October 3, 2016

Jill Parisi
Colorado Department of Public Health and Environment
HMWMD-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Phone: (303) 692-3348
E-mail: Jill.parisi@state.co.us

RE: Proposed Candlewood Suites Hotel
Materials Management Plan and Methane Mitigation Submittal
Lot 2&3, Block 1, North Pueblo
North of 4530 Dillion Drive
Pueblo, Colorado
Terracon Project No. B8167005

Dear Ms. Parisi:

The purpose of this correspondence is to provide a copy of the Materials Management Plan (MMP) and methane mitigation system (VMS) prepared for the proposed development of a Candlewood Suites Hotel located to the north of the Holiday Inn Express Hotel at 4530 Dillion Drive, Pueblo, CO. Quest Development and Construction, Inc. (Quest) will develop the site. Per our discussion on August 29, 2016, you requested Terracon provide a copy of the MMP and VMS plans to the Colorado Department of Public Health and Environment (CDPHE) for review and consideration.

Please let me know if you have any questions or concerns about the MMP and VMS included as an attachment.

Sincerely,
Terracon Consultants Inc.

Jared C. Geissler, P.E., PMP, CHMM
Department Manager | Environmental Services

Lawrence R. Keefe
Principal | Office Manager

C.C. John Kokales (Quest)

Materials Management Plan

Proposed Candlewood Suites Hotel

Lots 2 and 3, Block 1, North of 4530 Dillon Drive
Pueblo, Pueblo County, Colorado
October 3, 2016

Terracon Project No. B8167005

Prepared for:
Quest Development
Aberdeen, South Dakota

Prepared by:
Terracon Consultants, Inc.
Colorado Springs, Colorado

TABLE OF CONTENTS

PAGE NO

LIST OF EXHIBITS

MATERIALS MANAGEMENT PLAN
PROPOSED CANDLEWOOD SUITES HOTEL
LOTS 2 AND 3, BLOCK 1, NORTH OF 4530 DILLON DRIVE
PUEBLO, PUEBLO COUNTY, COLORADO
October 3, 2016
Terracon Project No. B8167005

1.0 GENERAL INFORMATION

Terracon Consultants, Inc. (Terracon), on behalf of its client, Quest Development, has prepared the following Materials Management Plan (MMP) for the management of potentially environmentally impacted media during proposed redevelopment of the proposed Candlewood Suites Hotel (site).

Implementation of the procedures outlined in this document is intended to provide protection of public health and the environment, related to the identified hazards during the development activities.

ITEM	DESCRITION
Site Address	Proposed Candlewood Suites Hotel, Lots 2 and 3, Block 1, North of 4530 Dillon Drive, Pueblo, CO; 38D 19M 6.5S North, 104D 36M 41S West
Site Area	Approximately 3.39 acres per the Pueblo County Assessor
Parcel Number(s)	Pueblo County Parcel Number 512021002 and 512021003
Current Land Use	Vacant and unimproved
Current Zoning	Planned Unit Development Zone District per Pueblo County
Current Ground Cover	None
Topography	The topographic surface of the site slopes to the east
Proposed Construction	New construction, consisting of approximately one 4-story hotel building with landscaping and parking
Property Owner	Pueblo Lodging II, LLC 2011 8th Ave NE Aberdeen, SD 57401
Owner Representative	Mr. John Kokales Quest Development 2301 8th Ave NE, Suite 120 Aberdeen, South Dakota 57401 (605) 725-6000
Prepared For	Quest Development 2301 8th Ave NE, Suite 120 Aberdeen, South Dakota 57401 (605) 725-6000
Contact Person	Terracon Consultants, Inc. Jared Geissler, P.E. 4172 Center Park Drive Colorado Springs, Colorado 80916 (719) 572-7673

The following sections of the MMP discuss the scope of activities to manage the site soils and the potential for methane vapors during development:

- Materials of Concern
- Description of Remedial Measures
- Soil and Groundwater Management
- Plan Implementation

2.0 PURPOSE

The purpose of this MMP is to provide a guidance document to manage hazardous materials, if encountered, during the site development. Through implementation of this MMP, the Owner or Owner's Representative will be notified of potential environmental-related incidents pertaining to construction activities at the site. Terracon is not responsible for fulfilling current and/or future Owner's obligations (as Owner of the site) described in any environmental covenants, responsibilities, agreements, or contracts associated with the site, should they exist.

For purposes of this MMP, the site is defined as any area associated with the property defined above and includes surrounding land that requires construction activity related to support of the development plan. This would include those areas where underground utility installation and connection is required to existing utilities that may not be physically located on the site.

The Plan outlines procedures to protect workers, public health, and the environment during development activities. This MMP addresses the decontamination procedures for equipment and materials. Earthwork operations and decontamination issues are discussed in the context of the procedures to be followed when regulated soil is encountered during construction activities.

3.0 MATERIALS OF CONCERN

Terracon recently prepared a Phase I Environmental Site Assessment (ESA) for the site, Terracon Project No. B8167004 dated August 22, 2016. The ESA included discussion on a 2006 Limited Site Investigation (LSI) Terracon performed for the adjacent property to the south, 4530 Dillon Dr. Pueblo, CO. The 2006 LSI was intended to assess a former landfill located adjacent to the east of that property. The former landfill is also located adjacent to the east of the site. The former landfill, reported to be Northside Landfill, was reportedly operated by the City of Pueblo as a municipal solid waste landfill until closure in approximately 1976. The information in the 2006 LSI report suggested that methane gas could potentially be migrating to the site from the landfill.

Borings advanced on the property adjacent to the south of the site in 2006 indicated that landfilled trash extended up to 75 feet into the property from the property line adjacent to the landfill. It is possible that the extent of landfilled refuse extends onto the site from the adjacent landfill to the east as well. There is potential for asbestos containing materials (ACM) to be within the landfilled

refuse. The ESA recommended the preparation of a written plan to control potential subsurface methane migration, manage potential ACM, and or other impacted media, including municipal solid waste if encountered.

3.1 Asbestos in Soil

Subsurface investigation work performed in the site area in 2006 indicates that landfilled wastes may extend onto the site from the adjacent landfill to the east. Due to a lack of historic information concerning specific disposal activities performed at the landfill, Terracon assumes that soils at the site may contain ACM debris.

Suspect ACM were not observed on the surface or in any of the soil borings performed during the 2006 LSI. Information regarding potential disposal of ACM in the landfill was not identified by Terracon. The planned motel / parking areas do not appear to be located closer than at least 50 feet from the on-site landfill extension, and current development plans do not include intentional disturbance of surficial / subsurface soils east of the motel / parking areas or in other areas at the Site. However, a trench approximately 1 to 2 feet wide and 10 feet deep extending generally north-south immediately adjacent to the eastern-most extent of the parking area will be excavated as part of the construction activities to facilitate installation of a horizontal methane extraction well. Based on location, the trench does not appear to impact the landfill area.

In the event that construction debris and/or Regulated Asbestos Containing Soil (RACS) as defined in the Colorado Department of Public Health and Environment (CDPHE) 6 CCR 1007-2 Part 1 – Regulations Pertaining To Solid Waste Sites and Facilities, Section 1.2 Definitions, effective January 14, 2015; are encountered during development activities, it will be removed in compliance with the CDPHE 6 CCR 1007-2 Part 1 – Regulations Pertaining To Solid Waste Sites and Facilities and Section 5.5 (Management of Regulated Asbestos Contaminated Soil [RACS]), effective January 14, 2015. It should be noted that any disturbance of soil in areas with debris in soil requires the presence of a Colorado Asbestos Building Inspector (CABI) on-site.

Contractors responsible for earthwork at the site will be required to have a two-hour asbestos awareness training prior to the start of the project. The training will provide an understanding of suspect materials that may be encountered during construction activities at the site and when to notify the CABI.

3.2 Methane Gas

As part of the limited site investigation activities preformed in 2006, 14 methane monitoring wells were installed at various locations across the site and adjacent parcel to the south currently developed with a Holiday Inn Express hotel located at 4530 Dillion Drive. During monitoring activities performed in September 2006, elevated methane levels were observed in one of the monitoring wells located along the south-eastern property boundary of the site. Though subsequent monitoring activities performed at the site observed reduced levels, the potential for subsurface methane migration onto the site exist.

Potential subsurface methane gas migration into the planned development area will be addressed using a passive vapor extraction system installed at the site. The vapor extraction system will consist of a single, horizontally-oriented subsurface extraction pipe extending along the eastern portions of the site. Methane gas that may accumulate in the extraction pipe will be discharged to the atmosphere through a number of standpipes attached to the extraction pipe and extending above ground surface. A passive wind driven turbine-type ventilation fan will be installed at the top of each standpipe to provide a slight vacuum pressure to the well. Exhibit 3 included as an attachment depicts the approximate locations of the vapor extraction pipe and details of the proposed extraction system.

The extraction pipe will be approximately 300 feet in length and will consist of 4-inch diameter perforated or slotted plastic pipe. Caps will seal both ends of the pipe. Tees (4 x 4 x 4-inch slip) will be installed at approximate 50-foot intervals along the length of the pipe. A standpipe consisting of an 8-feet long, 4-inch diameter Schedule 40 PVC solid pipe will be connected to each tee and extend vertically upward. A passive wind driven turbine-type ventilation fan will be attached to the top of each standpipe.

The pipe will be installed in a horizontal orientation in a single trench approximately 300 feet long, 10 feet deep and 18-inches wide. Following excavation, the trench will be backfilled with 1 to 2-inch diameter crushed rock to within approximately 32-inches below ground surface. An approximate 4-inch thick layer of pea gravel will be placed above the crushed rock and the pipe installed on top of the pea gravel. Additional pea gravel will subsequently be placed around the pipe to the top of the pipe. A geo-textile material will be placed on top of the pea gravel followed by an approximately 12-inch thick layer of bentonite clay. Silty clay soil will be placed on top of the bentonite to ground surface. The bentonite clay and silty clay layers will be compacted in approximate 6-inch lifts using a tamper or mechanical compaction methods. The compaction efforts should coordinate with the geotechnical engineer.

Additional construction details are included in Figure V1 of Appendix A.

3.2.1 Methane Gas Monitoring

Terracon recommends monitoring for the presence of methane gas using a portable organic vapor meter calibrated using a 50 percent Lower Explosive Limit (LEL) methane gas standard. Monitoring should be manually performed at each standpipe, e.g. at each passive turbine ventilation fan located along the entire length of the methane extraction pipe. Monitoring should be performed immediately following completion of motel construction activities, and once every month thereafter for 3 months. Subsequent monitoring should be performed on an annual basis. Results of monitoring activities should be documented and retained on file.

Should methane concentrations measured in the standpipes exceed 25% LEL, Terracon recommends performing indoor monitoring at the site hotel for the presence of methane gas as a precautionary measure. Monitoring should be manually performed at various locations on the

ground floor (or basement level if present) of the proposed motel structure. Monitored locations should include, but not be limited to:

- Floor drains / sink drains / sumps
- Mechanical / electrical room(s)
- Elevator pit(s) / shaft(s)
- Pipe chases / conduit terminals
- Janitorial closet(s)
- Floor / wall joints
- Hallway(s)

Should one or more whole air measurements equal or exceed the regulatory action level of 25% LEL, the owner / operator of the motel will immediately take all necessary steps and actions to ensure protection of human health including, but not limited to, evacuation of the motel structure until for such time that whole air methane concentrations have been demonstrably reduced below 25% LEL. The local fire department (719 / 553-2830) and CDPHE (303 / 692-2000 or 800 / 886-7689) will be notified by telephone immediately following detection of whole air methane concentrations at or above 25% LEL. A report documenting monitoring results and corrective actions implemented should be submitted to CDPHE within 10 calendar days following corrective action implementation.

4.0 SOIL AND GROUNDWATER MANAGEMENT

If impacted soil or groundwater (i.e. staining, chemical odors, oil related sheen) is encountered during development or remedial activities, then that material will be managed in accordance to the following criteria.

4.1 Soils Management

Based on soil lithology observed during boring activities, subsurface soils generally consisted of surficial silty clay underlain by brown weathered shale grading to gray shale.

Analytical data, collected as part of the 2006 LSI, indicated low levels of impact from arsenic, cadmium, lead and benzene. In discussions with CDPHE, the observed concentrations were determined to be naturally occurring within the gray shale and brown weathered shale beneath the site, and were not the result of offsite migration of impacted groundwater onsite or an onsite surface release.

Based on current development plans, construction activities in on-site areas of known or suspected solid waste disposal will not intentionally be performed. Should future activities resulting in sub-surface or surface cover disturbance in these areas be planned, activities will be performed in general accordance with this plan.

Potentially contaminated soil and or solid waste encountered during excavation activities should be observed by an environmental professional using field screening analytical methods prior to soil disposition and/or disposal.

4.1.1 Sampling and Analysis Plan

If additional analyses are performed, the following guidelines shall apply to environmental soil sampling.

- Soil from areas determined to be potentially impacted that may be excavated will be observed, sampled, analyzed, and characterized to determine proper handling methods and disposal.

- If soil contamination is suspected based on visual observation or other field screening methods, then the potentially impacted soil will be isolated by stockpiling suspect material using 10-mil or greater plastic sheeting. Laboratory analytical testing will determine if the soil can be reused on site or if the soil must be sent to an approved facility for disposal.

Soil samples collected in the field will be placed directly into clean laboratory-supplied containers, capped, labeled, and placed in ice-chilled containers for transport to a state-approved laboratory under strict chain-of-custody protocol.

Excavated soils/spoils that are generated from the site development that show evidence of contamination will be characterized and managed in accordance with local and state regulations.

Documentation regarding the quantities and disposition of soil will be maintained in the project file.

4.1.2 Excavation

Soil and debris generated during excavation activities, if identified as impacted will be characterized and managed as waste for disposal.

4.1.3 Dust Mitigation

The purpose of implementing dust mitigation activities are to minimize:

- Generation of visible dust;
- Off-site migration of fugitive dust; and,
- Worker and public exposure.

The Owner or Owner's Representative, General Contractor, and/or excavation subcontractor will conduct dust mitigation activities as a part of the best management practices (BMP). Water spray will be the primary method used for controlling fugitive dust during excavation, re-grading, and or pavement demolition activities at the site as applicable. Water used for dust control will be free from salts, oil, and other deleterious materials. Dust control water will be obtained from fire hydrants or spigots within close proximity to the work area or trucked onto site from an approved source.

Areas to be excavated and re-graded will be wetted using various techniques. The work areas will also be lightly sprinkled during excavation activities (as required) to minimize airborne dust. Dust control measures will be increased (more frequent wetting and sprinkling) during the movement of dry materials and/or observation of visible dust.

If soil is excavated, and determined to be removed from the site for offsite disposal, the soil will be direct-loaded into haul trucks when possible to reduce the handling and dust generation. Soil within the beds of haul trucks will be covered during transportation of soil to the appropriate disposal facility.

Trucks and equipment leaving the site will observe city requirements to minimize soil that may inadvertently fall or be tracked onto adjoining street surfaces.

4.2 Groundwater Management

Production of groundwater from dewatering is not anticipated during site redevelopment activities. Depth to groundwater was observed during previous investigation at depths exceeding 30 feet below ground surface. If groundwater production occurs, Terracon can provide characterization services to determine a waste management strategy. Disposal characterization samples will be collected directly into clean laboratory-supplied containers, capped, labeled, and placed in ice-chilled containers for transport to a state-approved laboratory under strict chain-of-custody protocol.

5.0 MONITORING PLAN IMPLEMENTATION

This section outlines the activities that will be conducted to conform to the material management strategies described above.

5.1 Project Health and Safety Plan

The risks associated with the on-site activities consist primarily of worker protection during construction. Workers and/or managers associated with intrusive (excavation) site activity will be required to undergo a one-time health and safety orientation meeting at the start of the project. Terracon recommendation the selected contractor prepare a site-specific Health and Safety Plan (HASP) for the planned construction work. The Owner/Owner's Representative/General

Contractor should also create a hazard communication program as part of the normal construction activity during site preparation, excavation and caisson drilling phases of construction. Terracon can assist with the preparations of the HASP and hazard communication program at the owners request.

5.2 Materials Management Plan Oversight

The observation of construction activities at the site should be conducted by trained environmental professionals capable of executing the requirements of this MMP during the construction work. Terracon suggests the establishment of an Environmental Management Coordinator (EMC) with experience in the recognition, characterization, handling and disposition of the materials of concern previously identified at the site. An EMC could be responsible for overseeing intrusive remedial activities at the site and documenting the types of soil materials encountered, the location, and the handling procedures used in proper relocation or waste management as may be necessary. Terracon can be engaged to provide these services, if desired.

5.3 Contingency Plan for Unanticipated Materials

Due to the location and history of the site, the possibility exists that hazardous materials may be encountered other than those identified and specified for special management within this MMP. Therefore, the following contingency procedures will be enacted in the event such materials are encountered.

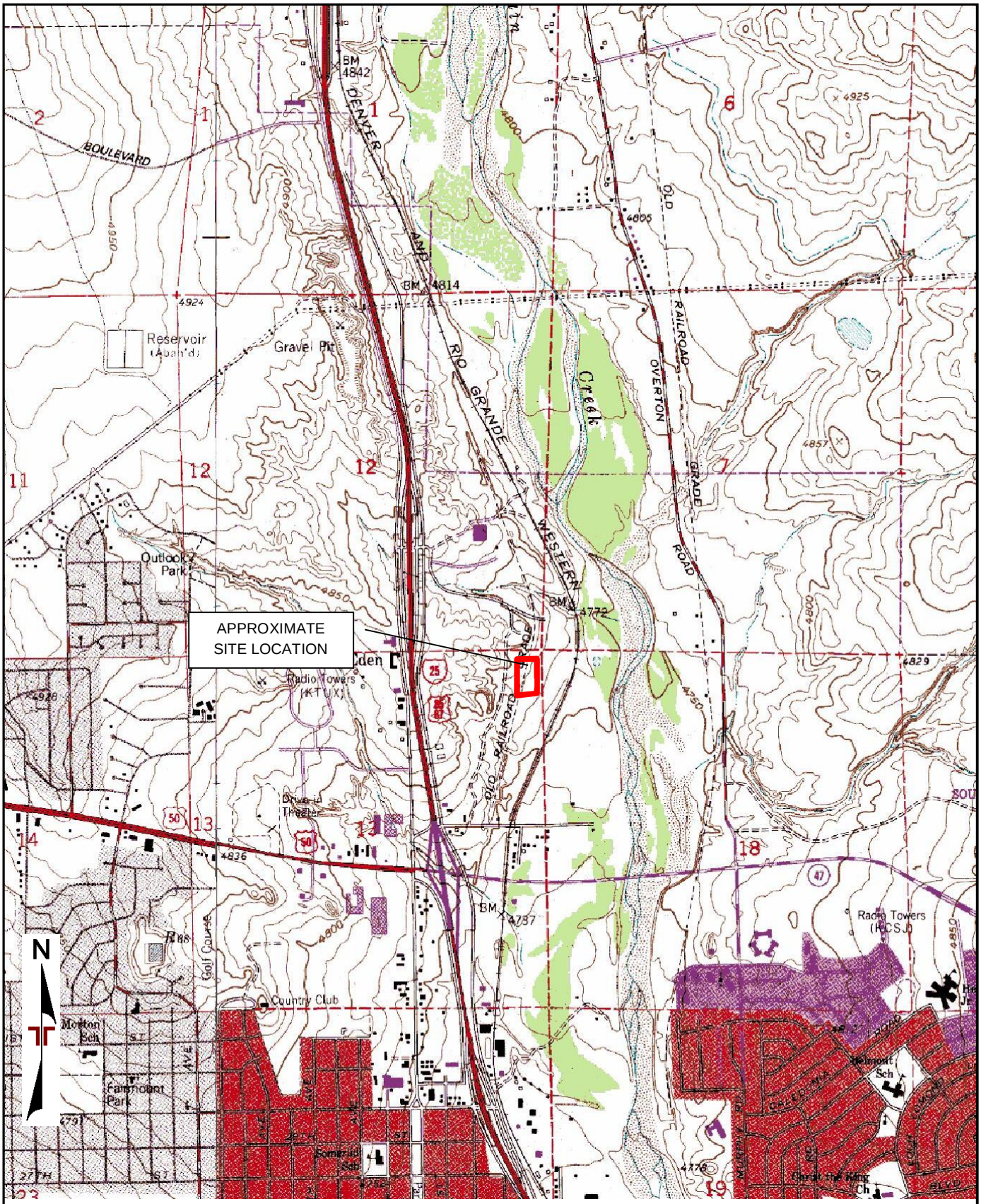
If underground storage tanks (USTs) or other hazards are detected during excavation work, the EMC or site personnel shall contact the Owner/Owner's Representative/General Contractor and the appropriate Colorado Department of Labor and Employment – Oil and Public Safety (CDLE-OPS) personnel to discuss the nature and extent of the hazard. Following this consultation, additional characterization, excavation, and/or analyses may be required. These activities are beyond the scope of work of this plan.

If uncharacterized, potentially-contaminated soil is encountered (based on appearance, odors, field screening, or other indications), the General Contractor and Owner/Owner's Representative will be notified immediately. The waste will be left in-place and sampled to evaluate the potential environmental impacts and proper handling and management strategy.

In the event that soils are characterized as environmentally-impacted, the soils will be managed in accordance with the criteria outlined in this plan. Any waste materials encountered during the project which are not specifically addressed within this MMP will be managed in accordance with local, state, and federal requirements.

EXHIBITS

EXHIBIT 1: TOPOGRAPHIC MAP
EXHIBIT 2: SITE AREA DIAGRAM
EXHIBIT 3: METHANE GAS VENTING SYSTEM



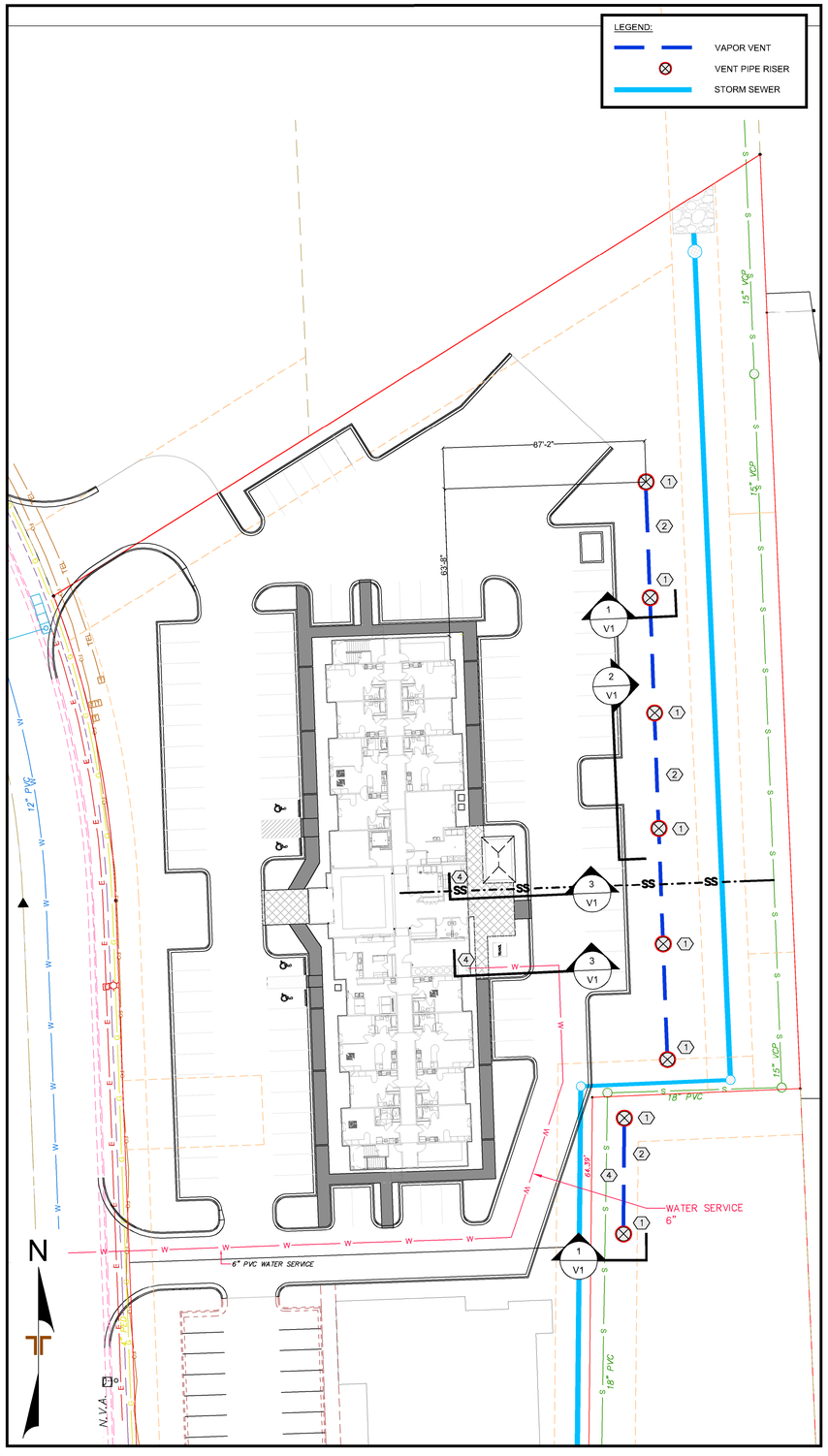
TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: NORTHWEST PUEBLO, CO (1/1/1994) and NORTHEAST PUEBLO, CO (1/1/1974).

Project Manager: JCG	Project No. B8167005	Terracon 2704 S. Prairie Ave. Unit D Pueblo, CO 81005	TOPOGRAPHIC MAP Proposed Candlewood Suites - Methane and Materials Management Support **Lots 2 and 3, Block 1 North Pueblo Commercial Park Filing No. 1, 1st Amendment**	Exhibit 1
Drawn by: JCG	Scale: 1"=2,000'			
Checked by: LRK	File Name:			
Approved by: LRK	Date: 9/21/16			

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

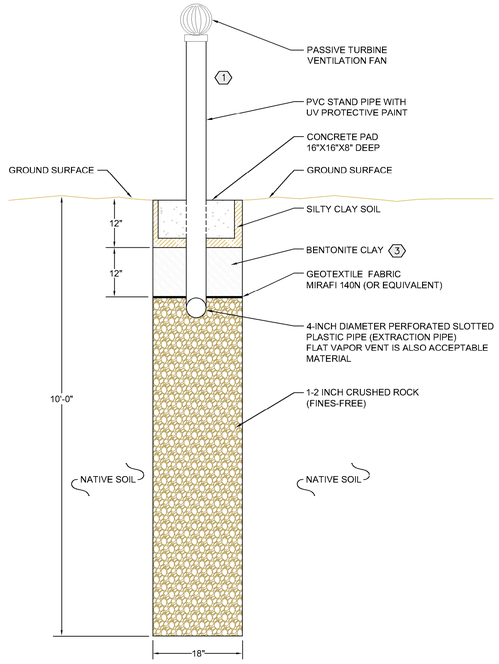
AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager: JCG Drawn by: JCG Checked by: LRK Approved by: LRK	Project No. B8167005 Scale: AS SHOWN File Name: Click Date: 9/21/16	Terracon 2704 S. Prairie Ave. Unit D Pueblo, CO 81005	SITE DIAGRAM Proposed Candlewood Suites - Methane and Materials Management Support **Lots 2 and 3, Block 1 North Pueblo Commercial Park Filing No. 1, 1st Amendment**	Exhibit 2



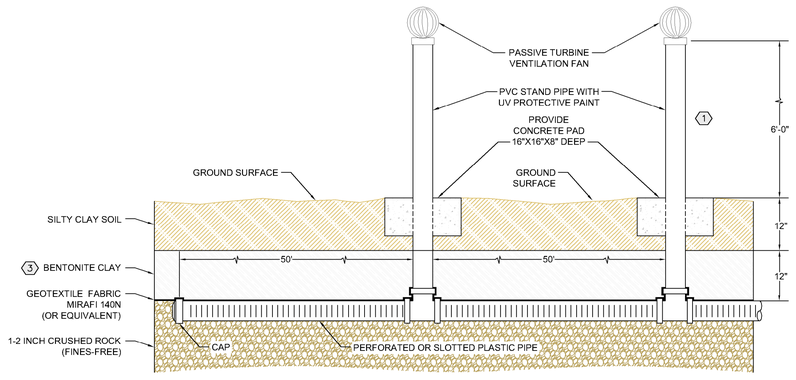
SITE PLAN

1" = 30'-0"



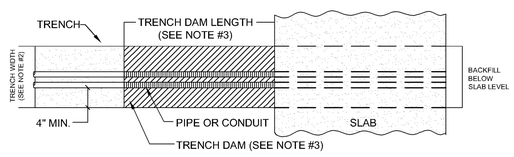
1/V1 CROSS-SECTION OF TYPICAL EXTRACTION PIPE TRENCH

NTS



2/V1 EXTRACTION PIPE TRENCH CONSTRUCTION DIAGRAM

NTS



NOTES: TRENCH DAMS

1. ALL TRENCH DAMS SHALL BE INSTALLED IN TRENCHES CONTAINING PIPING AND CONDUIT THAT CONNECTS DIRECTLY FROM THE UTILITY LINES COMING INTO THE BUILDING UNITS.
2. THE WIDTH OF A TRENCH DAM SHALL BE ONE HALF THE LENGTH.
3. TRENCH DAMS SHALL BE CONSTRUCTED OF ONE OF THE FOLLOWING:
   A. BENTONITE CEMENT SLURRY THREE FEET LONG: A MIXTURE OF 4% TYPE II CEMENT AND 2% POWDERED BENTONITE.
   B. COMPACTED NATIVE SOILS BACKFILL FIVE FEET LONG: NATIVE SOILS SHALL BE COMPACTED AT LEAST 90% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D-1557 TESTING PROCEDURES.
   C. CONCRETE MIXES OTHER THAN BENTONITE CEMENT SLURRY MAY BE USED PROVIDED CONDUIT OR PIPING IS WRAPPED WITH HIGH DENSITY PVE FOAM TAPE, CLOSED CELLS, ADHESIVE BACKED 1/4" THICK BY 1/2" WIDE SHALL BE APPLIED TO CLEAR SURFACE WITH ENDS BUTTED TOGETHER AT MOST VISIBLE LOCATIONS IN TRENCH DAM.
4. PIPING AND CONDUIT SHALL BE PROTECTED FROM CORROSION AND STRUCTURAL SETTLEMENT AS FOLLOWS:
   A. TAPE SHALL BE APPLIED ON CONDUIT AND PIPING ENCASED IN CEMENT SLURRY OR CONCRETE.
   2. TAPE SHALL BE PS-37-90, BLACK PLASTIC PVC OR PE PRESSURE-SENSITIVE CORROSION PREVENTATIVE TAPES.

3/V1 TRENCH DAM DETAIL AND NOTES

NTS

GENERAL NOTES:

1. PROPOSED VENTING SYSTEM TO BE INSTALLED ON THE WESTERN PORTION OF THE PROPERTY AS INDICATED.
2. COORDINATE WITH GENERAL CONTRACTOR FOR ACCESS AND TIMING FOR INSTALLATION.
3. COORDINATE WITH ASSOCIATED TRADES AND GC FOR PLACEMENT OF TRENCH DAMS.
4. COORDINATE WITH GEOTECHNICAL ENGINEER FOR COMPACTION AND TESTING REQUIREMENTS FOR COLLECTION TRENCH AND ACCEPTANCE OF MATERIAL SPECIFICATIONS.
5. COORDINATE ULTRAVIOLET (UV) PAINT COLOR AND TYPE FOR PVC STAND PIPES WITH GC AND ARCHITECT.

KEY NOTES:

1. PROVIDE VENT RISER, 4-INCH SCD-40 PVC WITH WIND DRIVEN TURBINE. AURA VENT OR ENGINEER APPROVED EQUIVALENT.
2. 4-INCH DIAMETER SLOTTED COLLECTION VENT PIPE. FLAT VAPOR VENT IS ALSO ACCEPTABLE. COORDINATE MATERIAL SELECTION WITH ENGINEER.
3. HYDRATE BENTONITE IN 6-INCH LIFTS OR PROVIDE BENTONITE GROUT MIX FOR SEAL.
4. PROPOSED TRENCH DAM LOCATION. SEE DETAIL 3/V1. COORDINATE WITH GENERAL CONTRACTOR FOR ACTUAL LOCATIONS.

REV.	DATE	BY	DESCRIPTION

METHANE GAS VENTING SYSTEM

PROPOSED CANDLEWOOD SUITES

LOTS 2 AND 3, BLOCK 1, NORTH PUEBLO COMMERCIAL PARK, FILING NO. 1, 1ST AMENDMENT
PUEBLO, COLORADO

Terracon
Consulting Engineers and Scientists
10625 W I-70 FRONTAGE RD N., SUITE 3
PH: (303) 423-3300
WHEAT RIDGE, CO 80033
FAX: (303) 423-3353

DRAFT
NOT FOR CONSTRUCTION

EXHIBIT 3	
DESIGNED BY:	JCG
DRAWN BY:	CPD
APPVD. BY:	DFS
SCALE:	AS-SHOWN
DATE:	09.28.2016
JOB NO.	B8167005
ACAD NO.	B8167005-EX3
SHEET NO.:	01 OF 01