

PHOENIX DEER VALLEY AIRPORT

**DVT RELOCATE TAXIWAY BRAVO
AND CONSTRUCT CONNECTORS B6 AND B9 – GMP 2
AV31000092 FAA**

DRAFT ENGINEER'S DESIGN REPORT

FEBRUARY 28, 2025

►
Prepared
for:

PHX DVT GYR

● CITY OF PHOENIX AVIATION DEPARTMENT

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- Appendix A: Final Geotechnical Report
- Appendix B: Draft Drainage Report
- Appendix C: 30% Preliminary Construction Documents
- Appendix D: GMP 2 90% Submittal Construction Documents
- Appendix E: Pre-Design Meeting Agenda

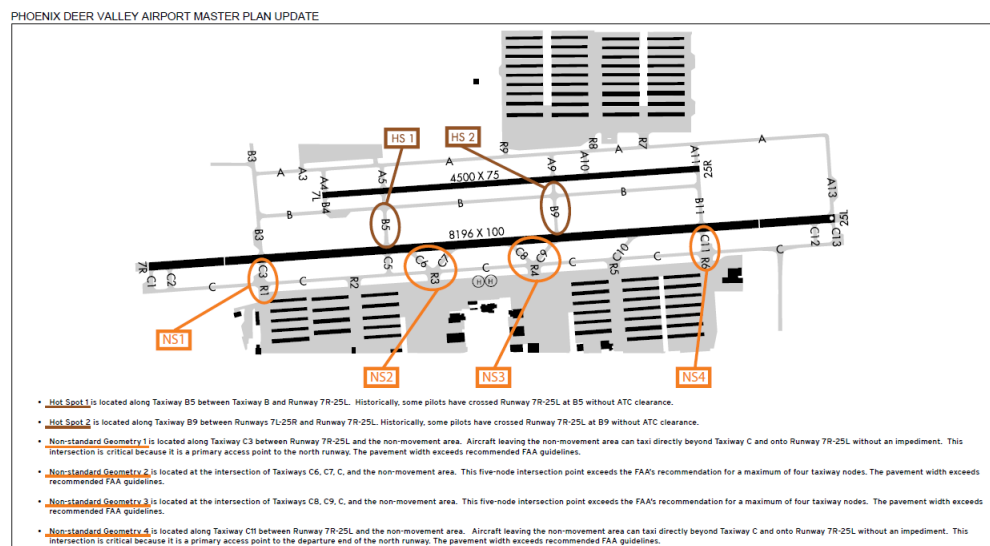
1.0 GENERAL SCOPE OF PROJECT

1.1 Project Narrative and Scope of Work

The purpose of the Relocate Taxiway B and Construct Connectors B6 and B9 project at Phoenix-Deer Valley Airport (DVT) is to increase airfield safety and improve airport operations through the design and relocation of parallel Taxiway B at Phoenix Deer Valley Airport (DVT). The project will relocate Taxiway B to a standard FAA regulated distance from the centerline of Runway 7L/25R according to its intended Aircraft Approach Category (AAC) and Airplane Design Group (ADG). In order to decrease the probability of runway incursions, taxiway connector relocation will address hot spot areas where pilots have historically crossed Runway 7R-25L without Air Traffic Control's (ATC) clearance. To improve airport operations, two acute angle taxiway connectors will be constructed to provide greater efficiency in runway usage by allowing aircraft to taxi off the runway at a higher speed than would be required for a 90-degree turn.

The relocation of Taxiway B corrects Hot Spot 1 and Hot Spot 2 as identified by the 2015 Master Plan Update for DVT (See Figure 1) by removing Taxiway B5 and Taxiway B9's extensions south from Taxiway B to Runway 7R-25L and constructing new Taxiways B4 and B10 offset from the north connectors.

Figure 1: DVT Hot Spots and Non-Standard Geometry per 2015 Master Plan Update for DVT



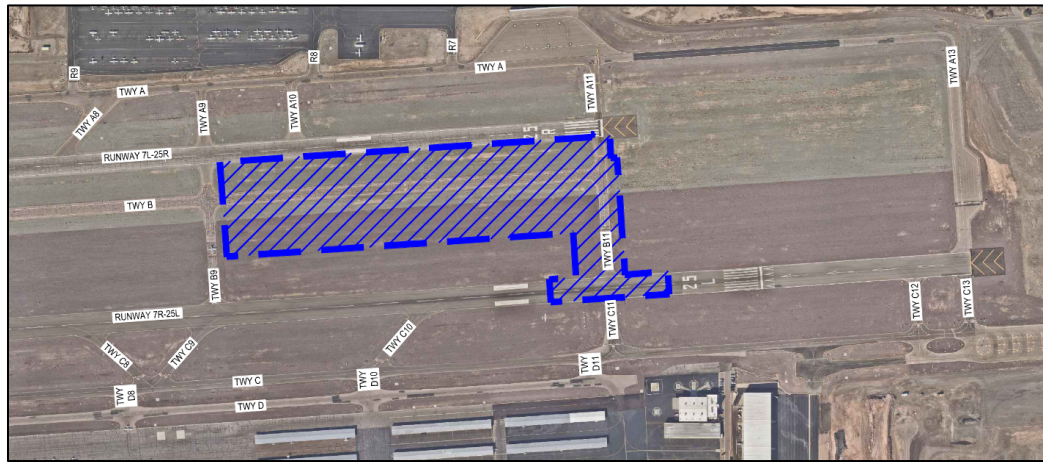
DVT Hot Spots and Non-standard geometry

Figure 3-3



This project is divided into multiple GMP packages which are determined based on available grant funding. GMP 1 was prepared in December 2024 which involved the design of electrical duct bank which will enable subsequent construction as part of this project. GMP 2 generally consists of the demolition of the existing asphalt pavement on Taxiway B east of Taxiway B9 and the reconstruction of Taxiway B11. GMP 2 also includes improvements to the airfield electrical, lighting and signage as well as infield grading and pavement marking installation. The project area for GMP 2 is shown in Figure 2 in blue.

Figure 2: GMP 2 Project Area



The City of Phoenix has contracted with TRACE Consulting, LLC (TRACE) to prepare construction documents for this project. The contract includes the following services:

- ➔ Investigation and inventory of available/visible utilities that affect the project
- ➔ Supplemental surveying services
- ➔ Geotechnical investigations
- ➔ Utility locating and subsurface utility exploration
- ➔ Preparation of Engineer's Design Report (EDR)
- ➔ Design development for Taxiway B relocation, construction of new Taxiway connectors B6 and B9, and full reconstruction of existing Taxiway B connectors to Runway 7R-25L
- ➔ Removal of existing infield materials and construction of asphalt taxiway pavement with P-401 asphalt concrete
- ➔ Evaluation and reconstruction of infield drainage areas and construction / relocation of new storm drain as needed
- ➔ Evaluation, addition and replacement of electrical lighting and signage as needed

- ➔ Evaluation of airfield pavement marking for the new taxiway and connectors
- ➔ Development of detailed specifications
- ➔ Design documents for bid letting (FAA and Federal funds requirements)
- ➔ Development of a Construction Management Plan (CMP)
- ➔ Development of a Construction Safety and Phasing Plan (CSPP)

1.2 AIP Eligible and Ineligible Work Items

Most work items associated with this project are anticipated to be AIP eligible at the time of this writing through FAA grant funding.

The design scope of services for this project covers the relocation of the full-length Taxiway B from Taxiway B4 to Taxiway B11. The project will be delivered using the Construction Manager at Risk (CMAR) delivery method. Project deliverables will be divided into several design packages relative to funding of the project. Each design package will correlate with a CMAR Guaranteed Maximum Price (GMP).

1.3 Unique and Unusual Situations

There are no known unique or unusual situations about the project at the time of this writing.

1.4 History of Existing System

DVT was built in 1960 with a single runway, operating as a private airfield. There was no control tower and only minimal amenities. The City of Phoenix (City or COP) bought the 482-acre airport in 1971. A new terminal was constructed four years later when the FAA started directing the air traffic. The City Council adopted a master plan in 1986 that allowed for DVT to accommodate more and different types of aircraft. Operations grew and infrastructure was added throughout the years. In 2007, a new Air Traffic Control Tower (ATCT) was constructed.

Now, DVT is one of the busiest general aviation airports in the nation, with a complex movement area and a mix of traffic that includes business jets and turboprops, piston twins and single engine aircraft, sport aircraft and rotorcraft, as well as a significant level of student pilot activity from the airport's two major flight training schools and by other smaller flight training entities.

The majority of the existing Taxiway B pavement was constructed in 1973. The portion between Taxiway B4 and B5 was constructed with the north runway extension in 1992.

According to the Arizona Department of Transportation (ADOT) Airport Pavement Management System (APMS) web application, the pavement condition index (PCI) of the existing taxiway pavements range from 36 to 52. The pavements had a micro-surfacing and crack seal treatment in 2009. Since then, there are no recorded major maintenance and repair treatments identified by the ADOT APMS web application.

The portion of Taxiway B from Taxiway B3 to Taxiway B4 was removed as part of the Taxiway B3 Relocation project (AV31000088 FAA) in early 2020.

2.0 PHOTOGRAPHS

2.1 Existing Site Conditions

Aerial photographs captured at the beginning of 2023 provide a general perspective of the existing condition of Taxiway B and its associated connectors, Taxiways B4, B5, B9 and B11, see Figures 3-5 below.

Site investigations in preparation for project design included a geotechnical soil investigation and site survey. No site visit photos of the existing site were captured.

Figure 3: Existing Taxiway B, Taxiway B4 and Taxiway B5

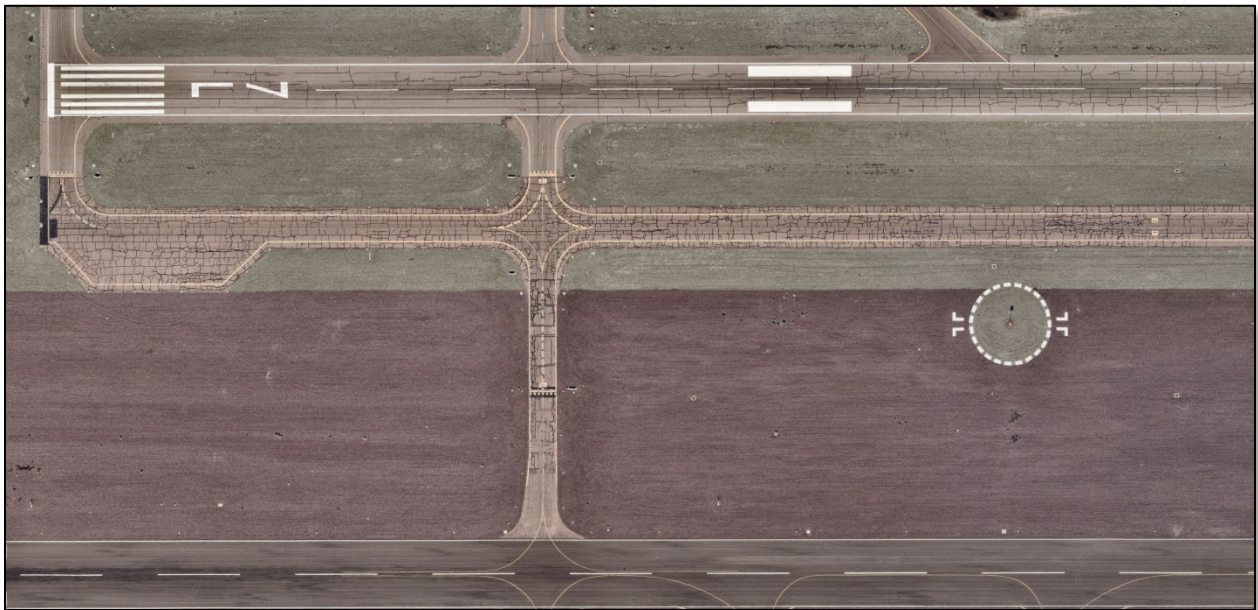
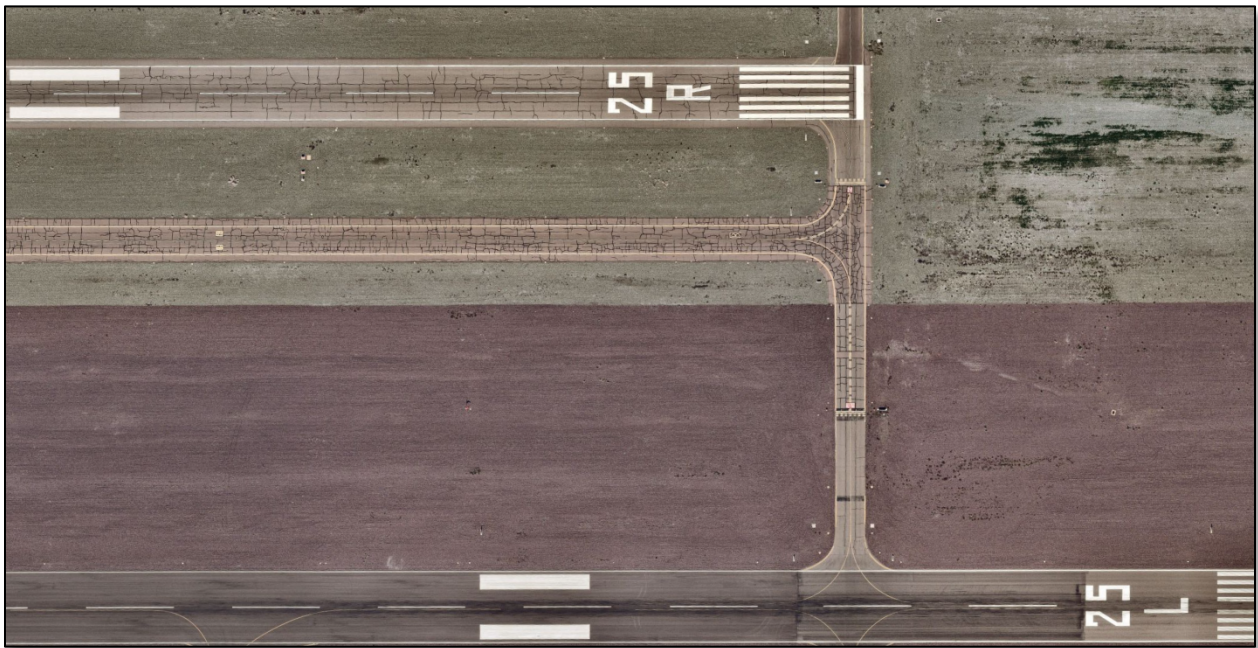


Figure 4: Existing Taxiway B and Taxiway B9



Figure 5: Existing Taxiway B and Taxiway B11



2.2 Existing Safety Area Deficiencies

There are no known existing safety area deficiencies at the time of this writing.

3.0 AIP STANDARDS

3.1 AIP Advisory Circulars Applicable to this Project

This project will be susceptible to the guidelines set forth in FAA ACs. The core discipline ACs that will be applicable to this project are listed below:

150/5300-13B	Airport Design – Change 1	Aug 16, 2024
150/5320-5D	Airport Drainage Design	Aug 15, 2013
150/5320-6G	Airport Pavement Design and Evaluation	Jun 07, 2021
150/5340-1M	Standards for Airport Markings	May 10, 2019
150/5340-18H	Standards for Airport Sign Systems	Sept 30, 2024
150/5340-30J	Design and Installation Details for Airport Visual Aids	Feb 12, 2018
150/5345-7F	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits	Aug 19, 2013
150/5345-26E	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories	Dec 16, 2021
150/5345-44L	Specification for Runway and Taxiway Signs	Sept 30, 2024
150/5345-46F	Specification for Runway and Taxiway Light Fixtures	Sept 30, 2024
150/5345-47C	Specification for Series to Series Isolation Transformers for Airport Lighting Systems	Jul 22, 2011
150/5345-53D	Airport Lighting Equipment Certification System	Sep 26, 2012
150/5360-12F	Airport Signing and Graphics	Sept 26, 2013
150/5370-2G	Operational Safety on Airports During Construction	Dec 13, 2017
150/5370-10H	Standards for Specifying Construction of Airports	Dec 21, 2018

Other FAA ACs not specifically identified above may be referenced throughout other ACs and be applicable to the project.

Other design standards and guidelines utilized for this project are the COP design standards (latest edition), COP Storm Water Policies and Standards (SWPS) (latest edition), and

Maricopa Association of Governments (MAG) Standard Details and Specifications (latest edition).

3.2 Critical Design Standard Values

GMP 2 involves the reconstruction of the Taxiway B11 connector. The geometric design of the connector will be in accordance with FAA AC 150/5300-13B. Critical design standard values for this project are presented in Table 1.

Table 1: Critical Design Standard Values for This Project

Critical Design Standard Values (Values per FAA AC 150/5300-13B)		
Aircraft Parameters		
	Airport Reference Code (ARC) 7L/25R	B-I
	Airport Reference Code (ARC) 7R/25L	C-II
	Taxiway Design Group (TDG)	2
Safety Area Dimensions		
	RSA Width (ft) 7L/25R	120
	RSA Width (ft) 7R/25L	500
	ROFA Width (ft) 7L/25R	400
	ROFA Width (ft) 7R/25L	800
	TSA Width (ft)	79
	TOFA Width (ft)	124
Taxiway Geometric Values		
	Taxiway Width (ft)	35
	Taxiway Shoulder Width (ft)	15
Taxiway Surface Gradients (Longitudinal)		
	Longitudinal Maximum Slope (%)	1.50%
	Maximum Longitudinal Grade Change (%)	3.00%
	Maximum Grade Change without Vertical Curve (%)	<0.40%
Taxiway Surface Gradients (Transverse)		
	Maximum Taxiway Pavement Transverse Slope (%)	1.0-1.5%
	Maximum Taxiway Shoulder Transverse Slope (%)	1.5-5.0%
	Maximum Transverse Slope within TSA (%)	1.5-3.0%
	Maximum Allowable Positive Slope between TSA and TOFA (%)	25.00%
	Maximum Allowable Positive Slope from (RSA+40') and ROFA	8:1

4.0 CONSIDERATIONS FOR AIRPORT OPERATIONAL SAFETY

4.1 CSPP Related Issues

The project will be divided into multiple design packages. Each design package will be designated and identified by the CMAR GMP number for that package, starting with GMP 1. Phasing will correlate with each design package. A Construction Safety and Phasing Plan (CSPP) will be developed for each GMP Design Package in conformance with FAA AC 150/5370-2G, *Operational Safety on Airports During Construction*. The phasing of the project will be determined by several factors including: available funding, timing of funds, airfield operational constraints, and construct constraints. The phasing for each GMP will be discussed below once the GMP Design Package has been sufficiently developed and preliminarily approved.

4.1.1 GMP 2

4.1.1.1 GMP 2 Proposed Phasing and Sequencing

Project phasing and sequencing for GMP 2 of this project is discussed in detail in the GMP 2 CSPP. The proposed phasing will attempt to minimize disruption to Airport Operations and minimize construction duration.

4.1.1.2 GMP 2 Work Area Limits and Closures

Work area limits and closures are discussed in detail in the CSPP. Runway 7R-25L and Runway 7L-25R will stagger closures to minimize disruptions to airport operations and only allow one runway closure per night.

4.1.1.3 GMP 2 Haul Routes and Staging Area Location

The Haul Routes are identified on the Project Layout Plan sheet in the GMP 2 design package. Two contractor staging and storage areas on the airfield with their own haul routes are required for GMP 2.

Construction access to the site will be provided at Gate 7 on the east side of the airfield along 7th Avenue north of Deer Valley Road. The haul routes will utilize the airport perimeter service road, where available. All existing pavements used for construction traffic are to be protected and restored to preconstruction conditions per the project specifications.

4.1.1.4 GMP 2 Impacts to Approach Procedures

Construction may impact approach procedures for runways 7R-25L and 7L-25R at DVT. It is anticipated that there will be communication and coordination between DVT Airport Operations Staff and the Contractor to discuss work activities. DVT Airport Operations Staff will issue any appropriate Notice to Airmen (NOTAM) as necessary to communicate to pilots any impact to approach procedures.

4.1.1.5 GMP 2 Impacts to FAA Owned NAVAIDS

No portions of the NAVAID facilities at the Phoenix Deer Valley Airport are owned by the FAA.

5.0 PAVEMENT DESIGN

Any pavement damaged by construction activities is to be repaired at no additional cost to the Owner. The following sections within Section 5 pertain to the overall project scope of work not limited to GMP 2.

5.1 Geotechnical Report

The final geotechnical report for this project was completed by Quality Testing, LLC. (QT), dated March 30, 2023. A copy of the geotechnical report is included as Appendix A of this report.

5.1.1 Soil Investigation

Field investigation of the site soil was conducted between September 3-5, 2019. A total of 31 borings were performed within the proposed Taxiway B and taxiway connector areas. All borings were drilled to depths ranging from 4.5 feet to 10 feet below the existing site grade. A truck mounted drill-rig (CME-55) was used to perform all borings. Groundwater was not encountered during this investigation.

5.1.2 Soil Characteristics

Laboratory testing was performed on representative soil samples to aid in material classification and to estimate the pertinent engineering properties of the on-site soils for use in developing geotechnical and pavement recommendations. Testing was performed in accordance with applicable ASTM methods and per appropriate guidelines. The following tests were performed on selected samples:

- Soil Classification and Site Characterization:
 - Grain-Size (Sieve) Analyses
 - Atterberg Limits
 - In-Situ Unit Weight and Moisture Contents
 - Direct Shear Test
 - pH & Resistivity
 - Sulfates & Chlorides
- Pavement Design:
 - Maximum Dry Density-Optimum Moisture Content (Proctor)
 - California Bearing Ratio (CBR)

Subsurface soil conditions at the site predominantly consisted of clayey sand (SC), lean clay (CL), fat clay (CH), clayey gravel (GC), poorly graded sand (SP) and poorly graded gravel (GP). Near-surface soils ranged from medium to high plasticity. The percent material passing the No. 200 sieve ranged from 16 percent to 71 percent. CBR values for the samples ranged from 4 to 8 for tests conducted on samples prepared at 95 percent compaction.

Complete discussion of the soil characteristics is in the geotechnical report in Appendix A.

5.2 Fleet Mix

The aircraft fleet mix was obtained by interpreting the Phoenix Deer Valley Airport Master Plan Update Aviation Activity Forecast dated August 2014.

Table 2: Aircraft Fleet Mix

Aircraft Type	Maximum Takeoff Weight (MTOW) (lbs)	Annual Departures
BeechJet-400	15,500	72
Challenger-CL-604	38,650	790
Challenger-CL-604	41,400	731
Chancellor-414	6,000	415
Citation-525	11,800	22
Citation-525	11,800	15
Citation-525	10,500	126
Citation-525	8,650	91
Citation-550B	15,900	59
Citation-550B	12,500	17
Citation-550B	14,000	106
Citation-550B	14,800	96
Citation-V	16,500	118
Citation-V	13,870	141
Citation-VI/VII	23,200	9
Citation-X	35,700	195
D-30	36,000	18
EMB-175 STD	49,816	51
ERJ-135	36,000	71
Falcon-2000	35,000	34
Falcon-50	28,650	23
Falcon-50	38,800	14
Falcon-900	45,500	78
Gulfstream-G-IV	75,000	186
Gulfstream-G-V	90,900	20
Learjet-35A/65A	10,800	97
Learjet-35A/65A	11,800	12
Learjet-35A/65A	14,650	10
Learjet-35A/65A	21,000	49
Learjet-35A/65A	12,900	68
Learjet-55	21,500	34
S-10	10,759	10
S-10	8,600	125
S-10	10,000	18
S-12.5	12,500	50
S-12.5	12,500	54

5.3 Recommended Pavement Design

A FAARFIELD analysis was conducted using the fleet mix from the previous section. The recommended pavement section is presented in the table below:

Table 3: Recommended Pavement Section

Layer No.	Layer Type	Thickness (inch)
1	P-401 Asphaltic Concrete (Surface)	5
2	P-209 Aggregate Base Course	8
3	P-155 Lime Treated Subgrade	12
4	P-152 Compacted Subgrade	6

5.4 Material Availability

On-site materials removed from excavation, grading, and/or trenches will generally be suitable for use as backfill, given that it meets compaction and moisture condition requirements as laid out in the project specifications.

If necessary, import soils may also be utilized as fill, so long as it meets the project specifications.

5.5 Subgrade Stabilization

The site soils within the upper 3 feet, exhibit potentially high plasticity and have a low California Bearing Ratio. It is recommended by the Geotechnical Engineer that a minimum of 12” of subgrade be lime treated per the requirements of FAA Specification P-155.

5.6 Pavement Design

A description of the pavement design procedure is included within the geotechnical report in Appendix A.

5.6.1 FAARFIELD Results

FAARFIELD output is included within the geotechnical report in Appendix A.

6.0 DRAINAGE DESIGN

The draft drainage report for this project was completed by Kimley-Horn and Associates (KHA), dated May 21, 2020. A copy of the drainage report is included as Appendix B of this report. The following sections within Section 6 pertain to the overall project scope of work not limited to GMP 2.

6.1 Existing Drainage Characteristics and Structures

Existing topography generally slopes from east to west. Runoff from the existing Taxiway B discharges into the adjacent infield drains. The infield drains are connected to existing storm drains that drain to the detention basin at the southwest corner of DVT and off DVT property. Relocating Taxiway B will modify and create new infield areas. New inlets will be constructed to connect to the existing storm drains. The new configuration will require re-routing runoff reaching inlet 10 to a different part of the system. However, the relocation will not increase the total amount of runoff reaching the system.

6.2 On-Site Hydrology

The peak discharges for the proposed inlets were calculated using the Rational Method as outlined in the City of Phoenix Storm Water Policies and Standards Manual (SWPS). The five-year (5-year) storm was used as the design storm in accordance with AC 150/5320-5D. The minimum time of concentration was five (5) minutes, as required by AC 150/5320-5D. National Oceanic and Atmospheric Administration (NOAA) Atlas 14 was used to obtain rainfall intensity for Deer Valley Airport.

6.3 On-Site Hydraulics

Runoff from the new infield areas west of the new B6 connector reach the existing storm drain discharging into the detention basin in the southwest corner of DVT. Runoff east of the new B6 connector reaches the existing 54-inch trunk line that is running north to south. Triple COP 1570 catch basins will be used to capture the runoff. New 24-inch storm drain will be used to connect to the existing systems. Storm drain hydraulics will be completed with the Final Drainage Report.

The HEC-22 Chart 9B was used to size the inlets. A clogging factor of 50% was applied per the SWPS for both area drains. Ponding for the 5-year storm was limited at each inlet to prevent the encroachment of runoff on the taxiway and runway pavements, as required by AC150/5320-5D.

7.0 AIRFIELD LIGHTING AND SIGNAGE

7.1 Condition of Existing Systems

The Airfield lighting circuits are fed with two existing 2-4" duct banks that run from south the north from Taxiway C to Taxiways A and B. The placement of the existing duct banks

and hole structures between runways will be affected by the realignment of parallel Taxiway B. Portions of existing 2-4" duct bank segments that will be affected by construction of realigned Taxiway Bravo will be replaced with new duct bank segments where possible. The existing duct bank segments that cross under existing pavements will remain and be extended to new hand hole structures that are relocated outside of safety areas.

7.2 Layout of Airfield Lights and Signage

GMP 1 consisted of the design of the new north / south duct bank to provide a path with an adequate number of new conduits to install new airfield lighting home run cables or temporary lighting circuit jumpers to maintain operation of the airfield lighting circuits and NAVAIDS during construction of realigned Taxiway B. Portions of the new duct bank include directionally bored, type HDPE, duct banks under Runway 7R/25L and 7L/25R. This will prevent the need to close the runways to sawcut existing pavement, trench, concrete encase, backfill, compact and patch the existing asphalt pavement.

All new duct banks will be installed in accordance with AC 150/5370-10H Standard Specifications for Construction of Airports, Section L-110, Airport Underground Electrical Duct Banks and Conduits. All new conduits will be specified with #6 counterpoise conductor and slurry encasement, where installed through infields. The new duct bank segment that crosses the new future Taxiway B will be sufficient depth to prevent interfering with future subgrade and base preparation and concrete encased.

New precast concrete hand hole structures will be specified in accordance with FAA Specification L-115, Electrical Handholes and Junction Structures.

7.3 Electrical Circuit Load Calculations

No existing circuits will be affected during the GMP-1 installation of the new duct bank and hand hole structures.

8.0 NAVAIDS

8.1 Listing of NAVAIDS and Ownership

Deer Valley Airport owns and operates the NAVAIDS on airport property.

8.2 Impacts to FAA Owned NAVAIDS

There will be no impacts to FAA-owned NAVAIDS.

9.0 PAVEMENT MARKINGS

Any pavement markings damaged by construction activities are to be replaced in kind at no additional cost to the Owner. The following sections within Section 9 pertain to the overall project scope of work not limited to GMP 2.

9.1 Layout of Markings

The layout of pavement markings is included in the construction plans for this project. At the time of this writing, anticipated pavement markings include the following:

- Runway Edge Markings
- Taxiway Centerline Markings
- Enhanced Taxiway Centerline Markings
- Continuous Taxiway Edge Markings
- Runway Holding Position Markings (Pattern A)
- Surface Painted Holding Position Sign Markings

9.2 Temporary Marking Application

Any temporary pavement markings will be applied at an application rate as defined in the project specifications.

The project specifications will address any application of glass beads for temporary pavement markings.

An appropriate waiting period will be defined for all paint types used for pavement marking. Once that period has expired, permanent pavement markings will be applied according to the project specifications.

10.0 ENVIRONMENTAL CONSIDERATIONS

10.1 Storm Water Management Measures

A Storm Water Pollution Prevention Plan will be implemented to mitigate construction debris from entering the storm drain network at DVT. A specification item will require that the Contractor comply with the Arizona Pollutant Discharge Elimination System (AZPDES) Permit Program.

10.2 Permits

The project specification and contract documents will include information for the Contractor to ensure that the necessary permits are acquired.

10.3 Soil and Paint Sampling

The City of Phoenix Environmental Department will need to collect representative samples of paint and soil within the proposed work areas to determine levels of contamination. The results of the environmental testing will assist in the Environmental Department's recommendation of mitigation methods and suitability of material export from the site.

11.0 UTILITY LINES IN WORK AREA

11.1 Existing Underground Utilities

Existing underground utilities consist of, but not limited to the following:

- ➔ Electric (Runway and Taxiway Circuits)
- ➔ Storm Drain

11.2 Potential Impacts of Existing Utilities

The only known electrical utilities in the project area are the airfield electrical lines and duct banks serving the lighting, signage, and various NAVAIDs. The exact layout of these lines is unknown, but they have been shown on the plans in the anticipated locations. Location of any electrical lines impacting the project shall be confirmed prior to underground work commencing.

Other underground utilities are not anticipated to be impacted.

11.3 Recommended Contacts of Utility Companies

Utility company representative contact information is included below:

Arizona Public Service (APS)	Don Crowder	(602) 371-6451
FAA Facilities	Roger Gustafson	(602) 305-2532
Century Link	John O'Dell	(602) 530-0496
Gas (Southwest Gas)	Norma Jardin	(602) 484-5344
City Water/Sewer	Jami Erickson	(602) 261-8229
City Environmental	Rebecca Godley	(602) 273-3396

All Emergency, Fire, Police, Medical	Operator	911
City Electrical	Robert Arthur	(602) 339-7733
City Communications	Chad Blotkamp	(602) 708-0244
City Utilities	Chad Blotkamp	(602) 708-0244

11.4 Potholes on Potential Conflict Areas

Potholes on potential conflict areas may be necessary during the design phase of this project. Potential pothole locations, if necessary, will be identified on a map to request that the information be located.

12.0 MISCELLANEOUS WORK ITEMS

The following paragraphs identify anticipated miscellaneous work items associated with this project at the time of this writing.

A Storm Water Pollution Prevention Plan will be implemented to mitigate construction debris from entering the storm drain network at DVT. A specification item will require that the Contractor comply with the Arizona Pollutant Discharge Elimination System (AZPDES) Permit Program.

The Airport Operations Area (AOA) security fence will be maintained during construction. Details identifying the responsible party for safety maintenance will be addressed in the project specifications.

13.0 REQUESTED MODIFICATIONS TO AIP CONSTRUCTION STANDARDS

No modifications to AIP construction standards are anticipated at the time of this writing.

14.0 DELINEATION OF AIP NON-PARTICIPATING WORK

All work items associated with construction of Taxiway B and associated connectors are anticipated to be AIP eligible at the time of this writing.

15.0 DBE PARTICIPATION

At the time of this writing, the City does not establish DBE participation goals for AIP projects. No DBE participation goal has been established for this project.

16.0 PROJECT SCHEDULE

The following are anticipated milestone dates for this project. They are preliminary dates approximated by the anticipated design schedule. The dates presented below are subject to change.

1. Project Initiation (NTP for Design): August 28, 2019
2. Preliminary Investigation and Design: August 2019 through September 2020
3. Initial GMP 2 CMAR Selection: October 22, 2022
4. Availability of Final GMP 2 plans and specifications: To Be Determined (based on grant timing)
5. Award of GMP 2 CMAR contract: To Be Determined (based on grant timing)
6. NTP: To Be Determined (based on GMP design packages and grant timing)
7. Completion: To Be Determined
8. Closeout: To Be Determined

17.0 PRE-DESIGN MEETING AGENDA

A pre-design meeting was held on January 16, 2020. The agenda from the pre-design meeting (design kick-off) is included as Appendix E.

Appendix A: Final Geotechnical Report

Appendix B: Draft Drainage Report

Appendix C: 30% Preliminary Construction Documents

(Under Separate Cover)

Appendix D: GMP 2 90% Submittal Construction Documents

(Under Separate Cover)

Appendix E: Pre-Design Meeting Agenda