

HURRICANE CITY

UTAH

Mayor
Nanette Billings

City Manager
Kaden DeMille

Airport Board

Art Granger, Chair
Dave Houston
Norm Anderson
Laron Hall
Kate Wadsworth
Cathy Clark
Scott Freeman
Jim Lemmon
Mike Vercimak
Doug Heideman

HURRICANE CITY MUNICIPAL AIRPORT ADVISORY BOARD MEETING AGENDA

Tuesday, October 18, 2022
9:00 A.M.

City Hall Council Chambers - 147 N 870 W

Notice is hereby given that the General Dick Stout Field Airport Advisory Board will hold a Regular Meeting in the City Hall Council Chambers located at 147 N 870 W, Hurricane, UT. A silent roll call will be taken, along with the Pledge of Allegiance and prayer by invitation.

AGENDA

1. Call to Order, Pledge of Allegiance, Prayer
2. Review Minutes of September 20, 2022
3. Discussion & possible recommendation on CARES ACT money – Mike Vercimak
4. Review & discuss material for updated ALP – Mike Vercimak
5. New Business
6. Adjourn

**Hurricane City Municipal Airport
Advisory Board Meeting Minutes
October 18, 2022**

Present: Art Granger, Mike Vercimak, Doug Heideman, Dave Houston, Norm Anderson, Cathy Clark, Kate Wadsworth, Laron Hall, Jim Lemmon, Scott Freeman (phone) Mayor Billings, Dayton Hall, and Stephen Nelson

Guests: Stephen Lemmon, Steve Young, Kirt McDaniel (Jviation)

Item #1 Call to Order, Pledge of Allegiance, Prayer

Chairman Art Granger called the meeting to order at 9:00 am Art Granger led Pledge of Allegiance and Doug Heideman offered the prayer.

Item #2 Review Minutes from September 20, 2022

Laron Hall motion to approve the minutes of September 20, 2022. Jim Lemmon second the motion. Motion passed.

Steve Lemmon addressed the board and thanked everyone who showed up at the Hurricane Mesa testing facility. They had 28 people participate which aerospace was very pleased.

Item #3 Discussion & possible recommendation on CARES ACT money – Mike Vercimak

Mike Vercimak gave a brief discussion on the CARES ACT grant and what you can use that money for. The airport had not used any of the CARES ACT money that was issued in 2020. The city had a large grant that was able to help all departments.

The grant money has been there for two years. The money needs to be used in which we have 60 days to put out a plan to show how we can use those funds.

Mike Vercimak sent out the attached information to everyone to see where that grant money could be use. He got a few items back from individuals which talked about mainly on maintenance needed at the airport.

Mike Vercimak stated that if we apply the grant money to maintenance issues it will only allow for repairs for current areas not new. The airport has \$30,000 of the grant money available. Looking into the grant we will need invoices for everything that is purchased. Mike would like for use to come up with some ideas to present to city council. Mike suggested to purchase a tractor for weed control.

Art Granger talked about what he uses now to control the weeds which doesn't work the best so a tractor would be very useful.

Laron Hall was wondering if we were able to find a tractor for that price. He suggested we check out the auctions for example the military auctions.

Mike Vercimak explained that the grant money is a reimbursement grant so once we purchase the items then we submit the required documents for reimbursement which would be within 60-90 days.

Dave Houston agreed that the tractor would be very helpful for the airport.

Laron Hall made a motion and recommendation to the city council to purchase a tractor with the CARES ACT money. Jim Lemmon seconded. Motion passed.

Dayton Hall suggested having Mike Vercimak take it to City Council on Thursday October 20, 2022, he will need to get with the City Recorder to have added to this week agenda.

Item #4 Review & discuss material for updated ALP – Mike Vercimak

Mike Vercimak discussed that the information for ALP is due November 14, 2022. See the attached handout that gives an explanation.

Kirk McDaniel with Jviation gave a brief explanation of what has been put together for projects and estimated costs.

Mayor Billings suggested that Mike contact FAA to see if we can move the projects up CIP. Kirk McDaniel said that the 2023-2024 years are already set. He explained that the 2025-2026 can be changed with submitting justification on why.

Dave Houston suggested adding the expansion on the tarmac along with adding a terminal building. He questioned if that would work with the grant money.

Doug Heideman explained the hand out showing capital improvement about planning 10 years out.

Scott Freeman and Dave Houston talked about the projects about AWOS, Apron improvement and add the light project back on the project list in the future.

Dave Houston proposed to use the funds for Apron expansion, Frog Hollow wall issue and runway extension. Art Granger would like to add more space for airport hangers.

Mike Vercimak is going to contact FAA about moving items up and to add items to the CIP project. The following items to be added lightening project, terminal building, improvements to the northeast area, and crossing on frog hollow wash.

Laron Hall made a recommendation to have Mike Vercimak take the following items to City Council for CIP projects. Kate Wadsworth seconded. Motion passed.

Item #5 New Business

Scott Freeman reported that the noise complaints have slowed down a lot.

Steve Young would like to build a hangar 60 feet wide 60 ft deep he has had the soil samples done with GTS. He would like to get a lease and building permit. This would be a private hangar. The hangar is South facing.

Jim Lemmon recommended to approve the proposal for Steve Young for the building of a hangar and get lease to the city council. Laron Hall second. Motion approved.

Norm Anderson had question on where Stephen Lemmon is at for his hangar. Dayton Hall stated he will be on the agenda for November 17th for approval from City Council.

Item #6 Adjourn

Art Granger motion to adjourn the meeting. Seconded by Laron Hall

Meeting adjourned 10:30

DRAFT



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Denver Airports District Office
26805 E. 68th Ave., Suite 224
Denver, CO 80249

October 12, 2022

Fiscal Year 2023 Airport Capital Improvement Plan Update

Dear Airport Sponsor:

The FAA and Utah Division of Aeronautics continually evaluate the needs of Utah's airports in order to develop a comprehensive and coordinated funding plan for airport development. We rely on airport capital improvement plans (CIP) for this purpose. The CIP is an inventory of airport improvement projects necessary to develop and maintain each airport and is derived from different sources including Master Plans, Pavement Management Plans and Joint Planning Conferences. We ask each airport sponsor to review and update their CIP annually to maintain an accurate funding plan.

The enclosed CIP for your airport shows projects planned to be funded with federal and/or state funds. In most cases, the projects are not identical to the ones you submitted to the FAA and Division last year. Please keep in mind that we develop and maintain a system of airports and the limited available funding must be used to support the highest priority work first. It is also important to note that a project's inclusion in the CIP does not guarantee a commitment by the FAA or Division for funding. Yet, your project's inclusion *will* assist us with planning for funding of improvements as you need them. Proper advanced preparation in this process is the first step in obtaining federal and state funding to support the development of your airport.

Please review your airport's CIP and send the update via email to christine.yaffa@faa.gov and mmaass@utah.gov by **November 14th**.

The CIP update process has changed in the last couple years due to the pandemic, but also as a result of an effort to make the annual CIP update process as efficient and accurate as possible. As we did last year, we would like you to **submit an updated CIP to include a ten-year period of projects**, FY23-32, rather than five-years as has been requested in the past. We are finding that the competition for some types of funding and the size/cost of major projects are forcing us to look much further into the future when constructing a funding plan. Understanding the size, scope and timing of projects you have on the horizon will help us be better prepared when the time comes to fund them. You can make your updates to the project list in the attached Excel file or you can submit it in your own format.

Again, as we did last year, we need you to **submit more detailed information on the projects you are requesting in the first five years**. At a minimum, we would like the following three items for each project requested in FY23-27:

- Project area sketch
- Cost estimate
- Project narrative and justification

This information allows us to have a clear understanding of the project and ensures that project importance and urgency is known. The enclosed CIP Data Sheet form can be used or you can use your own format to submit this information.

We have included additional information with this letter to assist you with your update. Please review it carefully because it contains additional information about preparing the sketch, cost estimate, project narrative and justification. There are also helpful tips on constructing a comprehensive CIP.

Last year, the FAA asked some airports to begin using the Airports External Portal (AEP) to submit their CIP update. The intention was to gradually move all CIP submissions to this tool beginning this year. However, last year's limited use found the tool to not be as efficient as we first believed and as a result we will not use AEP for the CIP submissions this year. Sending your materials to the email addresses listed above will be the method used this year.

We understand that airport needs are constantly changing and the CIP is intended to be a "flexible" document capable of changing with the needs of the airport. Foreseeable and consistent planning, at the same time, is just as important to funding agencies such as the FAA and Division. Significant changes to the first two upcoming fiscal years (FY23 & FY24) are discouraged and will be heavily scrutinized. For this reason, it is strongly recommended that you take a critical look at any projects you may have scheduled for FY25 & FY26, because if you need to make changes, now is the time.

In previous years FAA and Division staff have facilitated airport-specific CIP meetings with airport sponsors and their consultants in conjunction with the Fall Utah Airport Operators Association meeting. The years of pandemic related travel restrictions forced us to find alternative methods to hold these immensely useful meetings. We have found holding these meetings separate from the conference and via eConference (Zoom or MS Teams) has allowed more participation and can be spread out over several weeks. **We will be holding 45-minute e-conferences** between October 12th and November 4th. If you are interested in signing up for a session, please go [here](#). You may also contact Christy using the contact information below if you have any questions about the e-conferences.

Thank you for your continued support and patience during the planning and funding process.

Sincerely,



Christy Yaffa
Utah Community Planner
Federal Aviation Administration
Denver Airports District Office
(303) 342-1280
christine.yaffa@faa.gov



Matthew Maass, C.M.
Economic and Aviation Development Manager
Utah Department of Transportation
Division of Aeronautics
(503) 847-7176
mmaass@utah.gov

Enclosures (3)

CIP DATA SHEET

Directions: Please complete a CIP Data Sheet for each project requested in the first five years of the CIP (FY 23-27).

Part 1: Applicant Information

Airport Name: Click here to enter airport name.

Date: Click here to enter today's date.

Part 2: Project Information

Project Description:

Click here to enter the project description.

Requested Federal Fiscal Year:

Choose an item.

Local Priority:

Click here to enter the local priority of this project.

Scope of Work:

Click here to enter a detailed project description.

Is this a phased project? Choose an item.

If yes, Phase #:

Is this a new project? Choose an item.

Justification:

Click here to enter justification for this funding request.

Part 3: Proposed Project Cost Estimate

Major Work Item:	Estimated Cost
Click here to enter text.	
Click here to enter text.	
Click here to enter text.	
Click here to enter text.	
Click here to enter text.	
Administration	
Consultant Fees (Engineering/Planning)	
Total Estimated Project Cost	

Part 4: Project Sketch (if applicable)
Clearly designate specific area of work involved.

Part 5: Contact Designation

The Sponsor hereby designates the following as the contact for all questions regarding this project:

Name: Click here to enter contact's name.	Title: Click here to enter contact's title.
Address: Click here to enter contact's address.	City, State, Zip: Click here to enter contact's city, state and zip.
Phone: Click here to enter contact's phone number.	Email: Click here to enter contact's email address.

Airport Capital Improvement Plan Update Supplemental Information

Updated September 2022

PROJECT DOCUMENTATION

Submit the following project documentation for any project requested in fiscal years 2023 through 2027.

- **Project Area Sketch** – The sketch needs to clearly indicate the location of the project. For example, the section of the apron that will be rehabilitated, the location the AWOS will be installed, or the location the snow removal equipment (SRE) building will be constructed. It isn't necessary to submit anything for equipment acquisition (SRE, ARFF, etc.) or planning projects.
- **Cost Estimate** – Separate project costs by major work item (i.e. R/W rehab (does not need to be separated further into paving, grading, etc.), lighting, drainage improvement, land acquisition, master plan, SRE acquisition). Separately list consultant fees and administrative costs.
- **Project Narrative and Justification** – Give a detailed description of the work to be accomplished and why it needs to be done. For example, if your SRE is replacing an older piece of equipment, tell us how old that equipment is to show it's met its useful life. Indicate what the local priority is for the project (i.e. this project is our highest priority, this project is priority #3).

TIPS

- **Be consistent.** Significant changes to the plan from year to year *will* hurt your chances to compete for funding.
 - Significant changes to the first two upcoming fiscal years (FY23 & FY24) are discouraged and will be heavily scrutinized. For this reason, it is strongly recommended that you take a critical look at any projects you may have scheduled for FY25 & FY26, because if you need to make changes, *now is the time.*
- Understand that there are limited funds available. It isn't reasonable to expect significant discretionary or state apportionment funds every year. Entitlement funds should be your primary funding source.
- **Include a full plan of projects for fiscal years 2023 through 2032.** Ensure that you have a complete plan for any federal entitlement and allocated Bipartisan Infrastructure Law (BIL) funds you expect to receive. Not having a complete plan for your entitlements and BIL funds, especially in the first five years, could impact future funding levels.
- Make sure all applicable requested projects (including those funded with BIL) are shown on the current Airport Layout Plan (ALP). It is a requirement for federal funds and could delay your project if it isn't on the ALP.
- **Submit one data sheet for multi-phase projects.** If you plan to have a separate design phase for a project or will phase the construction, submit one data sheet including the entire project and outline your funding plan in the project justification section. Make sure the cost estimate supports the funding plan by providing an estimate for each phase.

- **Keep the timing of federal, state and local fiscal years in mind.** The CIP should use the federal fiscal year, October – September.
- Discuss the CIP with local officials and inform them of the level of Federal and State funds expected at least in the five-year planning period so that necessary local match is available.
- **We really do want to know what the local priority is for a project.** It is a common occurrence for UDOT and FAA to not have the funding available for all projects requested. When you don't communicate your priorities or label every project as "high" priority, the funding agencies are forced to set your priorities for you.
- **Give as much project detail as possible.** We need a clear understanding of the project in order to evaluate it for funding. The above described project documentation is only the *minimum* necessary. You can also submit photographs or other information if you feel it will help describe the project or make the case for funding.
- **Put some effort into the justification for the project.** This is your opportunity to explain why the project should be funded with state or federal funds, perhaps before projects at other airports.
 - Why is the project needed?
 - Has the snow plow become inoperable due to the scarcity of parts? How many aircraft owners have put down deposits on hangar space? Has the Cert Inspector told you that your pavement markings need to be refreshed/changed?
 - What is important about the timing of the project?
 - Do you have other funding for the project that could expire? Is the land you want to acquire currently advertised for sale? Is the pavement condition so bad that foreign object debris (FOD) has become an issue? Does your pavement need to be rehabilitated before it deteriorates to the point of requiring reconstruction? If so, what is the current condition and when is it anticipated to cross the line between rehabilitation and reconstruction?
 - The size and cost of the project is necessary because...
 - Does it make sense to extend the runway and taxiway at the same time? If so, why? What is the anticipated cost savings? Why does the apron need the size of expansion you are requesting? Do you anticipate the taxilane extension to be more costly than expected due to site conditions? If so, what are those conditions?
- When considering projects for the ten-year CIP, using a standard "useful life" timeline can be helpful in predicting when equipment such as SRE or ARFF will be needed or when pavement will need maintenance or to be rehabilitated or reconstructed. When the project gets closer, the timing can be adjusted based on the condition of the equipment or pavement. [Table 3-7](#) in FAA Order 5100.38D, AIP Handbook, can be helpful in determining useful life of facilities and equipment.
- **[Sign up for an e-conference.](#)** These can be very useful to discuss your projects with us and get feedback on how to present a project or what timing will fit within available funding.

Hurricane-General Dick Stout Field (1L8)

Project Description & Cost Estimate

[illegible]

Cost Allocation \$				
Federal State Apportionment	Federal Discretionary	State Participation	Sponsor Participation	
		4.685%	4.685%	
\$ -	\$ -	\$ -	\$ -	
\$ -	\$ -	\$ 15,508	\$ 15,508	
\$ -	\$ -	\$ -	\$ -	
\$ 1,500,000	\$ -	\$ 93,049	\$ 93,049	
\$ -	\$ -	\$ -	\$ -	
\$ 2,000,000	\$ -	\$ 118,896	\$ 118,896	
\$ -	\$ -	\$ -	\$ -	
\$ -	\$ -	\$ -	\$ -	
\$ -	\$ -	\$ -	\$ -	
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\$ -	\$ -	\$ -	\$ -	
\$ 3,500,000	\$ -	\$ 227,452	\$ 227,452	
		90.00%	10.00%	
		\$ -	\$ -	
		\$ 216,000	\$ 24,000	
		\$ -	\$ -	
		\$ -	\$ -	
		\$ -	\$ -	
		\$ 216,000	\$ 24,000	
project scope, location and costs.				



GEOTECHNICAL TESTING SERVICES, INC.
735 East Tabernacle Street, St. George, UT 84770
(435) 628-9536 admin@gtsstg.com

August 25, 2022

Mr. Steve Young
SD Young Inv., L.L.C.
2565 East 1520 South Circle
St. George, UT 84790

Subject: Geotechnical Investigation
Proposed Aircraft Hangar
Hurricane Airport
800 West 2300 South Street - Hangar Number 13S 4E
Hurricane, Utah
GTS Project Number: 12960

Dear Mr. Young:

This letter presents the results of our geotechnical investigation conducted at the site of the proposed aircraft hangar to be constructed at the above noted address. The purpose of our investigation was to provide information on subsurface soil and groundwater conditions, recommendations for foundation types and depths, soil bearing capacities, anticipated total and differential settlement, and other design and construction considerations influenced by the subsurface conditions. We have previously performed geotechnical investigations other hangars at the Hurricane Airport. Information from the previous investigations was used as part of this report.

We understand that an aircraft hangar is planned for construction on the property. The hangar will likely be a steel frame building constructed at grade. A basement is not planned. Minimal cut and fills are anticipated to bring the site to the proposed grade.

The hangar building pad area is rectangular in shape, and was vacant at the time of our investigation. The ground surface across the building area is level and flat. Surface drainage appeared to be fair. At the time of our investigation, the area was void of vegetation. The site is bound by undeveloped land to the south, by single family residences to the east, and by existing aircraft hangars to the north and west.

To investigate the subsurface soil conditions, one, 21.5-foot deep test hole was drilled near the proposed building area. The location of the test hole, in relation to the property limits, is shown on the Site Plan, Figure 1. The subsurface soils encountered in the test hole consisted of loose to dense, silty, gravelly SAND (SM) to the maximum depth of exploration, 21.5 feet. Groundwater was not encountered in the test hole at the time of our investigation. Please refer to Figure 2 for a detailed description of the soil conditions encountered in the test hole location. Figure 3 is the key to symbols and abbreviations used on our Test Hole Log.

Disturbed and undisturbed samples were collected, and returned to our laboratory for testing, and to confirm field classification. Swell-consolidation test performed on a samples collected from depths of 8.67, 16.17, and 21.17 feet collapsed 0.5, 0.8 and 4.5 percent, respectively, when saturated under a constant load of 1,000 psf. These test results indicate a low to high potential for hydro-collapse. Based on the loose condition and results from previous investigations for nearby hangars, the soils in the upper 5 feet are highly collapsible.

The area under the buildings should be further undercut to allow for a minimum of 5 feet of structural fill below the footings and slab or 6 feet below the existing grade, whichever is greater.

Adequate surface drainage must be maintained during the course of construction and after construction has been completed. The ground surface surrounding the exterior of the building should be sloped to drain away from the building in all directions. We recommend a minimum slope of 8 inches in the first 10 feet. Roof downspouts should discharge into solid pipes extended to a minimum of 8 feet beyond the building limits, or preferably, to the street or borrow ditch. Irrigation valve boxes should not be allowed within 10 feet of the building and pool. Improper drainage could cause movement of the building and pool large enough to cause distress.

All site grading and fill operations should be observed by a representative of GTS to determine the adequacy of site preparation, removal of all unsuitable material, compliance with compaction requirements, and to insure that the recommendations presented in this report are properly implemented during construction.

It is the responsibility of the owner/contractor to schedule the appropriate amount of observations and testing as outlined in this report. Failure to follow our recommendations could result in additional fees to verify the work that was performed or to provide additional recommendations.

We recommend that one of our engineers review the geotechnical aspects of the project's specifications and plans prior to submission for bids. This review allows us to check whether these documents reflect the intent of our recommendations. In addition, we could possibly identify contractual provisions that present the owner with an elevated risk of geotechnically related construction "extras."

The analysis and recommendations submitted in this report are based upon the data obtained from one test hole drilled, at the location of the proposed structures as indicated on the Site Plan, Figure 1. This report does not reflect any variations which may occur outside the limits of the test hole. The nature and extent of variations may not become evident until the course of construction and are sometimes sufficient to necessitate changes in the designs; thus, it is important that we observe subsurface materials exposed in the excavations to take advantage of all opportunities to recognize differing conditions which would affect the performance of the facility being planned.

Our findings and conclusions have been obtained in accordance with accepted professional engineering practice in the field of foundation engineering and soil mechanics. This warranty is in lieu of all other warranties, expressed or implied.

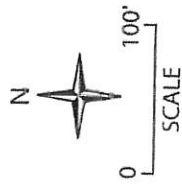
It has been a pleasure to assist you with this project. Please feel free to call us if you have any questions.

Sincerely,
GEOTECHNICAL TESTING SERVICES, INC.

CHRISTOPHER G. DUTSON, P.E.
Project Engineer

12960 - Geotechnical Investigation - Aircraft Hangar - Hurricane Airport - Hurricane UT - Steve young.wpd





Proposed Aircraft
Hangar



Engineering
Consulting
Testing

SITE PLAN

Client: SD Young Inv., L.L.C. - Mr. Steve Young
Project: Hurricane Airport Hangar Pad Number 13S 4E
Location: Hurricane, Utah
Number: 12960

Figure 1

LOG OF TEST HOLE NUMBER TH-01

TYPE BORING:

LOCATION: 37.137734 N, -113.303833 W

DEPTH, FT.	SYMBOL SAMPLES BLOWS PER FOOT	SOIL DESCRIPTION	% PASSING #200 SIEVE	LIQUID LIMIT	PLASTICITY INDEX	MOISTURE CONTENT	UNIT DRY WT. LB./CU FT.	SHEAR STRENGTH IN TSF			OTHER TESTS
								○ HAND PEN ● UNC CMP			
								0.5	1.0	1.5	
		SURF. ELEV.:						PL 20	WC 40	LL 60	
		SAND (SM), silty, some gravel, very loose to loose, moist, red.									
4											
5											
8		SAND (SM), silty, gravelly, loose, slightly moist, red.									
		SAND (SM), silty, gravelly, cobbles, medium dense, slightly moist, red.									
10						3.1	91	X			0.5% Collapse @ 1.0 ksf
10											
14											
15											
14		Boulder				1.6	99	X			0.8% Collapse @ 1.0 ksf
		SAND (SM), silty, gravelly, cobbles, dense, slightly moist, red.									
20											
38						2.1	109	X			4.5% Collapse @ 1.0 ksf

GTS TEST HOLE WID FIGURE A. 12960. CMT - HURRICANE AIRPORT HANGAR GJG GTS CORP QDT 02/22



**Engineering
Consulting
Testing**

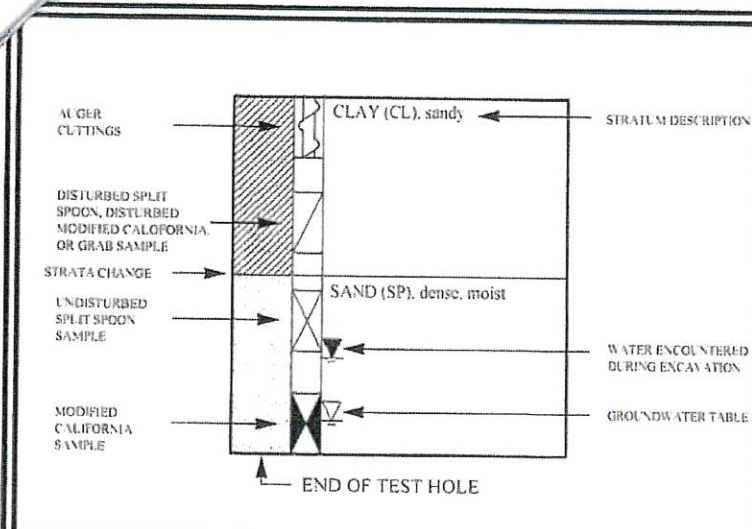
COMPLETION DEPTH: 21.5 FEET
DATE: 3/9/22-3/9/22

DEPTH TO WATER: >21.5 FEET
DATE: 3/9/22

Client: SD Young Inv., L.L.C. - Mr. Steve Young
Project: Hurricane Airport Hangar Number 13S 4E
Location: Hurricane, Utah
Number: 12960

Figure 2

GTS KEY TH 12960 - GINT - HURRICANE AIRPORT HANGAR.GPJ 8/25/22



RELATIVE DENSITY (SAND & SILT)

	BLOWS/FOOT
VERY LOOSE	<4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	>50

CONSISTENCY (CLAY)

	SHEAR STRENGTH (psf)	BLOWS /FOOT
VERY SOFT	<250	<2
SOFT	250 - 500	2 - 4
MED. STIFF	500 - 1000	4 - 8
STIFF	1000 - 2000	9 - 15
VERY STIFF	2000 - 4000	16 - 30
HARD	>4000	>30

FILL MAN MADE	CONCRETE	ASPHALT	TOPSOIL	ORGANIC SILT (OL)
CLAY PLASTIC (CH)	CLAY (CL)	(CL-ML)	SILT PLASTIC (MH)	SILT (ML)
SAND WELL GRADED (SW)	SAND POORLY GRADED (SP)	SAND CLAYEY (SC)	SAND SILTY (SM)	
SAND (SW-SC)	SAND (SW-SM)	SAND (SP-SC)	SAND (SP-SM)	SAND (SC-SM)
GRAVEL WELL GRADED (GW)	GRAVEL POORLY GRADED (GP)	GRAVEL CLAYEY (GC)	GRAVEL SILTY (GM)	
GRAVEL (GW-GC)	GRAVEL (GW-GM)	GRAVEL (GP-GC)	GRAVEL (GP-GM)	GRAVEL (GC-GM)
CLAY-STONE	SILT-STONE	SAND-STONE	VOLCANICS	ASH
CLAY-STONE WEATH.	SILT-STONE WEATH.	SAND-STONE WEATH.	GRANITICS	BASALT
CALICHE	BOULDERS AND COBBLES			REFUSAL

ABBREVIATIONS

- LL - LIQUID LIMIT (%)
- PI - PLASTIC INDEX (%)
- W - MOISTURE CONTENT (%)
- DD - DRY DENSITY (PCF)
- NP - NONPLASTIC
- 200 - PERCENT PASSING NO. 200 SIEVE
- phi - ANGLE OF INTERNAL FRICTION
- C - COHESION (PSF)
- p - HAND PENETROMETER (TSF)

NOTES:

- The soils have been classified in accordance with the Unified Soil Classification System
- Strata change lines represent the approximate boundary between soil and rock types, in-situ the transition may be gradual
- Test Hole 1 was drilled on March 9, 2022, with a truck mounted hollow stem auger operated by Geotechnical Drilling Services L.L.C., of St. George, Utah.
- Groundwater was not encountered in our test hole



**Engineering
Consulting
Testing**

KEY TO TEST HOLES

Client: SD Young Inv., L.L.C. - Mr. Steve Young
 Project: Hurricane Airport Hangar Number 13S 4E
 Location: Hurricane, Utah
 Number: 12960