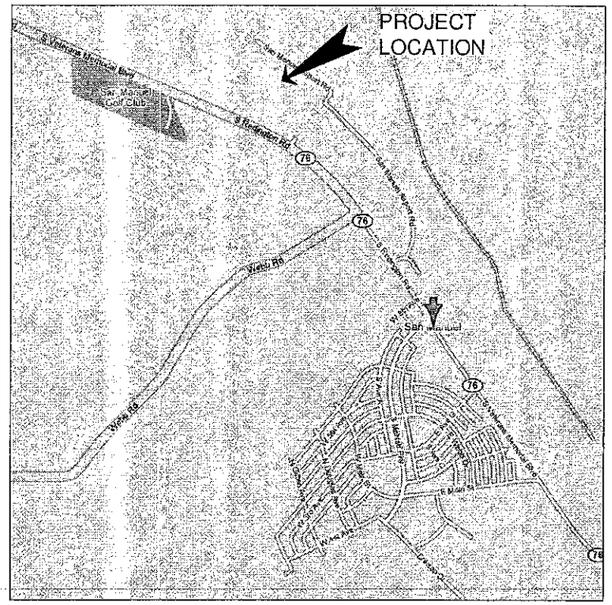


SAN MANUEL AIRPORT

PINAL COUNTY, ARIZONA

CONSTRUCTION DRAWINGS

A.I.P. No. 3-04-0080-001-2007
A.D.O.T. No. E8F75
A.C.I. PROJECT No. 085864

PREPARED BY:
ARMSTRONG CONSULTANTS, INC.
JUNE, 2008

VICINITY MAP
N.T.S.

Kevin E. Koler
REGISTERED PROFESSIONAL ENGINEER

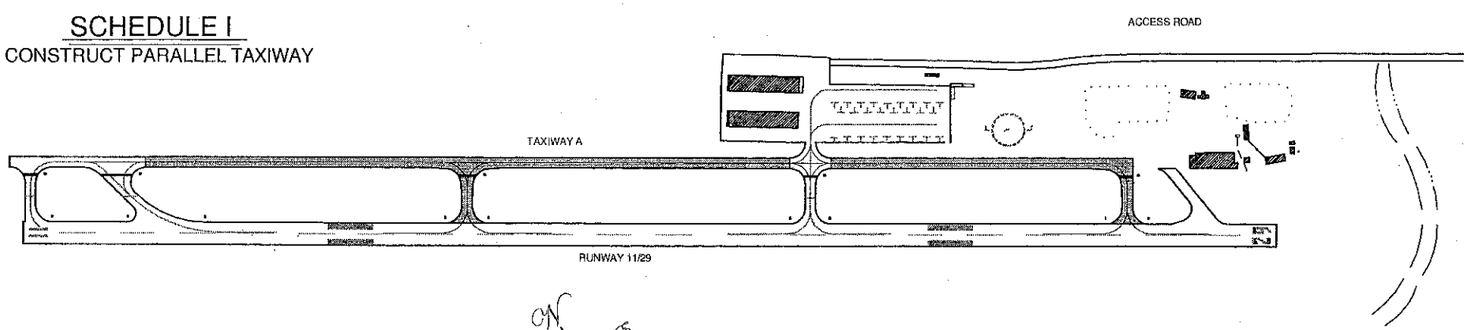
Registered Professional Engineer (Civil)
CERTIFICATE NO. 641766
KEITH E. KOLER
Date Signed 6/18/2008
ARIZONA U.S.A.

DATE

INDEX TO SHEETS Expires 12/31/2010

COVER SHEET	1
LEGEND, NOTES AND SURVEY CONTROL	2
CLOSURES, THRESHOLDS & BARRICADES	3
CONSTRUCTION OPERATIONS PLAN OUTLINE	4
TAXIWAY A PROFILE	5
TAXIWAY A LAYOUT AND GRADING	6 - 12
TYPICAL SECTION AND DETAILS	13
SIGNAGE LAYOUT PLAN	14
PAVEMENT MARKING PLAN	15
TAXIWAY A CROSS SECTIONS	16 - 19
BORROW AREA	20 - 22
CONCRETE PAN GUTTER PLAN	23

SCHEDULE I
CONSTRUCT PARALLEL TAXIWAY



KEY MAP
N.T.S.

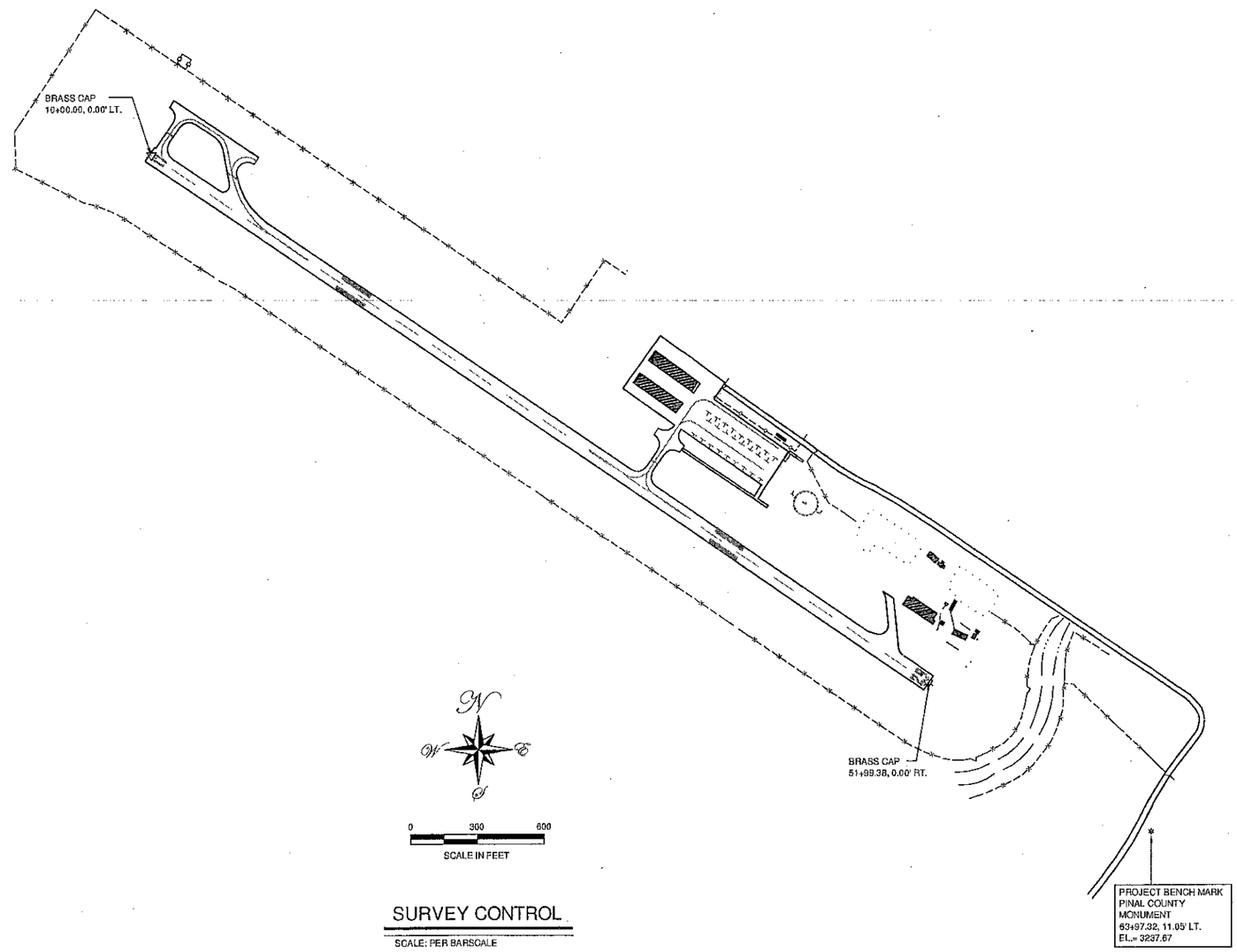
ARMSTRONG CONSULTANTS, Inc.
airport engineering and planning services

861 Rood Avenue
Grand Junction, CO 81501
ph: 970.242.0101 fax: 970.241.1769
www.armstrongconsultants.com

5864101

LEGEND

- 3221 — EXISTING GROUND CONTOUR (1' INTERVAL)
- EXISTING BARBED WIRE FENCE
- EXISTING WATER LINE
- EXISTING UNDERGROUND POWER OR TELE. LINE
- EXISTING BENCH MARK OR CONTROL POINT
- EXISTING FEATURE AS NOTED
- EXISTING BUILDING
- EXISTING ASPHALT PAVEMENT
- EXISTING CULVERT
- EXISTING DUCT BANK
- 21 — PROPOSED GROUND CONTOUR (1' INTERVAL)
- PROPOSED OR EXISTING ASPHALT PAVEMENT AS INDICATED
- PROPOSED UNLIGHTED SIGN
- ASPHALT REMOVAL
- PROPOSED CULVERT
- PROPOSED DUCT BANK



SURVEY CONTROL

SCALE: PER BARSCALE

GENERAL NOTES

1) SURVEY CONTROL POINTS ARE SHOWN ON THIS SHEET.

2) SEE GRADING PLANS AND TYPICAL SECTIONS FOR ADDITIONAL VERTICAL INFORMATION.

3) ADD 3200 TO ALL PROPOSED CONTOURS AND SPOT ELEVATIONS.

4) ESTIMATED QUANTITIES ARE CONSIDERED APPROXIMATE ONLY EXCEPT WHERE PLAN QUANTITIES ARE SPECIFIED FOR PAYMENT. ACTUAL QUANTITIES SHALL BE DETERMINED BY FIELD MEASUREMENT OR SPECIFICATIONS.

5) THE CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS FOR THE ENGINEER'S APPROVAL PRIOR TO ORDERING.

6) THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY CONSTRUCTION PERMITS AS NECESSARY FOR THE PROJECT.

7) THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A WORK SCHEDULE AND PROPOSED CONSTRUCTION METHODS AT THE PRE-CONSTRUCTION CONFERENCE.

8) THE CONTRACTOR SHALL OBTAIN APPROVAL FROM AIRPORT MANAGEMENT AND THE ENGINEER PRIOR TO ESTABLISHING CONSTRUCTION ACCESS OR HAUL ROADS. EXISTING PAVEMENT SURFACES OTHER THAN AIRFIELD PAVEMENTS SHALL BE USED TO THE MAXIMUM EXTENT POSSIBLE.

9) THE CONTRACTOR SHALL MINIMIZE DISTURBANCE INCLUDING RUTS PRODUCED BY VEHICLES AND EQUIPMENT IN NON-PAVEMENT AREAS WITHIN ALL CONSTRUCTION AREAS. ALL DISTURBED AREAS IN THESE LOCATIONS SHALL BE RECLAIMED AT NO ADDITIONAL COST TO THE SPONSOR. DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT OR FACILITIES DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE SPONSOR.

10) CONTRACTOR SHALL COORDINATE ALL ON-SITE WASTE MATERIAL DISPOSAL WITH ENGINEER AND AIRPORT.

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS IN THE FIELD. THE INFORMATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY LOCATOR NOTIFICATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION/EMBANKMENT TO REQUEST FIELD LOCATION OF UTILITIES.

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airport engineering and planning services
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Grand Junction, CO 81501
ph: 970.242.0101 fax: 970.241.1769
www.armstrongconsultants.com

SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 085864
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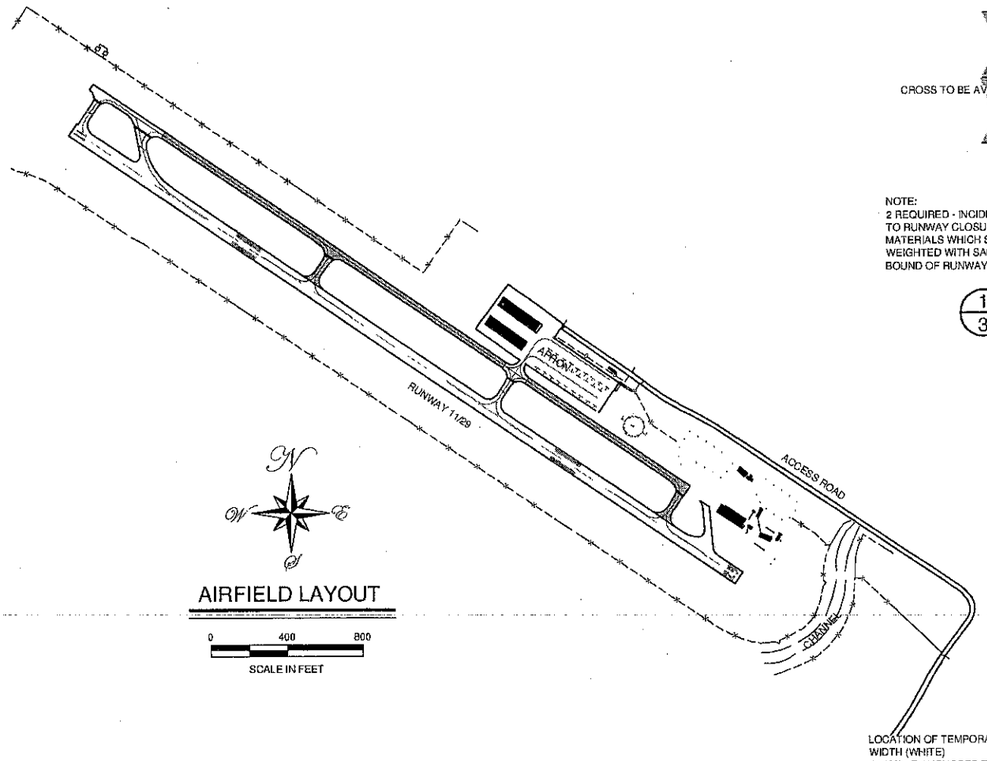
Drawn: JOS
Checked: RPR
Approved: KEK

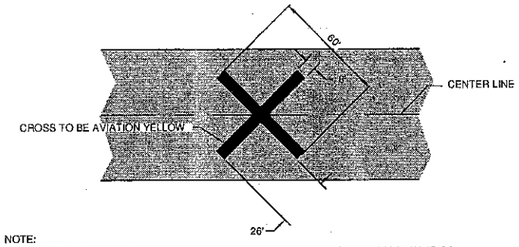
LEGEND, NOTES AND SURVEY CONTROL



AIRFIELD LAYOUT

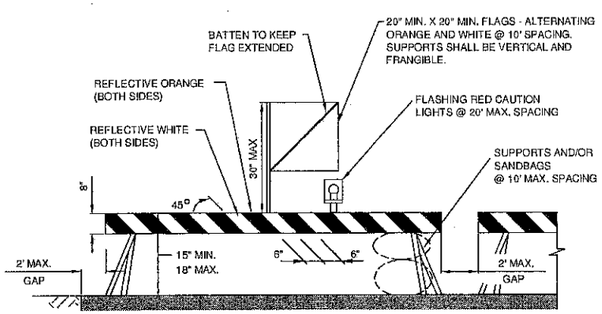
0 400 800

SCALE IN FEET



NOTE:
2 REQUIRED - INCIDENTAL TO BE APPLIED OVER RUNWAY NUMERALS ON RUNWAY PRIOR TO RUNWAY CLOSURE. CROSSES TO BE CONSTRUCTED OF PLYWOOD OR OTHER FLAT MATERIALS WHICH SHALL BE SECURELY FASTENED TO PAVEMENT AND/OR ADEQUATELY WEIGHTED WITH SAND BAGS. AFTER PAVEMENT IS PULVERIZED, PLACE CROSSES OUT-BOUND OF RUNWAY ENDS ON EXTENDED CENTERLINE.

1/3 RUNWAY CLOSURE CROSS
NOT TO SCALE



2/3 TYPE 1 BARRICADE
NOT TO SCALE

NOTES:
ALL BARRICADE MATERIALS AND CAUTION LIGHTS SHALL CONFORM TO THE STANDARDS SET FORTH IN THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

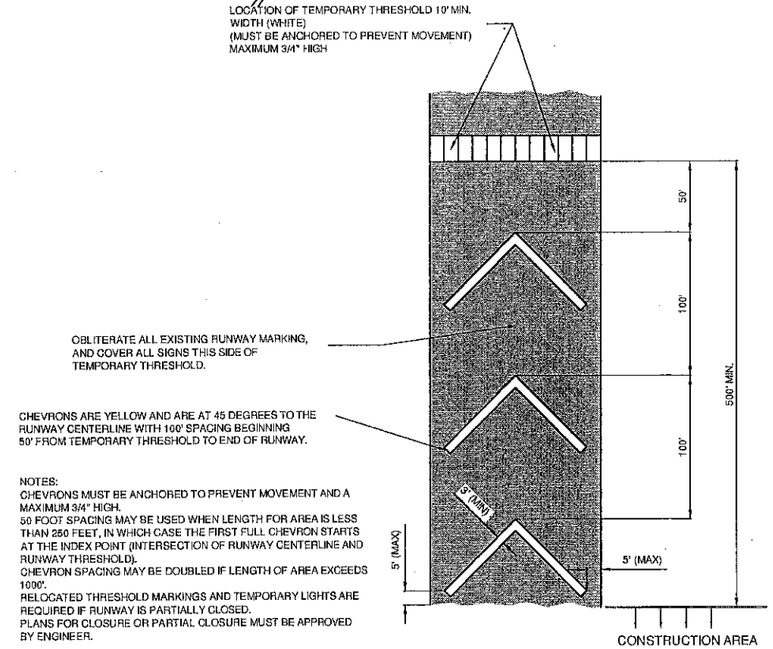
THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED WITH SMOOTH SURFACE TYPE REFLECTIVE SHEETING.

BARRICADES SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE FACILITY TO BE CLOSED EXCEPT FOR 2 FOOT MAXIMUM GAPS AT STANDARD LENGTH PANEL ENDS.

THE BARRICADES SHALL BE WEIGHTED AGAINST PROPWASH AND CAPABLE OF WITHSTANDING UP TO 100 M.P.H. WIND FORCES.

FLASHING RED CAUTION LIGHTS SHALL BE BATTERY OPERATED AND SHALL MAINTAIN SUCH INTENSITY SO AS TO BE READILY IDENTIFIED FROM DISTANCES OF AT LEAST 200 FT. DURING DARKNESS.

THE CONTRACTOR SHALL CHECK ALL BARRICADES AND LIGHTS EACH DAY BEFORE LEAVING THE AIRPORT TO ENSURE LIGHTS ARE WORKING PROPERLY AND MAY NOT LEAVE WITHOUT ALL BARRICADES AND LIGHTS BEING IN PROPER WORKING ORDER.



NOTES:
CHEVRONS MUST BE ANCHORED TO PREVENT MOVEMENT AND A MAXIMUM 3/4" HIGH.
50 FOOT SPACING MAY BE USED WHEN LENGTH FOR AREA IS LESS THAN 250 FEET, IN WHICH CASE THE FIRST FULL CHEVRON STARTS AT THE INDEX POINT (INTERSECTION OF RUNWAY CENTERLINE AND RUNWAY THRESHOLD).
CHEVRON SPACING MAY BE DOUBLED IF LENGTH OF AREA EXCEEDS 1000'.
RELOCATED THRESHOLD MARKINGS AND TEMPORARY LIGHTS ARE REQUIRED IF RUNWAY IS PARTIALLY CLOSED.
PLANS FOR CLOSURE OR PARTIAL CLOSURE MUST BE APPROVED BY ENGINEER.

3/3 TEMPORARY RELOCATED THRESHOLD MARKINGS
NOT TO SCALE

GENERAL NOTES - ALL PHASES

1) CLOSURES, VEHICLE MARKING, COMMUNICATIONS AND OTHER SAFETY REQUIREMENTS SHALL BE IN CONFORMANCE WITH THE CONTRACTOR'S CONSTRUCTION OPERATIONS PLAN WHICH IS SPECIFIED IN CONTRACT SPECIAL PROVISION 21. THE CONSTRUCTION OPERATIONS PLAN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO NOTICE-TO-PROCEED BEING ISSUED. THE CONSTRUCTION OPERATIONS PLAN WILL BE DISCUSSED AT THE PRE-CONSTRUCTION CONFERENCE. THE CONSTRUCTION OPERATIONS PLAN AND/OR THE WORK PHASING SHOWN HEREON MAY BE MODIFIED AT ANY TIME BY THE AIRPORT MANAGER. THE CONTRACTOR MAY AMEND THE CONSTRUCTION OPERATIONS PLAN AND/OR THE WORK PHASING SHOWN HEREON WITH PRIOR APPROVAL OF THE AIRPORT MANAGER, ENGINEER, AND FEDERAL AVIATION ADMINISTRATION.

2) THE AIRPORT MANAGER FOR THIS PROJECT IS JIM PETTY (520) 866-6545. ALL NOTAMS REQUIRED DURING CONSTRUCTION SHALL BE FILED BY THE AIRPORT MANAGER OR HIS AUTHORIZED AGENT.

3) THE ENGINEER FOR THIS PROJECT IS ARMSTRONG CONSULTANTS, INC. THE PROJECT MANAGER FOR ARMSTRONG CONSULTANTS, INC. IS KEITH KOLER 970-242-0101.

4) THE CONTRACTOR SHALL NOTIFY THE AIRPORT MANAGER AND THE ENGINEER A MINIMUM OF 48 HOURS BEFORE COMMENCING ANY CONSTRUCTION THAT WILL HAVE DIRECT OR INDIRECT IMPACT TO AIRCRAFT OPERATIONS OR INVOLVE MOVEMENT OF MEN AND EQUIPMENT IN AIR OPERATIONS AREAS (AOA).

5) EQUIPMENT MAINTENANCE, FUEL STORAGE AND OTHER ACTIVITIES OF THE CONTRACTOR CONDUCTED ON AIRPORT PROPERTY WHICH MAY DIRECTLY OR INDIRECTLY IMPACT AIR OPERATIONS OR SAFETY SHALL BE SUBJECT TO REVIEW OF THE AIRPORT MANAGER. THE AIRPORT MANAGER SHALL HAVE THE AUTHORITY TO REQUIRE THE CONTRACTOR TO TAKE REASONABLE PRECAUTIONS TO PROTECT THE INTERESTS OF PINAL COUNTY AND THE USERS OF SAN MANUEL AIRPORT.

6) THE CONTRACTOR SHALL MEET WITH AIRPORT OPERATIONS PERSONNEL PRIOR TO COMMENCING CONSTRUCTION TO IDENTIFY ONSITE UTILITIES AND OWNERSHIP OF UTILITIES FOR FUTURE LOCATION PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR DETAILED UTILITIES LOCATION IN ALL WORK AREAS.

7) CONTRACTOR STORAGE YARD AND FIELD OFFICES/TRAILERS SHALL BE LOCATED AS DIRECTED BY THE AIRPORT MANAGER. FINAL LOCATION(S) WILL BE DETERMINED AT THE PRE-CONSTRUCTION COORDINATION MEETING.

8) ACCESS TO THE AIRPORT BY THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS IS LIMITED TO THE LOCATION(S) AS DIRECTED BY THE AIRPORT MANAGER. HAUL ROUTES AND OTHER ACTIVITIES ON THE AIRPORT BY THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS SHALL BE COORDINATED WITH AND APPROVED IN ADVANCE BY THE AIRPORT MANAGER OR HIS AUTHORIZED AGENT. ACCESS ACROSS THE APRON AREAS WILL BE STRICTLY LIMITED AND CONTROLLED AND SHALL BE STRICTLY ON AN AS-NEEDED BASIS.

9) RUNWAY 11/29 AND TAXIWAYS SHALL BE KEPT OPEN TO AIR TRAFFIC TO THE MAXIMUM EXTENT POSSIBLE. THERE SHALL BE NO CROSSING OF RUNWAY 11/29 WHILE IT IS OPEN. THE CONTRACTORS CONSTRUCTION OPERATIONS PLAN SHALL ADDRESS ANY PROPOSED INTERRUPTIONS TO AIR TRAFFIC IN DETAIL.

10) THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO THE CONSTRUCTION AREAS AND PHASING IDENTIFIED ON THESE PLANS. ALL OTHER AREAS OF THE AIRPORT ARE RESTRICTED. THE CONTRACTOR SHALL RECEIVE PERMISSION FROM THE AIRPORT MANAGER OR HIS AUTHORIZED AGENT PRIOR TO WORKING OR TRAVELING IN UNAUTHORIZED AREAS OF THE AIRPORT.

11) THIS CONSTRUCTION AND SAFETY PHASING PLAN IDENTIFIES AREAS FOR PHASING ORIENTATION. SEE CONSTRUCTION DRAWINGS FOR DETAILED REQUIREMENTS OF THE WORK.

12) ALL BARRICADES, SIGNS AND OTHER SAFETY DEVICES AND PROCEDURES SHALL BE IN ACCORDANCE WITH CONTRACT SPECIAL PROVISIONS 15 AND 21, THE PROJECT SPECIFICATIONS, THE PROJECT PLANS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

13) ALL WORK DESCRIBED ON THE CONSTRUCTION OPERATIONS PLAN OUTLINE IS INCIDENTAL.

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Grand Junction, CO 81501
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SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
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Drawn: JOS
Checked: RPR
Approved: KEK

CLOSURES, THRESHOLDS, & BARRICADES

SAN MANUEL AIRPORT
CONSTRUCTION OPERATIONS PLAN OUTLINE
AIP #3-04-0080-001-2007

ALL WORK DESCRIBED ON THE CONSTRUCTION OPERATIONS PLAN OUTLINE IS INCIDENTAL.
THE ENGINEER FOR THIS PROJECT IS ARMSTRONG CONSULTANTS, INC. THE PROJECT MANAGER IS KEITH KOLER 970-242-0101.

A. PROJECT DESCRIPTION
SCHEDULE I: PARALLEL TAXIWAY.

THE PROPOSED DURATION OF THE PROJECT, IS 75 CALENDAR DAYS FOR SCHEDULE I.
SEE SPECIAL PROVISION 21 FOR FURTHER SAFETY INFORMATION.

B. RUNWAY LIGHTING AND CLOSURE
THE RUNWAY IS NOT LIGHTED. THE CONTRACTOR SHALL ADVISE THE AIRPORT MANAGER AND THE ENGINEER AT LEAST 48 HOURS IN ADVANCE OF ANY PROPOSED CONSTRUCTION ACTIVITY SO THE NECESSARY NOTAMS CAN BE ISSUED. THE AIRPORT MANAGER SHALL ISSUE THE NOTAM WHICH SPECIFICALLY DETAILS THE CLOSURE OF THE RUNWAY.

C. WORK IN RUNWAY AND TAXIWAY SAFETY AREAS, OFZ'S AND OFA'S
THE RUNWAY WILL BE SHORTENED DURING THE CONSTRUCTION OF SCHEDULE I. A MINIMUM OF 3000 FT. OF RUNWAY 11/29 SHALL BE OPEN WHEN POSSIBLE. CLOSURE(S) OF RUNWAY 11/29 SHALL BE KEPT TO A MINIMUM. THE CONTRACTOR WILL BE REQUIRED TO PLACE THE YELLOW CLOSURE CROSSES OVER THE RUNWAY NUMBERS. THE CROSSES AND THRESHOLD MARKINGS ARE TO BE CONSTRUCTED OF PLYWOOD OR OTHER FLAT MATERIALS WHICH SHALL BE SECURELY FASTENED TO PAVEMENT AND/OR ADEQUATELY WEIGHTED WITH SAND BAGS.

D. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY, INCLUDING POSSIBLE SAFETY PROBLEMS
WHEN THE TIE INS OF THE PARALLEL TAXIWAY AT THE END OF RUNWAY 29 AND THE MID FIELD CONNECTING TAXIWAY ARE BEING MADE THE RUNWAY WILL EITHER BE CLOSED OR THE RUNWAY THRESHOLD WILL BE RELOCATED.

E. NAVAIDS THAT COULD BE AFFECTED
NO NAVAIDS EXIST.

F. METHODS OF SEPARATING VEHICLES AND PEDESTRIAN CONSTRUCTION TRAFFIC FROM THE AIRPORT MOVEMENT AREAS
BARRICADES, CONES AND BARRELS SHALL BE PLACED TO PREVENT ANY AIRCRAFT FROM ENTERING CONSTRUCTION AREAS AND TO PREVENT CONSTRUCTION VEHICLES FROM ENTERING AREAS OF AIRCRAFT ACTIVITY. AT A MINIMUM, VEHICLES OPERATED ON THE AIRPORT PROPERTY SHALL BE MARKED WITH ORANGE AND WHITE FLAGS OR FLASHING YELLOW BEACONS DURING DAYLIGHT HOURS. DURING HOURS OF DARKNESS OR LOW VISIBILITY, THEY SHALL BE MARKED WITH AT LEAST YELLOW BEACONS. ALL BARRICADES, SIGNS AND OTHER SAFETY DEVICES AND PROCEDURES SHALL BE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS, PROJECT PLANS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

G. PROCEDURES AND EQUIPMENT, SUCH AS BARRICADES TO DELINEATE CLOSED CONSTRUCTION AREAS FROM THE AIRPORT OPERATIONAL AREAS, AS NECESSARY
THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT MANAGER THE AREAS THAT ARE TO BE BARRICADED TO DELINEATE THE CLOSED AREAS OF THE RUNWAY AND KEEP TRAFFIC OFF THE APRON AND TAXIWAYS AS MUCH AS POSSIBLE. THESE AREAS WILL BE DELINEATED WITH THE REQUIRED BARRICADES, CONES AND BARRELS.

H. LIMITATIONS ON CONSTRUCTION
THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO THE CONSTRUCTION AREAS IDENTIFIED IN THE PLANS. ALL OTHER AREAS OF THE AIRPORT ARE RESTRICTED. THE CONTRACTOR SHALL RECEIVE PERMISSION FROM THE AIRPORT MANAGER OR HIS AUTHORIZED AGENT PRIOR TO WORKING OR TRAVELING IN UNAUTHORIZED AREAS OF THE AIRPORT.

I. REQUIRED COMPLIANCE OF CONTRACTOR PERSONNEL WITH ALL AIRPORT SAFETY AND SECURITY MEASURES.
ACCESS TO THE AIRPORT BY THE CONTRACTOR, SUBCONTRACTORS AND ENGINEER IS LIMITED TO THE LOCATION(S) AS DIRECTED BY THE AIRPORT MANAGER. ACCESS TO THE EXISTING APRON WILL BE STRICTLY LIMITED AND CONTROLLED AND SHALL BE STRICTLY ON AN AS-NEEDED BASIS.

J. LOCATION OF STOCKPILED CONSTRUCTION MATERIALS, CONSTRUCTION SITE PARKING AND ACCESS AND HAUL ROADS
HAUL ROUTES AND OTHER ACTIVITIES ON THE AIRPORT BY THE CONTRACTOR, SUBCONTRACTORS AND ENGINEER SHALL BE COORDINATED WITH AND APPROVED IN ADVANCE BY THE AIRPORT MANAGER OR HIS AUTHORIZED AGENT. ACCESS TO THE RUNWAY WILL BE STRICTLY LIMITED AND CONTROLLED AND SHALL BE STRICTLY ON AN AS-NEEDED BASIS. THE LOCATION OF THE STAGING AREA WILL BE FINALIZED AT THE PRECONSTRUCTION MEETING WITH THE APPROVAL OF THE AIRPORT MANAGER, ENGINEER AND FAA. EQUIPMENT MAINTENANCE, FUEL STORAGE AND OTHER ACTIVITIES OF THE CONTRACTOR CONDUCTED ON AIRPORT PROPERTY WHICH MAY DIRECTLY OR INDIRECTLY IMPACT AIR OPERATIONS OR SAFETY SHALL BE SUBJECT TO REVIEW OF THE AIRPORT MANAGER. THE AIRPORT MANAGER SHALL HAVE THE AUTHORITY TO REQUIRE THE CONTRACTOR TO TAKE REASONABLE PRECAUTIONS TO PROTECT THE INTEREST OF THE SAN MANUEL AND THE USERS OF THE SAN MANUEL AIRPORT. CONTRACTOR STORAGE YARD AND FIELD OFFICES/TRAILERS SHALL BE LOCATED AS DIRECTED BY THE AIRPORT MANAGER.

K. RADIO COMMUNICATIONS
THE CONTRACTOR'S CONSTRUCTION SUPERINTENDENT SHALL BE REQUIRED TO MONITOR TRANSCEIVER RADIOS TUNED TO THE 122.9 MHZ FREQUENCY AT ALL TIMES. RADIOS SHALL BE SUPPLIED BY THE CONTRACTOR. SUCH RADIOS SHALL BE USED TO OBTAIN PROPER CLEARANCE IN REGARD TO THE MOVEMENT OF EQUIPMENT, TRUCKS, ETC., ON THE AIRPORT. FURTHER, ANY UNUSUAL OCCURRENCES IN THE FLIGHT PATTERN OF APPROACHING OR DEPARTING AIRCRAFT SHALL BE ACKNOWLEDGED BY ALL CONCERNED SO THAT OPERATIONS OF THE AIRPORT AND THE CONSTRUCTION WORK CAN BE SAFELY CARRIED ON AT ALL TIMES.

L. VEHICLE IDENTIFICATION
ALL VEHICLES THAT ARE ASSOCIATED WITH THE CONTRACTOR, SUBCONTRACTORS AND ENGINEER SHALL BE MARKED SO THAT THE AIRPORT MANAGER CAN READILY IDENTIFY SUCH VEHICLES.

M. TRENCHES AND EXCAVATIONS AND COVER REQUIREMENTS
THIS PROJECT IS FOR TAXIWAY CONSTRUCTION AND WILL REQUIRE THE PROPER EDGE DROPS. SHOULD THE CONTRACTOR DISTURB ANY OF THE SAFETY AREAS (TOFA OR ROFA) BEYOND THE SCOPE OF THE CONSTRUCTION AREA, IT SHALL BE REPAIRED AT NO COST TO THE OWNER.

N. PROCEDURES FOR NOTIFYING ARFF PERSONNEL IF WATER LINES OR FIRE HYDRANTS MUST BE DEACTIVATED OR IF EMERGENCY ACCESS ROUTES MUST BE REROUTED OR BLOCKED
THE CONTRACTOR SHALL NOTIFY THE INSPECTOR WHO WILL THEN NOTIFY THE AIRPORT MANAGER. THE AIRPORT MANAGER WILL THEN CONTACT THE PERSONNEL THAT ARE RESPONSIBLE TO MAKE THE NECESSARY ADJUSTMENTS FOR THE AIRPORT.

O. EMERGENCY NOTIFICATION PROCEDURES FOR MEDICAL AND POLICE RESPONSE
SAN MANUEL HAS 911 RESPONSE FOR ANY MEDICAL AND POLICE RESPONSE AT THE AIRPORT.

P. USE OF TEMPORARY VISUAL AIDS
NO AIRPORT LIGHTING EXISTS AT SAN MANUEL. THE ONLY VISUAL AIDS FOR VEHICLES WILL BE THE USE OF THE LIGHTED BARRICADES.

Q. WILDLIFE MANAGEMENT
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT SHOULD ANY FENCE BE CUT AND GATE INSTALLED FOR CONSTRUCTION BE CHECKED DAILY AND IS CLOSED AT ALL TIMES UNLESS IT NEEDS TO BE OPEN. THIS WILL ENSURE THAT DOMESTIC AND WILD ANIMALS CANNOT GAIN ACCESS TO THE AIRPORT PROPERTY.

R. FOREIGN OBJECT DEBRIS (FOD) CONTROL PROVISIONS
ALL EXCAVATED MATERIAL, DEBRIS, ETC., SHALL BE CLEANED FROM THE SITE AT LEAST DAILY AND MORE OFTEN IF REQUIRED BY THE AIRPORT MANAGER OR ENGINEER. TO CONTROL DUST AND/OR BLOWING DEBRIS, ANY SOIL, DEBRIS OR LOOSE MATERIAL ON THE APRON OR TAXIWAYS SHALL IMMEDIATELY BE SWEPT UP OR PICKED UP AND REMOVED.

S. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT
THE CONTRACTOR SHALL COMPLY WITH ALL EPA REGULATIONS. THE CONTRACTOR SHALL HAVE A SPILL PREVENTION CONTROL PLAN IN PLACE FOR ANY FUELING OF CONSTRUCTION VEHICLES ON SITE AS WELL AS ANY OTHER MATERIALS THAT MAY REQUIRE A SPILL PREVENTION CONTROL PLAN.

T. NOTAM ISSUANCE.
THE CONTRACTOR SHALL ADVISE THE AIRPORT MANAGER AND THE ENGINEER 48 HOURS IN ADVANCE OF ANY PROPOSED CONSTRUCTION ACTIVITIES SO THE NECESSARY NOTAM WHICH SPECIFICALLY DETAILS THE RUNWAY CLOSURE OR THRESHOLD RELOCATION AND STATING THAT MEN AND EQUIPMENT ARE ON THE RUNWAY AND MAY BE ON TRAVEL ROUTES ON THE APRON. THE AIRPORT MANAGER FOR THIS PROJECT IS JIM PETTY, 520-866-6545. ALL NOTAM'S REQUIRED DURING CONSTRUCTION SHALL BE FILED BY THE AIRPORT MANAGER OR HIS AUTHORIZED AGENT.

U. INSPECTION REQUIREMENTS.
THE CONTRACTOR SHALL INSPECT, ON A DAILY BASIS, ALL BARRICADES, CONES, BARRELS AND FLASHERS PRIOR TO WORK COMMENCING AND PRIOR TO LEAVING THE PROJECT SITE.

V. PROCEDURES FOR LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES, CABLES, WIRES, PIPELINES AND OTHER UNDERGROUND FACILITIES IN EXCAVATION AREAS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING APPROPRIATE UTILITY LOCATOR SERVICES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ATTEMPT TO LOCATE THE SPONSOR'S AND/OR FAA'S UNDERGROUND CABLES PRIOR TO CONSTRUCTION. DAMAGE TO UNDERGROUND CABLES BY THE CONTRACTOR WILL REQUIRE REPLACEMENT BY THE CONTRACTOR AT NO COST TO THE SPONSOR. ANY SPLICING OR REPLACING OF DAMAGED CABLE SHALL MEET CURRENT FAA SPECIFICATIONS.

W. PROCEDURES FOR CONTACTING RESPONSIBLE REPRESENTATIVES/POINTS OF CONTACT FOR ALL INVOLVED PARTIES
THE CONTRACTOR SHALL PROVIDE THE NAME AND PHONE NUMBER OF A RESPONSIBLE PERSON THAT MAY BE REACHED 24 HOURS A DAY FOR ANY ISSUE THAT MAY ARISE AT ANY TIME. THIS NAME AND NUMBER SHALL BE POSTED ON A BULLETIN BOARD ON THE PROJECT. THIS INFORMATION WILL ALSO BE INCLUDED IN THE CONSTRUCTION OPERATIONS PLAN THAT IS DISTRIBUTED TO THE AIRPORT MANGER, ENGINEER AND FAA. THE AIRPORT MANAGER WILL ALSO PROVIDE A PHONE NUMBER THAT THE CONTRACTOR MAY CALL FOR ANY ISSUES THAT MAY ARISE.

X. VEHICLE OPERATION TRAINING
ALL INDIVIDUALS THAT OPERATE VEHICLES ON THE PROJECT SHALL BE PROPERLY TRAINED IN THE USE OF THE EQUIPMENT THAT THEY MAY BE OPERATING. ALL INDIVIDUALS WHO OPERATE VEHICLES IN THE AIR OPERATIONS AREA OF THE AIRPORT SHALL COMPLY WITH THE AIRPORTS OWNER'S RULES AND REGULATIONS FOR VEHICLE MARKING AND OPERATION.

Y. PENALTY PROVISIONS FOR NONCOMPLIANCE WITH AIRPORT RULES AND REGULATIONS AND THE SAFETY PLAN
IF AT ANY POINT A SAFETY VIOLATION IS NOTED, ALL CONSTRUCTION ACTIVITIES IN THE AREA OF THE VIOLATION WILL BE IMMEDIATELY TERMINATED. BEFORE CONSTRUCTION CAN BEGIN, THE CONTRACTOR WILL PROVIDE A WRITTEN STATEMENT DEMONSTRATING TO THE OWNER THAT THE CONSTRUCTION CAN ONCE AGAIN OCCUR WITHOUT VIOLATIONS TO THE SAFETY PROCEDURES. THE CONTRACTOR IS NOT ELIGIBLE FOR ADDITIONAL COMPENSATION FOR THE DOWN TIME OR ANY OTHER CLAIM WHEN CONSTRUCTION IS TERMINATED DUE TO SAFETY VIOLATIONS.

AIRPORT MANAGER OR AUTHORIZED AGENT CAN SUSPEND CONSTRUCTION ACTIVITIES AT ANY TIME DURING WHICH THEY NOTE SAFETY VIOLATIONS.

THE DUTY OF THE ENGINEER OR OWNER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, OR NEAR THE CONSTRUCTION SITE.

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS.

Z. ANY SPECIAL CONDITIONS THAT AFFECT THE OPERATION OF THE AIRPORT AND WILL REQUIRE A PORTION OF THE SAFETY PLAN TO BE ACTIVATED
THE CONTRACTOR SHOULD MONITOR ANY WEATHER CONDITIONS, UNEXPECTED EMERGENCIES AND OTHER ELEMENTS THAT MAY CAUSE SAFETY ON THE PROJECT TO BE JEOPARDIZED. SHOULD ANY ELEMENTS CAUSE POTENTIAL SAFETY COMPLIANCE CONCERNS, THE SAFETY PLAN SHOULD BE FOLLOWED.

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Grand Junction, CO 81501
ph: 970.242.0101 fax: 970.241.1769
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SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

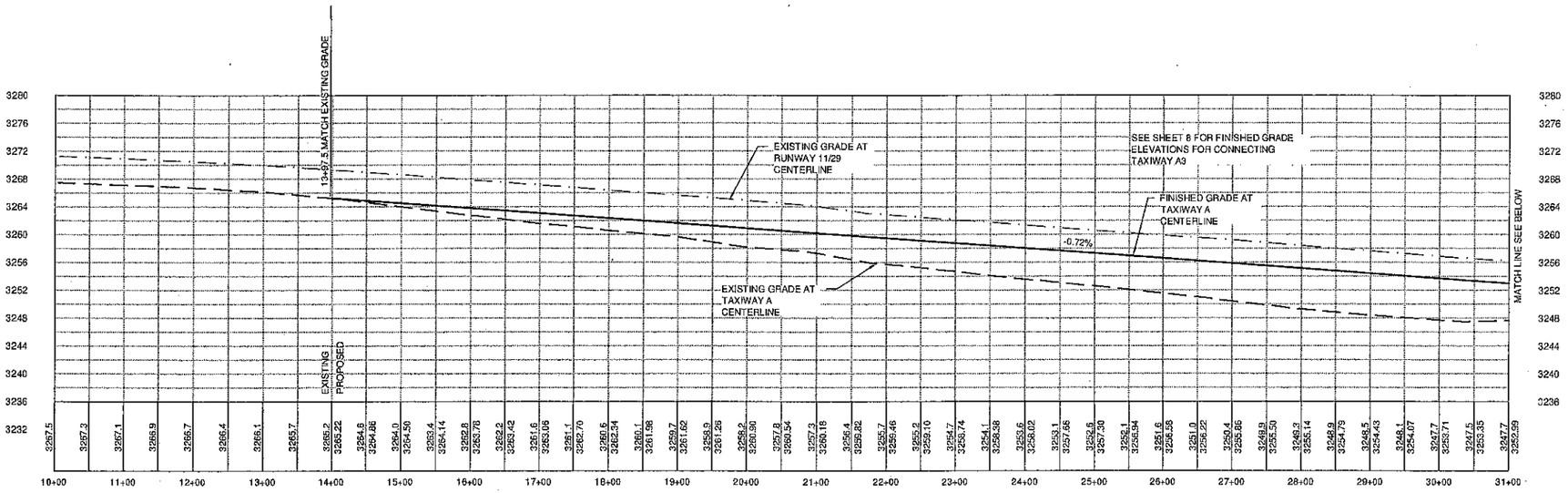
TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 085884
Date: JUNE, 2009
File Name: 5884101

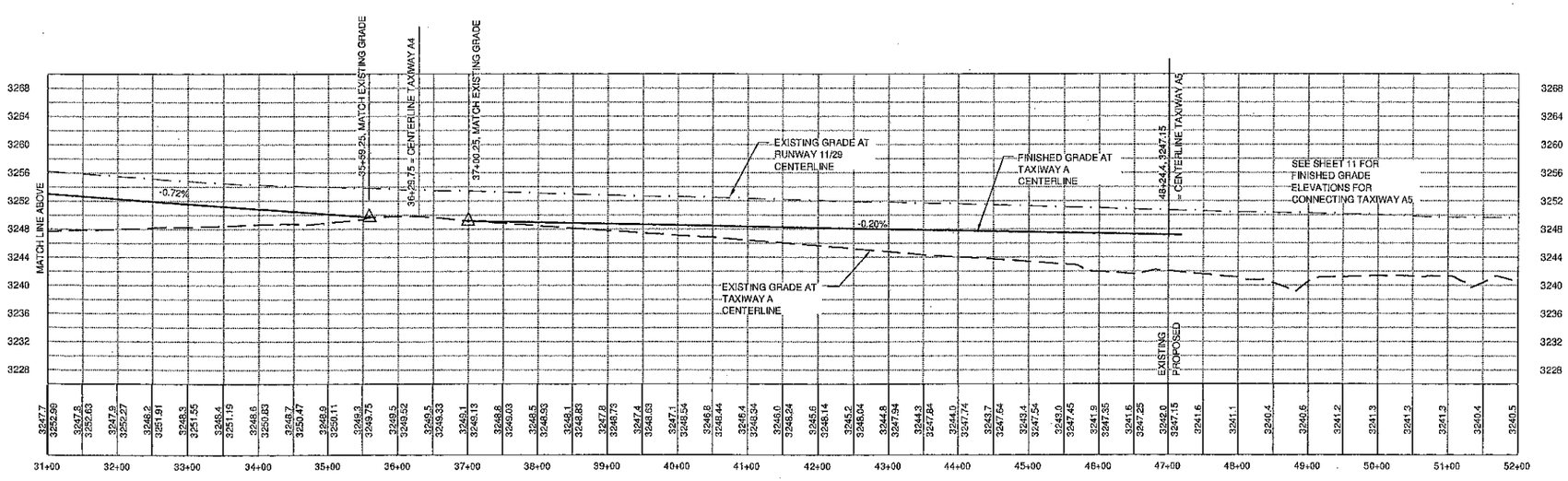
Drawn: JOS
Checked: KEK
Approved: KEK

CONSTRUCTION OPERATIONS PLAN OUTLINE



PROFILE - TAXIWAY A

SCALE: PER GRID



PROFILE - TAXIWAY A

SCALE: PER GRID

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SAN MANUEL, ARIZONA

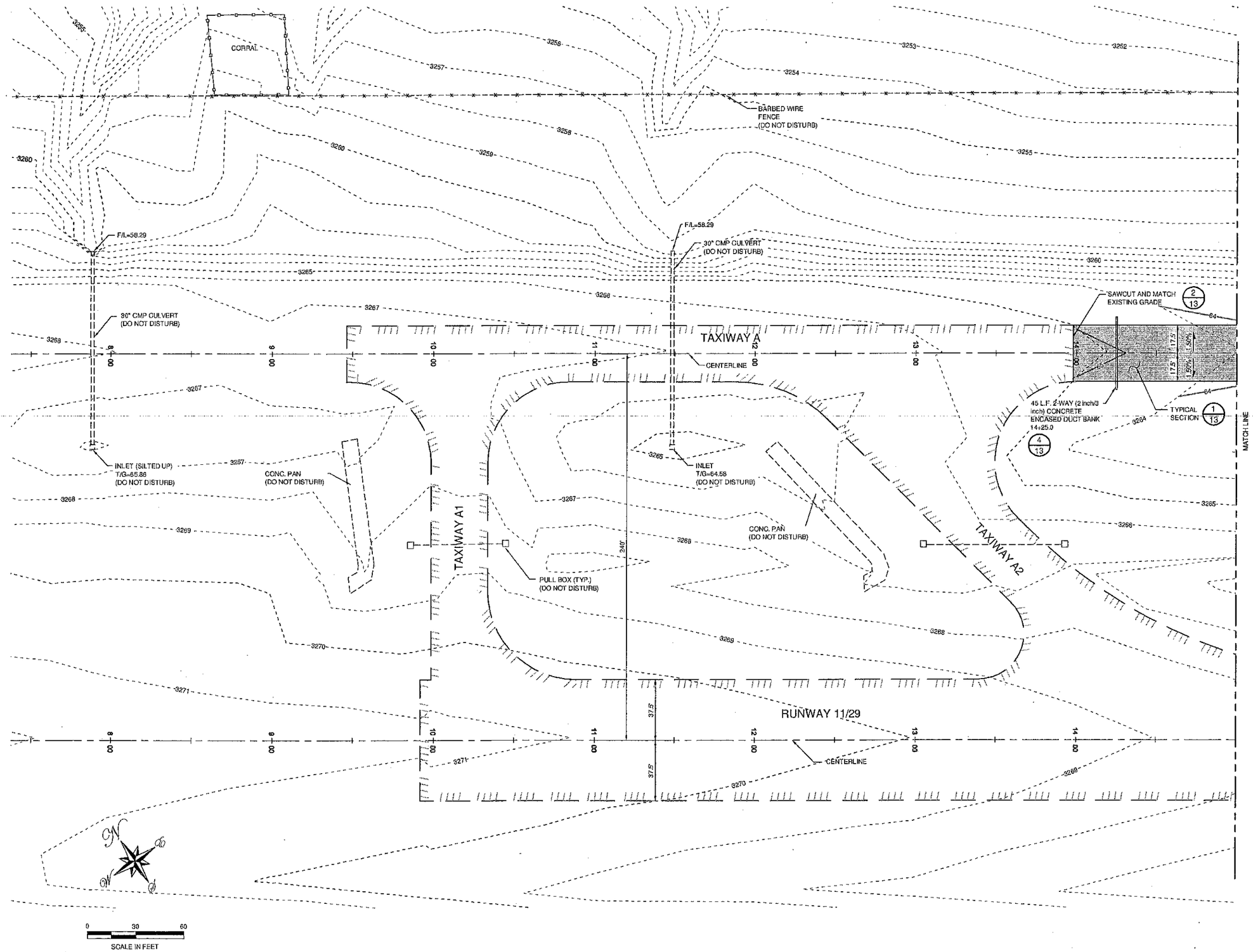
TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864103

Drawn: JCS
Checked: RPR
Approved: KEK

TAXIWAY A
PROFILE



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TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

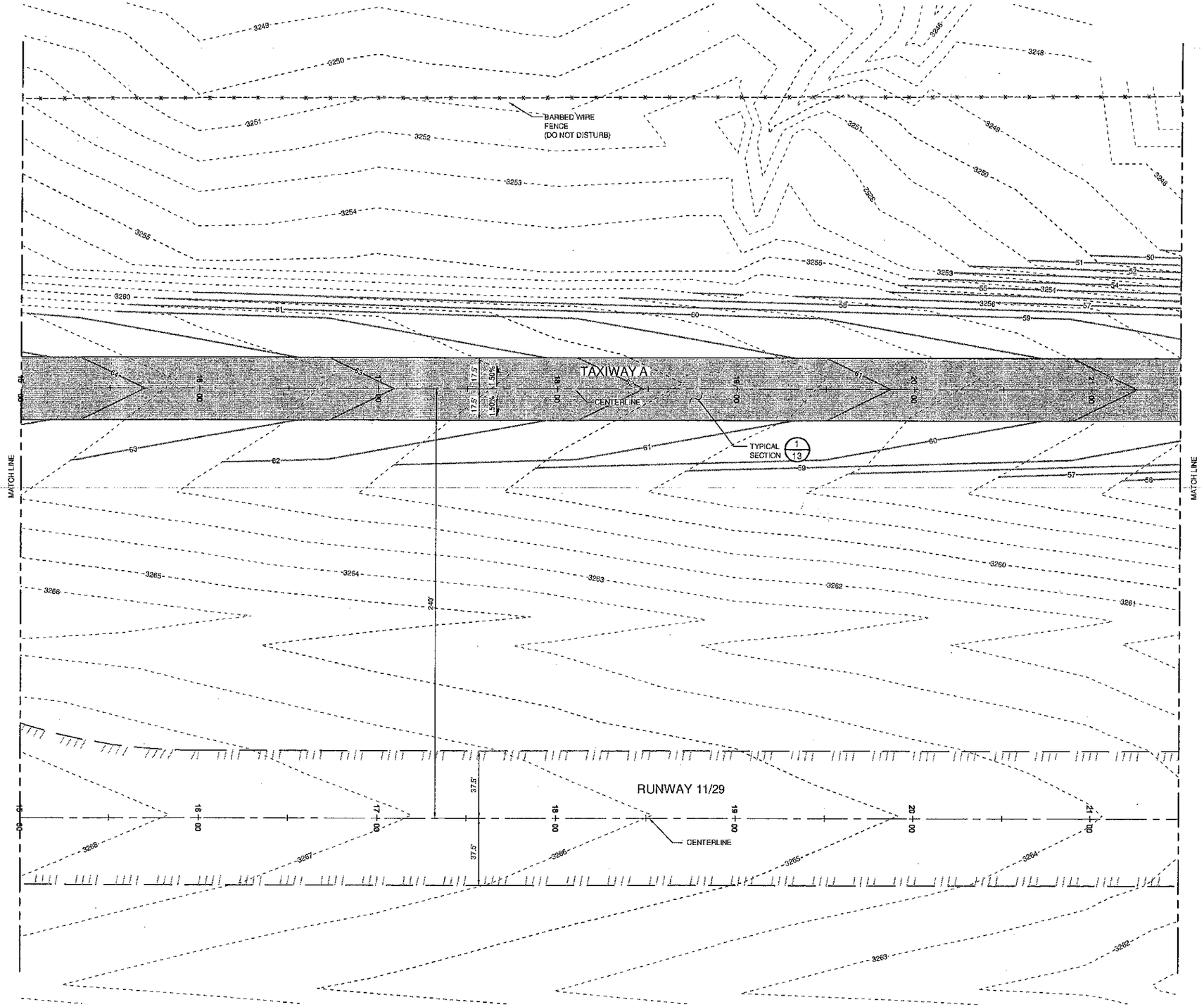
No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864102

Drawn: JOS
Checked: RPR
Approved: KEK

TAXIWAY A LAYOUT & GRADING

Sheet: 6 of: 23



0 30 60
SCALE IN FEET

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Grand Junction, CO 81501
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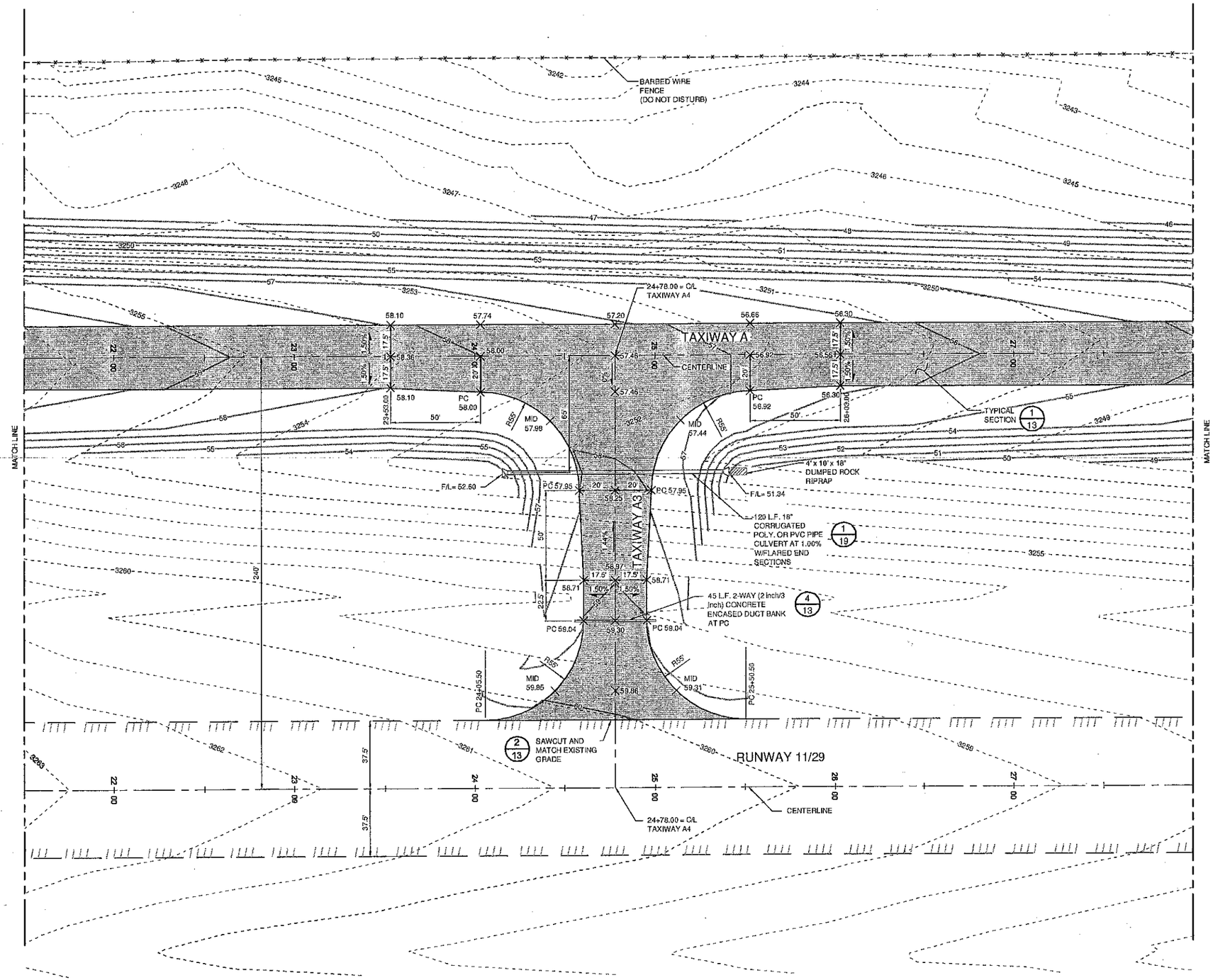
No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864102

Drawn: JOS
Checked: RPR
Approved: KEK

TAXIWAY A
LAYOUT &
GRADING

Sheet 7 of 23



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Project No: 085864
Date: JUNE, 2008
File Name: 5864102

Drawn: JOS
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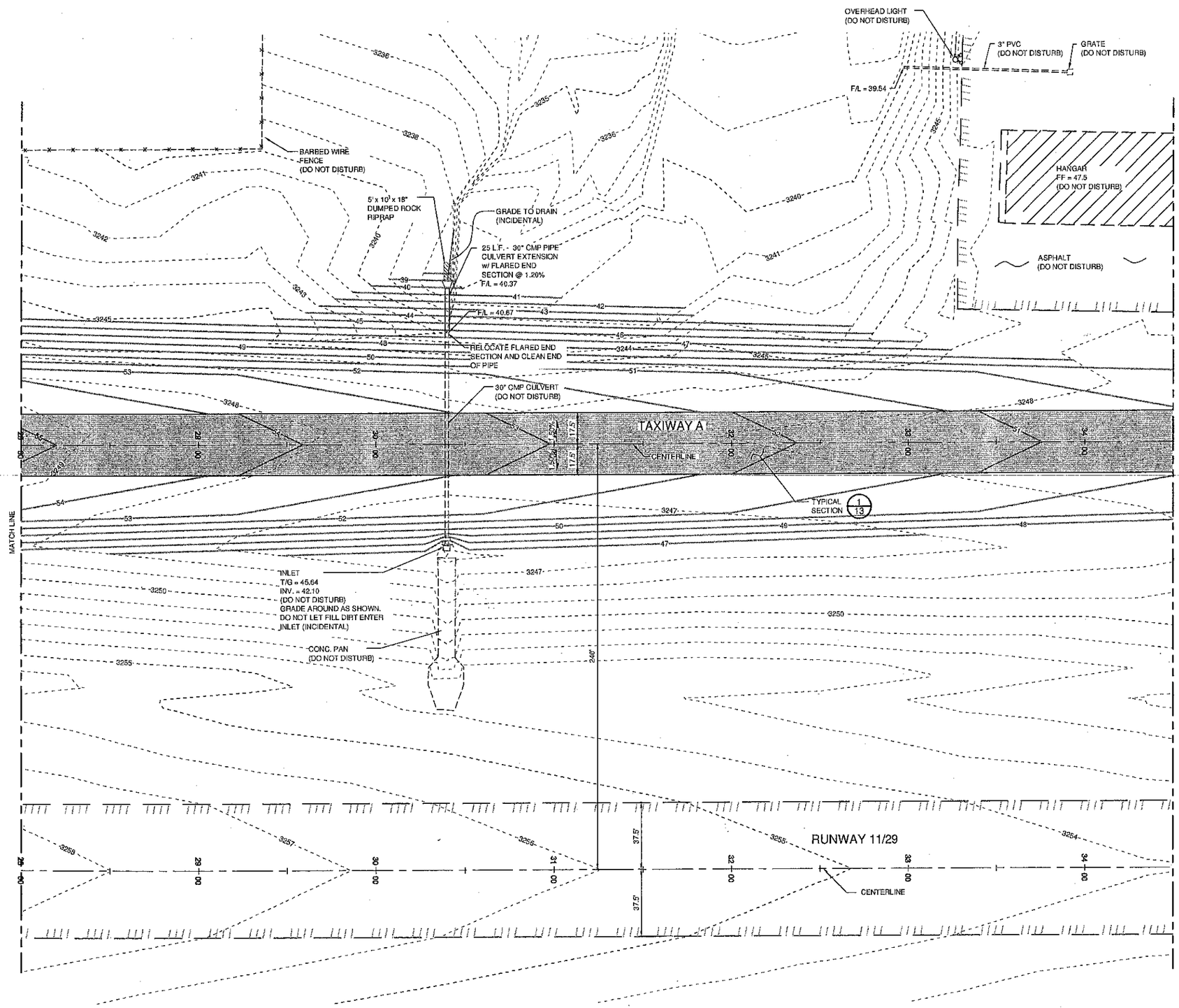
TAXIWAY A
LAYOUT &
GRADING

Sheet: 8 of: 23



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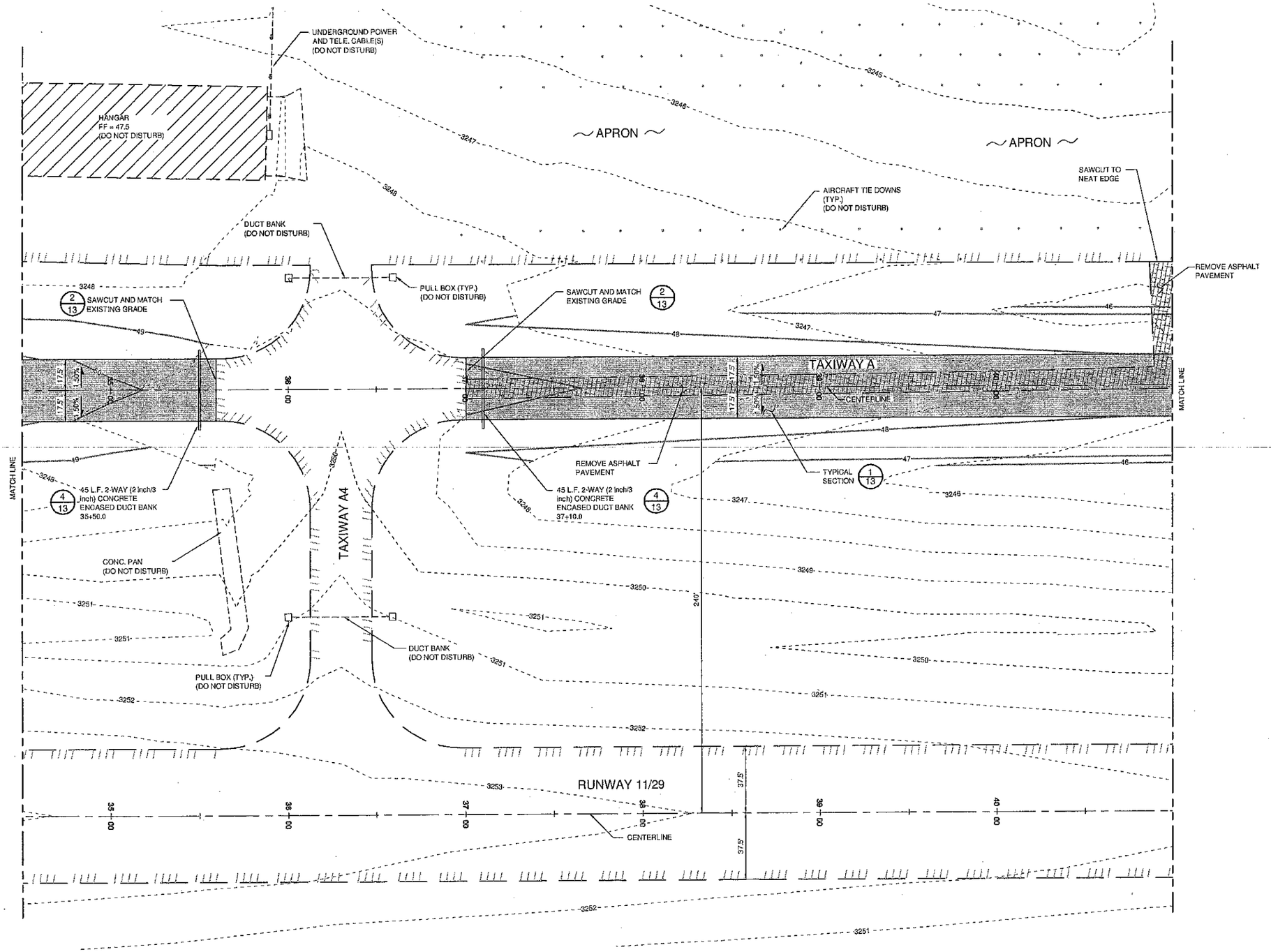
TAXIWAY A
LAYOUT &
GRADING



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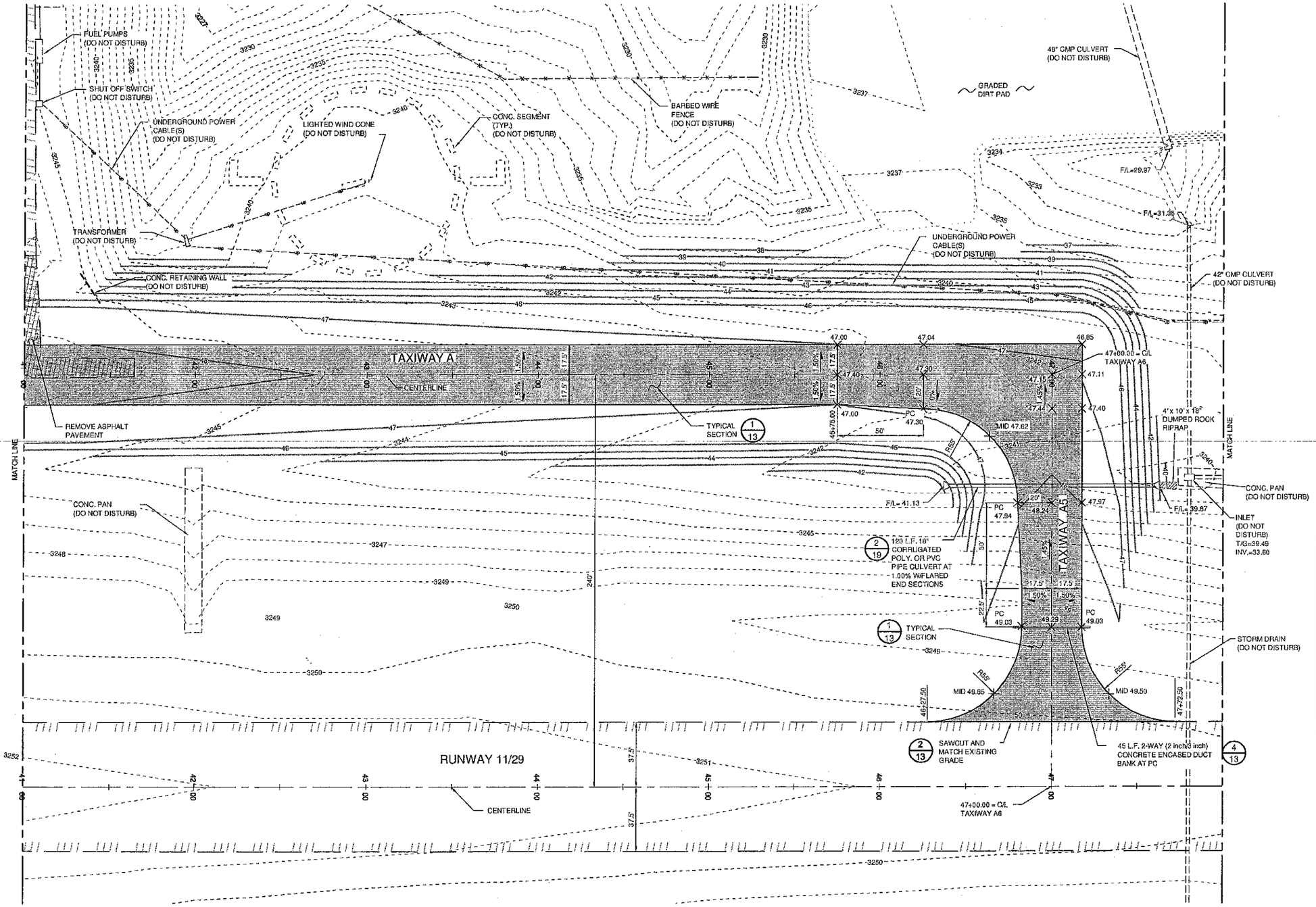
TAXIWAY A
LAYOUT &
GRADING

Sheet: 10 of: 23



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Approved: KEK

TAXIWAY A LAYOUT & GRADING

Sheet: 11 of: 23

GRADED DIRT PAD

GRADED DIRT PAD

BARBED WIRE FENCE (DO NOT DISTURB)

CONC. PAD (DO NOT DISTURB)

STORM DRAIN (DO NOT DISTURB)

F/L=35.79

UNDER GROUND CABLE(S) (DO NOT DISTURB)

PULL BOX (TYP.) (DO NOT DISTURB)

ELECTRICAL VAULT BUILDING (DO NOT DISTURB)

FENCE (DO NOT DISTURB)

SHEDS (DO NOT DISTURB)

SATELLITE DISH (DO NOT DISTURB)

HANGARS FF = 41.0 (DIRT)

MOBILE HOME

JUNCTION BOX (DO NOT DISTURB)

CONC. WALL (DO NOT DISTURB)

POWER BOX (DO NOT DISTURB)

TELE. PED (DO NOT DISTURB)

INLET T/G=40.37 INV.=38.84 (DO NOT DISTURB)

CONC. PAD (DO NOT DISTURB)

FENCE (DO NOT DISTURB)

ASPHALT PAVEMENT (DO NOT DISTURB)

TAXIWAY

HOSE BIB (DO NOT DISTURB)

DUCT BANK W/PULL BOXES (TYP.) (DO NOT DISTURB)

SIGN (TYP.) (DO NOT DISTURB)

CONC. PAN (DO NOT DISTURB)

MATCH LINE

CENTERLINE

RUNWAY 11/29

BORROW AREA (SEE SHEETS 20-22)

SCALE IN FEET

0 30 60

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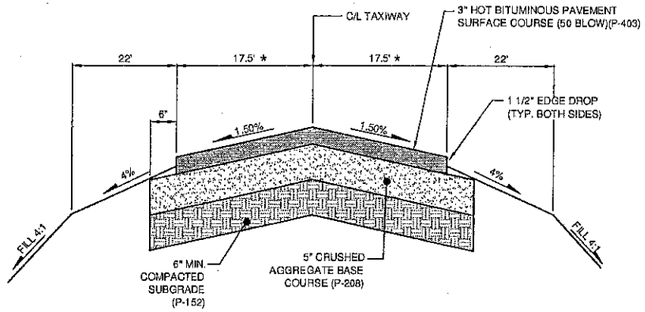
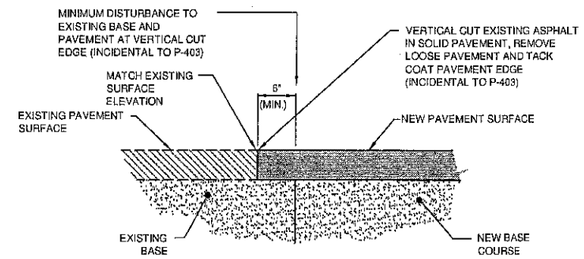
TAXIWAY A LAYOUT & GRADING

Sheet: 12 of 23

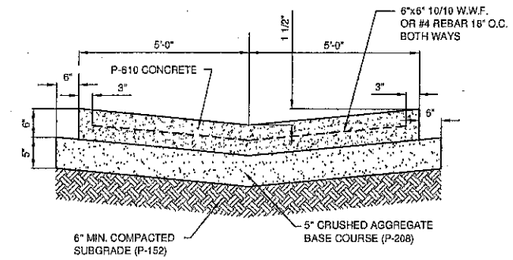


1/13 TAXIWAYS TYPICAL SECTION
NOT TO SCALE

NOTE: SEE CROSS SECTIONS AND GRADING PLANS FOR SPECIFIC GRADING INFORMATION



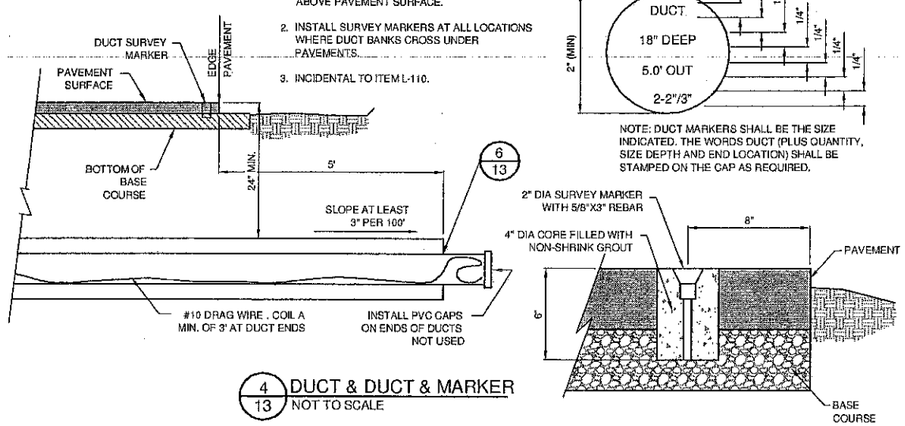
2/13 JOINT AT EXISTING PAVEMENT EDGE
NOT TO SCALE



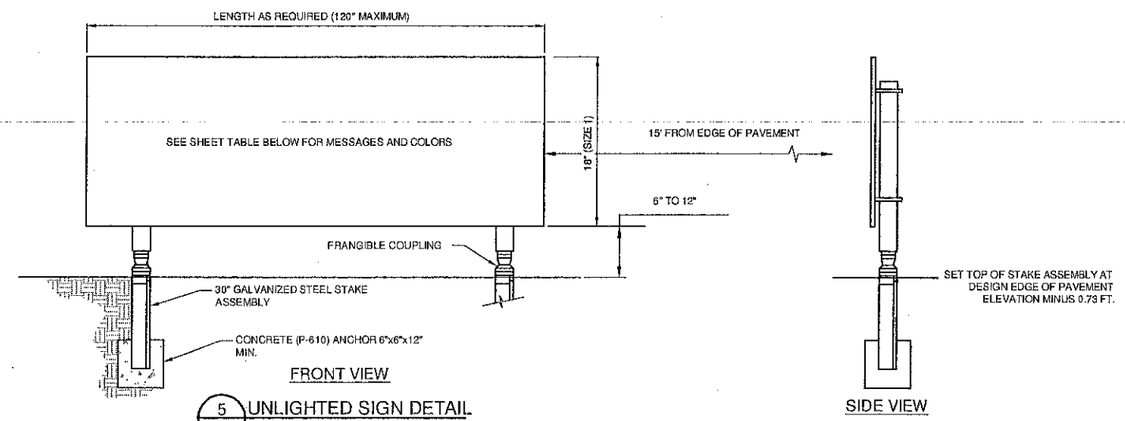
3/13 CONCRETE PAN GUTTER
NOT TO SCALE

DUCT SURVEY MARKER NOTES:

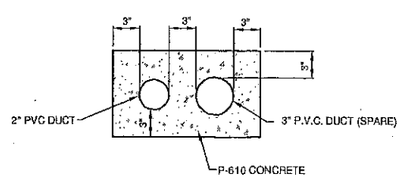
1. TOP OF SURVEY MARKER SHALL BE 0" TO 1/16" ABOVE PAVEMENT SURFACE.
2. INSTALL SURVEY MARKERS AT ALL LOCATIONS WHERE DUCT BANKS CROSS UNDER PAVEMENTS.
3. INCIDENTAL TO ITEM L-110.



4/13 DUCT & DUCT & MARKER
NOT TO SCALE



5/13 UNLIGHTED SIGN DETAIL
NOT TO SCALE



2-WAY

6/13 CROSS SECTION DUCTS
NOT TO SCALE

SIGN TABLE

SIGN NO.	LEGEND	TYPE	STYLE	SIZE	MODULES	LOCATION	DESCRIPTION OF WORK
1	A1 11	(L)(R)	1	1	2	10+61.8, 200.0' LT.	INSTALL NEW SIGN
2	A1 →	(Y)(Y)	1	1	2	10+88.5, 52.5' LT.	INSTALL NEW SIGN
3	← A2	(Y)(Y)	1	1	2	13+39.4, 52.5' LT.	INSTALL NEW SIGN
4	A2 29 11	(L)(R)(R)	1	1	3	13+77.6, 200.0' LT.	INSTALL NEW SIGN
5	A2 →	(Y)(Y)	1	1	2	15+98.15, 52.5' LT.	INSTALL NEW SIGN
6	← A3	(Y)(Y)	1	1	2	24+05.5, 52.5' LT.	INSTALL NEW SIGN
7	A3 29 11	(L)(R)(R)	1	1	3	25+33.6, 200.0' LT.	INSTALL NEW SIGN
8	A3 →	(Y)(Y)	1	1	2	25+50.5, 52.5' LT.	INSTALL NEW SIGN
9	← A4	(Y)(Y)	1	1	2	35+62.3, 52.5' LT.	INSTALL NEW SIGN
10	A4 29 11	(L)(R)(R)	1	1	3	36+75.6, 200.0' LT.	INSTALL NEW SIGN
11	A4 →	(Y)(Y)	1	1	2	36+97.3, 52.5' LT.	INSTALL NEW SIGN
12	A5 →	(Y)(Y)	1	1	2	47+72.5, 52.5' LT.	INSTALL NEW SIGN
13	A5 29 11	(L)(R)(R)	1	1	3	47+32.5, 200.0' LT.	INSTALL NEW SIGN
14	← A5	(Y)(Y)	1	1	2	46+27.5, 52.5' LT.	INSTALL NEW SIGN

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

STYLE 1 = UN-LIGHTED

ALL SIGN INSTALLATIONS ARE LOCATED AT 15 FT. FROM PAVEMENT EDGE TO NEAR EDGE OF SIGN.

ALL SIGNS ARE SIZE 1. (18" PANEL WITH 12" LEGEND)

HOLD POSITION SIGNS ALIGN WITH HOLD BARS. SEE MARKING PLAN FOR HOLD BAR LOCATIONS.

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SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

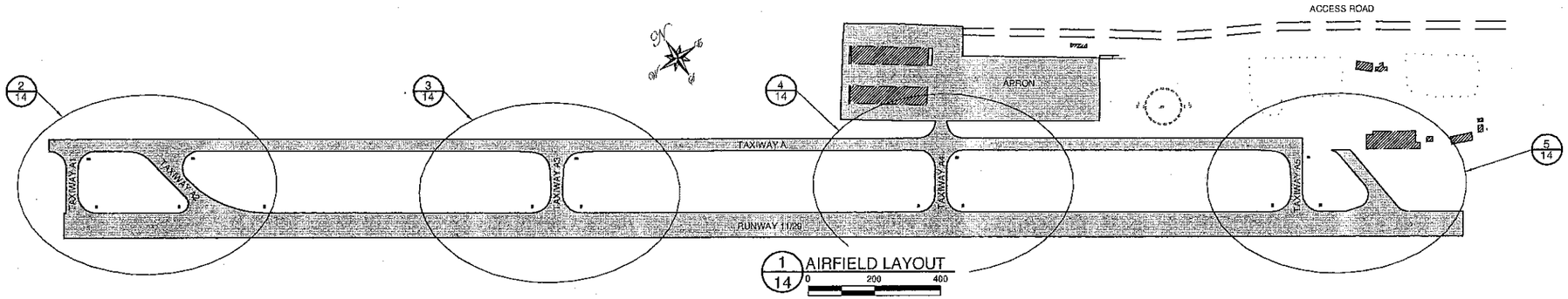
TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864101

Drawn: SLST / JOS
Checked: RPR
Approved: KEK

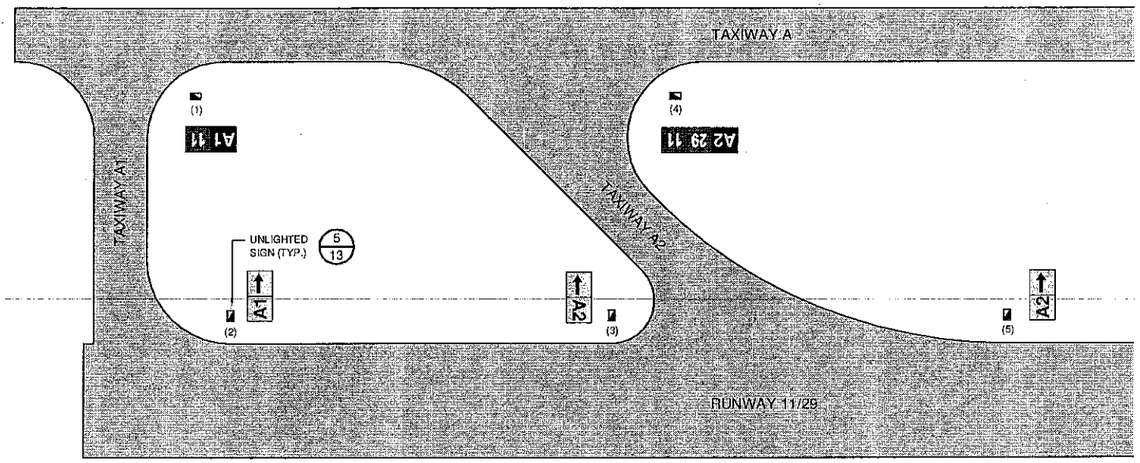
TYPICAL SECTIONS AND DETAILS



1/14 AIRFIELD LAYOUT

0 200 400

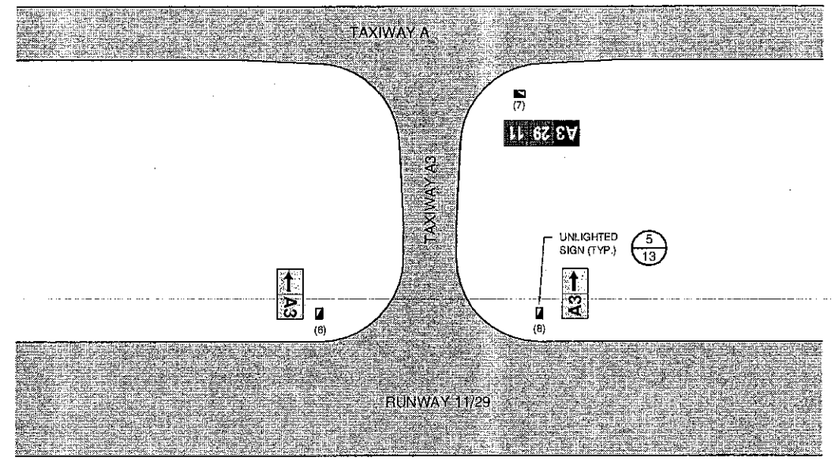
SCALE IN FEET



2/14 TAXIWAYS A1 & A2

0 50 100

SCALE IN FEET

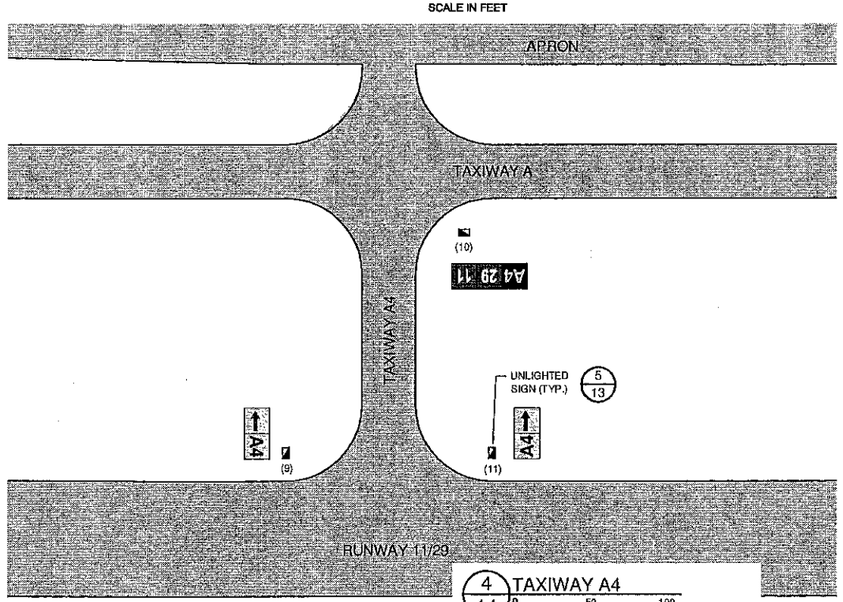


3/14 TAXIWAY A3

0 50 100

SCALE IN FEET

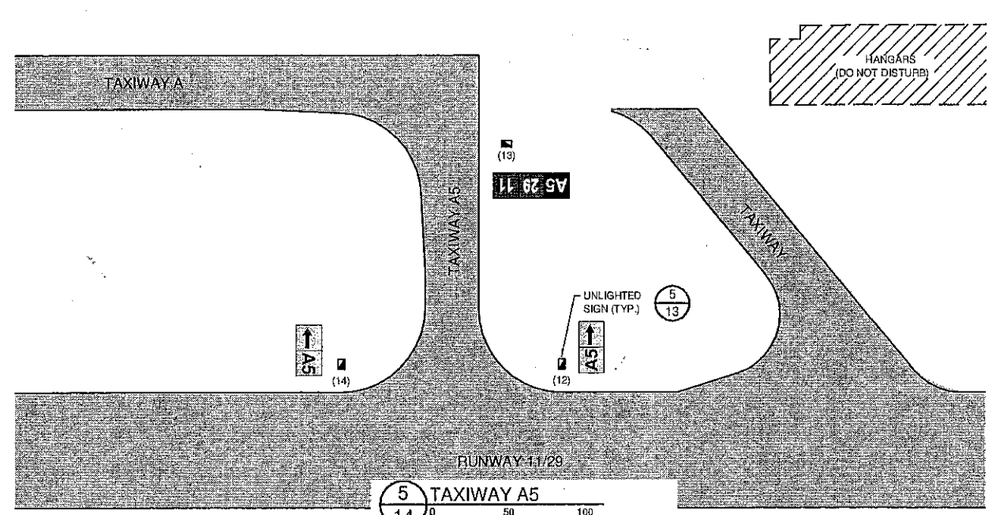
NOTE: SEE SHEET 13 FOR SIGN SIZES AND LOCATIONS.



4/14 TAXIWAY A4

0 50 100

SCALE IN FEET



5/14 TAXIWAY A5

0 50 100

SCALE IN FEET

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TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

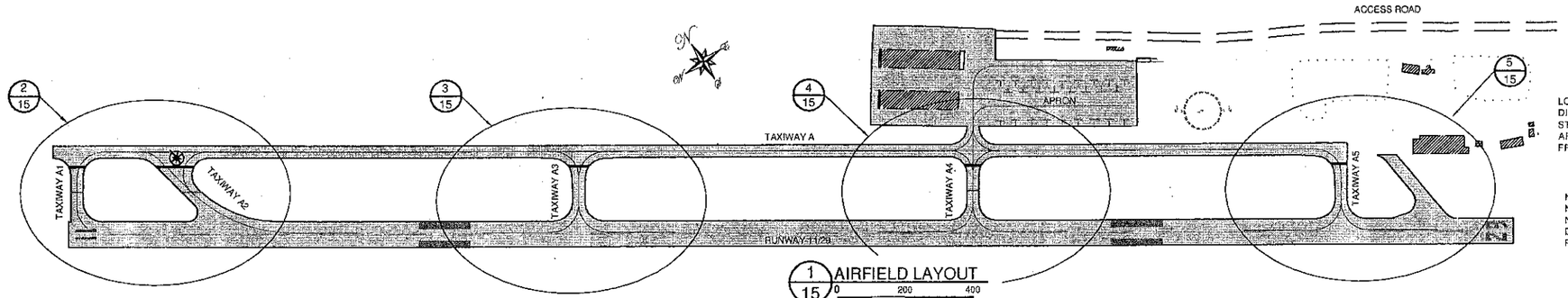
No.	Revision	Date	By

Project No: 075856
Date: JUNE, 2008
File Name: 5864104

Drawn: JOS
Checked: RPR
Approved: KEK

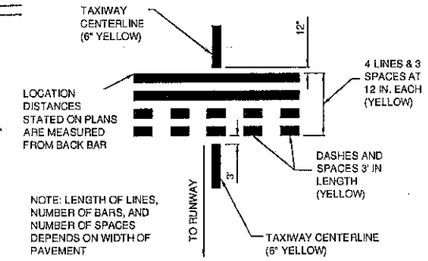
SIGNAGE LAYOUT PLAN

Sheet 14 of 23

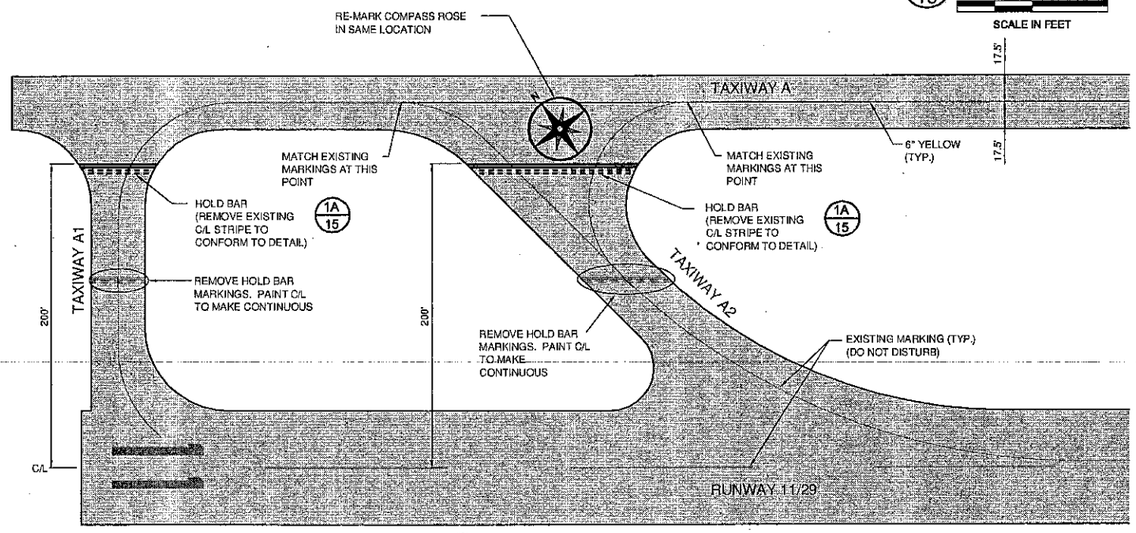


1/15 AIRFIELD LAYOUT

0 200 400
SCALE IN FEET

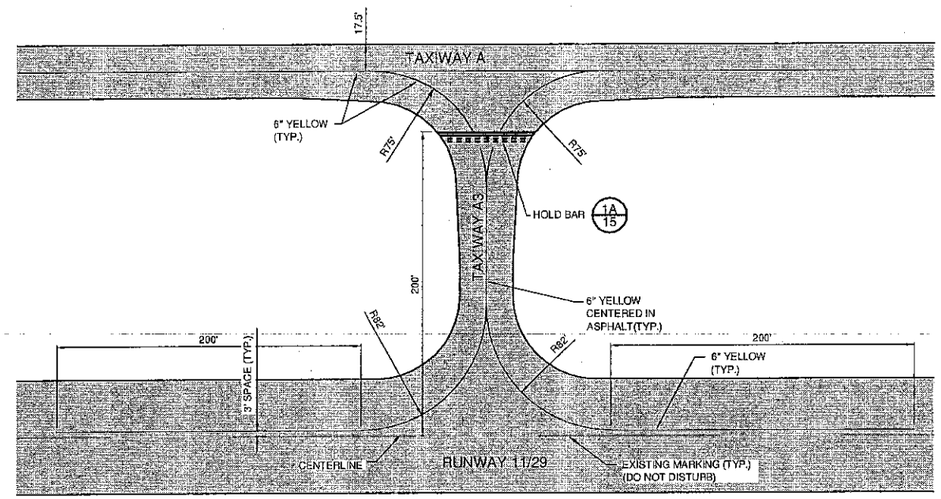


1A/15 HOLD BARS
NOT TO SCALE



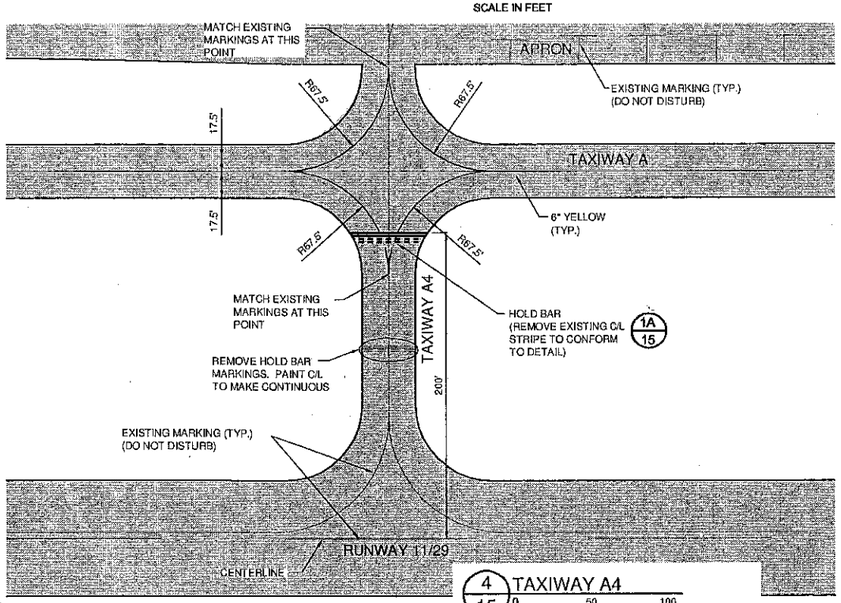
2/15 TAXIWAYS A1 & A2

0 50 100
SCALE IN FEET



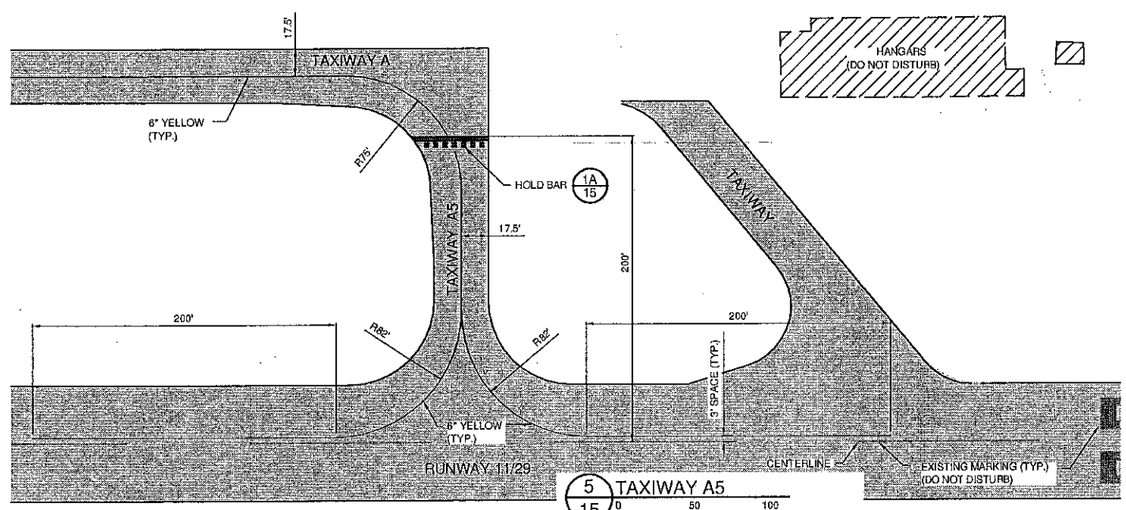
3/15 TAXIWAY A3

0 50 100
SCALE IN FEET



4/15 TAXIWAY A4

0 50 100
SCALE IN FEET



5/15 TAXIWAY A5

0 50 100
SCALE IN FEET

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TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

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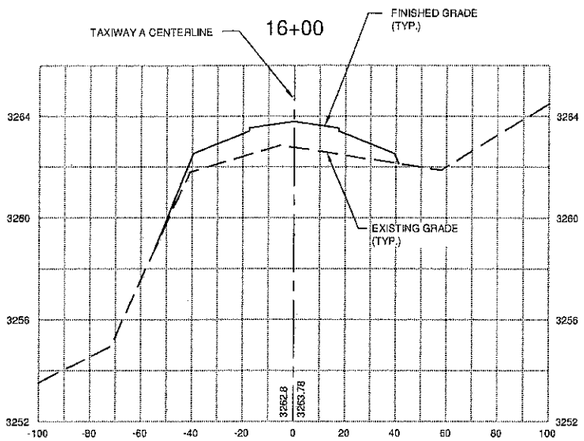
Project No: 075656
Date: JUNE, 2008
File Name: 5864104

Drawn: JOS
Checked: RPR
Approved: KEK

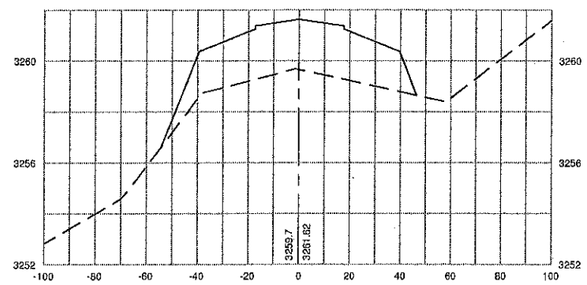
PAVEMENT MARKING PLAN

Sheet: 15 of: 23

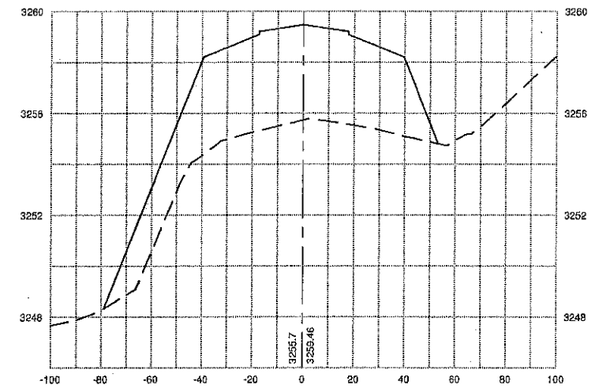
16+00



19+00



22+00



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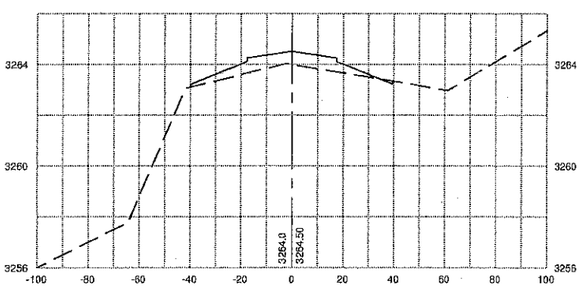
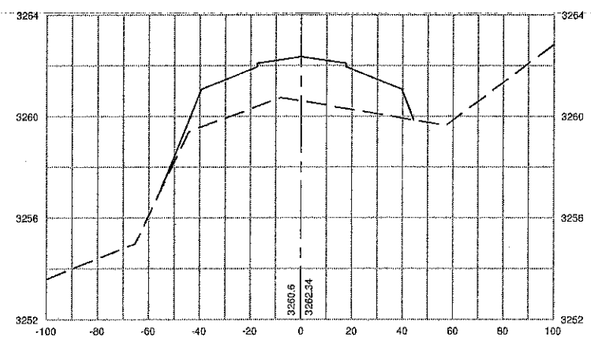


18+00



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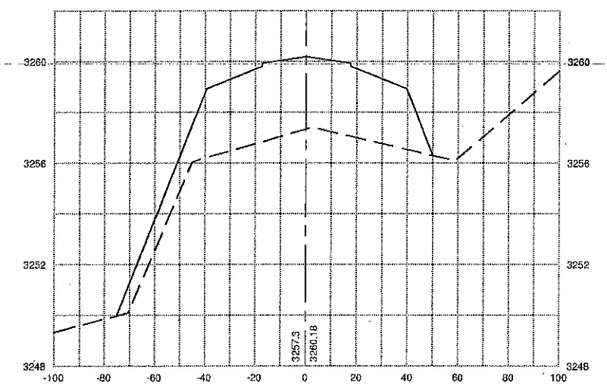

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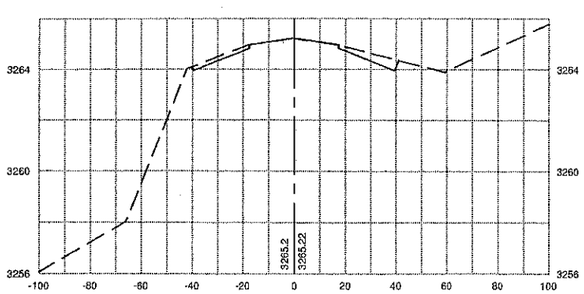

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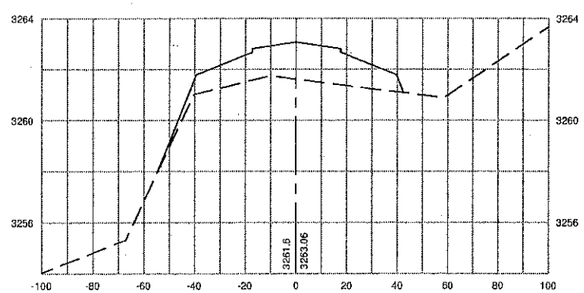

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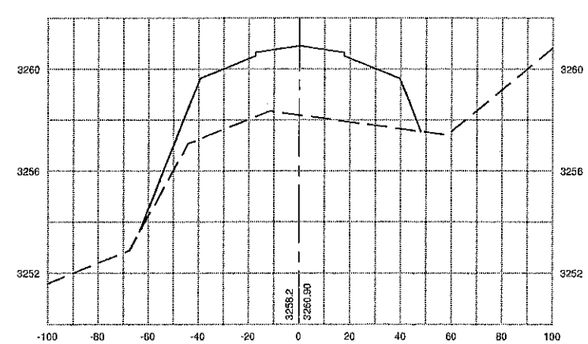

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SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

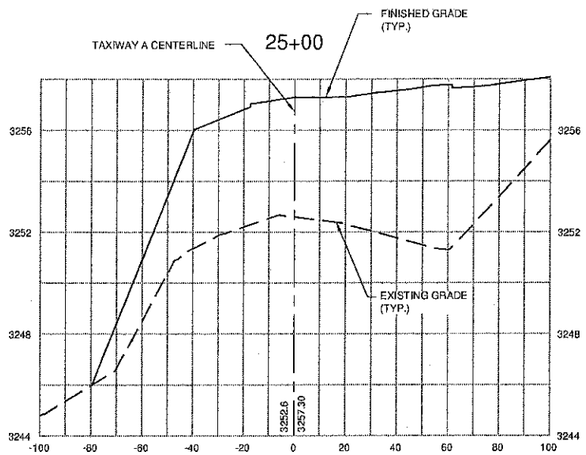
No.	Revision	Date	By

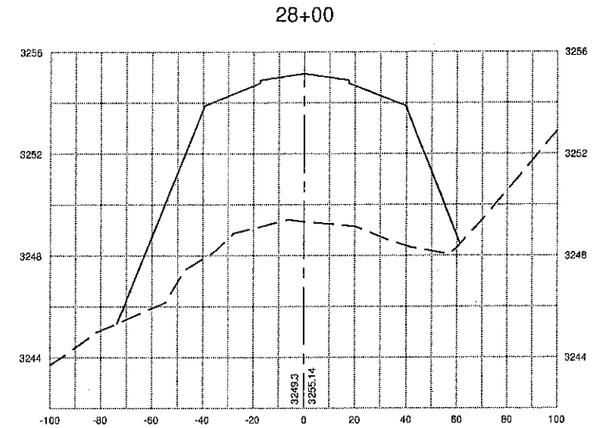
Project No: 075656
Date: JUNE, 2008
File Name: 5864105

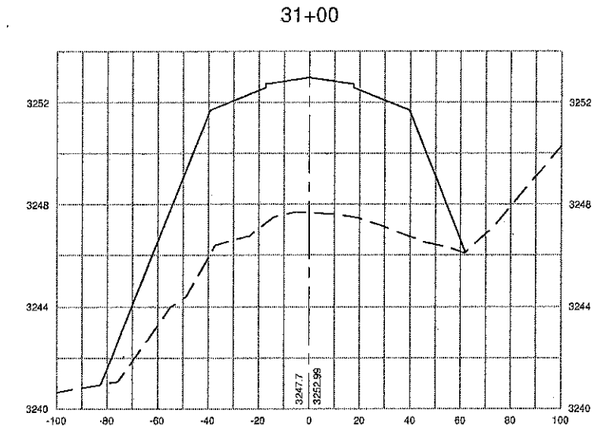
Drawn: JOS
Checked: RPR
Approved: KEK

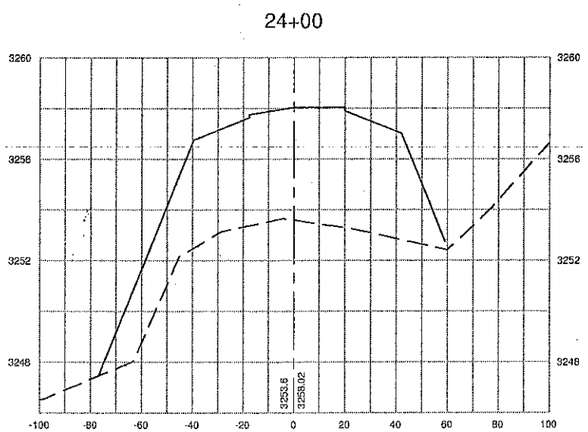
TAXIWAY A CROSS SECTIONS

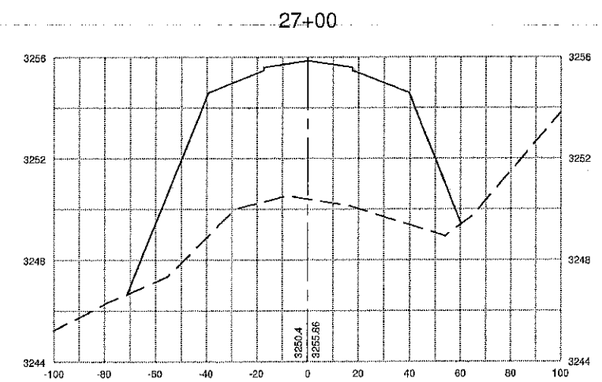
Sheet: 16 of: 23

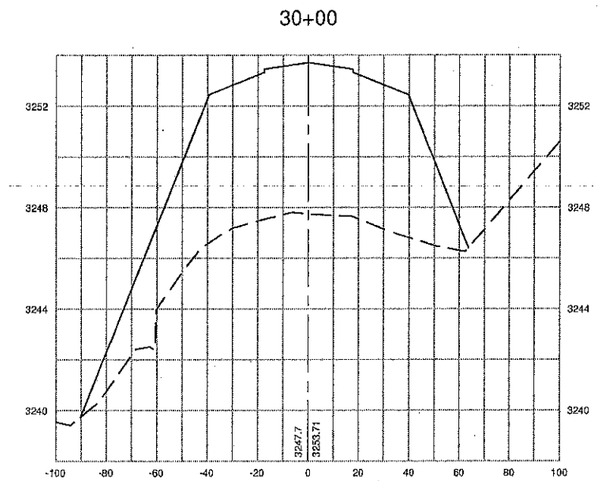


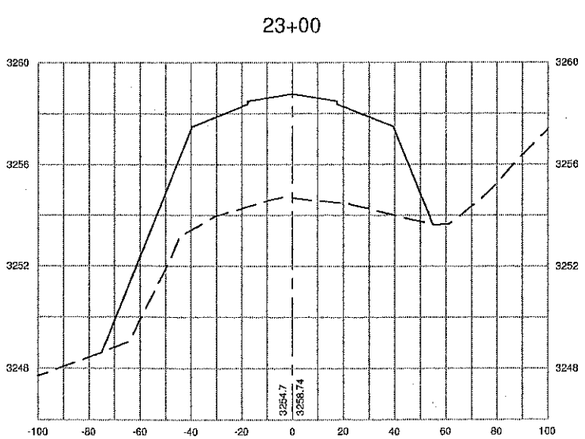


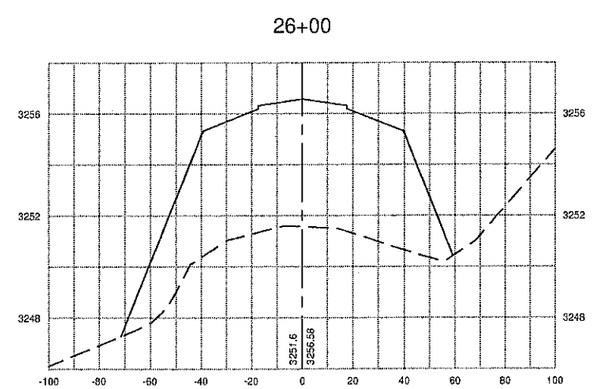


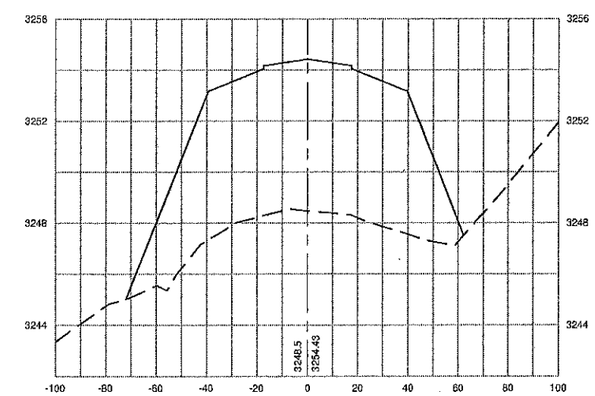












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SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

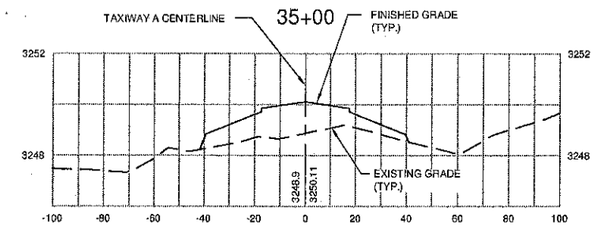
TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 075856
Date: JUNE, 2008
File Name: 5864105

Drawn: JOS
Checked: RPR
Approved: KEK

TAXIWAY A CROSS SECTIONS



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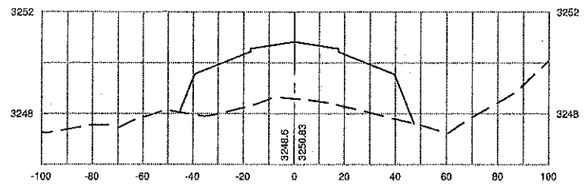

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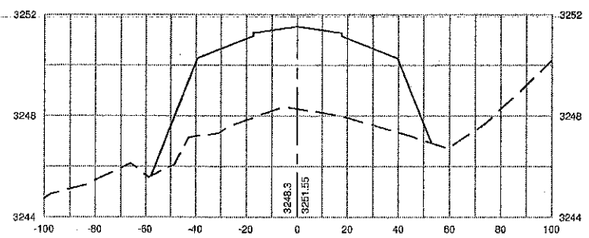

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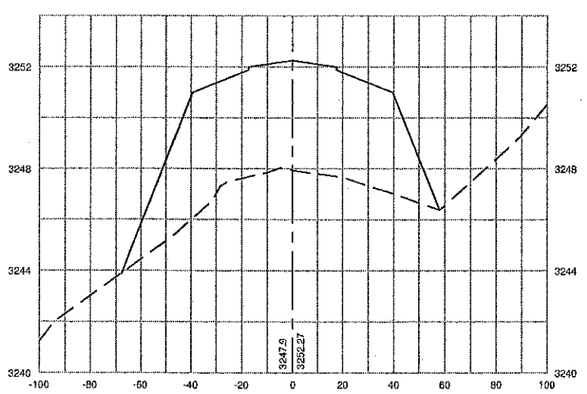

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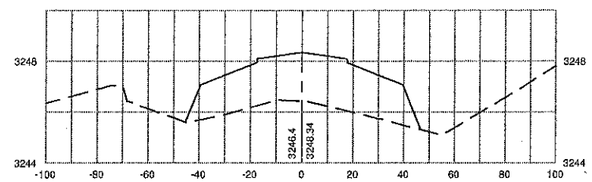

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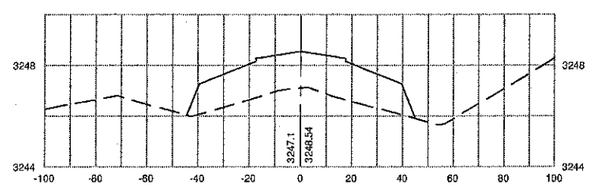

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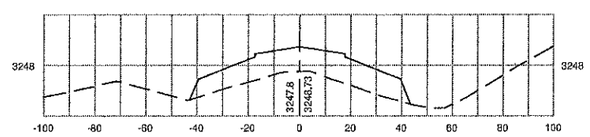

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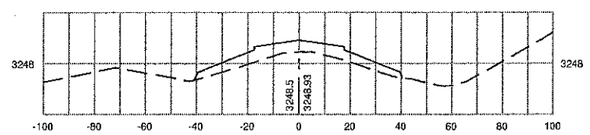

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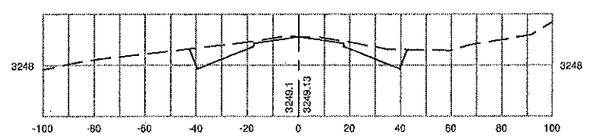

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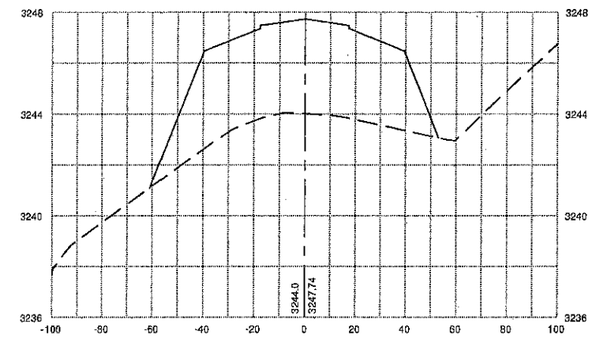

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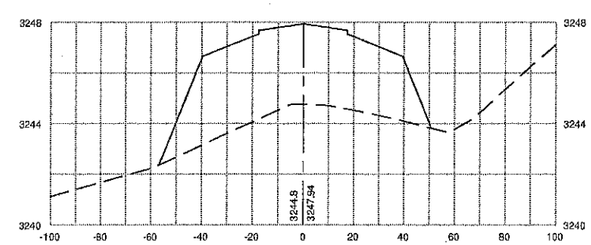

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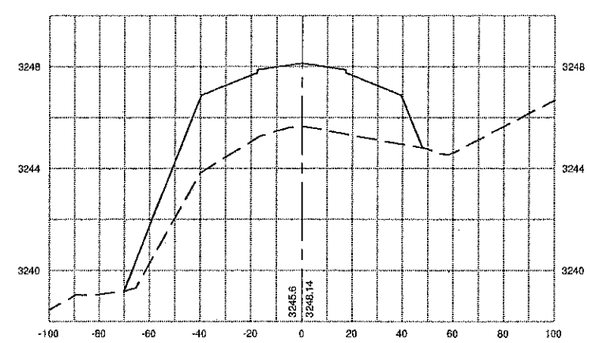

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SAN MANUEL AIRPORT
SAN MANUEL, ARIZONA

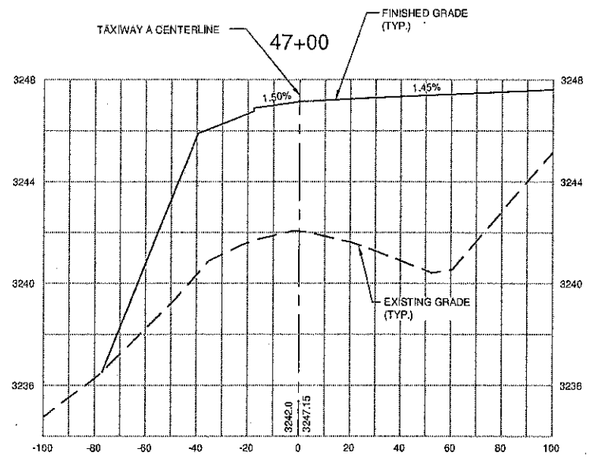
TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

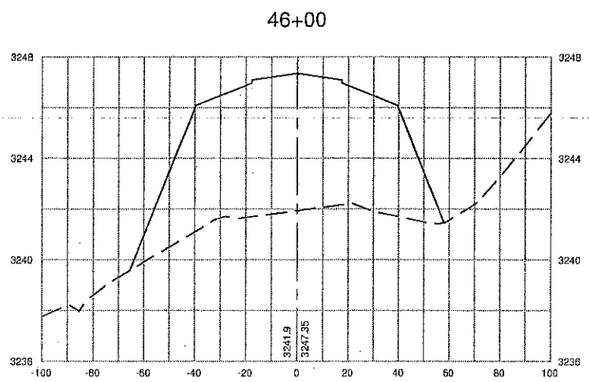
No.	Revision	Date	By

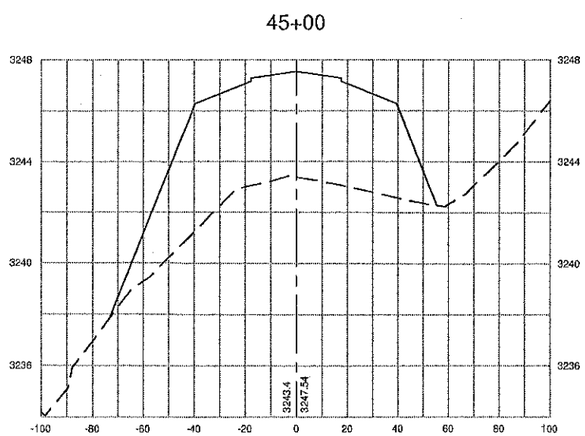
Project No: 075856
Date: JUNE, 2009
File Name: 5884105

Drawn: JOS
Checked: RPR
Approved: KEK

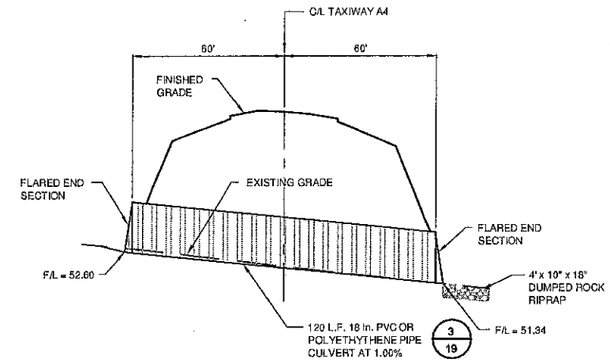
TAXIWAY A
CROSS
SECTIONS



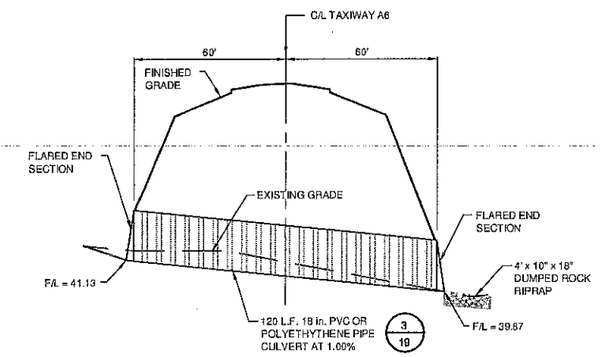




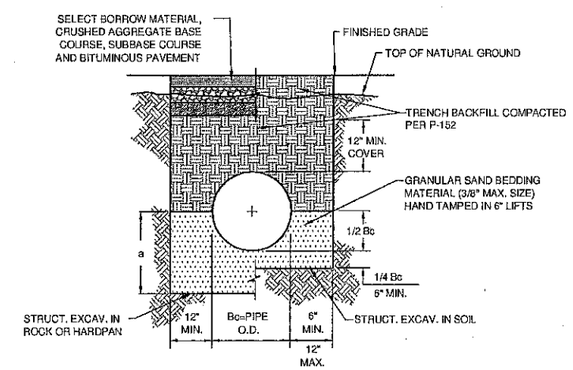
SEE SHEET 11 FOR FINISHED GRADE ELEVATIONS FOR CONNECTING TAXIWAY A5



1/19 CULVERT AT TAXIWAY A3
NOT TO SCALE
C/L OF CULVERT IS 65' RT. OF TAXIWAY A CENTERLINE



2/19 CULVERT AT TAXIWAY A5
NOT TO SCALE
C/L OF CULVERT IS 65' RT. OF TAXIWAY A CENTERLINE



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

3/19 PIPE CULVERT BEDDING & BACKFILL DETAIL
NOT TO SCALE

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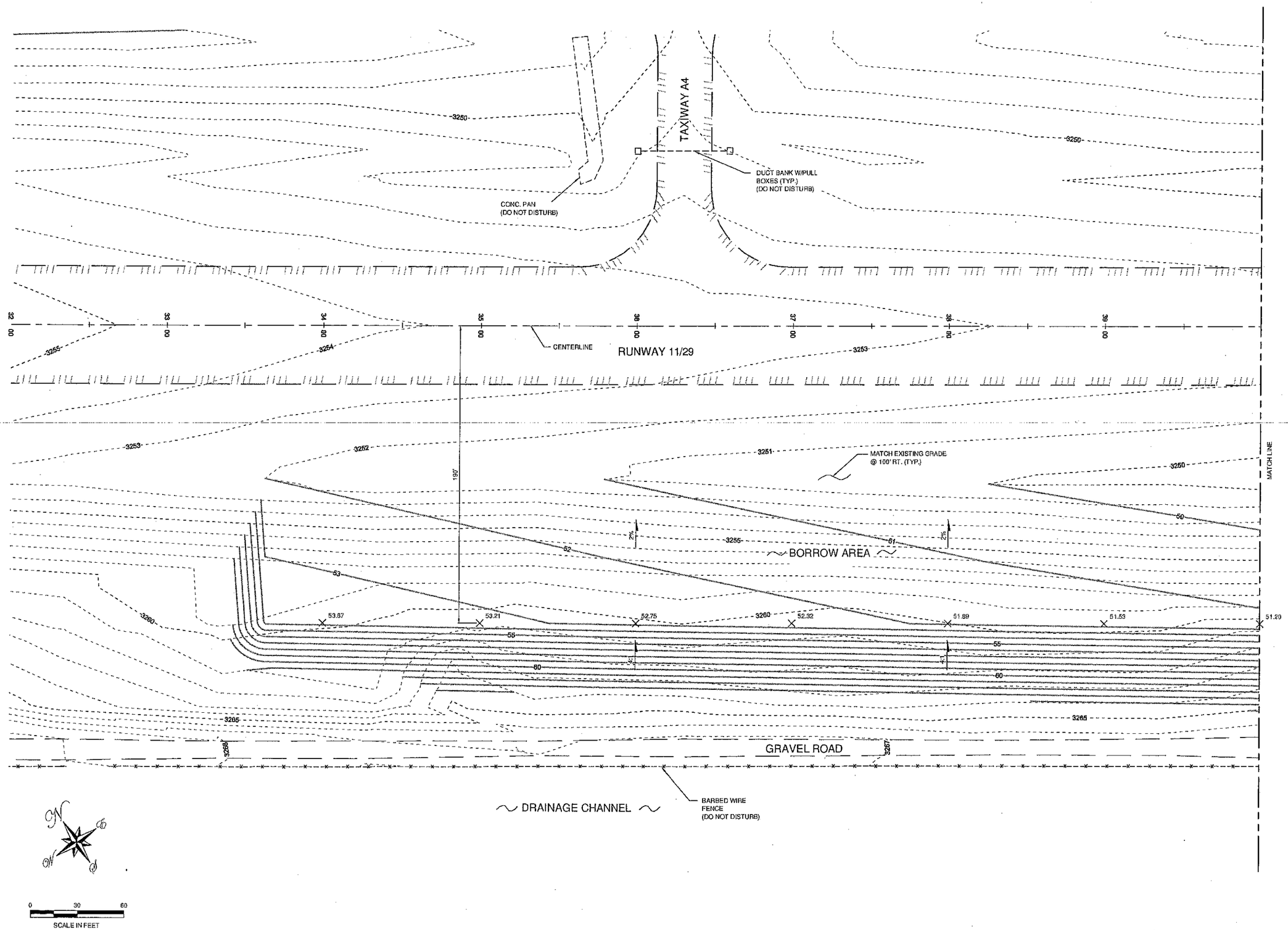
TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 075856
Date: JUNE, 2008
File Name: 5864105

Drawn: JOS
Checked: RPR
Approved: KEK

TAXIWAY A CROSS SECTIONS



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TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

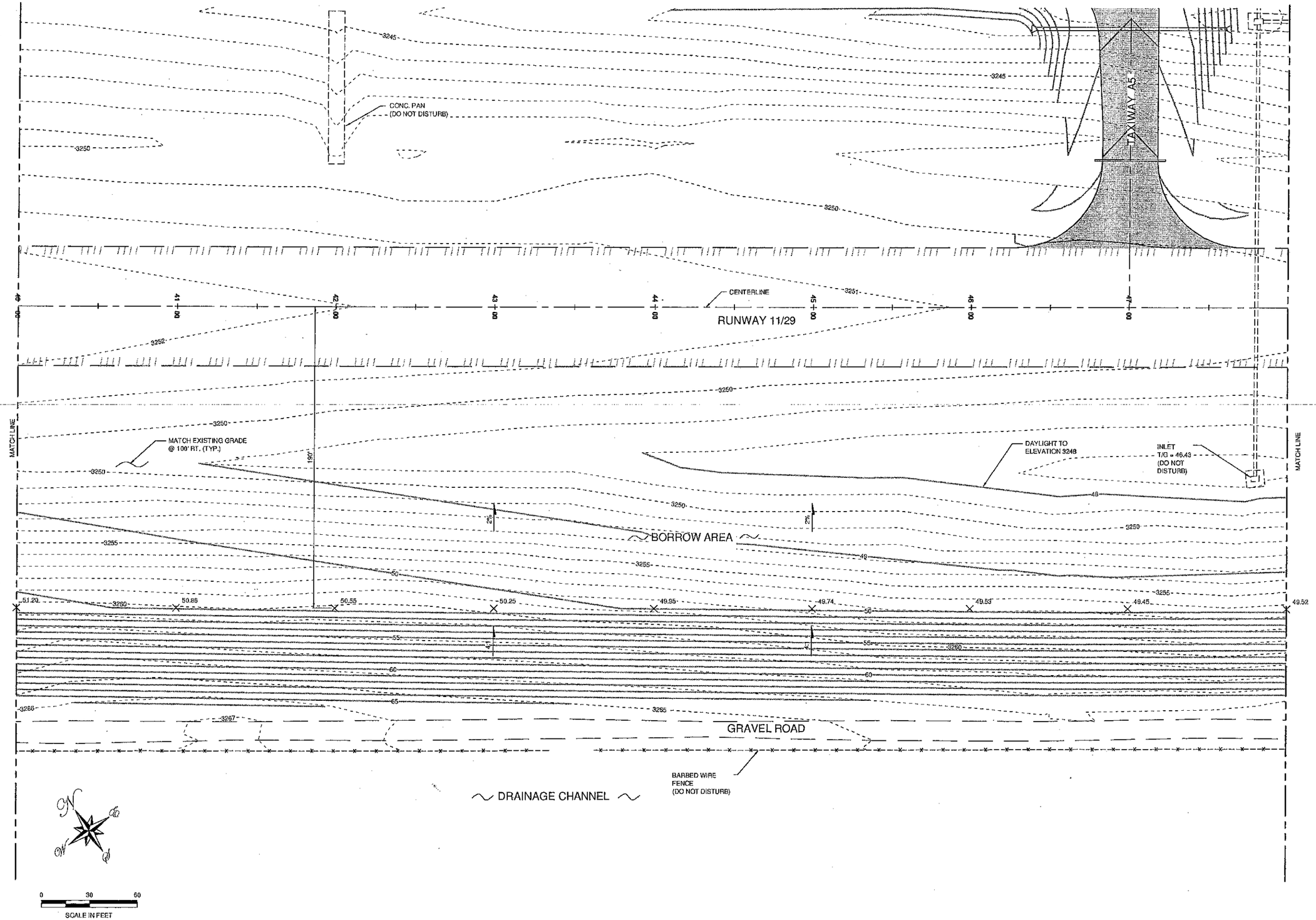
No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864102

Drawn: JOS
Checked: RPR
Approved: KEK

BORROW AREA

Sheet: 20 of: 23



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TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

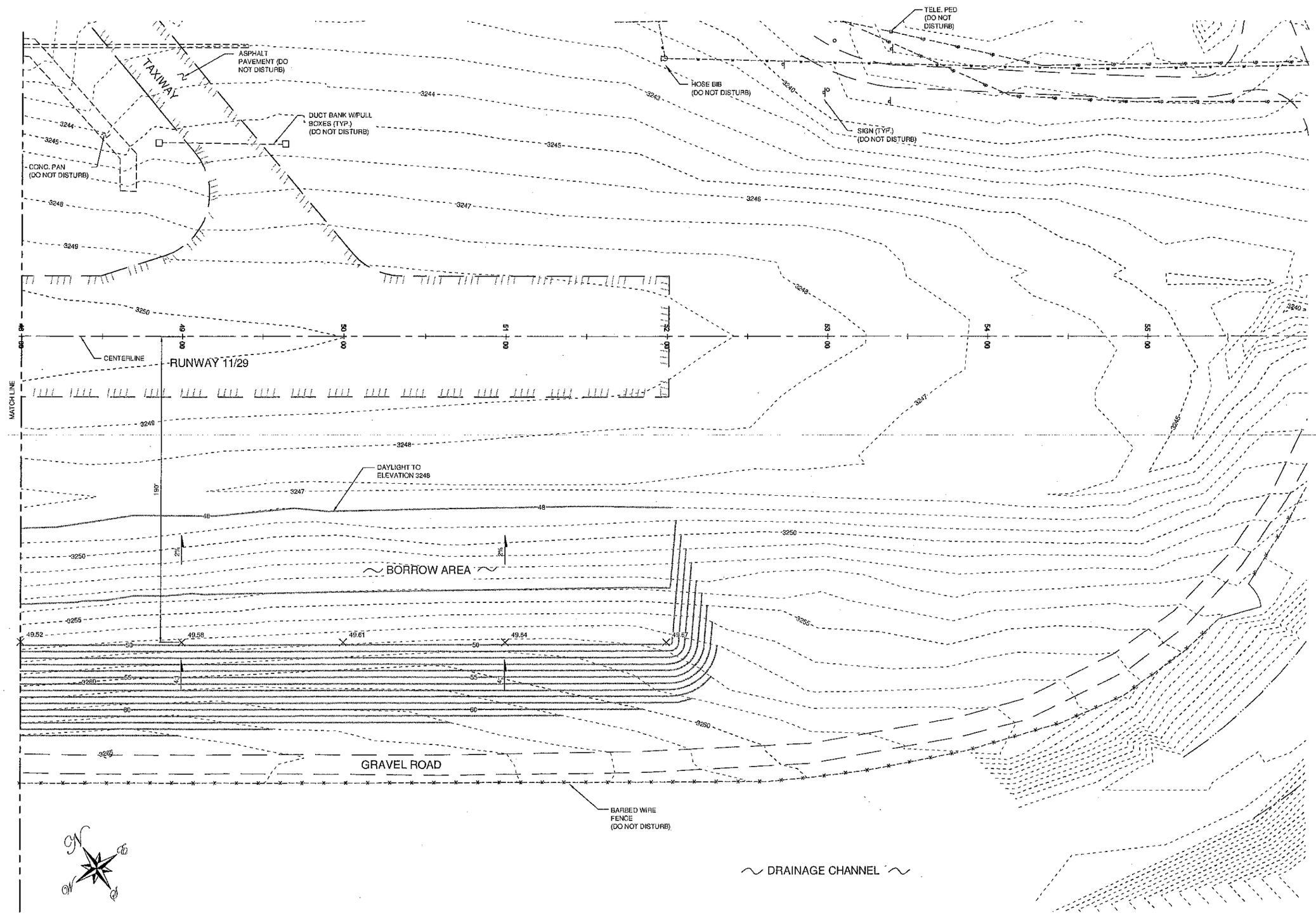
No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864102

Drawn: JOS
Checked: RPR
Approved: KEK

BORROW AREA

Sheet: 21 of 23



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A.I.P. No. 3-04-0080-001-2007

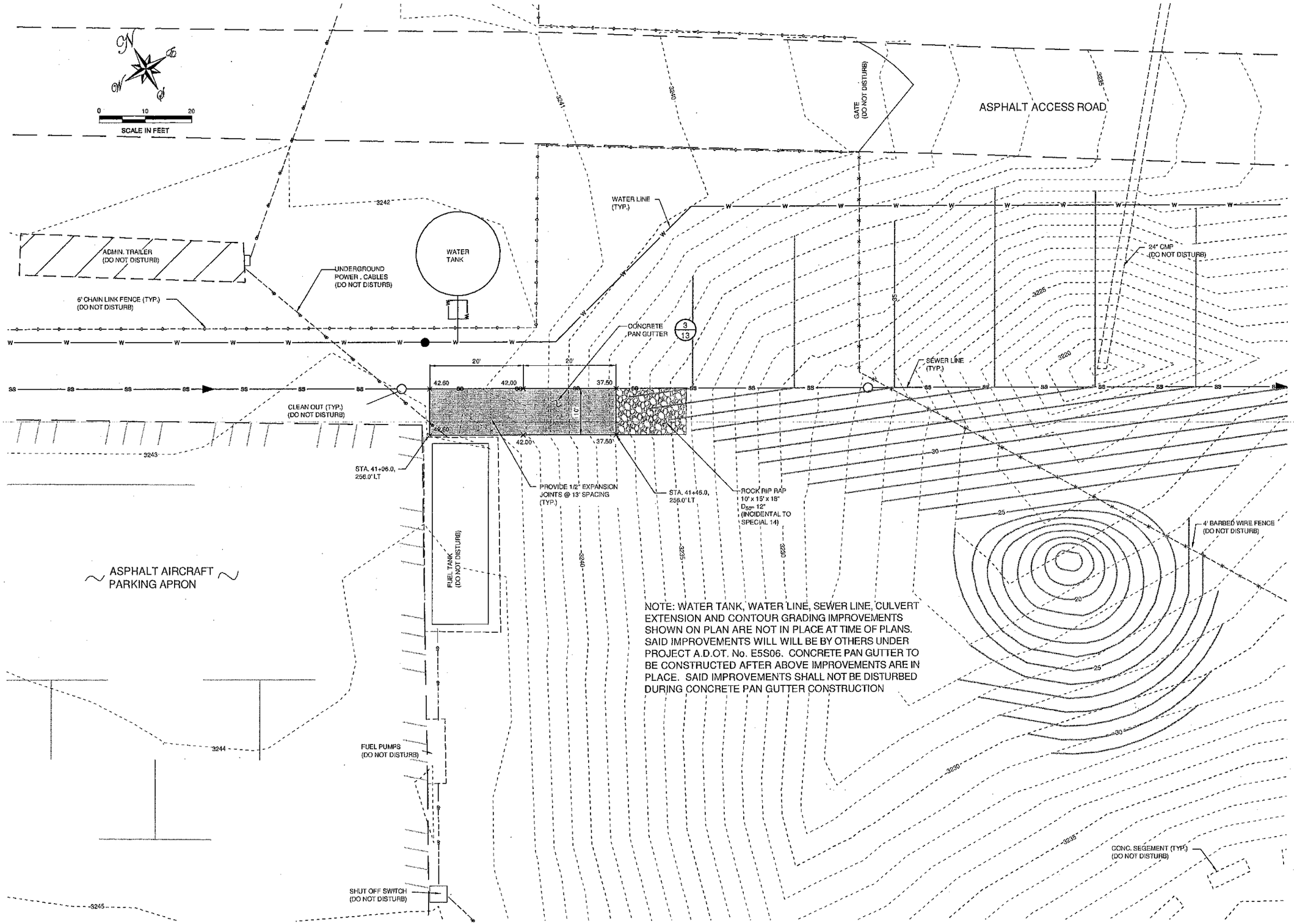
No.	Revision	Date	By

Project No: 085864
Date: JUNE, 2008
File Name: 5864102

Drawn: JOS
Checked: RPR
Approved: KEK

BORROW AREA

Sheet 22 of 23



NOTE: WATER TANK, WATER LINE, SEWER LINE, CULVERT EXTENSION AND CONTOUR GRADING IMPROVEMENTS SHOWN ON PLAN ARE NOT IN PLACE AT TIME OF PLANS. SAID IMPROVEMENTS WILL WILL BE BY OTHERS UNDER PROJECT A.D.O.T. No. E5S06. CONCRETE PAN GUTTER TO BE CONSTRUCTED AFTER ABOVE IMPROVEMENTS ARE IN PLACE. SAID IMPROVEMENTS SHALL NOT BE DISTURBED DURING CONCRETE PAN GUTTER CONSTRUCTION

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TAXIWAY IMPROVEMENTS
A.I.P. No. 3-04-0080-001-2007

No.	Revision	Date	By

Project No: 075656
Date: JUNE, 2008
File Name: 5864106

Drawn: JOS
Checked: RPR
Approved: KEK

CONCRETE PAN GUTTER PLAN

Sheet 23 of 23