

Santa Maria Public Airport District
Rehabilitate Parallel and Connecting Taxiways, Phase 1
AIP 3-06-0237-038-2022
Addendum No. 1

Contractors interested in bidding the work of this project are hereby notified of the following additions, deletions, changes, revisions, and/or modifications to the Plans and Specifications for this project.

Changes to Specifications:

- 1.01 The Construction Safety Phasing Plan (CSPP) is included as an attachment to this Addendum.
Bidder to insert the CSPP document, in its entirety, into the specification book as Appendix E.

Bid Date and Time Remain the same: **2:00 pm, March 24th, 2022**

Bidding Contractors must acknowledge receipt of this Addendum in the appropriate blank on Page 18 of the contract book.

END OF ADDENDUM No. 1

/s/ Chris Hastert
General Manager

Attachments:

1. Construction Safety Phasing Plan (32 pages)



CONSTRUCTION SAFETY PHASING PLAN

for

Rehabilitate Parallel and Connecting Taxiways, Phase 1

A.I.P. No. 3-06-0237-038-2022

SANTA MARIA PUBLIC AIRPORT

Santa Maria, CA

February, 2022

Tartaglia Engineering
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805-466-5660

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1. Introduction

Aviation safety is the primary consideration at airports, especially during construction. This Construction Safety and Phasing Plan (CSPP) serves as a companion document to the project plans and specifications for the Rehabilitate Parallel & Connecting Taxiways, Phase 1 Project, at Santa Maria Airport. The document has been prepared in compliance with FAA AC 150/5370-2G: Operational Safety on Airports During Construction, and with data and information taken from Santa Maria Airport's Airport Layout Plan.

Phasing developed for this project is intended to minimize the impact the project will have on airport operations while providing a logical sequence of construction activities. The emphasis is safety to airport users and the traveling public, but also to all contractor forces including material delivery personnel, as well as team support members including airport and FAA staff, the engineer, and all quality assurance technicians.

The goal is a high-quality construction improvement completed in a safe manner with minimal impacts to the traveling public. All team members share in responsibilities and obligations toward achieving this goal.

2. Baseline Airport Facility

A. Location

Santa Maria Airport is located within the incorporated limits of the City of Santa Maria, northern Santa Barbara County, California, about 10 miles from the coast, and five miles south of the Santa Maria River, the county line. The airport occupies about 2,600 acres of real property, on the west side of State Route 135, about three miles south of the city's central business district. From downtown Santa Maria, the airport is accessed by traveling south on Broadway (Highway 135), turning right on Skyway Drive, and proceeding northwest about a mile. Administration Offices and the Commercial terminal are on your left.

B. Airfield Facilities

Primary features of the airport include Runway 12-30 (8,004' by 150') and Runway 2-20 (5,199' by 75'), situated with an intersection approximately 2,350 feet from the north end of Runway 12-30. Runway 12-30 is a 24-hour facility, precision marked and lighted, with a friction surface (grooved), and 4-box PAPI serving the approach ends to both Runway 12 and Runway 30. Runway 2-20 is unlighted, day-use only, with basic markings. Both runways are served with full-length parallel taxiways and a supporting network of connecting taxiways that provide access to the terminal, self-serve fuel, aircraft storage hangars, FBO's and Jet Centers, the hotel, and the USFS Air-Attack facility. Taxiways serving Runway 12-30 are fully lighted with edge markings, and internally-lighted guidance signs.

Santa Maria Airport is staffed 24-hours a day with a fully-equipped Aircraft Rescue Fire Fighting (ARFF) facility, has an Air Traffic Control Tower, and maintains a beautiful, full-service commercial terminal with restaurant.

Figure 1 shows the current airfield at Santa Maria.

C. Navigation Aids

Visibility at Santa Maria can be a challenge due to a characteristic, low-level marine layer, persistent in early morning and early evening times during late spring and early summer periods. In addition to PAPI, Runway 12 is served with a full Instrument Landing System (ILS) including a Medium Intensity Approach Lighting System with Runway End Alignment Lights (MALSR), extending 2,400 feet to the northwest, beyond the runway end. The airport also has an Automated Surface Observation System (ASOS), rotating beacon, primary wind cone and numerous secondary wind cones throughout.

D. Activity

The airport is open 24-hours a day with no operational restrictions to Runway 12-30. Aviation enthusiasts fly into Santa Maria for business in the community and region, including activities at nearby Vandenberg Space Port, for the agricultural and wine industry, or for recreational and scenic destinations throughout the area. Activity is evenly spread distributed; weekends for recreation and weekdays for business. The airport does attract significant transient military operations and activities, in conjunction with nearby Vandenberg and other military facilities in central California. There are about 235 based aircraft at Santa Maria and the airport experiences about 42,000 annual operations (2019 Master Plan).

During fire response activities, the United States Forest Service (USFS) operates from their base at Santa Maria. Operations tend to start mid-morning, after morning briefing and review of aerial incident documentation, and continue up to sunset. Operations after sundown are generally limited to return-to-base movements, and usually wrap up within an hour of sunset.

3. Project Description

A. General Scope of the Work

- a. In general, the project includes the following major elements:
 - Removal and reconstruction of airfield taxiways, complete, addressing both the sub-standard structural section and airfield geometry issues. Taxiways to have paved shoulders.
 - With the reconstruction, the work includes new edge lighting and guidance sign circuits including conduits, lights, and internally-lighted signs.
 - The project also includes new pavement markings and infield grading to address surface irregularities and to promote surface drainage.
- b. The scope of actual construction work includes:
 - Airfield safety and security.
 - Construction site environmental compliance.
 - Removal of existing asphalt paved structural sections through a pulverize / grind in-place effort, followed with stockpile for future use.
 - Earthwork and subgrade preparation. Earth import / export to / from an on-airport site.
 - Implementation of utility protection effort, addressing several existing pipelines crossing under taxiways.
 - Trenching, backfill, and compaction.
 - Installation of electrical conduits, some encased in concrete.
 - Installation of new electrical conductor for this segment of the taxiway lighting circuit.

- Construction of new pavement structural sections, including recycled material, aggregate base, and hot-mix asphalt pavement.
 - Infield grading.
 - Pavement markings, including centerlines, edge lines and hold position markings.
 - Installation of elevated edge lights and internally-lighted guidance signs.
 - Application of a hydro-seed erosion control material.
- c. The work is presented in a Base Bid plus Additive Alternate A plus Additive Alternate B; a three-bid schedule format.
- d. Figure 2, the Project Layout Plan, shows the extent and location of all work on this project.

B. Location

The work of this project is focused on the southeast end of Taxiway A, runway connecting Taxiways A8, A7, A6, and apron connecting Taxiways W, V, U, T, S, and R.

C. Duration

The work of this project is divided into three phases, covered on a Base Bid and two Additive Alternate Bid Schedule format.

Bid Schedule	Phase	Duration
Base Bid	Phase 1	80 working days
Additive Alternate A	Phase 2	80 working days
Additive Alternate B	Phase 3	60 working days
Total		220 working days

A Notice to Proceed will be issued after approval of all material submittals has occurred and the anticipated receipt of all materials is time-certain. Project plans and specifications require that the work of one phase be complete, accepted, and open to air traffic before proceeding to the next phase. In general, major elements of this project including earthwork, subgrade preparation, and the construction of asphalt pavement sections are sensitive to weather (precipitation and temperature). It is anticipated that weather could have an impact on construction progress. The team will evaluate the time of year and anticipated weather during the near-term period, ahead of each Phase of the work, and make a collective decision to proceed, or not. Weather events, particularly rain, tend to impact work site conditions for the duration of the weather event plus several subsequent dry-out days.

4. Project Team

Table 1 identifies key team members that have been and continue to be instrumental in the successful progress of this project to-date. Table 2 identifies key team members during the construction phase. It will be revised based on contractor information acquired during the Pre-Construction Conference.

Design Contacts			
Table 1			
Organization	Point of Contact	Role	Contact Information
Santa Maria Airport	Chris Hastert	Airport Manager	(805) 922-1726 chastert@santamariaairport.com
	Ric Tokoph	Airport Operations	(805) 922-1726 rtokoph@santamariaairport.com
FAA – Airports District Office	Carlos Mora	Program Manager	(424) 405-7270 Carlos.M.Mora@faa.gov
FAA – Facilities	Morgan Ford	Paso Robles FAA Tech/Ops Facilities Manager	(805) 238-0102 Morgan.ford@faa.gov
Tartaglia Engineering	Jason Hargreaves	Lead Designer	(805) 466-5660 jason@tartaglia-engineering.com
	John Smith	Design Manager	(805) 466-5660 john@tartaglia-engineering.com

Construction Team			
Table 2			
Organization	Role	Point of Contact	Contact Information
Santa Maria Airport	Airport Manager	Chris Hastert	(805) 922-1726 chastert@santamariaairport.com
	Airport Facilities	Ric Tokoph	(805) 922-1726 rtokoph@santamariaairport.com
FAA – Airports District Office	Program Manager	Carlos Mora	(424) 405-7270 Carlos.M.Mora@faa.gov
FAA – Facilities	Paso Robles FAA Tech / Ops Facility Manager	Morgan Ford	(805) 238-0102 Morgan.ford@faa.gov
Tartaglia Engineering	Lead Designer	Jason Hargreaves	(805) 466-5660 jason@tartaglia-engineering.com
	Construction Manager	John Smith	(805) 391-3665 john@tartaglia-engineering.com
	Inspector	Brett Dolan	(805) 610-7816 brett@tartaglia-engineering.com
Earth Systems Pacific	Quality Assurance Manager	Fred Potthast	(805) 544-3276 fpotthast@earthsystems.com
	Materials Testing Technician – Asphalt	Ted Cios	Phone tcios@earthsystems.com
	Materials Testing Technician – All Else	TBD	Phone e-mail
General Contractor	Project Manager	TBD	Phone e-mail
	Project Superintendent	TBD	Phone e-mail
	Safety Manager	TBD	Phone e-mail
	Quality Control Manager	TBD	Phone e-mail
Subcontractor A	Project Manager	TBD	Phone
			e-mail

Construction Team			
Table 2			
Organization	Role	Point of Contact	Contact Information
Subcontractor B	Foreman	TBD	Phone
			e-mail
	Project Manager	TBD	Phone
			e-mail
	Foreman	TBD	Phone
			e-mail

5. Emergency Response

Table 3 identifies all emergency response providers. This table will be copied on card stock and distributed to team members during the Pre-Construction Conference, to be kept in all construction vehicles.

Emergency Response			
Table 3			
Organization	Role	Point of Contact	Contact Information
Marian Regional Medical Center 1400 E. Church, Santa Maria	Emergency Medical	N/A	(805) 739-3000
Cottage Urgent Care 3596 Skyway Dr., Santa Maria		N/A	(805) 354-5563
Dignity Health Urgent Care 2271 S. Depot, Santa Maria		N/A	(805) 922-0561
Fire Department: City of Santa Maria	Fire Protection	N/A	911 or (805) 925-2631
Police Department – Community: City of Santa Maria	Public Safety	N/A	911 or (805) 928-3781
Police Department – Airport: City of Guadalupe		N/A	911 or (805) 343-2112
Hazardous Materials Management Services (HMMS)	Santa Barbara County Certified Unified Program Agency (CUPA)	N/A	911 or (805) 346-8460

6. Coordination

Coordination and communication are key to project success. Coordination between the airport and the design team has been instrumental in facilitating progress on the project to the point of public bidding and award of construction contract. The need for effective coordination and communication is heightened as the work moves out to the field, and the need for an emphasis on public safety becomes more acute.

A. Construction Progress Meetings

Periodic construction progress meetings will be scheduled to help facilitate communication between the Contractor, the RPR, and the Airport. These meetings will be essential for distribution of information regarding phasing and scheduling, issues related to airfield safety and improvement constructability, etc. Minutes taken at each meeting will serve as the agenda for each subsequent meeting.

B. Scope or Schedule Changes

Scope or schedule changes, should they occur, will be well-documented and agreed upon in advance of implementation. The FAA Program Manager will be kept informed as potential changes begin to materialize. All implemented changes will be proceeded with preparation, distribution, and approval of contract Change Orders.

C. FAA ATO / Facilities Coordination

FAA facilities at Santa Maria include the Air Traffic Control Tower, (ATCT), the Automated Surface Observation System (ASOS), the Instrument Landing System (ILS), and the Precision Approach Path Indicator (PAPI) for both Runways 12 and 30.

A section of the project, primarily removal and reconstruction of portions of each of the three connecting taxiways, will occur within the Runway 12-30 Safety Area, requiring runway closure. At present, the closure period has been determined to be from 2000 until 0600, local. FAA facilities to be shut down with each runway closure period:

- a. Glide Slope
- b. Localizer
- c. MALSR
- d. Runway 12 PAPI
- e. Runway 30 PAPI

The local FAA Facilities representatives will be invited to the Pre-Construction Conference and all periodic progress meetings.

- a. Review of project plans for possible impact to FAA facilities and conduits serving them.
- b. With the project engineer, field location of FAA conduits.
- c. Coordination for runway closures.

There will be no long-term shutdown of FAA facilities. All shut downs will be for each individual work shift only. None of the activities, including work shift shut-downs, will require re-certification flight testing.

D. Lines of Communication

- a. Airport staff will serve and provide the following:
 - The Public Information Officer, disseminating information to the public including commercial airlines, FBO's, and tenants, and receiving concerns and communication from the public.
 - Communication with FAA – Facilities, regarding construction progress and any potential issues through interaction with FAA facilities.
 - Communication with the Air Traffic Control Tower, regarding scheduling and overall construction progress.
 - Communication with the engineer regarding concerns and issues, possible changes to the project; scheduling, construction, scope of work, etc.
 - Communication with the contractor when immediate direction is warranted.
- b. Engineer will serve and provide the following:
 - Communication with the airport regarding progress, issues, challenges, and opportunities, and input on schedule including certification flight tests.

- Communication with the contractor regarding safety including any safety violations, quality assurance, work progress, periodic pay requests, field engineering including technical input and plan and specification interpretation, compliance with employee compensation, subcontractor issues, etc.
- Communication with the FAA – Facilities regarding project schedule, runway closures, and construction sequencing that may impact facilities.
- c. Contractor will serve and provide the following, through communication to the engineer:
 - Schedule updates and other impacts to planned work progress.
 - All material submittals and plan submittals.
 - Look-ahead logic, seeking issues and challenges before they occur, providing questions and asking for input in a timely manner to facilitate uninterrupted progress.
 - All required documentation for quality control, materials placed including weight tickets, certified payroll statements including compensation to DBE's, etc.

E. Project Meetings and Representation

Construction Team members are invited and expected to attend and provide active input at the following project meetings:

- a. Pre-Construction Conference.
 - Identify / confirm the extent of award of contract.
 - Present detailed schedule.
 - Phasing and sequencing.
 - Review airport safety including the CSPP. Emphasis on:
 - Runway closed not airport.
 - Runway and taxiway safety areas (imaginary areas centered on features).
 - Work window limitations.
 - Closing and re-opening procedures.
 - Confirm all points of contact for various team members including back-ups (update Table 2).
 - Project submittals.
 - Airport tenant and user concerns and issues, FBO's, etc.
 - Neighbor / community concerns.
 - Construction activities and materials.
 - Quality control / quality assurance.
 - Project milestones.
 - Labor requirements, civil rights requirements, DBE goals and documentation.
 - Payroll records.
 - Pay requests; periodic and final.
 - Issuance of Notice to Proceed – Day 1.
 - Time for performance based on extent of contract award.
- b. Construction Progress Meetings.
 - Meetings will be weekly until otherwise informed.
 - The primary venue for open discussion regarding all issues.
 - Team member to provide representation capable of providing active input.
 - Subjects at Pre-Construction Conference serve as the basis.
 - Discuss and review Requests for Information (RFI's), RFI Responses, Requests for Proposals (RFP's), Proposal Responses, Change Orders, Pay Requests.

- During day-shift operations, meetings to be scheduled during the day. During night-shift operations, meetings to be scheduled in the evening before shift starts.
- Engineer-prepared minutes become living document, serving as agenda for next meeting.
- c. Preliminary Final and Final Inspections.
 - Review progress to-date, including completed work and schedule.
 - Establish final pay quantities, substantiated by field measurement, material weight ticket, or other.
 - Status of all Contractor-provided closeout paperwork:
 - Marked up, as-built plans.
 - O&M Manuals.
 - Final certifications.
 - Permit closeout paperwork and confirmation.
 - All final certified payrolls, benefit statements, etc.
 - Documentation for final compensation to all DBE's including statement regarding compliance / achieving the goal.
 - Identify all compensation deductions:
 - Based on contractor performance, in accordance with technical specifications.
 - Deductions due to waste material.
 - Financial penalties for CSPP violations.
 - Receipt of all spare parts and elements and components to be salvaged to the Airport.
 - Documentation of outstanding items and issues through generation of a Preliminary Punch List.
 - Schedule for timely completion of all outstanding items, and for Final Inspection.

F. Coordination Procedures for FAA Facilities Shutdown and Restart

For those work periods that require runway closure, FAA staff will play a critical role in the nightly shut down of FAA-owned and maintained navigation aids at the start of each closure period, and the re-start of this equipment at the end of each closure period.

- a. Shutdown Sequence - Start of Shift:
 - Airport staff will confirm NOTAM for closure has been issued.
 - Airport staff to confirm status of any anticipated commercial service operations scheduled in proximity to the start of the closure period.
 - After the time for published closure has passed, Airport staff will announce the runway closure, and turn off airfield lighting circuits: runway and taxiway.
 - FAA Facilities will shut down Glide Slope, Localizer, PAPI, and MALSR serving Runway 12-30.
 - Contractor to install lighted runway closure crosses, and then go to work.
- b. Turn-On Sequence - End of Shift:
 - Prior to the identified end of shift, contractor to vacate airfield pavements (men, equipment, materials, work area lights), clean airfield pavements including haul routes, and seek inspection of same.
 - Airport staff perform FOD inspection.
 - Contractor re-clean if necessary and assist in re-inspection.
 - Contractor remove runway closure crosses.
 - Airport staff turn on airfield lighting circuits: runway and taxiway.
 - FAA Facilities turn on Glide Slope, Localizer, PAPI, and MALSR serving Runway 12-30.

- Airport staff perform one final inspection with lighting and navigation aids powered up and functioning.
- Airport staff announce runway open.
- c. The following is essential for successful Shutdown and Turn-On Sequencing:
 - Contractor forces to remain on-site until FOD check and electrical inspection is complete.
 - Contractor limiting areas of disturbance and haul routes will help minimize end of shift inspections.
 - Scheduled or anticipated short-shifts need to be communicated to the team, for coordination of FAA technician early arrival.

7. Phasing and Sequencing, Accomplishment

A. Phasing and Sequencing

The project is to be phased in a total of three (3) phases, created with a focus on providing large enough contractor work areas to achieve economies of scale while concurrently preserving airfield access and aircraft maneuverability. Work areas, the general scope of work, and airfield impacts beyond each work shift for each phase are identified in Table 4 below.

Work Phase Summary			
Table 4			
Phase	Work Areas	Items of Work	Impacts Beyond Work Shift
1	Twy A from and including Twy V, south, including Twy's A7, A8, and W.	Remove & reconstruction taxiways complete, including electrical, marking, infield grading, and hydro-mulch erosion control.	Work area closed for duration of phase, weekends, holidays, and extended non-work periods included. Impacts to access to Rwy 30 threshold and to Terminal Apron.
2	Twy A between Twy S and Twy V, including Twy T and U.		
3	Twy A from and including Twy S, north, including Twy's A6 and R.		

Figures 3, 4, and 5 show the area of work for each of these three (3) phases. The Contractor is to establish and maintain delineation for the limits of each phase as described, for the duration of each work period. All delineation shall be protected and maintained for the duration, evenings, weekends, holidays, and extended non-work periods included.

The work of Phases 1-3 is to be performed in any logical sequence, one at a time. It is possible the Contractor can move from one phase into another phase within the same work period, but not concurrently. Portions of all three phases require runway closure.

Each of the Phasing Plans identify the following for each Phase:

- Extent of area of work.
- Haul routes / path of travel for materials and equipment.
- Airfield closure delineation (low-profile lighted delineators)
- Runway closure delineation (lighted runway closure crosses)

B. Accomplishment

- a. Airport to remain open for the duration of the project.
- b. The work of is to be accomplished in three phases.
- c. Each of the phases includes work within the Runway Safety Area (RSA) requiring runway closure.

- d. Runway closure can occur between 2000 and 0600, local time, Sunday night through Friday morning.
- e. No Friday or Saturday night or holiday closures allowed.
- f. In addition, a portion of the work within each phase is outside the RSA. This work can be accomplished at any time, day or night.
- g. Airport to issue Notice to Airman (NOTAM) in advance of each runway closure period.
- h. During those closure periods when a runway is closed, Contractor to place runway closure delineation (lighted X's) over the top of each runway designation marking for the duration each shift, removing back to the yard at the end of each work period.
- i. Runways are to be re-opened at the end of each shift. Substantial financial penalty to the Contractor for failure to re-open a runway before the end of the nightly closure period.
- j. FAA-Facilities to turn off FAA navigation aids at the start of each shift, and restore them to full function at the end of each work shift.
- k. Airport staff, with contractor, to turn off airport-owned airfield electrical including runway and taxiway edge lights and guidance signs, and restore them to full power at the end of each shift. Runway and taxiway circuits to be tested and fully operational at the end of each work period.
- l. No impacts to airport perimeter security / fencing.
- m. Work that can occur within each phase or, at contractor option, in a single effort, after completion of each of the individual phases:
 - The second coat of pavement markings, to be applied in a single move-in, 30+ days after completion of the last, first-coat of markings.
 - All final infield grading and dressing.
 - Application of hydro-seed erosion control material.

C. Construction Safety Drawings

The Project Layout Plan, along with Phase 1, Phase 2, and Phase 3 Plans, provide clear indication of the individual work areas of each phase, along with the location of closure delineation and contractor haul / access routes. These figures are included in this CSPP through reference here.

8. Areas and Operations Affected by the Construction Activity

A. Areas Affected by Construction Activity

In general, work on this project is focused on the southern end of the main parallel taxiway, and the threshold area of Runway 30. Specific areas of work that will be impacted include Taxiway A from Taxiway A5 south, and connecting Taxiways A6, A7, A8, R, S, T, U, V, and W. The work will impact access to the threshold of Runway 30, the Terminal Apron, the Hotel Apron, and the Cargo Apron.

- a. Runway 12-30:
 - Runway 12-30 closed periodically, at night, during the period 2000 – 600, local.
 - Impacted access to threshold of Runway 30 in Phase's 1 and 2.
 - Phase 3 requires use of runway as taxiway, traveling past the ATCT.
- b. Terminal Apron:
 - Impacted access to the apron, by periodic closers of all three connecting taxiways.
 - Connecting Twy's T and U closed concurrently. Access to Apron from Twy S.
 - Connecting Twy's T and U open when Twy S is closed.

- c. Hotel Apron:
 - Impacted access to the apron by periodic closers of both connecting taxiways.
 - Connecting Twy U closed and reconstructed first, followed by connecting Twy V.
 - Portion of apron to be temporarily occupied by Cargo Apron activities.
- d. Cargo Apron:
 - Temporarily closed, during Phase 1.
 - Activity to be temporarily relocated to Hotel Apron.

Table 5 identifies Airfield Safety Areas that are in force at Santa Maria Airport. Contractor forces are to remain clear of Runway Object Free Areas (ROFA) and Taxiway Object Free Areas (TOFA) unless each specific element is intended to be closed. During Construction, when contractor forces are working within the identified work area, Contractor forces can be within the ROFA but must remain outside the Runways Safety Areas (RSA) unless the Runway is closed.

Airfield Safety Areas			
Table 5			
Design Standards – General	Entity	Parameter	Dimension
Design Aircraft: C-IV Critical Aircraft: Boeing DC-10 Runway Design Code: C-IV-2400	Runway 12 – 30	Runway Object Free Area (ROFA)	800 feet – centered
		Runway Safety Area (RSA)	500 feet – centered
	Taxiways	Taxiway Object Free Area (TOFA)	259 feet – centered
		Taxiway Safety Area (TSA)	171 feet – centered

B. Operations Affected by Construction Activity

During each day-time construction period (0700 – 1600), the Contractor will work within the active Phase, in the portion outside the Runway 12-30 RSA. Construction delineation will have been installed at the start of the phase. Operations will be affected by the closed facility, during the construction period and during non-work times when delineation remains in place.

During each night-time construction period (2000 – 0600), the Contractor will install and maintain lighted runway closure crosses for Runway 12-30, and will establish any additional delineation required to demarcate their night shift construction activities. He will then proceed with work within the active Phase, working both inside and outside of the RSA. These additional delineators, and the closure crosses, will be removed before the end of the night shift.

The work impacts normal access to Runway 30 from the parallel taxiway, and access into and out of the Terminal Apron. Phase 3 requires using a short segment of Runway 12-30 as taxiway. Construction phasing has been established with a sensitivity toward minimizing, the extent possible, these impacts.

- a. Phase 1 (80 working-days):
 - Scope of Work: Rehabilitate a segment of parallel Taxiway A, and connecting Twy's V, W, A7, and A8.
 - Access to Rwy 30:
 - Enter Rwy 30 at Twy A6, back-taxi to threshold, turn, and take off.
 - Enter Rwy 30 at Twy A6, take-off at this point (5,800 feet available).
 - Access to / from Terminal Apron:
 - Enter / exit Apron at Twy's S, T, and U.

- Access to Cargo Apron:
 - Apron closed. Functions temporarily relocated to Hotel Apron.
 - Access to relocated Cargo Operation is by Twy U.
- b. Phase 2 (80 working-days):
 - Scope of Work: Rehabilitate a segment of parallel Taxiway A, connecting Twy's T and U, and construct a new connecting Taxiway A6.
 - Access to Rwy 30:
 - Enter Rwy 30 at Twy A6, back-taxi to threshold, turn, and take off.
 - Enter Rwy 30 at Twy A6, take-off at this point (5,800 feet available).
 - Enter Rwy 30 at Twy A7 via Terminal and Hotel Aprons.
 - Access to / from Terminal Apron:
 - Enter / exit Apron at Twy's S and V.
- c. Phase 3 (60 working-days):
 - Scope of Work: Rehabilitate a segment of parallel Taxiway A, and connecting Twy S. Permanently close Twy R.
 - Access to Rwy 30:
 - Enter Rwy 30 at new Twy A7 or A8, by way of Terminal Apron.
 - Access to / from Terminal Apron:
 - Enter / exit Apron at Twy's T, U, and V.
 - Taxiing from northwest to southeast past ATCT:
 - Enter / exit Runway 12-30 at A4 or A5 on the north, and A6 on the south.

9. Protection of Navigation Aids (NAVAIDs)

The Contractors attention is directed to the project plans that identify the following Navigation Aids and the conduits and conductors that serve them:

- Conduit serving the ASOS.
- Conduit serving Runway 30 PAPI.

Protection of all NAVAID's is essential to the success of the project. The Contractor shall notify the Inspector immediately should FAA facilities be impacted or damaged during the course of the work.

10. Contractor Access

Contractor access to and from the airport shall be per the provisions cited in this Construction Safety Phasing Plan, the project plans and specifications, and the contents of FAA Circular AC150/5370-2G, included in its entirety at the back of this document. In the field, contractor access shall be through one automatic vehicle access gate, designated on the Project Layout Plan.

- A. Airport Security Requirements
 - a. All contractor forces shall wear / employ OSHA-standard Personal Protective Equipment (PPE), appropriate for their individual tasks and for the environmental condition anticipated for this project (dark), including safety wear and high-visibility outerwear.
 - b. All gates shall be unlocked and locked with each passage. No dummy-locking. No piggy-backing allowed.
 - c. All vehicles inside the fence shall be equipped with flashing beacons and/or orange checked flags at all times.

- d. Personal vehicles not allowed within the AOA.
- e. In the event of material delivery inside the fence, Contractor shall designate a flagman to accompany delivery vehicles to / from the gate and work site at all times.
- B. Vehicle Safety Requirements
 - a. All vehicles will be equipped with either standard FAA orange and white checkered flags (day only) or amber rotating beacons (day or night), to be installed at the highest point on the equipment.
 - b. The company name or logo shall be displayed on both sides of the vehicles. Vehicle marking requirements are shown in the project specifications.
 - c. Employee parking shall be as designated by the Project Manager, outside the AOA.
 - d. Access to the job site shall be via specified Haul Routes as shown on the plans designated by the engineer and approved by the Project Engineer.
- C. Access and Driving on the Airport
 - a. Contractor shall attend and participate in safety training / workshops organized and presented by the Airport in advance of driving within the AOA. Material delivery or occasional drivers need not receive training provided they have a trained escort while on airport property.
 - b. All vehicles and persons shall enter and exit the AOA (Airport Operations Area) through designated gates only.
 - c. Maximum vehicle speed shall be 15 MPH while on airport property.
 - d. No deviation from designated vehicle haul routes shall be allowed, unless previously approved by the Airport Project Manager. While in the AOA, all vehicles and persons shall remain within designated areas.
 - e. All private vehicles shall be parked outside the fence.
 - f. No vehicle shall be parked on, or operated across any aircraft apron or transient aircraft tie-down row, whether they are vacant or occupied.
- D. Automatic Vehicle Access Gate Protocol
 - a. Gates at Santa Maria operate via card-in, card-out control.
 - b. Pull up to the key pad, wave or insert card as appropriate at the reader.
 - c. Proceed into the airport, pulling past access control loops.
 - d. Stop and wait for gate to come to a complete close.
 - e. Proceed into airport.
 - f. Exit airport in same manner.
 - g. Do not move beyond the gate area unless and until the gate is FULLY CLOSED.
 - h. Do not accommodate any vehicle other than those in your charge.
 - i. Any vehicle authorized to be on / in the AOA is fully aware of gate protocol. They will wait for your movement to conclude.
 - j. Any vehicle that enters the airport under your control will not be allowed out unless under your control.
 - k. Automatic gates in a path of travel during heavy traffic periods (material import or export) can be locked in the open position, provided contractor-provided sentry is in place.
- E. Airfield Incursions
 - a. An airfield incursion is an unauthorized entry into controlled space within the AOA. An incursion can be on foot or in a vehicle.
 - b. At towered airports, when the tower is open, unauthorized movement or entry into the Movement Area is considered an incursion.

- c. At towered airports, when the tower is closed, unauthorized movement or entry into any Runway Object Free Area or Taxiway Object Free Area of a runway or taxiway that is open without adequate and proper announcement of your intent and confirmation of a safe condition, is considered an incursion.
- d. There are four (4) categories of incursion, based on the level of risk or exposure, from most to least significant:
 - Category A: A serious incident in which a collision was narrowly avoided.
 - Category B: An incident in which separation decreases and there is a significant potential for collision, which may result in a time critical corrective / evasive response to avoid a collision.
 - Category C: An incident characterized by ample time and/or distance to avoid a collision.
 - Category D: An incident that meets the definition of airfield incursion such as incorrect presence of a single vehicle / person / aircraft on the protected area of a surface designated for the landing, take off, or taxiing of aircraft but with no immediate safety consequences.
- F. Fencing and Gates
 - a. Throughout the duration of the project, security of the airport provided by the perimeter fence and access gates shall remain equal to or greater than pre-project condition. The integrity of the perimeter fence shall remain intact during construction. The work of this project does not modify the perimeter fence in any way.
 - b. Manual access gates normally closed will remain closed. After entering or exiting the airport through an automatic gate, the Contractor shall remain in close proximity to the gate until the gate is fully closed, prohibiting airport access to any other individual.
 - c. After entering the airport through a manual gate, the Contractor must lock himself in. All manual gates shall be locked after leaving the airport as well. During material import or export operations, the Contractor shall maintain a sentry at the access gate. The sentry shall be prepared to deny access to any unauthorized individuals. The gate shall be locked during all sentry breaks or lunch.
- G. Contractor Access and Haul Route Provisions
 - a. The Contractor shall control his/her operations and the operations of his/her subcontractors and all suppliers while on airport property.
 - b. The Contractor's men and equipment shall be limited to the Construction areas shown on the project plans and in the specifications. Contractor agrees to implement such security measures as are necessary to assure compliance with Federal Aviation Administration, State and local airport regulations. The Contractor shall be responsible for clearly delineating the limits of his operation. Delineation shall be installed in accordance with the typical delineation details shown on the plans. Delineation left overnight, if allowed, shall be clearly and adequately lighted. Batteries shall be replaced every two weeks at a minimum or more frequently as needed.
 - c. Haul routes will use existing vehicle service roads to bring in material or remove material at the worksite. Absolutely no deviations from designated routes will be allowed without prior written authorization of Airport Staff or the Project Engineer.
 - d. The Contractor's attention is directed to the plans, which show the fence, access gate, haul routes and areas available for the storage of materials and equipment as required. The restriction and control of persons and vehicles allowed on the Airport is of prime importance. Therefore, the Contractor will be responsible for the persons and vehicles coming through the access gates during the time that he/she has it in his/her control. When the gates are

- unlocked, he/she shall have them in the “closed” position and guarded by a person on his/her staff who will allow only those persons known to him to be a part of the construction team. Additionally, only vehicles properly flagged or equipped with a rotating beacon will be allowed. At all times when the gates are not guarded by a person, they will be kept closed and locked.
- e. It shall be the Contractor’s responsibility to inform any and all delivery personnel of these requirements.
 - f. To avoid confusion with aircraft during the construction and to avoid damage to the existing pavement and to the adjacent property, the Contractor’s equipment shall be restricted to haul routes shown on the plans and in this document. The routes will be open to the Contractor depending on work area actively under construction. In most areas the routes are coincident with or across existing ramps or taxiways. It shall be the responsibility of the Contractor to provide adequate safeguards, including flagmen, so that the operation of the Airport will not be hindered.
 - g. All equipment storage areas shall be delineated as called out in the project specifications.
 - h. At the end of each work day, the active haul route shall be swept and cleared of any debris.
 - i. At the completion of work, all haul routes in paved or unpaved areas shall be restored to the conditions existing prior to the start of the work.
- H. Radio Communications
- a. Contractor forces are required to successfully complete radio training before being authorized to participate in radio communication at Santa Maria Airport.
 - b. Air band radio communication is not for contractor-contractor communication, or contractor-engineer communication.
 - c. During periods when the Air Traffic Control Tower (ATCT) is open (0600 – 2000), all air-band radio traffic is between you and the ATCT.
 - Ground: 121.9
 - Tower: 118.3
 - d. During periods when the ATCT is closed, all air-band radio traffic is between you and aircraft.
 - CTAF: 118.3
 - e. Radio communications are required:
 - To broadcast contractor intent for the movement of men and equipment into or through active airport operations areas.
 - To hear, learn, comprehend, and disseminate to others on the crew, information regarding active or near-term aircraft movements that can adversely impact contractor operations or pending contractor operations.
 - To identify airfield conditions to pilots that will impact identified pilot intent.
 - f. Airband radio frequencies can be busy. Respectful radio protocol is essential. Prior to initiating radio communications, the Contractors Radio Monitor shall listen for active communication, and delay initiating communication until confident all previous communications are complete.
 - g. The Contractor shall have a designated, authorized, radio monitor on site the entire time work crews are present within the AOA. The monitor shall have in his possession a working air-band radio tuned to the appropriate frequency, shall be in a physical position capable of hearing radio broadcasts (away from background noise), and shall be capable of initiating or responding to radio communications that are essential to the safety of the flying public and contractor forces.

- h. Radio communication is essential for entering or crossing active airfield operations areas. The Contractor's radio monitor shall be capable of providing clear and concise direction regarding intent, and / or shall be capable of complete understanding of the location and intent of aircraft maneuvering on the airport.
- i. Radio Monitor shall use cell phone, CB-radio, or other means to communicate by and between contractor forces including material delivery trucks, and not the airband radio.
- I. Aircraft and Pedestrian Operations
Throughout the construction project, the following safety and operational practices shall be observed:
 - a. Airport runways and taxiways should remain in use by aircraft to the maximum extent possible.
 - b. Aircraft shall *always* have the right of way.
 - c. Aircraft use of areas near the contractor's work shall be controlled to minimize disturbance to the contractor's operation.
 - d. Contractor, subcontractor, and supplier employees are restricted from entering the airport area inside the fence except through the designated gates and along the routes shown on the Project Layout Plan.
 - e. Construction within the safety area of an active runway, taxiway, or apron and performed under normal operational conditions must be accomplished when the runway, taxiway, or apron is closed or use-restricted and initiated only with prior permission from the Airport Project Manager or Inspector.
 - f. Airport Project Manager, Engineer, RPR (Inspector), or other designated airport representative may order the contractor to suspend operations; move personnel, equipment, and materials to a safe location at any time the situation requires it.
- J. Specific Safety Requirements
 - a. Aircraft, emergency vehicles, maintenance vehicles, operational vehicles and enplaning and deplaning passengers have right of way over all traffic. This includes passengers for general aviation aircraft as well as fire-fighting and emergency response aircraft.
 - b. No vehicles shall be left unattended within the AOA.
 - c. No spilling or littering of any substance onto any paved surface. Vehicle operators shall make sure that no loose object falls onto a paved surface or is allowed to become dispersed by either the wind or propeller or jet blast.
 - d. All hazardous conditions necessitated by construction or maintenance activities (trenches, excavations, stockpiles) shall be marked so as to render them readily visible, day and night.
 - e. Pollution by any substance, under any form, shall be properly controlled by means and methods acceptable to Airport Project Manager or RPR (Inspector).
 - f. No metal track vehicle shall be operated on any paved surface, unless prior approval has been secured from the Airport Project Manager or RPR (Inspector).
 - g. All accidents, incidents involving bodily injury or property damages, regardless of severity or property ownership, which occur on the airport, shall be immediately reported to the Airport Project Manager or RPR (Inspector).

11. Wildlife Management

Throughout the duration of the project, Contractor and all subcontractors shall concern themselves with activities and site conditions that could, inadvertently, attract wildlife. To avoid such conditions, team members shall:

- Monitor construction water applications such that free water cannot stand for more than 30 hours.
- Monitor storm water such that free water cannot stand for more than 48 hours after the conclusion of a rain event.
- Implement pumps and other de-watering devices and techniques as necessary to eliminate standing water and the sheen associated with a wet surface.
- Maintain an effective solid waste program that keeps site trash including food waste to a minimum. Containers shall be conveniently placed, shall be securely closed or otherwise inaccessible to wildlife, and shall be serviced at a frequency that preserves their functionality.
- All airport access points shall be kept securely closed when not in use to prevent wildlife access to the airport through an open gate.
- Contractor shall maintain vegetation including grass to an acceptable level / condition within all contractor yards and material storage areas, to reduce wildlife attraction. Projects of long duration may demand a shift or temporary relocation of material stockpiles to facilitate vegetation control.
- Gates shall be kept shut when not in use to prevent domestic and wildlife access to the airport.
- Contractor wildlife management responsibilities including monitoring and addressing standing water extend over weekends, holidays, and extended non-work periods.
- The Contractor shall contact Airport Operations immediately in the event of a wildlife encounter, or at the time of recognition or identification of a condition that could be deemed an attraction to wildlife.

12. Foreign Object Debris (FOD) Management

It is the responsibility of the Contractor to maintain a clean project site free from FOD or the threat of FOD. The project site includes actual work areas, but also includes all haul routes, staging areas, all locations where delineation is placed, and any other airfield area occupied or affected by contractor operations.

FOD management also includes inspection of all vehicles before entering the AOA, looking for and addressing rock, loose construction materials, hand tools, hardware, etc., not stored securely within holding compartments (tool boxes, truck beds, etc.). In addition, vehicles shall be re-inspected when leaving the work area, heading out of the airport.

The Contractor and its employees will be held responsible for maintaining the project area and keeping it free from FOD whether it is generated from the project site or other airfield areas. This obligation also applies to all material suppliers, equipment delivery and equipment servicing staff, quality control and quality assurance staff, etc. Everyone inside the AOA is responsible for the removal of FOD regardless of its origin. All parties associated and affiliated with this project are included in this obligation.

The Contractor is encouraged to limit his path of travel to narrow lanes, following the routes identified on the plans. In so doing, he narrows his area of focus when performing all cleaning and inspecting activities as the work shift comes to a close.

The Contractor shall use water, brooms, blowers, street sweepers (no metal bristles), vacuum trucks, or any other industry-standard, effective means to clean airfield pavements within the project site prior to opening closed areas to air traffic. Airport Staff will have the final word on the acceptance of cleaned project areas for aircraft operations. The Contractor shall allow ample time for inspection of cleaned areas and re-cleaning if necessary, in advance of the end of any closure period.

13. Hazardous Materials (HAZMAT) Management

Hazardous Material Management applies to any material that is considered hazardous by the USEPA, either in character, quantity, condition, or any combination thereof. Hazardous materials can include construction materials, fuels, lubricants, coolants, binders, and coatings, but also can include waste products and blended products. The Contractor shall:

- Prepare, submit, and gain approval of a Hazardous Materials Management Plan (HMMP). The plan shall outline all anticipated hazardous materials to be used, employed, encountered, or generated by and at the necessity of this project, and shall include a complete library of Material Safety Data Sheets (MSDS). The document shall identify the Contractor's Hazardous Materials Manager with 24-hour contact information. In addition, the plan shall address fuel and other material deliveries, material storage, and use. Lastly, the plan shall address spill prevention and control for all anticipated activities.
- Perform all maintenance, serving, and refueling of vehicles and equipment within the designated contractor yard(s).
- Keep all materials in original containers, labeled, to the extent possible, until use.
- Provide adequate and appropriate labeling of all waste product containers.
- Report any hazardous materials spills or related hazardous materials incidences to the following:
 - Call 911 immediately, for local emergency response.
 - Call Airport Operations.
 - Call 1-800-424-8802, the Environmental Protection Agency's (EPA), National Response Center.
 - Identify the caller, location, nearest point of access into airport (gate number), nature of the spill, current site condition, and specific hazardous substance and quantity if known, and how the spill or incident occurred.
 - For spills and incidences of potential significant impacts to the environment, identify date and time of spill, location of threatened waterway.
- Contractor's employees shall not attempt to clean the spill until it has been evaluated by the local emergency response agency. Only those employees with a Hazardous Material Certification shall be involved in the cleanup and then only under the direction of the local emergency response agency.

14. Notification of Construction Activity

- A. The project contact list (Construction Team) will be made current at the conclusion of the Pre-Construction Conference, when all key team players have been identified. The contact list will be reviewed periodically at weekly construction progress meetings, and updated as necessary throughout the duration of the project.
- B. The Notice to Airman (NOTAM) system will be employed to provide project information including closure periods, out of service items, and scheduling updates, etc. The Airport Project Manager will provide active NOTAM management, uploading, and distribution of these to team members. NOTAM's must be issued and in-place before any airfield closures (and work) can occur. The Airport requires a minimum of 72 hours advance notice to publish a NOTAM. In the event a work period is canceled, the Airport can cancel a NOTAM immediately.
- C. Local emergency responders including fire protection and law enforcement will be invited to attend the Pre-Construction Conference, to gain full knowledge of the extent and duration of the project. The Project Engineer will reach back out to these entities quarterly to remind them of the ongoing project, and to update any key members on the Construction team contact list.
- D. Emergency Landing Procedures
The most frequent event that can challenge airport work sites when runways are closed is the unplanned need for landing an aircraft. In the event the contractor's radio monitor is contacted by an aircraft requesting to land during construction hours, the contractor's radio monitor must engage the identifying aircraft and describe conditions on the ground at the airport (i.e. Runway 12-30 closed for construction).
 - He/she shall first confirm if an alternate runway is available and acceptable.
 - If no, then encourage the pilot to go elsewhere stating that "requested runway is closed" and identifying the two closest airports:
 - **Lompoc is 16 miles to the south**
 - **San Luis Obispo is 26 miles to the north**
 - **Santa Ynez is 28 miles to the southeast**
 - **Santa Barbara is 47 miles to the southeast**

Should the pilot insist on landing, the radio monitor shall ask the following questions:

- "Are you declaring an emergency?"
- "What is the nature of your emergency?"
- "How much runway do you need?"
- Followed by, "We will attempt to accommodate" and advising the pilot of any drop offs, loose debris, open trenches or other possible hazards.

The contractor shall temporally cease construction activities and clear the runway as quickly as possible. Time permitting, he shall turn on runway lights, following up to the aircraft specific characteristics about conditions on the ground and instructions for a preferred operation (ie: "first 2500 feet clear", "land early", "last 3,000 feet occupied with equipment", "equipment off right shoulder", etc. In all cases, radio monitor to conclude each radio transmission to the pilot with **"Pilot Discretion"**.

Radio Monitor to contract emergency responders and identify the pending operation and nature of emergency, and document the planes identification number (N number).

15. Inspection Requirements

The project RPR (Inspector) will be on-site full time, during all construction activities. Airport personnel will make periodic site visits to the project during construction to provide oversight and ensure the CSPP is being followed. The Project Engineer is responsible for ensuring the project is constructed in conformance with the contract, plans, and specifications. Should any deviations from the plans and specifications be observed, the Contractor will be required to immediately correct the deviations as instructed by the Engineer and/or Airport. Final acceptance of constructed improvements will be determined in accordance with the contract documents.

The Contractor shall identify a Construction Safety Officer in its Safety Plan Compliance Document (SPCD) as well as a single point of contact for each subcontractor involved on the project. These contacts will be incorporated into Table 2, Construction Team, in order to provide a comprehensive list of project contacts. The Contractor shall also outline in the SPCD its safety policy and internal inspection requirements to ensure airfield safety compliance.

During the re-opening of temporarily closed airfield pavements and facilities, Airport Personnel will have the final word on the acceptance of cleaned construction areas for aircraft operations. Refer to Section 7 for additional guidance on cleaning procedures prior to opening pavement.

Airport Personnel, Project Engineer, and Project RPR (Inspector) are not responsible for any escort, gate guard, placement of runway closure crosses and delineation, or other Contractor-required safety and security measures, duties, and responsibilities.

16. Underground Utilities

The design team performed research into available records and as-built plans. All known underground utilities within the project footprint have been included / identified on the project plans, and are shown to the best of our knowledge and ability. Facilities with the area of work are limited to Airport-Owned electrical infrastructure (conduits, conductors, junction boxes, edge lights, and guidance signs), and FAA-Owned electrical infrastructure (conduits, conductors, junction boxes, and above ground, visible navigation aids).

The contractor is required to investigate the site and become familiar with existing facilities. Such investigation includes pot-holing as necessary to confirm horizontal and vertical locations, especially at locations of potential conflict with designed underground facilities (electrical or storm drain).

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17. Penalties

Table 6 identifies various CSPP and contract violations and associated consequences. Penalties apply to all team members on the field; Engineer, Inspector and Quality Assurance technicians included.

Penalties for Noncompliance	
Table 6	
Violation	Consequence
Exceed work days allocation for construction: Overall contract	\$1,200.00 per calendar day for first 30 days \$2,000.00 per calendar day past 30 days
Exceed work days allocation for construction: Individual phases	None
Failure to facilitate runway opening at end of shift:	\$500.00 per minute or part thereof, for the first ten (10) minutes. \$1,000.00 per minute or any part thereof for all subsequent minutes.
Access gate violation: Unattended gate, vehicle depart before fully closed, unauthorized third-party access	\$2,000.00 per event
Badge / escort violation: employees not under direct control of escort	1 st occurrence: \$500.00 fine & written warning 2 nd occurrence: \$1,000.00 fine & permanent removal from project
Category A & B airfield incursion	1 st occurrence: \$5,000.00 fine & permanent removal from project 2 nd occurrence: \$20,000.00 fine & permanent removal from project
Category C & D airfield incursion	1 st occurrence: \$2,000.00 fine & written warning 2 nd occurrence: \$2,000.00 fine & permanent removal from project
Abnormal behavior deemed a risk to public safety	Permanent removal from project
General Safety Plan Violation	1 st occurrence: \$500.00 fine & written warning 2 nd occurrence: \$1,000.00 fine & permanent removal from project

Financial penalties to be deducted from periodic pay requests when and if they occur, as appropriate.

18. Special Conditions

Airport operations take precedence over all work, especially if a question of safety is involved. Special conditions such as low visibility, aircraft in distress, aircraft accident, security breach, or work being completed by others may require the rescheduling of Project Work to accomplish and preserve air safety. Full compensation for all costs involved in rescheduling and moving from one work area to another, including work stoppage caused by airport operations shall be considered as included in the contract prices paid for contract items of work and not additional compensation.

19. Runway and Taxiway Visual Aids

- Contractor to employ temporary jumpers as necessary to restore airfield lighting circuits including runway and taxiway edge lighting at the end of each shift, outside the delineated limits of the work. If above ground, jumpers shall be in PVC conduit, secured to the ground.
- All runway edge lighting circuits to be functioning at the end of each shift, outside the delineated limits of the work. Within individual work areas where the scope of the effort requires temporary removal of runway edge light, Contractor to fabricate a temporary light base and anchorage, and reinstall each runway edge light in this temporary configuration at the end of each shift.
- All taxiway edge lighting circuits to be functioning at the end of each shift, outside the delineated limits of the work. Within individual work areas where the scope of the effort requires temporary removal of taxiway edge light, Contractor to fabricate a temporary light base and anchorage, and

reinstall every other taxiway edge light, at a minimum, in this temporary configuration at the end of each shift.

- Guidance signs being modified can be temporarily taken out of service for a period of time necessary to remove and dispose existing and install new, including construction of new sign foundations where shown. This out of service can extend beyond work periods. Contractor to sequence sign out-of-service conditions so-as to limit the duration of any one given sign being out of service. Hold position signs must be functional at the end of each shift.

20. Marking and Signs for Access Routes

Contractor forces to recognize and acknowledge the airport will remain open during construction. "Runway Closed" does not mean "Airport Closed".

Where access routes are on airfield pavements (runways, taxiways, aprons), Contractor to install low-profile barricades and / or delineators at periodic intervals along both sides of haul routes, from and between point of access (gate), yard, and work area. Emphasis shall be at all changes of direction where confusion regarding direction may exist. Delineators shall be installed at the start of each shift, maintained for the duration of each shift, and removed at the conclusion of each work period.

Delineators will be used as a means of traffic control, providing direction to contractor forces including material delivery vehicles, but also as an indication to pilots regarding active work areas and haul routes. At some closure locations, safety may be enhanced through the installation of two sets of closure delineators; one for aircraft that will help prevent aircraft from entering a taxiway that is closed at the other end, and one for contractor forces that will help prevent trucks and equipment from

Delineators are not required along those portions of access routes that are on airport perimeter roads outside active airport pavement areas. Contractor shall, however, install delineation at locations where these routes enter airfield pavements and their respective object free areas. Signs shall also be installed and maintained at these locations stating "Entering Active Airfield Area", providing emphasis of the change of environment.

All access route delineation shall be removed from the site at the end of each shift unless placed outside object free areas or within object free areas of temporarily closed airfield facilities.

21. Hazard Marking and Lighting

Low profile barricades and Runway Closure Markers (lighted closure crosses) will be used as a method of traffic control. Barricades will be used to keep contractor forces including material delivery trucks within designated haul routes and within specific project work areas. In addition, these barricades will keep aircraft out of work zones.

Within the Safety Plan Compliance Document (SPCD), the Contractor shall identify additional means proposed to address those locations where haul / access routes cross open taxiways, including the establishment of contractor way points and radio-monitoring access / crossing guards.

The lighted closure crosses are very effective hazard markers, providing visual indication to approaching aircraft that runways are closed.

22. Work Zone Lighting for Nighttime Construction

Contractor forces shall install and maintain night shift area lighting for each night work period. Lights activated prior to closure shall be kept pointed down, below the horizontal plane, until after the runway is closed. During night shift operations that do not include runway closure, all work area lights shall remain pointed down below the horizontal plane for the duration of the shift. Balloon style lighting is acceptable (paving), when the runway(s) is/are closed. All work area lighting shall remain in the yard or outside the fence until after closure, then mobilized into position. Area lights to be removed from the work site back to the yard before any runway is re-opened.

Contractor shall comply with levels of illumination identified in Table 7 for the specific type and areas of work. Levels are considered minimums. Specific task or work areas may dictate enhanced night lighting for effective construction activities or increased safety.

Minimum Levels of Illumination		
Table 7		
Work Location or Type of Work	Illumination Level	Average Minimum Maintained Illuminance
<ul style="list-style-type: none"> Contractor yard. Contractor employee parking area. Contractor point of access to airport (gate). Within airport, haul route change of direction. 	Level 1	5 foot-candles
<ul style="list-style-type: none"> Haul route point of entry into specific work area. Earthwork, grading, aggregate base. Paving, chip seal, and slurry seal operations. Pavement marking. 	Level 2	10 foot-candles
<ul style="list-style-type: none"> Electrical. Drainage excavations, pipe placement, backfill. Drainage structure placement / construction. 	Level 3	20 foot-candles

Contractor to submit a Lighting Plan as a project submittal. The document shall identify how proposed minimum levels of illumination are to be met.

23. Protection of Specific and Individual Airport Safety Areas

A significant portion of the work of this project is within either the Runway Object Free Area (ROFA) or the Taxiway Object Free Area (TOFA). In addition, a significant portion of the work of this project is within the Runway Safety Area (RSA) or the Taxiway Safety Area (TSA). The contractor will be allowed to work within RSA's and TSA's during designated runway and taxiway closure periods.

At the end of each shift, for earthwork operations, all RSA and TSA design parameters shall be met in a temporary fashion:

- Surface slopes shall not exceed 5%, down and away from airfield pavements.
- Maximum temporary vertical drop-off the edge of the full-strength pavement shall be 3-inches.
- All storm drain trenches shall be backfilled or appropriately covered.

At the end of each shift, for airfield electrical upgrades work, all RSA and TSA design parameters along with safe electrical facilities conditions shall be met in a temporary fashion:

- All above-ground temporary conductor shall be installed in conduit, with wicket anchors at 10-foot maximum intervals.
- All pull box and light can covers shall be reinstalled.

- All temporary forming in preparation for concrete pour shall be plate covered.
- Lights and signs intended to be functional shall be so. Likewise, electrical facilities intended to be out of services shall either be disconnected or securely covered with shields / covers.
- No temporary foundation excavations greater than 3-inches vertically within Safety Areas.
- All electrical trenches shall be backfilled or appropriately covered.

24. Other Limitations on Construction

A. Prohibitions

- a. No person (other than personnel so authorized) shall approach the scene of any emergency unless requested to do so by Airport personnel or as immediate lifesaving requires.
- b. No torch-welding, open flame, material/equipment storage, or disposal of any waste material shall be authorized anywhere on the airport, except at designated locations and unless prior approval from Airport Staff/Engineer has been secured.

B. Restrictions

- a. Construction inspection shall be full time anytime construction is taking place. All inspection and materials testing requirements are identified in the specifications and FAA advisory circulars.
- b. All contractor forces shall comply with Cal-OSHA standards regarding protective headwear, footwear, and eyewear.
- c. Appropriate markers acceptable to the Engineer shall be used to define the work area and hazardous condition within the "safety areas" of the "aircraft maneuvering area."
- d. Trench and excavation cover requirements are included in the specifications for this project. All open trenches, excavations, and stockpiled materials shall be prominently marked and lighted during the hours of restricted visibility and darkness. (Due to the nature of this project and tight physical relationship between areas of work, the runway, and taxiways, no open trenches allowed beyond each work window.)
- e. All closed, deceptive and hazardous areas resulting from construction activities shall be marked and lighted as appropriate.

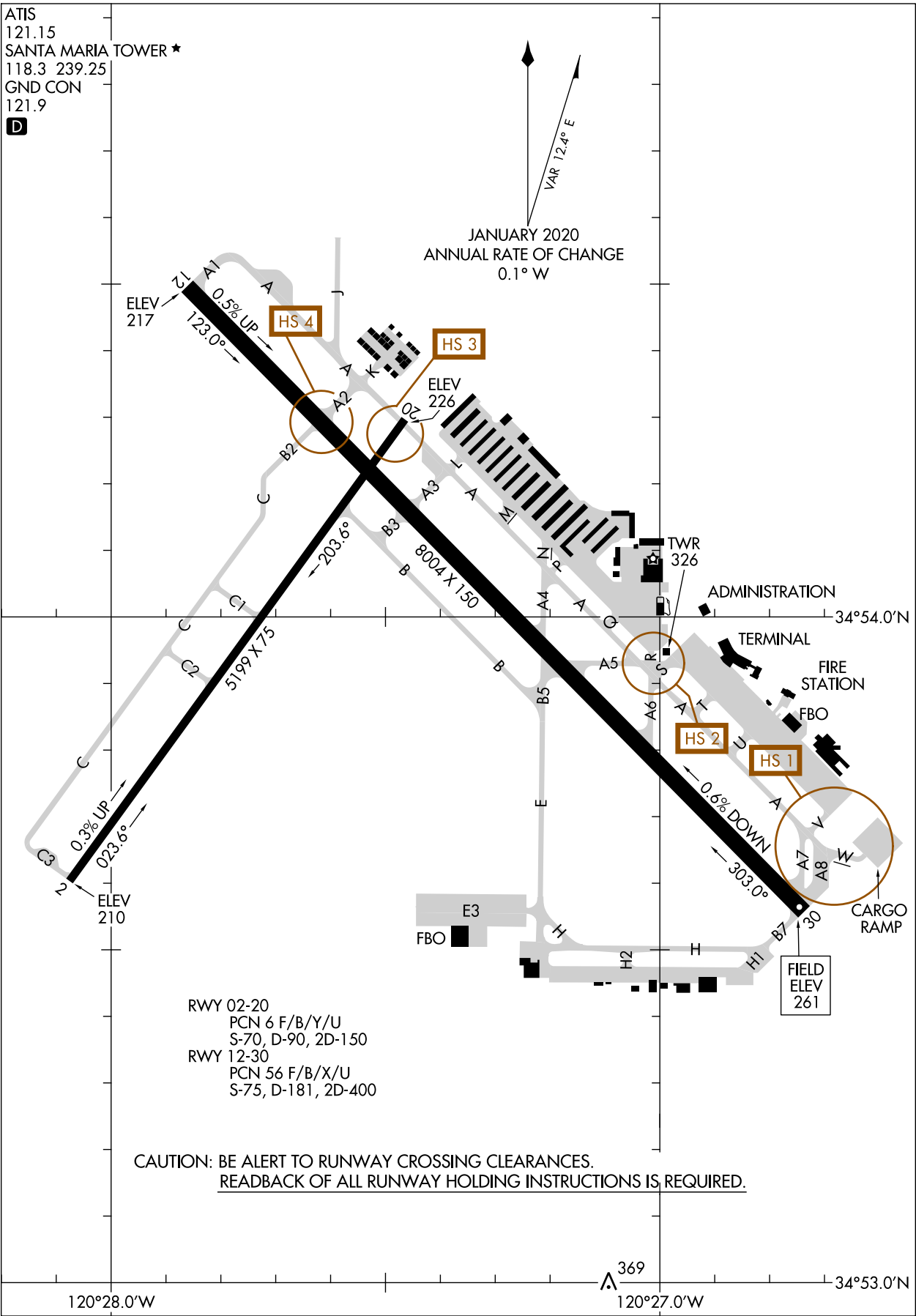
- C. Equipment Height: Prior to the start of construction the Contractor shall provide a schedule of equipment anticipated to be serving this project to include specific heights. The Engineer shall review for confirmation that the equipment height identified in the Air-Space Analysis (FAA 7460-1) appropriately characterized the equipment to be used.

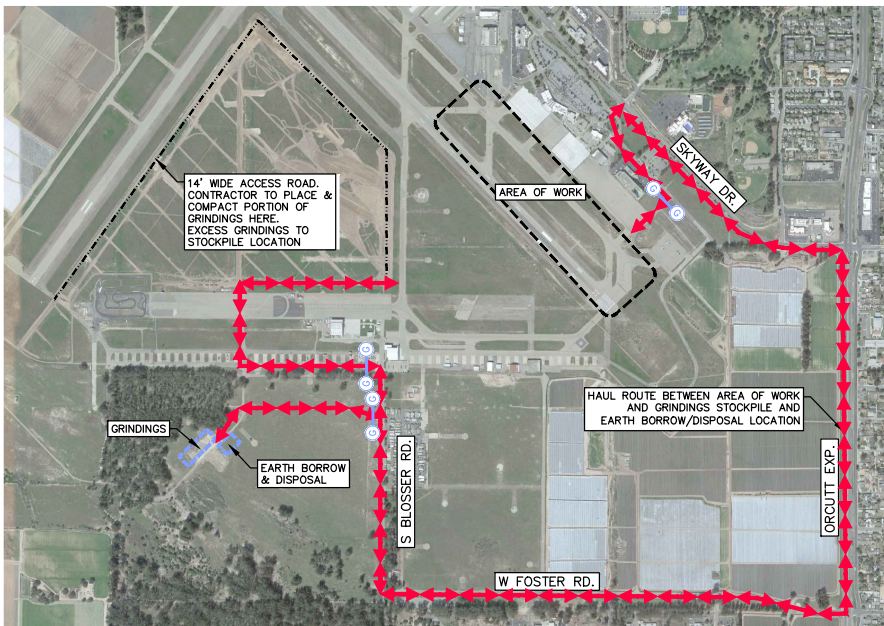
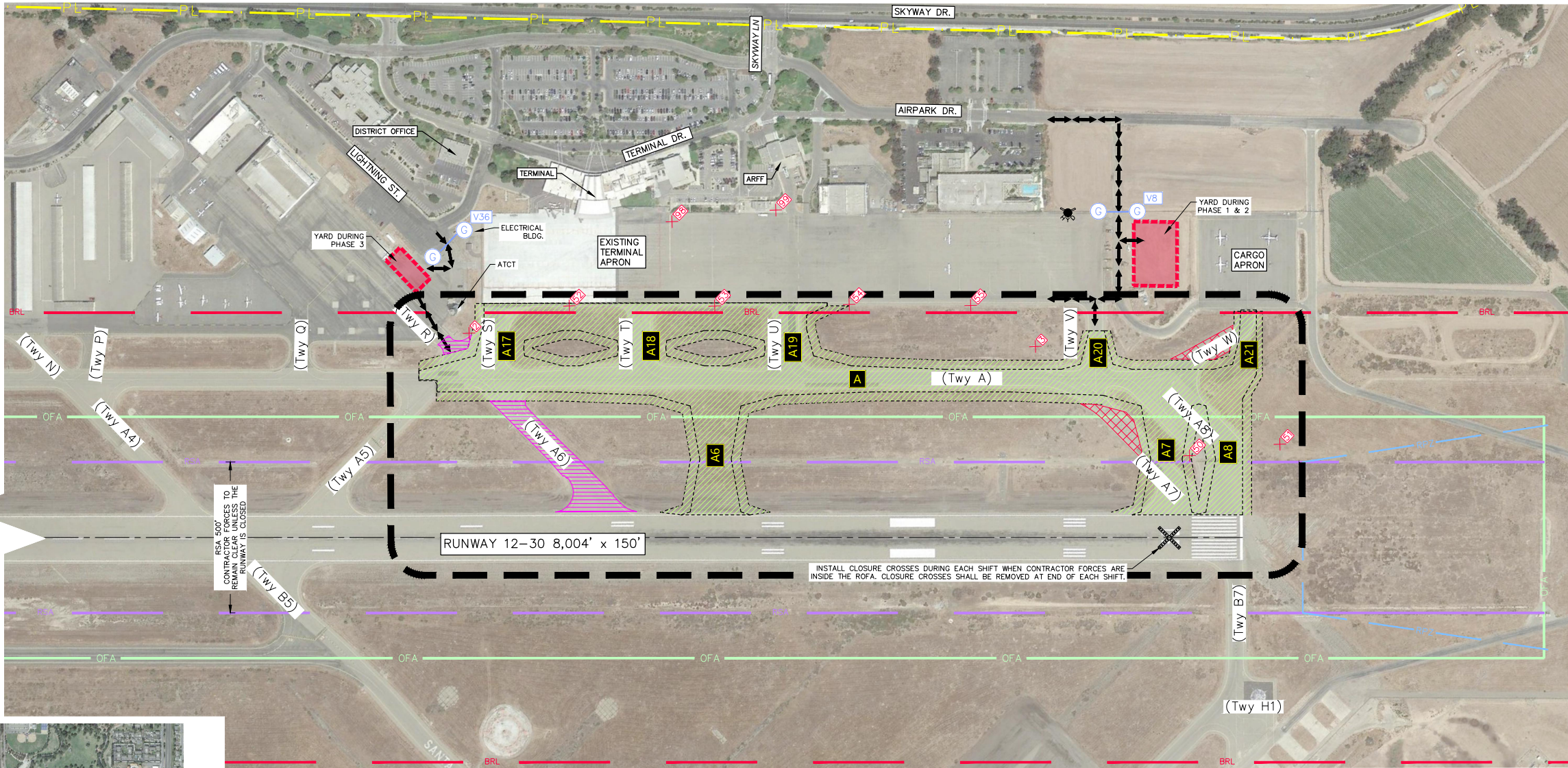
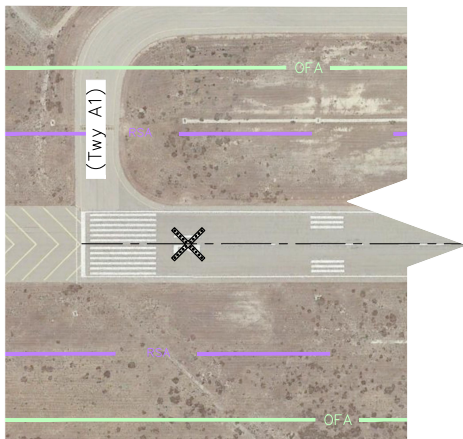
25. Appendix

The appendix includes a total of 5 Figures, depicting existing airport conditions and the various phases of construction.

- | | |
|-----------|---------------------|
| Figure 1: | Current Airfield |
| Figure 2: | Project Layout Plan |
| Figure 3: | Phase 1 |
| Figure 4: | Phase 2 |
| Figure 5: | Phase 3 |

End of Text.





GRINDINGS AND EARTH BORROW/DISPOSAL LOCATION MAP
SCALE: 1" = 1000'

BASIS OF BEARING:

THIS HORIZONTAL DATUM FOR THIS SURVEY IS BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 5 (NAD83). THE LOCAL BASIS OF BEARINGS IS THE LINE BETWEEN POINTS 2 AND 3, SHOWN HEREON, BOTH BEING SECONDARY AIRPORT CONTROL STATIONS (SACS). THE BEARING BEING: S41°50'34"E

BENCHMARK:

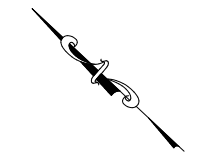
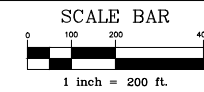
THE BENCHMARK FOR THIS SURVEY IS THE TOP OF BRASS CAP SET IN CONCRETE CATCH BASIN, MARKED "SMX A 2000", SHOWN HEREON AS POINT NUMBER 3. THE ELEVATION BEING: 257.29' NAVD88.

CONTROL POINTS:

Pt #	Northing	Easting	Elevation	Description
99	2158020.27	5828104.021	254.841	MAG
98	2158244.822	5827840.401	252.17	MAG&SHINER
50	2156462.581	5828449.834	259.296	FD C NAIL
51	2156270.203	5828682.418	263.878	5/8" REBAR
2	2158482.262	5827110.284	243.592	M 739 RESET SACS TOWER
52	2158301.684	5827403.853	247.913	MAG&SHINER
53	2157950.269	5827733.512	251.467	MAG&SHINER
54	2157628.456	5828042.391	254.737	AERIAL
55	2157332.425	5828315.77	258.191	MAG&SHINER
3	2157082.764	5828363.463	257.286	SMX A 2000 SACS CATCH BASIN

LEGEND:

- CONTROL POINT
- AREA OF IMPROVEMENTS
- CONTRACTOR PATH OF TRAVEL
- BUILDING RESTRICTION LINE (BRL)
- HYDRANT
- RUNWAY OBJECT FREE AREA (ROFA)
- AIRPORT PROPERTY LINE
- EXISTING TAXIWAY DESIGNATION
- NEW TAXIWAY DESIGNATION
- CONTRACTOR YARD
- AIRPORT ACCESS GATE
- RUNWAY PROTECTION ZONE (RPZ)
- RUNWAY SAFETY AREA (RSA)
- PAVEMENT TO BE REMOVED
- NEW OR RECONSTRUCTED PAVEMENT
- ABANDONED IN PLACE PAVEMENT



UNDERGROUND SERVICE ALERT
811
DIAL 811
TWO WORKING DAYS
BEFORE YOU DIG

PROJECT LAYOUT PLAN
OVERALL PROJECT

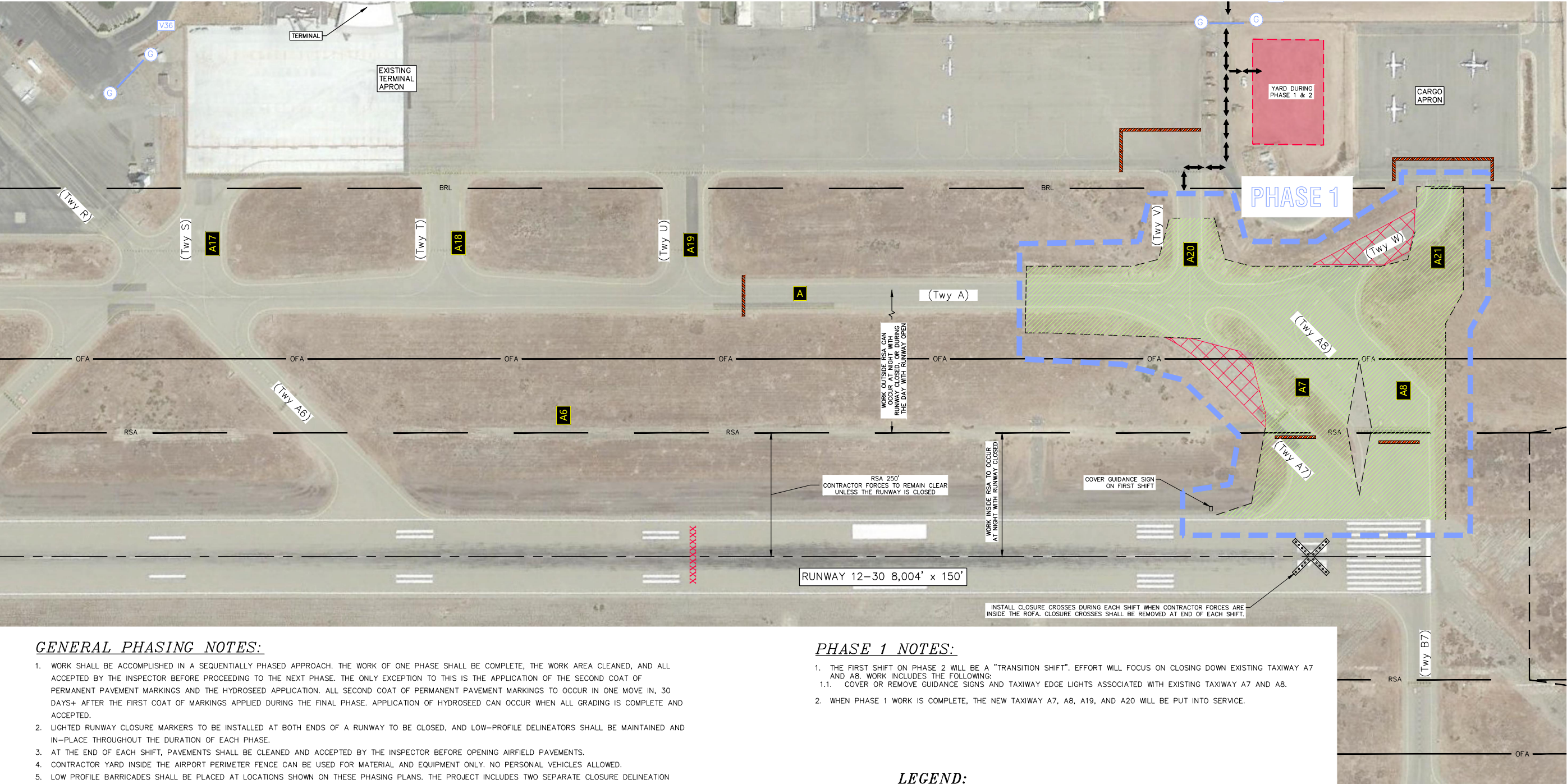
REV.	DESCRIPTION	DATE	APP.
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TARTAGLIA
ENGINEERING

SANTA MARIA AIRPORT
REHABILITATE TAXIWAYS, PHASE 1



DESIGN JTH
DRAWN JTH
CHECKED JTH
SCALE 1"=200'
DWG. NO. 19-67
DATE 02/22/2022
SHEET 3 of 56



GENERAL PHASING NOTES:

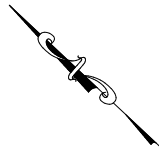
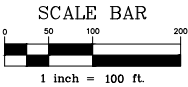
- WORK SHALL BE ACCOMPLISHED IN A SEQUENTIALLY PHASED APPROACH. THE WORK OF ONE PHASE SHALL BE COMPLETE, THE WORK AREA CLEANED, AND ALL ACCEPTED BY THE INSPECTOR BEFORE PROCEEDING TO THE NEXT PHASE. THE ONLY EXCEPTION TO THIS IS THE APPLICATION OF THE SECOND COAT OF PERMANENT PAVEMENT MARKINGS AND THE HYDROSEED APPLICATION. ALL SECOND COAT OF PERMANENT PAVEMENT MARKINGS TO OCCUR IN ONE MOVE IN, 30 DAYS+ AFTER THE FIRST COAT OF MARKINGS APPLIED DURING THE FINAL PHASE. APPLICATION OF HYDROSEED CAN OCCUR WHEN ALL GRADING IS COMPLETE AND ACCEPTED.
- LIGHTED RUNWAY CLOSURE MARKERS TO BE INSTALLED AT BOTH ENDS OF A RUNWAY TO BE CLOSED, AND LOW-PROFILE DELINEATORS SHALL BE MAINTAINED AND IN-PLACE THROUGHOUT THE DURATION OF EACH PHASE.
- AT THE END OF EACH SHIFT, PAVEMENTS SHALL BE CLEANED AND ACCEPTED BY THE INSPECTOR BEFORE OPENING AIRFIELD PAVEMENTS.
- CONTRACTOR YARD INSIDE THE AIRPORT PERIMETER FENCE CAN BE USED FOR MATERIAL AND EQUIPMENT ONLY. NO PERSONAL VEHICLES ALLOWED.
- LOW PROFILE BARRICADES SHALL BE PLACED AT LOCATIONS SHOWN ON THESE PHASING PLANS. THE PROJECT INCLUDES TWO SEPARATE CLOSURE DELINEATION SCENARIOS:
 - PAVEMENT CLOSURE FOR THE DURATION OF THE PHASE – DELINEATION SHALL BE INSTALLED AT THE BEGINNING OF THE PHASE, REMAIN IN-PLACE FOR THE DURATION OF THE PHASE (24 HOURS, 7 DAYS A WEEK) AND REMOVED WHEN THE PHASE IS COMPLETE AND ACCEPTED BY THE INSPECTOR.
 - PAVEMENT CLOSURE FOR THE DURATION OF EACH SHIFT – DELINEATION SHALL BE INSTALLED AT THE BEGINNING OF THE SHIFT, AND REMOVED AT THE END OF EACH SHIFT (INSTALLED AND REMOVED EVERY WORKING DAY).
- PORTION OF WORK ON THIS PROJECT IS WITHIN THE RUNWAY SAFETY AREA (RSA) AND TAXIWAY SAFETY AREA (TSA). EACH SHIFT REQUIRES SITE AND GRADE RESTORATION AFTER WORKING WITHIN THE RSA OR TSA. CONTRACTOR TO RESTORE SITE TO A SAFE CONDITION BEFORE RE-OPENING AIRFIELD PAVEMENTS:
 - MAXIMUM VERTICAL DROP OFF EDGE OF ACTIVE AIRFIELD PAVEMENT = 3"
 - SURFACE GRADED DOWN AND AWAY FROM EDGE OF AIRFIELD PAVEMENTS TO LIMIT OF RSA AND TSA.
 - NO OPEN TRENCHES, DRAINAGE BOXES OR ELECTRICAL VAULTS IN RSA AND TSA.
 - NO EARTH, AGGREGATE OR OTHER MATERIAL STOCKPILES.
 - ELECTRICAL JUMPERS, WHERE SHOWN, TO BE IN PVC CONDUIT AND SECURED TO THE GROUND SURFACE WITH STEEL WICKETS, OR LOW SAND BAGS.

PHASE 1 NOTES:

- THE FIRST SHIFT ON PHASE 2 WILL BE A "TRANSITION SHIFT". EFFORT WILL FOCUS ON CLOSING DOWN EXISTING TAXIWAY A7 AND A8. WORK INCLUDES THE FOLLOWING:
 - COVER OR REMOVE GUIDANCE SIGNS AND TAXIWAY EDGE LIGHTS ASSOCIATED WITH EXISTING TAXIWAY A7 AND A8.
- WHEN PHASE 1 WORK IS COMPLETE, THE NEW TAXIWAY A7, A8, A19, AND A20 WILL BE PUT INTO SERVICE.

LEGEND:

- CONTRACTOR PATH OF TRAVEL
- (Twy A) EXISTING TAXIWAY DESIGNATION
- NEW TAXIWAY DESIGNATION
- CONTRACTOR YARD
- AIRPORT ACCESS GATE
- PAVEMENT TO BE REMOVED
- NEW OR RECONSTRUCTED PAVEMENT
- PAVEMENT TO BE ABANDONED-IN-PLACE
- PAVEMENT CLOSED DELINEATION (LEFT IN-PLACE DURING ENTIRE PHASE)
- XXXX PAVEMENT CLOSED DELINEATION (PLACED AND REMOVED EACH SHIFT)



UNDERGROUND SERVICE ALERT

811 DIAL 811

TWO WORKING DAYS BEFORE YOU DIG

PROJECT PHASING

PHASE 1

REV.	DESCRIPTION	DATE	APP.
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TARTAGLIA ENGINEERING

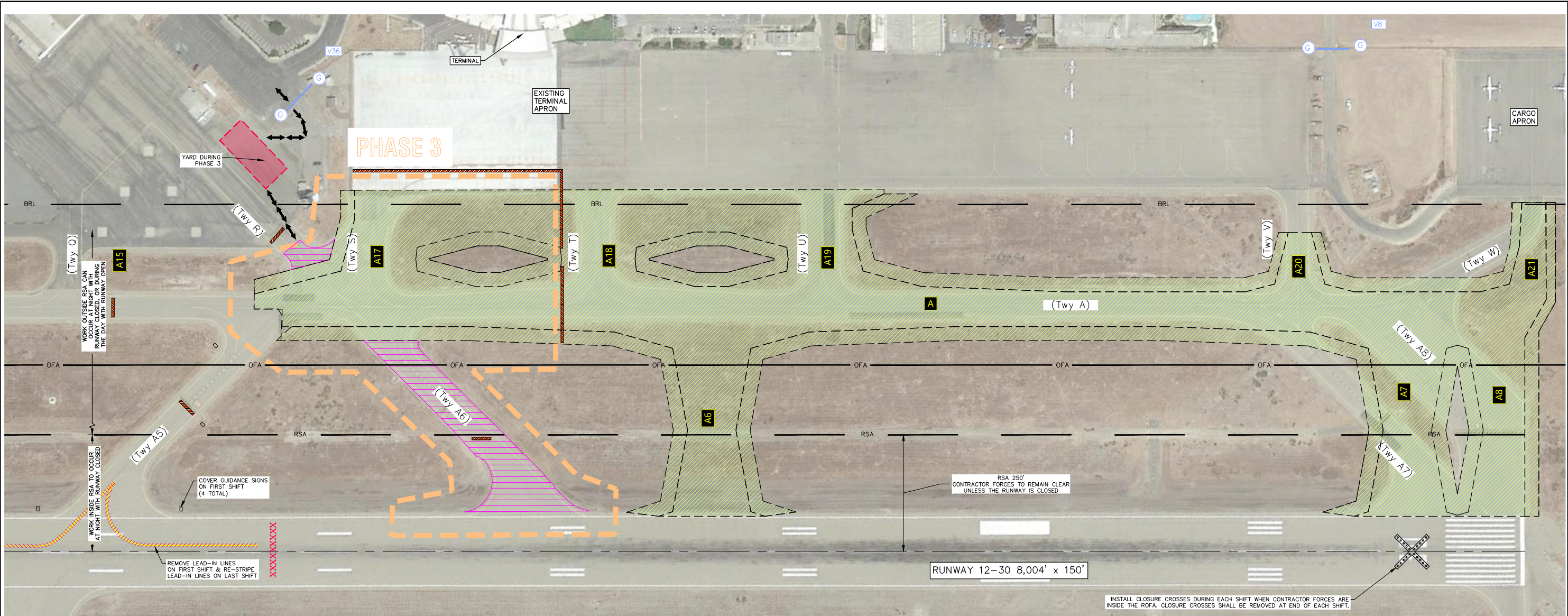
SANTA MARIA AIRPORT

REHABILITATE TAXIWAYS, PHASE 1



DESIGN JTH
DRAWN JTH
CHECKED JTH
SCALE SHOWN
DWG. NO. 19-67
DATE 02/22/2022
SHEET 5 OF 56

POST DATE 2/23/2022



GENERAL PHASING NOTES:

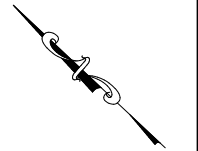
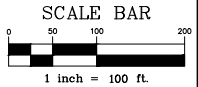
- WORK SHALL BE ACCOMPLISHED IN A SEQUENTIALLY PHASED APPROACH. THE WORK OF ONE PHASE SHALL BE COMPLETE, THE WORK AREA CLEANED, AND ALL ACCEPTED BY THE INSPECTOR BEFORE PROCEEDING TO THE NEXT PHASE. THE ONLY EXCEPTION TO THIS IS THE APPLICATION OF THE SECOND COAT OF PERMANENT PAVEMENT MARKINGS AND THE HYDROSEED APPLICATION. ALL SECOND COAT OF PERMANENT PAVEMENT MARKINGS TO OCCUR IN ONE MOVE IN, 30 DAYS+ AFTER THE FIRST COAT OF MARKINGS APPLIED DURING THE FINAL PHASE. APPLICATION OF HYDROSEED CAN OCCUR WHEN ALL GRADING IS COMPLETE AND ACCEPTED.
- LIGHTED RUNWAY CLOSURE MARKERS TO BE INSTALLED AT BOTH ENDS OF A RUNWAY TO BE CLOSED, AND LOW-PROFILE DELINEATORS SHALL BE MAINTAINED AND IN-PLACE THROUGHOUT THE DURATION OF EACH PHASE.
- AT THE END OF EACH SHIFT, PAVEMENTS SHALL BE CLEANED AND ACCEPTED BY THE INSPECTOR BEFORE OPENING AIRFIELD PAVEMENTS.
- CONTRACTOR YARD INSIDE THE AIRPORT PERIMETER FENCE CAN BE USED FOR MATERIAL AND EQUIPMENT ONLY. NO PERSONAL VEHICLES ALLOWED.
- LOW PROFILE BARRICADES SHALL BE PLACED AT LOCATIONS SHOWN ON THESE PHASING PLANS. THE PROJECT INCLUDES TWO SEPARATE CLOSURE DELINEATION SCENARIOS:
 - PAVEMENT CLOSURE FOR THE DURATION OF THE PHASE – DELINEATION SHALL BE INSTALLED AT THE BEGINNING OF THE PHASE, REMAIN IN-PLACE FOR THE DURATION OF THE PHASE (24 HOURS, 7 DAYS A WEEK) AND REMOVED WHEN THE PHASE IS COMPLETE AND ACCEPTED BY THE INSPECTOR.
 - PAVEMENT CLOSURE FOR THE DURATION OF EACH SHIFT – DELINEATION SHALL BE INSTALLED AT THE BEGINNING OF THE SHIFT, AND REMOVED AT THE END OF EACH SHIFT (INSTALLED AND REMOVED EVERY WORKING DAY).
- PORTION OF WORK ON THIS PROJECT IS WITHIN THE RUNWAY SAFETY AREA (RSA) AND TAXIWAY SAFETY AREA (TSA). EACH SHIFT REQUIRES SITE AND GRADE RESTORATION AFTER WORKING WITHIN THE RSA OR TSA. CONTRACTOR TO RESTORE SITE TO A SAFE CONDITION BEFORE RE-OPENING AIRFIELD PAVEMENTS:
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 - SURFACE GRADED DOWN AND AWAY FROM EDGE OF AIRFIELD PAVEMENTS TO LIMIT OF RSA AND TSA.
 - NO OPEN TRENCHES, DRAINAGE BOXES OR ELECTRICAL VAULTS IN RSA AND TSA.
 - NO EARTH, AGGREGATE OR OTHER MATERIAL STOCKPILES.
 - ELECTRICAL JUMPERS, WHERE SHOWN, TO BE IN PVC CONDUIT AND SECURED TO THE GROUND SURFACE WITH STEEL WICKETS, OR LOW SAND BAGS.

PHASE 3 NOTES:

- THE FIRST SHIFT OF PHASE 3 WILL BE A "TRANSITION SHIFT". EFFORT WILL FOCUS ON CLOSING DOWN EXISTING TAXIWAY A5. WORK INCLUDES THE FOLLOWING:
 - REMOVE LEAD-IN LINE PAVEMENT MARKINGS FOR TAXIWAY A5.
 - COVER GUIDANCE SIGNS AND TAXIWAY EDGE LIGHTS ASSOCIATED WITH TAXIWAY A5
- THE LAST SHIFT ON PHASE 3 WILL BE A "TRANSITION SHIFT". EFFORT WILL FOCUS ON GETTING TAXIWAY A5 BACK INTO SERVICE:
 - REMOVE ALL COVERS ON GUIDANCE SIGNS AND TAXIWAY EDGE LIGHTS ASSOCIATED WITH EXISTING TAXIWAY A5.
 - RE-APPLY LEAD-IN LINE PAVEMENT MARKINGS FOR TAXIWAY A5.
- WHEN PHASE 3 WORK IS COMPLETE, NEW TAXIWAY A16 WILL BE PUT INTO SERVICE, EXISTING TAXIWAY A5 WILL BE PUT BACK INTO SERVICE, EXISTING TAXIWAY A6 AND TAXIWAY R WILL BE ABANDONED IN PLACE AND PERMANENTLY TAKEN OUT OF SERVICE.

LEGEND:

- CONTRACTOR PATH OF TRAVEL
- (Twy A) EXISTING TAXIWAY DESIGNATION
- NEW TAXIWAY DESIGNATION
- CONTRACTOR YARD
- AIRPORT ACCESS GATE
- PAVEMENT TO BE REMOVED
- NEW OR RECONSTRUCTED PAVEMENT
- PAVEMENT TO BE ABANDONED-IN-PLACE
- PAVEMENT CLOSED DELINEATION (LEFT IN-PLACE DURING ENTIRE PHASE)
- PAVEMENT CLOSED DELINEATION (PLACED AND REMOVED EACH SHIFT)



UNDERGROUND SERVICE ALERT

811

DIAL 811

TWO WORKING DAYS BEFORE YOU DIG

PROJECT PHASING

PHASE 3

REV.	DESCRIPTION	DATE	APP.
1			
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TARTAGLIA ENGINEERING

SANTA MARIA AIRPORT

REHABILITATE TAXIWAYS, PHASE 1

DESIGN JTH

DRAWN JTH

CHECKED JTH

SCALE SHOWN

DWG. NO. 19-67

DATE 02/22/2022

SHEET 7 OF 56

REGISTERED PROFESSIONAL ENGINEER
JOHN A. SMITH
No. 46852
EXP. 6-30-23
CIVIL
STATE OF CALIFORNIA