GRAMOLL CONSTRUCTION

155 South 750 West, North Salt Lake, Utah 84054
Phone 801-295-2341 - Fax 801-295-2656 - www.gramoll.com

Addendum #1

Metal Building Bid Package

West Bountiful City Public Works Building

The following is a description of changes and clarifications to the Metal Building Bid Package for The West Bountiful City Public Works Building project.

- **Bid Date & Time:**
  - Bid date and time is unchanged and remains the same.

- **Additional Reference Documents:**
  - Site Geotechnical Engineering Study. (Page 2)
  - Seismic Site Class Determination Letter. (Page 36)

- **Additional Drawings/Details:**
  - South Mezzanine plan, details and framing takeoff from Structural Engineer. (Page 40)
  - Northeast Mezzanine plan, details and framing takeoff from Structural Engineer. (Page 51)

- **Building Narrative:**
  - Revisions to Metal Building Narrative. (Page 61)
    - Clarification - Manufacturers standard metal panel system is desired for the roof & walls.
    - Clarification – Alternate Galvalume finish pricing for roof panels only.
    - Identification of alternates.

- **Bid Alternates:**
  - Alternate #1- Galvalume Finish
    - Pricing for a Galvalume finish for the roof panels in lieu of the painted finish that is to be included as part of the base bid.

  - Alternate #2 – Exterior Canopy
    - Supply and construction of an exterior canopy on the north side of the building
      - 12’ X high X 15’ deep X approximately 80’ long
      - Including side walls

  - Please include separate pricing for each alternate and the base bid on the revised bid form.

- **Revised Bid Cost Proposal form:**
  - Revised cost proposal form. Now accommodates Alternate #1 & #2 (Page 63)

- **Subcontract agreement:**
  - Sample Gramoll Construction subcontract agreement. (Page 66)

- **Additional Clarifications & Requirements:**
  - A concrete block wall will form the perimeter of the wash bay and will NOT be included in the scope of work for the Metal building supplier/contractor.
  - A Manufacturer standard wall panel system is desired.
  - The metal building design shall be designed to accommodate the possible future addition of a photovoltaic system on the roof. Assume an average wight of 3.3. lbs./sf for the photovoltaic system.
  - The snow load requirement for West Bountiful is 30 lbs./sf, but site-specific determination is allowed.

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Cover Page

SITE GEOTECHNICAL ENGINEERING STUDY

CMT ENGINEERING LABORATORIES

Engineering
Geology
Environmental (ESA I & II)
Organic Chemistry
Materials Testing
Special Inspections

GEOTECHNICAL ENGINEERING STUDY

Proposed West Bountiful Public Works Facility

About 1400 West and 1200 North
West Bountiful City, Utah 84087

Prepared For:

Mr. Ben White
West Bountiful City
550 North 800 West
West Bountiful, Utah 84087

CMT Project No. 11372
June 26, 2018

CMT ENGINEERING LABORATORIES

June 26, 2018

Mr. Ben White
West Bountiful City
550 North 800 West
West Bountiful, Utah 84087

Subject: Geotechnical Engineering Study
Proposed West Bountiful Public Works Facility
About 1400 West 1200 North
West Bountiful, Utah 84087
CMT Project Number: 11372

Mr. White:

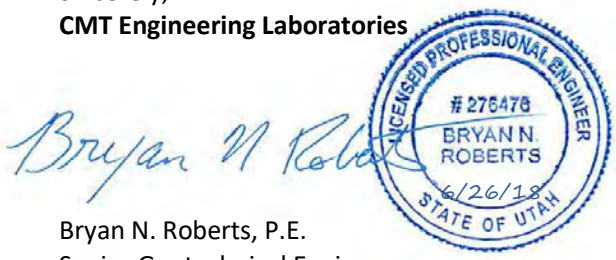
Submitted herewith is the report of our geotechnical engineering study for the subject site. This report contains the results of our findings and an engineering interpretation of the results with respect to the available project characteristics. It also contains recommendations to aid in the design and construction of the earth related phases of this project.

On June 6 and 7, 2018 one boring and 6 test pits were completed within the current proposed development to depths of about 10.0 to 36.5 feet below the existing ground surface. Non-engineered fills blanket the site and extended to depths of about 2.0 to 7.0 feet below the surface. Groundwater was encountered as shallow as about 8.0 feet below the ground surface. Soil samples were obtained during the field operations and subsequently transported to our laboratory for further testing and observation.

Conventional spread and/or continuous footings may be utilized to support the proposed structures, provided the recommendations in this report are followed. A detailed discussion of design and construction criteria is presented in this report.

We appreciate the opportunity to work with you at this stage of the project. CMT offers a full range of Geotechnical Engineering, Geological, Material Testing, Special Inspection services, and Phase I and II Environmental Site Assessments. With 8 offices throughout Utah and Arizona, our staff is capable of efficiently serving your project needs. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at (801) 870-6732.

Sincerely,
CMT Engineering Laboratories



Bryan N. Roberts, P.E.
Senior Geotechnical Engineer

Reviewed by:

Andrew M. Harris, P.E.
Geotechnical Division Manager

CMT ENGINEERING LABORATORIES

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APPENDIX

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1.0 INTRODUCTION

1.1 General

CMT Engineering Laboratories (CMT) was retained to conduct a geotechnical subsurface study for the proposed West Bountiful Public Works Facility at about 1400 West 1200 North in West Bountiful, Utah, as shown in the **Vicinity Map** below.

Vicinity Map

1.2 Objectives, Scope and Authorization

The objectives and scope of our study were planned in discussions between Mr. Ben White, City Engineer for West Bountiful City, and Bryan Roberts of CMT Engineering Laboratories (CMT). In general, the objectives of this study were to define and evaluate the subsurface soil and groundwater conditions at the site, and provide appropriate foundation, earthwork, pavement and seismic recommendations to be utilized in the design and construction of the proposed development.

In accomplishing these objectives, our scope of work has included performing field exploration which consisted of the drilling/logging/sampling of 1 boring to about 36.5 feet and excavating 6 test pits to depths of

about 10.0 to 11.5 feet below the surface, performing laboratory testing on representative samples, and conducting an office program, which consisted of correlating available data, performing engineering analyses, and preparing this summary report. This scope of work was authorized by returning a signed copy of the West Bountiful City Professional Service Agreement.

1.3 Description of Proposed Construction

The site consists of about 5.5 acres with current development plans consisting of: a one to one extended level warehouse structure with plan area of about 16,000 square feet; a single-story salt/other storage building with a plan area of about 4,200 square feet and; a surrounding asphalt paved yard for moderate to heavy equipment storage.

The proposed structures will likely be constructed of masonry and/or steel framing supported on concrete spread footings with slab on grade floors established near existing site grades. Maximum projected continuous wall and column loads are on the order of 2 to 5 kips per lineal foot and 50 to 150 kips, respectively.

A site grading plan was not available at the time of this report, but we project that maximum cuts and fills to achieve planned grading may be on the order of 1 to 3 feet.

1.4 Executive Summary

The results of our study show that the proposed structure may be supported upon conventional spread and continuous wall foundations placed on suitable natural soils or structural fill extending to suitable natural soils utilizing a bearing pressure of 2,000 pounds per square foot (psf). More heavily loaded foundations must be supported over some minimal thickness of granular structural replacement fill as discussed in Section 7.0 Foundation Recommendations.

The most significant geotechnical aspects of the site are:

1. The existing surficial non-engineered fills soils that blanket the surface at each test pit and boring locations extending to depths of about 2.0 to 7.0 feet below the surface. These fills are variable, contain debris and occasional garbage, and will exhibit very poor engineering characteristics in their present state. The depth and lateral extent of non-engineered fills soils must be anticipated to vary across the site.
2. Moderately shallow groundwater was encountered at about 8.0 to 9.3 feet below the existing ground surface.

All non-engineered fills soils and debris must be removed below all foundations and floor slabs. The in-situ, non-engineered fills soils may remain below exterior flexible pavements if free of excessive deleterious materials, subsequent overlying site grading fills are limited to 2 feet in total thickness, and if properly prepared, as discussed later in this report. Any loose fill piles and debris across the surface must be completely removed.

CMT must verify that all topsoil, disturbed, non-engineered fill, or unsuitable soils have been removed and/or properly prepared and that suitable soils have been encountered prior to placing site grading fills, footings, slabs, and pavements.

In the following sections, detailed discussions pertaining to the site and subsurface descriptions, geologic/seismic setting, earthwork, foundations, lateral resistance, lateral pressure, floor slabs, and pavements are provided.

2.0 FIELD EXPLORATION

2.1 General

In order to define and evaluate the subsurface soil and groundwater conditions at the site, 1 boring and 6 test pits were drilled/excavated throughout the site to depths of approximately 10.0 to 36.5 feet below the existing ground surface. Locations of the bore hole and test pits are presented on **Figure 1, Site Plan**, included in the Appendix.

During the course of the drilling and excavation operations, a continuous log of the subsurface conditions encountered was maintained. The field portion of our study was performed under the direct control and continual supervision of an experienced member of our geotechnical staff. In addition, samples of the typical soils encountered were obtained for subsequent laboratory testing and examination.

A 3.25-inch outside diameter, 2.42-inch inside diameter drive sampler (Dames & Moore) and a 2.0-inch outside diameter, 1.38-inch inside diameter drive sampler (SPT) were utilized at select locations within the boring. Relatively undisturbed samples were taken by hydraulically pushing a 3 inch diameter Shelby tube. The blow counts recorded on the boring logs were those required to drive the sampler 12 inches with a 140-pound hammer dropping 30 inches. Representative soil samples were collected within the test pits by obtaining disturbed "grab" samples, block samples and utilizing a 2.5-inch outside diameter thin-wall drive sampler from within the test pits. The samples were placed in sealed plastic bags and containers prior to transport to the laboratory.

The collected samples were logged and described in general accordance with ASTM 2488. The soils were classified in the field based upon visual and textural examination. These classifications have been supplemented by subsequent inspection and testing in our laboratory. Detailed graphical representation of the subsurface conditions encountered is presented on **Figures 2 to 8**, Bore Hole/Test Pit Log provided in the Appendix. Sampling information and other pertinent data and observations are also included on the logs. In addition, a Key to Symbols defining the terms and symbols used on the logs is provided as **Figure 9** in the Appendix.

Following completion of the excavation operations and prior to backfilling, a 1.25-inch diameter slotted PVC pipe was installed in test pit TP-1 in order to allow subsequent water level measurements.

When backfilling the test pits, only minimal effort was made to compact the backfill and no compaction testing was performed. Thus, the backfill must be considered as non-engineered fill and settlement of the backfill in the test pits over time should be anticipated. The boring was backfilled with auger cuttings.

3.0 LABORATORY TESTING

3.1 General

Selected samples of the subsurface soils were subjected to various laboratory tests to assess pertinent engineering properties, as follows:

1. Moisture Content, ASTM D-2216, Percent moisture representative of field conditions
2. Dry Density, ASTM D-2937, Dry unit weight representing field conditions
3. Atterberg Limits, ASTM D-4318, Plasticity and workability
4. Gradation Analysis, ASTM D-1140/C-117, Grain Size Analysis
5. One Dimension Consolidation, ASTM D-2435, Consolidation properties

3.2 Lab Summary

Laboratory test results are presented on the bore hole logs (**Figures 2 through 8**) and in the following Lab Summary Table:

Lab Summary Table

Bore Hole	Depth (feet)	Soil Class	Sample Type	Moisture Content (%)	Dry Denstiy (pcf)	Gradation			Atterberg Limits		
						Grav	Sand	Fines	LL	PL	PI
B-1	5	SM	D&M	24.2	93						
	10	CL	Shelby	27.3	98				30	20	10
	12.5	CL	D&M	22.2	106						
	20	CL	D&M	31.9					38	25	13
TP-1	4	CL	TW	22.3	103						
TP-2	9	CL	Bag	30.8				85.7			
TP-4	2	CL-SC-Fill	Bag	14.1		9	37	53.7			
	8	CL	TW	25.1	88						
TP-5	8	CL	TW	22.4	99						
TP-6	3	SC-Fill	Bag	18.3		5	63	32.0			

3.3 One-Dimensional Consolidation Tests

To provide data necessary for our settlement analyses, consolidation tests were performed on two representative samples of the natural clay soils encountered at the site. The data obtained from the tests were used to calculate foundation movements which could occur from the anticipated foundation loadings.

Based upon data obtained from the consolidation tests, the natural, undisturbed clay soils indicate moderate over consolidated soil conditions and would exhibit moderate strength and compressibility characteristics under planned loading. Detailed results of the tests are maintained within our files and can be transmitted to you, upon your request.

4.0 GEOLOGIC & SEISMIC CONDITIONS

4.1 Geologic Setting

The subject site is located in the southeast portion of Davis County in north-central Utah. The site sits at an elevation of approximately 4,218 feet above sea level. The site is located in a valley bound by the Wasatch Mountains on the east and Antelope Island (Great Salt Lake) and the Promontory Mountains to the west. The Valley is a deep, sediment-filled basin that is part of the Basin and Range Physiographic Province. The valley was formed by extensional tectonic processes during the Tertiary and Quaternary geologic time periods. The Valley is located within the Intermountain Seismic Belt, a zone of ongoing tectonism and seismic activity extending from southwestern Montana to southwestern Utah. The active (evidence of movement in the last 10,000 years) Wasatch Fault Zone is part of the Intermountain Seismic Belt and extends from southeastern Idaho to central Utah along the western base of the Wasatch Mountain Range.

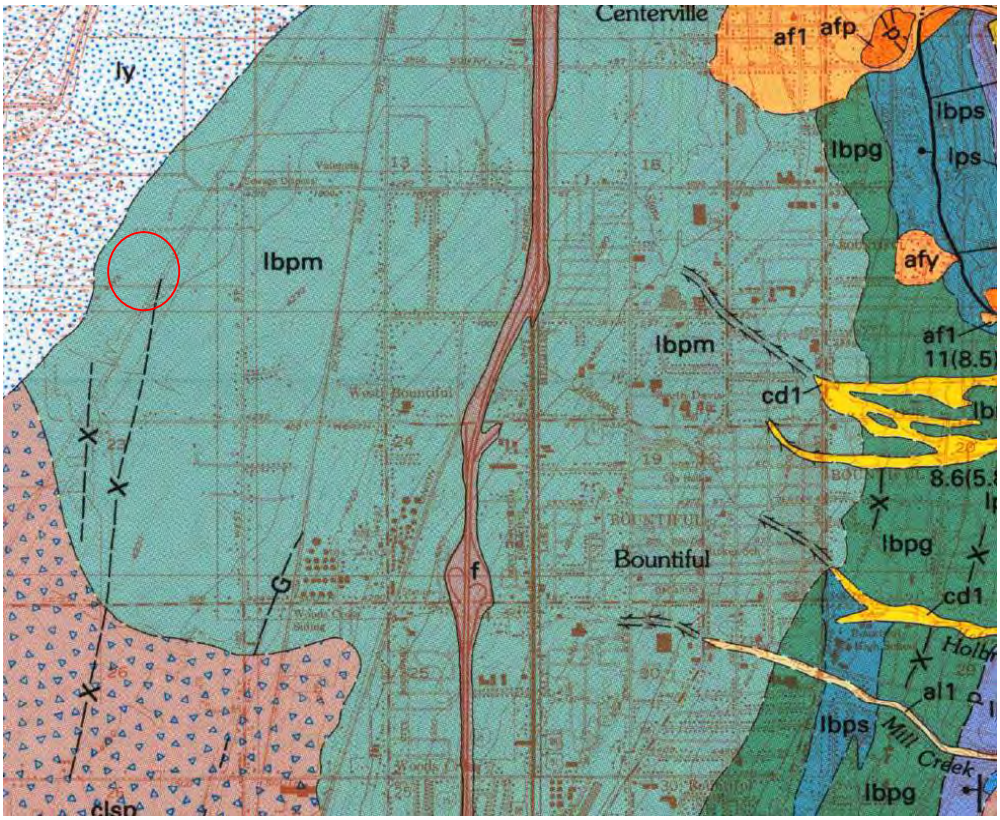
Much of northwestern Utah, including the valley in which the subject site is located, was also previously covered by the Pleistocene age Lake Bonneville. The Great Salt Lake, located along the western margin of the valley and beyond, is a remnant of this ancient fresh water lake. Lake Bonneville reached a high-stand elevation of between approximately 5,100 and 5,200 feet above sea level at between 18,500 and 17,400 years ago. Approximately 17,400 years ago, the lake breached its basin in southeastern Idaho and dropped relatively fast, by almost 300 feet, as water drained into the Snake River. Following this catastrophic release, the lake level continued to drop slowly over time, primarily driven by drier climatic conditions, until reaching the current level of the Great Salt Lake. Shoreline terraces formed at the high-stand elevation of the lake and several subsequent lower lake levels are visible in places on the mountain slopes surrounding the valley. Much of the sediment within the Valley was deposited as lacustrine sediments during both the transgressive (rise) and regressive (fall) phases of Lake Bonneville.

The geology of the Weber Segment of the Wasatch Fault Zone, that includes the location of the subject site, has been mapped by Nelson and Personius[1]. The surficial geology at the location of the subject site and adjacent properties is mapped as “lacustrine silt and clay, undivided (of the Bonneville lake cycle” (Map Unit

[1]Nelson, A.R., and Personius, S.F., 1993, Surficial Geologic Map of the Weber Segment, Wasatch Fault Zone, Weber and Davis Counties, Utah; U.S. Geological Survey Miscellaneous Investigations Series, Map I-2199, Scale 1:50,000.

lbpm) dated to be upper Pleistocene. No fill has been mapped at the location of the site on the geologic map. Unit lbpm is described in the referenced mapping as "clay, silt, and minor fine sand deposits deposited in deep and (or) quiet water."

No landslide deposits or features, including lateral spread deposits, are mapped on or adjacent to the site. The site is not located within a known or mapped potential debris flow, stream flooding, or rock fall hazard area.



Geologic Map

4.2 Faulting

No surface fault traces are shown on the referenced geologic map crossing, adjacent to, or projecting toward the subject site. The nearest mapped active fault trace is the Weber Section of the Wasatch Fault located about 2.9 miles east of the site.

The Wasatch Fault is considered a "normal" fault because movement along the fault is typically vertical. The east side of the fault, or the mountain block, typically moves upward relative to the valley block on the west side of the fault. The fault generally dips to the west below the valleys. The Wasatch Fault is one of the longest and most active normal faults in the world.

4.3 Seismicity

4.3.1 Site Class

Utah has adopted the International Building Code (IBC) 2015. IBC 2015 determines the seismic hazard for a site based upon 2008 mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil site class. The USGS values are presented on maps incorporated into the IBC code and are also available based on latitude and longitude coordinates (grid points). For site class definitions, IBC 2015 (Section 1613.3.2) refers to Chapter 20, Site Classification Procedure for Seismic Design, of ASCE[2] 7. Given the subsurface soils at the site, including our projection of soils within the upper 100 feet of the soil profile, it is our opinion the site best fits Site Class D – Stiff Soil Profile, which we recommend for seismic structural design.

4.3.2 Ground Motions

The 2008 USGS mapping utilized by the IBC provides values of peak ground, short period and long period accelerations for the Site Class B boundary and the Maximum Considered Earthquake (MCE). This Site Class B boundary represents average bedrock values for the Western United States and must be corrected for local soil conditions. The following table summarizes the peak ground, short period and long period accelerations for the MCE event, and incorporates the appropriate soil correction factor for a Site Class D soil profile at site grid coordinates of 40.902108 degrees north latitude and 111.920847 degrees west longitude:

Spectral Acceleration Value, T	Site Class B Boundary [mapped values] (g)	Site Coefficient	Site Class D [adjusted for site class effects] (g)	Design Values (g)
Peak Ground Acceleration	0.576	F_a = 1.000	0.576	0.384
Short Period Acceleration (0.2 Seconds)	S_S = 1.441	F_a = 1.000	S_{MS} = 1.441	S_{DS} = 0.961
Short Period Acceleration (1.0 Second)	S_1 = 0.515	F_v = 1.500	S_{M1} = 0.773	S_{D1} = 0.515

4.3.3 Liquefaction

The site is located in an area that has been identified by the Utah Earthquake Preparedness Information Center Utah Division of Comprehensive Emergency Management for Davis County as having “high” liquefaction potential. Liquefaction is defined as the condition when saturated, loose, granular soils lose their support capabilities because of excessive pore water pressure, which develops during a seismic event. Clayey soils, even if saturated, will generally not liquefy during a major seismic event.

[2] American Society of Civil Engineers

We evaluated the liquefaction using the procedures described in the 2008 Soil Liquefaction During Earthquakes Monograph by Idriss and Boulanger[3] and the 2014 Soil Liquefaction During Earthquakes Monograph by Idriss and Boulanger Boulanger[4]. The primary soil conditions encountered below the groundwater consisted of silty clay with a Plastic Index greater than 7 percent and therefore liquefaction within the depths penetrated, 36.5 feet is unlikely to occurring during the design seismic event.

5.0 SITE CONDITIONS

5.1 Surface Conditions

The property is comprised of about 5.5 acres, is near rectangular in shape, vacant of any development and overall is relatively flat. The site is bordered by: similar vacant property to the east; an access road to some private structures followed by vacant property to the west; 1200 North Street along the south and; the Legacy Parkway trail along the north. Based on aerial photos readily available on the internet extending back to 1993 the site has remained vacant. However, following about 2010, visible imported fills soils were evidently being brought in and loosely piled which we understand has continued up until recently. A near current aerial view can be seen as the Vicinity map in **Section 1.1** above).

5.2 Subsurface Soil

At the boring and test pit locations variable surface fills were encountered and comprised of clay, sand, and a mixture of these soils with varying gravel debris and garbage content extending to depths of about 2.0 to 7.0 feet below the surface. Based on observation these surface fills must be considered as non-engineered and must be anticipated to vary both laterally and with depth across the site. Below the surface fill, natural soils were encountered and consisted of primarily silty and fine sandy clay with some occasional silt and clayey/silty fine sand layers.

The natural clay soils were medium stiff to stiff, moist to wet, brown and gray in color and appear to be moderately over-consolidated which in turn will likely exhibit moderate strength and compressibility characteristics. The natural sand soils are medium dense, moist to wet, brown and gray in color and will exhibit relatively high strength and low compressibility characteristics under static loading.

For a more descriptive interpretation of subsurface conditions, please refer to the test pit and bore hole logs, **Figures 2 through 8**, which graphically represent the subsurface conditions encountered. The lines designating the interface between soil types on the logs generally represent approximate boundaries; in situ, the transition between soil types may be gradual.

[3] Idriss, I. M., and Boulanger, R. W. (2008), Soil liquefaction during earthquakes: Monograph MNO-12, Earthquake Engineering Research Institute, Oakland, CA, 261 pp.

[4] Boulanger, R. W. and Idriss, I. M. (2014), "CPT and SPT Based Liquefaction Triggering Procedures." Report No. UCD/CGM-14/01, Center for Geotechnical Modeling, Department of Civil and Environmental Engineering, University of California, Davis, CA, 134 p.

5.3 Groundwater

Groundwater was visible at about 8.0 to 9.3 feet below the ground surface while excavating the test pits. On June 20, 2018, CMT personnel returned to the site to measure the static groundwater levels within an installed PVC pipe at test pit TP-1 and groundwater was measured at a depth of about 8.3 feet below the existing ground surface.

Groundwater levels can fluctuate as much as 1.5 to 2 feet seasonally. Numerous other factors may also influence ground water elevations at the site. The detailed evaluation of these and other factors, which may be responsible for ground water fluctuations, is beyond the scope of this study.

5.4 Site Subsurface Variations

Based on the results of the subsurface explorations and our experience, variations in the continuity and nature of subsurface conditions should be anticipated. Due to the heterogeneous characteristics of natural soils, care should be taken in interpolating or extrapolating subsurface conditions between or beyond the exploratory locations.

6.0 SITE PREPARATION AND GRADING

6.1 General

Initial site preparation shall consist of the removal of all surface vegetation, topsoil, disturbed soils and any other deleterious material from beneath an area extending out a minimum 4 feet from the perimeter of proposed buildings.

Existing non-engineered fills must be removed down to suitable natural soils below all footings. Further, non-engineered fills must be removed below concrete floor slabs. If structures, such as the salt storage building, do not incorporate a floor slab then the existing fill soils may remain if properly prepared and if some potential settlement of the fills is acceptable. All loose surface fill piles must be removed below structures and pavement areas.

Existing, in-situ non- engineered fills may remain within the planned asphalt pavement areas provided they are free of excessive debris/deleterious materials, no more than 2 feet of subsequent site grading fill is placed over them, and if properly prepared. Proper preparation shall consist of compacting the upper 24 inches of in-situ fill soils below flexible pavement. This will require the temporary removal of all soils in excess of 12 inches, scarifying and properly moisture condition the remaining 12 inches and recompacting. Subsequent filling and compacting shall conform to the requirements set forth in **Section 6.4 Fill Placement and Compaction** of this report. Even with proper preparation, pavement over some remaining thickness of non-engineered fill may experience some settlement over time. If this is not tolerable then the entire sequence of non-engineered fill must be removed.

Please note: Existing fill soils consisting of fine-grained clay and clayey sand soils are inherently difficult to adequately moisture prepare and re-compact and may become near impossible to re-compact during cold and wet periods of the year. In addition, they may at present, be above optimum moisture content for proper compaction and therefore require some drying prior to re-utilization. As an alternative, the upper 2 feet of fills soil may be removed and replaced with imported granular structural fill placed over exposed unfrozen, proof-rolled subgrade. Any loose fill piles/debris across the surface must be completely removed.

Subsequent to stripping and prior to the placement of floor slabs, foundations, structural site grading fills, exterior flatwork, and pavements, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. An exception to this would be where the exposed subgrade is within 2 feet of groundwater. If excessively soft or otherwise unsuitable soils are encountered beneath footings, they must be totally removed and/or stabilized. In pavement, areas, additional subgrade stabilization may be required in conjunction with the minimum subgrade preparation thickness as discussed above.

A representative of CMT must verify that suitable natural soils and proper preparation of existing soils have been encountered/met prior to placing site grading fills, footings, slabs, and pavements.

6.2 Temporary Excavations

Temporary construction excavations in cohesive soil, not exceeding 4 feet in depth and above or below the groundwater table, may be constructed with near-vertical sideslopes. Temporary excavations up to 8 feet deep in fine-grained cohesive soils, above or below the water table, may be constructed with sideslopes no steeper than one-half horizontal to one vertical (0.5H:1V). Excavations deeper than 8 feet are not anticipated at the site.

For granular (cohesionless) soils, construction excavations above the water table, not exceeding 4 feet, should be no steeper than one-half horizontal to one vertical (0.5H:1V). For excavations up to 8 feet, in granular soils and above the water table, the slopes should be no steeper than one horizontal to one vertical (1H:1V). Excavations encountering saturated cohesionless soils will be very difficult and will require very flat sideslopes and/or shoring, bracing and dewatering as these soils will tend to flow into the excavation.

To reduce disturbance of the natural soils during excavation, it is recommended that smooth edge buckets/blades be utilized.

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated. All excavations should be made following OSHA safety guidelines.

6.3 Fill Material

Structural fill is defined as all fill which will ultimately be subjected to structural loadings, such as imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as

site grading fill, and as replacement fill below footings. All structural fill must be free of sod, rubbish, topsoil, frozen soil, and other deleterious materials.

Following are our recommendations for the various fill types we anticipate will be used at this site:

Fill Material Type	Description/Recommended Specification
Structural Fill	Placed below structures, flatwork and pavement. Well-graded sand/gravel mixture, with maximum particle size of 4 inches, a minimum 70% passing 3/4-inch sieve, a maximum 20% passing the No. 200 sieve, and a maximum Plasticity Index of 10.
Site Grading Fill	Placed over larger areas to raise the site grade. Sandy to gravelly soil, with a maximum particle size of 6 inches, a minimum 70% passing 3/4-inch sieve, and a maximum 40% passing No. 200 sieve.
Non-Structural Fill	Placed below non-structural areas, such as landscaping. On-site soils or imported soils, with a maximum particle size of 8 inches, including silt/clay soils not containing excessive amounts of degradable/organic material.
Stabilization Fill	Placed to stabilize soft areas prior to placing structural fill and/or site grading fill. Coarse angular gravels and cobbles 1 inch to 8 inches in size. May also use 1.5- to 2.0-inch gravel placed on stabilization fabric, such as Mirafi RS280i, or equivalent (see **Section 6.6**).

On-site soils may be reused as site grading fill if free of deleterious material and as non-structural fill. However, please note that the onsite surface fill soils are variable and therefore may require significant laboratory proctor tests and field density testing over a larger area. In addition, the fine-grained soils are inherently more difficult to rework, are very sensitive to changes in moisture content, and will require very close moisture control during placement and compaction. Further the at site soils may be above optimum moisture content and require significant drying prior to recompacting. Smaller lift placement and moderate to high compaction effort will be likely. This will be very difficult, if not impossible, during wet and cold periods of the year.

All fill material should be approved by a CMT geotechnical engineer prior to placement.

6.4 Fill Placement and Compaction

The various types of compaction equipment available have their limitations as to the maximum lift thickness that can be compacted. For example, hand operated equipment is limited to lifts of about 4 inches and most "trench compactors" have a maximum, consistent compaction depth of about 6 inches. Large rollers, depending on soil and moisture conditions, can achieve compaction at 8 to 12 inches. The full thickness of each lift should be compacted to at least the following percentages of the maximum dry density as determined by ASTM D-1557 (or AASHTO[5] T-180) in accordance with the following recommendations:

[5] American Association of State Highway and Transportation Officials

Location	Total Fill Thickness (feet)	Minimum Percentage of Maximum Dry Density
Beneath an area extending at least 4 feet beyond the perimeter of structures, and below flatwork and pavement (applies to structural fill and site grading fill)	0 to 5 5 to 8	95 98
Site grading fill outside area defined above	0 to 5 5 to 8	92 95
Scarified natural subgrade preparation below parking slab	9	90
Utility trenches within structural areas	--	96
Roadbase and subbase	-	96
Non-structural fill	0 to 5 5 to 8	90 92

Structural fills greater than 8 feet thick are not anticipated at the site. For best compaction results, we recommend that the moisture content for structural fill/backfill be within 2% of optimum. Field density tests should be performed on each lift as necessary to verify that proper compaction is being achieved.

6.5 Utility Trenches

For the bedding zone around the utility, we recommend utilizing sand bedding fill material that meets current APWA[6] requirements.

All utility trench backfill material below structurally loaded facilities (flatwork, floor slabs, roads, etc.) shall be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill shall be proofrolled and/or properly compacted prior to the construction of any exterior flatwork over a backfilled trench. Proofrolling shall be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proofrolling, they shall be removed to a maximum depth of 2 feet below design finish grade and replaced with structural fill.

Most utility companies and City-County governments are now requiring that Type A-1a or A-1b (AASHTO Designation – basically granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T-180 (ASTM D-1557) method of compaction. We recommend that as the major utilities continue onto the site that these compaction specifications are followed.

In private utility areas, natural soils may be re-utilized as trench backfill over the bedding layer provided that they are properly moisture prepared and compacted to the minimum requirements stated in section 6.4 Fill Placement and Compaction.

[6] American Public Works Association

6.6 Stabilization

To stabilize soft soil conditions, coarse angular gravel and cobble mixtures (stabilizing fill) may be utilize and shall be end-dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto the surface continuously at least twice. As an alternative, the stabilizing fill may be compacted by passing moderately heavy construction equipment or large self-propelled compaction equipment at least twice. Subsequent fill material placed over the coarse gravels and cobbles shall be adequately compacted so that the "fines" are "worked into" the voids in the underlying coarser gravels and cobbles. Utilization of a stabilization/filter fabric, such as Mirafi RS 380i or equivalent, over soft subgrade may also be advantageous.

7.0 FOUNDATION RECOMMENDATIONS

The following recommendations have been developed on the basis of the previously described project characteristics, the subsurface conditions observed in the field and the laboratory test data, as well as common geotechnical engineering practice.

7.1 Foundation Recommendations

The results of our analyses indicate that the proposed structures may be supported upon conventional spread and/or continuous wall foundations established upon suitable, stable, natural soils or granular structural fill extending to suitable natural soils.

In order to control total and differential settlements, heavily loaded footings must be underlain by some thickness of granular structural replacement fill. For minimum thickness of replacement fill below footings, please see Section 7.3, Estimated Settlements below:

Minimum Recommended Depth of Embedment for Frost Protection	- 30 inches
Minimum Recommended Depth of Embedment for Non-frost Conditions	- 15 inches
Recommended Minimum Width for Continuous Wall Footings	- 18 inches
Minimum Recommended Width for Isolated Spread Footings	- 24 inches
Recommended Net Bearing Pressure for Real Load Conditions on Suitable Natural Clay Soil	- 2,000 pounds* per square foot

Bearing Pressure Increase for Seismic Loading	- 50 percent

* More heavily loaded footings must be directly underlain by some minimal thickness of granular structural replacement fill to control settlements (please see Section 7.3, Estimated Settlements below).

The term “net bearing pressure” refers to the pressure imposed by the portion of the structure located above lowest adjacent final grade. Therefore, the weight of the footing and backfill to lowest adjacent final grade need not be considered. Real loads are defined as the total of all dead plus frequently applied live loads. Total load includes all dead and live loads, including seismic and wind.

7.2 Installation

Under no circumstances shall the footings be established upon non-engineered fills, loose/soft or disturbed soils, topsoil, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. If unsuitable soils are encountered, they must be completely removed and replaced with compacted structural fill.

Excavation bottoms should be examined by a qualified geotechnical engineer to confirm that suitable bearing materials soils have been exposed. Where natural soils below the surface fills may be saturated or near saturated they may require stabilization prior to placement of structural fill or foundations.

The width of structural replacement fill below footings should be equal to the width of the footing plus one foot for each foot of fill thickness. For instance, if the footing width is 2 feet and the structural fill depth beneath the footing is 2 feet, the fill replacement width should be 4 feet, centered beneath the footing.

7.3 Estimated Settlement

Settlements of foundations designed and installed in accordance with the above criteria and recommendations supporting the loads, as discussed in Section 1.3, Description of Proposed Construction, can be controlled to within 1 inch or less if heavily loaded footings are underlain by some thickness of granular structural fill per the table below.

Approximately 40 percent of the quoted settlement should occur during construction.

Foundations	Loading	Design Bearing Pressure (Pounds per Square foot)	Minimum Thickness of Replacement Granular Structural Fill (feet)*
Spread	Up to 100 kip	2,000	0.0
Spread	100+ to 150 kips	2,000	1.0
Wall	Up to 5 kips per lineal foot	2,000	0.0

* Placed over stable natural subgrade soils.

7.4 Lateral Resistance

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of 0.30 should be utilized for natural soils and 0.40 for granular structural fills. Passive resistance provided by properly placed and compacted granular structural fill above the water table may be considered equivalent to a fluid with a density of 250 pounds per cubic foot.

A combination of passive earth resistance and friction may be utilized provided that the friction component of the total is divided by 1.5.

8.0 LATERAL EARTH PRESSURES

For shallow retaining walls, sublevel walls or utility boxes up to 4 feet tall the following lateral pressure discussion is provided. Parameters, as presented within this section, are for backfills which will consist of drained granular soil placed and compacted in accordance with the recommendations presented herein.

The lateral pressures imposed upon subgrade facilities will, therefore, be basically dependent upon the relative rigidity and movement of the backfilled structure. For active walls, such as retaining walls which can move outward (away from the backfill), backfill may be considered equivalent to a fluid with a density of 40 pounds per cubic foot in computing lateral pressures. For more rigid walls (moderately yielding), backfill may be considered equivalent to a fluid with a density of 50 pounds per cubic foot. For very rigid non-yielding walls, granular backfill should be considered equivalent to a fluid with a density of at least 60 pounds per cubic foot. The above values assume that the surface of the soils slope behind the wall is horizontal and that the fill within 3 feet of the wall will be compacted with hand-operated compacting equipment.

For seismic loading of retaining/below-grade walls, the following uniform lateral pressures, in pounds per square foot (psf), should be added based on wall depth and wall case.

Uniform Lateral Pressures			
Wall Height (Feet)	Active Pressure Case (psf)	Moderately Yielding Case (psf)	At Rest/Non-Yielding Case (psf)
4	33	65	96

9.0 FLOOR SLABS

Floor slabs may be established upon suitable natural soils and/or upon structural fill extending to suitable natural soils. Under no circumstances shall floor slabs be established non-engineered fills, loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

In order to facilitate curing of the concrete, it is recommended that floor slabs be directly underlain by at least 4 inches of "free-draining" fill, such as "pea" gravel or three-quarters to one-inch minus clean gap-graded gravel.

To help control normal shrinkage and stress cracking, the floor slabs may include the following features:

1. Adequate reinforcement for the anticipated floor loads with the reinforcement continuous through interior floor joints;
2. Frequent crack control joints; and
3. Non-rigid attachment of the slabs to foundation walls and bearing slabs.

10.0 DRAINAGE RECOMMENDATIONS

It is important to the long-term performance of foundations and floor slabs that water not be allowed to collect near the foundation walls and infiltrate into the underlying soils. We recommend the following:

1. All areas around structures should be sloped to provide drainage away from the foundations. Where possible we recommend a minimum slope of 6 inches in the first 10 feet away from the structure.

2. All roof drainage should be collected in rain gutters with downspouts designed to discharge at least 10 feet from the foundation walls or well beyond the backfill limits, whichever is greater.

3. Adequate compaction of the foundation backfill should be provided. We suggest a minimum of 90% of the maximum laboratory density as determined by ASTM D-1557. Water consolidation methods should not be used under any circumstances.

4. Sprinklers should be aimed away and kept at least 4 feet from the foundation walls. The sprinkling systems should be designed with proper drainage and be well-maintained. Over watering should be avoided.

5. Other precautions may become evident during construction.

11.0 PAVEMENTS

The existing surface fill/disturbed soil, if properly prepared, are anticipated to exhibit relatively poor to fair pavement support when saturated. Our pavement design is based upon an estimated California Bearing Ratio (CBR) of 4 for the surficial clay soils and prepared existing fill soils.

Surface pavements at the site are anticipated to consist primarily of asphalt paved parking and equipment storage areas. The equipment is anticipated to consist of light to moderately heavy weight vehicles, earthwork equipment etc.

(Light to moderate Volume of Automobiles and Light Trucks,
Light Volume of Medium-Weight Trucks,
Occasional Heavy-Weight Trucks)
[6-10 equivalent 18-kip axle loads per day]

Material	Pavement Section Thickness (in)
Asphalt	**3.5**
Roadbase	**11**
Total Thickness	**14.5**
OR	
Asphalt	**3.5**
Roadbase	**6**
Subbase	**7**
Total Thickness	**16.5**

*Subgrade should be proof-rolled and stable

Untreated base course (UTBC) should conform to city specifications, or to 1-inch-minus UDOT specifications for A–1-a/NP, and have a minimum CBR value of 70%. Subbase shall have a minimum CBR value of 30%. Material meeting our specification for structural fill may likely be used for subbase, as long as the fines content (percent passing No. 200 sieve) does not exceed 15%. Roadbase and subbase material should be compacted as recommended above in **Section 6.4**. Asphalt material generally should conform to APWA requirements, having a ½-inch maximum aggregate size, a 75-gyration Superpave mix containing no more than 15% of recycled asphalt (RAP) and a PG58-28 binder.

For dumpster pads, we recommend a pavement section consisting of 6.5 inches of Portland cement concrete, 4.0 inches of aggregate base, over properly prepared suitable natural subgrade or site grading structural fills extending to suitable natural soils. Dumpster pads shall not be constructed overlying non-engineered fills

unless heavily reinforced. The concrete should have a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent ±1 percent air-entrainment.

12.0 QUALITY CONTROL

We recommend that CMT be retained to as part of a comprehensive quality control testing and observation program. With CMT onsite we can help facilitate implementation of our recommendations and address, in a timely manner, any subsurface conditions encountered which vary from those described in this report. Without such a program CMT cannot be responsible for application of our recommendations to subsurface conditions which may vary from those described herein. This program may include, but not necessarily be limited to, the following:

12.1 Field Observations

Observations should be completed during all phases of construction such as site preparation, foundation excavation, structural fill placement and concrete placement.

12.2 Fill Compaction

Compaction testing by CMT is required for all structural supporting fill materials. Maximum Dry Density (Modified Proctor, ASTM D-1557) tests should be requested by the contractor immediately after delivery of any fill materials. The maximum density information should then be used for field density tests on each lift as necessary to ensure that the required compaction is being achieved.

12.3 Excavations

All excavation procedures and processes should be observed by a geotechnical engineer from CMT or his representative. In addition, for the recommendations in this report to be valid, all backfill and structural fill placed in trenches and all pavements should be density tested by CMT. We recommend that freshly mixed concrete be tested by CMT in accordance with ASTM designations.

13.0 LIMITATIONS

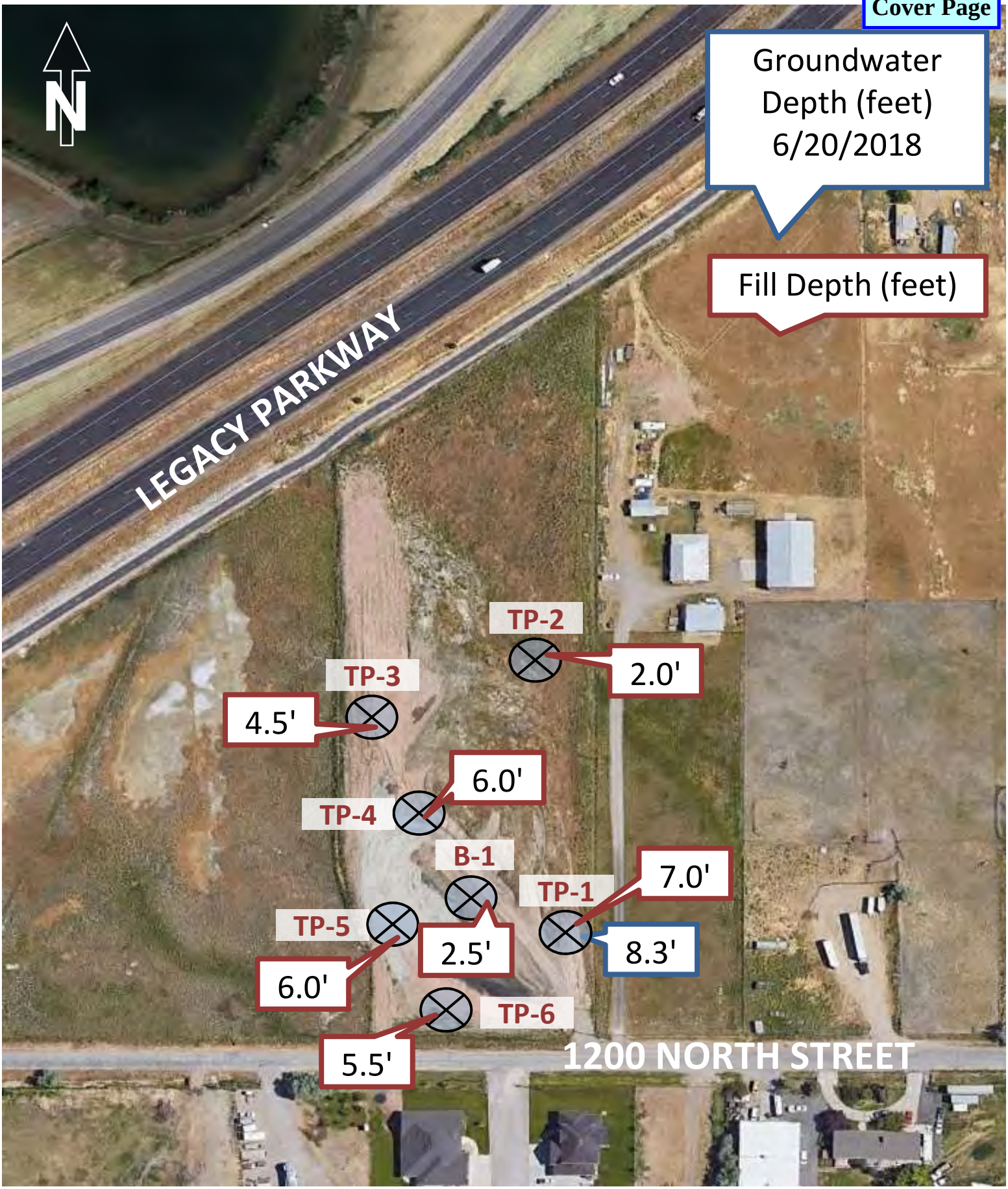
The recommendations provided herein were developed by evaluating the information obtained from the subsurface explorations and soils encountered therein. The exploration logs reflect the subsurface conditions only at the specific location at the particular time designated on the logs. Soil and ground water conditions may differ from conditions encountered at the actual exploration locations. The nature and extent of any variation in the explorations may not become evident until during the course of construction. If variations do appear, it may become necessary to re-evaluate the recommendations of this report after we have observed the variation.

Cover Page

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

We appreciate the opportunity to be of service to you on this project. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at (801) 870-6732. To schedule materials testing, please call (801) 381-5141.

Appendix



West Bountiful Public Works Facility 1400 W 1200 N, West Bountiful, UT	CMT ENGINEERING LABORATORIES			Figure: 1
	Site Plan	Date:	13-Jun-18	
		Job #	11372	

West Bountiful Public Works Facility

Bore Hole Log

B-1

About 1400 West and 1200 North in West Bountiful, Utah

Boring Type: Hollow-Stem Auger | Total Depth: 36.5' | Date: 6/7/18
Surface Elev. (approx): | Water Depth: 9' | Job #: 11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)	Total	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		FILL, with some various debris dry to moist, medium dense												
		FILL, Dark Brown Silty SAND (SM), with clay, trace gravel moist, medium dense		1	4 4 7	11								
4				2	5 7 14	21	24.2	93						
		Grayish Brown CLAY (CL), mottling moist, very stiff		3	7 7 8	15								
8		wet												
		Brown SAND (SM), with gray clay layers												
		Grayish Brown CLAY (CL), with silty sand layers and lenses wet, stiff / medium dense		4			27.3	98				30	20	10
12		moist, very stiff / hard		5	10 16 22	38								
		very moist		6			22.2	106						
16														
20		grades blue / gray with trace sand lenses firm		7	0 3 3	6								
24		grades with sand layers and lenses soft		8	2 2 2	4								
28														

Remarks: Groundwater encountered during drilling at depth of 9 feet.

Figure: 2

CMT ENGINEERING LABORATORIES

Drilled By: Great Basin Drilling
Logged By: Nate Pack
Page: 1 of 2

West Bountiful Public Works Facility

Bore Hole Log

B-1

About 1400 West and 1200 North in West Bountiful, Utah

Boring Type: Hollow-Stem Auger		Total Depth:	36.5'	Date:	6/7/18
Surface Elev. (approx):		Water Depth:	9'	Job #:	11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)	Total	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
28														
				9	2 3 3	6								
32														
				10	1 1 2	3								
36		END AT 36.5'												
40														
44														
48														
52														
56														

Remarks: Groundwater encountered during drilling at depth of 9 feet.

Figure: 2

CMT ENGINEERING LABORATORIES

Drilled By: Great Basin Drilling
Logged By: Nate Pack
Page: 2 of 2

West Bountiful Public Works Facility

Test Pit Log

TP-1

About 1400 West and 1200 North in West Bountiful, Utah

Equipment: Rubber Tire Backhoe	Total Depth: 10'	Date: 6/6/18
Surface Elev. (approx):	Water Depth: 8', 8.3'	Job #: 11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation: Gravel %	Gradation: Sand %	Gradation: Fines %	Atterberg: LL	Atterberg: PL	Atterberg: PI
0		FILL, Brown Silty CLAY (CL) dry, medium dense (estimated)										
3		TOPSOIL, 2.5', Dark Brown Silty / Clayey Loam moist, loose (estimated)										
4		Gray Silty CLAY (CL) moist, stiff (estimated)		1	22.3	103						
6		Brown SAND (SC/SM), with clay and silt very moist										
7				2								
8		wet										
9		Gray CLAY (CL), with sand lenses and layers very moist, stiff (estimated)										
10				3								
		END AT 10'										

Remarks: Groundwater encountered during excavation at depth of 8 feet and measured on 6/20/18 at depth of 8.3 feet.
Slotted PVC pipe installed to depth of 10.0 feet to facilitate water level measurements.

Figure: 3

CMT ENGINEERING LABORATORIES

Excavated By: Farrer Excavation
Logged By: Nate Pack
Page: 1 of 1

West Bountiful Public Works Facility

Test Pit Log

TP-2

About 1400 West and 1200 North in West Bountiful, Utah

Equipment: Rubber Tire Backhoe	Total Depth:	11'	Date:	6/6/18
Surface Elev. (approx):	Water Depth:	9'	Job #:	11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		FILL, Mixed CLAY, with gravel, black sand, and silts with sand										
2		Brown / Dark Brown CLAY (CL), with silt slightly moist, hard (estimated)		4								
5		grades gray with silt moist, stiff (estimated)		5								
8		grades brown sandy clay very moist to wet										
9 ▽		wet		6	30.8				85.7			
11		END AT 11'										

Remarks: Groundwater encountered during excavation at depth of 9 feet.

Figure: 4

CMT ENGINEERING LABORATORIES

Excavated By: Farrer Excavation
Logged By: Nate Pack
Page: 1 of 1

West Bountiful Public Works Facility

Test Pit Log

TP-3

About 1400 West and 1200 North in West Bountiful, Utah

Equipment: Rubber Tire Backhoe
Surface Elev. (approx):

Total Depth: 11.5'
Water Depth: (see Remarks)

Date: 6/6/18
Job #: 11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		FILL, Reddish-Brown GRAVEL / SAND (GC/SC), with clay and silt, trace debris, brick, corrugated pipe — moist, dense (estimated)										
4				7								
5		Dark Brown SILT (ML), with loam — moist, very stiff (estimated)										
7		Gray CLAY (CL) — moist, stiff to medium stiff (estimated)										
8				8								
10				9								
11		END AT 11.5'										
14												

Remarks: Groundwater not encountered during excavation.

Figure: 5

CMT ENGINEERING LABORATORIES

Excavated By: Farrer Excavation
Logged By: Nate Pack

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West Bountiful Public Works Facility

Test Pit Log

TP-4

About 1400 West and 1200 North in West Bountiful, Utah

Equipment: Rubber Tire Backhoe
Surface Elev. (approx):

Total Depth: 11'
Water Depth: (see Remarks)

Date: 6/6/18
Job #: 11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		FILL, Reddish-BrownSandy CLAY (SC/CL), with gravel and silt, trace cobbles up to 18" in diameter dry to moist, medium dense (estimated)										
2				10	14.1		9	37	53.7			
3		FILL, Dark Brown GRAVEL and Silty LOAM Topsoil Mix (GP/CL) moist, medium dense (estimated)										
6		Gray CLAY (CL), with silt trace gravel and sand moist, stiff (estimated)										
8				11	25.1	88						
11		END AT 11'										
14												

Remarks: Groundwater not encountered during excavation.

Figure: 6

CMT ENGINEERING LABORATORIES

Excavated By: Farrer Excavation
Logged By: Nate Pack

Page: 1 of 1

West Bountiful Public Works Facility

Test Pit Log

TP-5

About 1400 West and 1200 North in West Bountiful, Utah

Equipment: Rubber Tire Backhoe
Surface Elev. (approx):

Total Depth: 11'
Water Depth: (see Remarks)

Date: 6/6/18
Job #: 11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		FILL, Misc, Red / Tan / Dark Brown, Sand, Gravel, and Fine Mixtues, trace debris, garbage pipe, asphalt chunks up to 12" thick dry to moist, medium dense to dense (estimated)										
4				12								
6		TOPSOIL, 6" moist, medium dense (estimated)										
7		Gray CLAY (CL), with trace sand and gravel moist, stiff (estimated)										
8				13	22.4	99						
11		END AT 11'										

Remarks: Groundwater not encountered during excavation.

Figure: 7

CMT ENGINEERING LABORATORIES

Excavated By: Farrer Excavation
Logged By: Nate Pack

Page: 1 of 1

West Bountiful Public Works Facility

Test Pit Log

TP-6

About 1400 West and 1200 North in West Bountiful, Utah

Equipment: Rubber Tire Backhoe		Total Depth:	11'	Date:	6/6/18
Surface Elev. (approx):		Water Depth:	9.25'	Job #:	11372

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Moisture (%)	Dry Density(pcf)	Gradation Gravel %	Gradation Sand %	Gradation Fines %	Atterberg LL	Atterberg PL	Atterberg PI
0		FILL, Misc, Red / Tan / Dark Brown, Sand, Gravel, and Fine Mixtues, trace debris, garbage pipe, asphalt chunks up to 12" thick dry to moist, medium dense to dense (estimated)										
1												
2												
3		clayey gravel with sand moist, medium dense / stiff		14	18.3		5	63	32			
4												
5												
6		Gray CLAY (CL) moist, stiff (estimated)										
7												
8				15	21.7	101						
9												
10		Brown SAND (SC/SM), with clay and silt lenses wet medium dense		16								
11		END AT 11'										
12												
13												
14												

Remarks: Groundwater encountered during excavation at depth of 9.25 feet.

Figure: 8

CMT ENGINEERING LABORATORIES

Excavated By: Farrer Excavation
Logged By: Nate Pack
Page: 1 of 1

Cover Page

West Bountiful Public Works Facility

About 1400 West and 1200 North in West Bountiful, Utah

Key to Symbols

Date: 6/6/18
Job #: 11372

Depth (ft) ①	GRAPHIC LOG ②	Soil Description ③	Sample Type ④	Sample # ⑤	Moisture (%) ⑥	Dry Density(pcf) ⑦	Gradation ⑧ Gravel %	Sand %	Fines %	Atterberg ⑨ LL	PL	PI

COLUMN DESCRIPTIONS

① **Depth (ft.):** Depth (feet) below the ground surface (including groundwater depth - see water symbol below).

② **Graphic Log:** Graphic depicting type of soil encountered (see ② below).

③ **Soil Description:** Description of soils encountered, including Unified Soil Classification Symbol (see below).

④ **Sample Type:** Type of soil sample collected at depth interval shown; sampler symbols are explained below-right.

⑤ **Sample #:** Consecutive numbering of soil samples collected during field exploration.

⑥ **Moisture (%):** Water content of soil sample measured in laboratory (percentage of dry weight of sample).

⑦ **Dry Density (pcf):** The dry density of a soil measured in laboratory (pounds per cubic foot).

⑧ **Gradation:** Percentages of Gravel, Sand and Fines (Silt/Clay), obtained from lab test results of soil passing the No. 4 and No. 200 sieves.

⑨ **Atterberg:** Individual descriptions of Atterberg Tests are as follows:

LL = Liquid Limit (%): Water content at which a soil changes from plastic to liquid behavior.

PL = Plastic Limit (%): Water content at which a soil changes from liquid to plastic behavior.

PI = Plasticity Index (%): Range of water content at which a soil exhibits plastic properties (= Liquid Limit - Plastic Limit).

STRATIFICATION	
Description	**Thickness**
Seam	Up to ½ inch
Lense	Up to 12 inches
Layer	Greater than 12 in.
Occasional	1 or less per foot
Frequent	More than 1 per foot

MODIFIERS	
Trace	<5%
Some	5-12%
With	> 12%

MOISTURE CONTENT
Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp / moist to the touch, but no visible water.
Saturated: Visible water, usually soil below groundwater.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			USCS SYMBOLS	②	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 sieve size.	GRAVELS The coarse fraction retained on No. 4 sieve.	CLEAN GRAVELS (< 5% fines)	GW		Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GP		Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (≥ 12% fines)	GM		Silty Gravels, Gravel-Sand-Silt Mixtures
			GC		Clayey Gravels, Gravel-Sand-Clay Mixtures
	SANDS The coarse fraction passing through No. 4 sieve.	CLEAN SANDS (< 5% fines)	SW		Well-Graded Sands, Gravelly Sands, Little or No Fines
			SP		Poorly-Graded Sands, Gravelly Sands, Little or No Fines
		SANDS WITH FINES (≥ 12% fines)	SM		Silty Sands, Sand-Silt Mixtures
			SC		Clayey Sands, Sand-Clay Mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS Liquid Limit less than 50%		ML		Inorganic Silts and Sandy Silts with No Plasticity or Clayey Silts with Slight Plasticity
			CL		Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
			OL		Organic Silts and Organic Silty Clays of Low Plasticity
	SILTS AND CLAYS Liquid Limit greater than 50%		MH		Inorganic Silts, Micacious or Diatomacious Fine Sand or Silty Soils
			CH		Inorganic Clays of High Plasticity, Fat Clays
			OH		Organic Silts and Organic Clays of Medium to High Plasticity
HIGHLY ORGANIC SOILS			PT		Peat, Soils with High Organic Contents

Note: Dual Symbols are used to indicate borderline soil classifications (i.e. GP-GM, SC-SM, etc.).

SAMPLER SYMBOLS

- Block Sample
- Bulk/Bag Sample
- Modified California Sampler
- 3.5" OD, 2.42" ID D&M Sampler
- Rock Core
- Standard Penetration Split Spoon Sampler
- Thin Wall (Shelby Tube)

WATER SYMBOL

- Encountered Water Level
- Measured Water Level (see Remarks on Logs)

1. The results of laboratory tests on the samples collected are shown on the logs at the respective sample depths.
2. The subsurface conditions represented on the logs are for the locations specified. Caution should be exercised if interpolating between or extrapolating beyond the exploration locations.
3. The information presented on each log is subject to the limitations, conclusions, and recommendations presented in this report.

CMT ENGINEERING LABORATORIES

Figure: 9

GRAMOLL CONSTRUCTION
155 South 750 West, North Salt Lake, Utah 84054
Phone 801-295-2341 - Fax 801-295-2656 - www.gramoll.com

Cover Page

SEISMIC SITE CLASS DETERMINATION LETTER

September 17, 2021
Job No. 2194-010-21

Ms. Kathy Wheadon
CRSA
175 South Main Street, Suite 300
Salt Lake City, Utah 84111

Ms. Wheadon:

Re: Letter
Observed Site Class Determination
Proposed West Bountiful Public Works Facility
Approximately 1400 West 1200 North
West Bountiful, Utah

Introduction

This letter presents the results of the shear-wave velocity testing and observed site class determination performed at the above referenced site.

Shear-Wave Velocity Profile

The site shear-wave velocity profile was completed utilizing Refraction Microtremor (ReMi) testing. This geophysical testing was performed at the surface using a series of geophone sensors and a seismic source. A wavefield transformation was performed on the geophone recorded movements. The transformation was then utilized to create a shear-wave dispersion curve to model the subsurface shear-wave velocity profile.

The ReMi testing results were analyzed with a resulting average shear-wave velocity in the upper 100 feet/30 meters ($\overline{v}_{s30}$) value of 627 ft/s. This characterizes the site as a Site Class D – Stiff Soil Profile as defined in Chapter 20 of ASCE 7-16.

The shear-wave velocity results are provided on attached Figure 1, Shear-Wave Velocity Profile.

Ground Motions

The IBC 2018 code is based on USGS mapping, which provides values of short and long period accelerations for average bedrock values for the Western United States and must be corrected for local soil conditions. The table on the following page summarizes the peak ground and short and

long period accelerations for the MCE event and incorporates the appropriate soil amplification factor for a Site Class D – Stiff Soil Profile. Based on the site latitude and longitude (40.9023 degrees north and 111.9208 degrees west, respectively), the values for this site are tabulated below:

Spectral Acceleration Value, T	Bedrock Boundary [mapped values] (% g)	Site Coefficient	Site Class D [adjusted for site class effects] (% g)	Design Values* (% g)
0.2 Seconds (Short Period Acceleration)	S_S = 137.2	F_a = 1.000	S_{MS} = 137.2	S_{DS} = 91.5
1.0 Second (Long Period Acceleration)	S_1 = 50.3	F_v = 1.797	S_{M1} = 90.4	S_{D1} = 60.3

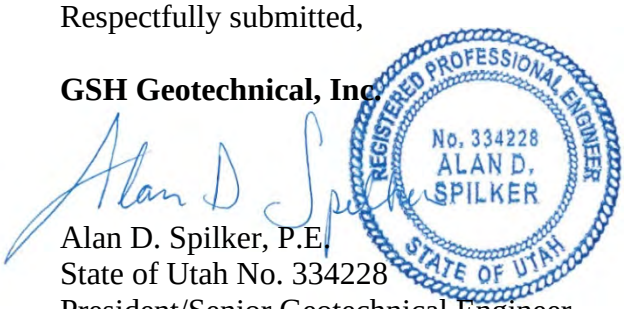
* IBC 2018/ASCE 7-16 may require a site-specific study based on the project structural engineer's evaluation and recommendations. If needed, GSH can provide additional information and analysis, including a complete site-specific study.

Closure

If you have any questions or would like to discuss these items further, please feel free to contact us at (801) 685-9190.

Respectfully submitted,

GSH Geotechnical, Inc.



Alan D. Spilker, P.E.
State of Utah No. 334228
President/Senior Geotechnical Engineer

ADS:ea

Encl. Figure 1, Shear-Wave Velocity Profile

Addressee (email)

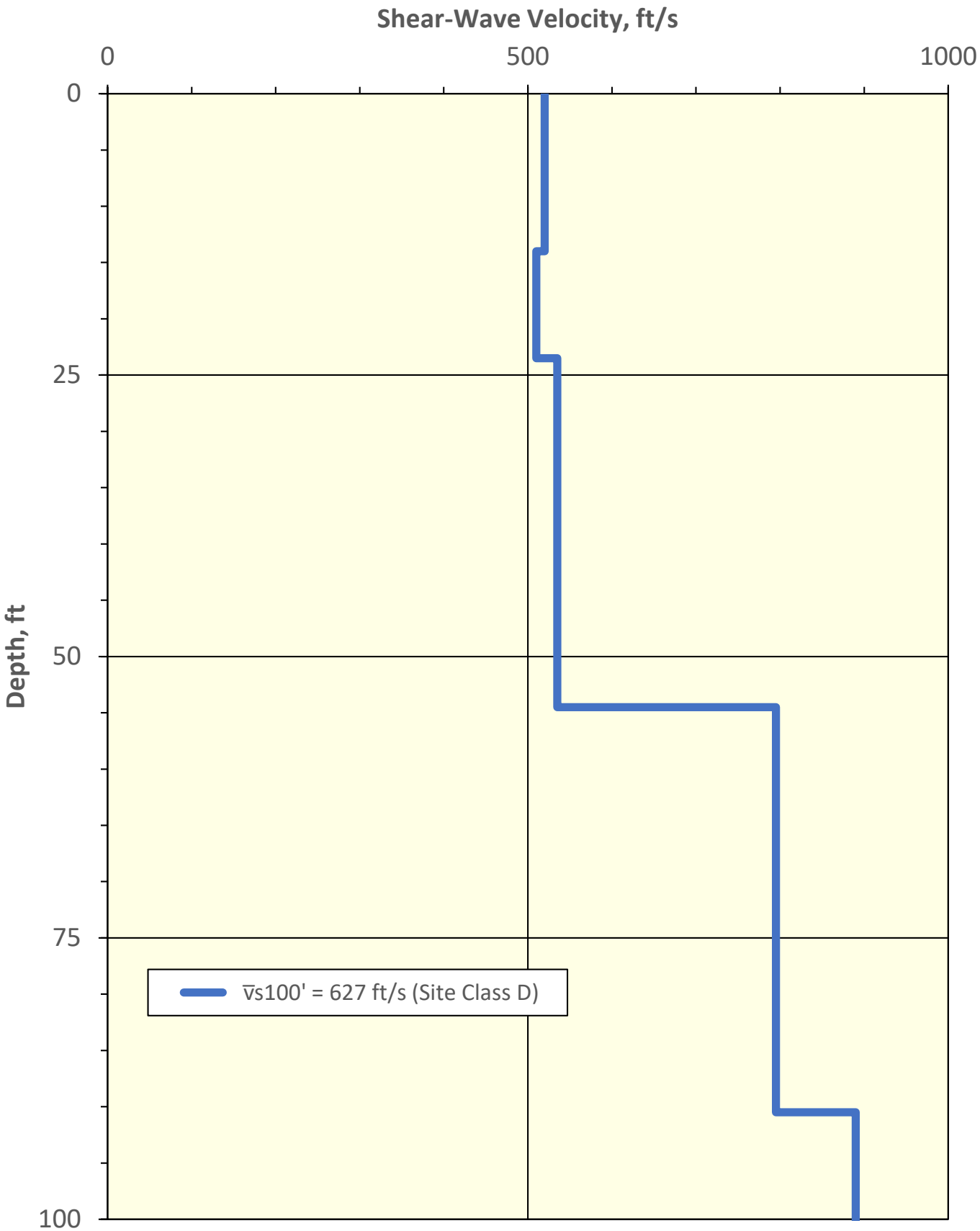


FIGURE 1 Proposed West Bountiful Public Works Facility 2194-010-21

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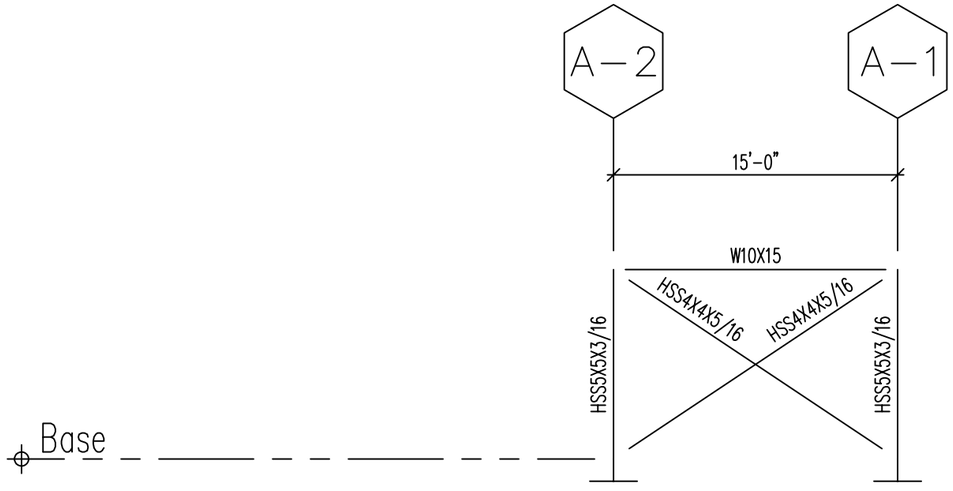
Cover Page

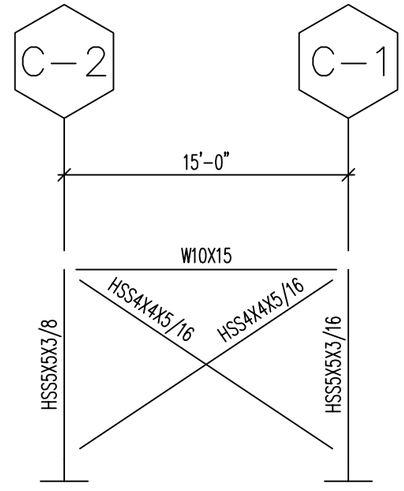
SOUTH MEZZANINE PLAN & DETAILS


A
B
C
25’–0”
25’–0”
1
2
3
4
5
15’–0”
15’–0”
W16x26 (9)
W16x26 (9)
W12x14 (8)
W12x14 (8)
W12x14 (8)
W8x10 (6)
W18x40 (20)
W16x26 (10)
W18x35 (16)
W18x35 (16)
W18x35 (16)
W16x26 (10)
W21x44 (22)
W21x44 (22)
W16x26 (10)
W18x35 (16)
W18x35 (16)
W18x35 (16)
W16x26 (10)
W8x10 (6)
W18x40 (20)
W10x12 (6)
W12x14 (8)
W12x14 (8)
W12x14 (8)
W10x12 (6)
W16x26 (9)
W16x26 (9)
MEZZANINE



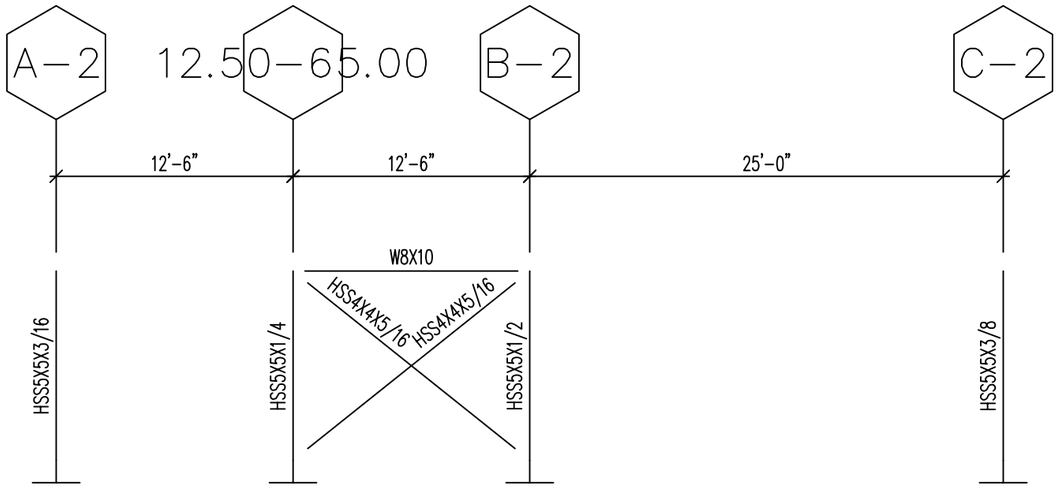
A

SCALE: 1/8" = 1'



C

SCALE: 1/8" = 1'



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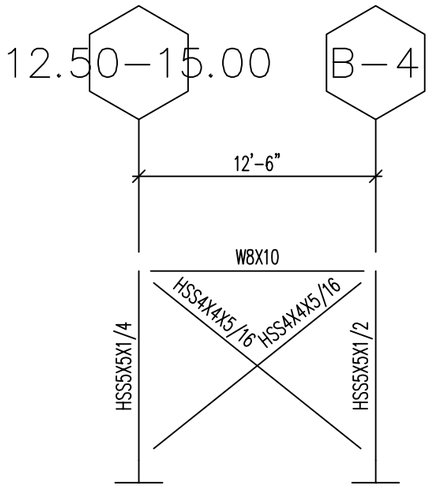
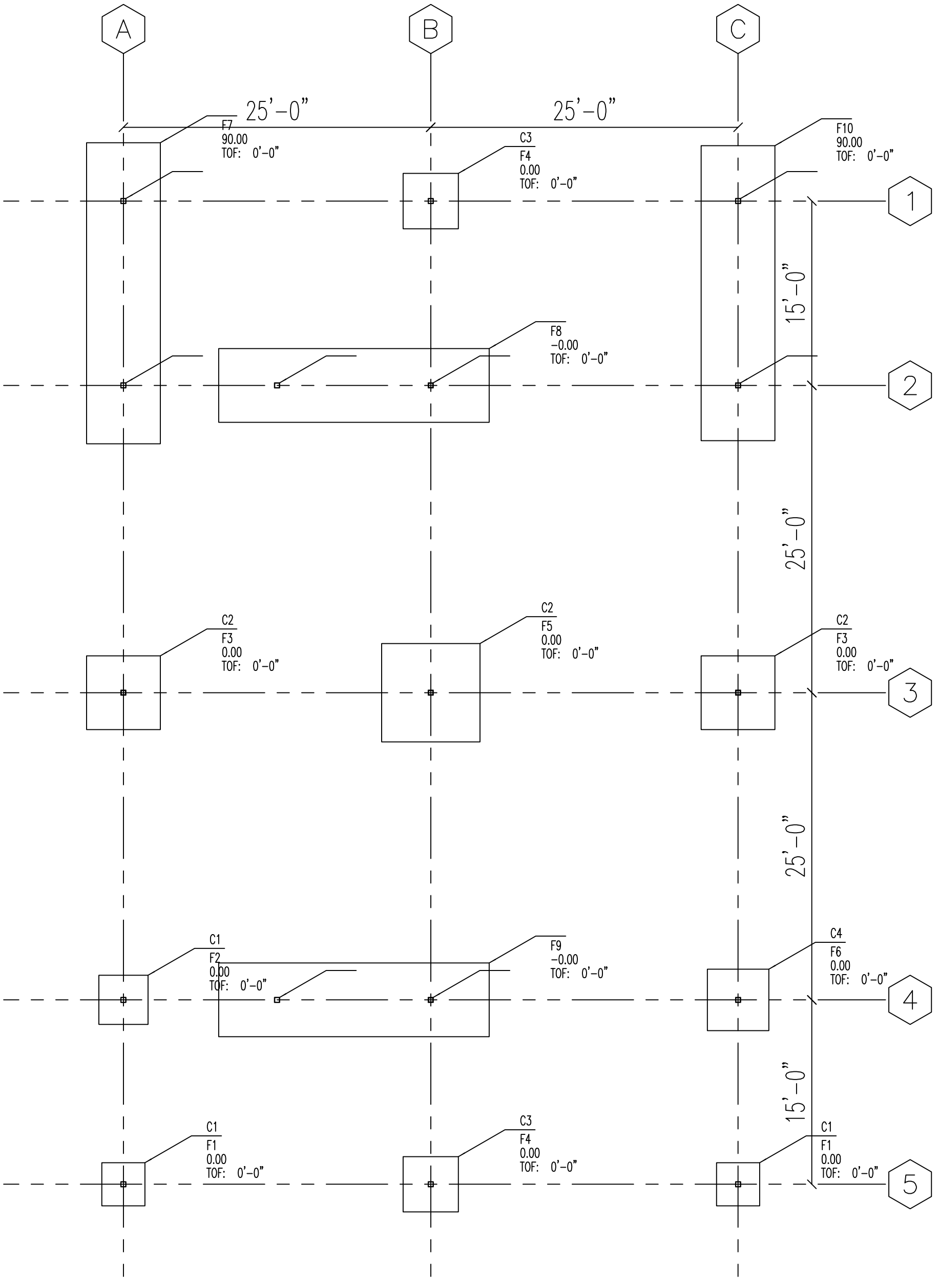
SCALE: 1/8" = 1'



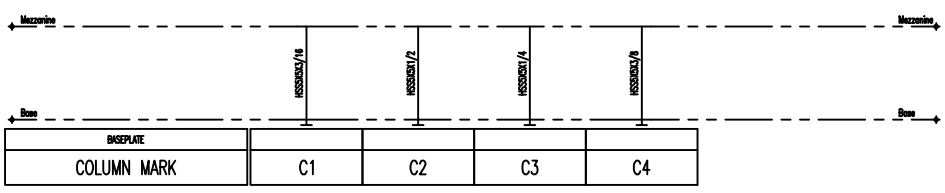
4

SCALE: 1/8" = 1'

Cover Page


A
B
C
1
2
3
4
5
25'-0"
25'-0"
15'-0"
25'-0"
15'-0"
F7
90.00
TOF: 0'-0"
C3
F4
0.00
TOF: 0'-0"
F10
90.00
TOF: 0'-0"
F8
-0.00
TOF: 0'-0"
C2
F3
0.00
TOF: 0'-0"
C2
F5
0.00
TOF: 0'-0"
C2
F3
0.00
TOF: 0'-0"
C1
F2
0.00
TOF: 0'-0"
F9
-0.00
TOF: 0'-0"
C4
F6
0.00
TOF: 0'-0"
C1
F1
0.00
TOF: 0'-0"
C3
F4
0.00
TOF: 0'-0"
C1
F1
0.00
TOF: 0'-0"

Cover Page



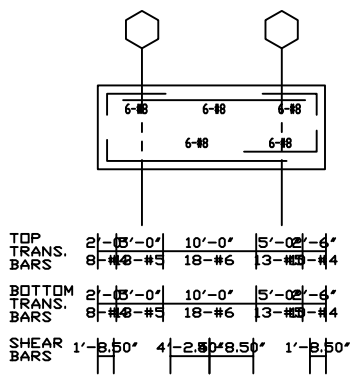
MARK ORDER: BY COORDINATES
* SLOPING COLUMN

COLUMN SCHEDULE

SCALE: 1/8" = 1'

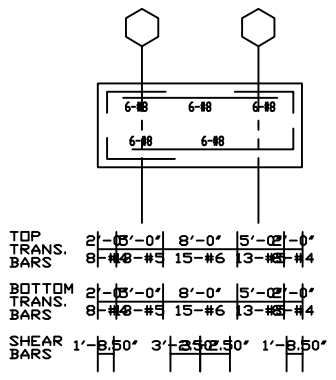
SPREAD FOOTING SCHEDULE

MARK	PLAN SIZE	THICKNESS	REINFORCEMENT
F1	3'-6" SQ.	1'-0"	10-#3 EW- BOTTOM
F2	4'-0" SQ.	1'-0"	10-#3 EW- BOTTOM
F3	6'-0" SQ.	1'-0"	9-#4 EW- BOTTOM
F4	4'-6" SQ.	1'-0"	11-#3 EW- BOTTOM
F5	8'-0" SQ.	1'-4"	9-#5 EW- BOTTOM
F6	5'-0" SQ.	1'-0"	12-#3 EW- BOTTOM



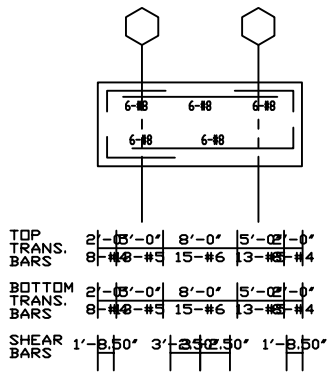
F7 SIZE 24'-5"×6'-0"×3'-0"

SCALE: 1/8" = 1'



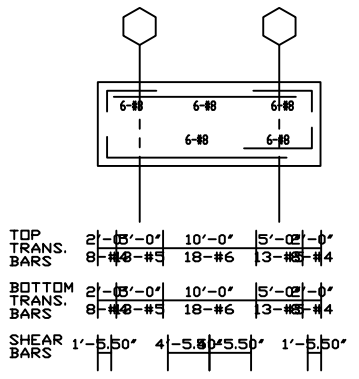
F8 SIZE 21'-11"×6'-0"×3'-0"

SCALE: 1/8" = 1'



F9 SIZE 21'-11"×6'-0"×3'-0"

SCALE: 1/8" = 1'



F10 SIZE 23'-11"×6'-0"×3'-0"

SCALE: 1/8" = 1'

STEEL BEAM DESIGN TAKEOFF:

Floor Type: Mezzanine
Story Level 1
Steel Grade: 50

SIZE	#	LENGTH (ft)	WEIGHT (lbs)
W8X10	2	25.00	252
W10X12	2	30.00	361
W12X14	6	90.00	1274
W16X26	8	200.00	5227
W18X35	6	150.00	5257
W18X40	2	50.00	2008
W21X44	2	50.00	2212
	---		---
	28		**16591**

Total Number of Studs = **328**

Note: Weight is based on actual member areas, not nominal weights.

Steel Grade: 50

Rectangular HSS

Size	#	Length (ft)	Weight (lbs)
HSS5X5X3/16	3	30.0	335
HSS5X5X1/4	2	20.0	293
HSS5X5X3/8	1	10.0	210
HSS5X5X1/2	3	30.0	804
	9		1642

Note: Weight is based on actual member areas, not nominal weights.

Level: Mezzanine

Floor Area (ft**2): 4131.0

Columns:

Tube:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
HSS5X5X3/8	1	10.0	210	
HSS5X5X1/4	2	20.0	293	
HSS5X5X3/16	3	30.0	335	
HSS5X5X1/2	2	20.0	536	
	8		1374	0.33

Beams:

Wide Flange:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
W8X10	2	25.0	252	
W10X15	2	30.0	450	
	4		702	0.17

Braces:

Tube:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
HSS4X4X5/16	8	136.1	1899	
	8		1899	0.46

TOTAL STRUCTURE FRAME TAKEOFF

Floor Area (ft**2): 4131.0

Columns:

Tube:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
HSS5X5X3/8	1	10.0	210	
HSS5X5X1/4	2	20.0	293	
HSS5X5X3/16	3	30.0	335	
HSS5X5X1/2	2	20.0	536	
	8		1374	0.33

Beams:

Wide Flange:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
W8X10	2	25.0	252	
W10X15	2	30.0	450	
	4		702	0.17

Braces:

Tube:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
HSS4X4X5/16	8	136.1	1899	
	8		1899	0.46

Note: Length and Weight based on Centerline dimensions.

Note: Weight is based on actual member areas, not nominal weights.

SPREAD FOOTINGS TAKEOFF:

Concrete Strength, f'c (ksi): 3.00 Unit Wt (pcf): 145.00

Size (ft)	Quantity	Volume (yds³)	Weight (kips)
3.50x 3.50x 1.00	2	0.91	3.55
4.00x 4.00x 1.00	1	0.59	2.32
4.50x 4.50x 1.00	2	1.50	5.87
5.00x 5.00x 1.00	1	0.93	3.62
6.00x 6.00x 1.00	2	2.67	10.44
8.00x 8.00x 1.33	1	3.16	12.37
	9	**9.75**	**38.18**

Reinforcement Grade, fy (ksi): 60.00

Size	Quantity	Length (ft)	Weight (kips)
#3	128	538.00	0.20
#4	36	216.00	0.15
#5	18	144.00	0.15
	182	**898.00**	**0.50**

CONTINUOUS FOOTINGS TAKEOFF:

Concrete Strength, f'c (ksi): 3.00 Unit Wt (pcf): 145.00

Size (ft)	Quantity	Volume (yds³)	Weight (kips)
22.00x 6.00x 3.00	2	29.33	114.84
24.00x 6.00x 3.00	1	16.00	62.64
24.50x 6.00x 3.00	1	16.33	63.95
	4	**61.67**	**241.43**

Reinforcement Grade, fy (ksi): 60.00

Size	Quantity	Length (ft)	Weight (kips)
#4	132	726.00	0.49
#5	208	1144.00	1.21
#6	132	726.00	1.09
#8	120	1438.50	3.87
	592	**4034.50**	**6.65**

TOTAL FOOTING TAKEOFF:

Concrete Strength, f'c (ksi): 3.00 Unit Wt (pcf): 145.00

Size (ft)	Quantity	Volume (yds³)	Weight (kips)
3.50x 3.50x 1.00	2	0.91	3.55
4.00x 4.00x 1.00	1	0.59	2.32
4.50x 4.50x 1.00	2	1.50	5.87
5.00x 5.00x 1.00	1	0.93	3.62
6.00x 6.00x 1.00	2	2.67	10.44
8.00x 8.00x 1.33	1	3.16	12.37
22.00x 6.00x 3.00	2	29.33	114.84
24.00x 6.00x 3.00	1	16.00	62.64
24.50x 6.00x 3.00	1	16.33	63.95
	13	**71.42**	**279.61**

Reinforcement Grade, fy (ksi): 60.00

Size	Quantity	Length (ft)	Weight (kips)
#3	128	538.00	0.20
#4	168	942.00	0.64
#5	226	1288.00	1.36
#6	132	726.00	1.09
#8	120	1438.50	3.87
	774	**4932.50**	**7.16**

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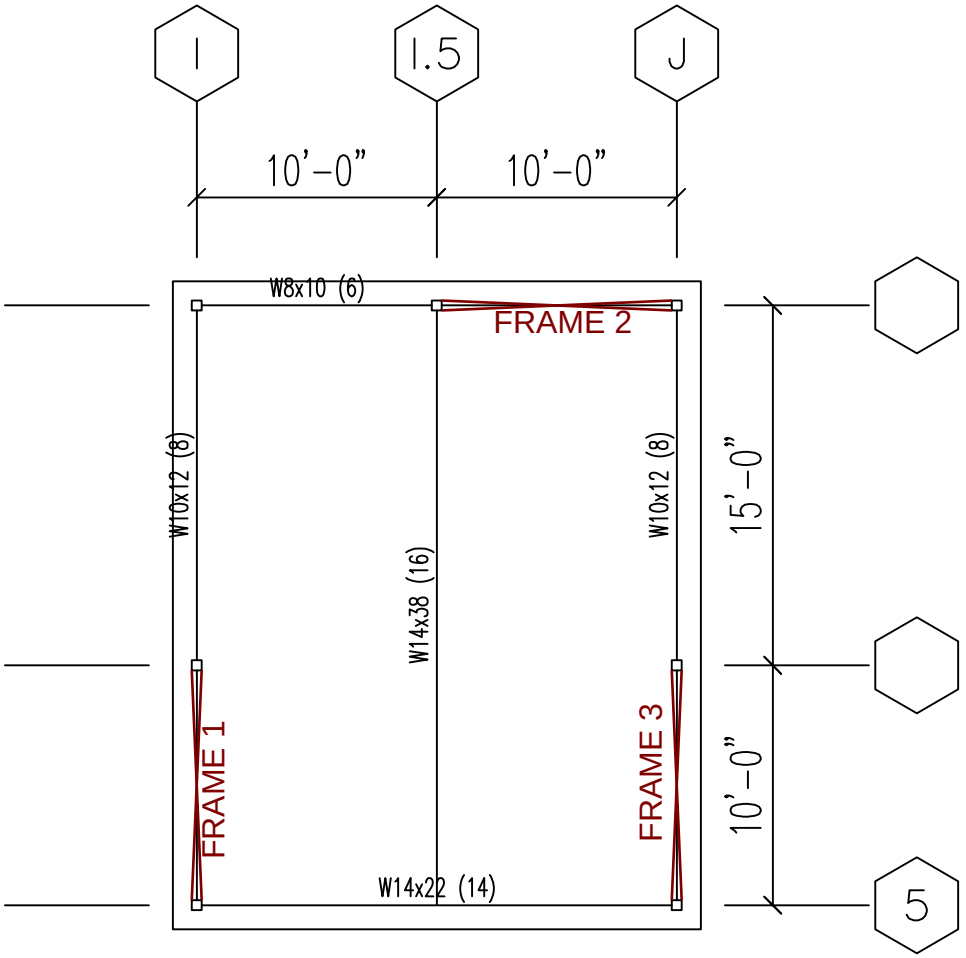
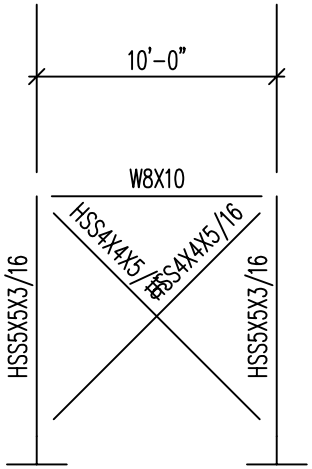
Cover Page

NORTHEAST MEZZANINE PLAN & DETAILS


I
1.5
J
10'-0"
10'-0"
W8x10 (6)
FRAME 2
W10x12 (8)
W10x12 (8)
W14x38 (16)
15'-0"
FRAME 1
FRAME 3
10'-0"
W14x22 (14)
5

MEZZANINE



1
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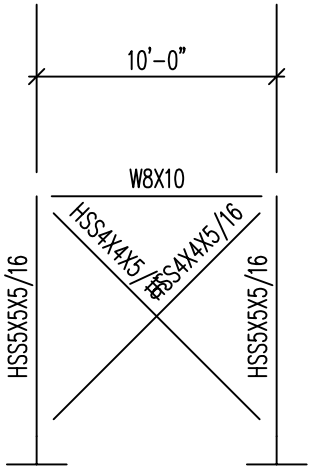

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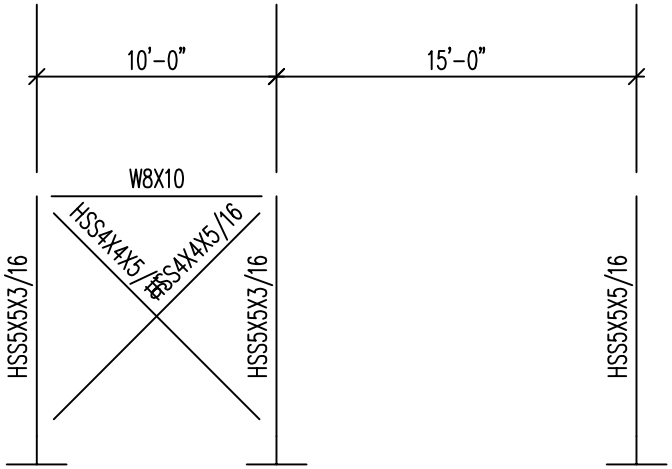

3
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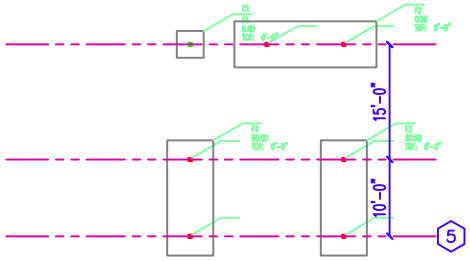
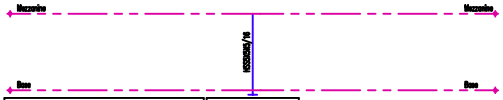


COLUMN LAYOUT

SCALE: 1/8" = 1'



COLUMN MARK	C1

MARK ORDER: BY COORDINATES

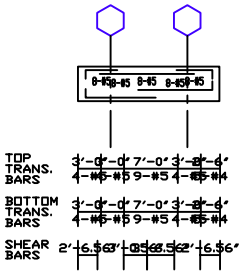
* SLOPING COLUMN

COLUMN SCHEDULE

SCALE: 1/8" = 1'

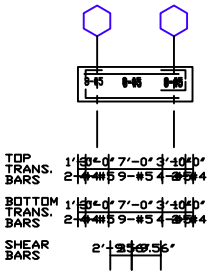
SPREAD FOOTING SCHEDULE

MARK	PLAN SIZE	THICKNESS	REINFORCEMENT
F1	3'-6" SQ.	1'-0"	12-#3 EW- BOTTOM



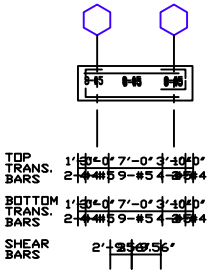
F2 SIZE 18'-5"x6'-0"x1'-6"

SCALE: 1/8" = 1'



F3 SIZE 14'-11"x6'-0"x1'-6"

SCALE: 1/8" = 1'



F4 SIZE 14'-11"x6'-0"x1'-6"

SCALE: 1/8" = 1'

STEEL BEAM DESIGN TAKEOFF:

Floor Type: Mezzanine
Story Level 1
Steel Grade: 50

SIZE	#	LENGTH (ft)	WEIGHT (lbs)
W8X10	1	10.00	101
W10X12	2	30.00	361
W14X22	1	20.00	442
W14X38	1	25.00	953
	-----		----------
	5		**1857**

Total Number of Studs = **52**

Note: Weight is based on actual member areas, not nominal weights.

Steel Grade: 50

Rectangular HSS

Size	#	Length (ft)	Weight (lbs)
HSS5X5X5/16	1	10.0	179
	1		179

Note: Weight is based on actual member areas, not nominal weights.

Level: Mezzanine

Floor Area (ft**2): 594.0

Columns:

Tube:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
HSS5X5X5/16	2	20.0	358	
HSS5X5X3/16	4	40.0	446	
	6		804	1.35

Beams:

Wide Flange:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
W8X10	3	30.0	302	
	3		302	0.51

Braces:

Tube:

Steel Grade: Other

Size	#	Length ft	Weight lbs	UnitWt psf
HSS4X4X5/16	6	84.9	1184	
	6		1184	1.99

TOTAL STRUCTURE FRAME TAKEOFF

Floor Area (ft**2): 594.0

Columns:

Tube:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
HSS5X5X5/16	2	20.0	358	

Size	#	Length	Weight	UnitWt
HSS5X5X3/16	4	40.0	446	
	6		804	1.35

Beams:

Wide Flange:

Steel Grade: 50

Size	#	Length ft	Weight lbs	UnitWt psf
W8X10	3	30.0	302	
	3		302	0.51

Braces:

Tube:

Steel Grade: Other

Size	#	Length ft	Weight lbs	UnitWt psf
HSS4X4X5/16	6	84.9	1184	
	6		1184	1.99

Note: Length and Weight based on Centerline dimensions.

Note: Weight is based on actual member areas, not nominal weights.

SPREAD FOOTINGS TAKEOFF:

Concrete Strength, f'c (ksi): 3.00 Unit Wt (pcf): 145.00

Size (ft)	Quantity	Volume (yds³)	Weight (kips)
3.50x 3.50x 1.00	1	0.45	1.78
	1	**0.45**	**1.78**

Reinforcement Grade, fy (ksi): 60.00

Size	Quantity	Length (ft)	Weight (kips)
#3	24	84.00	0.03
	24	**84.00**	**0.03**

CONTINUOUS FOOTINGS TAKEOFF:

Concrete Strength, f'c (ksi): 3.00 Unit Wt (pcf): 145.00

Size (ft)	Quantity	Volume (yds³)	Weight (kips)
15.00x 6.00x 1.50	2	10.00	39.15
18.50x 6.00x 1.50	1	6.17	24.14
	3	**16.17**	**63.29**

Reinforcement Grade, fy (ksi): 60.00

Size	Quantity	Length (ft)	Weight (kips)
#4	26	143.00	0.10
#5	230	1546.00	1.63
	256	**1689.00**	**1.73**

TOTAL FOOTING TAKEOFF:

Concrete Strength, f'c (ksi): 3.00 Unit Wt (pcf): 145.00

Size (ft)	Quantity	Volume (yds³)	Weight (kips)
3.50x 3.50x 1.00	1	0.45	1.78
15.00x 6.00x 1.50	2	10.00	39.15
18.50x 6.00x 1.50	1	6.17	24.14
	4	**16.62**	**65.07**

Reinforcement Grade, fy (ksi): 60.00

Size	Quantity	Length (ft)	Weight (kips)
#3	24	84.00	0.03
#4	26	143.00	0.10
#5	230	1546.00	1.63

Size	Quantity	Length (ft)	Weight (kips)
	280	**1773.00**	**1.76**

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Cover Page

REVISED METAL BUILDING NARRATIVE

BUILDING NARRATIVE – prepared by CRSA Architects:

Overview:

The West Bountiful Public Works Building project will consist of an office, shop and storage facility totaling approximately 18,000 square feet. The building will consist of a Pre-engineered Metal Building (PEMB) approximately 80 feet in width by 225 feet in length with an eave height of approximately 22 feet (80ft X 225ft X 22ft).

Pre-Engineered Metal Building (PEMB): (See preliminary floor plan)

- The PEMB shall utilize clear span frames with no interior columns.
- The building includes two mezzanine areas and a wash bay - structure by others. The first mezzanine is located in the first two bays at the south end of the building and the second mezzanine located in the northeast corner of the building. The concrete block enclosed wash bay is located in the northwest corner of the building.
- Walls will be standard metal panels with vinyl faced R-19 insulation (by PEMB supplier). Wall panels shall be installed on top of the 4' perimeter concrete wall (by others). The interior face of the gert will be covered by plywood (by others).
- Basis of design for the profile of both wall and roof is to **be a manufacturers standard metal panel system** ~~match MCBI style 7.2 Panel~~, in a smooth finish for walls and roof. Bidders to price both a painted finish, to be selected by architect, and Galvalume finish for ~~walls and~~ **the** roof **panels (Alternate #1)**.
- Man doors in shop area, by PEMB supplier, to match exterior wall color. Overhead doors, storefront and doors and windows by others.
- The PEMB supplier will provide a metal panel roof with vinyl faced R-30 insultation.
- West Bountiful City would like to price separately a canopy 12 feet high, 15 feet deep, by approximately 80 feet long, with side walls, on the north façade of the building **(Alternate #2).**
- Gutter and downspouts with 45-degree elbows are to be provided by PEMB in a color to match walls.
- PEMB to provided trim package (including but not limited to door and window opening, base and eave trim).
- 1-ton monorail crane will be located in shop and attached to the metal building structure between grid lines H-J. PEMB supplier to account for loads.

GRAMOLL CONSTRUCTION
155 South 750 West, North Salt Lake, Utah 84054
Phone 801-295-2341 - Fax 801-295-2656 - www.gramoll.com

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REVISED COST PROPOSAL FORM

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COST PROPOSAL FORM

NAME OF PROPOSER _____ DATE _____

Gramoll Construction
155 South 750 West
North Salt Lake, UT 84054

The undersigned, responsive to the "Notice to Contractors" and in accordance with the "Request for Proposals" for the Metal Building Contractor for West Bountiful City, and having examined the Contract Documents and the site of the proposed Work and being familiar with all of the conditions surrounding the construction of the proposed Project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies as required for the Work in accordance with the Contract Documents as specified and within the time set forth and at the price stated below. This price is to cover all expenses incurred in performing the Work required under the Contract Documents of which this bid is a part:

I/We acknowledge receipt of the following Addenda: _____

A. BASE BID- For supply and installation of all base bid work shown on the Drawings and described in the Specifications and Contract Documents, I/we agree to perform for the sum of:

_____ DOLLARS _____

(In case of discrepancy, written amount shall govern)

B. Mark-up for Change Orders %_____

C. ALTERNATE #1 – GALVALUME FINISH – For galvalume finish for roof panels in lieu of a painted finish, I/we agree to perform for the sum of:

_____ DOLLARS $_____

(In case of discrepancy, written amount shall govern)

D. ALTERNATE #2 – EXTERIOR CANOPY - For supply and installation of the Exterior Canopy, I/we agree to perform for the sum of:

_____ DOLLARS $_____

(In case of discrepancy, written amount shall govern)

I/We guarantee that the Work will be Substantially Complete per our attached schedule and should I/we be the successful proposer and agree to pay liquidated damages in the amount of $ 500.00 per day for each day after expiration of the Contract Time as stated in Article 3 of the Contractor's Agreement.

This bid shall be good for 45 days after bid opening.
The undersigned Contractor's License Number for Utah is _____

Upon receipt of notice of award of this bid, the undersigned agrees to execute the contract within ten (10) days, unless a shorter time is specified in the Contract Documents, and e-mail to aaron.nielsen@gramoll.com.

Type of Organization:

_____

(Corporation, Partnership, Individual, etc.)

Any request and information related to Utah Preference Laws:

_____

Respectfully submitted,

_____

Name of Proposer

ADDRESS:

_____

_____

_____

Authorized Signature

GRAMOLL CONSTRUCTION
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Phone 801-295-2341 - Fax 801-295-2656 - www.gramoll.com

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SAMPLE GRAMOLL CONSTRUCTION SUBCONTRACT AGREEMENT

Cover Page

NO. 713XX

SUBCONTRACT AGREEMENT

THIS SUBCONTRACT AGREEMENT ("Subcontract") by and between GRAMOLL CONSTRUCTION COMPANY, a Utah corporation, hereinafter referred to as "Contractor," and **(SUBCONTRACTOR NAME AND ADDRESS) hereinafter referred to as "Subcontractor,"** is entered into and shall be effective as of the date it has been signed by both parties hereto (the "Subcontract Date"). If Subcontractor commences work prior to signing this Subcontract, the Subcontract Date shall be deemed to be the date Subcontractor commenced the Work.

RECITALS

1. Contractor has entered into a contract with **WEST BOUNTIFUL CITY** for the construction, performance and completion of a certain project known as **WEST BOUNTIFUL CITY PUBLIC WORKS FACILITY** said contract being hereinafter referred to as the "General Contract".

2. Subcontractor desires to furnish, and Contractor desires to have Subcontractor furnish a portion of the work for Contractor. Contractor and Subcontractor desire to establish the terms and conditions that govern the relationship between them when Subcontractor furnishes such labor, materials, and equipment pursuant to this Subcontract.

ARTICLE I

1.1 **Scope of Work.** Subcontractor shall furnish all labor, materials, permits, tools, machinery, equipment, facilities, supplies and services, pay all applicable taxes, and comply with any and all additional requirements imposed by the jurisdiction in which the work is performed, and to do all things necessary to complete the following items of work under the General Contract (the "Work"):

Furnish all labor, materials, equipment and supervision required to complete all [LABOR TYPE] work required, as described in specifications sections [SECTION NUMBER AND DESCRIPTION] and as shown on the drawings in [BID PACKAGE] and comply with all other sections of the specifications and the drawings dated [DATE], for WEST BOUNTIFUL CITY PUBLIC WORKS FACILITY prepared by [ARCHITECT], as related to such work.

Addenda:

Alternates:

Includes:

Excludes: SALES TAX

Hereinafter, all such documents, plus this Subcontract and the General Contract are collectively referred to as the "Subcontract Documents." All Subcontract Documents other than this Subcontract are incorporated herein by reference and hereby adopted and made a part of this Subcontract as fully as if it were set forth in full herein, subject to the limitations set forth in Article I hereof. All General, Supplemental General, and Special Conditions of the specifications and all terms and conditions of the General Contract shall apply to this Subcontract, except where ambiguous or inconsistent with this Subcontract, in which case the provisions of this Subcontract shall control. Subcontractor acknowledges that the Work to be performed by Subcontractor is not confined to any particular portion of the drawings or section of the specifications but may be scattered throughout those documents. In the performance of this Subcontract, Subcontractor binds itself to Contractor to comply fully with all undertakings and obligations of the Contractor to the extent that they apply to the scope of the Work.

ARTICLE II

2.1 **Subcontract Price.** Contractor shall pay Subcontractor for completion of the Work in accordance with the Subcontract Documents the lump sum of **[Subcontract Price]** (the "Subcontract Price.") The Subcontract Price includes all costs and expenses to perform the Work, and associated with the performance of the Work, including, without limitation, (1) all applicable transportation charges, costs and expenses, and (2) all applicable

taxes including, without limitation, applicable taxes under any law now existing, or which may hereafter be adopted by federal, state, local or other governmental authorities, taxing the labor, materials, or equipment furnished, or any other tax levied as a result of performance of the Work. The Subcontract Price may be adjusted only as provided for in Article V.

ARTICLE III

3.1 **Independent Contractor.** The relationship of Subcontractor to Contractor during the term of this Subcontract shall be that of an independent contractor. Subcontractor shall take any and all actions necessary to maintain that independent contractor relationship throughout the term of the Subcontract, and neither Subcontractor nor its employees shall be considered employees of Contractor. Subcontractor shall exercise exclusive control for the means, methods, techniques, and procedures in performance of the Work.

3.2 **Examination of Subcontract Documents/ Site.** Subcontractor has examined the Subcontract Documents and the applicable Laws and Regulations, as that term is defined below, and has examined the site of the work and satisfied itself as to all conditions to be encountered in the performance of the Work. Subcontractor enters this Subcontract on the basis of its own examination, investigation and evaluation of all such matters, and not in reliance on the opinions or representations of Contractor or Owner. If there are any inconsistencies between the Subcontract Documents or ambiguities in any Subcontract Document, Subcontractor shall bring such inconsistencies or ambiguities to the attention of Contractor before the execution of this Subcontract; otherwise, Subcontractor shall be bound by Contractor's resolution of such inconsistencies or ambiguities.

In the event of any discrepancy (1) in the Subcontract Documents, or (2) between the Subcontract Documents and the Laws and Regulations, those which are more stringent, provide persons and property with greater protection, or provide for a better product shall govern. In the event of any discrepancy in the Subcontract Documents between dimensions and measurements for the Work based on scaling, the Work shall comply with the dimensions for such Work. Subcontractor shall promptly notify Contractor in writing of any such discrepancy. To the extent that the Subcontract Documents include plans, specifications or other documents that depict, refer or relate to mechanical, plumbing, electrical or fire protection systems, such documents are diagrammatic only, and are not intended to show the precise alignment, physical locations, or configurations of such Work. The Subcontract Price includes all costs and expenses for such systems to be installed such that they clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance.

Before commencing Work, Subcontractor will satisfy itself as to the location of all utilities that may affect or interfere with Subcontractor's Work. Subcontractor will fully protect all utilities, and keep them operating at all times, unless otherwise provided in the Subcontract Documents. Subcontractor shall take such field measurements as are necessary for the proper execution of its work. It shall be assumed that the Subcontractor has fully accepted the work of others as being satisfactory and he shall be fully responsible thereafter for the satisfactory performance of the work covered by this Agreement, regardless of the defective work of others.

3.3 **Lines, Levels, Dimensions and Measurements.** Subcontractor assumes full responsibility for the proper interpretation and interpolation of all lines, levels, dimensions, and measurements and their relation to benchmarks, property lines, reference lines and the work of Contractor and other trades. In all cases where dimensions are governed by conditions already established, the responsibility for correct knowledge of the condition's rests entirely on Subcontractor. The Work shall comply with the dimensions provided in the Subcontract Documents and shall not be performed based on scales indicated in those documents. No variations from specified lines, levels or dimensions shall be made except on prior written approval of Contractor clearly setting forth the variation.

3.4 **Shop Drawings/ Submittals.** Shop drawings and submittals shall be provided in a minimum of one (1) digital copy to Contractor's office in North Salt Lake. Additional copies shall be provided if required by the Subcontract Documents. Shop drawings and/ or submittals and/ or samples are due within fourteen (14) days of Subcontract's date of issuance. At the time of submission, Subcontractor shall clearly identify in writing any deviation in its shop drawings/ submittals/ samples from the requirements of the Subcontract Documents and must receive from Contractor specific written approval for any deviation.

3.5 **Warranty.** Subcontractor warrants that:

3.5.1 all materials and equipment furnished under this Subcontract will be of good quality and new, unless otherwise required or permitted by the Subcontract Documents.

3.5.2 the materials and equipment provided as part of the Work will be suitable for the purposes intended in the Subcontract Documents.

3.5.3 the Work will be performed in a good and workmanlike manner.

3.5.4 the Work will conform to the requirements of the Subcontract Documents; and

3.5.5 the Work will be free from defects.

Work not conforming to these requirements including, without limitation, substitutions not properly approved and authorized, shall be considered defective (all such work, "Defective Work"). Subcontractor shall (1) execute any special guarantees, and (2) assign to Contractor all warranties, as required by the Subcontract Documents.

3.6 **Correction and Replacement of Defective Work.** During performance of the Work, Subcontractor shall promptly correct or replace Defective Work. Contractor shall determine whether Work is defective and whether work performed by Subcontractor to correct or replace Defective Work complies with Subcontractor's warranty obligations.

3.6.1 If, within the greater of (1) the period established in the Subcontract Documents, or (2) one year after the Completion Date, (hereinafter the "Warranty Period"), any of Subcontractor's Work is found to be defective, Subcontractor shall correct or replace it promptly after receipt of written notice of the Defective Work. If Contractor prefers to accept, rather than correct or repair Defective Work, Contractor may, in its sole discretion, accept the work subject to its right of reimbursement, as set forth below.

3.6.2 Subcontractor shall pay all costs to correct or replace Defective Work without any adjustment to the Subcontract Price or Subcontract Time. If Subcontractor fails to correct Defective Work within the time allowed by Contractor, or if no time is specified, a reasonable time after receipt of notice of such defects, Contractor may correct or replace the Defective Work. Subcontractor shall reimburse Contractor for (1) the costs to correct or replace defective Work, including, without limitation, the costs of additional sampling, testing and inspections, if any, made necessary by Defective Work, corrections or replacements, (2) all Losses that Contractor incurs that arise out of or result from Defective Work, (3) any amounts assessed and collected by Owner from Contractor for acceptance of Defective Work, and (4) any other amounts for which Subcontractor is responsible at law or in equity.

3.7 **Safety.** Subcontractor shall initiate, maintain and supervise all safety precautions and programs in connection with the Work including, without limitation, such precautions and programs as necessary to comply with the Gramoll Project Safety Rules and Regulations that are expressly made a part of the Subcontract Documents. Subcontractor shall take all necessary precautions to prevent damage, injury or loss to (a) all persons performing the Work or who may be affected by the Work; and (b) all Work, whether stored on or off the Project site. Subcontractor shall promptly report to Contractor all accidents incidental to the Work which result in death or injury to persons or in damage to property. Subcontractor shall provide to Contractor any reasonable documentation requested by Contractor related to any such death, injury, damages.

3.8 **Compliance with Laws and Regulations.** Subcontractor shall comply with and give all notices required by all federal, state, local, and municipal laws, regulations, codes, ordinances, and orders that directly or indirectly bear on the Work and/or the performance of the Work including, without limitation:

3.8.1 building codes and ordinances.

3.8.2 worker's compensation laws and regulations.

3.8.3 safety laws, codes, regulations and orders, including, without limitation, the Occupational Safety & Health Act of 1970, as enacted and amended, and regulations issued under that act.

3.8.4 environmental laws including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, the Clean Water Act, the Clean Air Act, and the Resources Conservation and Recovery Act, as enacted and amended, regulations issued under those acts, and counterpart state laws;

3.8.5 wage, hour, labor, and anti-discrimination laws, including, without limitation, the Equal Employment Opportunity (EEO) Executive Order 11246, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, the Equal Pay Act of 1963, the Family and Medical Leave Act, the Americans with Disabilities Act, the National Labor Relations Act, the Fair Labor Standards Act; Sections 503 and 504 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, the Immigration Reform Control Act of 1986, as enacted and amended, and all regulations issued under those acts; and

3.8.6 tax laws and regulations; all as enacted and amended, and all regulations issued under such acts

Collectively, these are referred to in this Subcontract as the "Laws and Regulations."

3.9 **Subcontractors.** Subcontractor shall not assign this contract, in part or in whole, without Contractor's prior written consent, nor shall Subcontractor assign any monies due or to become due to it hereunder, without Contractor's prior written consent. Subcontractor shall, upon request from Contractor at the inception of this Subcontract, provide to Contractor or supplier a written list of sub-subcontractors or suppliers that Subcontractor intends to use in connection with the performance of its obligations under this Subcontract where the dollar amount individually or in the aggregate with the same sub-subcontractor will exceed 5% of the Subcontract Price. Subcontractor shall require all of its sub-subcontractors to comply with the Subcontract Documents to the extent that they apply to the scope of work of such sub-subcontractor. Subcontractor shall not change sub-subcontractors without prior written approval of Contractor.

Upon Contractor's request, Subcontractor agrees to provide documentation evidencing full payment of all sub-subcontractors and/or suppliers engaged by Subcontractor with respect to its performance of this Subcontract.

If this Subcontract is terminated, each of Subcontractor's contracts for performance of the Work shall be assigned to Contractor, provided that Contractor accepts such assignment in writing and assumes all rights and obligations of Subcontractor pursuant to each such contract.

3.10 **Cleanup.** Subcontractor will continuously clean, and remove from the jobsite, its debris and excess materials and at the end of each day will leave its working areas in broom-clean condition. Also, he shall clean up to the satisfaction of the inspectors, all dirt, grease marks, etc., from walls, ceilings, floors, fixtures, etc., deposited or placed thereon as a result of the execution of this Subcontract. If Subcontractor fails to do so, Contractor may perform the cleanup and backcharge Subcontractor for the cost of performing such clean-up.

3.11 **Supervision.** Subcontractor shall have available on the project, at all times, a qualified superintendent, who is acceptable to Contractor, to coordinate the Subcontractor's work with that of the Contractor and of the other subcontractors, and any instruction given by the Contractor to said representative on the project shall have the same force and effect as if given to the Subcontractor either at the project or at the Subcontractor's office away from the project site.

ARTICLE IV

4.1 **Subcontract Time.** Subcontractor shall commence and complete the Work in accordance with the most current schedule prepared by Contractor, as may be revised from time to time during the course of the Project (the "Project Schedule"). Subcontractor shall commence and complete all activities in compliance with the time periods expressly provided for such activities in the Project Schedule. The periods of time provided in the Project Schedule for commencement and final completion of all activities that comprise the Work shall constitute the "Subcontract Time." Except as otherwise expressly noted, as used herein and in the Project Schedule, the term "day" shall refer to a calendar day. The date on which all the work performed by Contractor and its subcontractors is completed and accepted by the Owner shall be referred to hereinafter as the "Completion Date."

Subcontractor's commencement, prosecution, and completion of the Work in the Subcontract Time and in compliance with the Project Schedule is of the essence of this Subcontract.

Subcontractor acknowledges that the precise time periods scheduled for its performance are estimates only. Subcontractor shall cooperate with Contractor in scheduling and performing its work to avoid conflict or interference with the work of Contractor or other trades. Contractor reserves the right, in its sole discretion, to extend or to delay the scheduling of Subcontractor's work if such extension or delay becomes necessary in the opinion of Contractor. Each Subcontractor shall review the schedule of all items of work other than his own, to anticipate completion of specific items of its Work as it affects other trades, to be certain that work following Subcontractor's Work is not delayed. In the event of any conflicts in the Project Schedule between the work of Subcontractor and Contractor or another trade, Contractor shall determine, in its sole discretion, which work shall have precedence and how the parties will coordinate their respective work. All other work not specifically scheduled shall be coordinated as necessary to avoid delaying Work as scheduled. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time based on the coordination of such activities with Contractor or any determination by Contractor concerning coordination of the work.

If Contractor determines, in its sole discretion, that Subcontractor has failed to diligently prosecute the Work in accordance with the Project Schedule, or that Subcontractor will not complete the Work within the Subcontract Time, Contractor may, in its sole discretion, (1) require Subcontractor to work overtime and/or use such additional labor and equipment as necessary to accelerate the Work and bring Subcontractor's performance into compliance with the Project Schedule, (2) supplement Subcontractor's work by furnishing additional labor and equipment to the Project as necessary to accelerate the Work and bring Subcontractor's performance into compliance with the Project Schedule, (3) require Subcontractor to provide reasonable assurances of timely performance in accordance with the Project Schedule, (4) terminate this Subcontract pursuant to Article X, and/ or (5) exercise all other rights and remedies available under this Subcontract. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time as a result of any such action by Contractor.

ARTICLE V

5.1 **Changes and Modifications to Subcontract.** Without invalidating the Subcontract and without notice to any surety, Contractor may, at any time or from time to time, order additions, deletions or revisions in the Work or acceleration of the Work. Any such additions, deletions, revisions, or acceleration shall be binding upon Contractor and Subcontractor exclusively when made in writing executed by James Gramoll. Upon receipt of such an order, Subcontractor shall promptly proceed with the Work involved, which shall be performed under the applicable conditions of this Subcontract and the Subcontract Documents, except as otherwise specifically provided. Subcontractor shall not proceed to perform changes in the Work without prior written authorization from Contractor as provided herein. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time for any work performed without such prior written authorization. Except as provided in this Article V or Section 12.1, the terms and conditions of this Subcontract are not otherwise subject to addition, modification, or change.

5.2 **Claims.** The Subcontract Price and the Subcontract Time may be changed only by a written directive by Contractor, change order, or written Amendment to this Subcontract signed by James Gramoll. Within seven (7) working days of an occurrence or event giving rise to a claim for a adjustment in the Subcontract Price or Subcontract Time, Subcontractor shall provide to Contractor written notice (hereinafter, a "Claim") stating the nature of the Claim and the adjustment in Subcontract Price and Subcontract Time requested, accompanied by supporting documentation. All Claims shall include and/ or be accompanied by the following supporting information and/ or documents: (a) the specific amount of the requested adjustment in the Subcontract Price, if any, (b) the specific number of days' adjustment in the Subcontract Time requested, if any, (c) the reasons justifying the request for an adjustment in the Subcontract Price and the Subcontract Time, including a CPM analysis demonstrating a critical path delay for any requested adjustment in the Subcontract Time, if any, (d) the party or parties whose orders, decisions, acts or omissions give rise to the requested adjustment in the Subcontract Price and/ or the Subcontract Time, and (e) a revised schedule based on the requested adjustments in the Subcontract Time, if any.

A Claim shall be deemed to include all adjustments in Subcontract Price and/ or Subcontract Time to which the claimant is entitled as a result of the occurrence or events giving rise to the Claim. No Claim by Subcontractor for an adjustment of the Subcontract Price or Subcontract Time will be valid if not delivered to the Contractor within the seven (7) working day period prescribed above. Subject to Contractor's right to terminate Subcontractor's rights under this Subcontract, Subcontractor shall continue performance of its

obligations under this Subcontract notwithstanding any dispute between Contractor and Subcontractor concerning a Claim asserted by either party.

Subcontractor's sole and exclusive right to an adjustment in the Subcontract Price and/ or the Subcontract Time shall be the adjustment in the contract price and/ or the contract time to the General Contract actually received by Contractor from Owner on behalf of Subcontractor as a result of any such Claim. Subcontractor shall not be entitled to any adjustment in the Subcontract Price or the Subcontract Time or any other remedy under this Subcontract or remedy for breach thereof as a result of any event, occurrence, or act or omission of Contractor or Owner beyond such adjustment in the contract price and/or the contract time to the General Contract received by Contractor from Owner. Receipt by Contractor of a fully-executed written change order from Owner is a condition precedent to Subcontractor's right, if any, to an adjustment in the Subcontract Price and/ or the Subcontract Time, a remedy under this Subcontract, or remedy for breach of this Subcontract. Subcontractor's right to recover for such change, remedy, or breach shall be limited to the adjustment in contract price and/ or contract time received by Contractor from Owner for such change, remedy, or breach.

5.3 **Delays** If events, occurrences, acts, or omissions beyond the control of Subcontractor including, without limitation, the work of other trades or contractors, fire, earthquake, acts of God, terrorist acts, riots, war, strikes or other force majeure events delay Subcontractor's Work, the Subcontract Time and/ or the Subcontract Price will be adjusted to the extent of any adjustment in the contract price and/ or the contract time in the General Contract received by Contractor from Owner on behalf of Subcontractor. Subcontractor may make a Claim for an adjustment in the Subcontract Time and/ or the Subcontract Price if, and only if, Subcontractor timely presents to Contractor a Claim in compliance with Section 5.2. Any such adjustment in the contract price and/ or the contract time under the General Contract received by Contractor from Owner shall be Subcontractor's sole and exclusive remedy for such delays, if any, to Subcontractor's Work on the Project. Receipt by Contractor of a fully executed written change order from Owner is a condition precedent to Subcontractor's right, if any, to an adjustment in the Subcontract Price and/ or the Subcontract Time for delays of any kind or nature.

The Subcontract Time and the Subcontract Price shall not be adjusted and Subcontractor shall not be entitled to any remedy under this Subcontract, or for breach of this Subcontract for (a) delays caused concurrently by Subcontractor and Contractor, Owner or any other person, or (b) any other delays to Subcontractor's Work on the Project for any other events, occurrences, acts or omissions of any person or entity or of any other kind or nature other than that for which an adjustment in the Subcontract Price and/ or the Subcontract Time are expressly authorized in this Section.

5.4 **Subcontractor-Caused Delays.** Subcontractor recognizes and acknowledges that Contractor will suffer substantial Losses if Subcontractor fails to perform the Work in compliance with the Project Schedule. Subcontractor shall indemnify and hold Contractor harmless from and against any and all Losses and liquidated damages that are attributable to or caused by Subcontractor's failure to perform the Work in compliance with the Project Schedule. In addition to liquidated damages, such Losses may include, without limitation, direct jobsite overhead costs such as costs for project management and supervision, quality control, utilities, and other costs such as home office overhead, attorneys' and other professional fees, and other usual and customary mark-ups. If Contractor incurs Losses and/ or is assessed liquidated damages as a result of delays caused concurrently by Subcontractor and other trades or contractors, such Losses and/ or liquidated damages shall be pro rated by Contractor, in its sole discretion, between Subcontractor and all other responsible parties. Contractor's allowing Subcontractor to proceed with Work beyond the time specified for Subcontractor's performance of that Work shall not constitute a waiver of any rights by Contractor to recover damages for Subcontractor's delay.

ARTICLE VI

6.1 **Payment.** Contractor shall pay Subcontractor in monthly payments of 95% percent of the work performed in any preceding month, in accordance with estimates prepared by Subcontractor. **All such pay estimates shall be made on the sample form provided, entitled "Subcontractor's Application for Payment."** Contractor has the unfettered right, at its discretion, to adjust Subcontractor's statements to reflect any overestimation of the percent of work complete made by Subcontractor in a pay estimate.

6.2 **Pay-If-Paid.** When such pay estimates are approved by Contractor and/ or the Owner, Contractor will pay Subcontractor as payments are received by Contractor from the Owner covering the monthly pay estimates of the Contractor, including the approved portion of Subcontractor's monthly pay estimate.

All payments to Subcontractor will be made only from a special fund, namely, from payments made by Owner to Contractor in respect of work performed by Subcontractor. No payments will be made to Subcontractor unless that fund comes into existence. Owner's payment to Contractor for Subcontractor's Work is an express condition precedent to Contractor's obligation to make any payment to Subcontractor.

6.3 **Delayed Pay Estimate/ Retainage.** If the Subcontractor fails to submit a timely request for payment in an amount approved by Contractor, Subcontractor's payment may be delayed. Contractor shall have the right to withhold from any payment the percentage of retention set forth in the General Contract between Contractor and the Owner, but in no case less than five percent of all amounts due Subcontractor until the project is fully completed and accepted by the architect or Owner, and Contractor has received final payment from the Owner.

6.4 **Payroll Summaries/ Prevailing Wages.** Subcontractor agrees to furnish to Contractor one copy of each weekly payroll summary within seven days after the date of payment. Subcontractor agrees to comply with any and all provisions in the General Contract relating to labor standards, minimum wages and other wage and hour provisions to the same extent as they are binding upon Contractor. In the event the Owner requires Contractor to furnish payroll affidavits, subcontractor agrees to furnish similar affidavits to the Contractor.

6.5 **Withholding.** Contractor may withhold payment to Subcontractor in whole or in part to the extent necessary, in Contractor's sole discretion, to protect Contractor against Losses for which Subcontractor is responsible as a result of any Default, as that term is defined below.

If, at any time prior to final payment, Contractor determines, in its sole discretion, that it is insecure regarding Subcontractor's ability, willingness, or intent to fulfill its warranty obligations under the Subcontract Documents, Contractor may, at its option, withhold final payment during the entire Warranty Period. Subcontractor waives any right to recover interest on the amount withheld during that time. Contractor shall make final payment for Subcontractor's Work within ten (10) days of (1) expiration of the Warranty Period, or (2) Contractor's receipt of adequate assurances from Subcontractor of its ability, willingness and intent to perform the warranty work, subject to receipt of by Contractor of final payment from Owner as provided in Section 6.2.

6.6 **Backcharges.** Where feasible, Contractor shall use reasonable efforts to give Subcontractor notice before any costs are incurred which will be offset against the Subcontract Price. If Subcontractor disagrees with the nature or amount of costs to be incurred, it shall advise Contractor promptly in writing, and in no event later than three (3) days after its receipt of notice from Contractor. Such notification shall include reasons for Subcontractor's dispute and shall propose a reasonable and acceptable alternative along with an estimate of the cost of the alternative, where applicable.

If Contractor receives no protest to a proposed backcharge or Subcontractor protests and does not provide an alternative to Contractor's proposed action, Contractor may proceed to incur the costs and offset them against the Subcontract Price. Costs so offset shall be deemed to be reasonable and beyond dispute by Subcontractor. If Subcontractor timely protests and proposes a reasonable alternative that Contractor rejects, the disputed costs incurred shall be subject to the dispute resolution procedure outlined in Article XI, if Subcontractor gives Contractor written notice within ten (10) days of such rejection.

6.7 **Lien Waivers.** Subcontractor shall present to Contractor lien waivers for all labor, materials and equipment furnished by others in connection with this Subcontract prior to receiving each payment hereunder. Contractor may require such lien waivers as a condition of progress or final payment.

6.8 **Liens.** Subcontractor shall timely pay all claims for labor, materials, and equipment incurred in the performance of the Work and shall (1) keep the property on which the Project is situated (the "Property") free from mechanic's liens or attachments, and (2) prevent the filing of any claim or stop notice against funds or the payment of funds owed to Contractor, by any person or entity performing a portion of the Work. If any mechanic's lien, attachment, claim against funds, or stop notice is filed against the Property or funds owed to Contractor arising out of or related to performance of the Work, Subcontractor shall, within ten (10) days after written demand by Contractor, take all reasonable steps necessary to cause the effect of such lien, attachment, claim, or stop notice to be released. Upon request by Contractor, Subcontractor shall obtain a lien release or discharge bond or other bond satisfactory to Contractor in the amount of 150% all liens, attachments, claims, or stop notices so recorded or served.

6.9 Acceptance of, or payment for, Subcontractor's defective or late work shall not constitute a waiver of any claim or offset that Contractor may have under the terms of this Subcontract.

ARTICLE VII

7.1 **Indemnification.** To the fullest extent allowed by law, Subcontractor shall indemnify and hold harmless Contractor, Owner, the project architects and engineers, and all of their respective agents and employees (the "Indemnitees") from and against all claims, damages, losses and expenses including, without limitation, attorney's fees ("Losses"), arising out of or resulting from (1) any Default, or failure by Subcontractor to comply with any express duty, warranty, representation, acknowledgment or covenant in this Subcontract, (2) any charges, claims, or liquidated damages assessed and collected by the Owner against Contractor as a result of and to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees; (3) personal or bodily injury to or death of any person, including, without limitation, any agent, employee, guest or invitee of Subcontractor or its sub-subcontractors, other contractors, Contractor, or Owner, to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees, (4) damage to or loss of property to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees, (5) any use of Contractor's equipment, tools, rigging, blocking, hoists, or scaffolding, (6) liens, attachments, claims, or stop notices against funds or payments owed to Contractor, recorded or served by any of Subcontractor's sub-subcontractors, or (7) infringement of any patent or copyright by Subcontractor. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

The indemnity agreement shall be covered by Subcontractor's comprehensive general liability insurance policy. The indemnity obligations set forth in this Subcontract shall not be limited by (1) the Subcontract Price, or (2) the amount or type of proceeds, compensation, or benefits available to Subcontractor under any insurance policy including, without limitation, any self-insurance or similar program or policy maintained by Subcontractor.

At the request of an Indemnitee, Subcontractor shall defend any claim for Losses against an Indemnitee. The Indemnitee shall be entitled to approve the legal counsel to be paid for by Subcontractor for the purpose of defending such claims for Losses. No claim for Losses shall be settled or discontinued, nor shall judgment be permitted to be entered without the written consent of the Indemnitee, which consent shall not be unreasonably withheld.

ARTICLE VIII

8.1 **Insurance.** Unless otherwise specified in the Subcontract Documents indicating that insurance shall be provided pursuant to an owner-controlled or contractor-controlled insurance program, Subcontractor shall purchase and maintain the following insurance coverages for itself and the Additional Insureds during the course of the Work and during the Warranty Period, and shall maintain completed operations coverage for itself and the Additional Insureds for the length of time necessary to cover any manifestation date within the applicable statutes of limitations and/ or repose which pertain to the Work. If additional insurance coverage or greater limits of liability are required by the General Contract Documents, such provisions shall control.

8.1.1 **Commercial General Liability** coverage on an occurrence basis with a deductible not to exceed $1,000 per occurrence that includes coverage for liability assumed under any oral or written contract relating to the conduct of Subcontractors' business, including this Subcontract, and also including (1) broad form property damage liability coverage; (2) premises-operations coverage; (3) explosion and collapse hazard coverage; (4) underground hazard; (5) products and completed operations hazard coverage, and (6) independent contractor coverage. The limit of liability shall be not less than $1,000,000 each occurrence, $2,000,000 general aggregate (subject to a per project general aggregate provision applicable to the project per ISO form CG 2503 or its equivalent), $2,000,000 products/completed operations aggregate and $1,000,000 personal and advertising injury.

Claims Made/Self-Insurance Provisions. Subcontractor shall not provide general liability insurance under any Claims-Made General Liability form without express prior written consent of Contractor. Any self-insurance program providing coverage in excess of $25,000 per occurrence requires the prior written consent of the contractor.

8.1.2 **Automobile Liability** coverage in comprehensive form affording coverage for owned, hired, and non-owned vehicles. The limit of liability shall not be less than $1,000,000 for bodily injury and property damage combined, $1,000,000 for each accident. (No aggregate on automobile

insurance). The General Contractor, Owner and all other parties required of the General Contractor, shall be included as insureds on the auto policy.

8.1.3 **Workers Compensation and Employers Liability** coverage with Workers Compensation limits complying with statutory requirements, and Employers Liability Insurance limits of at least $1,000,000 each accident, $1,000,000 for bodily injury by accident, and $1,000,000 each employee for injury by disease. Workers' compensation insurance shall comply with the statutory form.

8.1.4 **Commercial Umbrella** coverage with limits of at least $1,000,000. Umbrella coverage must include as insureds all entities that are additional insureds on the CGL. Umbrella coverage for such additional insureds shall apply as primary before any other insurance or self-insurance, including any deductible, maintained by, or provided to, the additional insured other than the CGL, Auto Liability and Employers Liability coverages maintained by the Subcontractor.

8.1.5 **Hazardous Materials** If Subcontractor and/or its subcontractors or suppliers, regardless of tier, perform remediation of hazardous material, or if their operations create an exposure to hazardous materials as those terms are defined in federal, state, or local law, Subcontractor and its subcontractors and suppliers must obtain a "Contractor's Pollution Liability" policy with limits not less than $1,000,000 per occurrence and $2,000,000 aggregate for Bodily Injury, Personal Injury, and Property Damage, naming Contractor and Owner as additional insured. If Subcontractor or its subcontractors or suppliers haul hazardous material (including, without limitation, waste), they must carry Auto Liability insurance with a $1,000,000 Combined Single Limit for Bodily Injury and Property Damage applicable to all hazardous waste hauling vehicles, and include MCS 90 and CA9948.

8.1.6 **Professional Liability Coverage** Any subcontractor performing work that includes design/build work or services shall obtain a Professional Liability Insurance Policy. Design/build work includes, without limitation, design/build work with respect to mechanical, structural, plumbing, and fire sprinkler systems. Coverage must allow for a minimum of two years following the completion of the project. If Owner or Contractor elects to purchase a project design policy, Subcontractor's policy shall be endorsed to provide excess coverage only.

The liability insurance policies, including commercial general liability, automobile liability and excess liability, shall be endorsed to provide: (1) that Contractor and Owner are additional insureds (the "Additional Insureds") per ISO form CG 20 10 07 04 and CG 20 37 07 04 or their equivalent, (2) that the insurance afforded by the policies shall apply to Contractor as though a separate policy had been issued to Contractor, and (3) that the coverage afforded to Contractor is primary and any other insurance in force for Contractor will be excess and will not contribute to the primary policies. All required insurance shall be provided by insurance companies with a rating of A- VII or better by A.M. Best Company.

Prior to performing any Work, Subcontractor shall provide Contractor with a certificate of insurance demonstrating that Subcontractor has obtained all of the insurance coverages required by this Section. An additional insured endorsement shall be attached to such certificate of insurance. The certificate of insurance and the insurance policies effectuating coverages required by this Section shall contain a provision that coverage afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to Contractor.

8.2 Subcontractor waives all rights against Contractor, Owner and Architect and their respective agents, officers, directors and employees for recovery of damages to the extent these damages are covered by commercial general liability, commercial umbrella liability, business auto liability or workers compensation or employers liability insurance.

8.3 Subcontractor will protect the job site, the work of Contractor and subcontractors, and its own work until completion and acceptance of the entire project. Contractor and Subcontractor waive all rights against each other and against all other subcontractors and Owner for loss or damage to the extent reimbursed by Builder's Risk or any other property or equipment insurance applicable to the work, except such rights as they may have to the proceeds of such insurance. If the Subcontractors policies of insurance referred to in this Section require an endorsement or consent of the insurance company to provide for continued coverage where there is a waiver of subrogation, the owners of such policies will cause them to be so endorsed or obtain such consent.

Upon written request of the Subcontractor, Contractor shall provide Subcontractor with a copy of the Builder's Risk policy of insurance or any other property or equipment coverage in force for the project and procured by Contractor. Subcontractor shall satisfy himself as to the existence and extent of such coverage prior to commencement of Subcontractor's work.

If Builder's Risk insurance purchased by Owner or Contractor provides coverage for Subcontractor for loss or damage to Subcontractor's work, Subcontractor shall be responsible for the insurance policy deductible amount applicable to damage to the Subcontractor's work and/or damage to other work caused by Subcontractor. If not covered under the Builder's Risk policy of insurance or any other property or equipment insurance required by the Contract Documents, Subcontractor shall procure and maintain at his own expense property and equipment insurance for portions of Subcontractor's work stored off the site or in transit.

If Owner or Contractor has not purchased Builder's Risk or equivalent insurance including the full insurable value of Subcontractor's work, then Subcontractor may procure such insurance at his own expense as will protect the interests of Subcontractor, and his subcontractors in the work. Such insurance shall also apply to any of the Owner's or Contractor's property in the care, custody, or control of Subcontractor.

8.4 **Health Insurance Certification**. Subcontractor hereby certifies that the Subcontractor and all applicable subcontractors and suppliers at any tier that is subject to UCA 63A-5-205 and Utah Administrative Code Rule R23-23, has and will maintain for the duration of this contract, an offer of qualified health insurance coverage for their employees; all in accordance with UCA 63A-5-205, and Utah Administrative Code Rule R23-23.

ARTICLE IX

9.1 **Default.** The following acts or omissions by Subcontractor shall constitute events of default ("Default") under this Subcontract and shall give rise to all rights and remedies for material breach of this Subcontract, including, without limitation, termination of this Subcontract:

(a) failure to perform the Work in strict compliance with this Subcontract and the Subcontract Documents.

(b) failure to promptly and diligently correct or replace Defective Work.

(c) failure to diligently perform the Work in compliance with the Project Schedule including, without limitation, failure to supply sufficient skilled laborers, materials, or equipment.

(d) failure to provide reasonable assurances of timely performance.

(e) failure to provide timely submittal information for review and approval as provided in the Subcontract Documents.

(f) failure or evidence of failure to timely pay workers, subcontractors, or health, welfare, pension or other benefit funds for labor, materials or equipment furnished as part of the Work.

(g) failure to keep the Property free from mechanic's liens.

(h) third party claims or evidence indicating, in Contractor's sole discretion, probable filing of such claims unless Subcontractor provides security against such claims in a form acceptable to Contractor.

(i) failure to pay prevailing wages, if required.

(j) assignment or subcontracting the majority of the Work without prior written authorization from Contractor.

(k) failure to perform the Work in strict compliance with the Laws and Regulations or the Safety Rules and Regulations.

(l) evidence that the Work can not be completed for the unpaid balance of the Subcontract Price, as determined by Contractor in its sole discretion.

(m) evidence that the Work will not be completed within the Subcontract Time, and/ or that the unpaid balance will not be adequate to cover actual or liquidated damages for the anticipated delay, as determined by Contractor in its sole discretion.

(n) damage to the work of Contractor or others on the Project.

(o) insolvency, inability to pay its current obligations, filing of any action seeking the protection of a bankruptcy court where this Subcontract is rejected by the trustee or the Subcontractor is unable to satisfy the requirements for assuming this Subcontract under the applicable provisions of the bankruptcy code, seeking to effect reorganization or workout with its creditors, filing in bankruptcy court by its creditors seeking to compel Subcontractor to reorganize or liquidate assets, appointment of a receiver or trustee related to any insolvency of Subcontractor, and garnishment of any amounts owed by Contractor to Subcontractor;

(p) any other material breach of this Subcontract or the Subcontract Documents; and

(q) any act, occurrence or event that places Subcontractor in default under any agreement between Contractor and Subcontractor other than this Subcontract.

9.2 **Notice of Default.** Upon written notice of Default, Subcontractor shall, within forty-eight (48) hours of receipt of such notice, take all actions requested by Contractor and such other actions as may be necessary to cure such Default. Subcontractor shall not be entitled to any adjustment in the Subcontract Price or the Subcontract Time as a result of any efforts to cure such Default.

9.3 If Subcontractor fails to cure any Default within forty-eight (48) hours after receipt of written notice of Default, Contractor may cure or remedy any Default by Subcontractor. Subcontractor shall reimburse Contractor and/or Contractor may backcharge Subcontractor for, any and all Losses it incurs, plus a reasonable allowance for profit, to cure or remedy any Default, or as a result of any other failure of Subcontractor to comply with the terms and conditions of this Subcontract or the Subcontract Documents. Contractor may offset against the Subcontract Price any Losses incurred as a result of a Default or any amounts owed to Contractor pursuant to this Section.

ARTICLE X

10.1 **Termination for Cause.** If (1) Subcontractor fails to cure any Default within forty-eight (48) hours after receipt of written notification of such Default, or (2) a Default threatens to cause immediate personal or bodily injury or death, Contractor may terminate Subcontractor's rights under this Subcontract in its entirety and Contractor shall have all the rights and remedies available under this Subcontract and at law or in equity including, without limitation, those remedies specified below.

If Contractor terminates this Subcontract for cause as provided herein, Contractor may, without prejudice to any other of its rights or remedies, perform and complete the Work and in connection therewith, Contractor may do any or all of the following:

10.1.1 exclude Subcontractor from the Project.

10.1.2 take possession of all materials, equipment, and tools intended for performance of the Work including materials and equipment at the Project site, stored materials and equipment, and materials and equipment in the course of preparation wherever located (without liability to Subcontractor for trespass or conversion),

10.1.3 accept assignment of Subcontractor's rights under all of Subcontractor's contracts with sub-subcontractors for performance of the Work, pursuant to Section 3.9 and/ or

10.1.4 otherwise obtain materials and equipment and employ persons which, in Contractor's sole discretion, are necessary to complete the Work.

Upon termination for cause as provided herein, Subcontractor shall not be entitled to receive any further payment until completion of all of the Work and acceptance of the entire Project. Subcontractor shall reimburse Contractor for all Losses it incurs to complete Subcontractor's Work, plus a reasonable allowance for overhead and profit. If the unpaid balance of the Subcontract Price exceeds the Contractor's Losses, plus allowance for overhead and profit, Contractor shall pay such excess to Subcontractor. If such Losses, overhead, and profit exceed the unpaid balance of the Subcontract Price, the Subcontractor shall pay the difference to Contractor. In addition, Contractor shall be entitled to such other and further remedies available at law or in equity.

10.2 **Suspension for Convenience.** Contractor may, without cause, suspend, delay or interrupt the Work in whole or in part for such period of time as the Contractor may determine and/ or as provided in the Subcontract Documents. Subject to the requirements and limitations of Article V, the Subcontract Price and Subcontract Time may be adjusted for increases in the cost and time to complete the Work caused by such suspension. No adjustment shall be made, however, to the extent that (a) performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Subcontractor is responsible, (b) an adjustment is made or denied under another provision of this Subcontract, or (c) Contractor is not entitled to a adjustment in the contract price and/ or the contract time under the General Contract on behalf of Subcontractor as a result of such suspension.

10.3 **Termination for Convenience.** The Contractor may, at any time, terminate this Subcontract for the convenience of Contractor and without cause. Subcontractor's sole and exclusive right to compensation for Losses resulting from such termination shall be the compensation actually received by Contractor from Owner on behalf of Subcontractor as a result of any such termination. Subcontractor shall not be entitled to any compensation for Losses or any other remedy under this Subcontract or for breach thereof as a result of such termination beyond such adjustment in the contract price and/ or the contract price to the Prime Contract received by Contractor from Owner on behalf of Subcontractor. Receipt by Contractor of such compensation is a condition precedent to Subcontractor's right, if any, to compensation for Losses resulting from such termination. Subcontractor's right to recover for such termination shall be limited to the compensation received by Contractor from Owner for such termination on behalf of Subcontractor.

ARTICLE XI

11.1 **Dispute Resolution.** Disputes, if any, between Subcontractor and Contractor arising out of or relating to this Subcontract or the Work shall be resolved as provided in this Article.

11.2 **Disputes Involving the Owner or the Architect.** Any disputes in which the Owner or the Architect is a party shall be governed by the dispute resolution procedures in the Subcontract Documents other than this Subcontract. If those Subcontract Documents contain no dispute resolution procedures, such disputes shall be resolved as provided in Section 11.3 below.

11.3 **Disputes Not Involving the Owner or the Architect.** At the sole and exclusive discretion of Contractor, all disputes in which neither the Owner nor the Architect is a party shall be resolved in (1) binding arbitration, or (2) litigation in a state or federal court of competent jurisdiction situated in the state of the location of the Project. If Contractor determines to resolve disputes under this Subcontract by binding arbitration, the following rules shall apply.

11.3.1 Binding Arbitration shall be pursuant to the current Construction Industry Arbitration Rules of the American Arbitration Association unless the parties mutually agree otherwise. A written demand for arbitration shall be filed with the American Arbitration Association and the other party within a reasonable time after the dispute or claim has arisen, but in no event after the applicable statute of limitations for a legal or equitable proceeding would have run.

11.3.2 Any Arbitration pursuant to this Subcontract may be joined or consolidated with any arbitration involving (1) any other person or entity necessary to resolve the claim, dispute or controversy, (2) the same transaction or series of related transactions as those in the Arbitration, or (3) a common issue of law or fact with those in the Arbitration creating the possibility of conflicting rulings by more than one arbitrator or panel of arbitrators. The location of the arbitration proceedings shall be in the state of the location of the Project. The arbitration award shall be final.

11.3.3 Arbitration pursuant to this Section shall be governed by the applicable version of the Uniform Arbitration Act in enacted by the state of the location of the Project. The arbitrator, in

determining an award, shall be without jurisdiction to enter any award not in conformity with the laws determined by the parties to be controlling pursuant to Section 12.4. The arbitrator shall have all authority necessary to enforce all the terms and conditions of this Subcontract and provide for all remedies available hereunder including, without limitation, interim relief, if appropriate. The arbitrator shall prepare a (1) reasoned award, or (2) findings of fact and conclusions of law, applying the governing laws to the facts of the case.

11.3.4 Notwithstanding the foregoing, the arbitrator shall be deemed to have exceeded the authority granted under this Subcontract if, and to the extent, an award does not comply with the requirements of this Subcontract. The Parties consent to the jurisdiction of the state and federal courts of the state in which the Project is located for the purposes of (1) enforcing the parties' obligation to arbitrate disputes, claims and controversies under this Subcontract, (2) determining the scope of the matters that are subject to arbitration, (3) requiring the joinder and/ or consolidation of matters subject to arbitration, and (4) enforcing and entering judgment upon the arbitration award entered by the arbitrator. Each Party waives any objection that it may now have or hereafter have to venue in such courts.

11.3.5 If any action or proceeding is brought in connection with this Subcontract, the prevailing party shall be entitled to recover its costs and reasonable expert and attorneys' fees.

ARTICLE XII

12.1 This Subcontract and the Subcontract Documents constitute the final, complete, and exclusive statement of the agreement between the parties, and supersedes and replaces in their entirety all prior oral or written agreements, including but not limited to, bids and bid acceptances. This Subcontract may not be altered, amended or extended, except by written agreement of the parties hereto executed by James Gramoll on behalf of Contractor.

12.2 This Subcontract shall inure to the benefit of and be binding upon the parties hereto, their successors and permitted assigns.

12.3 Delay by Contractor in enforcing any rights or remedies in the event of Default or a breach of any term or condition of this Subcontract or any other contract between Contractor or Subcontractor, shall not be construed as a waiver of such Default or breach. Payment by Contractor of progress payments or final payment shall not be construed as acceptance of any work for which payment is made or waiver of any Claims, rights, or remedies under this Subcontract.

12.4 This Subcontract shall be construed and interpreted as a whole in accordance with its fair meaning and in accordance with the laws of the state of the location of the Project. Under no circumstances, however, shall such laws be interpreted to apply conflict of laws principles to require the laws of another state to determine the interpretation or construction of this Subcontract.

12.5 **Performance Guaranty.** If Subcontractor operates as a corporation, limited liability company, partnership or a business entity other than as an individual or sole proprietor, this Subcontract will be signed by the President and Secretary of the corporation, the managing member(s), partners, or other authorized principals of Subcontractor's company, and the officers, managing member(s), partners, and/ or other principals signing this Subcontract on behalf of the corporation, limited liability company, partnership or other business entity do jointly and severally, guarantee to the Contractor the full and faithful performance of this Subcontract by Subcontractor, and do further agree, jointly and severally, that they shall be personally liable to Contractor for the full and faithful performance of Subcontractor's obligations under this Subcontract. Failure of Contractor to request a performance bond from Subcontractor shall not affect the obligation assumed by the officers, managing members, partners or other principals signing this Subcontract on behalf of Subcontractor.

IN WITNESS WHEREOF, this Subcontract has been executed by the Contractor and Subcontractor as of the day and the year below.

SUBCONTRACTOR: **(SUBCONTRACTOR NAME)**

By _____

Print _____

Its _____

Date: _____

CONTRACTOR: **GRAMOLL CONSTRUCTION COMPANY**

Auth _____

Print James C. Gramoll, President

Date: _____