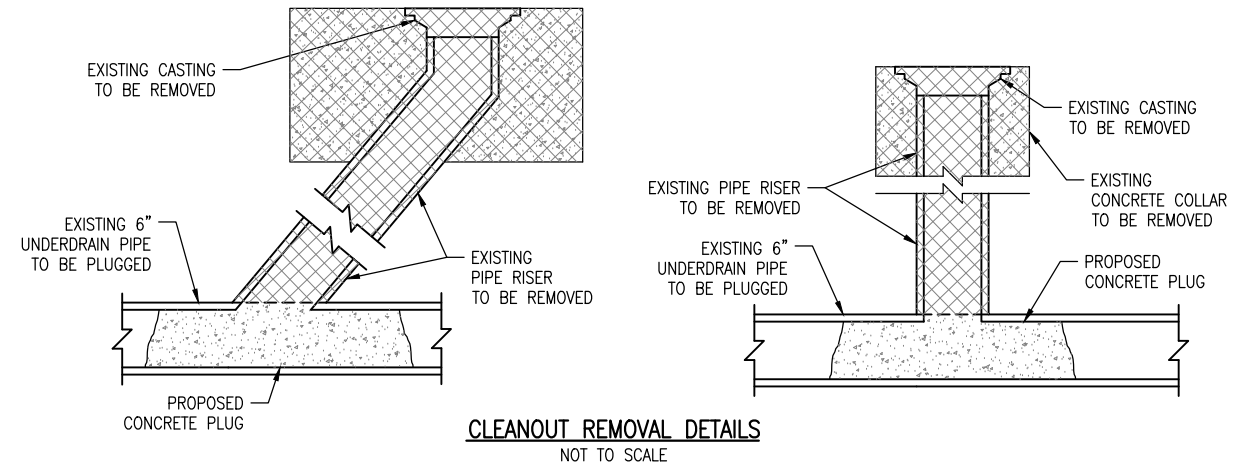
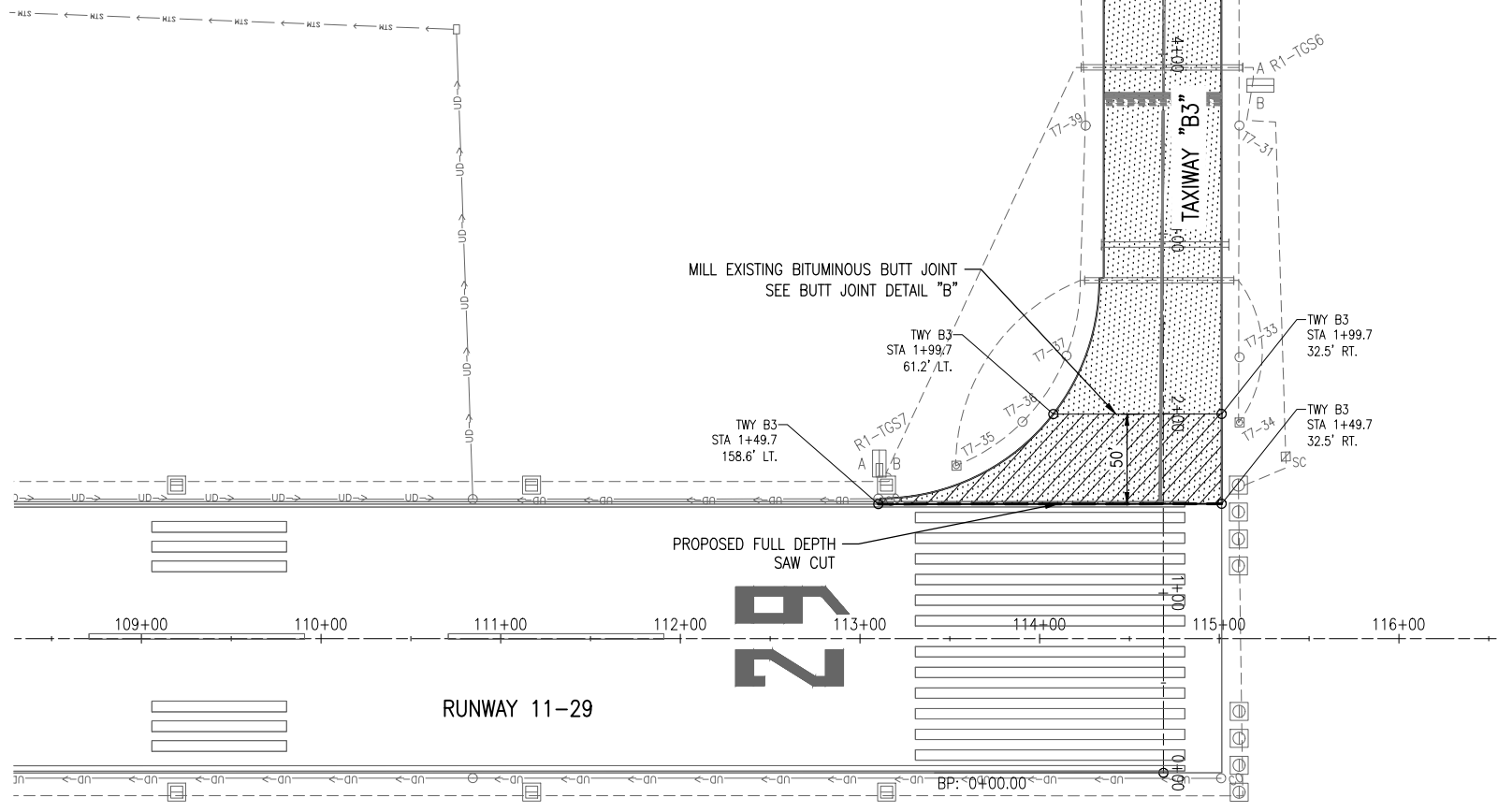
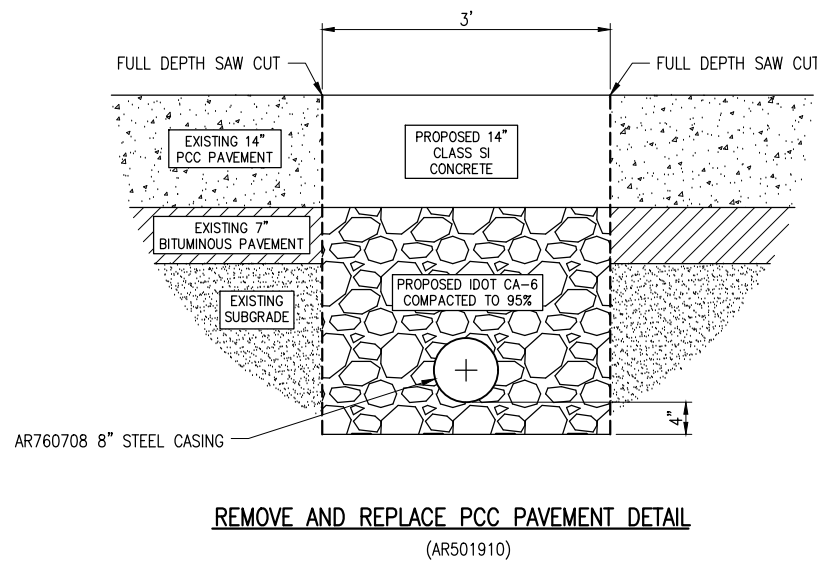
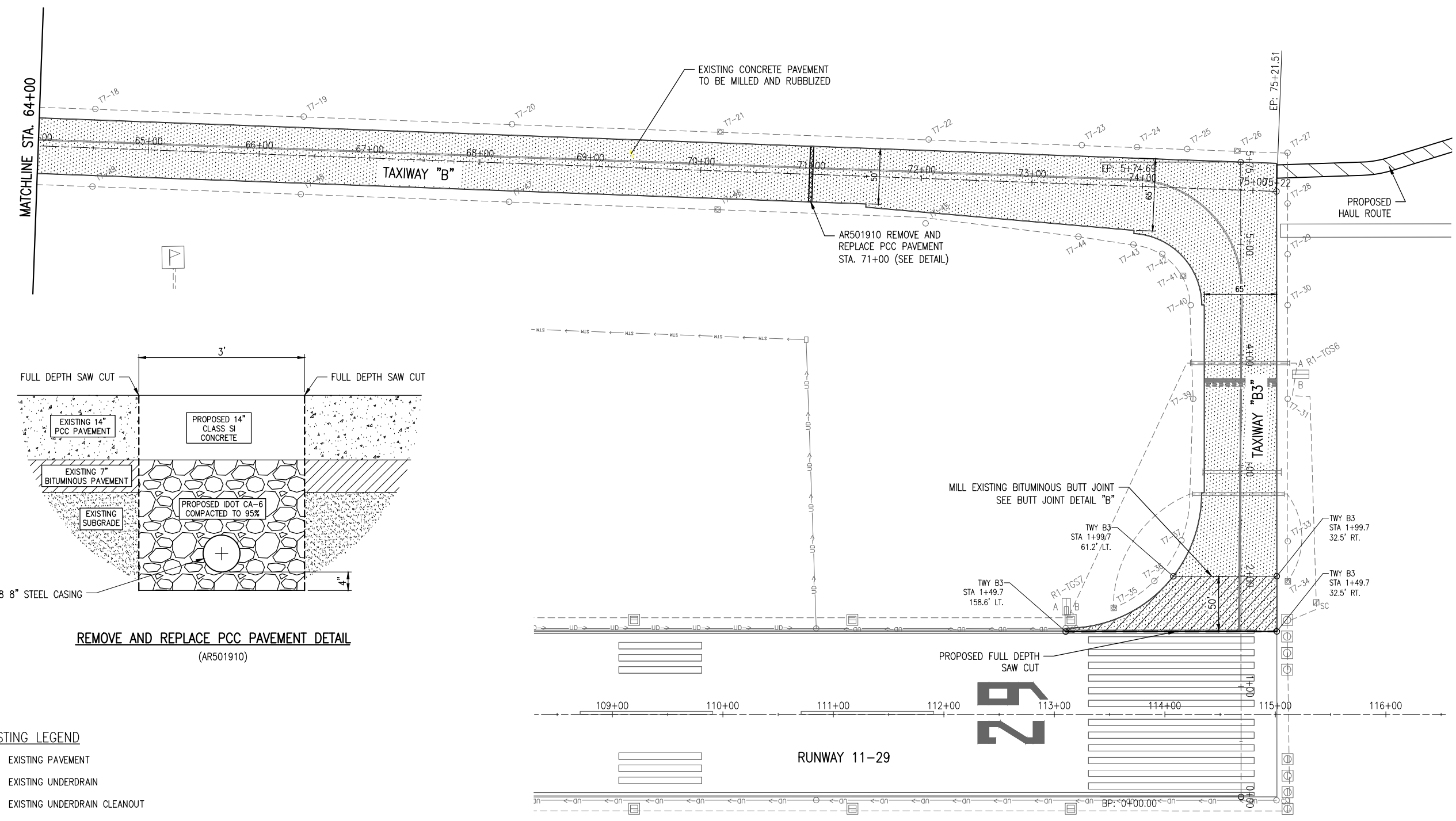
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067


NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020

PROJECT NO: 19A0001  
CAD FILE: C-111-REM.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

**REMOVAL PLAN  
TAXIWAY B STA.  
63+00 TO 75+21.48  
AND TAXIWAY B3**



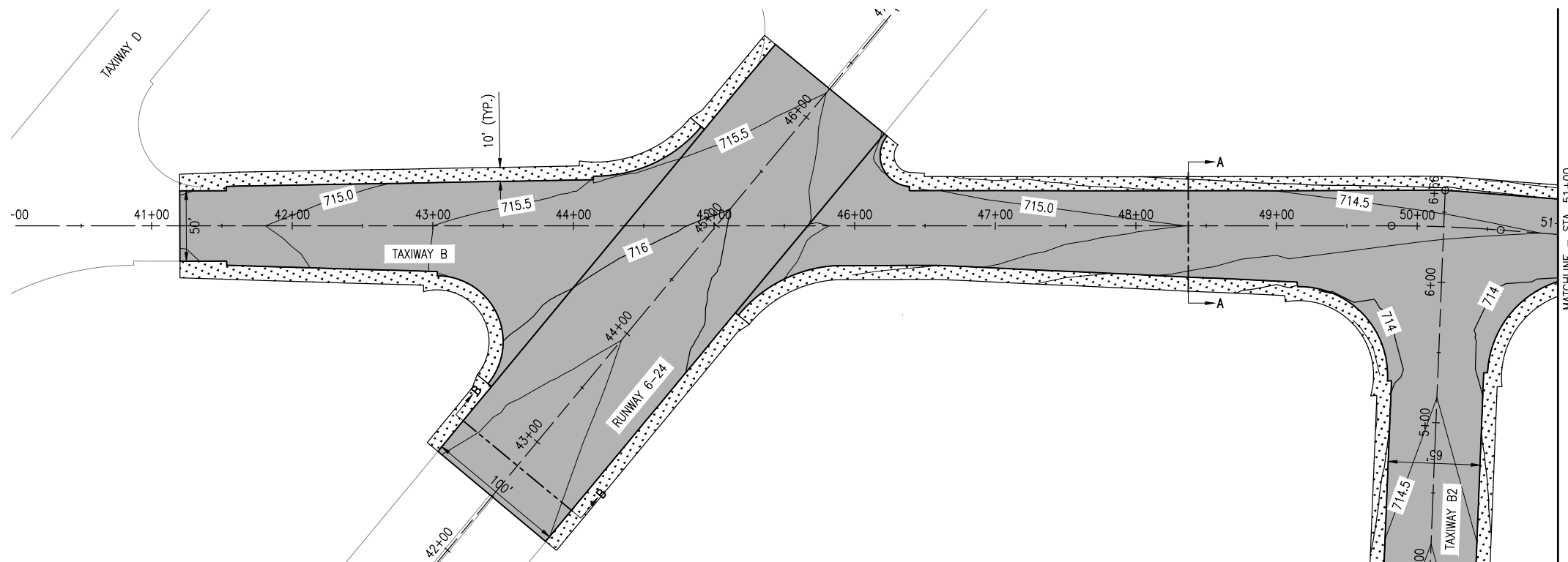
**EXISTING LEGEND**

- EXISTING PAVEMENT
- EXISTING UNDERDRAIN
- EXISTING UNDERDRAIN CLEANOUT
- EXISTING STORM SEWER
- EXISTING ELECTRICAL DUCT
- EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
- EXISTING REIL
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED THRESHOLD LIGHT
- EXISTING BASE MOUNTED THRESHOLD LIGHT
- EXISTING SPLICE CAN
- EXISTING ELECTRICAL MANHOLE
- EXISTING ELECTRICAL HANDHOLE
- EXISTING TAXI GUIDANCE SIGN

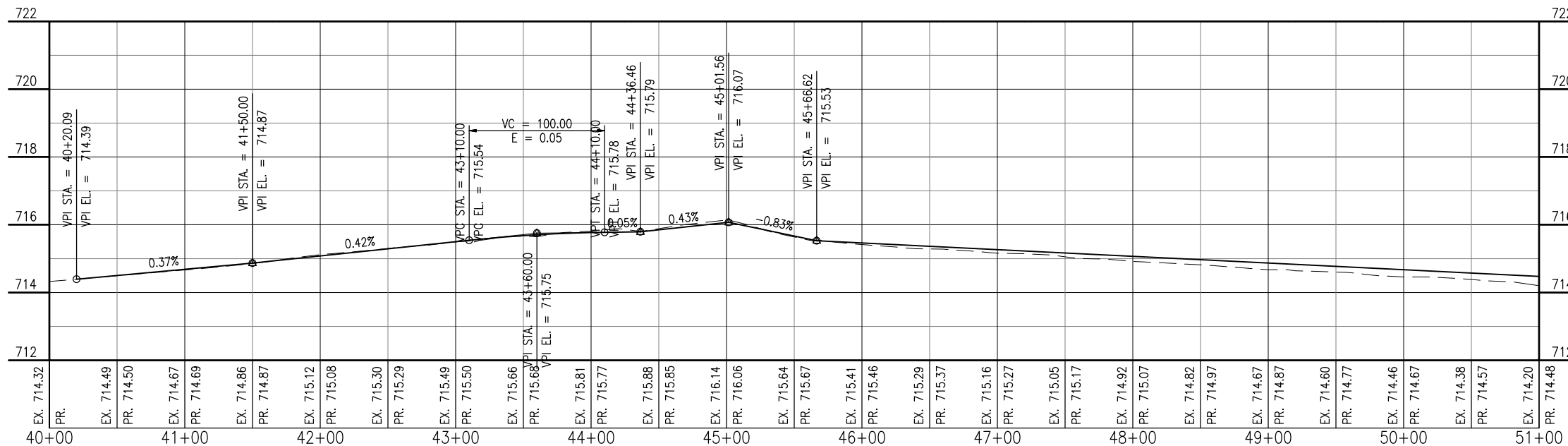
**REMOVAL LEGEND**

- AR501120 RUBBLIZE PAVEMENT
- AR501550 PCC PAVEMENT MILLING
- AR501910 REMOVE AND REPLACE PCC PAVEMENT
- AR401650 BITUMINOUS PAVEMENT MILLING
- AR501900 REMOVE PCC PAVEMENT
- FULL DEPTH SAW CUT
- AR705904 REMOVE UNDERDRAIN CLEANOUT
- AR705900 REMOVE UNDERDRAIN

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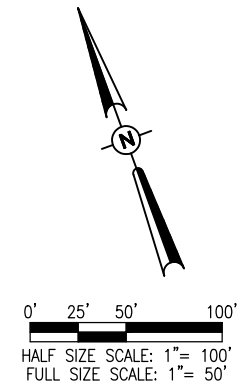


PLAN VIEW - TAXIWAY B STA. 41+20 TO STA. 51+00



PROFILE VIEW - TAXIWAY B STA. 41+20 TO STA. 51+00

- LEGEND**
- EXISTING PAVEMENT
  - PROPOSED PAVEMENT
  - PROPOSED SHOULDER ADJUSTMENT



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

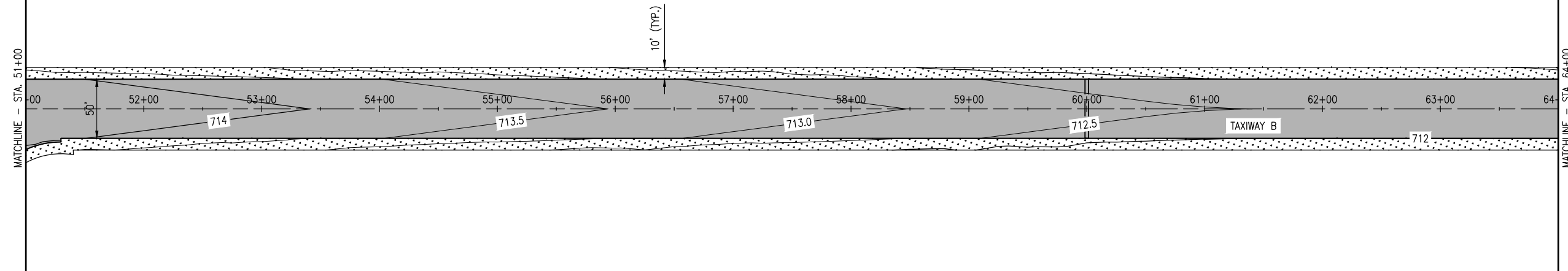
IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

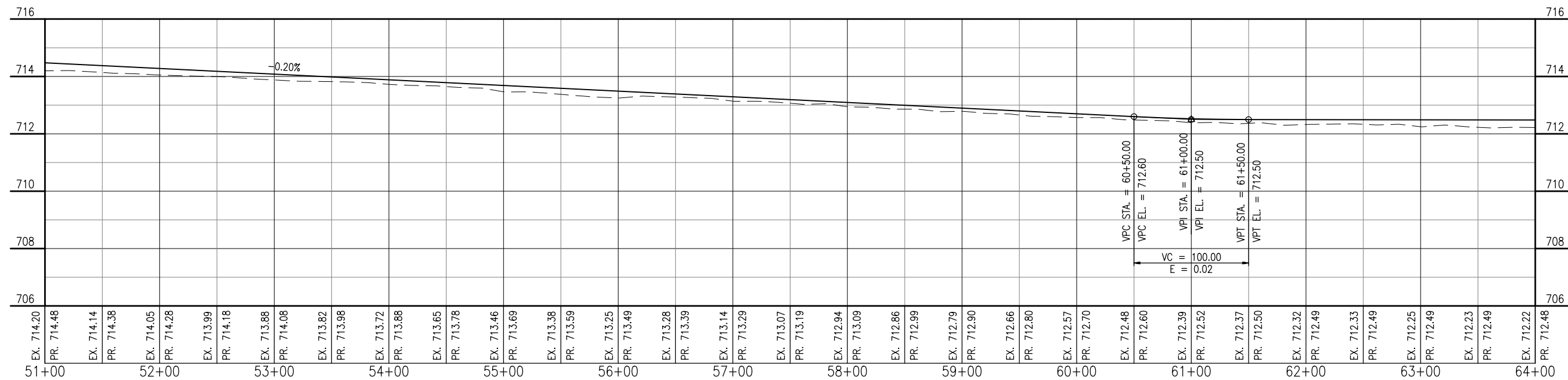
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-701-PNP.DWG  
DESIGN BY: JRH 05/08/2019  
DRAWN BY: JRH 05/08/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**PLAN AND PROFILE -  
TAXIWAY B STA. 41+20  
TO STA. 51+00**

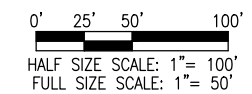
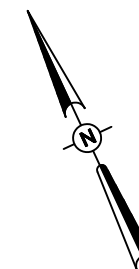


PLAN VIEW - TAXIWAY B STA. 41+20 TO STA. 51+00



PROFILE VIEW - TAXIWAY B STA. 41+20 TO STA. 51+00

- LEGEND**
- EXISTING PAVEMENT
  - PROPOSED PAVING AREA
  - AR152480 SHOULDER ADJUSTMENT  
AR901510 SEEDING  
AR908510 MULCHING



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

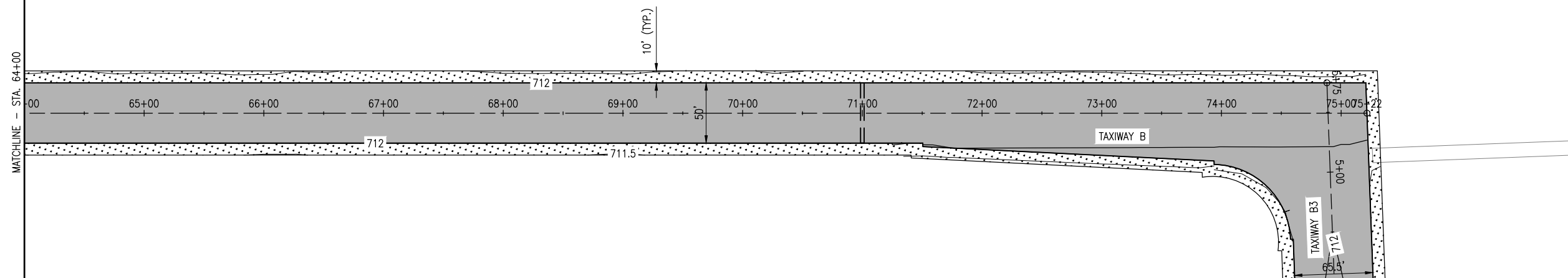
NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-701-PNP.DWG  
DESIGN BY: JRH 05/08/2019  
DRAWN BY: JRH 05/08/2019  
REVIEWED BY: KBS 04/16/2020

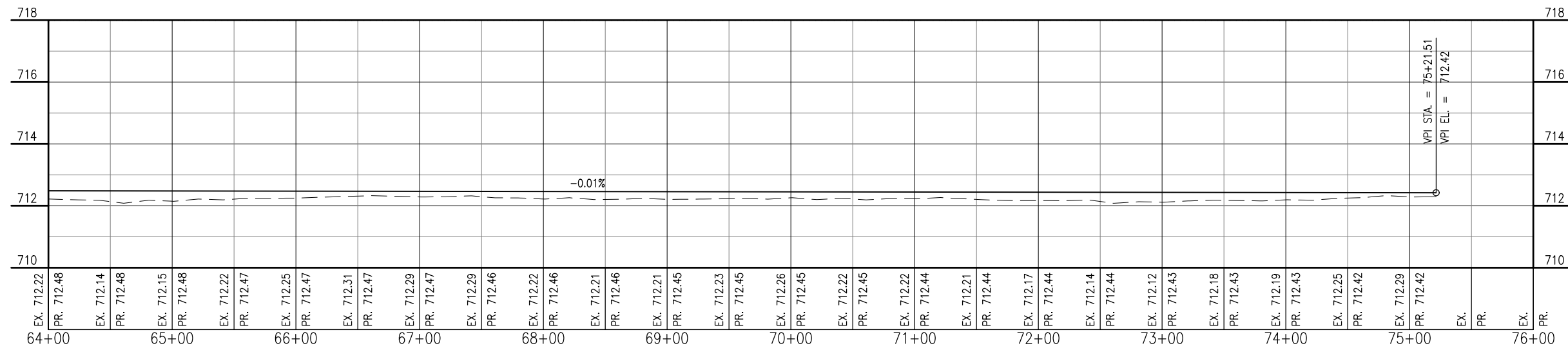
SHEET TITLE

**PLAN AND PROFILE -  
TAXIWAY B STA. 51+00  
TO STA. 64+00**





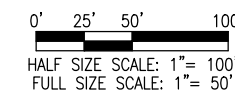
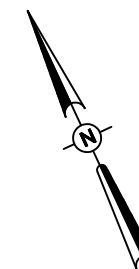
PLAN VIEW - TAXIWAY B STA. 41+20 TO STA. 51+00



PROFILE VIEW - TAXIWAY B STA. 41+20 TO STA. 51+00

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING AREA
- AR152480 SHOULDER ADJUSTMENT  
AR901510 SEEDING  
AR908510 MULCHING



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

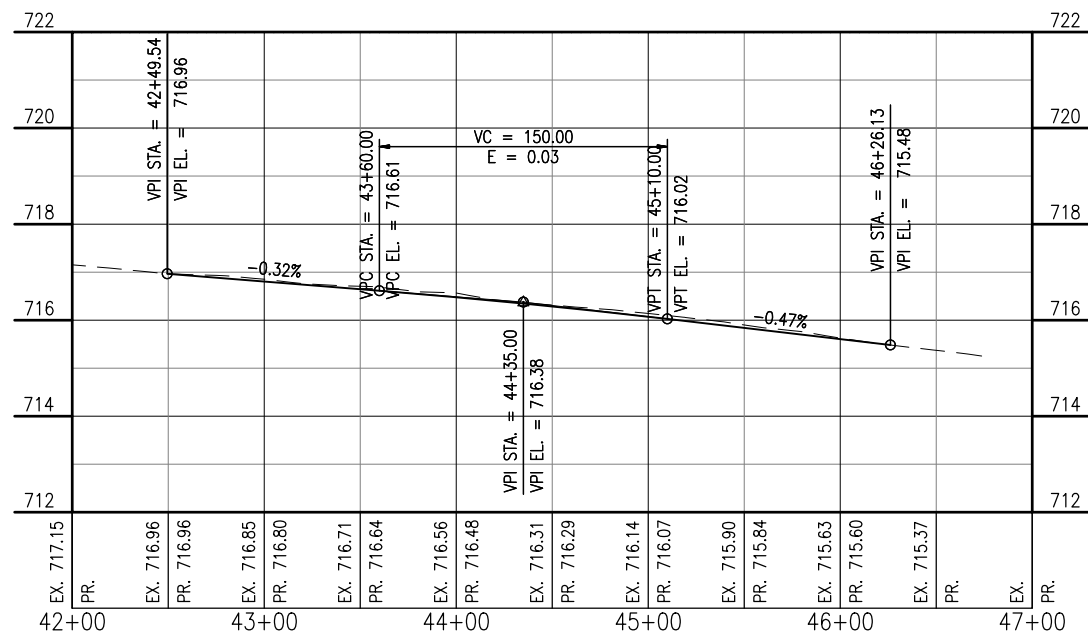
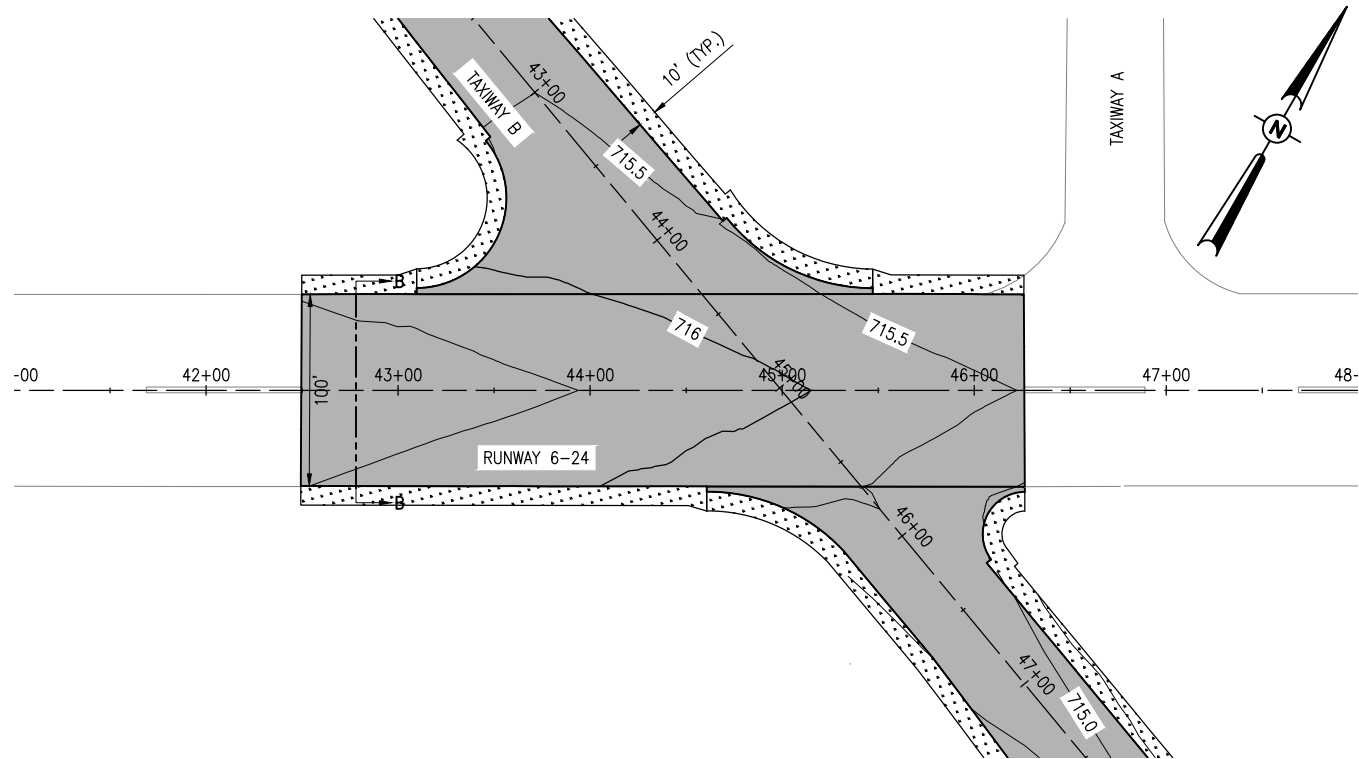
NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-701-PNP.DWG  
DESIGN BY: JRH 05/08/2019  
DRAWN BY: JRH 05/08/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**PLAN AND PROFILE -  
TAXIWAY B STA. 64+00  
TO STA. 75+22**

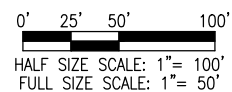




PROFILE VIEW - RUNWAY 6-24

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING AREA
- AR152480 SHOULDER ADJUSTMENT
- AR901510 SEEDING
- AR908510 MULCHING
- AR905530 TOPSOILING (4" THICKNESS)
- AR901510 SEEDING
- AR908510 MULCHING



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
 SBG Project No:  
 3-17-SBGP-156/159  
 Contract No. CO067

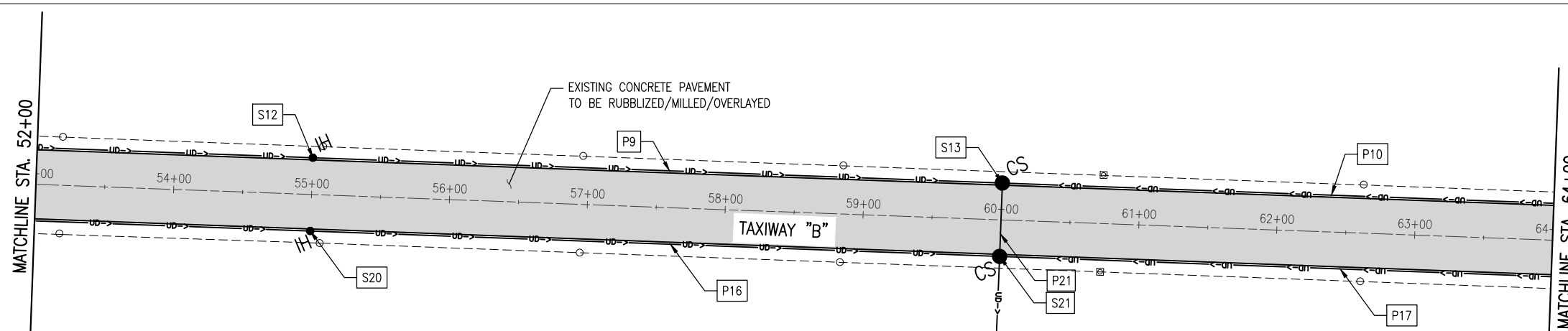
NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
 PROJECT NO: 19A0001  
 CAD FILE: C-701-PNP.DWG  
 DESIGN BY: JRH 05/08/2019  
 DRAWN BY: JRH 05/08/2019  
 REVIEWED BY: KBS 04/16/2020

SHEET TITLE

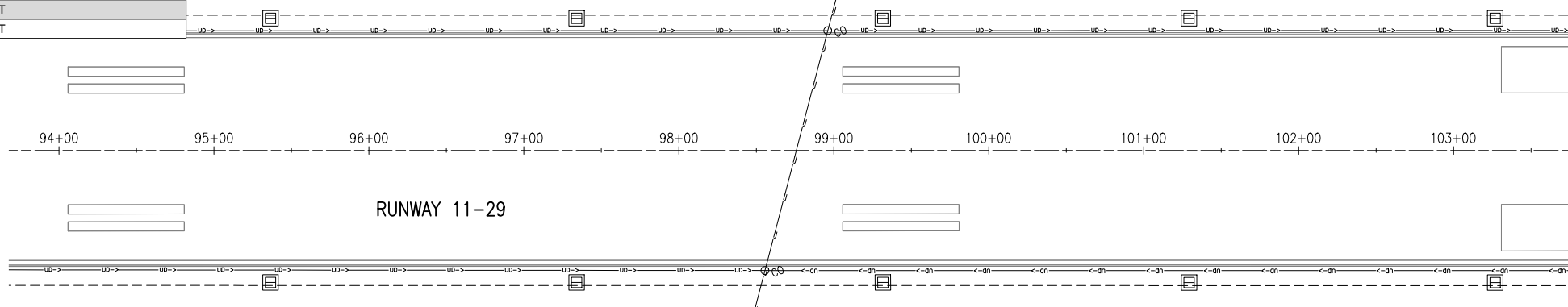
**PLAN AND PROFILE -  
RUNWAY 6-24**





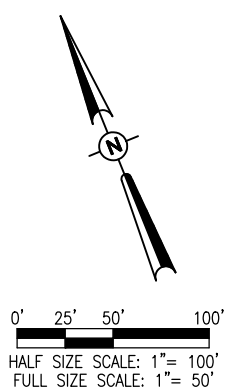
DRAINAGE STRUCTURE SCHEDULE							
S#	BASELINE	STA.	OFF	RIM	INVERT	TYPE	
S1	TWY B	45+32.5	122.6	LT	715.00	712.30	UNDERDRAIN CLEANOUT STRUCTURE
S2	TWY B	41+34.4	29.4	LT	713.25	710.09	UNDERDRAIN INSPECTION HOLE
S3	TWY B	41+96.3	217.7	LT	711.22	707.11	UNDERDRAIN COLLECTION STRUCTURE
S4	RWY 624	39+29.5	56.6	LT	716.91	713.91	UNDERDRAIN CLEANOUT STRUCTURE
S5	TWY B	38+97.2	150.7	RT	712.65	709.51	UNDERDRAIN COLLECTION STRUCTURE
S6	TWY B	43+03.2	37.2	RT	715.40	711.64	UNDERDRAIN INSPECTION HOLE
S7	RWY 624	40+070.0	121.9	RT	716.59	714.51	UNDERDRAIN CLEANOUT STRUCTURE
S8	TWY B	45+86.8	30	RT	715.22	712.58	UNDERDRAIN INSPECTION HOLE
S9	TWY B2	4+81.3	34.3	LT	713.69	711.00	EXISTING CLEANOUT STRUCTURE
S10	RWY 624	46+27.9	54.5	RT	714.87	712.37	UNDERDRAIN COLLECTION STRUCTURE
S11	TWY B	50+00.0	26.8	LT	714.06	711.07	UNDERDRAIN INSPECTION HOLE
S12	TWY B	55+00.0	26.8	LT	713.12	709.46	UNDERDRAIN INSPECTION HOLE
S13	TWY B	60+00.0	26.8	LT	712.15	707.86	UNDERDRAIN COLLECTION STRUCTURE
S14	TWY B	66+00.0	26.8	LT	711.82	709.32	UNDERDRAIN CLEANOUT STRUCTURE (DUAL)
S15	TWY B	71+00.0	26.8	LT	711.99	707.92	UNDERDRAIN COLLECTION STRUCTURE
S16	TWY B	75+22.0	26.8	LT	711.82	709.32	UNDERDRAIN CLEANOUT STRUCTURE
S17	TWY B3	1+50.0	34.0	RT	713.43	710.93	UNDERDRAIN CLEANOUT STRUCTURE
S18	TWY B2	1+55.0	157.4	RT	716.03	713.53	UNDERDRAIN CLEANOUT STRUCTURE
S19	TWY B	50+39.9	26.8	RT	713.77	711.17	UNDERDRAIN INSPECTION HOLE
S20	TWY B	55+00.0	26.8	RT	713.13	709.68	UNDERDRAIN INSPECTION HOLE
S21	TWY B	60+00.0	26.8	RT	712.24	707.67	UNDERDRAIN COLLECTION STRUCTURE
S22	TWY B	66+00.0	26.8	RT	711.92	709.43	UNDERDRAIN CLEANOUT STRUCTURE (DUAL)
S23	TWY B	71+00.0	26.8	RT	711.99	707.83	UNDERDRAIN COLLECTION STRUCTURE
S24	TWY B	74+38.1	63.5	RT	711.64	709.19	UNDERDRAIN CLEANOUT STRUCTURE
S25	TWY B3	1+55.0	158.5	LT	713.29	711.29	UNDERDRAIN CLEANOUT STRUCTURE
S26	TWY B	60+00.0	149.6	RT	708.69	707.24	EXISTING INLET
S27	TWY B	71+01.0	149.7	RT	708.77	707.48	EXISTING INLET

DRAINAGE PIPE SCHEDULE						
P#	FROM	TO	L.F.	SLOPE	TYPE	
P1	S1	S2	435	0.50%	6" PERFORATED UNDERDRAIN W/SOCK	
P2	S2	S3	248.1	1.72%	6" PERFORATED UNDERDRAIN W/SOCK	
P3	S6	S5	452	0.47%	6" PERFORATED UNDERDRAIN W/SOCK	
P4	S4	S6	483	0.47%	6" PERFORATED UNDERDRAIN W/SOCK	
P5	S7	S8	584	0.33%	6" PERFORATED UNDERDRAIN W/SOCK	
P6	S8	S9	478	0.33%	6" PERFORATED UNDERDRAIN W/SOCK	
P7	S10	S11	407.9	0.32%	6" PERFORATED UNDERDRAIN W/SOCK	
P8	S11	S12	502.3	0.32%	6" PERFORATED UNDERDRAIN W/SOCK	
P9	S12	S13	500	0.32%	6" PERFORATED UNDERDRAIN W/SOCK	
P10	S14	S13	600	0.25%	6" PERFORATED UNDERDRAIN W/SOCK	
P11	S14	S15	500	0.28%	6" PERFORATED UNDERDRAIN W/SOCK	
P12	S16	S15	422	0.33%	6" PERFORATED UNDERDRAIN W/SOCK	
P13	S17	S16	425	0.38%	6" PERFORATED UNDERDRAIN W/SOCK	
P14	S18	S19	576	0.41%	6" PERFORATED UNDERDRAIN W/SOCK	
P15	S19	S20	361	0.41%	6" PERFORATED UNDERDRAIN W/SOCK	
P16	S20	S21	500	0.41%	6" PERFORATED UNDERDRAIN W/SOCK	
P17	S22	S21	600	0.29%	6" PERFORATED UNDERDRAIN W/SOCK	
P18	S22	S23	500	0.32%	6" PERFORATED UNDERDRAIN W/SOCK	
P19	S24	S23	344.6	0.46%	6" PERFORATED UNDERDRAIN W/SOCK	
P20	S25	S24	408	0.46%	6" PERFORATED UNDERDRAIN W/SOCK	
P21	S13	S21	54	0.35%	6" NON-PERFORATED UNDERDRAIN IN 8" STEEL CASING	
P22	S21	S26	123	0.35%	6" NON-PERFORATED UNDERDRAIN	
P23	S15	S23	54	0.28%	6" NON-PERFORATED UNDERDRAIN IN 8" STEEL CASING	
P24	S23	S27	123	0.28%	6" NON-PERFORATED UNDERDRAIN	



- EXISTING LEGEND**
- EXISTING PAVEMENT
  - EXISTING UNDERDRAIN
  - EXISTING UNDERDRAIN CLEANOUT
  - EXISTING STORM SEWER
  - EXISTING ELECTRICAL DUCT
  - EXISTING AIRFIELD LIGHTING ELECTRICAL CABLE
  - EXISTING REIL
  - EXISTING STAKE MOUNTED TAXIWAY LIGHT
  - EXISTING BASE MOUNTED TAXIWAY LIGHT
  - EXISTING STAKE MOUNTED RUNWAY LIGHT
  - EXISTING BASE MOUNTED RUNWAY LIGHT
  - EXISTING STAKE MOUNTED THRESHOLD LIGHT
  - EXISTING BASE MOUNTED THRESHOLD LIGHT

- DRAINAGE LEGEND**
- PAVEMENT RUBBLIZATION AND RESURFACING AREA
  - AR705630 UNDERDRAIN INSPECTION HOLE
  - AR705640 UNDERDRAIN CLEANOUT
  - AR705635 UNDERDRAIN COLLECTION STRUCTURE
  - AR705526 6" PERFORATED UNDERDRAIN W/ SOCK
  - AR705546 6" NON-PERFORATED UNDERDRAIN
  - PROPOSED DRAINAGE ITEM (SEE DRAINAGE SCHEDULE)
  - PROPOSED DRAINAGE ITEM (SEE DRAINAGE SCHEDULE)



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-130-DRPL.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**UNDERDRAIN PLAN  
TAXIWAY B STA.  
52+00 TO 64+00**

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

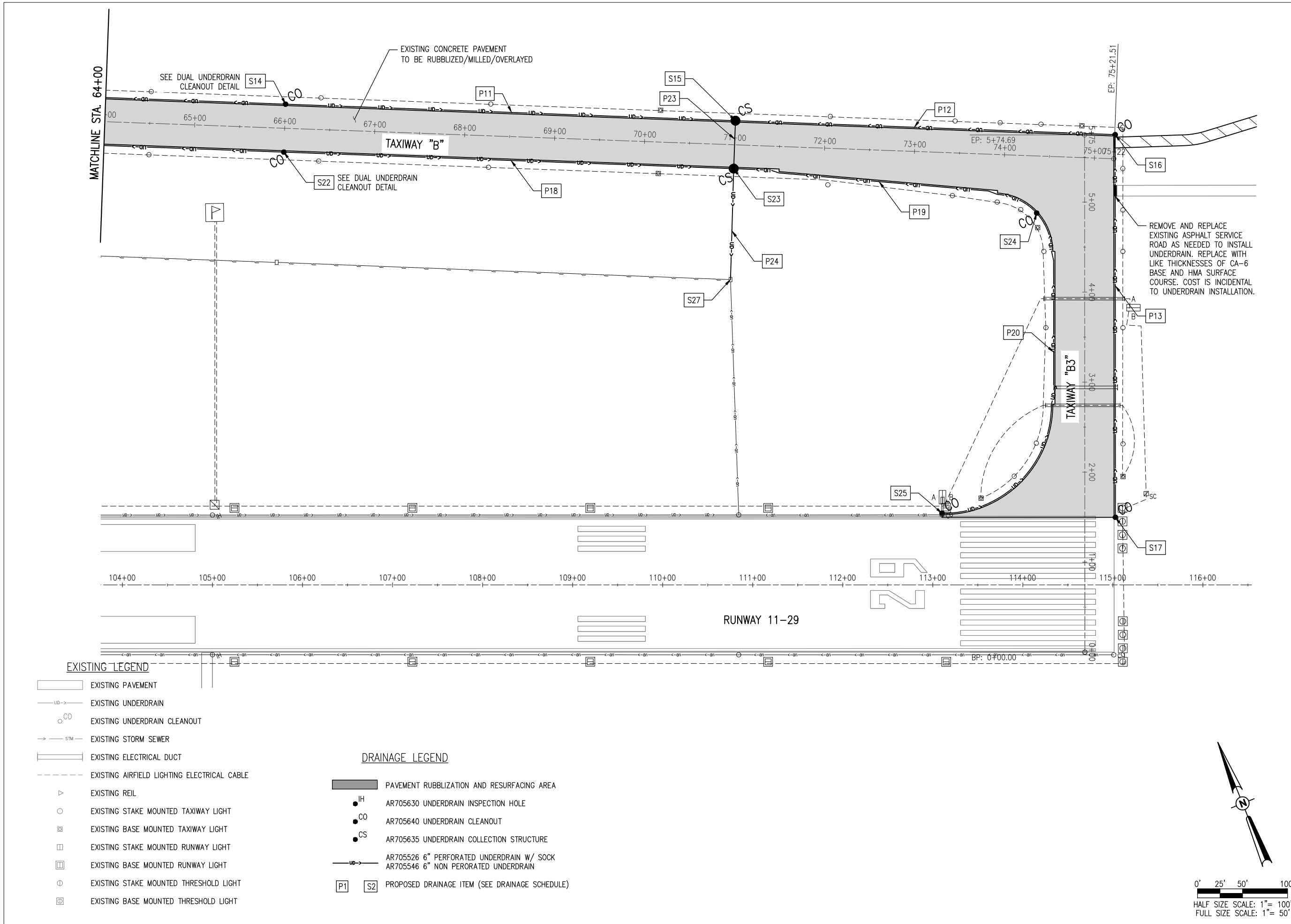
IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

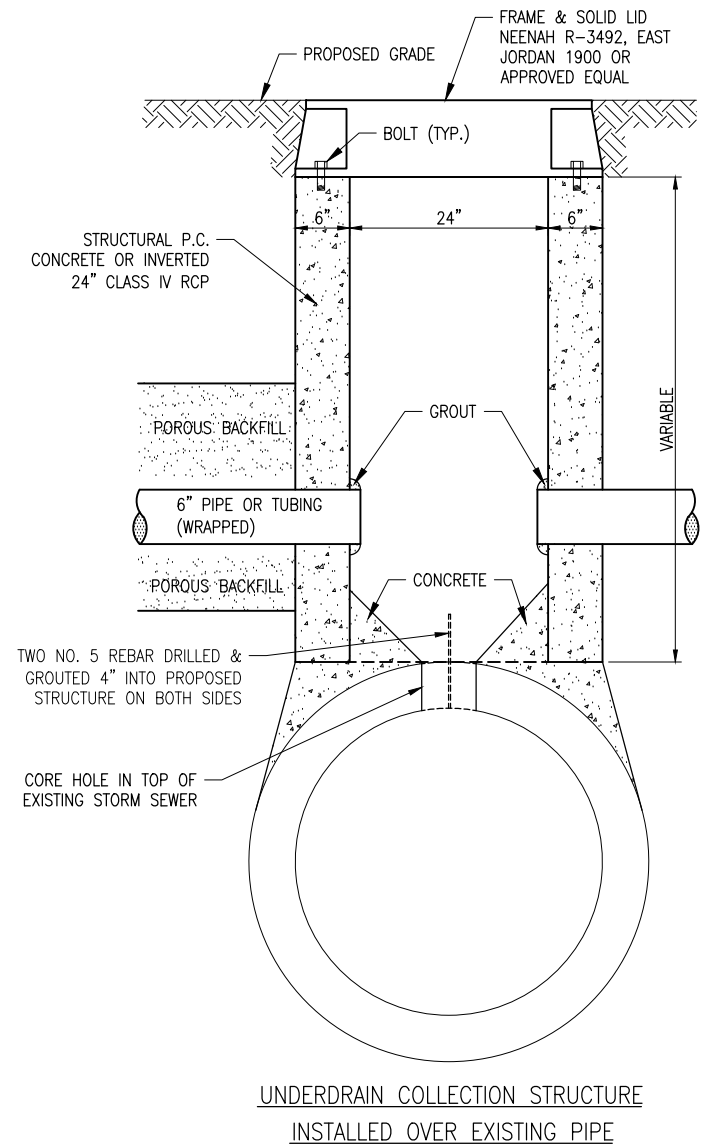
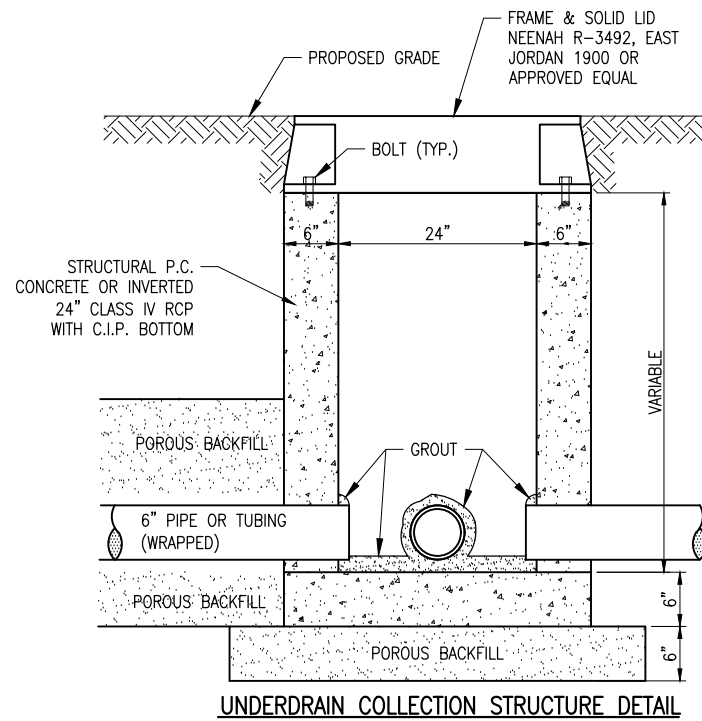
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-130-DRPL.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**UNDERDRAIN PLAN  
TAXIWAY B STA.  
64+00 TO 75+22 AND  
TAXIWAY B3**

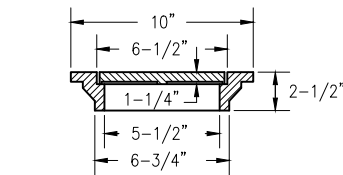
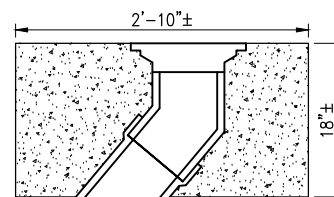
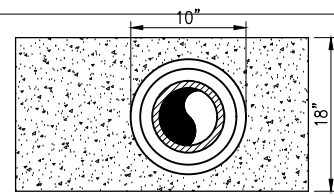


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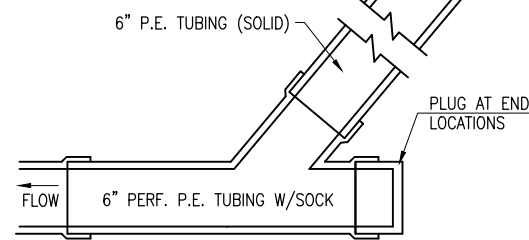
**CLEANOUT NOTES**

1. TOP OF CLEANOUTS SHALL BE 2" ABOVE FINISH GROUND LINE AT LOCATION SHOWN ON PLANS.
2. 1/2" CHAMFER TO BE USED ON ALL EXPOSED EDGES OF CLEANOUTS.
3. THE CONCRETE SHALL BE STRUCTURAL PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH ITEM 610.



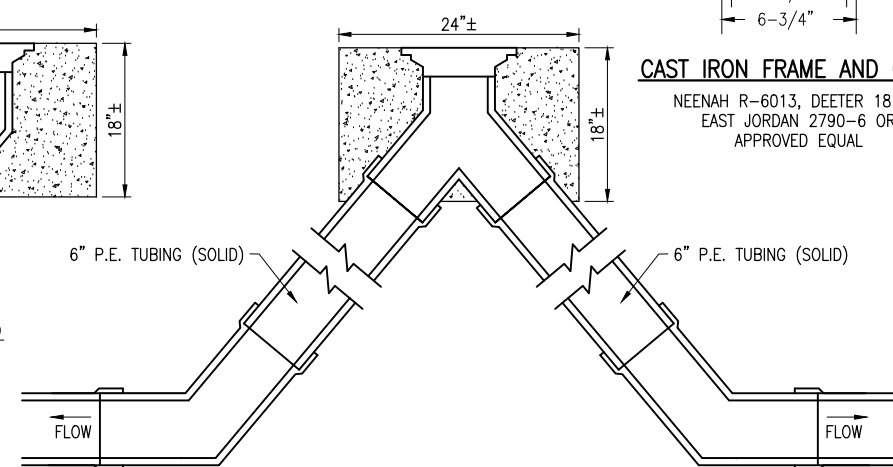
**CAST IRON FRAME AND COVER**

NEENAH R-6013, DEETER 1810,  
EAST JORDAN 2790-6 OR  
APPROVED EQUAL



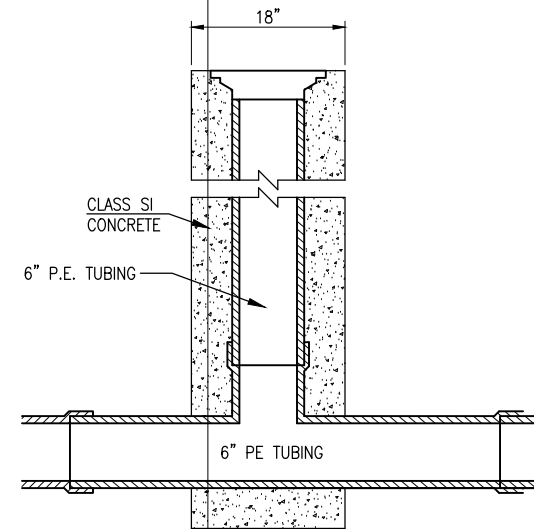
**UNDERDRAIN CLEANOUT**

NO SCALE



**DUAL UNDERDRAIN CLEANOUT**

NO SCALE



**INSPECTION HOLE DETAIL**

NOT TO SCALE

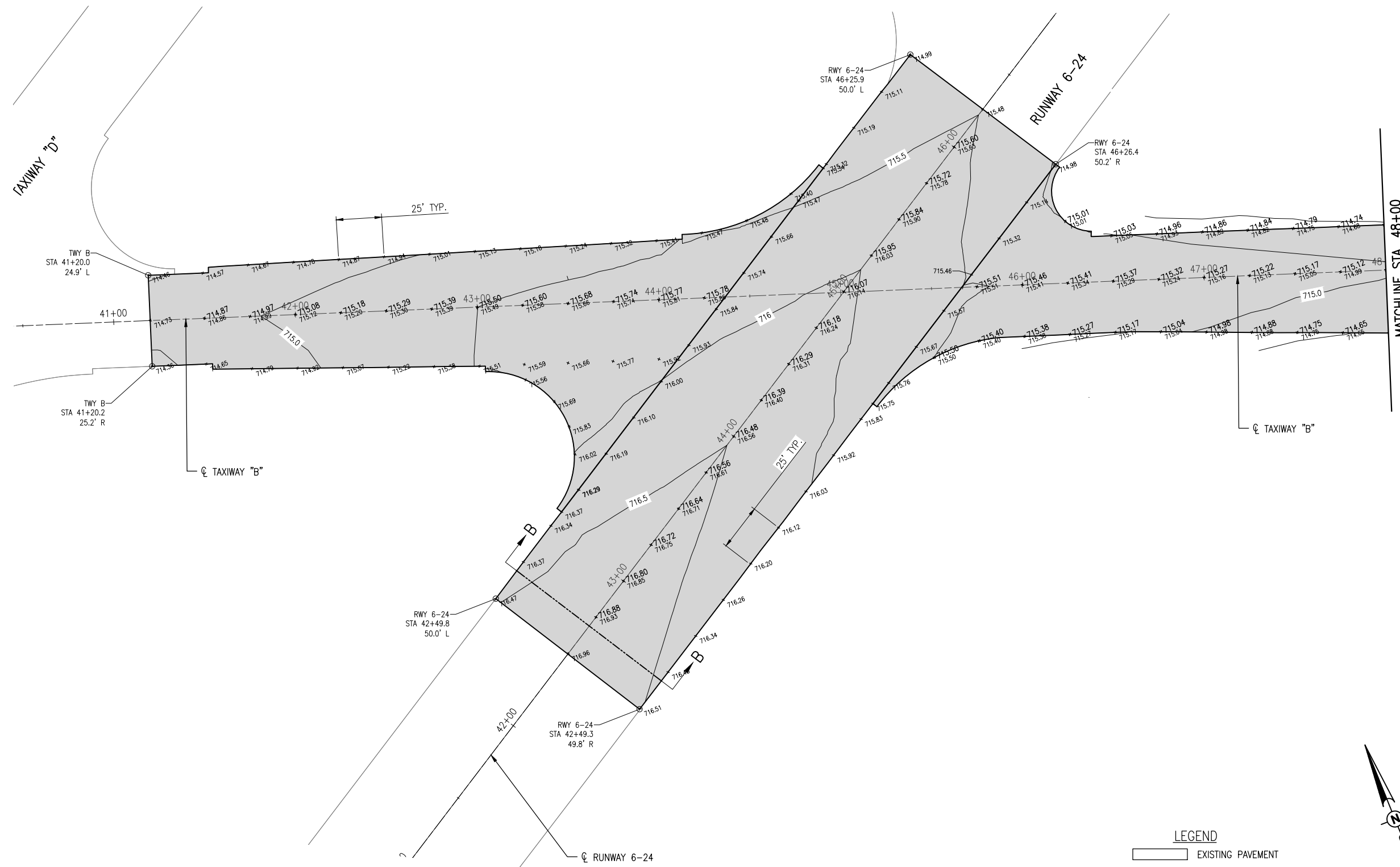
**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067


NO.	DATE	DESCRIPTION		
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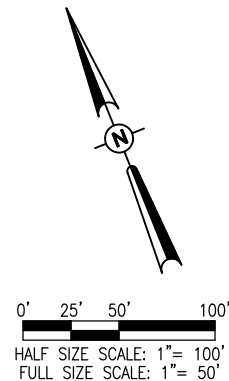
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PROJECT NO: 19A0001  
CAD FILE: C-131-DRN.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

**DRAINAGE DETAILS**



**LEGEND**

	EXISTING PAVEMENT
	PROPOSED PAVEMENT
	EXISTING GRADE
	PROPOSED GRADE
	PROPOSED CONTOURS



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067


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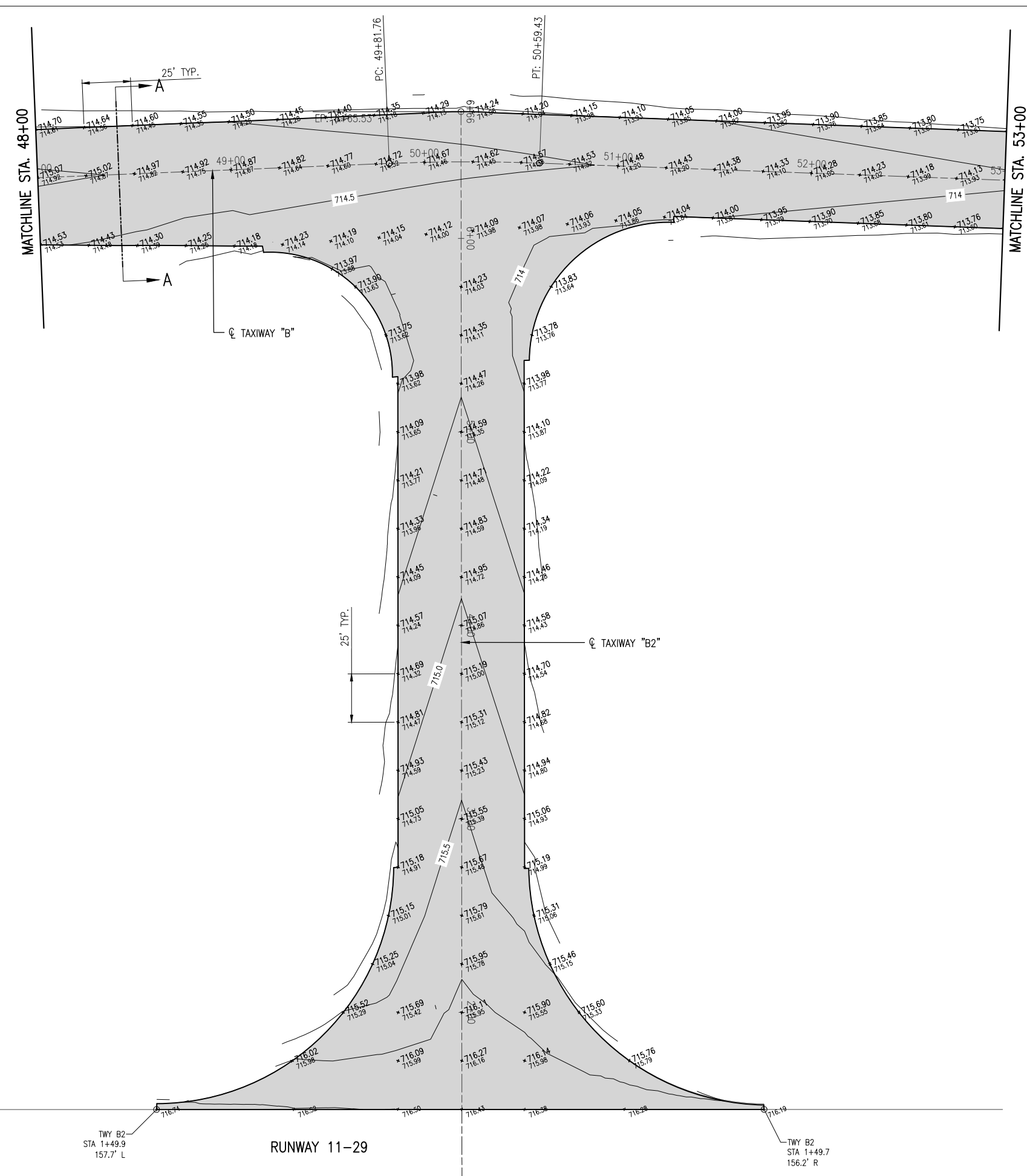
ISSUE: 04/17/2020

PROJECT NO: 19A0001  
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DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

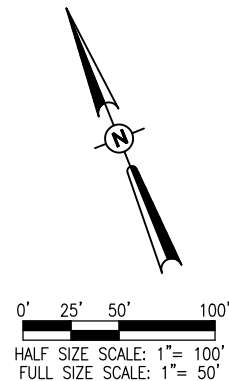
**STAKING PLAN  
TAXIWAY B STA.  
41+00 TO 48+00 AND  
RUNWAY 6-24**





**LEGEND**

	EXISTING PAVEMENT
	PROPOSED PAVEMENT
	EXISTING GRADE
	PROPOSED GRADE
	PROPOSED CONTOURS



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

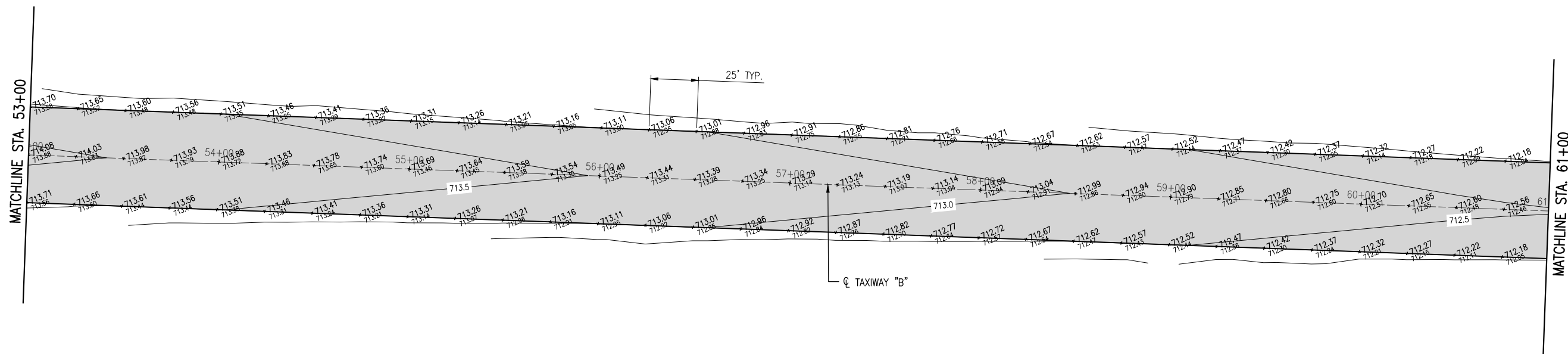

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020

PROJECT NO: 19A0001  
CAD FILE: C-161-STK.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**STAKING PLAN  
TAXIWAY B STA.  
48+00 TO 53+00 AND  
TAXIWAY B2**



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

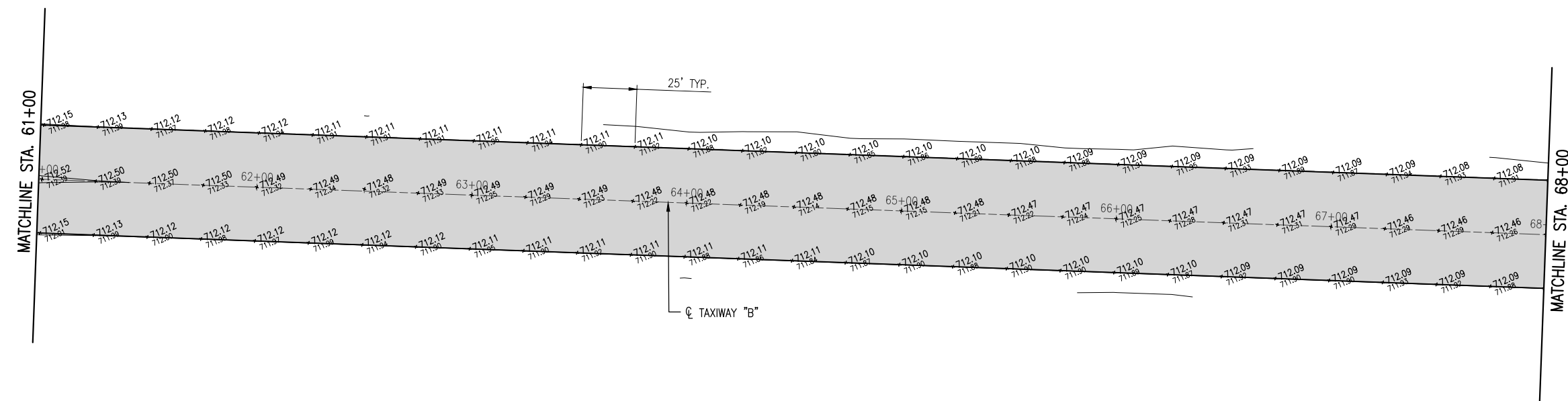
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3-17-SBGP-156/159  
Contract No. CO067

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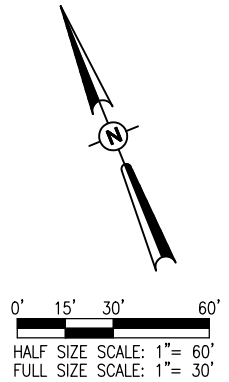
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-161-STK.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

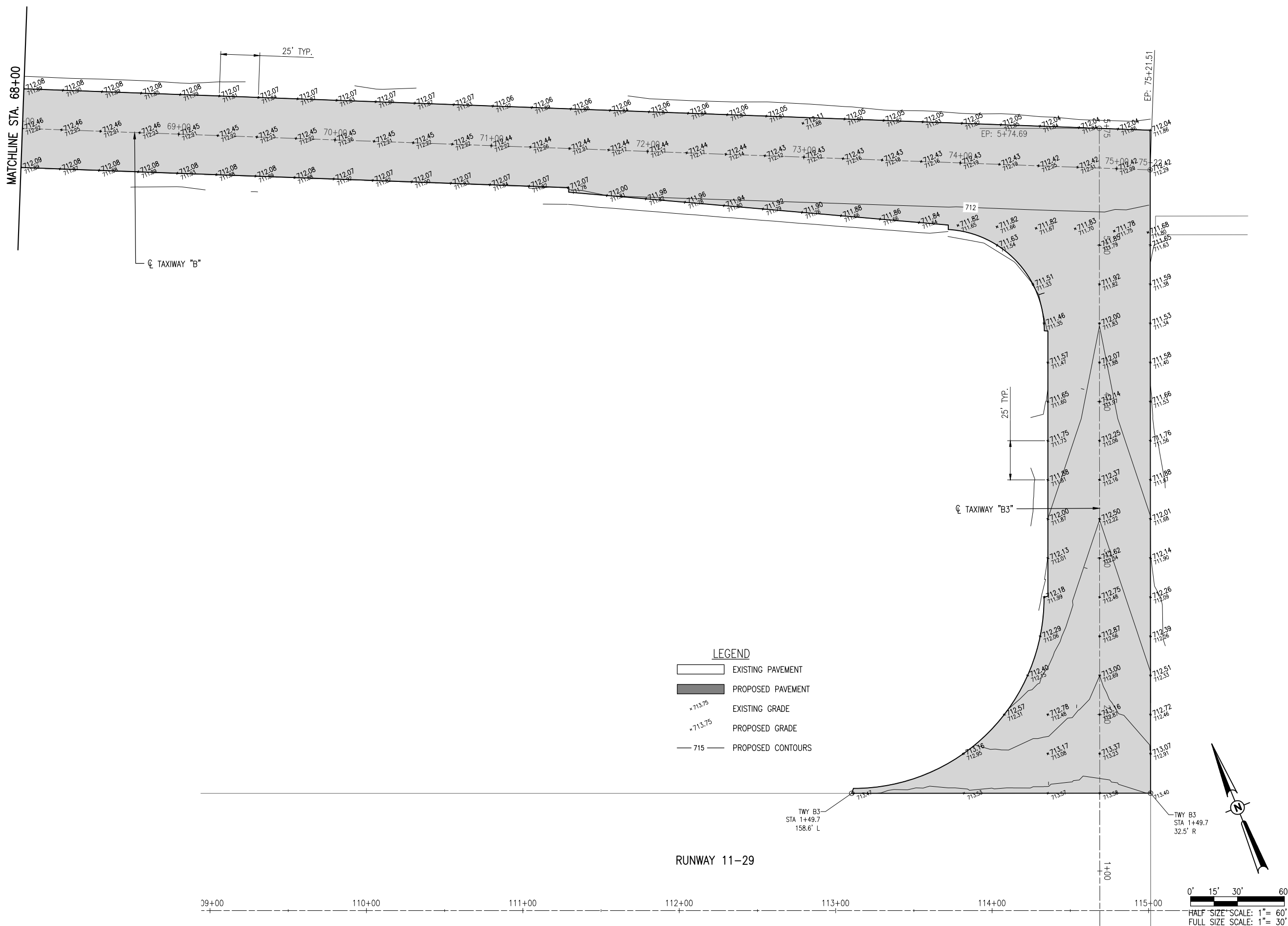
SHEET TITLE

**STAKING PLAN  
TAXIWAY B STA.  
53+00 TO 68+00**



- LEGEND**
- EXISTING PAVEMENT
  - PROPOSED PAVEMENT
  - EXISTING GRADE
  - PROPOSED GRADE
  - 715 PROPOSED CONTOURS





**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

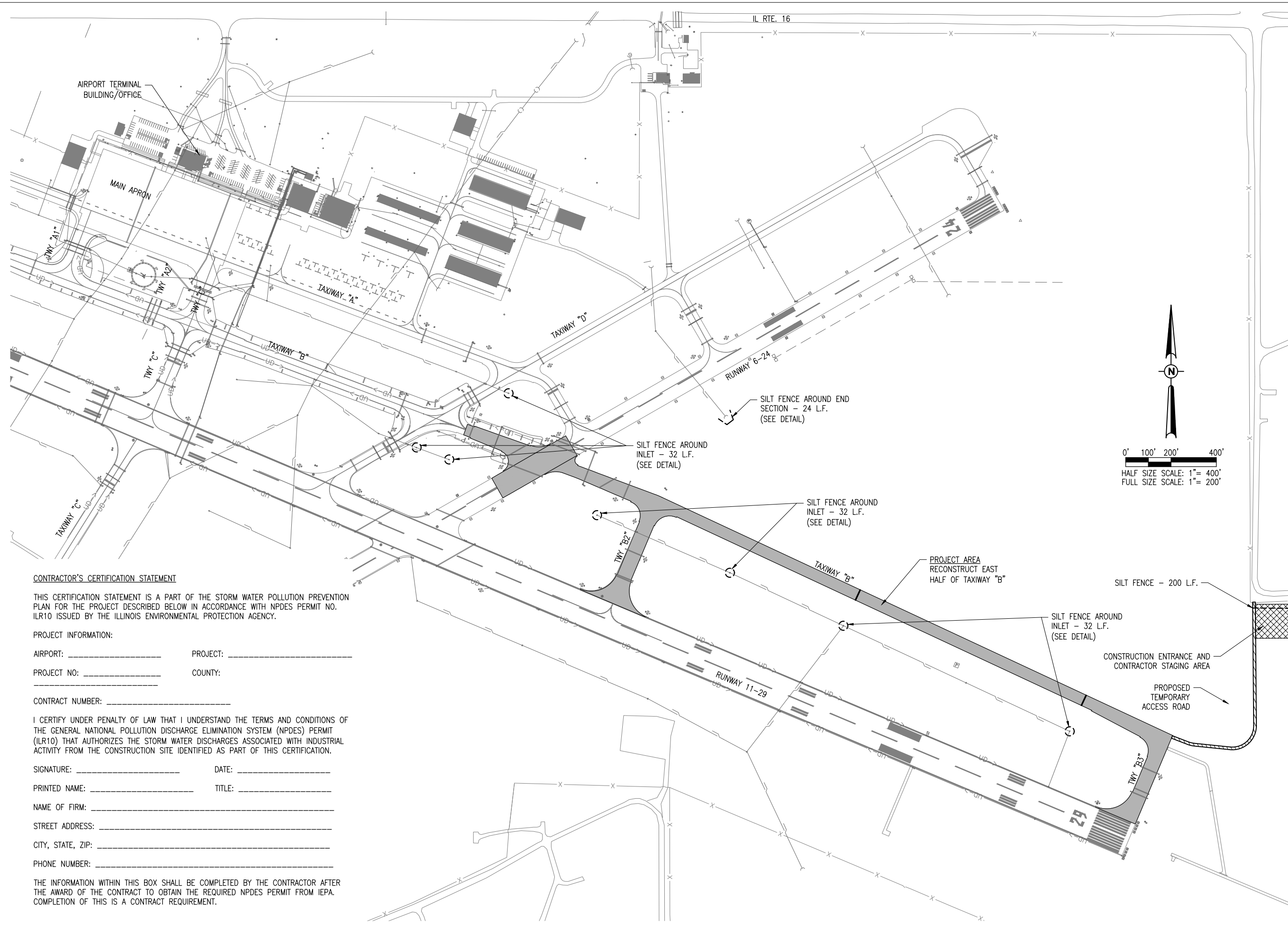

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020

PROJECT NO: 19A0001  
CAD FILE: C-161-STK.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**STAKING PLAN  
TAXIWAY B STA.  
68+00 TO 75+22 AND  
TAXIWAY B3**



**CONTRACTOR'S CERTIFICATION STATEMENT**

THIS CERTIFICATION STATEMENT IS A PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR THE PROJECT DESCRIBED BELOW IN ACCORDANCE WITH NPDES PERMIT NO. ILR10 ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

**PROJECT INFORMATION:**

AIRPORT: \_\_\_\_\_ PROJECT: \_\_\_\_\_

PROJECT NO: \_\_\_\_\_ COUNTY: \_\_\_\_\_

CONTRACT NUMBER: \_\_\_\_\_

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINTED NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

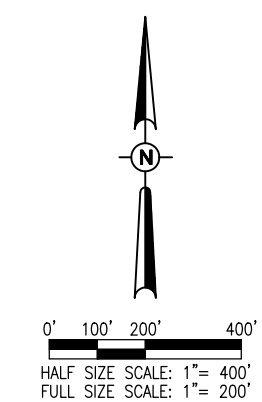
NAME OF FIRM: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

THE INFORMATION WITHIN THIS BOX SHALL BE COMPLETED BY THE CONTRACTOR AFTER THE AWARD OF THE CONTRACT TO OBTAIN THE REQUIRED NPDES PERMIT FROM IEPA. COMPLETION OF THIS IS A CONTRACT REQUIREMENT.



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067


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		DES	DWN	REV

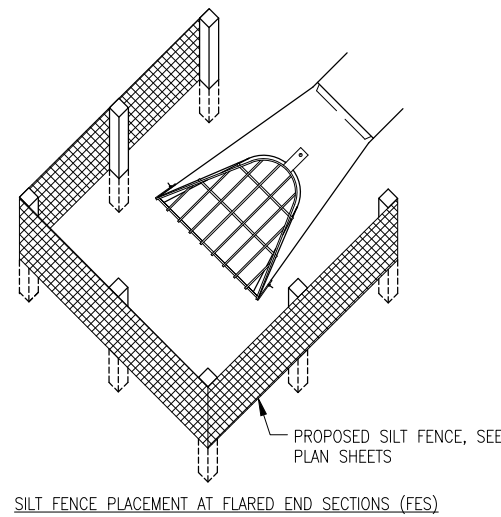
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-591-SWP.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

**STORMWATER  
POLLUTION  
PREVENTION PLAN**

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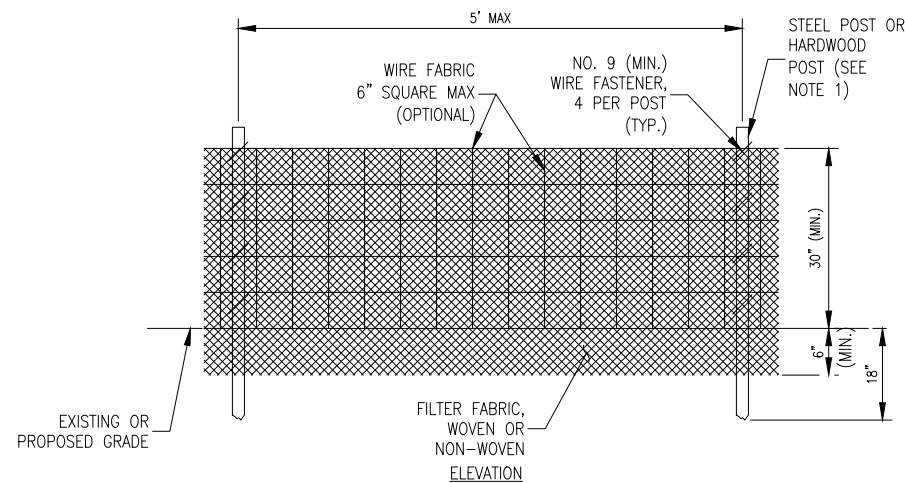
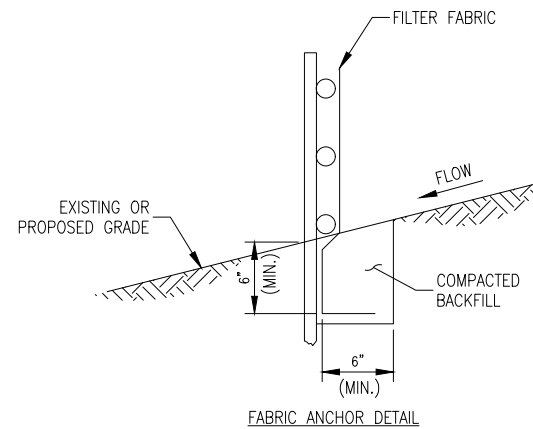
**NOTES:**

- FENCE POST SHALL BE EITHER STEEL "T" LINE POST OR HARDWOOD POST WITH A MINIMUM SECTIONAL AREA OF 2.0 SQUARE INCHES. A CARPENTER'S (NOMINAL) 2"x2" POST WILL MEET SPECIFICATIONS.
- TOP AND BOTTOM WIRE OF WIRE FABRIC SHALL BE MINIMUM GAGE NO. 9. INTERMEDIATE WIRES OF THE WIRE FABRIC SHALL BE MINIMUM GAGE NO. 11.
- WIRE FABRIC SHALL BE SECURELY FASTENED TO FENCE POSTS WITH NO. 9 GAGE WIRE MINIMUM. FOUR (4) FASTENERS PER POST REQUIRED.
- FILTER FABRIC SHALL BE SECURELY FASTENED TO WIRE FABRIC AND POSTS WITH TIES OR STAPLES SPACED AT 12" APART AT THE TOP, MIDDLE AND BOTTOM.
- WHEN TWO SECTIONS OF FILTER FABRIC MEET, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED AND ATTACHED TO THE WIRE FABRIC AT A POST.
- FILTER FABRIC SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS WITH APPARENT OPENING SIZE (AOS) OF AT LEAST 40 FOR NONWOVEN AND WOVEN. THE FABRIC MUST MEET THE APPLICABLE STANDARDS OF AASHTO 288-00 (Article IV, Section B.1.j.1.f.i, AS AMENDED), OR EQUIVALENT.



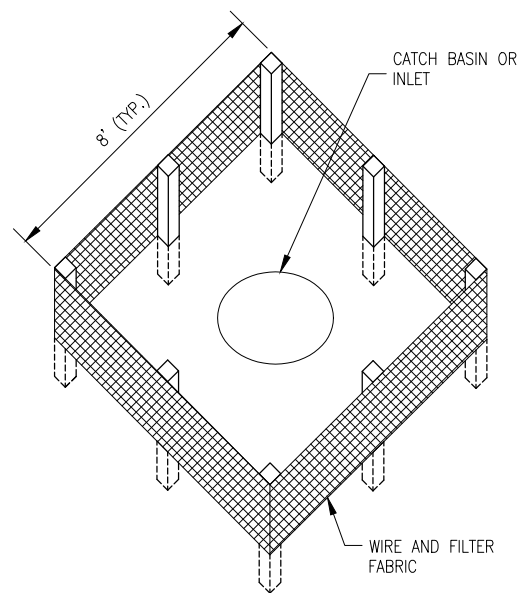
**NOTES:**

- A MAXIMUM OF 5 FEET IS USED FOR POST-TO-POST SPACING.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. PERIODIC INSPECTION SHALL BE PERFORMED AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN BULGES DEVELOP IN THE SILT FENCE.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
- FENCE POSTS SHALL BE REMOVED WHEN DIRECTED AT PROJECT END.
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.



**SEDIMENTATION AND EROSION CONTROL NOTES:**

- SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- FOR THOSE DEVELOPMENTS THAT REQUIRE A DESIGNATED EROSION CONTROL INSPECTOR (DECI), INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
  - UPON COMPLETION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
  - AFTER EVERY SEVEN (7) CALENDAR DAYS OR STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- A STABILIZED MAT OF CRUSHED STONE MEETING IDOT GRADATION CA-01 AND/OR RR-01 UNDERLAIN WITH FILTER FABRIC AND IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, OR OTHER APPROPRIATE MEASURE(S) AS APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT OF WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN.
- DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE OR REDISTURBANCE.
- ALL STOCKPILES SHALL HAVE APPROPRIATE MEASURES TO PREVENT EROSION. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS OR WETLANDS AND DESIGNATED BUFFERS.
- SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH APPROPRIATE MEASURES AS APPROVED BY THE ENFORCEMENT OFFICER.
- APPROPRIATE EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN THE NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DISCHARGES SHALL BE ROUTED THROUGH AN APPROVED ANIONIC POLYMER DEWATERING SYSTEM OR A SIMILAR MEASURE AS APPROVED BY THE ENFORCEMENT OFFICER. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE ENFORCEMENT OFFICER, OR APPROVED REPRESENTATIVE, MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- IF INSTALLED SOIL EROSION AND SEDIMENT CONTROL MEASURES DO NOT MINIMIZE SEDIMENT LEAVING THE DEVELOPMENT SITE, ADDITIONAL MEASURES SUCH AS ANIONIC POLYMERS OR FILTRATION SYSTEMS MAY BE REQUIRED BY THE ENFORCEMENT OFFICER.
- ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, ENFORCEMENT OFFICER, OR OTHER GOVERNING AGENCY.



**NOTES:**

- FILTER FABRIC SHALL BE EMBEDDED 8" INTO THE SOIL.
- INSPECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS AT THE DIRECTION OF THE AIRPORT REPRESENTATIVE OR OWNER SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. CONTRACTOR SHALL PLACE SEED AND MULCH PER LANDSCAPING PLAN. COST OF REMOVAL SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR SILT FENCE.
- AREAS DISTURBED OUTSIDE OF CONSTRUCTION LIMITS DURING PLACEMENT OF INLET PROTECTION TO BE RE-GRADED, SEEDED AND MULCHED, COST INCIDENTAL TO SILT FENCE.
- FENCE AND POSTS SHALL BE REMOVED WHEN DIRECTED AT PROJECT END.
- PAID UNDER AR156510 SILT FENCE.

**STORM WATER POLLUTION PREVENTION NOTES**

**GENERAL**  
THE CONTRACTOR SHALL IMPLEMENT ALL PROVISIONS OF THE CONTRACT DOCUMENTS TO ASSURE THAT STORM WATER POLLUTION PREVENTION ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY MANNER. SEDIMENTATION MUST NOT BE TRANSPORTED OFF THE CONSTRUCTION SITE. PERMANENT DRAINAGE FEATURES AND VEGETATIVE MEASURES SHALL BE PROVIDED AS SOON AS POSSIBLE.

**THE MAINTENANCE OF ALL STORM WATER POLLUTION PREVENTION MEASURES IS INCIDENTAL TO THE ASSOCIATED ITEM.**

**POLLUTION PREVENTION MEASURES**  
THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT AND MAINTAIN STORM WATER POLLUTION PREVENTION PRACTICES AND MEASURES PRIOR TO THE STRIPPING OF EXISTING VEGETATION WHEREVER POSSIBLE AND AS SOON AS CONSTRUCTION PERMITS IN OTHER AREAS. POLLUTION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THESE CONSTRUCTION PLANS, AND WITH STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE. THE CONTRACTOR SHALL ADJUST HIS OPERATIONS AND IMPLEMENT POLLUTION CONTROL MEASURES SO THAT NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE CONSTRUCTION SITE OTHER THAN THROUGH SEDIMENT TRAPS OR OTHER SUITABLE CONTROL MEASURES.

POLLUTION CONTROL ITEMS SHALL BE PROVIDED AS NOTED ON THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE STORM WATER POLLUTION PREVENTION DETAILS AND AS DIRECTED BY THE ENGINEER. THE LIMITS OF SUCH MEASURES SHALL BE STAKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH LIMITS MAY BE ADJUSTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL SITE CONDITIONS EXPERIENCED DURING CONSTRUCTION. ADDITIONAL COMPENSATION FOR MEASURES EXCEEDING THE PLAN QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.

THE CONTRACTOR IS TO MAINTAIN AND ADJUST, REPAIR OR REPLACE ALL POLLUTION PREVENTION MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. MAINTENANCE OF POLLUTION CONTROL MEASURES IS TO BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES ARE EXISTING ON SITE LOCATED AT DRAINAGE FACILITIES AND ALONG THE PROPERTY LINE.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
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Contract No. CO067

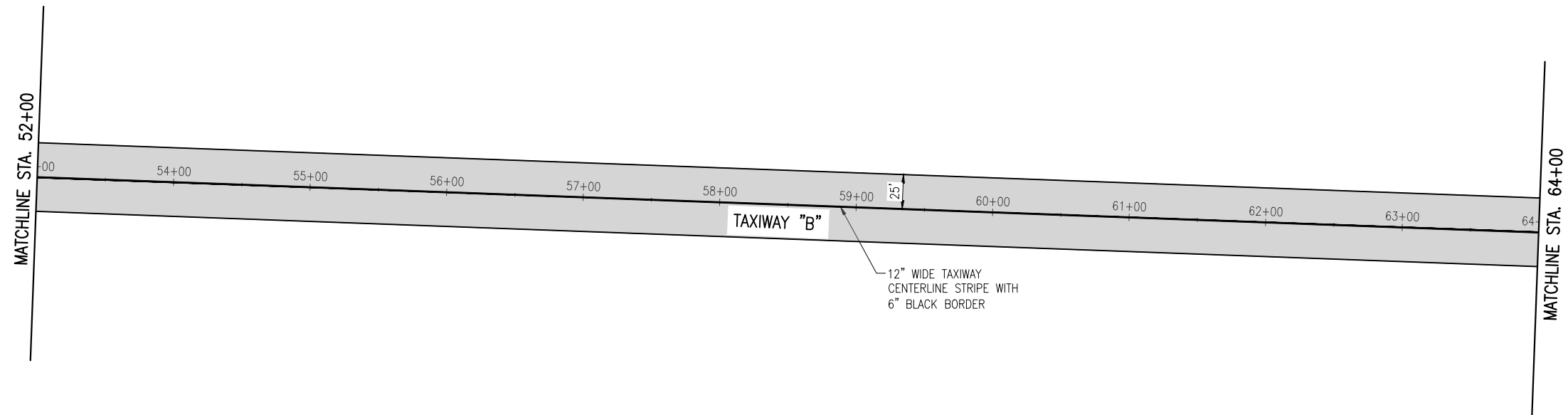
NO.	DATE	DESCRIPTION		
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DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

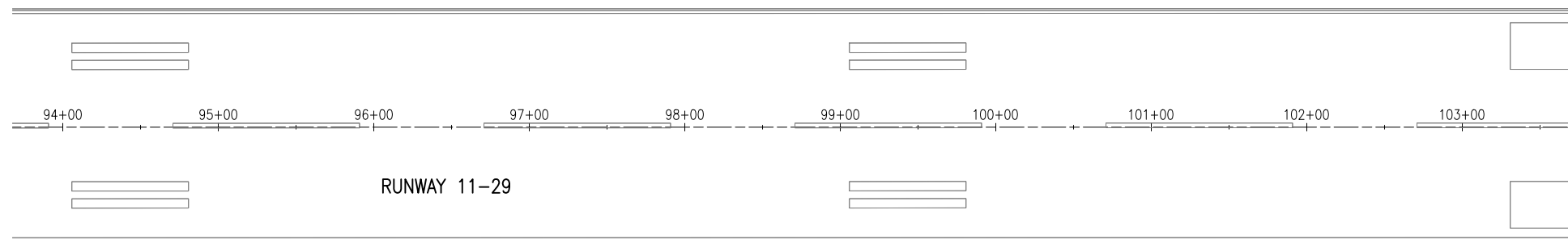
SHEET TITLE

**STORMWATER  
POLLUTION  
PREVENTION PLAN  
DETAILS**





MARKING AND GROOVING SCHEDULE	
<b>AR620900 PAVEMENT MARKING REMOVAL</b>	<b>AREA (S.F.)</b>
TWY D - N. OF TWY B	834
TWY D - S. OF TWY B	2004
<b>TOTAL MARKING REMOVAL</b>	<b>2838</b>
<b>AR620520 PAVEMENT MARKING-WATERBORNE - WHITE</b>	<b>AREA (S.F.)</b>
RUNWAY 11-29 EDGE LINES	1473
RUNWAY 6-24 CENTERLINE STRIPES	1080
<b>TOTAL WHITE</b>	<b>2553</b>
<b>AR620520 PAVEMENT MARKING-WATERBORNE - YELLOW</b>	<b>AREA (S.F.)</b>
TAXIWAY CENTERLINE AND LEAD IN STRIPE	7290
TAXIWAY HOLD LINES	884
TAXIWAY ENHANCED CENTERLINES	498
<b>TOTAL YELLOW</b>	<b>8672</b>
<b>AR620525 PAVEMENT MARKING-BLACK BORDER - 6"</b>	<b>AREA (S.F.)</b>
RUNWAY 11-29 EDGE LINES	491
RUNWAY 6-24 CENTERLINE STRIPE	372
TAXIWAY CENTERLINE AND LEAD IN STRIPE	7294
TAXIWAY HOLD LINES	1706
TAXIWAY ENHANCED CENTERLINES	414
<b>TOTAL BLACK</b>	<b>10277</b>
<b>AR620555 PERFORMED THERMOPLASTIC</b>	<b>AREA (S.F.)</b>
SURFACE PAINTED HOLDING POSITIONS (INCL. RED)	1261
SURFACE PAINTED HOLDING POSITIONS (BLACK BORDER)	164
<b>TOTAL THERMOPLASTIC</b>	<b>1425</b>
<b>AR401640 BITUMINOUS PAVEMENT GROOVING</b>	<b>AREA (S.Y.)</b>
RUNWAY 6-24	3345
<b>TOTAL GROOVING</b>	<b>3345</b>

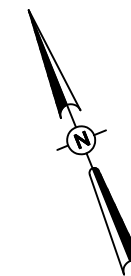


**PAVEMENT MARKING NOTES**

1. ALL PAVEMENT MARKING SHALL BE WATERBORNE PAINT IN ACCORDANCE WITH ITEM 620 UNLESS OTHERWISE SPECIFIED.
2. ALL MARKING BESIDES BLACK BORDER SHALL BE APPLIED IN TWO COATS, WITH REFLECTIVE BEADS APPLIED ON THE SECOND COAT.
3. CONTRACTOR SHALL REMARK ANY MARKINGS OUTSIDE OF THE PROPOSED LIMITS THAT ARE TRACKED OVER OR DAMAGED BY CONSTRUCTION ACTIVITIES.

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING AREA
- PROPOSED MARKING



0' 25' 50' 100'  
HALF SIZE SCALE: 1"= 100'  
FULL SIZE SCALE: 1"= 50'

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-151-MRK.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**MARKING PLAN  
TAXIWAY B STA.  
52+00 TO 64+00**

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

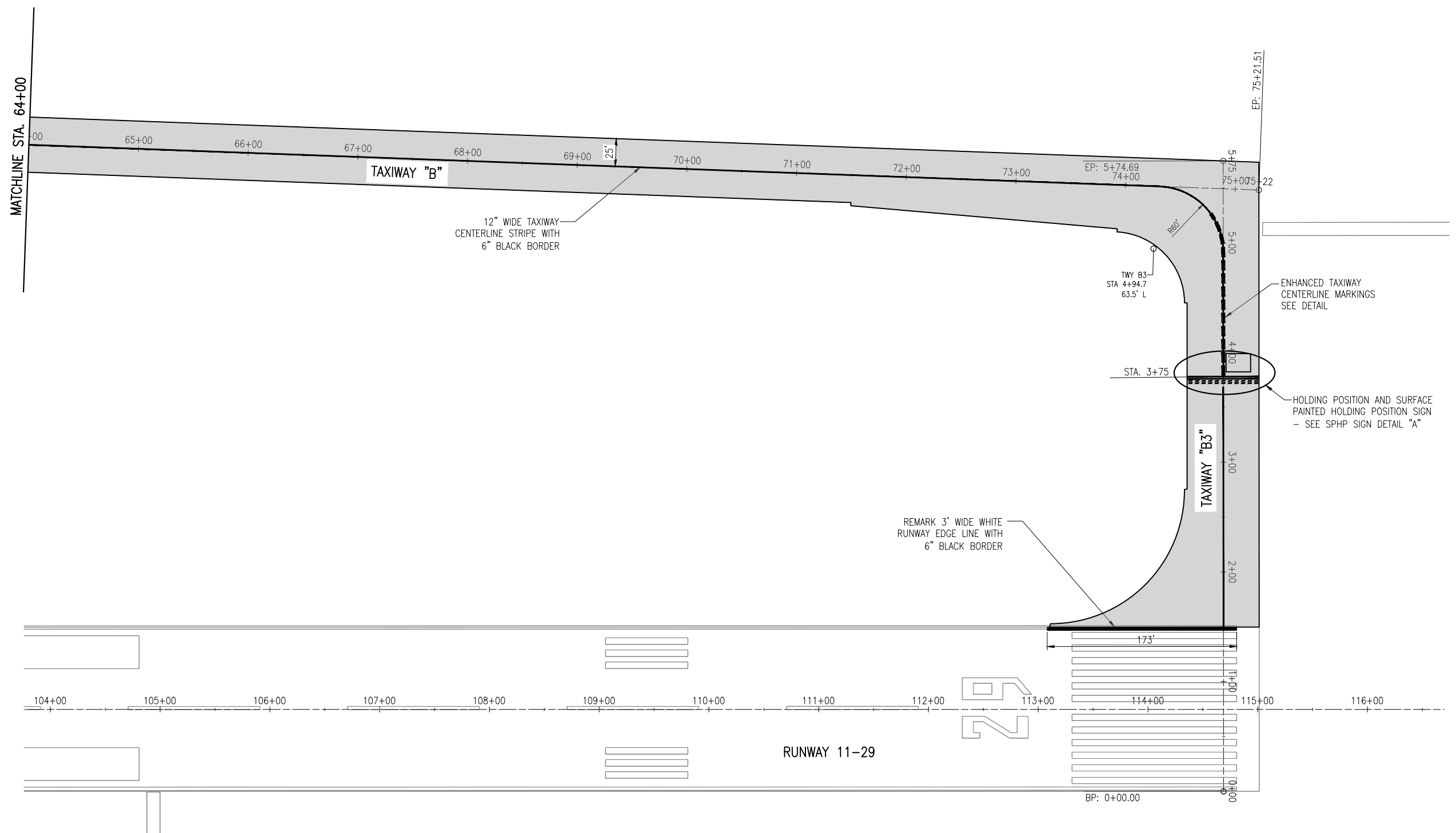
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-151-MRK.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**MARKING PLAN  
TAXIWAY B STA.  
64+00 TO 75+22 AND  
TAXIWAY B3**

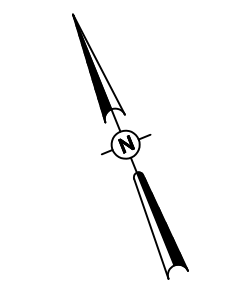


**PAVEMENT MARKING NOTES**

1. ALL PAVEMENT MARKING SHALL BE WATERBORNE PAINT IN ACCORDANCE WITH ITEM 620 UNLESS OTHERWISE SPECIFIED.
2. ALL MARKING BESIDES BLACK BORDER SHALL BE APPLIED IN TWO COATS, WITH REFLECTIVE BEADS APPLIED ON THE SECOND COAT.
3. CONTRACTOR SHALL REMARK ANY MARKINGS OUTSIDE OF THE PROPOSED LIMITS THAT ARE TRACKED OVER OR DAMAGED BY CONSTRUCTION ACTIVITIES.

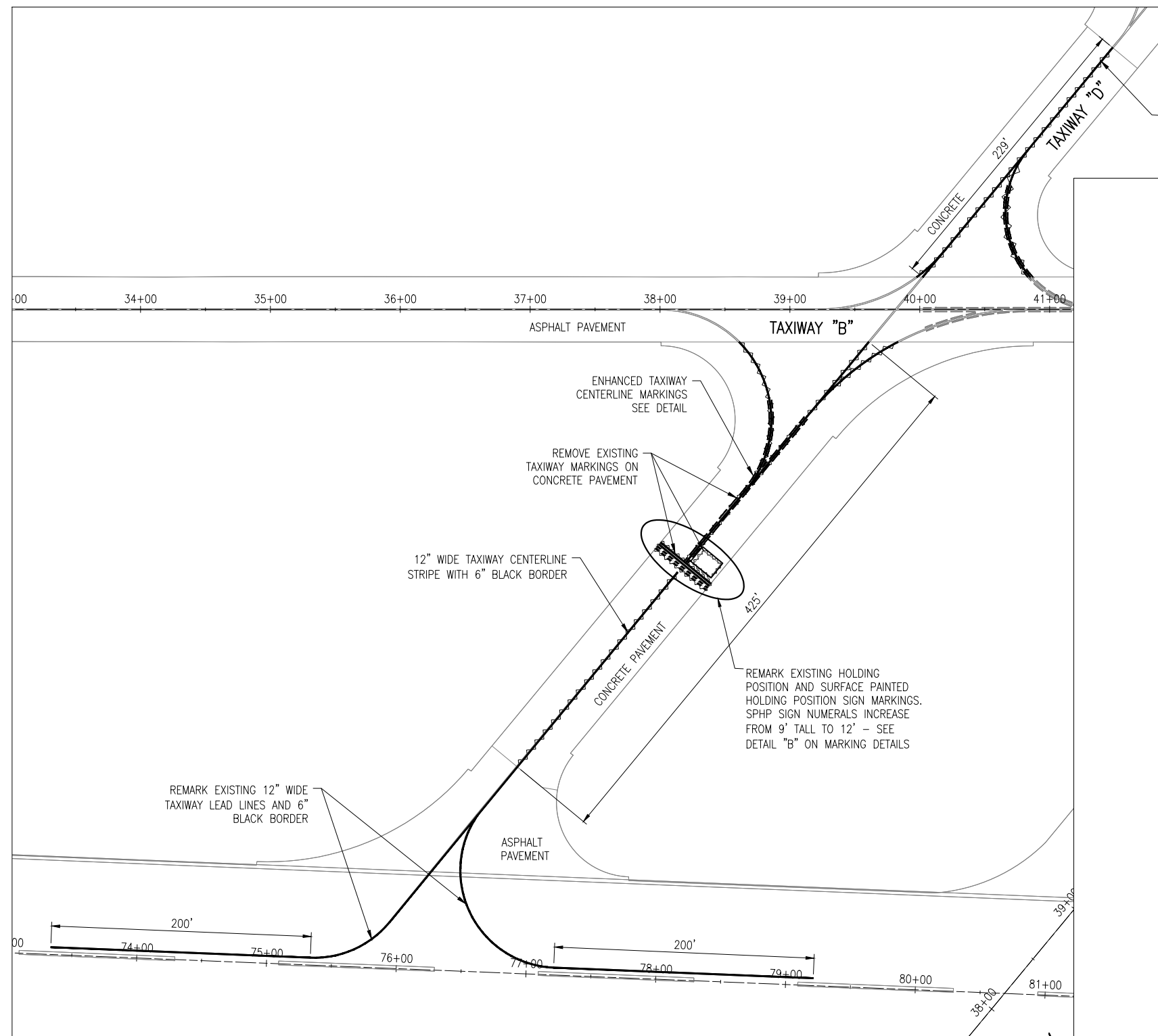
**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING AREA
- PROPOSED MARKING



0' 25' 50' 100'  
HALF SIZE SCALE: 1" = 100'  
FULL SIZE SCALE: 1" = 50'





**PAVEMENT MARKING NOTES**

1. ALL PAVEMENT MARKING SHALL BE WATERBORNE PAINT IN ACCORDANCE WITH ITEM 620 UNLESS OTHERWISE SPECIFIED.
2. ALL MARKING BESIDES BLACK BORDER SHALL BE APPLIED IN TWO COATS, WITH REFLECTIVE BEADS APPLIED ON THE SECOND COAT.
3. CONTRACTOR SHALL REMARK ANY MARKINGS OUTSIDE OF THE PROPOSED LIMITS THAT ARE TRACKED OVER OR DAMAGED BY CONSTRUCTION ACTIVITIES AT THEIR OWN EXPENSE.

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVING AREA
- PROPOSED WATERBORNE MARKING
- PROPOSED PAVEMENT MARKING REMOVAL

0' 25' 50' 100'  
HALF SIZE SCALE: 1" = 100'  
FULL SIZE SCALE: 1" = 50'

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

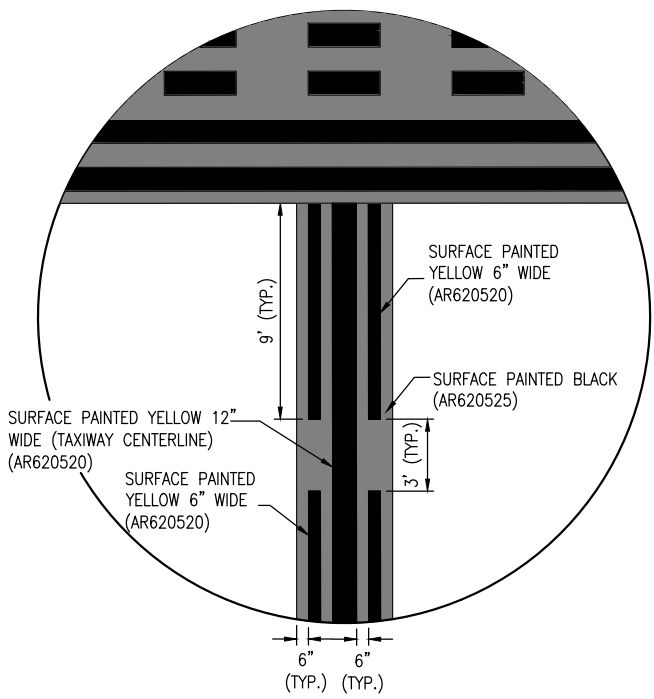
NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-151-MRK.DWG  
DESIGN BY: JAP 05/2018  
DRAWN BY: JAP 05/2018  
REVIEWED BY: KBS 04/16/2020

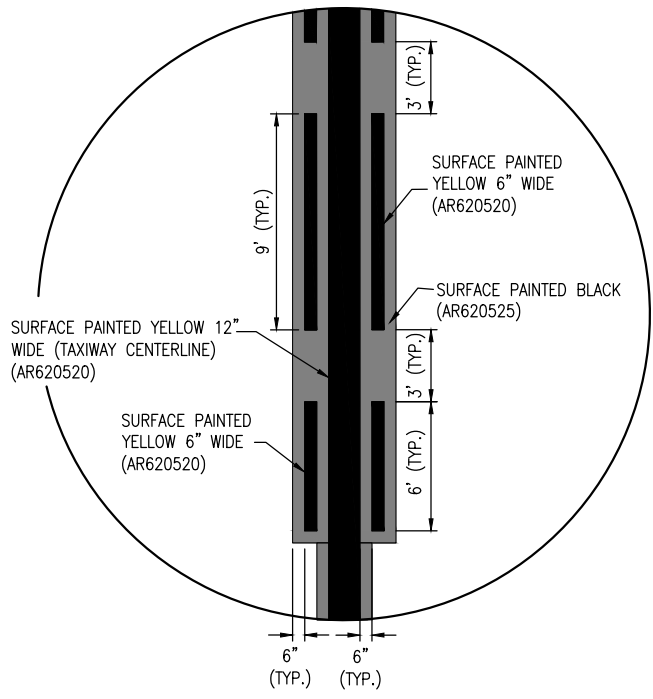
SHEET TITLE

**MARKING PLAN  
TAXIWAY D**

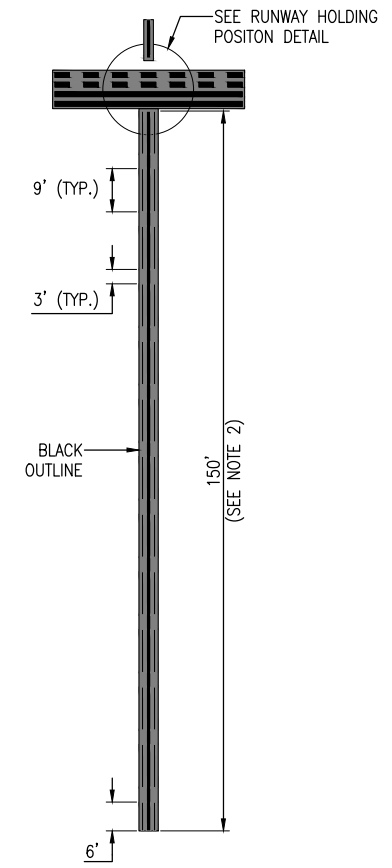




**ENHANCED TAXIWAY CENTERLINE MARKING DETAIL (BEGIN)**  
NOT TO SCALE



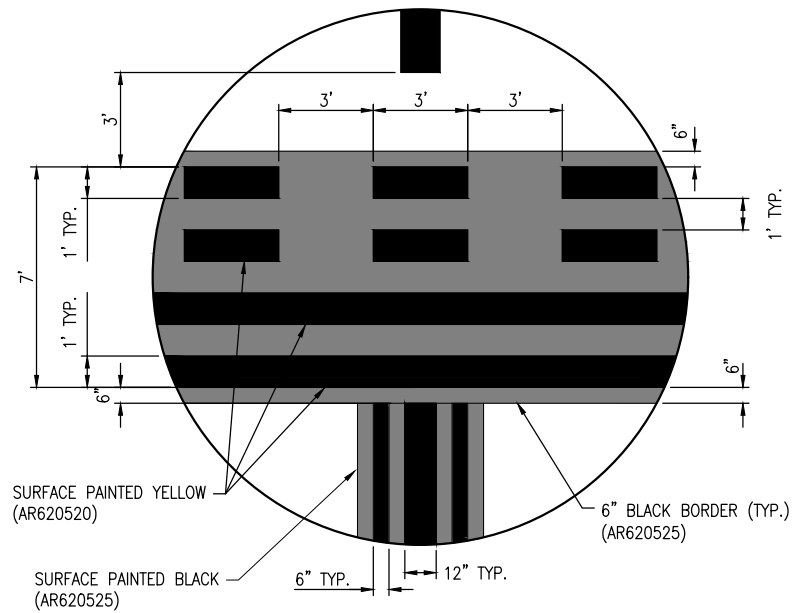
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NOT TO SCALE



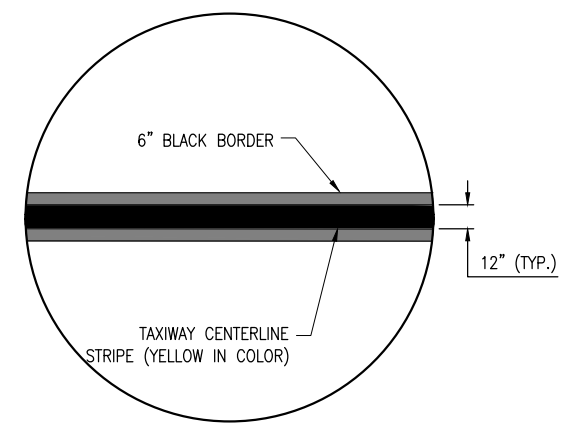
**ENHANCED TAXIWAY CENTERLINE MARKING DETAIL**

**ENHANCED TAXIWAY CENTERLINE MARKING NOTES:**

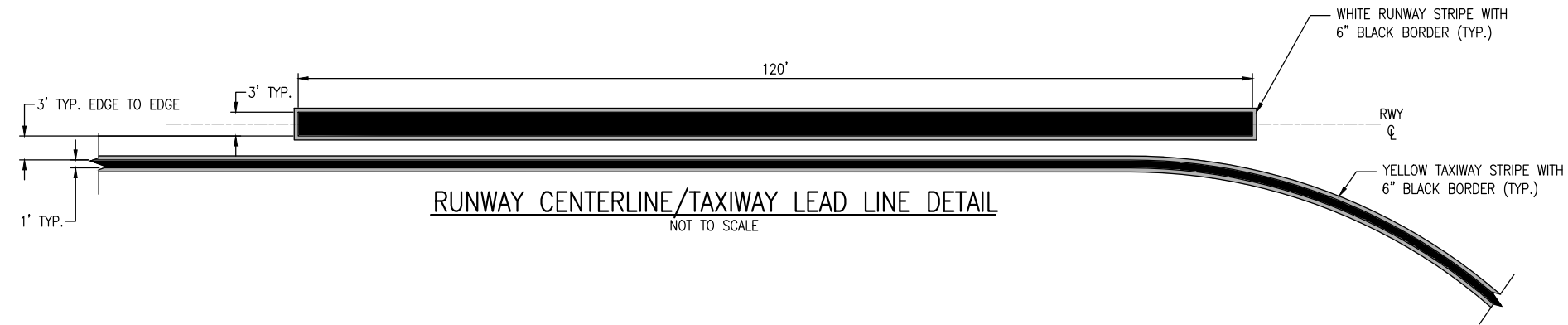
1. TAXIWAY CENTERLINE MARKINGS SHALL BE YELLOW IN COLOR AND OUTLINED IN BLACK.
2. TAXIWAY CENTERLINE MARKINGS SHALL BE ENHANCED FOR 150-FT PRIOR TO A RUNWAY HOLDING POSITION MARKING, UNLESS NOTED OTHERWISE. FOR A CURVED TAXIWAY CENTERLINE, THIS DISTANCE SHALL BE MEASURED ALONG THE CENTERLINE BEING ENHANCED TO A DISTANCE OF 150-FT.
3. WHERE TWO TAXIWAY CENTERLINES CONVERGE AT OR BEFORE THE RUNWAY HOLDING POSITION MARKING, PARTIAL INNER DASHED LINES LESS THAN 5 FEET AT THE POINT OF CONVERGENCE MAY BE OMITTED.
4. DASHES ON EITHER SIDE OF THE TAXIWAY CENTERLINE MUST BE ALIGNED, STARTING AND STOPPING WITH THE DASHES ON THE OPPOSITE SIDE OF THE CENTERLINE. TO ACCOMPLISH THIS FOR CURVED TAXIWAY CENTERLINES, THE MEASUREMENTS FOR THE DASHES AND GAPS SHALL BE MADE AT THE CENTERLINE AND EXTENDED PERPENDICULAR FROM THE CENTERLINE TO OBTAIN THE LOCATIONS OF THE DASHES.
5. ENHANCED TAXIWAY CENTERLINE MARKINGS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF FAA AC 150/5340-1, STANDARDS FOR AIRPORT MARKING.
6. IF THE CONTRACTOR ELECTS TO "BLOCK PAINT" THE BLACK PAINT AND THEN PAINT EITHER YELLOW OR WHITE PAINT OVER THE BLACK PAINT; ONLY THE VISIBLE BLACK PAINT WILL BE ELIGIBLE FOR PAYMENT.



**HOLDING POSITION DETAIL**  
NOT TO SCALE



**TAXIWAY CENTERLINE DETAIL**  
NOT TO SCALE



**RUNWAY CENTERLINE/TAXIWAY LEAD LINE DETAIL**  
NOT TO SCALE

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

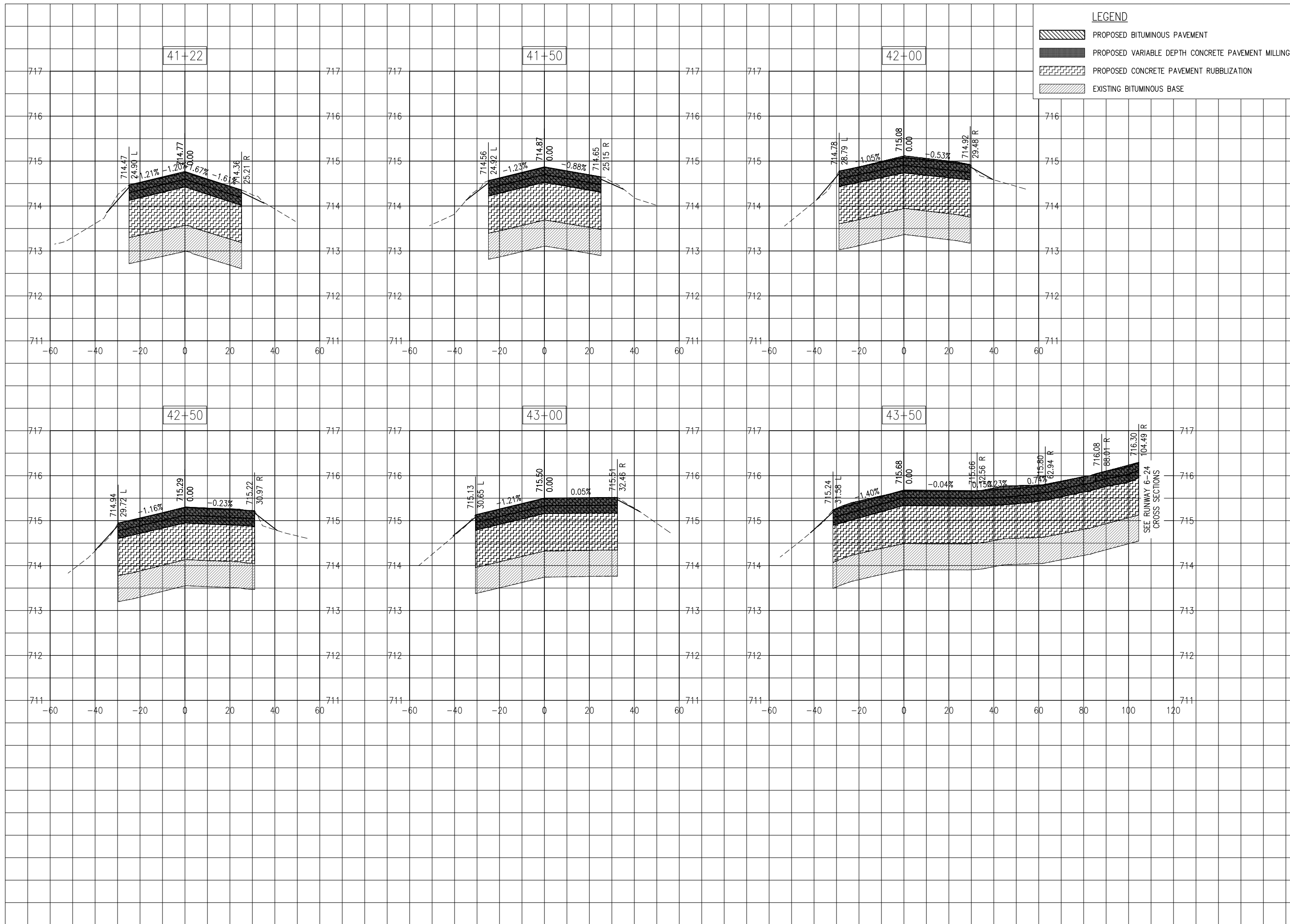
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-152-MRK-DET.DWG  
DESIGN BY: JAP 05/06/2019  
DRAWN BY: JAP 05/06/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**MARKING DETAILS -  
SHEET 2**



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

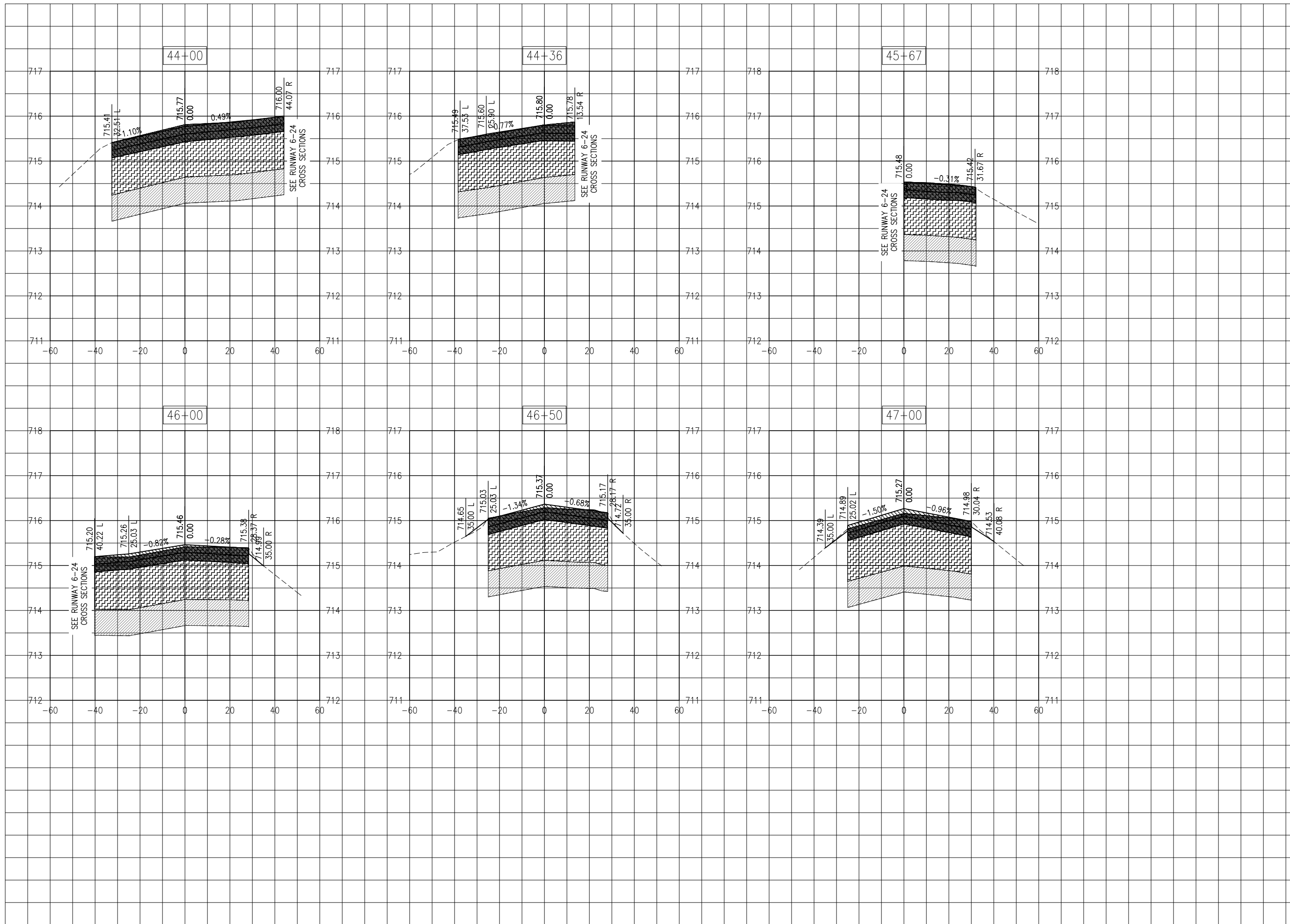
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

**TAXIWAY B CROSS  
SECTIONS - STA.  
41+22 - STA. 43+50**



PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

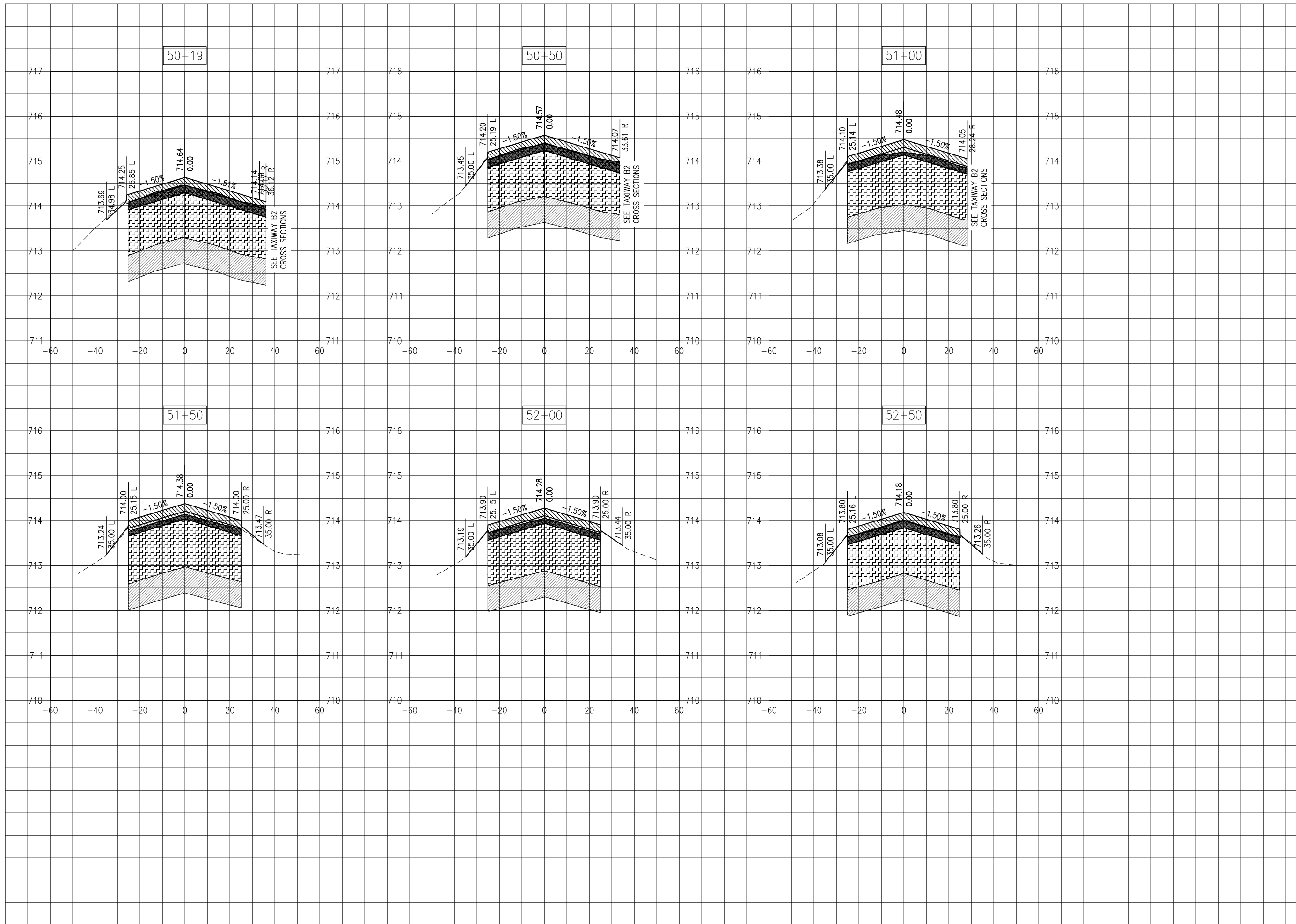
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ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
44+00 - STA. 47+00





PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

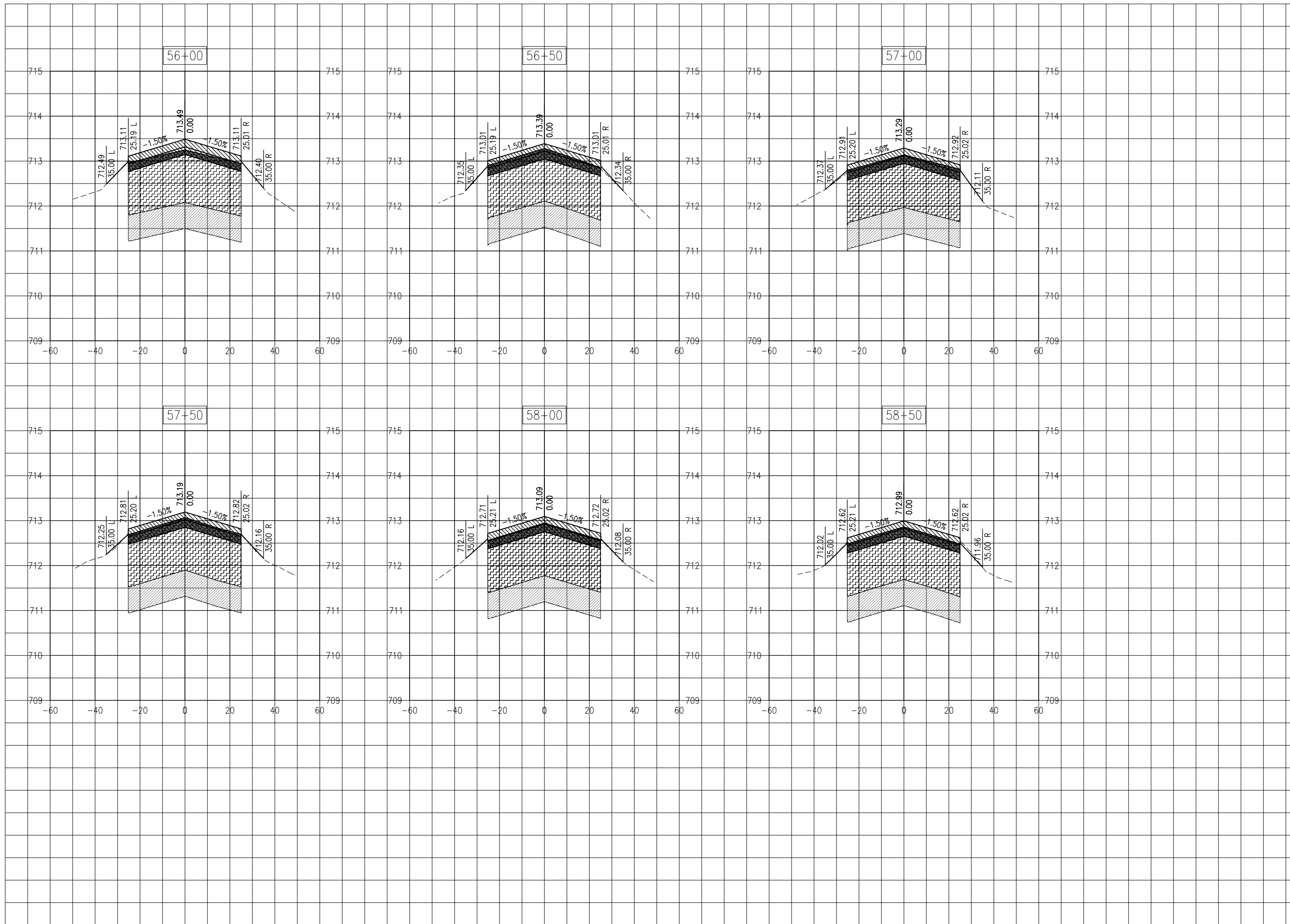
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CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
50+19 - STA. 52+50







PHASE 2:  
RECONSTRUCT  
TAXIWAY B

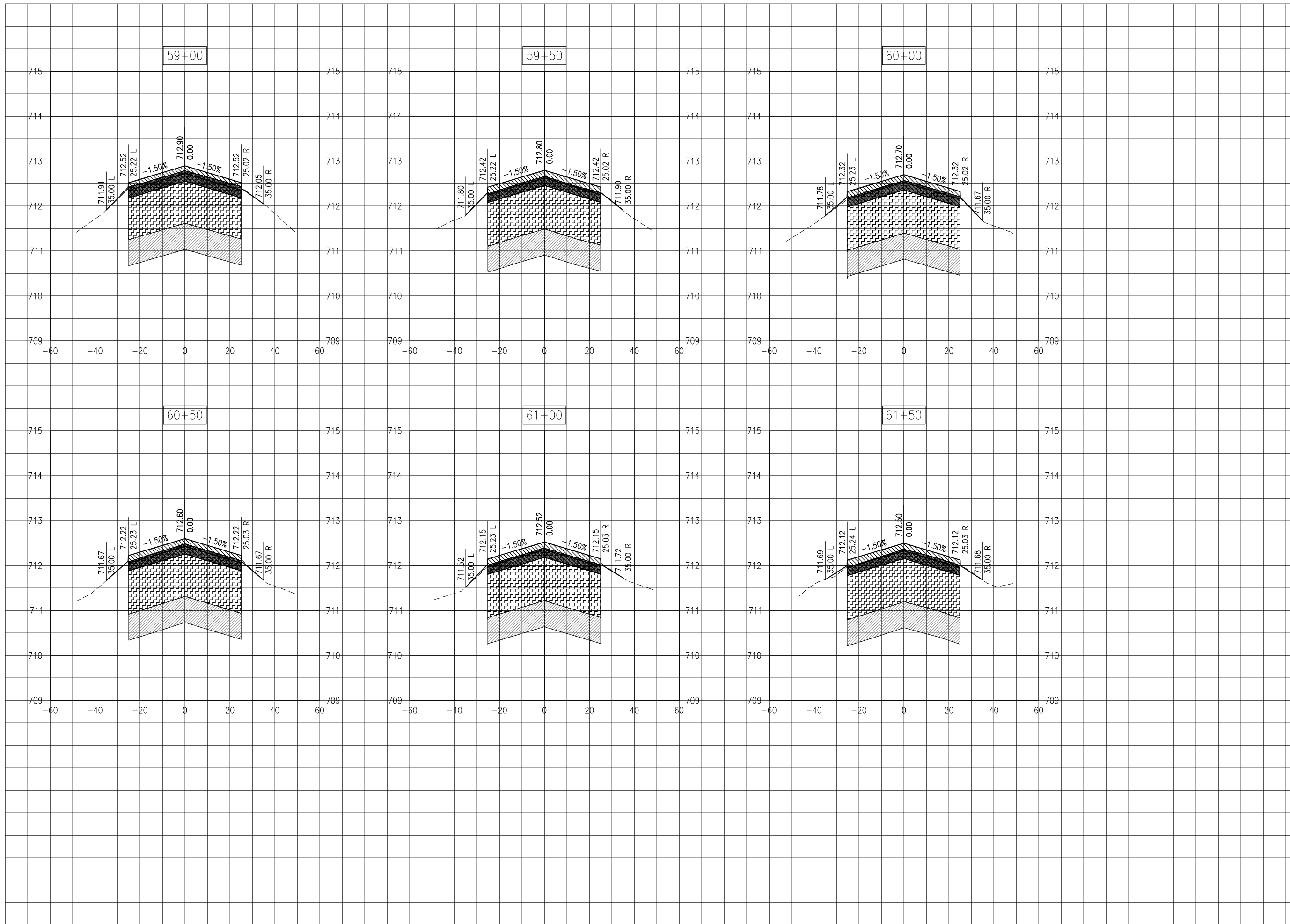
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3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
56+00 - STA. 58+50



PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
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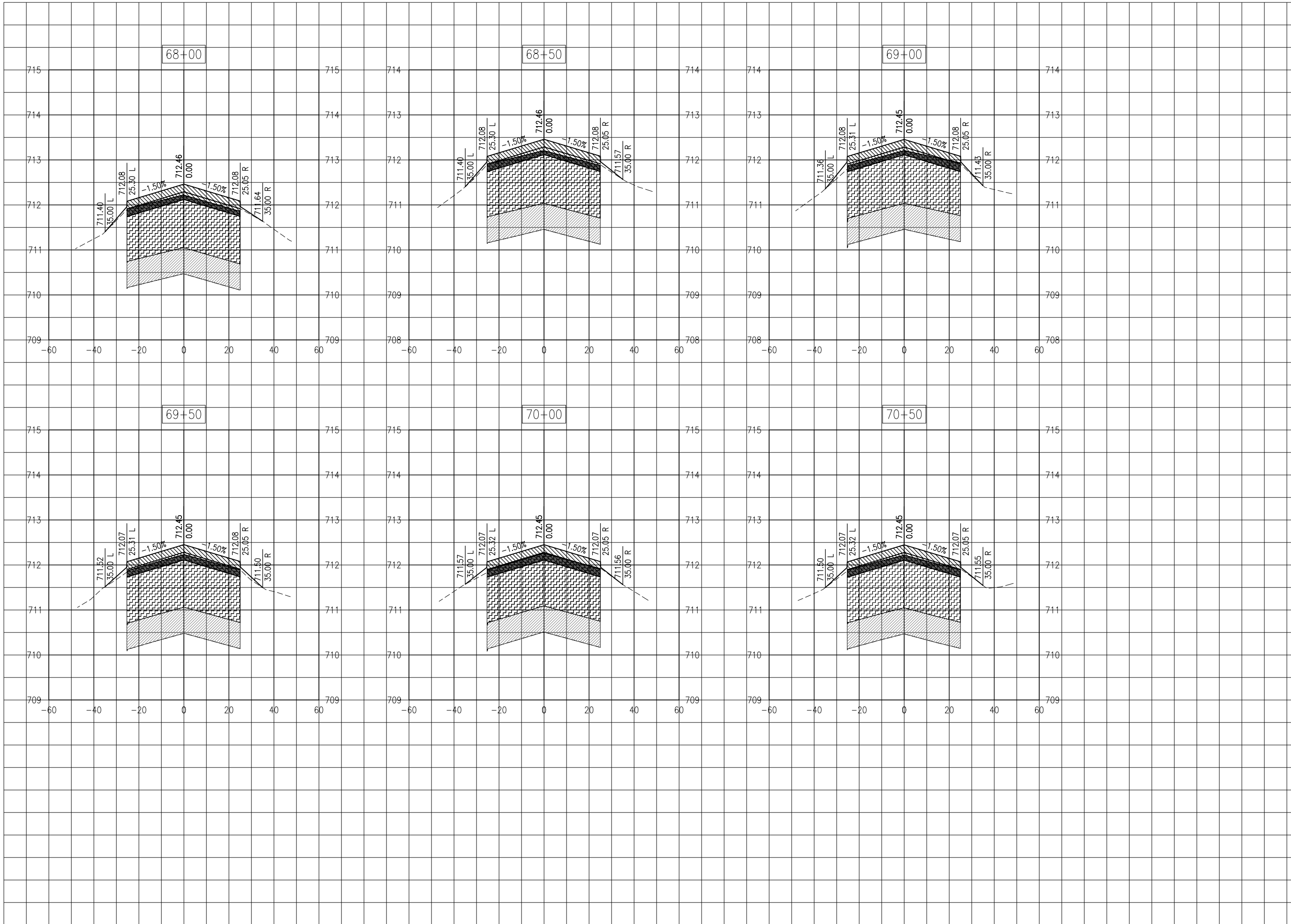
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PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
59+00 - STA. 61+50







PHASE 2:  
RECONSTRUCT  
TAXIWAY B

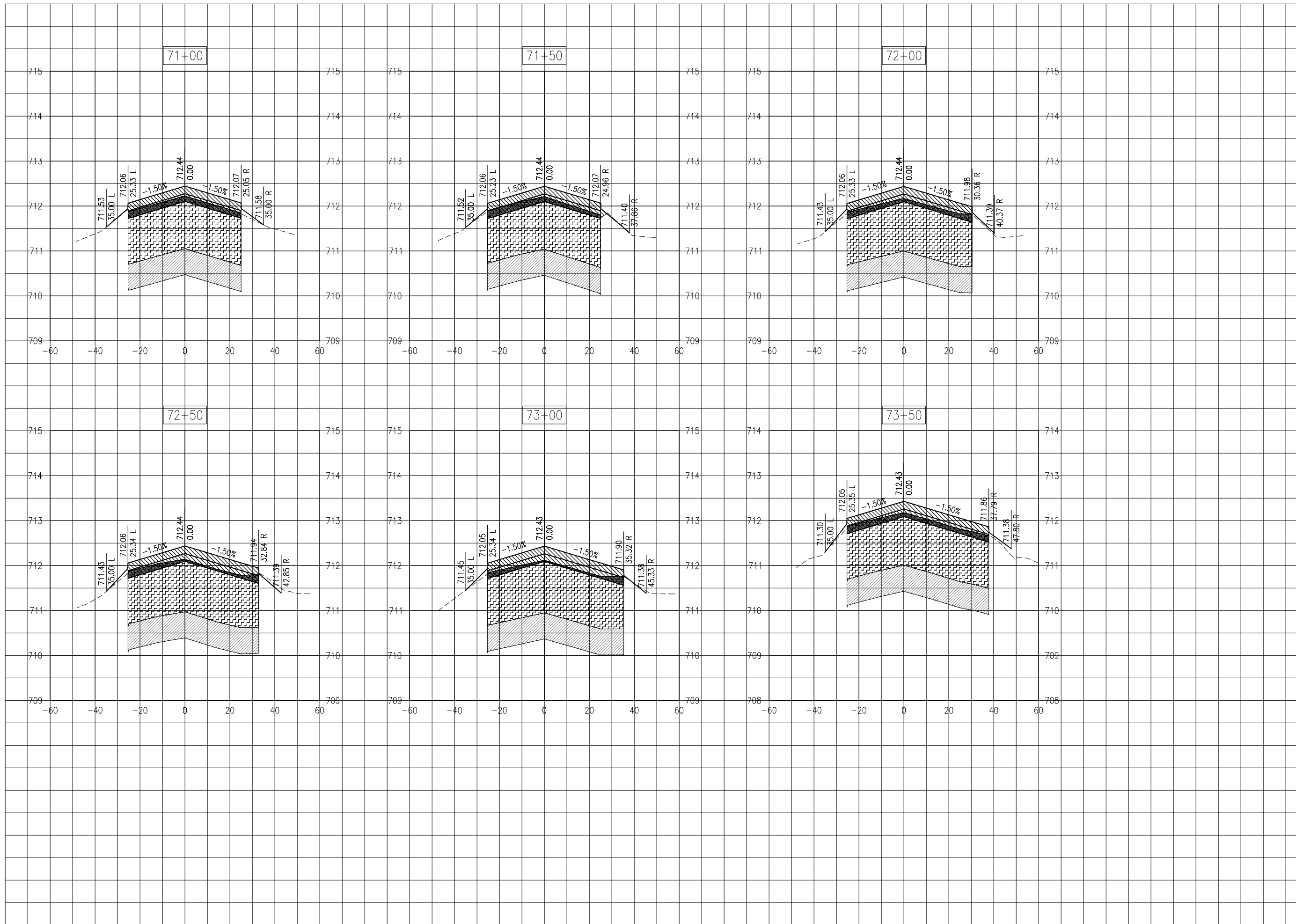
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
68+00 - STA. 70+50



PHASE 2:  
RECONSTRUCT  
TAXIWAY B

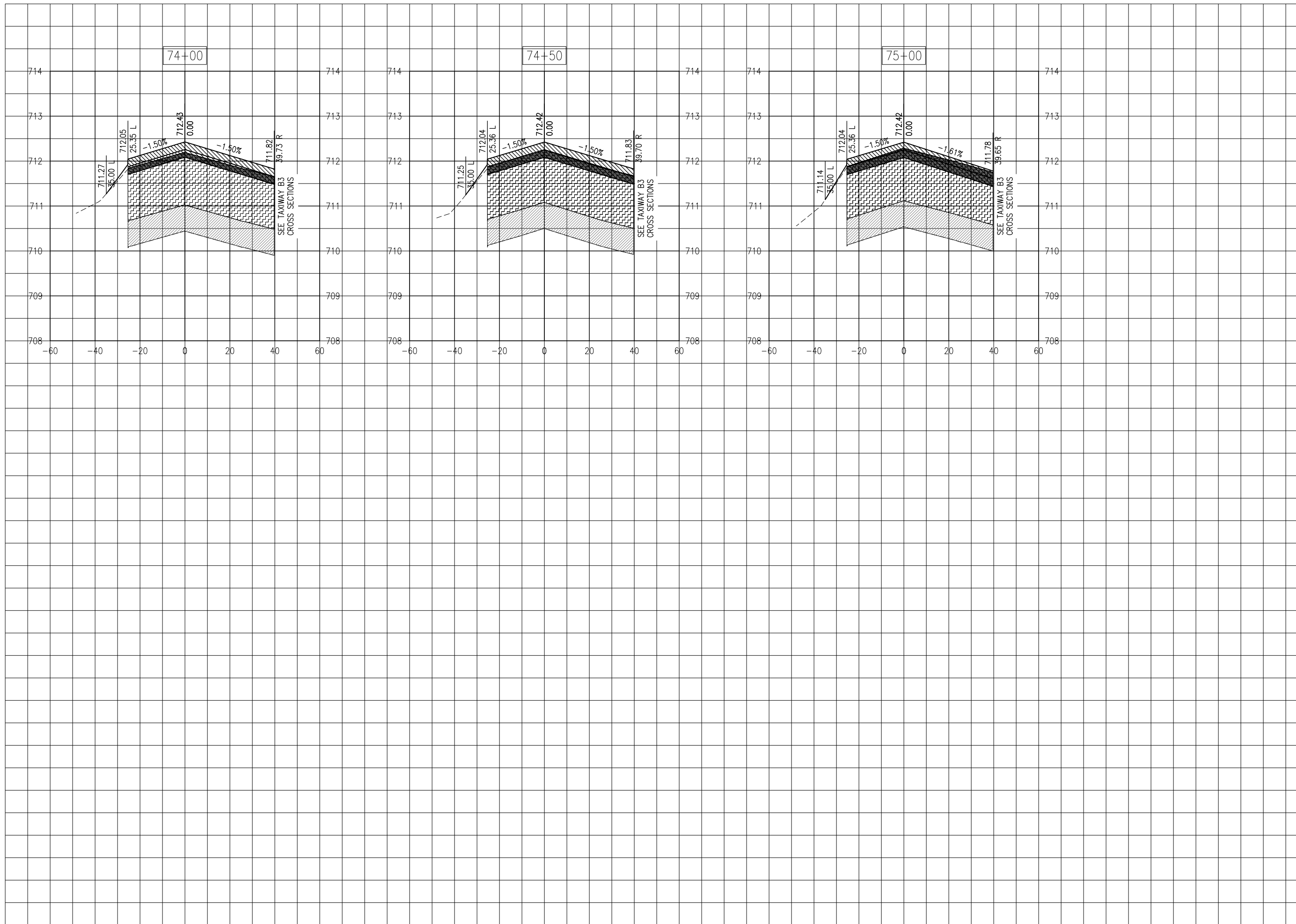
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
71+00 - STA. 73+50



PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
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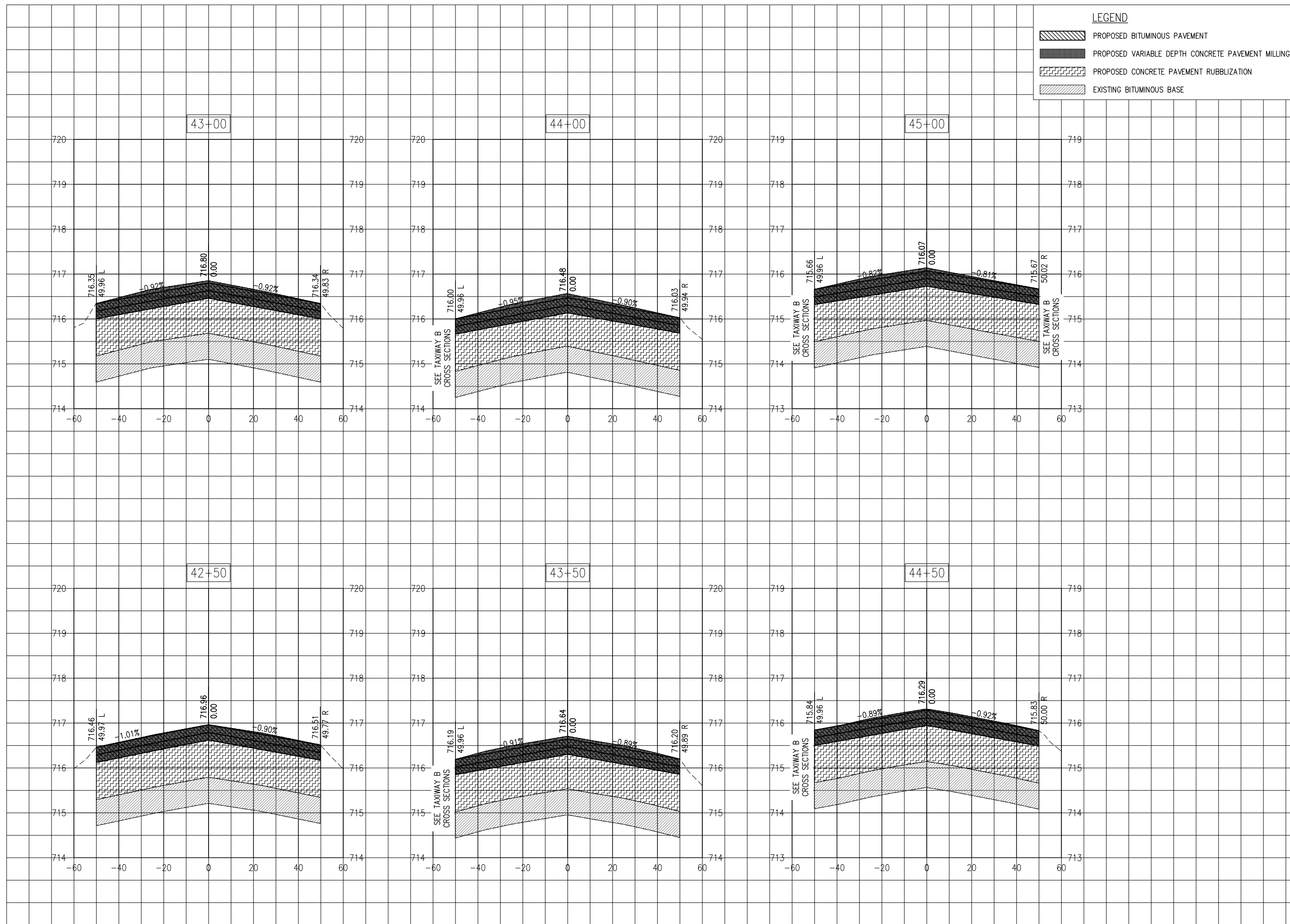
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DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B CROSS  
SECTIONS - STA.  
74+00 - STA. 75+00

**LEGEND**

	PROPOSED BITUMINOUS PAVEMENT
	PROPOSED VARIABLE DEPTH CONCRETE PAVEMENT MILLING
	PROPOSED CONCRETE PAVEMENT RUBBLIZATION
	EXISTING BITUMINOUS BASE



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067


NO.	DATE	DESCRIPTION		
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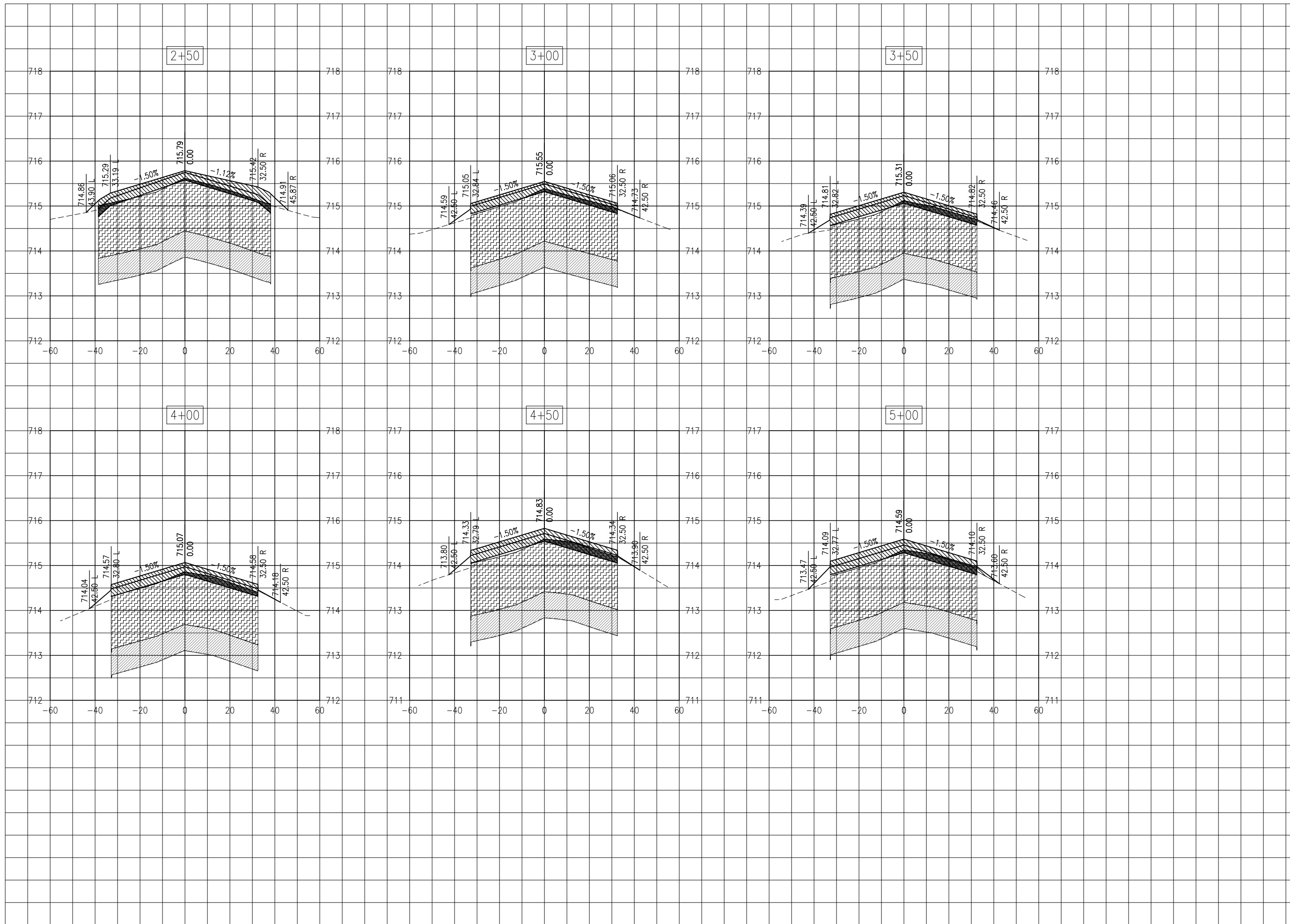
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PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

**SHEET TITLE**  
  
RUNWAY 6-24 CROSS  
SECTIONS STA. 42+50  
- STA. 45+00









PHASE 2:  
RECONSTRUCT  
TAXIWAY B

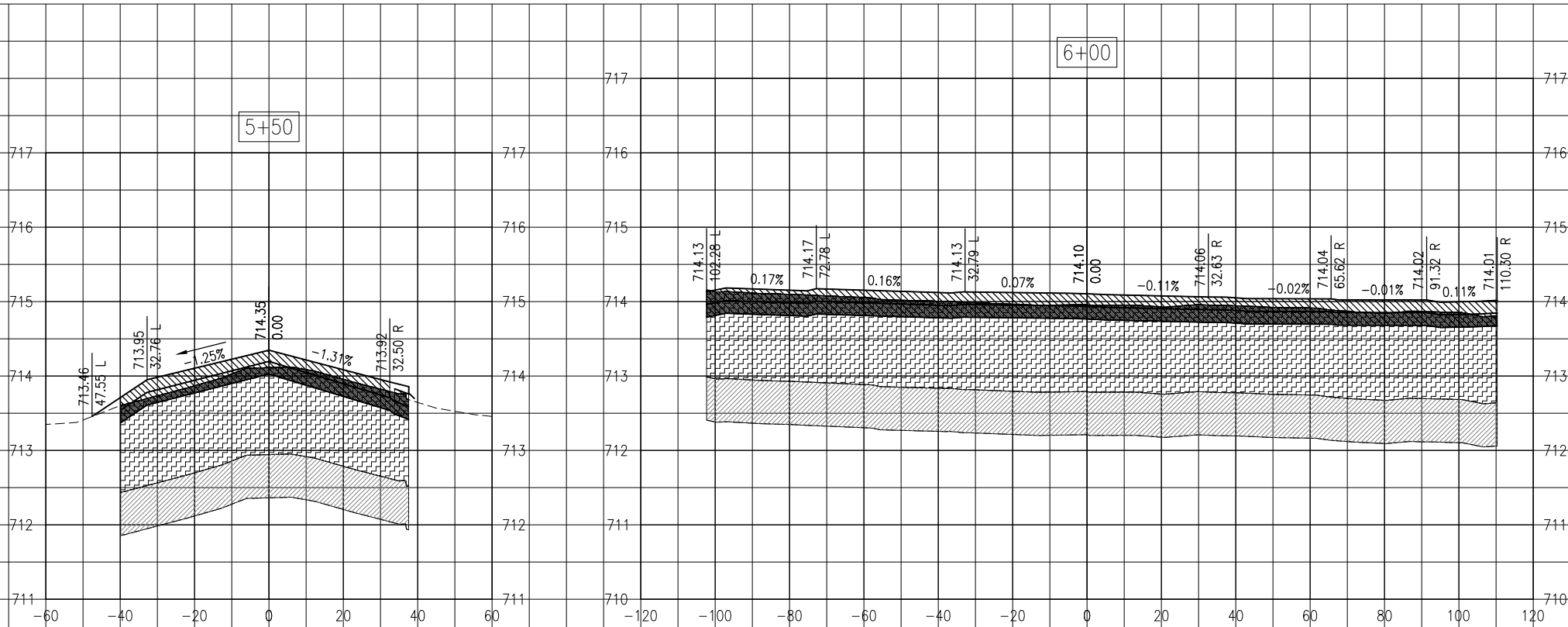
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SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B2 CROSS  
SECTIONS STA. 2+50  
- STA. 5+00



PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

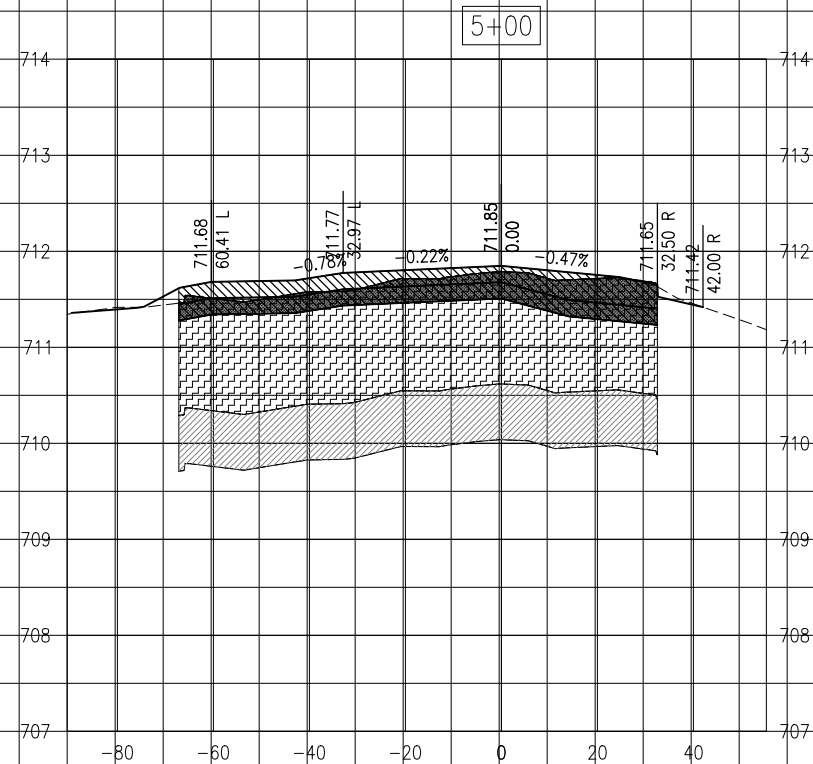
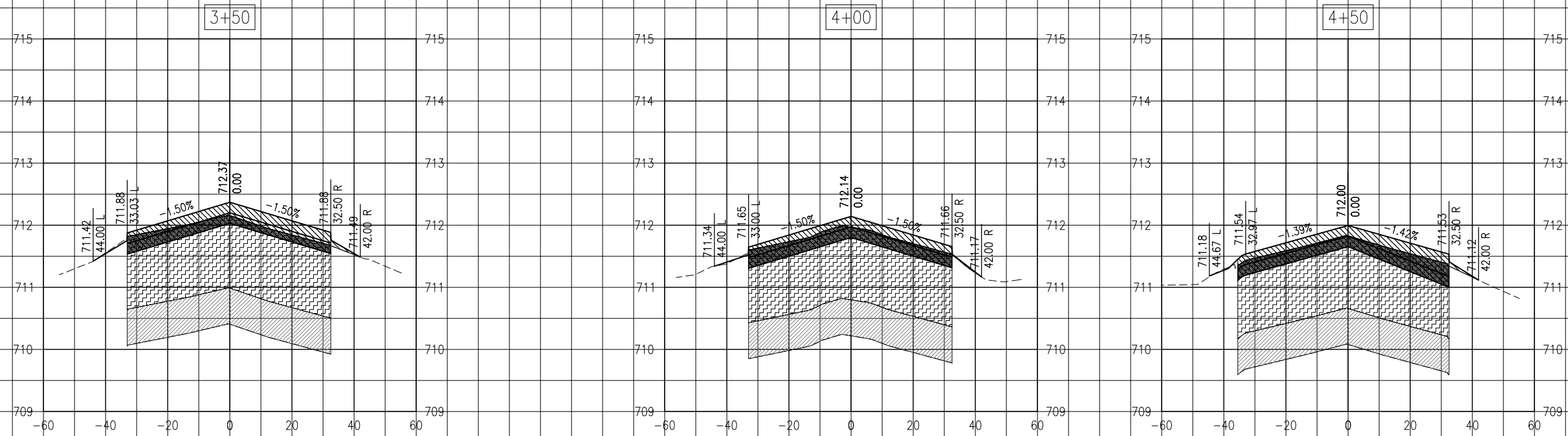
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ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B2 CROSS  
SECTIONS STA. 5+50  
- STA. 6+00





PHASE 2:  
RECONSTRUCT  
TAXIWAY B

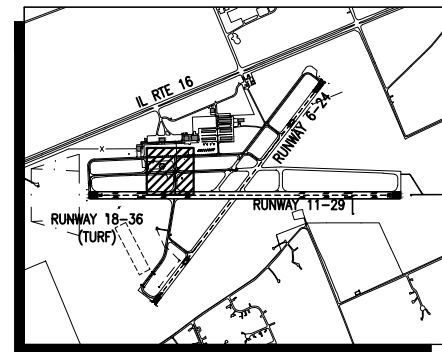
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3-17-SBGP-156/159  
Contract No. CO067

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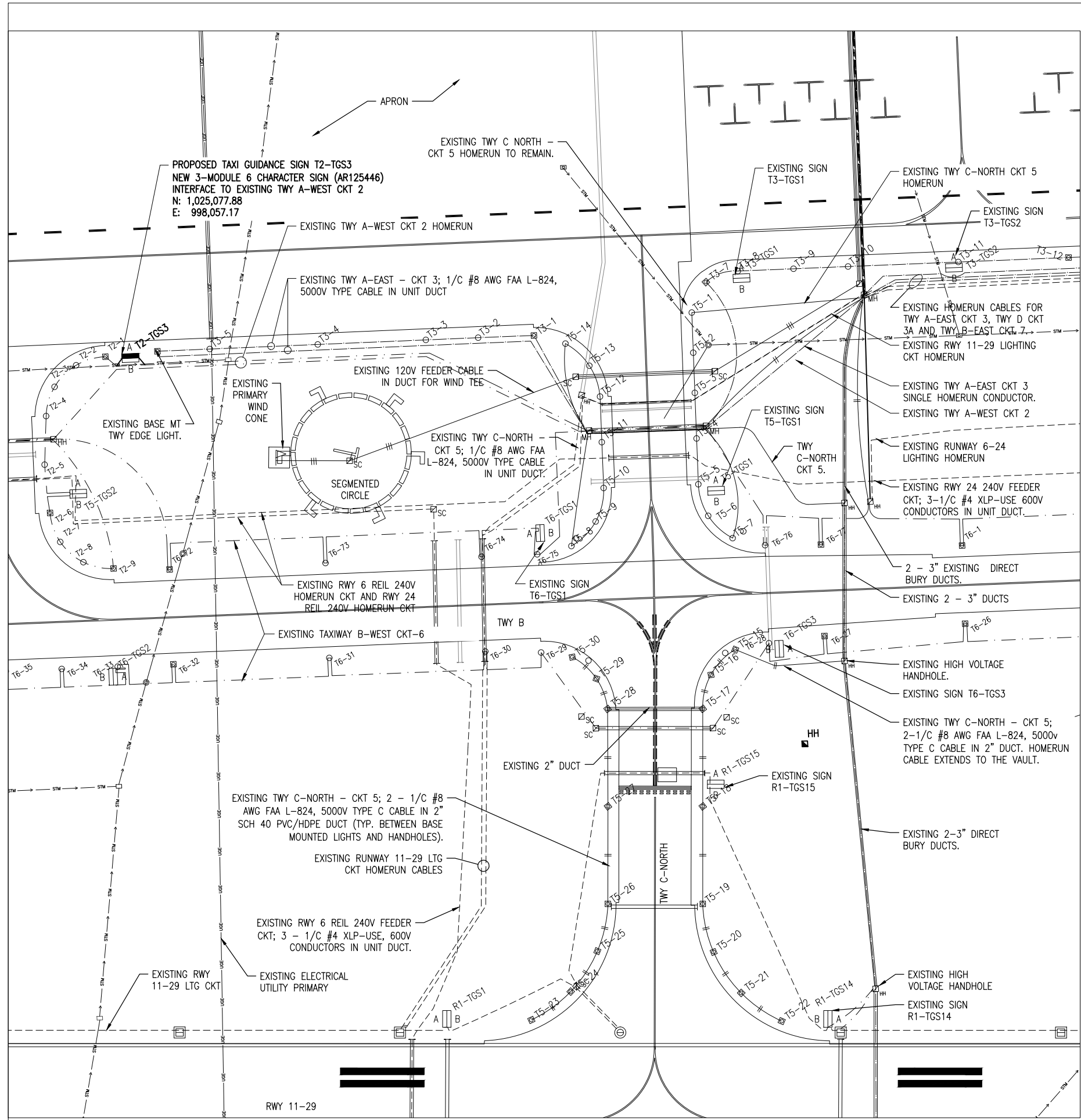
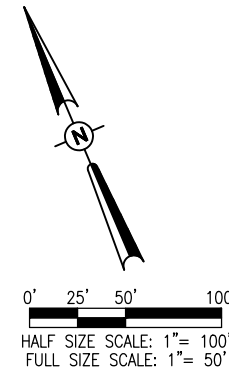
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: C-301-XS.DWG  
DESIGN BY: KWS 05/2019  
DRAWN BY: NLD 05/2019  
REVIEWED BY: KBS 04/16/2020

SHEET TITLE

TAXIWAY B3 CROSS  
SECTIONS STA. 3+50  
- STA. 5+00



KEY MAP



**LEGEND**

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- EXISTING ELECTRICAL CABLE
- EXISTING 1/C #8AWG, FAA L-824, 5000 VOLT TYPE C UNDERGROUND CABLE IN UNIT DUCT
- EXISTING CABLES IN 2" DUCT. (SLASHES INDICATE NUMBER OF CABLES).
- EXISTING WATER
- EXISTING TELEPHONE
- EXISTING UNDERDRAIN
- EXISTING STORM SEWER
- EXISTING GAS LINE
- EXISTING SANITARY
- EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- PROPOSED TAXI GUIDANCE SIGN
- EXISTING TAXI GUIDANCE SIGN
- EXISTING SLICE CAN
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED THRESHOLD LIGHT
- EXISTING BASE MOUNTED THRESHOLD LIGHT
- EXISTING AIRPORT ROTATING BEACON
- EXISTING UTILITY TRANSFORMER
- EXISTING ELECTRICAL MANHOLE
- EXISTING ELECTRICAL HANDHOLE
- EXISTING CLEAN-OUT

NOTE: REFER TO TAXI GUIDANCE SIGN MODIFICATION PLAN SHEET FOR SIGN PANEL REPLACEMENT LOCATIONS.

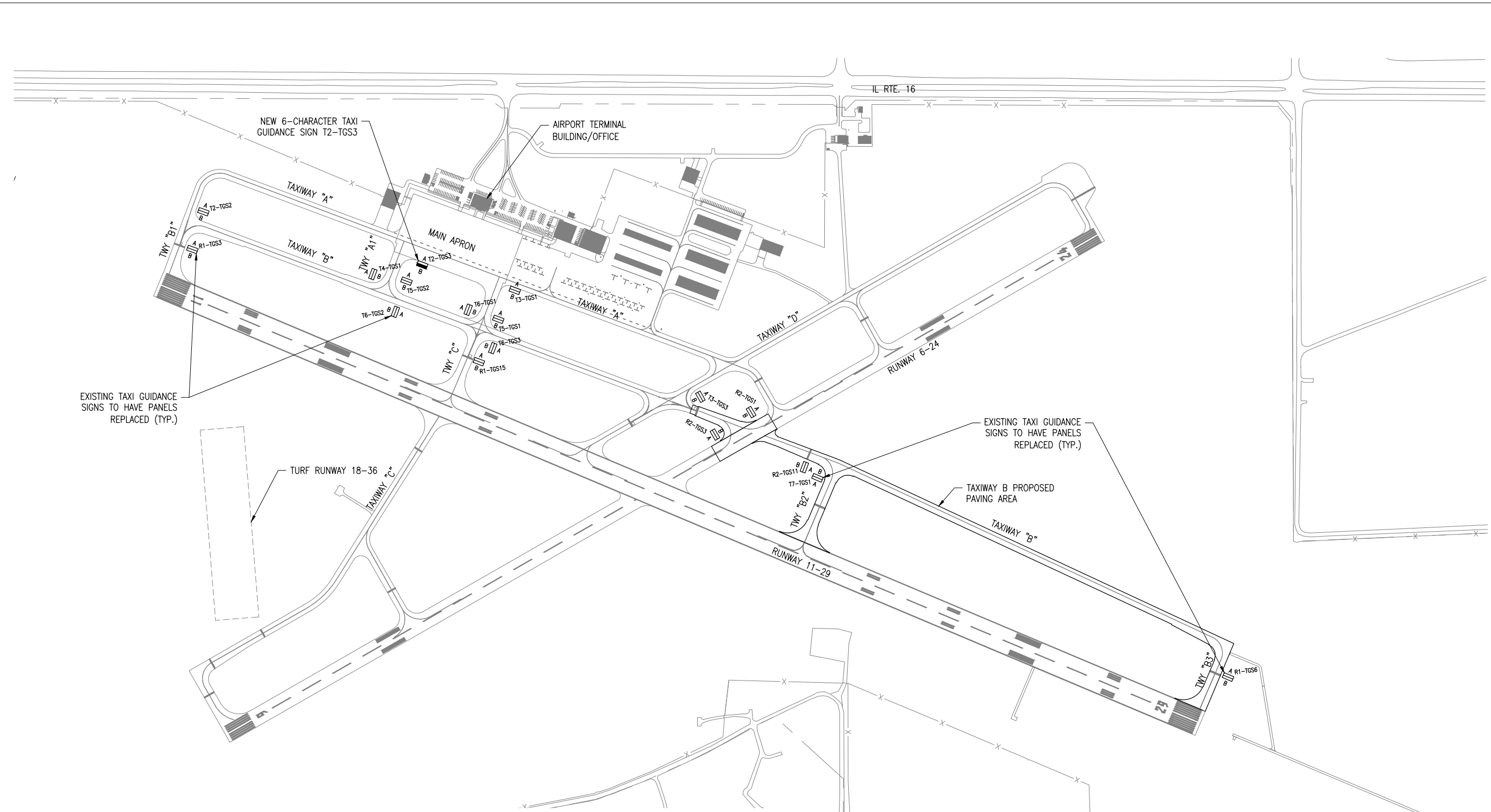
**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067


NO.	DATE	DESCRIPTION		
		DES	DWN	REV





**AIRFIELD LIGHTING  
PLAN**

MAY 05 2020 8:16 PM D:\DAS\01944\1193\085\19A000119A0001\19A0001\19A0001\CAD\AIRPORT\19A0001\19A0001.ELE.DWG



0' 150' 300' 600'  
HALF SIZE SCALE: 1" = 600'  
FULL SIZE SCALE: 1" = 300'

**LEGEND**

	EXISTING PAVEMENT
	EXISTING BUILDING
	REPLACE PANEL(S) TO EXISTING TAXI GUIDANCE SIGN
	NEW TAXI GUIDANCE SIGN

- NOTES**
1. REFER TO TAXI GUIDANCE SIGN SCHEDULE SHEET FOR NEW/REPLACEMENT PANEL INFO.
  2. REFER TO AIRFIELD LIGHTING PLAN SHEET FOR FURTHER DETAIL OF NEW SIGN T2-TGS3 AT TAXIWAY A1.
  3. WORK AT EACH SIGN LOCATION MAY ONLY BE COMPLETED IN CONJUNCTION WITH OTHER WORK THAT REQUIRES CLOSING THAT PORTION OF THE AIRFIELD.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: E-143-TGS-P.DWG  
DESIGN BY: KBS 05/2019  
DRAWN BY: JAP 05/2019  
REVIEWED BY: KBS 03/19/2020

SHEET TITLE

**TAXI GUIDANCE SIGN  
MODIFICATION PLAN**

MAY 05 2020 8:17 PM D:\DAS\01944\1\19A0001\19A0001\19A0001\CAD\AIRPORT\19A0001-143-TGS-P.DWG





TAXI GUIDANCE SIGN SCHEDULE						
SIGN NUMBER	LOCATION	EXISTING		PROPOSED		REMARKS
		SIDE A	SIDE B	SIDE A	SIDE B	
R1-TGS3	TAXIWAY B1 INTERSECTION WITH RUNWAY 11 AT HOLD LINE			NO CHANGE		EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE B PANELS WITH NEW PANELS (2-1 MODULE PANELS).
R1-TGS6	TAXIWAY B3 INTERSECTION WITH RUNWAY 29 AT HOLD LINE			NO CHANGE		EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE B PANELS WITH NEW PANELS (2-1 MODULE PANEL).
R1-TGS15	TAXIWAY C INTERSECTION WITH RUNWAY 29-11 AT HOLD LINE			NO CHANGE		EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE B PANELS WITH NEW PANELS (3-1 MODULE PANELS).
R2-TGS1	RUNWAY 24 INTERSECTION WITH TAXIWAY B, WEST SIDE OF RUNWAY 24				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS WITH NEW PANELS (3-1 MODULE PANELS).
R2-TGS3	RUNWAY 6 INTERSECTION WITH TAXIWAY B, WEST SIDE OF RUNWAY 6				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS WITH NEW PANELS (3-1 MODULE PANELS).
R2-TGS11	TAXIWAY B INTERSECTION WITH RUNWAY 6-24 AT HOLD LINE			NO CHANGE		EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE B PANELS WITH NEW PANELS (3-1 MODULE PANELS).
T2-TGS2	TAXIWAY A INTERSECTION WITH TAXIWAY B			NO CHANGE		EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE B PANELS WITH NEW PANELS (4-1 MODULE PANELS).
T2-TGS3	SOUTH SIDE OF APRON NEAR INTERSECTION WITH TAXIWAY A1					NEW 6-CHAR. 3-MODULE SIGN. CONNECT SIGN TO TAXIWAY A-WEST CIRCUIT 2.
T3-TGS1	SOUTH SIDE OF APRON NEAR INTERSECTION WITH TAXIWAY C					EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDES A AND B PANELS WITH NEW PANELS (3-1 MODULE PANELS/SIDE-6 TOTAL).
T3-TGS3	TAXIWAY D AT INTERSECTION WITH TAXIWAY B					EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDES A AND B PANELS WITH NEW PANELS (3-1 MODULE PANELS/SIDE-6 TOTAL).
T4-TGS1	TAXIWAY B AT WEST SIDE OF ACCESS TAXIWAY A1 TO WEST SIDE OF APRON				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS WITH NEW PANELS (3-1 MODULE PANELS).
T5-TGS1	TAXIWAY C AT INTERSECTION WITH TAXIWAY B					EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDES A AND B PANELS WITH NEW PANELS (3-1 MODULE PANELS/SIDE-6 TOTAL).
T5-TGS2	ACCESS TAXIWAY A1 TO WEST SIDE OF APRON AT INTERSECTION WITH TAXIWAY B					EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A AND B PANELS WITH NEW PANELS (2-1 MODULE PANELS/SIDE-4 TOTAL).
T6-TGS1	TAXIWAY B AT INTERSECTION WITH TAXIWAY C AT WEST SIDE OF TAXIWAY C				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS WITH NEW PANELS (3-1 MODULE PANELS).
T6-TGS2	TAXIWAY B AT EAST SIDE OF ACCESS TAXIWAY A1 TO WEST SIDE OF APRON				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS WITH NEW PANELS (3-1 MODULE PANELS).
T6-TGS3	TAXIWAY B AT INTERSECTION WITH TAXIWAY C AT EAST SIDE OF TAXIWAY C				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS (3-1 MODULE PANELS).
T6-TGS5	TAXIWAY B AT INTERSECTION WITH TAXIWAY D					EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDES A AND B PANELS WITH NEW PANELS (3-1 MODULE PANELS/SIDE-6 TOTAL).
T7-TGS1	TAXIWAY B2 AT INTERSECTION WITH TAXIWAY B				NO CHANGE	EXISTING SIGN TO REMAIN IN PLACE; REPLACE EXISTING SIDE A PANELS WITH NEW PANELS (3-1 MODULE PANELS).

**NOTES:**

- EXISTING TAXI GUIDANCE SIGNS REQUIRING PANEL REPLACEMENTS ARE L-858(L), SIZE 1, STYLE 2, CLASS 2 MANUFACTURED BY LUMACURVE, STANDARD SIGNS, INC. CONTRACTOR SHALL FIELD VERIFY EXISTING SIGNS TO CONFIRM REPLACEMENT PANEL SIZES AND REQUIREMENTS.
- THE PROPOSED TAXI GUIDANCE SIGN REPLACEMENT PANELS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345-44 (CURRENT ISSUE IN EFFECT) AND BE FAA-APPROVED FOR TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGNS (BLACK LEGEND ON YELLOW BACKGROUND); TYPE L-858R(L) MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE ON WHITE LEGEND ON RED BACKGROUND); AND/OR TYPE L-858L(L) LOCATION SIGN (YELLOW LEGEND AND BORDER ON BLACK BACKGROUND). THE SIGN PANELS SHALL BE MANUFACTURED BY THE ORIGINAL EQUIPMENT MANUFACTURER TO MAINTAIN THE ETL LISTING AND FAA APPROVAL OF EACH SIGN.
- SEE SPECIFICATION ITEM L-125 FOR ADDITIONAL REQUIREMENTS ON TAXI GUIDANCE SIGNS.
- SEE "AIRFIELD LIGHTING NOTES" SHEET FOR ADDITIONAL REQUIREMENTS ON TAXI GUIDANCE SIGNS.
- CONTRACTOR SHALL TEST AND RECORD THE EARTH GROUND RESISTANCE FOR THE GROUND ROD AT EACH NEW TAXI GUIDANCE SIGN.
- ALL EXISTING SIGN PANELS TO BE REPLACED SHALL BE TURNED OVER TO THE AIRPORT.

TAXI GUIDANCE SIGN LEGEND	
	TYPE L-858L(L) LOCATION SIGN - YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND
	TYPE L-858R(L) MANDATORY INSTRUCTION SIGN - BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON A RED BACKGROUND
	TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGN - BLACK LEGEND ON A YELLOW BACKGROUND
	BLANK - BLACK BACKGROUND

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

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ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
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SHEET TITLE

**TAXI GUIDANCE SIGN  
SCHEDULE**

**TAXI SIGN AND AIRFIELD LIGHTING INSTALLATION NOTES**

1. KEEP ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. EXAMINE THE SITE TO DETERMINE THE EXTENT OF THE WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS.
3. VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, RELOCATING, INSTALLING, OR CONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
4. INSTALL AIRFIELD LIGHTS, TAXIWAY LIGHTS, GUIDANCE SIGNS, OTHER AIRFIELD LIGHTING, SPLICE CANS, HANDHOLES, MANHOLES, ELECTRICAL DUCTS, AND CABLE AT THE LOCATIONS SHOWN AND IN COMPLIANCE WITH THE SPECIFICATIONS, SPECIAL PROVISIONS, RESPECTIVE DETAILS, AND MANUFACTURER'S RECOMMENDATIONS.
5. NEW CABLE FOR RUNWAY AND TAXIWAY LIGHTING CABLE IN AREAS ALONG THE RESPECTIVE PAVEMENT SHALL BE INSTALLED APPROXIMATELY 10' TO 14' FROM THE PAVEMENT EDGE. CABLES SHALL BE PLACED A MINIMUM OF 18" BELOW FINISHED GRADE.
6. LIGHTING CABLE FOR RUNWAY AND TAXIWAY LIGHTING SHALL BE 1/C, #8 AWG, FAA L-824, 5000 VOLT, TYPE C UNDERGROUND CABLE IN DUCT OR RACEWAY.
7. IN AREAS WHERE THERE IS A CONGESTION OF CABLES OR WHERE THE PROPOSED CABLE CROSSES AN EXISTING CABLE, THE CONTRACTOR IS REQUIRED TO HAND DIG THE TRENCH NECESSARY FOR THE PROPOSED CABLE. AT OTHER LOCATIONS, THE PROPOSED CABLE MAY BE TRENCHED OR PLOWED INTO PLACE. HAND DIGGING, TRENCHING AND/OR PLOWING WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED CABLES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
8. GROUND ROD MUST BE INSTALLED AT EACH LIGHT FIXTURE AND TAXI SIGN. THE PURPOSE OF THE LIGHT BASE GROUND IS PROVIDE A DEGREE OF PROTECTION FOR MAINTENANCE PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE THAT MAY RESULT FROM A SHORTED POWER CABLE OR ISOLATION TRANSFORMER. PER NATIONAL ELECTRICAL CODE ARTICLE 250.53 "GROUNDING ELECTRODE SYSTEM INSTALLATION" RESISTANCE FROM THE GROUND ROD/ELECTRODE TO EARTH GROUND MUST BE 25 OHMS OR LESS VIA MEASUREMENT WITH A GROUND TESTER. GROUNDS RODS FOR LIGHT BASE GROUNDS SHALL BE 3/4-INCH BY 10- FEET MINIMUM LENGTH UL LISTED COPPER-CLAD STEEL SECTIONAL RODS. GROUND RODS SHALL BE PRODUCED FROM 100% DOMESTIC STEEL. EACH GROUND ROD SHALL BE TESTED AND THE RESULTS RECORDED FOR EACH AIRFIELD LIGHT FIXTURE AND TAXI SIGN INSTALLATION. COPIES OF GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE PROJECT ENGINEER AND/OR THE RESIDENT ENGINEER/TECHNICIAN.
9. HOMERUN CABLES FOR A RESPECTIVE CIRCUIT THAT ARE INSTALLED IN CONDUIT OR DUCT SHALL BE RUN TOGETHER IN THE SAME RACEWAY OR DUCT.
10. THE RESPECTIVE RUNWAY AND TAXIWAY LIGHTING CCR'S (FOR THE AREAS OF WORK ON THIS PROJECT) SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, MODIFICATIONS, AND/OR ADDITIONS AND AFTER THE NEW CABLES AND LIGHTING SYSTEM MODIFICATIONS AND ADDITIONS HAVE BEEN COMPLETED. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATIONS. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE RESIDENT ENGINEER/TECHNICIAN. TEST RESULTS SHALL BE PROVIDED TO THE PROJECT ENGINEER AND RESIDENT ENGINEER/TECHNICIAN.
11. FAA AC 150/5370-10G "STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS", ITEM L-108 "UNDERGROUND POWER CABLE FOR AIRPORTS", REQUIRES THAT EVERY AIRFIELD LIGHTING CABLE SPLICER SHALL BE QUALIFIED IN MAKING CABLE SPLICES AND TERMINATIONS ON CABLES RATED ABOVE 5,000 VOLTS AC. CABLE SPLICING/TERMINATING PERSONNEL SHALL HAVE A MINIMUM OF THREE (3) YEARS CONTINUOUS EXPERIENCE IN TERMINATING/SPLICING MEDIUM VOLTAGE CABLE.
12. OTHER CONSTRUCTION PROJECTS MIGHT BE IN PROGRESS AT THE AIRPORT AT THE SAME TIME AS THIS PROJECT. THE CONTRACTOR WILL BE REQUIRED TO COOPERATE WITH ALL OTHER CONTRACTORS AND THE AIRPORT MANAGER IN THE COORDINATION OF THE WORK.
13. OBTAIN APPROVAL FROM THE AIRPORT MANAGER PRIOR TO SHUTTING DOWN A RUNWAY OR TAXIWAY. WHEN A RESPECTIVE RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. WHEN A RESPECTIVE TAXIWAY IS CLOSED THE RESPECTIVE TAXIWAY LIGHTING FOR THAT TAXIWAY SHALL BE SHUT OFF.
14. THE CONTRACTOR IS REQUIRED TO FILL IN ALL HOLES AND DEPRESSIONS RESULTING FROM THE NEW WORK, WITH EARTH MATERIAL. THE AREAS SHALL BE COMPACTED TO PREVENT FUTURE SETTLEMENT AND FERTILIZED, SEEDED, AND MULCHED IN ACCORDANCE WITH ITEMS 901 AND 908 RESPECTIVELY.
15. IN THE EVENT A CONFLICT IS DETERMINED WITH RESPECT TO MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION.
16. SEE SAFETY PLAN AND SAFETY NOTES FOR SAFETY AND CONSTRUCTION REQUIREMENTS.
17. EXISTING DUCTS AND CABLES SHALL BE LOCATED AND PROTECTED IN AREAS OF WORK.
18. OWNER SHALL BE KEPT INFORMED OF WORK AND SCHEDULES.
19. ROUTE NEW CABLES AND DUCTS TO AVOID INTERFERENCES WITH OTHER UTILITIES, LINES, AND STRUCTURES.
20. ALL ABOVEGROUND JUMPERS SHALL BE IN A DUCT WITH ALL CONNECTIONS SEALED. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT, OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA 150/5370-2G, OPERATION SAFETY ON AIRPORTS DURING CONSTRUCTION, SECTION 2.18.3 "LIGHTING AND VISUAL NAVAIDS". ALL LABOR, MATERIALS, AND TIME NECESSARY TO COMPLY WITH THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
21. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2G (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
22. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
23. WHEN A RESPECTIVE RUNWAY IS CLOSED THE NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. KEEP RESPECTIVE NAVAIDS ACTIVE DURING TIMES WHEN RESPECTIVE RUNWAY IS OPEN. NAVAIDS RECEIVING MAINTENANCE SHALL BE SHUT OFF UNTIL OPERATING PROPERLY.
24. CONTRACTOR SHALL INTERFACE AIRFIELD LIGHTING AND/OR TAXI SIGNS TO THE RESPECTIVE AIRFIELD LIGHTING AND ASSOCIATED CIRCUITS.
25. HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, RACEWAY, JUNCTION STRUCTURE, OR HANDHOLE.
26. THE PROPOSED TAXI GUIDANCE SIGNS AND REPLACEMENT PANELS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345-44 (CURRENT ISSUE IN EFFECT) AND BE FAA-APPROVED FOR TYPE L-85BY(L) DIRECTION, DESTINATION, AND BOUNDARY SIGNS (BLACK LEGEND ON YELLOW BACKGROUND); TYPE L-85BR(L) MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON RED BACKGROUND); AND/OR TYPE L-85BL(L) LOCATION SIGN (YELLOW LEGEND AND BORDER ON BLACK BACKGROUND). THE REPLACEMENT SIGN PANELS SHALL BE MANUFACTURED BY THE ORIGINAL EQUIPMENT MANUFACTURER TO MAINTAIN THE ETL LISTING AND FAA APPROVAL OF EACH RESPECTIVE SIGN.
27. ALL SIGNS SHALL BE FURNISHED WITH TETHERS. TETHERS SHALL BE 3/16" STAINLESS STEEL AIRCRAFT CABLE WITH A FORMED EYE ON BOTH ENDS. THE TETHER EYE SHALL BE ATTACHED TO THE SIGN AND BASE BY BEING SANDWICHED BETWEEN TWO STAINLESS STEEL FENDER WASHERS, WITH A 1/2" MINIMUM STAINLESS STEEL BOLT. THE TETHER SHALL BE OF SUFFICIENT LENGTH TO HAVE A MINIMUM OF 6" OF SLACK WHEN ATTACHED BETWEEN THE SIGN AND THE SIGN BASE. THE TETHERS AND BONDING CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO ALLOW THE FRANGIBLE COUPLINGS TO OPERATE WITHOUT RESTRICTIONS AND TO ALLOW THE POWER CABLE TO DISCONNECT IF THE SIGN FALLS OVER. PROVIDE 3" ± 1/2" SLACK IN TETHER AND ALL TETHERS SHALL BE THE SAME LENGTH.
28. ALL SIGNS SHALL BE ORIENTATED SUCH THAT THE LONGITUDINAL CENTERLINE OF THE SIGN IS PERPENDICULAR TO THE RESPECTIVE TAXIWAY/RUNWAY CENTERLINE, UNLESS NOTED OTHERWISE.
29. CONCRETE STEEL REINFORCEMENT SHALL BE TYPE ASTM A615 OR A706 GRADE 60. ALL REINFORCEMENT SHALL HAVE A 3" MINIMUM CONCRETE COVER. REINFORCEMENT MAY BE ADJUSTED TO MISS INTERFERENCES. CONCRETE SHALL CONFORM TO ITEM 610 STRUCTURAL PORTLAND CEMENT CONCRETE.
30. NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER/TECHNICIAN SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.



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Illinois Licensed  
Professional Service Corporation  
#184-001084



**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

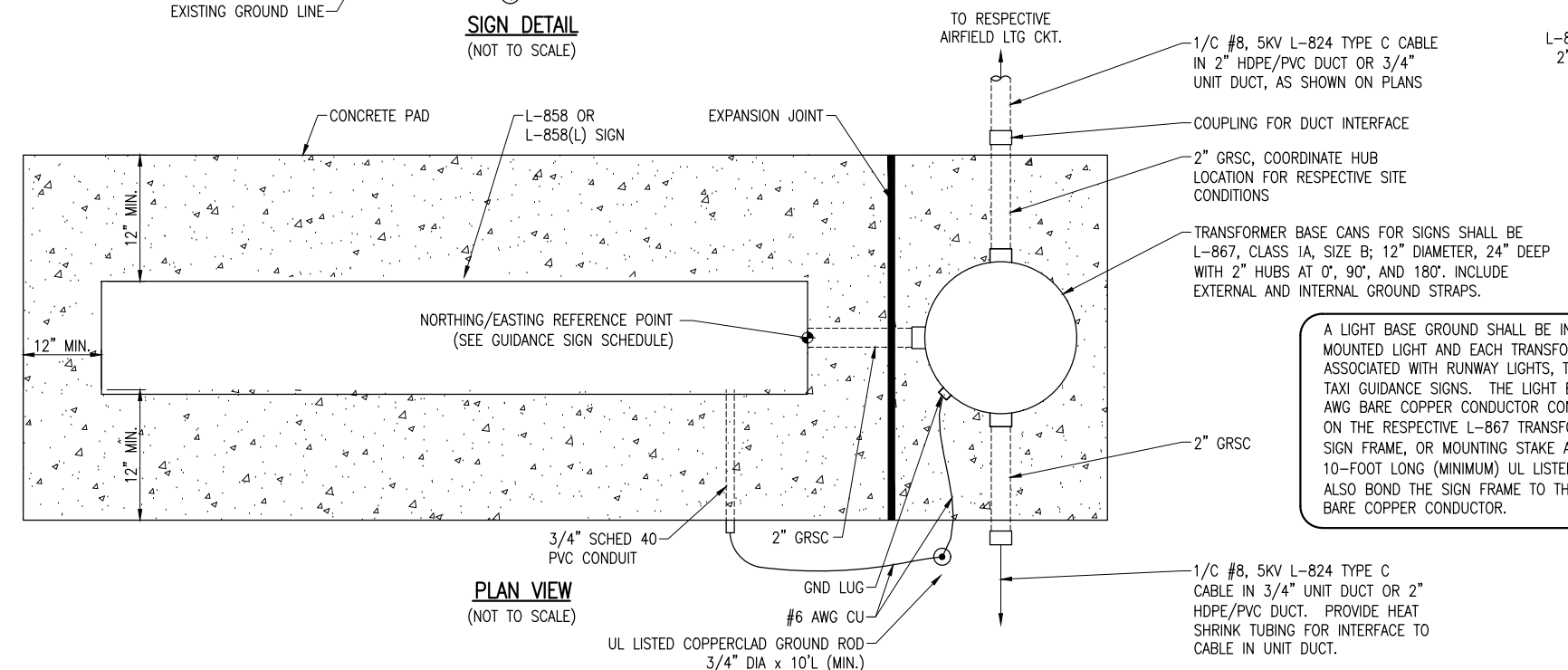
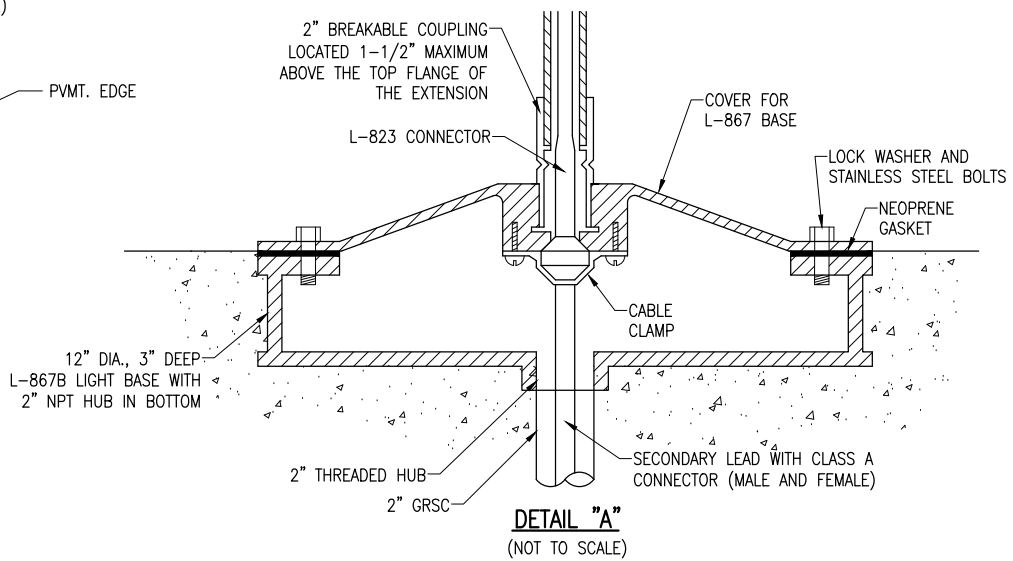
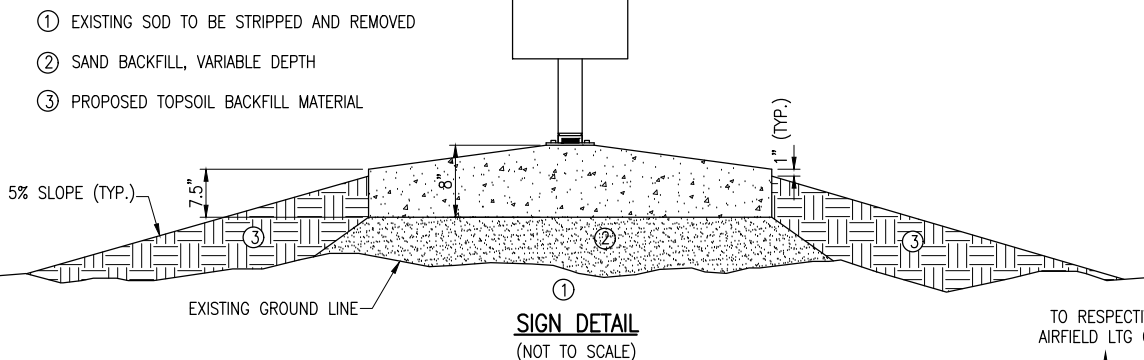
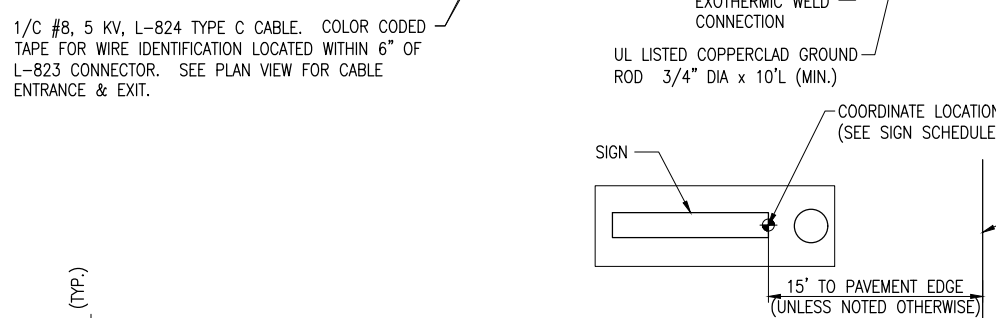
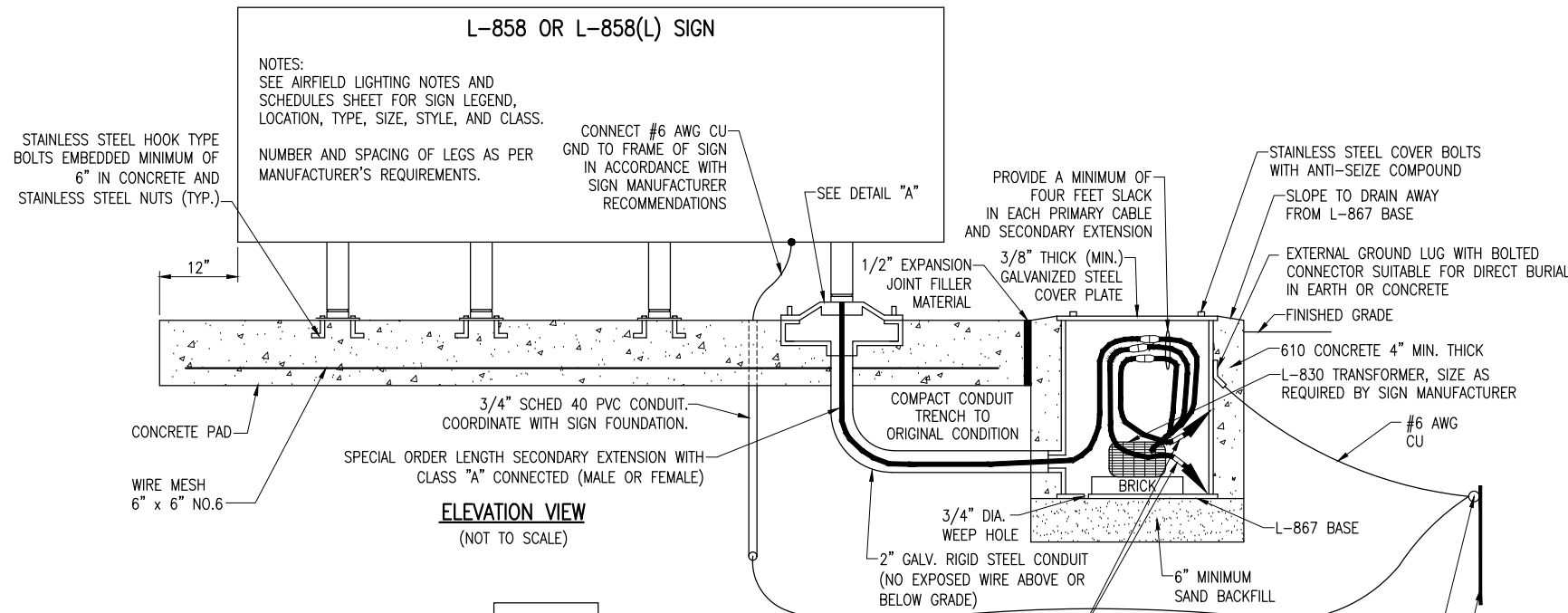
IDA No: MTO-4752  
SBG Project No:  
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Contract No. CO067

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		DES	DWN	REV

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REVIEWED BY: KNL 06/26/2019

SHEET TITLE

**AIRFIELD LIGHTING  
NOTES**



A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH STAKE MOUNTED LIGHT AND EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN, TAXI SIGN FRAME, OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. ALSO BOND THE SIGN FRAME TO THE GROUND ROD WITH A #6 AWG BARE COPPER CONDUCTOR.

**GENERAL NOTES**

- SEE PROPOSED ELECTRICAL SHEETS, AIRFIELD LIGHTING NOTES AND TAXI GUIDANCE SIGN SCHEDULES FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.
- SEE ELECTRICAL NOTES SHEETS.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
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**TAXI GUIDANCE SIGN  
DETAILS**

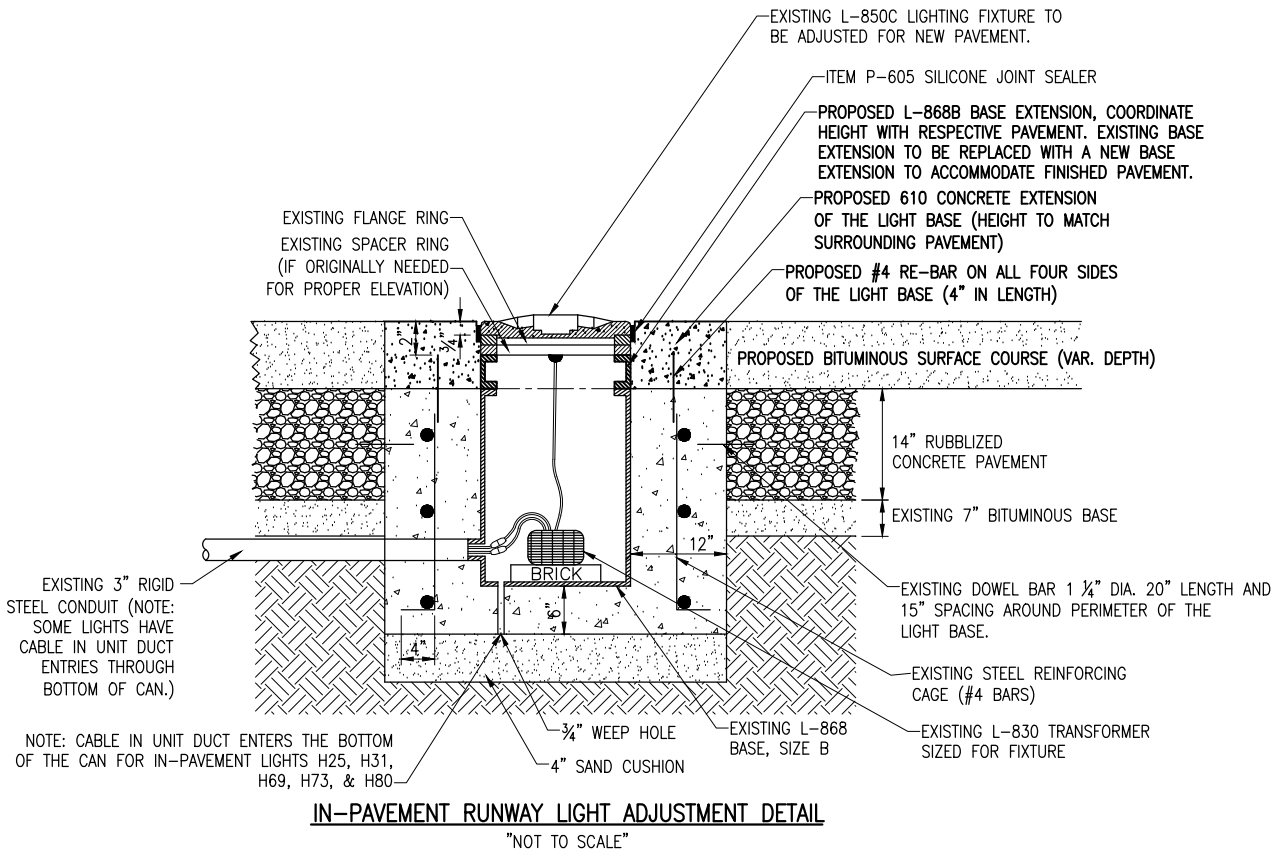
**AIRFIELD LIGHTING ADJUSTMENT AND INSTALLATION NOTES**

- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE THE EXTENT OF THE WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2G (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- ALL ELECTRICAL EQUIPMENT (INCLUDING AIRFIELD LIGHTING AND NAVAIDS) SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRIC CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS, AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PRIOR TO BEGINNING AIRFIELD LIGHTING MODIFICATIONS, CABLE OR DUCT INSTALLATION, AND/OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING SYSTEMS, ALL EXISTING SERIES CIRCUIT CABLES SHALL BE MEGGER TESTED WITH AN INSULATION RESISTANCE TESTER AND RECORDED AT THE VAULT. ALL EXISTING SERIES CIRCUIT CABLE LOOPS SHALL HAVE THE RESISTANCE MEASURED WITH AN OHMMETER AND RECORDED FOR EACH CIRCUIT AT THE VAULT. EACH CONSTANT CURRENT REGULATOR SHALL BE TESTED WITH RESULTS RECORDED. PROVIDE A TRUE RMS AMMETER FOR CURRENT MEASUREMENTS. COPIES OF TEST RESULTS SHALL BE PROVIDED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AND THE RESPECTIVE PROJECT ENGINEER WITHIN 5 BUSINESS DAYS OF CONDUCTING THE RESPECTIVE SET OF TESTS. SEE THE TESTING FORMS IN APPENDIX A, OF THE SPECIAL PROVISION SPECIFICATIONS.
- AFTER AIRFIELD LIGHTING MODIFICATIONS, ADDITIONS, UPGRADES, AND/OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING SYSTEMS HAVE BEEN COMPLETED, SERIES CIRCUIT CABLES SHALL BE MEGGER TESTED WITH AN INSULATION RESISTANCE TESTER AND RECORDED AT THE VAULT. ALL SERIES CIRCUIT CABLE LOOPS SHALL HAVE THE RESISTANCE MEASURED WITH AN OHMMETER AND RECORDED FOR EACH CIRCUIT AT THE VAULT. EACH CONSTANT CURRENT REGULATOR SHALL BE TESTED WITH RESULTS RECORDED. PROVIDE A TRUE RMS AMMETER FOR CURRENT MEASUREMENTS. COPIES OF TEST RESULTS SHALL BE PROVIDED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AND THE RESPECTIVE PROJECT ENGINEER WITHIN 5 BUSINESS DAYS OF CONDUCTING THE RESPECTIVE SET OF TESTS. SEE THE TESTING FORMS IN APPENDIX A, OF THE SPECIAL PROVISION SPECIFICATIONS.
- INSULATION RESISTANCE TESTING EQUIPMENT FOR USE WITH 5,000 VOLT SERIES CIRCUIT CABLES SHALL USE AN INSULATION RESISTANCE TESTER CAPABLE OF TESTING THE CABLES AT 5,000 VOLTS. OLDER SERIES CIRCUIT CABLES AND/OR CABLES IN POOR CONDITION MAY REQUIRE THE TEST VOLTAGE TO BE PERFORMED AT A VOLTAGE LOWER THAN 5,000 VOLTS (EXAMPLE 1,000 VOLTS, 500 VOLTS, OR LESS THAN 500 VOLTS). THE RESPECTIVE TEST VOLTAGE SHALL BE RECORDED FOR EACH CABLE INSULATION RESISTANCE TEST RESULT. INSULATION RESISTANCE TESTING EQUIPMENT FOR USE WITH 600 VOLT RATED CABLES SHALL USE A 500 VOLT INSULATION RESISTANCE TESTER. THE RESPECTIVE TEST VOLTAGE SHALL BE RECORDED FOR EACH CABLE INSULATION RESISTANCE TEST RESULT.
- EXISTING AIRFIELD LIGHTING, DUCTS, CONDUITS, CABLES, SPLICE CANS, HANDHOLES, AND/OR MANHOLES SCHEDULED TO REMAIN SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING FACILITIES AND COORDINATE THE PAVEMENT REMOVAL WORK TO AVOID AND DAMAGE TO AIRFIELD LIGHTING SYSTEMS AND OTHER FACILITIES.
- IN AREAS WHERE THERE IS A CONGESTION OF CABLES OR WHERE THE PROPOSED CABLE AND DUCT CROSSES AN EXISTING CABLE, THE CONTRACTOR IS REQUIRED TO HAND DIG THE TRENCH NECESSARY FOR THE PROPOSED CABLE AND DUCT. AT OTHER LOCATIONS, THE PROPOSED CABLE AND DUCT MAY BE TRENCHED OR PLOWED INTO PLACE. HAND DIGGING, TRENCHING AND/OR PLOWING WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED CABLES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ONLY CABLE IN DUCT OR UNIT DUCT SHALL BE INSTALLED BY PLOWING METHOD.

- CONCRETE STEEL REINFORCEMENT SHALL BE TYPE ASTM A615 OR A706 GRADE 60. ALL REINFORCEMENT SHALL HAVE A 3" MINIMUM CONCRETE COVER. REINFORCEMENT MAY BE ADJUSTED TO MISS INTERFERENCES. CONCRETE SHALL CONFORM TO ITEM 610 STRUCTURAL PORTLAND CEMENT CONCRETE.
- RUNWAY LIGHTING CIRCUITS SHALL BE ACTIVE AT THE END OF EACH CONSTRUCTION DAY FOR AN OPEN RUNWAY. THE CONTRACTOR SHALL PROVIDE TEMPORARY CABLE & CONNECTIONS WHERE NECESSARY TO MAINTAIN A RUNWAY OR TAXIWAY LIGHTING SYSTEM. TEMPORARY CABLE SHALL BE 1/C #8 FAA L-824 5KV UG CABLE IN DUCT OR UNIT DUCT
- ALL ABOVEGROUND JUMPERS SHALL BE IN A DUCT WITH ALL CONNECTIONS SEALED. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT, OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA 150/5370-2G, OPERATION SAFETY ON AIRPORTS DURING CONSTRUCTION, SECTION 2.18.3 "LIGHTING AND VISUAL NAVAIDS". ALL LABOR, MATERIALS, AND TIME NECESSARY TO COMPLY WITH THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- HOMERUN CABLES FOR A RESPECTIVE CIRCUIT THAT ARE INSTALLED IN CONDUIT OR DUCT SHALL BE RUN TOGETHER IN THE SAME RACEWAY OR DUCT.
- WHEN A RESPECTIVE RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF.
- PER FAA AC 150/5270-10G "STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS", ITEM L-108 "UNDERGROUND POWER CABLE FOR AIRPORT", EVERY AIRFIELD LIGHTING CABLE SPLICER SHALL BE QUALIFIED IN MAKING CABLE SPLICES AND TERMINATIONS ON CABLES RATED ABOVE 5,000 VOLTS AC. CABLE SPLICING/TERMINATING PERSONNEL SHALL HAVE A MINIMUM OF THREE (3) YEARS CONTINUOUS EXPERIENCE IN TEMINATING/SPLICING MEDIUM VOLTAGE CABLE.
- HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, RACEWAY, JUNCTION STRUCTURE, OR HANDHOLE.
- NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER/TECHNICIAN SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.



**IN-PAVEMENT RUNWAY LIGHT ADJUSTMENT DETAIL**  
"NOT TO SCALE"

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

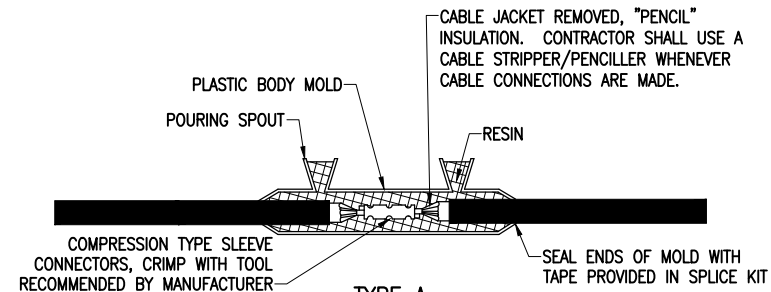
IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

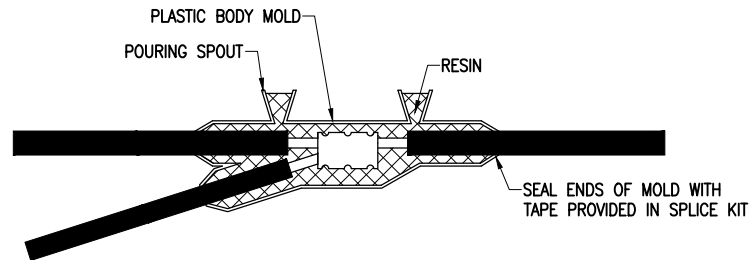
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: E-511-DETL.DWG  
DESIGN BY: KNL 05/07/2019  
DRAWN BY: CWS 05/08/2019  
REVIEWED BY: KNL 06/26/2019

SHEET TITLE

**IN-PAVEMENT  
RUNWAY LIGHT  
ADJUSTMENT DETAIL**



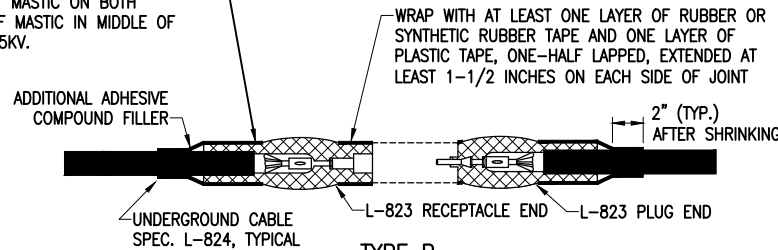
**TYPE A**  
FOR SPLICES IN LOW VOLTAGE CABLE (600V) HOMERUNS FOR EXTENSIONS TO EXISTING LOW VOLTAGE CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTION BOXES



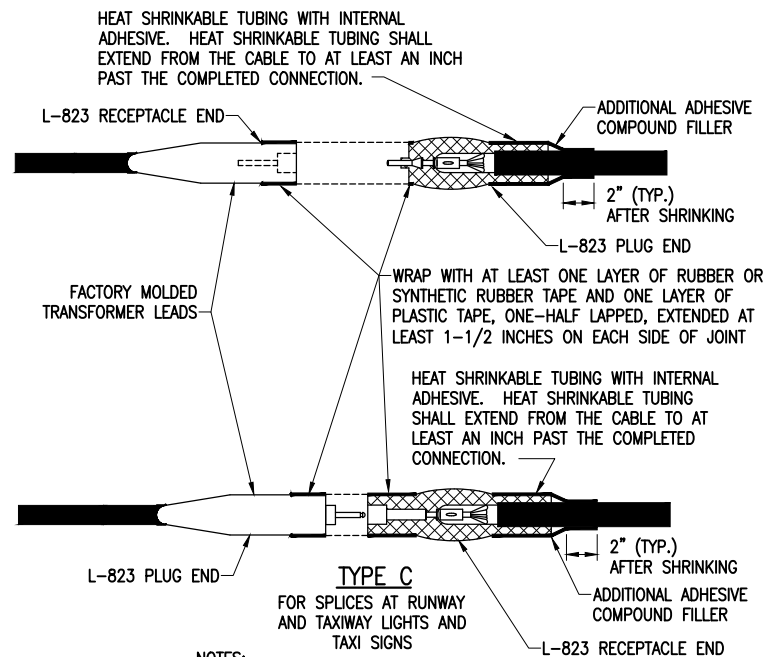
**LOW VOLTAGE UNDERGROUND TAP SPLICE**

FOR TAP SPLICES IN LOW VOLTAGE (600V) CABLE. SPLICES SHALL BE RATED AND LISTED SUITABLE FOR DIRECT BURIAL LOCATIONS. FOR SPLICES UP TO #2 AWG CONDUCTOR, SPLICES SHALL BE WYE RESIN TYPE POWER CABLE TAP SPLICE KIT SUITABLE FOR THE RESPECTIVE CABLES AND RESPECTIVE APPLICATION.

CONTINUOUS HEAT SHRINK TUBING PLACED OVER THE ENTIRE L-823 CONNECTOR(S) BOTH MALE AND FEMALE AT ALL 5KV JUNCTIONS. THE HEAT SHRINK TUBING SHALL BE APPROXIMATELY 18" IN LENGTH WITH 6 INCHES OF MASTIC ON BOTH ENDS AND VOID OF MASTIC IN MIDDLE OF TUBE RATED FOR 5KV.



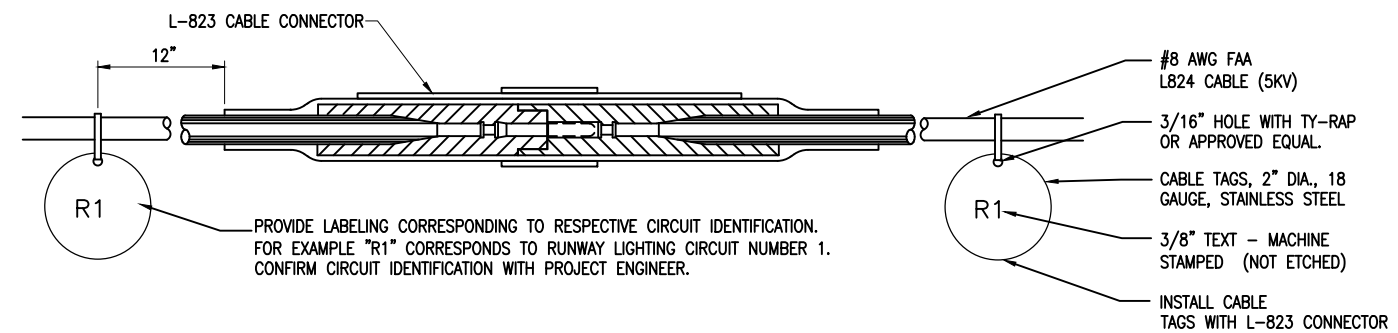
**TYPE B**  
FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT AND FOR SPLICES IN HOMERUNS TO EXISTING CABLES



**TYPE C**  
FOR SPLICES AT RUNWAY AND TAXIWAY LIGHTS AND TAXI SIGNS

**NOTES:**  
INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

**CABLE SPLICES**  
"NOT TO SCALE"



1. CONTRACTOR SHALL PROVIDE CABLE CIRCUIT IDENTIFICATION MARKERS ATTACHED TO BOTH SIDES OF EACH CABLE CONNECTION.
2. CABLE IDENTIFICATION TAGS SHALL BE STAINLESS STEEL OR BRASS.
3. THE CABLE SHALL THOROUGHLY BE CLEANED PRIOR TO THE INSTALLATION OF THE L-823 CONNECTOR KIT.
4. ATTACH EACH CABLE TIE ENOUGH TO HOLD IN PLACE WITHOUT COMPRESSING EDGE OF CABLE TAG INTO CONDUCTOR. TRIM OFF EXCESS CABLE TIE.
5. CABLE TAGS SHALL BE PROVIDED AT ALL POINTS OF ACCESS INCLUDING L-867 BASES, L-868 BASES, HANDHOLES, MANHOLES, JUNCTION BOXES, AND WIREWAYS.

**CABLE TAG DETAIL**  
"NOT TO SCALE"

**NOTES:**

1. SPLICE DETAILS ARE PROVIDED FOR NEW WORK AND TO ASSIST IN REPAIRS OF ACCIDENTAL OR UNEXPECTED INTERRUPTIONS AND/OR CUTS TO AIRFIELD LIGHTING CABLES.
2. KEEP ON HAND A MINIMUM OF 10 SETS OF SPLICE KITS FOR L-823 CONNECTORS AND A MINIMUM OF 10 SETS OF TYPE A LOW VOLTAGE SPLICE KITS TO ACCOMMODATE REPAIRS.
3. EVERY AIRFIELD LIGHTING CABLE SPLICER SHALL BE QUALIFIED IN MAKING CABLE SPLICES AND TERMINATIONS ON CABLES RATED AT AND/OR ABOVE 5,000 VOLTS AC TO COMPLY WITH THE REQUIREMENTS OF FAA AC 150/5370-10G ITEM L-108.
4. INSIDE DIAMETER OF RESPECTIVE CABLE CONNECTOR SHALL PROPERLY MATCH OUTSIDE DIAMETER OF CABLE.
5. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILER WHENEVER CABLE CONNECTIONS ARE MADE.
6. WRAP ALL PRIMARY AND SECONDARY POWER CONNECTIONS WITH SUFFICIENT LAYERS OF HIGH VOLTAGE ELECTRICAL INSULATING TAPE (RUBBER SPLICING TAPE SUITABLE FOR PRIMARY ELECTRICAL INSULATION FOR SPLICING CABLE FROM 600 VOLTS TO 69,000 VOLTS) AND COVER WITH VINYL ELECTRICAL TAPE (ALL-WEATHER VINYL INSULATING TAPE SUITABLE FOR PROTECTIVE JACKETING FOR HIGH-VOLTAGE CABLE SPLICES AND REPAIRS) FOR FULL VALUE OF CABLE INSULATION VOLTAGE. PER ILLINOIS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS ITEM 108, ITEM 125, AND FAA AC 150/5370-10H ITEM L-108, HIGH VOLTAGE ELECTRICAL INSULATING TAPE SHALL BE 3M SCOTCH 23, 3M SCOTCH 130C OR APPROVED EQUIVALENT, AND VINYL ELECTRICAL TAPE SHALL BE 3M SCOTCH 88 OR APPROVED EQUIVALENT. TAPES MUST BE RATED SUITABLE FOR THE APPLICATION.
7. PROVIDE CABLE TAGS TO IDENTIFY THE RESPECTIVE CIRCUITS ALL POINTS OF ACCESS INCLUDING L-867 BASES, L-868 BASES, HANDHOLES, MANHOLES, JUNCTION BOXES, AND WIREWAYS.
8. CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. FOR THE L-823 CONNECTORS, THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.

PHASE 2:  
RECONSTRUCT  
TAXIWAY B

IDA No: MTO-4752  
SBG Project No:  
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Contract No. CO067

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PROJECT NO: 19A0001  
CAD FILE: E-503-ELEC.DWG  
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DRAWN BY: CWS 04/08/2019  
REVIEWED BY: KNL 06/26/2019

SHEET TITLE

AIRFIELD LIGHTING  
CABLE SPLICE  
DETAILS



### GENERAL NOTES

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
- CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
- IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
- THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
- WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.
- ANY AND ALL INSTRUCTIONS FROM THE RESIDENT ENGINEER/RESIDENT TECHNICIAN TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS. THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER/RESIDENT TECHNICIAN REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
- A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:
  - A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
  - THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
  - INSTALLATION INSTRUCTION.
  - START-UP INSTRUCTIONS.
  - PREVENTATIVE MAINTENANCE REQUIREMENTS.
  - CHART FOR TROUBLE-SHOOTING.
  - COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT – "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.
  - PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
  - SAFETY INSTRUCTIONS.

### POWER AND CONTROL NOTES

- PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.
- COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR PHASE CONDUCTORS ON 120/240VAC SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, ORANGE (FOR HIGH LEG) AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 240/120VAC THREE-PHASE, FOUR WIRE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).
- ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.
- IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
- LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
- NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
- THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
  - IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.
  - IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.
- A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.
- EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
- SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
- CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
- DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
- ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMENTATIONS.
- SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE.
- CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.
- PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED. CONFIRM LIQUID-TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.
- UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
- USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
- USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- WRAP ALL PRIMARY AND SECONDARY POWER CONNECTIONS WITH SUFFICIENT LAYERS OF HIGH VOLTAGE ELECTRICAL INSULATING TAPE (RUBBER SPLICING TAPE SUITABLE FOR PRIMARY ELECTRICAL INSULATION FOR SPLICING CABLE FROM 600 VOLTS TO 69,000 VOLTS) AND COVER WITH VINYL ELECTRICAL TAPE (ALL-WEATHER VINYL INSULATING TAPE SUITABLE FOR PROTECTIVE JACKETING FOR HIGH-VOLTAGE CABLE SPLICES AND REPAIRS) FOR FULL VALUE OF CABLE INSULATION VOLTAGE. PER ILLINOIS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS ITEM 108, ITEM 125 AND FAA AC 150/5370-10H ITEM L-108, HIGH VOLTAGE ELECTRICAL INSULATING TAPE SHALL BE 3M SCOTCH 23, 3M SCOTCH 130C OR APPROVED EQUIVALENT, AND VINYL ELECTRICAL TAPE SHALL BE 3M SCOTCH 88 OR APPROVED EQUIVALENT. TAPES MUST BE RATED SUITABLE FOR THE APPLICATION.
- UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINIMUM.
- THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
  - FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.
  - THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
  - ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
  - WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.
  - ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
  - EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
  - A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
  - THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
  - ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
  - MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
- FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOFF, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "ARC FLASH HAZARD WARNING".

### PHASE 2: RECONSTRUCT TAXIWAY B

IDA No: MTO-4752

SBG Project No:  
3-17-SBGP-156/159

Contract No. CO067

NO.	DATE	DESCRIPTION		
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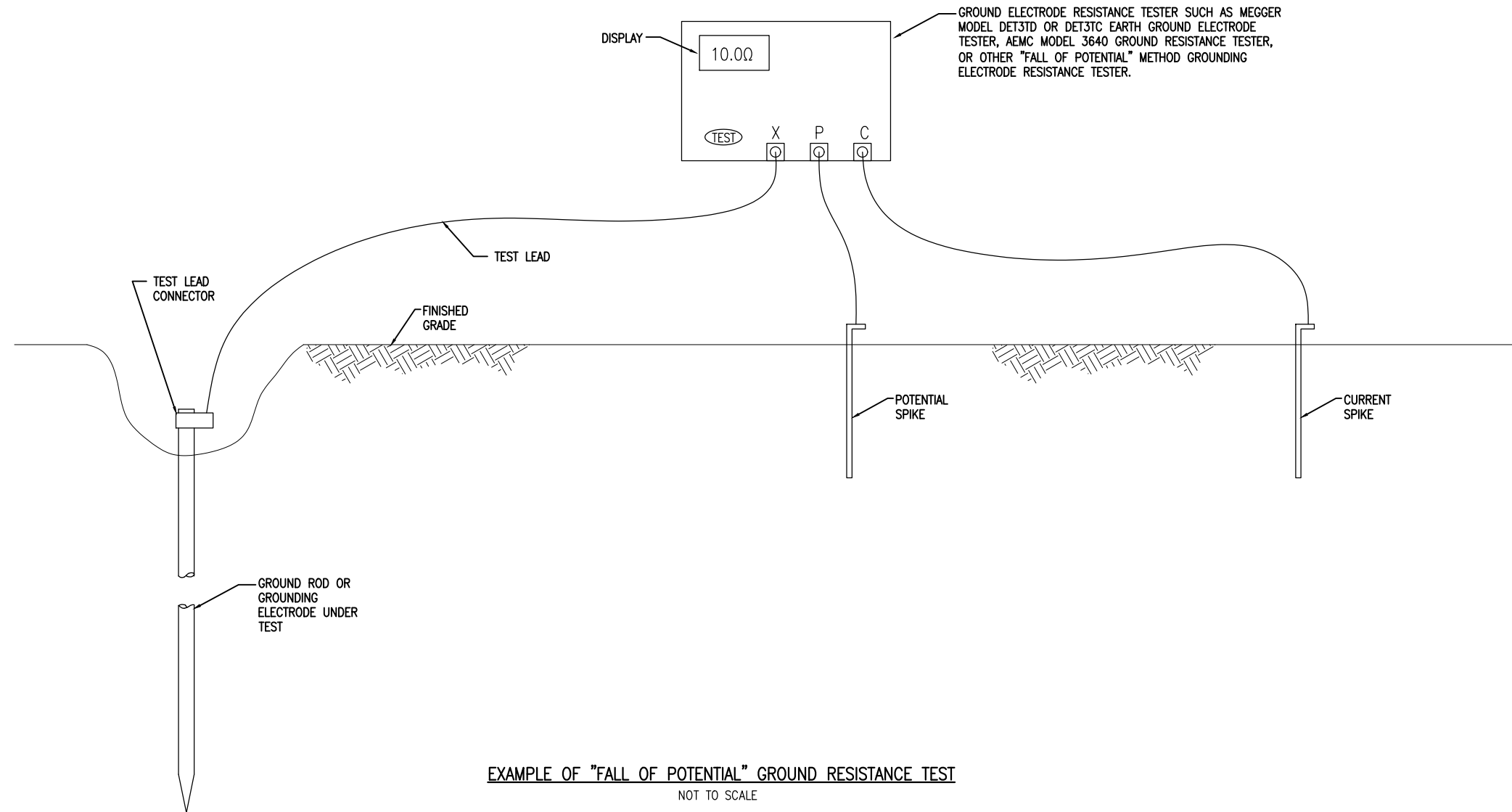
DRAWN BY: CWS 04/08/2019

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SHEET TITLE

### ELECTRICAL NOTES SHEET 1





**EXAMPLE OF "FALL OF POTENTIAL" GROUND RESISTANCE TEST**

NOT TO SCALE

**NOTES**

1. CONTRACTOR SHALL TEST AND RECORD THE RESISTANCE FOR EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUNDING ELECTRODE SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN, AND THE PROJECT ENGINEER.
2. FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, SPLICE CAN AND NAVAID THE CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND SYSTEM WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND SYSTEMS. TEST RESULTS SHALL BE RECORDED FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, AND NAVAIDS INSTALLATION. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. ALSO REFER TO EOR-47643 FOR ADDITIONAL INFORMATION ON GROUNDING REQUIREMENTS WHERE APPLICABLE. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER / RESIDENT TECHNICIAN, AND THE PROJECT ENGINEER.
3. GROUND RESISTANCE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE RESPECTIVE GROUND ELECTRODE RESISTANCE TESTING EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
4. RECORD SITE CONDITIONS DURING TESTS.
5. "FALL OF POTENTIAL" TYPE GROUND ELECTRODE RESISTANCE TESTER IS RECOMMENDED FOR TESTING INDIVIDUAL STAND ALONE GROUND RODS.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
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**GROUND  
RESISTANCE  
TESTING DETAILS**

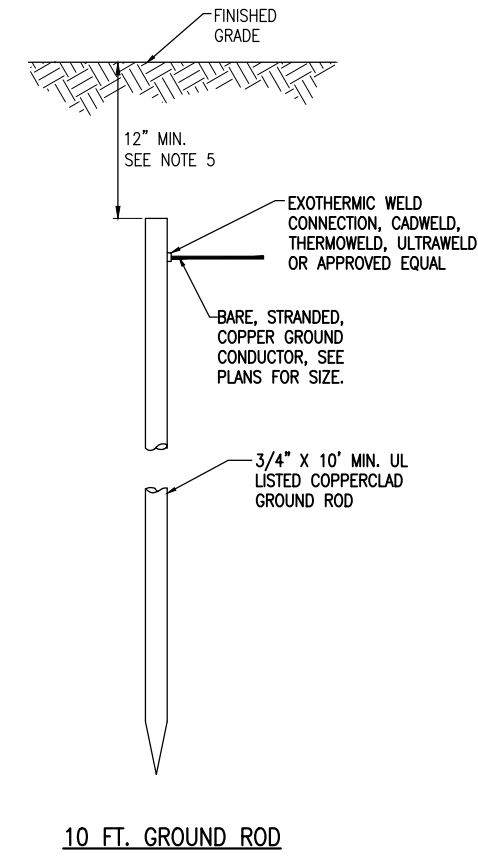


**GROUNDING NOTES**

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING AS MAY BE NECESSARY OR REQUIRED TO MAKE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE LATEST NATIONAL ELECTRICAL CODE (NFPA 70) IN FORCE AND FAA-STD-019e (LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT). THE RELIABILITY OF THE GROUNDING SYSTEM IS DEPENDENT ON CAREFUL, PROPER INSTALLATION AND CHOICE OF MATERIALS. IMPROPER PREPARATION OF SURFACES TO BE JOINED TO MAKE AN ELECTRICAL PATH, LOOSE JOINTS OR CORROSION CAN INTRODUCE IMPEDANCE THAT WILL SERIOUSLY IMPAIR THE ABILITY OF THE GROUND PATH TO PROTECT PERSONNEL AND EQUIPMENT AND TO ABSORB TRANSIENTS THAT CAN CAUSE NOISE IN COMMUNICATIONS CIRCUITS. THE FOLLOWING FUNCTIONS ARE PARTICULARLY IMPORTANT TO ENSURE A RELIABLE GROUND SYSTEM:

- FURNISH AND INSTALL GROUND RODS AS DETAILED HEREIN. GROUND RODS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING (UNLESS DETAILED OTHERWISE HEREIN). GROUND RODS SHALL BE SPACED OR AS DETAILED ON THE RESPECTIVE PLANS, AND IN NO CASE SPACED LESS THAN ONE ROD LENGTH APART. ALL CONNECTIONS TO GROUND RODS AND THE GROUND RING SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY PENTAIR ERICO PRODUCTS, INC., THERMOWELD BY CONTINENTAL INDUSTRIES, INC., ULTRAWELD BY HARGER, OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS OR AT BURIED GROUNDING ELECTRODE CONDUCTORS.
- CONTRACTOR SHALL TEST EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND FIELD SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. ALSO REFER TO EOR-47643 FOR ADDITIONAL INFORMATION ON GROUNDING REQUIREMENTS WHERE APPLICABLE. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AND THE PROJECT ENGINEER.
- ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.
- ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANCHEM INC. "NO-OX-ID "A-SPECIAL" COMPOUND, BURNDY PENETROX E, OR APPROVED EQUAL.
- METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2017 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.
- METALLIC RACEWAY FITTINGS SHALL BE MADE UP TIGHT TO PROVIDE A PERMANENT LOW IMPEDANCE PATH FOR ALL CIRCUITS. METAL CONDUIT TERMINATIONS IN ENCLOSURES SHALL BE BONDED TO THE ENCLOSURE WITH UL-LISTED FITTINGS SUITABLE FOR GROUNDING. PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING SERVICE EQUIPMENT (METER BASE, CT CABINET, MAIN SERVICE BREAKER ENCLOSURE, ETC.). PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING AN ENCLOSURE THROUGH CONCENTRIC OR ECCENTRIC KNOCKOUTS THAT ARE PUNCHED OR OTHERWISE FORMED SO AS TO IMPAIR THE ELECTRICAL CONNECTION TO GROUND. STANDARD LOCKNUTS OR BUSHINGS SHALL NOT BE THE SOLE MEANS FOR BONDING WHERE A CONDUIT ENTERS AN ENCLOSURE THROUGH A CONCENTRIC OR ECCENTRIC KNOCKOUT
- ALL CONNECTIONS, LOCATED ABOVE GRADE, BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS SHALL BE MADE USING UL-LISTED DOUBLE COMPRESSION CRIMP TYPE CONNECTORS OR UL-LISTED BOLTED GROUND CONNECTORS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, DOSSERT CORPORATION, ILSCO CORPORATION, PENN-UNION CORPORATION, THOMAS & BETTS, OR APPROVED EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.
- PROVIDE ALL BOXES FOR PROPOSED OUTLETS, SWITCHES, CIRCUIT BREAKERS, ETC. WITH GROUNDING SCREWS. PROVIDE ALL PANELBOARD, SWITCHGEAR, ETC., ENCLOSURES WITH GROUNDING BARS WITH INDIVIDUAL SCREWS, LUGS, CLAMPS, ETC., FOR EACH OF THE GROUNDING CONDUCTORS THAT ENTER THEIR RESPECTIVE ENCLOSURES.
- EACH NEW FEEDER CIRCUIT AND/OR BRANCH CIRCUIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. METAL RACEWAY OR CONDUIT SHALL NOT MEET THIS REQUIREMENT. THE EQUIPMENT GROUND WIRE FROM EQUIPMENT SHALL NOT BE SMALLER THAN ALLOWED BY 2017 NEC TABLE 250-122 "MINIMUM SIZE CONDUCTORS OR GROUNDING RACEWAY AND EQUIPMENT." WHEN CONDUCTORS ARE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP, EQUIPMENT-GROUNDING CONDUCTORS SHALL BE ADJUSTED PROPORTIONATELY ACCORDING TO CIRCULAR MIL AREA. ALL EQUIPMENT GROUND WIRES SHALL BE COPPER, EITHER BARE OR INSULATED GREEN IN COLOR. WHERE THE EQUIPMENT GROUNDING CONDUCTORS ARE INSULATED, THEY SHALL BE IDENTIFIED BY THE COLOR GREEN, AND SHALL BE THE SAME INSULATION TYPE AS THE PHASE CONDUCTORS.

- ALL EXTERIOR METAL CONDUIT, WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF MANHOLES, HANDHOLES, NON-METALLIC JUNCTION BOXES, ETC., SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE DUCT RUN, AND AT EACH END, WITH A COPPER-BONDING JUMPER SIZED IN CONFORMANCE WITH 2017 NEC 250-102. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE (SUCH AS A MOTOR CONTROL CENTER, SWITCHBOARD, ETC) WHERE THERE IS NOT ELECTRICAL CONTINUITY WITH THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT SIZED PER 2017 NEC 250-102.
- IT IS THE INTENT OF THIS SPECIFICATION THAT ALL MOTOR FRAMES, PUMP BASES ELECTRICAL EQUIPMENT ENCLOSURES, PANEL HOUSINGS, CONDUITS, BOXES, ETC. HAVE A CONTINUOUS COPPER WIRE GROUND CONNECTION AND SHALL BE POSITIVELY BONDED TO THE RESPECTIVE GROUNDING SYSTEM. CONDUIT CONNECTORS WILL NOT BE CONSIDERED AS ADEQUATE GROUNDING.
- PROVIDE A POSITIVE GROUND BOND FOR ALL OUTLET BOXES, ELECTRICAL EQUIPMENT ENCLOSURES, GROUNDING RECEPTACLES, TOGGLE SWITCHES, ETC. INSTALL A GROUNDING CONDUCTOR IN ALL WIRE AND CABLE RACEWAYS. GROUND CONDUCTOR TO HAVE 600-VOLT INSULATION AND BE IDENTIFIED BY A CONTINUOUS GREEN COLOR COATING. THEY SHALL BE USED SOLELY FOR GROUNDING PURPOSES AND BE ENTIRELY SEPARATE FROM WHITE GROUNDED NEUTRAL CONDUCTOR, EXCEPT AT SUPPLY SIDE OF SERVICE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.
- EACH AND ALL GROUNDED CASED AND METAL PARTS ASSOCIATED WITH ELECTRICAL EQUIPMENT SHALL BE TESTED FOR CONTINUITY OF CONNECTION WITH GROUND BUS SYSTEM BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE.
- ALL CONNECTIONS BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS ABOVE GRADE SHALL BE MADE USING BOLTED GROUND CONNECTORS. GROUND LUGS SHALL BE PROVIDED IN ALL ENCLOSURES AND WIRING TERMINATION JUNCTION BOXES. EQUIPMENT GROUNDS AND GROUNDING CONDUCTOR SHALL BE CONNECTED TO THESE GROUND LUGS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, DOSSERT CORPORATION, ILSCO CORPORATION, PENN-UNION CORPORATION, THOMAS & BETTS, OR APPROVED EQUAL.
- BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.
- BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.
- INSTALL GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS AND SEPARATE GROUND CONDUCTORS IN SCHEDULE 40 OR SCHEDULE 80 PVC CONDUIT OR EXPOSED WHERE ACCEPTABLE TO LOCAL CODES. WHERE GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS OR INDIVIDUAL GROUND CONDUCTORS ARE RUN IN PVC CONDUIT, DO NOT COMPLETELY ENIRCLE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. USE NON-METALLIC REINFORCED FIBERGLASS STRUT SUPPORT. WHERE METAL CONDUIT CLAMPS ARE INSTALLED, USE NYLON BOLTS, NUTS, WASHERS AND SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT. THIS IS REQUIRED TO AVOID GIRDLING OF GROUND CONDUCTORS. GIRDLING OF A GROUND CONDUCTOR IS THE RESULT OF PLACING THE CONDUCTOR IN A RING OF MAGNETIC MATERIAL. THIS RING COULD BE A METALLIC CONDUIT, U-BOLT OR STRUT SUPPORT PIPE CLAMP, OR OTHER SUPPORT HARDWARE. THE RESULT OF GIRDLING GROUND CONDUCTORS SIGNIFICANTLY INCREASES THE INDUCTIVE IMPEDANCE OF THE GROUND CONDUCTOR. INDUCTIVE AND CAPACITIVE IMPEDANCE IS A TYPE OF RESISTANCE THAT OPPOSES THE FLOW OF ALTERNATING CURRENT. ANY INCREASE IN THE IMPEDANCE OF A GROUND CONDUCTOR REDUCES ITS ABILITY TO EFFECTIVELY MITIGATE RADIO FREQUENCY NOISE IN THE GROUND SYSTEM. THE CONDITION WHERE A GROUND CONDUCTOR IS GIRDLED DURING A LIGHTNING STRIKE RESULTS IN PHENOMENA KNOWN AS SURGE IMPEDANCE LOADING. SURGE IMPEDANCE LOADING IS A RESULT OF VOLTAGE AND CURRENT REACHING 500,000 VOLTS AND 10,000 AMPS FOR A SHORT DURATION. GIRDLING FURTHER INCREASES THE IMPEDANCE AT LIGHTNING FREQUENCIES OF 100 KILOHERTZ TO 100 MEGAHERTZ. AT THESE POWER AND FREQUENCY LEVELS ANY INCREASE IN THE IMPEDANCE OF THE GROUND CONDUCTOR MUST BE CONTROLLED. DURING LIGHTNING DISCHARGE CONDITIONS A LOW INDUCTIVE IMPEDANCE PATH IS MORE IMPORTANT THAN A LOW DC RESISTANCE PATH.
- IF LOCAL CODES DICTATE THAT INDIVIDUAL GROUNDING CONDUCTORS MUST BE RUN IN METAL CONDUIT OR RACEWAY, THEN THE CONDUIT OR RACEWAY MUST BE BONDED AT EACH END OF THE RUN WITH A BONDING JUMPER SIZED EQUAL TO THE INDIVIDUAL GROUNDING CONDUCTOR OR AS REQUIRED BY 2017 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.
- NEVER REMOVE, ALTER, OR ATTEMPT TO REPAIR CONDUCTORS OR CONDUIT SYSTEMS PROVIDING GROUNDING OR ELECTRICAL BONDING FOR ANY ELECTRICAL EQUIPMENT UNTIL ALL POWER IS REMOVED FROM EQUIPMENT. WARN ALL PERSONNEL OF THE UNGROUNDED CONDITION OF THE EQUIPMENT. DISPLAY APPROPRIATE WARNING SIGNS, SUCH AS DANGER TAGS, TO WARN PERSONNEL OF THE POSSIBLE HAZARDS.
- WHERE A CONFLICT IS DETERMINED WITH RESPECT TO GROUNDING REQUIREMENTS PER MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTIONS.
- GROUND RODS SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA FROM 100 PERCENT DOMESTIC STEEL TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENTS AND THE STEEL PRODUCTS PROCUREMENT ACT.



**10 FT. GROUND ROD**

**GROUND RODS**

NOT TO SCALE

**NOTES**

- TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
- THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
- COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
- GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.
- TOP OF GROUND RODS FOR AIRFIELD LIGHT FIXTURES AND TAXI GUIDANCE SIGNS, SHALL BE 12" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN.
- GROUND RODS FOR INDIVIDUAL SPLICE CANS SHALL BE 3/4-IN DIAMETER BY 10 FOOT LONG. WHERE GROUND RESISTANCE EXCEEDS 25 OHMS FURNISH AND INSTALL A SECOND GROUND ROD SPACED MINIMUM OF 10 FEET APART (ONE ROD LENGTH APART), AND CONNECT TO FIRST GND ROD.

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**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

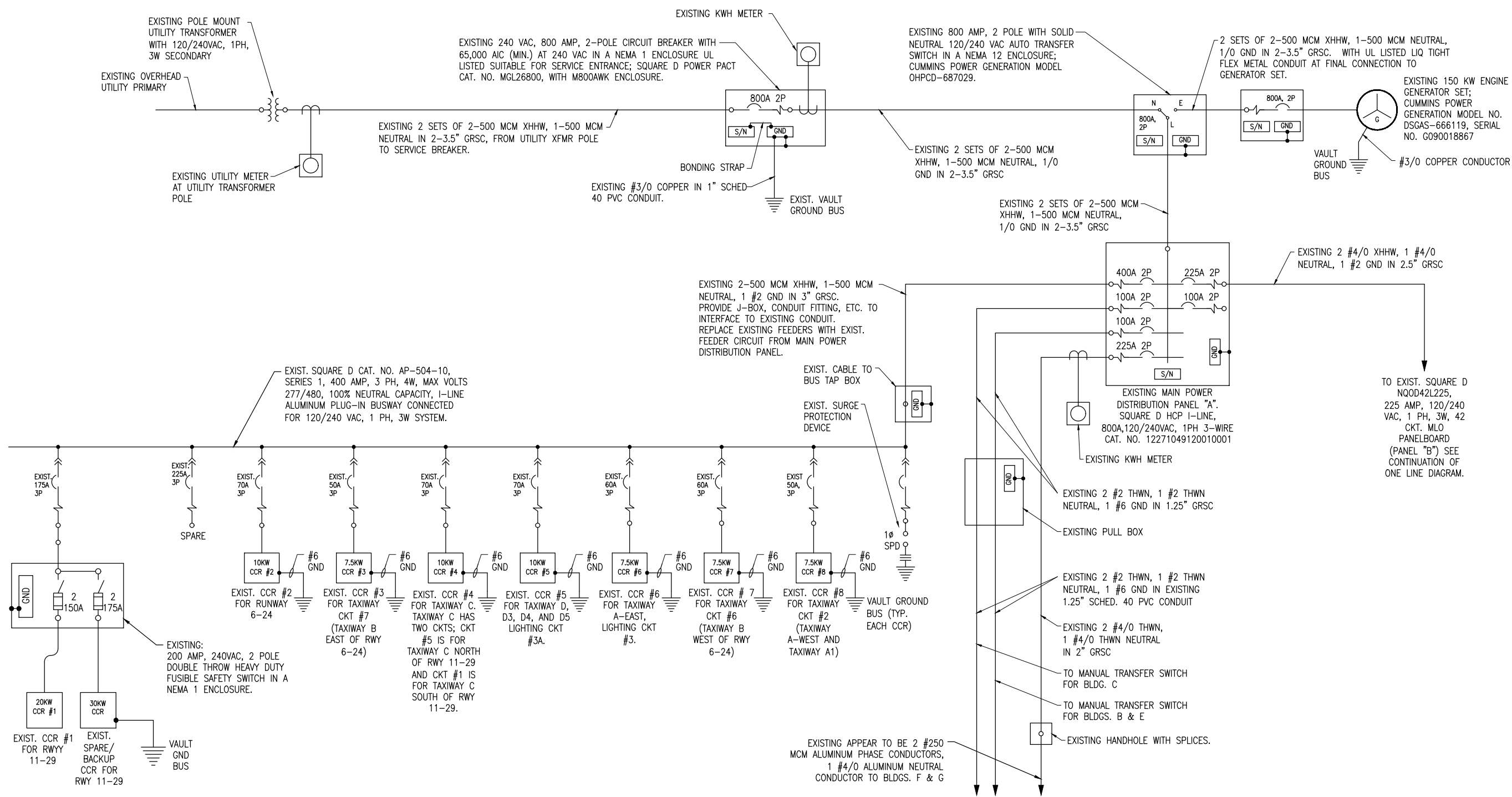
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SHEET TITLE

**GROUNDING NOTES**





**EXISTING ELECTRICAL ONE LINE DIAGRAM FOR VAULT**

**NOTES:**

- EXISTING ONE-LINE DIAGRAM WIRING IS BASED ON FIELD DATA AND INFORMATION PROVIDED BY OTHERS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND WIRING AND REPORT ANY VARIATIONS TO THE PROJECT ENGINEER AND THE RESIDENT ENGINEER/TECHNICIAN.
- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND THE AIRPORT MAINTENANCE STAFF. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE THE EXTENT OF THE WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING OR CONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2G (CURRENT ISSUE IN EFFECT) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- WHEN A RUNWAY IS CLOSED THE RUNWAY LIGHTING AND ASSOCIATED AIRFIELD NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF.
- WHEN A TAXIWAY IS CLOSED THE RESPECTIVE TAXIWAY LIGHTING SHALL BE SHUT OFF.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

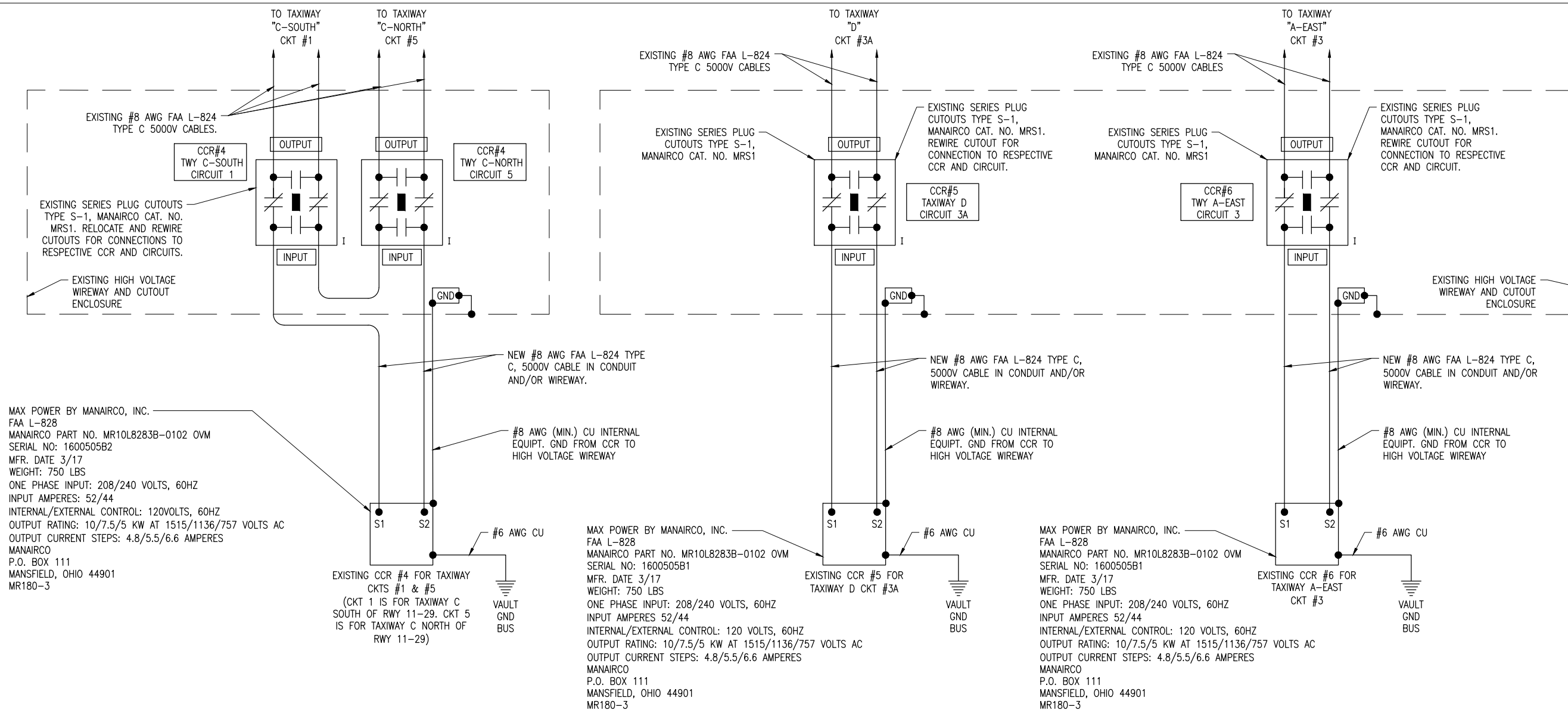
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**EXISTING  
ELECTRICAL ONE  
LINE DIAGRAM FOR  
VAULT**





**NOTES:**

- KEEP ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND RESIDENT ENGINEER/TECHNICIAN. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS.
- VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, WORKING ON, RELOCATING, RECONNECTING, AND/OR INSTALLING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICES. CONTRACTOR SHALL REPORT ANY VARIATIONS, DEFICIENCIES, AND/OR APPARENT SAFETY CONCERNS TO THE PROJECT ENGINEER AND THE RESIDENT ENGINEER/TECHNICIAN, ALSO REFER TO EOR-47643 WHERE APPLICABLE.
- IDENTIFY EACH RESPECTIVE CIRCUIT PRIOR TO PERFORMING WORK ON THAT CIRCUIT.
- NEVER PULL A CUTOUT WITH THE CIRCUIT ENERGIZED. SHUTOFF CIRCUITS PRIOR TO PULLING A SERIES PLUG CUTOUT.
- THE RESPECTIVE PERSONNEL PERFORMING AIRFIELD LIGHTING WORK, VAULT WORK, AND/OR TESTS SHALL BE FAMILIAR WITH, AND QUALIFIED TO WORK ON, 5000 VOLT AIRFIELD LIGHTING SERIES CIRCUITS, CONSTANT CURRENT REGULATORS, AND ASSOCIATED AIRPORT ELECTRICAL VAULT EQUIPMENT.
- CONTRACTOR SHALL EXERCISE CAUTION, PRACTICE SAFETY, AND DISCONNECT THE SERIES CIRCUITS FROM THE RESPECTIVE CONSTANT CURRENT REGULATORS, AS APPLICABLE WHEN PERFORMING WORK ON THE AIRFIELD LIGHTING OR WORK THAT MIGHT AFFECT THE AIRFIELD LIGHTING. CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS TO DISCONNECT POWER AND LOCKOUT CIRCUITS FOR PROTECTION OF PERSONNEL.
- MEGGER TEST (WITH AN INSULATION RESISTANCE TESTER) AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING SYSTEMS AND AGAIN AFTER AIRFIELD LIGHTING MODIFICATIONS, ADDITIONS, UPGRADES, AND/OR OTHER WORK HAS BEEN COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE, (WITH AN OHMMETER). THESE ARE REQUIRED TESTS IN ACCORDANCE WITH IDOT DIVISION OF AERONAUTICS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS. PROVIDE TEST RESULTS TO THE PROJECT ENGINEER WITHIN 5 BUSINESS DAYS OF CONDUCTING TESTS.
- THE RESPECTIVE RUNWAY AND TAXIWAY LIGHTING CCR'S SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, MODIFICATIONS, ADDITIONS, AND/OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING SYSTEMS, AND AFTER THE RESPECTIVE WORK HAS BEEN COMPLETED. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATIONS. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE RESIDENT ENGINEER/TECHNICIAN. TEST RESULTS SHALL BE PROVIDED TO THE PROJECT ENGINEER AND RESIDENT ENGINEER/TECHNICIAN WITHIN 5 BUSINESS DAYS OF CONDUCTING TESTS.

**EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAY CKTS 1, 3, 3A, & 5**

**LEGEND**

- "I" DENOTES PLUG CUTOUT WITH PLUG INSERTED
- "P" DENOTES PLUG CUTOUT WITH PLUG PULLED
- "CCR" DENOTES CONSTANT CURRENT REGULATOR

NOTE: INFORMATION SHOWN ON THIS SHEET IS TO HELP WITH IDENTIFYING EXISTING CONDITIONS.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

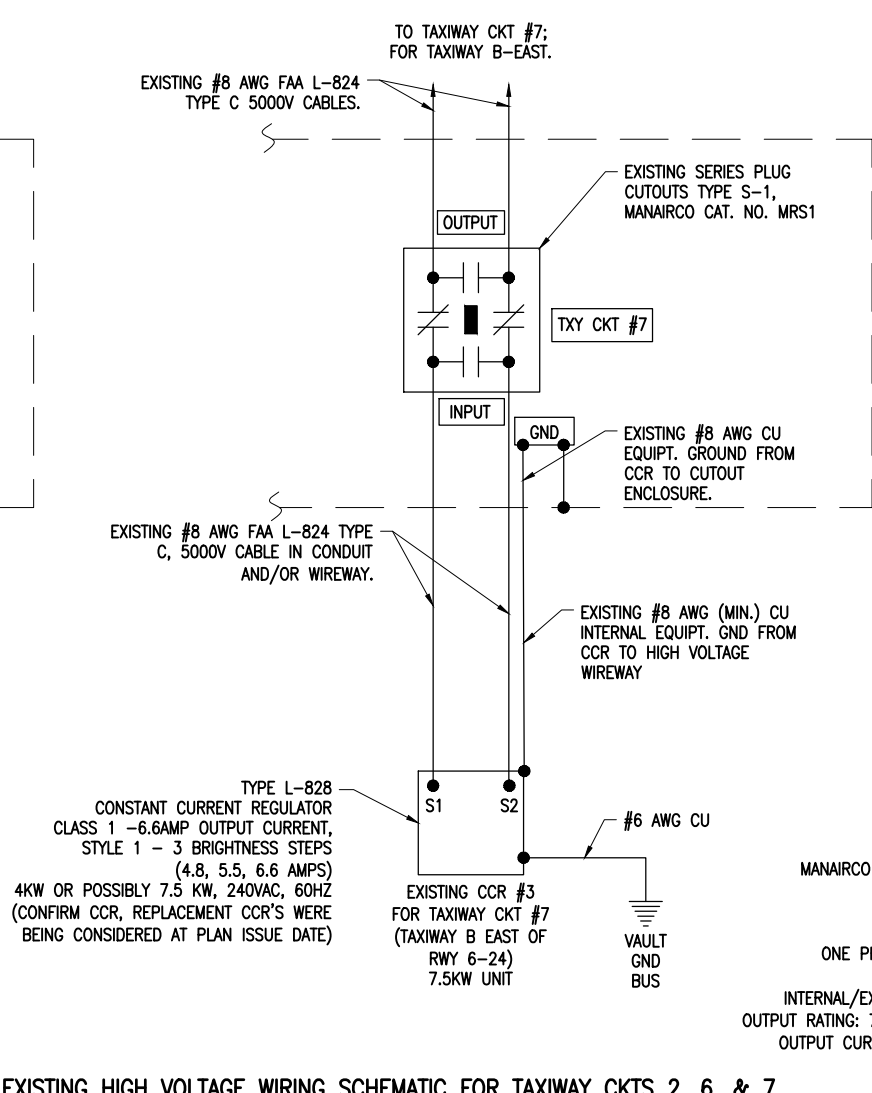
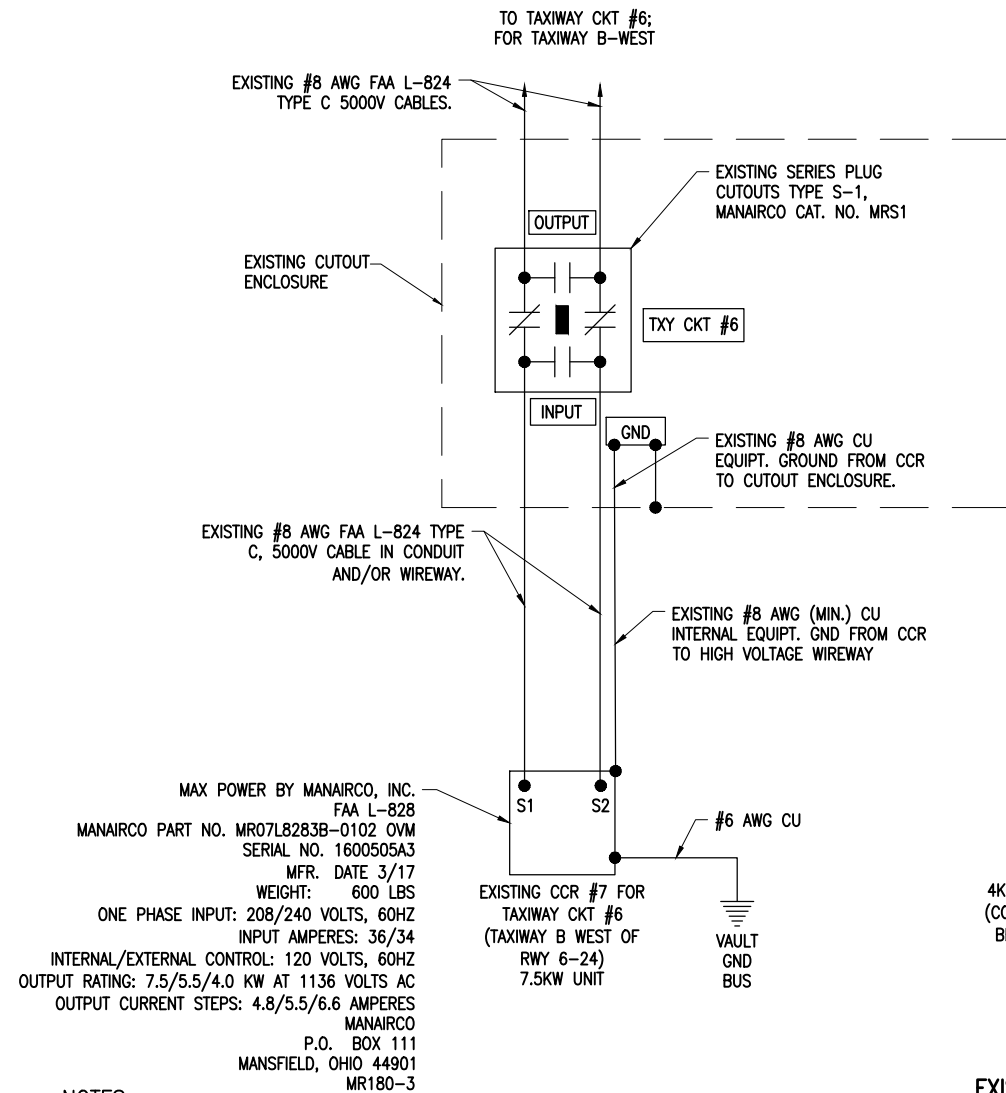
IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

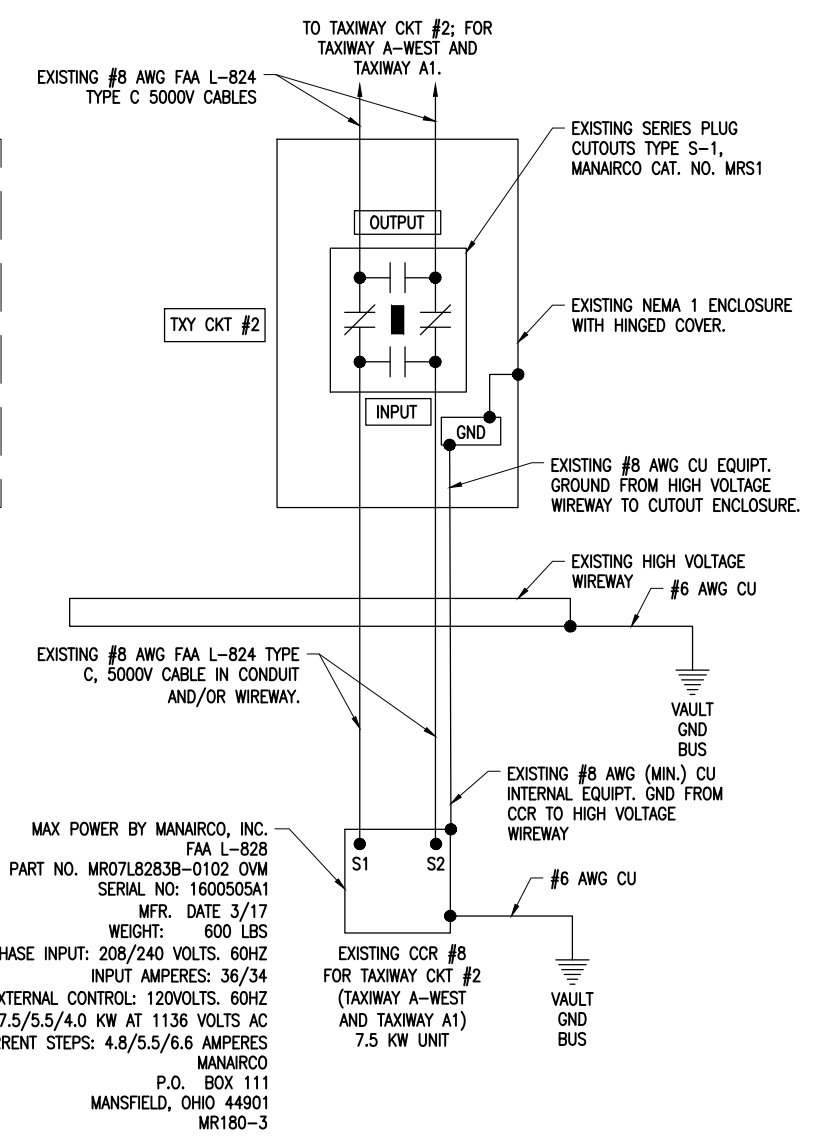
ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: E-603.DWG  
DESIGN BY: KNL 04/07/2019  
DRAWN BY: CWS 04/08/2019  
REVIEWED BY: KNL 06/26/2019

SHEET TITLE

**EXISTING HIGH  
VOLTAGE WIRING  
SCHEMATIC FOR  
TWY CKTS 1,3,3A&5**



EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAY CKTS 2, 6, & 7



**LEGEND**

"I" DENOTES PLUG CUTOUP WITH PLUG INSERTED

"P" DENOTES PLUG CUTOUP WITH PLUG PULLED

"CCR" DENOTES CONSTANT CURRENT REGULATOR

NOTE: INFORMATION SHOWN ON THIS SHEET IS  
TO HELP WITH IDENTIFYING EXISTING CONDITIONS.

- NOTES:**
- KEEP ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND RESIDENT ENGINEER/TECHNICIAN. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
  - EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS.
  - VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, WORKING ON, RELOCATING, RECONNECTING, AND/OR INSTALLING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICES. CONTRACTOR SHALL REPORT ANY VARIATIONS, DEFICIENCIES, AND/OR APPARENT SAFETY CONCERNS TO THE PROJECT ENGINEER RESIDENT ENGINEER/TECHNICIAN, ALSO REFER TO EOR-47643 WHERE APPLICABLE.
  - IDENTIFY EACH RESPECTIVE CIRCUIT PRIOR TO PERFORMING WORK ON THAT CIRCUIT.
  - NEVER PULL A CUTOUP WITH THE CIRCUIT ENERGIZED. SHUT OFF CIRCUITS PRIOR TO PULLING A SERIES PLUG CUTOUP.
  - THE RESPECTIVE PERSONNEL PERFORMING AIRFIELD LIGHTING WORK, VAULT WORK, AND/OR TESTS SHALL BE FAMILIAR WITH, AND QUALIFIED TO WORK ON, 5000 VOLT AIRFIELD LIGHTING SERIES CIRCUITS, CONSTANT CURRENT REGULATORS, AND ASSOCIATED AIRPORT ELECTRICAL VAULT EQUIPMENT.
  - CONTRACTOR SHALL EXERCISE CAUTION, PRACTICE SAFETY, AND DISCONNECT THE SERIES CIRCUITS FROM THE RESPECTIVE CONSTANT CURRENT REGULATORS, AS APPLICABLE WHEN PERFORMING WORK ON THE AIRFIELD LIGHTING OR WORK THAT MIGHT AFFECT THE AIRFIELD LIGHTING. CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS TO DISCONNECT POWER AND LOCKOUT CIRCUITS FOR PROTECTION OF PERSONNEL.
  - MEGGER TEST (WITH AN INSULATION RESISTANCE TESTER) AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING SYSTEMS AND AGAIN AFTER AIRFIELD LIGHTING MODIFICATIONS, ADDITIONS, UPGRADES, AND/OR OTHER WORK HAS BEEN COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE, (WITH AN OHMMETER). THESE ARE REQUIRED TESTS IN ACCORDANCE WITH IDOT DIVISION OF AERONAUTICS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS. PROVIDE TEST RESULTS TO THE PROJECT ENGINEER WITHIN 5 BUSINESS DAYS OF CONDUCTING TESTS.
  - THE RESPECTIVE RUNWAY AND TAXIWAY LIGHTING CCR'S SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, MODIFICATIONS, ADDITIONS, AND/OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING SYSTEMS, AND AFTER THE RESPECTIVE WORK HAS BEEN COMPLETED. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATIONS. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE RESIDENT ENGINEER/TECHNICIAN. TEST RESULTS SHALL BE PROVIDED TO THE PROJECT ENGINEER AND RESIDENT ENGINEER/TECHNICIAN WITHIN 5 BUSINESS DAYS OF CONDUCTING TESTS.

**PHASE 2:  
RECONSTRUCT  
TAXIWAY B**

IDA No: MTO-4752  
SBG Project No:  
3-17-SBGP-156/159  
Contract No. CO067

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: 04/17/2020  
PROJECT NO: 19A0001  
CAD FILE: E-604.DWG  
DESIGN BY: KNL 04/07/2019  
DRAWN BY: CWS 04/08/2019  
REVIEWED BY: KNL 06/26/2019

SHEET TITLE

**EXISTING HIGH  
VOLTAGE WIRING  
SCHEMATIC FOR  
TWY CKTS 2,6&7**

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