

**CITY OF TEMPE
DEVELOPMENT REVIEW COMMISSION**

**Meeting Date: 4/27/2021
Agenda Item: 10**

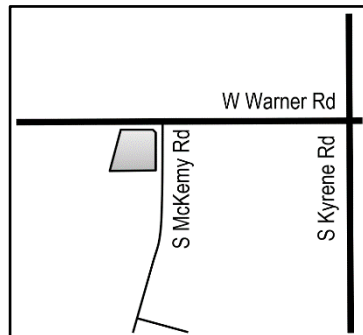
ACTION: Request a Use Permit to allow an expansion to an existing carwash facility (new self-service vacuum stations) for NO GIMMICK CARWASH, located at 8830 South McKemy Street. The applicant is Valley Architecture, Inc.

FISCAL IMPACT: N/A

RECOMMENDATION: Staff – Approve, subject to conditions

BACKGROUND INFORMATION: NO GIMMICK CARWASH (PL210068) is an existing full-service carwash facility located on the southwest corner of West Warner Road and South McKemy Street in the GID, General Industrial District, and within the SWOD, Southwest Tempe Overlay District. The new operator plans to convert the business to a self-service carwash facility which includes installation of eleven (11) new vacuum pylons that will create ten (10) regular vacuum spaces and one (1) ADA vacuum space, each provided with fabric canopies. The facility will continue to provide onsite oil changes in the existing garage bays and will not be affected by the conversion. The request includes the following:

ZUP210030 Use Permit to allow an expansion to an existing carwash facility (new self-service vacuum stations).



Property Owner	United Petroleum, LLC
Applicant	Ron Hecht, Valley Architecture, Inc.
Zoning District	GID (SWOD)
Site Area	62,117 s.f.
Building Area	7,333 s.f.
Lot Coverage	11.8% (no standard max. required)
Vacuum Pylon/Canopy Height	11'-0" (35'-0" max. allowed)
Vacuum Pylon/Canopy Setbacks	206' front, 113' side, 35' street side, 40' rear (25', 0', 25', 0' min. required)
Vehicle Parking	17 spaces (23 min. required)
Bicycle Parking	4 spaces (no standard min. required)
Hours of Operation	8 a.m. to 7 p.m., Daily

ATTACHMENTS: Development Project File

STAFF CONTACT(S): Lee Jimenez, Senior Planner (480) 350-8486

Department Director: Shelly Seyler, Interim Community Development Director
 Legal review by: N/A
 Prepared by: Lee Jimenez, Senior Planner
 Reviewed by: Steve Abrahamson, Principal Planner

COMMENTS

The site is located between West Warner Road, West La Vieve Lane, South McKemy St, and Union Pacific Railroad tracks. Adjacent uses include a self-serve storage establishment across Warner Road to the north, a big-box retail home improvement store across McKemy Street to the east, an industrial warehouse/office building to the south, and railroad right-of-way to the west.

PUBLIC INPUT

No public comments have been received by staff as of the publishing date of the staff summary report.

USE PERMIT

The installation of self-service vacuum stations is considered an expansion to the existing carwash use and is considered an intensification of the use and requires approval of a new Use Permit in the GID zoning district.

Section 6-308(E) Approval criteria for Use Permit (*in italics*):

1. *Any significant increase in vehicular or pedestrian traffic*; the conversion from a full-service carwash to a self-service carwash may increase vehicular traffic but not at a significant enough level.
2. *Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions*; the new vacuum stations are not expected to generate emissions at a level exceeding that of ambient conditions. The facility currently has vacuum equipment. Furthermore, the new equipment will be housed in the same enclosure as the original equipment.
3. *Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan*; the installation of self-service vacuums is not expected to cause the downgrading of property values nor be in conflict with the City's adopted plans and General Plan. The new self-service vacuums will help the facility compete with all the other self-service carwash facilities throughout the City.
4. *Compatibility with existing surrounding structures and uses*; the expanded use is compatible with the surrounding area which consists of industrial and commercial uses.
5. *Adequate control of disruptive behavior both inside and outside the premises which may create a nuisance to the surrounding area or general public*; the vacuum stations will only be accessible to customers during business hours. Staff will be on hand to enforce rules such as no loud music or other disruptive behavior.

REASONS FOR APPROVAL:

Based on the information provided by the applicant and the above analysis, staff supports the requested Use Permit. This request meets the required criteria and will conform to the conditions.

SHOULD AN AFFIRMATIVE ACTION BE TAKEN ON THIS REQUEST, THE FOLLOWING NUMBERED CONDITIONS OF APPROVAL SHALL APPLY, BUT MAY BE AMENDED BY THE DECISION-MAKING BODY.

CONDITION(S) OF APPROVAL: (Non-standard conditions are identified in bold)

EACH NUMBERED ITEM IS A CONDITION OF APPROVAL. THE DECISION-MAKING BODY MAY MODIFY, DELETE OR ADD TO THESE CONDITIONS.

1. The Use Permit is valid only after a Building Permit has been obtained, the required inspections have been completed and a Final Inspection has been passed. As part of the Building Permit process, on-site storm water retention may be required to be verified or accomplished on this Site.
2. The Use Permit is valid for the plans as submitted within this application. Any additions or modifications may be submitted for review during the building plan check process.

3. Business hours of operation to begin no earlier than eight o'clock in the morning (8:00 a.m.) and end no later than seven o'clock in the morning (7:00 p.m.) daily.
4. **All landscape areas (onsite and within adjacent right-of-way) shall conform with the last approved landscape plan for this site prior to final inspection. Any proposed landscape modifications shall require approval of a Minor Development Plan Review.**
5. **The operator may opt to install vacuum stations to the parking row north of the carwash tunnel. Such modifications to the plans may be submitted for review during the building plan check process.**
6. **Prior to application for building permits, the operator shall obtain approval of a Minor Development Plan Review for the installation of the vacuum stations and the unauthorized repaint of the facility.**

CODE/ORDINANCE REQUIREMENTS:

THE BULLETED ITEMS REFER TO EXISTING CODE OR ORDINANCES THAT PLANNING STAFF OBSERVES ARE PERTINENT TO THIS CASE. THE BULLET ITEMS ARE INCLUDED TO ALERT THE DESIGN TEAM AND ASSIST IN OBTAINING A BUILDING PERMIT AND ARE NOT AN EXHAUSTIVE LIST.

USE PERMIT:

- The Use Permit is valid for No Gimmicks Carwash and may be transferable to successors in interest through an administrative review with the Community Development Director, or designee.
- The use permit approval shall be void if the use is not commenced or if an application for a building permit has not been submitted, whichever is applicable, within twelve (12) months after the use permit is granted or within the time stipulated by the decision-making body.
- The decision-making body, upon finding that the applicant has not taken corrective actions to resolve issues related to the permit/approval and that a continuation of the permit/approval is not in the interest of the public health, safety and general welfare, can revoke the permit/approval after providing written notice of its intentions to the holder of the permit.
- Specific requirements of the **Zoning and Development Code (ZDC)** are not listed as a condition of approval but will apply to any application. To avoid unnecessary review time and reduce the potential for multiple plan check submittals, become familiar with the ZDC. Access the ZDC through <http://www.tempe.gov/zoning> or purchase from Development Services.
- All business signs shall receive a Sign Permit. Contact sign staff at 480-350-8435.
- Any intensification or expansion of use shall require a new Use Permit.
- All required permits and clearances shall be obtained from the Audit and Licensing Division of the City of Tempe prior to the Use Permit becoming effective.
- All required Federal, State, County, and Municipal permits, licenses, and clearances shall be obtained, or the Use Permit is void.

HISTORY & FACTS:

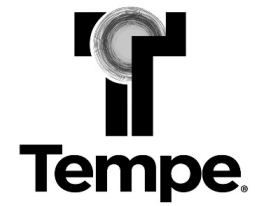
August 23, 1995

Board of Adjustment approved a Use Permit to a carwash and a convenience store with gas pumps in conjunction with the carwash facility for WHITESTONE CAR WASH (BA950173), located at 8830 South McKemy Street in the I-1, Light Industrial District.

ZONING AND DEVELOPMENT CODE REFERENCE:

Section 3-302 Permitted Uses in Office/Industrial Districts

Section 6-308 Use Permit



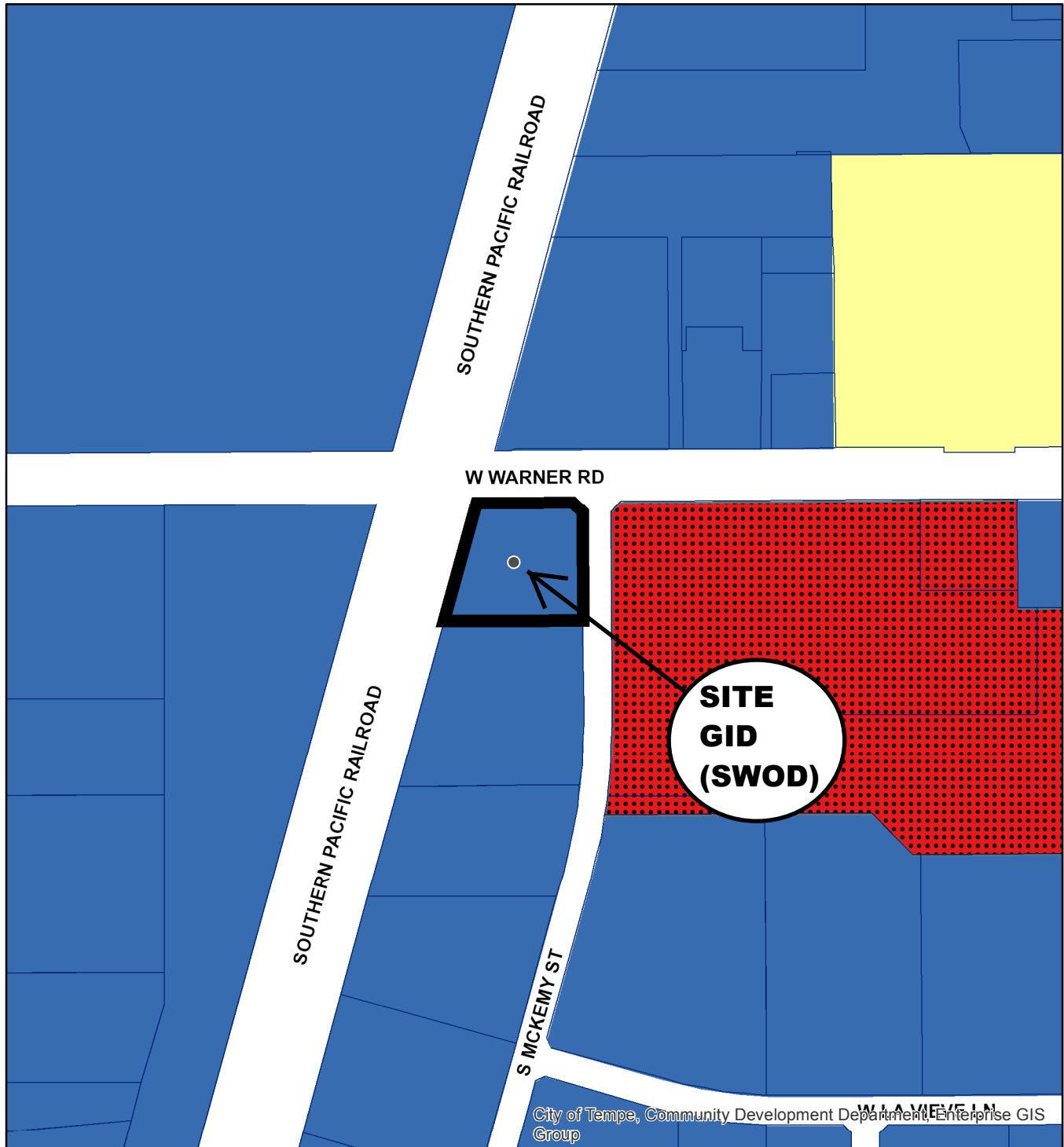
DEVELOPMENT PROJECT FILE
for
NO GIMMICKS CARWASH
(PL210068)




ATTACHMENTS:

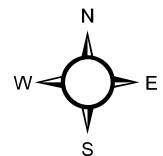
1. Location Map
2. Aerial
- 3-4. Letter of Explanation
5. Site Plan
- 6-23. Vacuum Details
24. Vacuum Pylons Finish Exhibit
- 25-34. Site Context Photos

NO GIMMICKS CARWASH

PL210068



-  General Industrial District (GID)
-  Planned Commercial Center General (PCC-2)
-  Agricultural (AG)

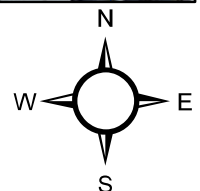


NO GIMMICKS CARWASH

PL210068



Aerial Map





April 8, 2021

Letter of Explanation

Project: Carwash – Vacuum Installation
United Petroleum, LLC
8830 S. McKemy St.
Tempe, AZ 85284

This project is at an existing carwash. The carwash is transitioning from a full-service car wash to a self-service carwash. This necessitates the installation of self-serve vacuum stations. The scope of this project is to install 11 new vacuum pylons creating 10 new vacuum parking spaces. 1 of the 10 will be accessible. The facility also provides onsite oil changes in existing garage bays and this operation will not be affected by this proposal. No changes are proposed for the existing building.

The existing facility currently utilizes vacuum equipment which is remotely located in a screened yard on the west property line of the site. The west side of the site is adjacent to a set of high voltage electrical lines. There is no neighbor to the west. The new vacuum equipment will be located in this existing screened yard. There will be no motorized equipment at the vacuum self-serve parking spaces.

The current neighbors include the power lines to the west, Warner Road to the north with a Self-Storage business north of Warner, the back side of Home Depot to the east and a commercial office/warehouse building to the south. The site has screen walls on the north, east and west sides. This is an appropriate location for a carwash and the addition of vacuum stations will not be a detriment to the surrounding area.

The new vacuum spaces will occupy existing parking spaces within existing curbs and are interior to the site and not along any property lines or setbacks. No new pavement or reconfigured driveways are required for this installation. There is an existing shade structure over 5 of the parking spaces that will be removed to accommodate the new installation. The vacuum parking spaces will have a fabric shade canopy over all spaces. The vacuum parking spaces will have one accessible vacuum space but removes one accessible parking space. The parking area along the west property line will be restriped to create the required accessible parking space. In total, 17 parking spaces will be needed and 23 parking spaces will be provided.

The following addresses Development Code Criteria per the Use Permit application Section 6:

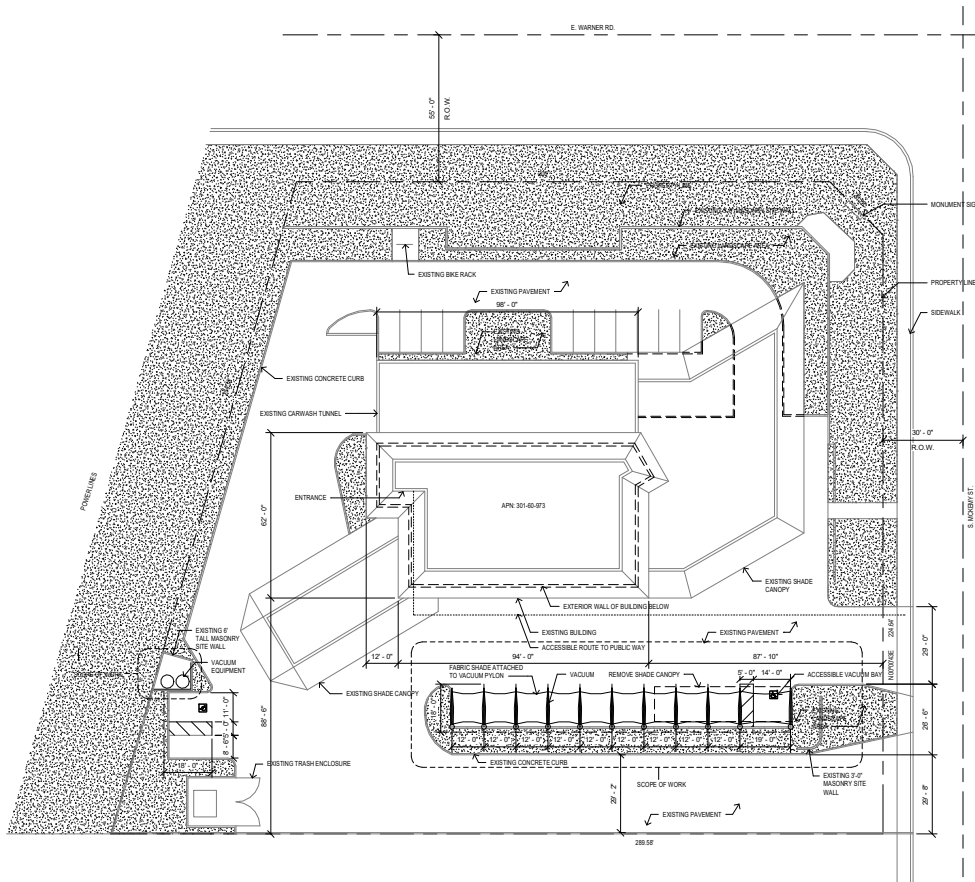
- a) Any significant vehicular or pedestrian traffic in adjacent areas:
 - a. No. This is currently a carwash and will remain a carwash. The entry and exit from the site will remain the same.
- b) Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions:

- a. No. The site currently has vacuum equipment and the new vacuum equipment will be located in the same enclosure.
- c) Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is conflict with the goals, objectives or policies of the city's adopted plans for General Plan:
 - a. No. This site is currently a carwash and will remain a carwash. Adding self serve vacuums does not in anyway contribute to deterioration of the neighborhood or conflict with the General Plan.
- d) Compatibility with existing surrounding structures and uses:
 - a. The surrounding area is entirely commercial in nature. The use is compatible with the surroundings.
- e) Adequate control of disruptive behavior inside and outside the premises, which may create a nuisance to the surrounding area or general public:
 - a. The site is only accessible during business hours and the vacuums only run during business hours. While operating, the site is supervised by employees. No loud music or other disruptive behavior is allowed. Nothing having to do with this business invites disruptive behavior inside or outside of its premises.

This business will operate 7 days a week from the hours of 8 AM to 7 PM. There will be between 10 and 12 employees at the peak of operations.

End of Explanation.

Please call Ron Hecht, Valley Architecture, Inc., at 602.334.9766 or ron@valleyarch.com with any questions.



ADJACENT PARCEL
20160-020A
INDUSTRIAL



Project Team

BUILDING OWNER:
UNITED PETROLEUM LLC
1805 E. GWEN ST.
PHOENIX, AZ 85042
CONTACT: MANISH GUPTA
SHABLOO@HOTMAIL.COM
602.668.7011

ARCHITECT:
VALLEY ARCHITECTURE, INC
1248 N. HILLCREST
MESA, ARIZONA 85201
CONTACT: RON HECHT
RON@VALLEYARCH.COM
602.334.9766

Project Data

PROJECT DESCRIPTION:
ADDITION OF NEW EXTERIOR STAND ALONE VEHICLE VACUUM MACHINES. PROJECT WILL INCLUDE NEW FOUNDATION FOR EQUIPMENT AND INSTALLATION OF EQUIPMENT.

SITE INFORMATION:
LOCATION: 8830 S. MCKEMY ST.
TEMPE, AZ 85284
LOT APN: 301-60-973
S. T. R.: 21 1S 4E
ZONING: G1D
LOT SIZE: 62,177 SF
LOT COVERAGE: 17,080 SF (27.5%)
CONSTRUCTION:

TYPE: V&B (W/AFES)
BEARING WALLS: MASONRY
FLOOR: SLAB ON GRADE
ROOF: WOOD TRUSS

NON-SEPARATED 1 STORY BUILDING
BUILDING IS FULLY SPRINKLERED
(SEE DEFERRED SUBMITTAL NOTE)

PROJECT AREA: 5,070 SF (NO CHANGE)

OCCUPANCY TYPE: 8

PARKING:
USE: CAR WASH
SPACES REQUIRED: 5,070/300 = 17
SPACES PROVIDED: 23 (INCLUDING 2 ACCESSIBLE)

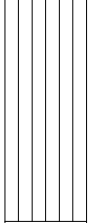
BICYCLE RACK: 4 SPACES PROVIDED



ADDITION FOR:
UNITED PETROLEUM LLC.
8830 S. MCKEMY ST.
TEMPE, AZ 85284



PROJ # VA-2106



DATE: 04/08/21

A100



GENERAL NOTES

Preliminary Drawings:

Preliminary drawings may be provided with a quote to indicate the location of vacuum equipment, piping, and hoses. Drawings may be used in direct coordination with Architects' and Engineers' plans for city/AHJ/client approval. Accurate and complete plans must be provided to ensure the quality of your vacuum area to coordinate issues such as vacuum parking space width/angle, traffic flow, and hose reach.

Drawings are preliminary until the final system order is signed by the client.

*changes made to a vacuum system without Vacutech's consultation voids all Vacutech responsibility as well as the system warranty.

INSTALLATION NOTES

Installation By Others:

Installation drawings are provided with each project. Most projects require 2 or more installers and a forklift. Buried pipe, footings and concrete equipment pad(s) should be completed before installing Vacutech systems. J-bolt template kits for footings for vacuum arches and stanchions are available for purchase from Vacutech. Refer to drawings for footing requirements. Changes to vacuum piping, vacuum equipment location, and vacuum equipment enclosure will affect the performance of your system. Changes made to a vacuum system without Vacutech's consultation voids all Vacutech responsibility and the system warranty.

Vacutech System Install:

Vacutech offers installation as an option when bidding a project.

Please note that the scope of Vacutech's installation only includes work above ground. Vacutech will install vacuum arches/stanchions to concrete footings, install vacuum piping and set vacuum equipment in place.

Vacutech does not dig trenches, auger footings, dig/backfill/bury pipe or conduit, or provide any work below grade.

Vacutech does not pour footings, install J-bolts, install concrete trenches with covers, pour concrete pads, or do concrete work of any kind. Vacutech does not do core drilling through building walls.

Vacutech does not wire light fixtures, light bulbs, disconnects, VFDs, starters or any other electrical component. Vacutech does not pull wire through conduits. These items must be done by a Licensed Electrician.

WARRANTY NOTES

CHANGES MADE TO VACUUM SYSTEM WITHOUT VACUTECH CONSULTATION VOIDS ALL VACUTECH RESPONSIBILITY AND SYSTEM WARRANTY.

Equipment warranty information: (if applicable)

When vacuum equipment is installed in an enclosure with 4 walls and a roof it must be ventilated. Enclosure door must be louvered and an exhaust fan with thermostat set at 85°F must be installed to turn over air every 15 min. Vacuum turbine must be exhausted outside with metallic pipe no smaller than 6" with exhaust pipe opening protected from elements. Equipment pad must be flat and level.

Variable frequency drive (VFD) warranty information: (if applicable)

VFDs must be wired from main distribution panel in separate conduit (sized per code; based on turbine H.P. and voltage) to each VFD and from each VFD to turbine motor.

A separate conduit, sized per code, must also be installed from VFD to vacuum pressure transducer installed on filter separator. If two (2) or more VFD's are installed in one (1) enclosure, a separate conduit must be installed for each VFD. Install separate conduit from enclosure to each turbine motor, and each filter separator if there is more than one (1).

PIPE NOTES

Piping systems above ground

Piping system shall be schedule 40 (or sch 80) solid core PVC or ABS plastic pipe, with plastic D.W.V. (drain, waste and vent) fittings. Zinc aluminum, or galvanized tubing, with directional flow zinc fittings of no less than 16 gauge, designed specifically for central vacuum systems are also acceptable.

Buried piping systems cast iron no-hub

In-ground piping systems that are subject to ground freeze/thaw conditions or excessive movement shall be cast iron with no-hub fittings and no-hub couplings (w/ stainless steel hand)

Buried piping systems PVC sch 40 (or sch 80)

In-ground piping systems using PVC pipe shall be sch 40 (or sch 80) solid core, with PVC D.W.V. (drain, waste, and vent) fittings. Plastic installed in-ground have a potential of possible cracking and wear. All plastic pipe systems in-ground must be below freeze line.

System notes:

All interior surfaces shall be free of burrs and obstructions for a non-restrictive air flow. ABS and PVC piping shall be cut straight and removed of burrs. Piping shall be attached together using a primer, and a cement (clear PVC cement for PVC/ black abs cement for abs) for a 100% tight seal.

Overhead piping systems shall be supported by means of approved pipe hangers, and shall be installed at a maximum of six feet O.C. when using abs or PVC pipe and ten feet when using zinc or aluminum tubing. All fittings supporting vacuum droo/hose assemblies shall be supported with within one foot on each side of fitting connection.

Piping systems shall be tested to hold 10 psi for a minimum of 24 hours.

When vacuum system is installed in potentially explosive environment, the following may be required as a minimum: Explosion proof motor Class I - Group D & Class II - Group E, F & G. Aluminum piping with zinc fittings. Primary and filtered separators and hose assemblies require special grounding. Verify all conditions.

PVC and ABS plastic pipe are not U.V. rated and will discolor and soften/cause bowing when exposed to direct sunlight. It is recommended that all exposed plastic pipe and fittings be primed and painted to help prevent this. It is recommended to use zinc, or aluminum tubing and zinc fittings be used when exposed to sun.

Plastic pipe exposed to elements:

PVC pipe will become brittle at 40° f and can crack/split when moving debris collides with it, it is recommended to use cast iron, zinc, or aluminum tubing for colder conditions.

ADDITIONAL NOTES

VFD Systems:

Instructions for wiring VFD to Turbine and Filter Separator are available for your electrician. After wiring is complete, call our customer service to complete programming.

Arch Systems: How Awnings are ordered (Coolaroo/Weblon)

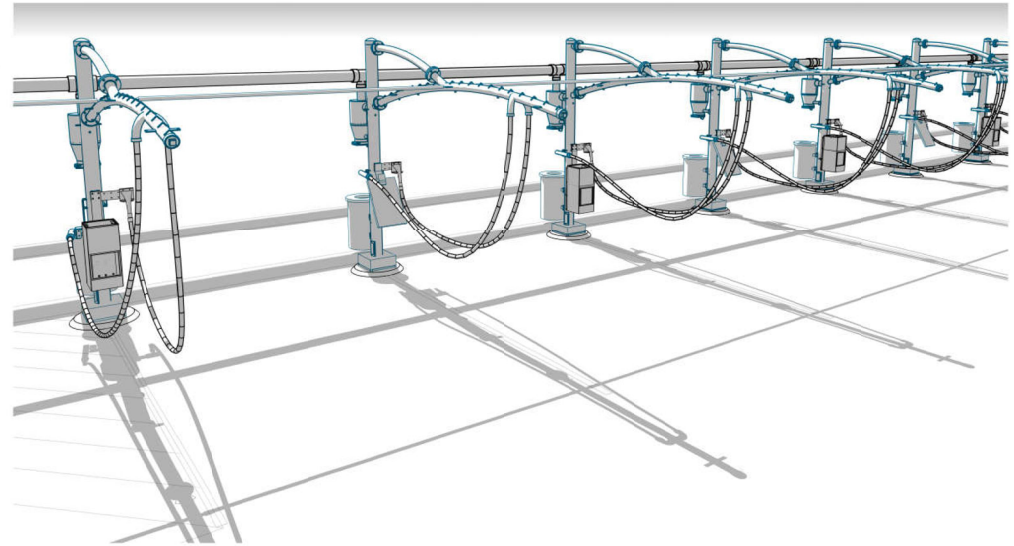
Step 1: Arches are to be completely installed on site.
Step 2: After installation, Vacutech will send an awning measurement form to be filled out with instructions on how and where to measure. The awning form must be filled out entirely, signed, dated, and faxed or emailed to Vacutech for production.
Step 3: Awnings are shipped to site w/ instructions

Maintenance:

System longevity under continuous operation is extended by regular maintenance. Issues commonly result from failure to remove obstructions in the piping system, replace damaged or worn parts, or not regularly changing filter bags. Refer to Vacutech maintenance instructions

Assign a person to central vacuum maintenance:

To ensure continued trouble free central vacuum system operation and to avoid downtime during periods of heavy use, assign an employee to follow a strict maintenance schedule. Refer to Vacutech recommended maintenance schedule.



VACUTECH

Elevation: 1,300' ASL

SHEET INDEX

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V201	PIPE LAYOUT	1
V211	PIPE ISOMETRIC	1
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V302	ADA PARKING ELEVATION	1
V311	ARCH NUMBERING PLAN	1

SHEET INDEX

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V701	EQUIPMENT DETAILS	1
V711	ENCLOSURE DETAIL	1
V721	PIPE DETAILS	1
V731	VFD DETAILS	1

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1350 HI-TECH DRIVE
 SHERIDAN, WY 82801
 PHONE: (307) 675-1982
 EMAIL: info@vacutechllc.com
 WEB: www.vacutechllc.com

FRANCIS & SONS MCKEMY

8830 South MCKEMY STREET
 TEMPE, ARIZONA 85824

#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	MB	KG	4/30/20

COVER SHEET

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG



FIELD VERIFY ALL DIMENSIONS

NOTE: IF VACUUM EQUIPMENT IS ENCLOSED WITH ROOF/CEILING, REFER TO VENTILATION REQUIREMENTS UNDER EQUIPMENT WARRANTY INFORMATION

VACUUM AREA A

QTY	ITEM
2	SINGLE USER PALM ARCH
9	DUAL USER PALM ARCH
10	CLAW VACUUM TOOL & HOLDER
10	CREVICE VACUUM TOOL & HOLDER
2	ADA TOOL BRACKET
10	CLAW TOOL EXTENSION BRACKET
20	1-1/2"x15' VACUUM HOSE
6	17" M&T RACK
11	30 GALLON WASTE RECEPTACLE
5	TOWEL BIN
10	11'-16" ADJUSTABLE CROSSBAR

VACUUM EQUIPMENT A

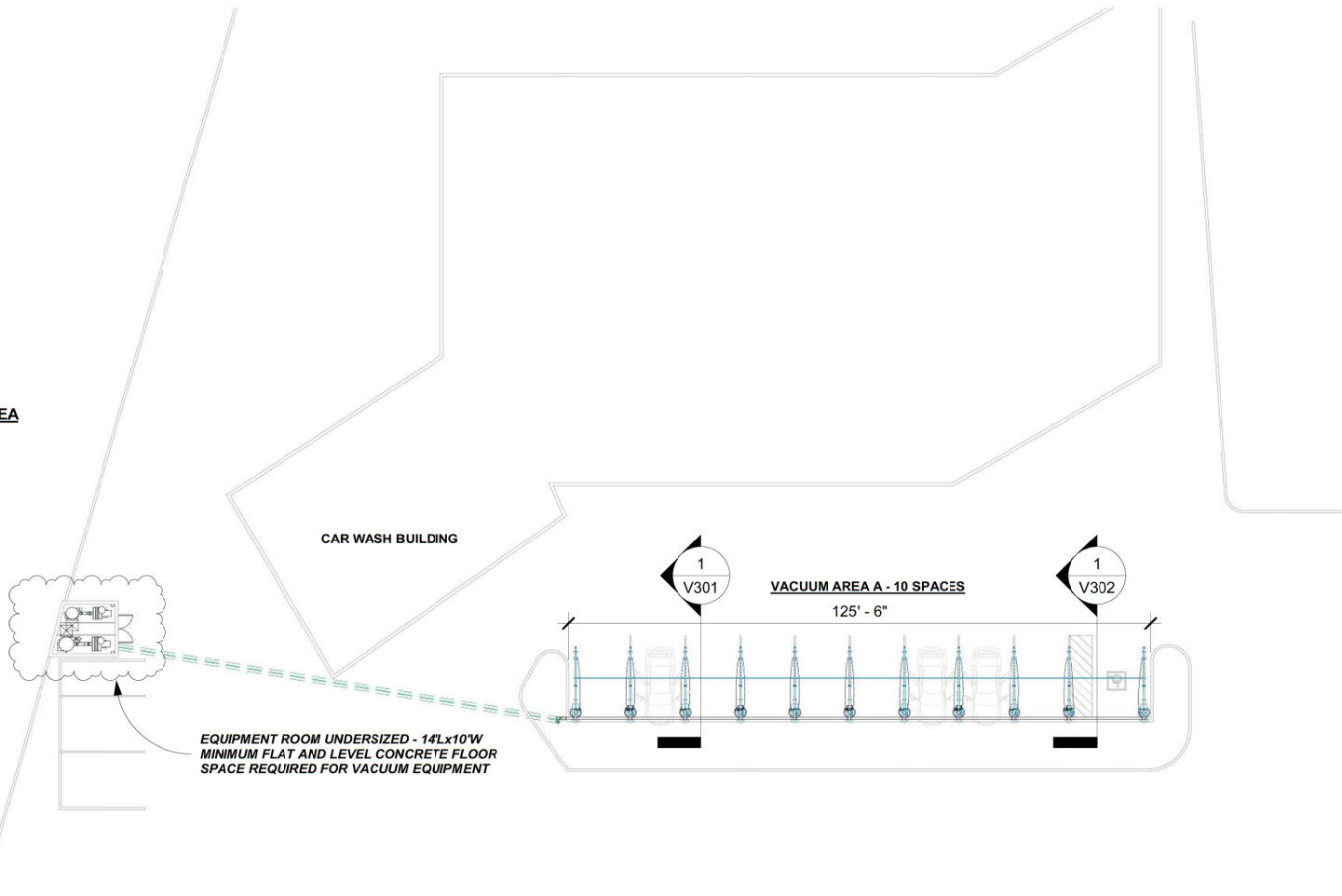
QTY	ITEM
1	50HP T4 DIRECT DRIVE TURBINE
1	8" T4 OUTDOOR EXHAUST SILENCER
1	38x88 FILTER SEPARATOR

VACUTECH PROVIDING NEW EQUIPMENT FULL SERVICE AREA

QTY	ITEM
1	25HP T3 DIRECT DRIVE TURBINE
1	6" T3 OUTDOOR EXHAUST SILENCER
1	31x79 FILTER SEPARATOR

14'Lx10'W MINIMUM FLAT AND LEVEL CONCRETE FLOOR SPACE REQUIRED FOR VACUUM EQUIPMENT

VERIFY SEPARATOR WILL FIT THROUGH DOOR (48" DOUBLE DOOR RECOMMENDED)



1 OVERALL SITE PLAN

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1350 HI-TECH DRIVE
SHERIDAN, WY 82801
PHONE: (307) 675-1992
EMAIL: info@vacutechllc.com
WEB: www.vacutechllc.com

FRANCIS & SONS McKEMY
8830 South McKEMY STREET
TEMPE, ARIZONA 85824

#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

OVERALL SITE PLAN

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG

REVISION 101
Mar 8, 2021



11/16/2020 4:00:18 PM

FIELD VERIFY ALL DIMENSIONS

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6	17" MAT RACK
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5	TOWEL BIN
10	11'-16" ADJUSTABLE CROSSBAR

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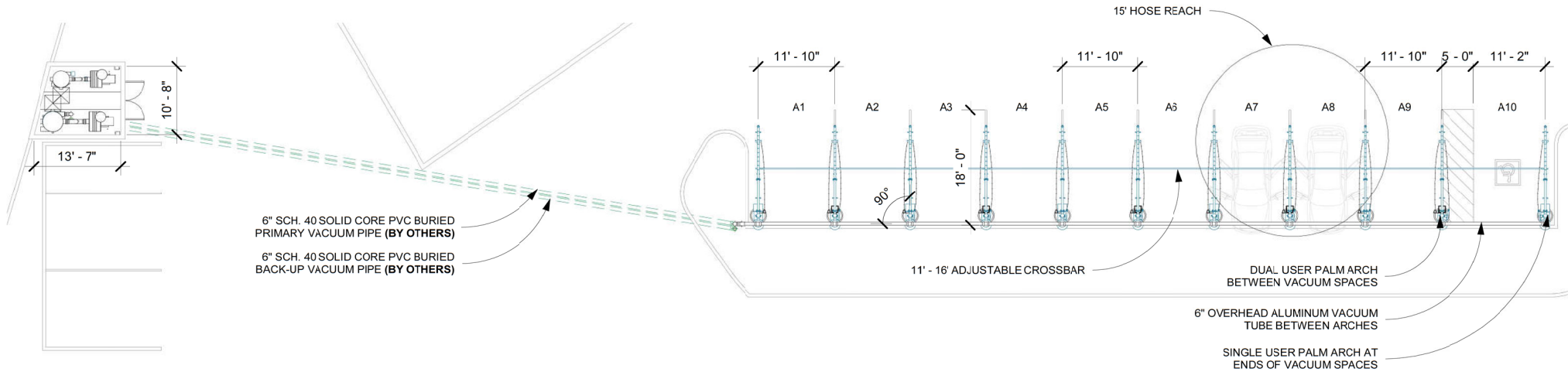
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14'Lx10'W MINIMUM FLAT AND LEVEL CONCRETE FLOOR SPACE REQUIRED FOR VACUUM EQUIPMENT

VERIFY SEPARATOR WILL FIT THROUGH DOOR (48" DOUBLE DOOR RECOMMENDED)



1 SITE PLAN

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FRANCIS & SONS McKEMY

8830 South McKEMY STREET
TEMPE, ARIZONA 85824

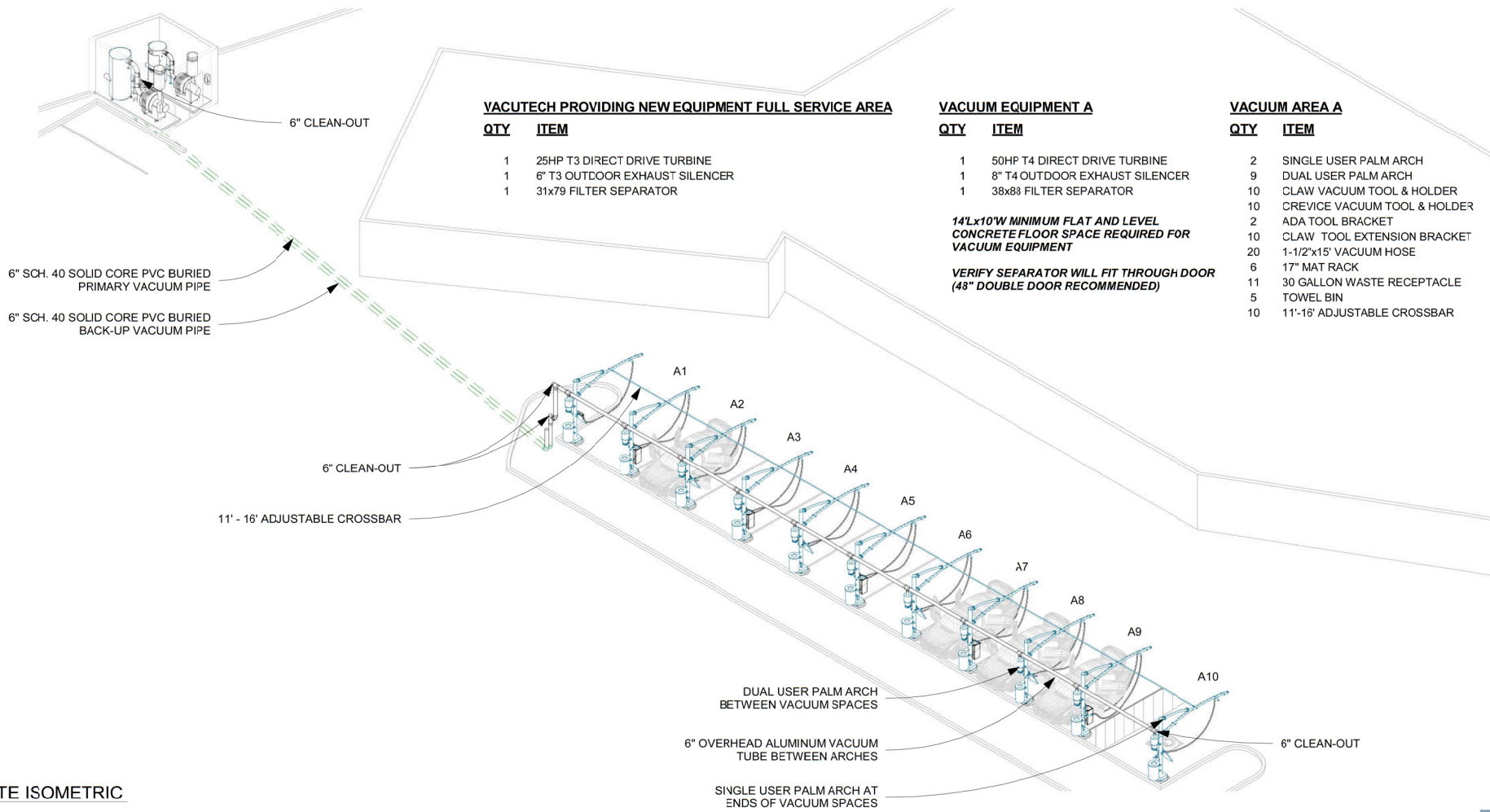
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1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

VACUUM SITE PLAN

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG



NOTE: IF VACUUM EQUIPMENT IS ENCLOSED WITH ROOF/CEILING, REFER TO VENTILATION REQUIREMENTS UNDER EQUIPMENT WARRANTY INFORMATION



VACUTECH PROVIDING NEW EQUIPMENT FULL SERVICE AREA

QTY	ITEM
1	25HP T3 DIRECT DRIVE TURBINE
1	6" T3 OUTDOOR EXHAUST SILENCER
1	31x79 FILTER SEPARATOR

VACUUM EQUIPMENT A

QTY	ITEM
1	50HP T4 DIRECT DRIVE TURBINE
1	8" T4 OUTDOOR EXHAUST SILENCER
1	38x83 FILTER SEPARATOR

14'Lx10'W MINIMUM FLAT AND LEVEL CONCRETE FLOOR SPACE REQUIRED FOR VACUUM EQUIPMENT

VERIFY SEPARATOR WILL FIT THROUGH DOOR (48" DOUBLE DOOR RECOMMENDED)

VACUUM AREA A

QTY	ITEM
2	SINGLE USER PALM ARCH
9	DUAL USER PALM ARCH
10	CLAW VACUUM TOOL & HOLDER
10	CREVICE VACUUM TOOL & HOLDER
2	ADA TOOL BRACKET
10	CLAW TOOL EXTENSION BRACKET
20	1-1/2"x15' VACUUM HOSE
6	17" MAT RACK
11	30 GALLON WASTE RECEPTACLE
5	TOWEL BIN
10	11'-16" ADJUSTABLE CROSSBAR

1 SITE ISOMETRIC

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WEB: www.vacutechllc.com

FRANCIS & SONS McKEMY
8830 South McKEMY STREET
TEMPE, ARIZONA 85824

#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

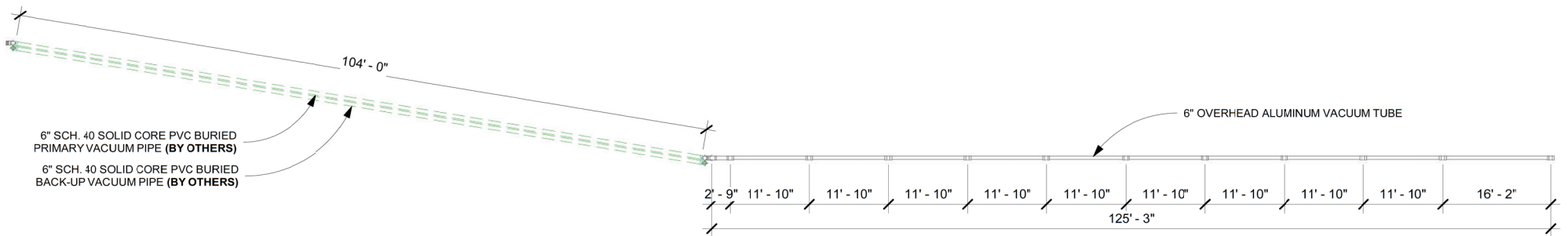
VACUUM SITE ISOMETRIC

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG

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FIELD VERIFY ALL DIMENSIONS



① PIPE LAYOUT

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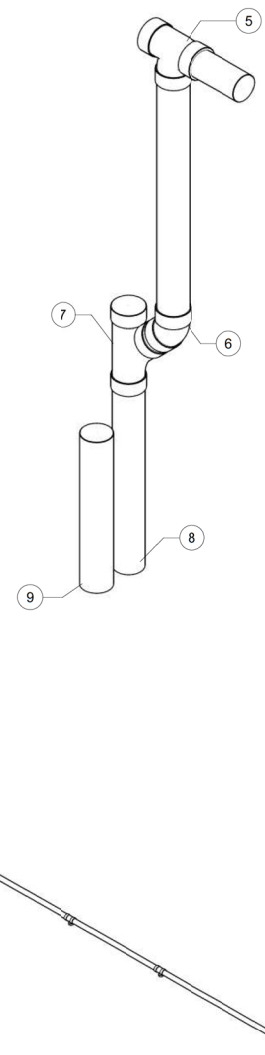
#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	MS	KG	4/30/20

PIPE LAYOUT

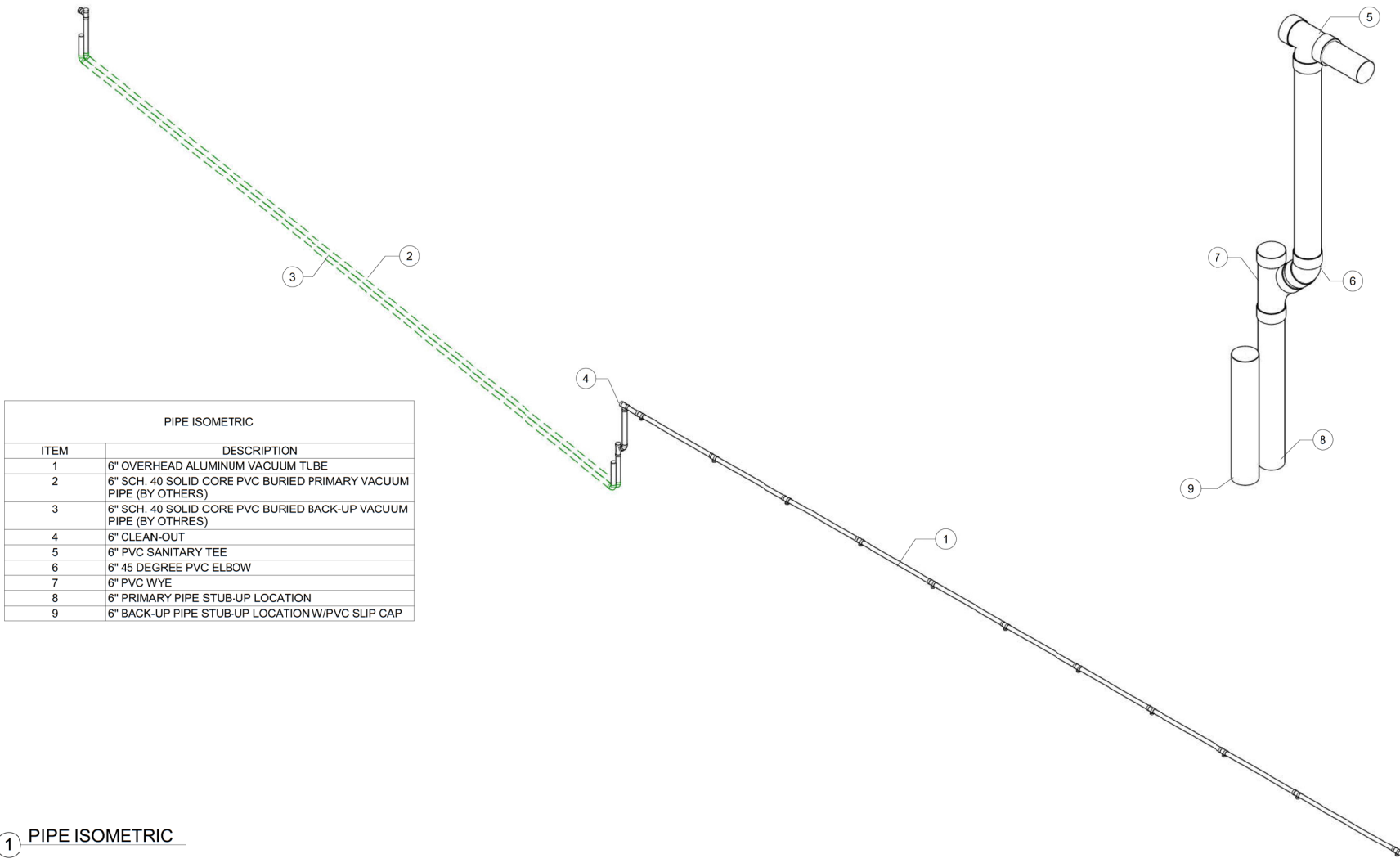
Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG

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 V201
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PIPE ISOMETRIC	
ITEM	DESCRIPTION
1	6" OVERHEAD ALUMINUM VACUUM TUBE
2	6" SCH. 40 SOLID CORE PVC BURIED PRIMARY VACUUM PIPE (BY OTHERS)
3	6" SCH. 40 SOLID CORE PVC BURIED BACK-UP VACUUM PIPE (BY OTHERS)
4	6" CLEAN-OUT
5	6" PVC SANITARY TEE
6	6" 45 DEGREE PVC ELBOW
7	6" PVC WYE
8	6" PRIMARY PIPE STUB-UP LOCATION
9	6" BACK-UP PIPE STUB-UP LOCATION W/PVC SLIP CAP



① PIPE ISOMETRIC

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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

PIPE ISOMETRIC

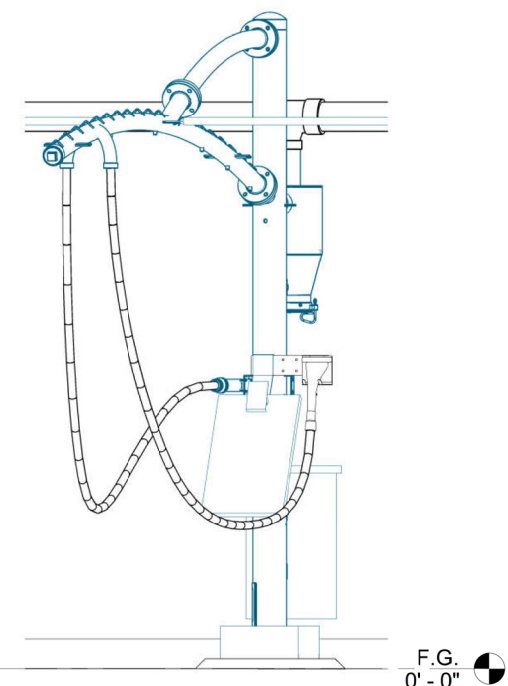
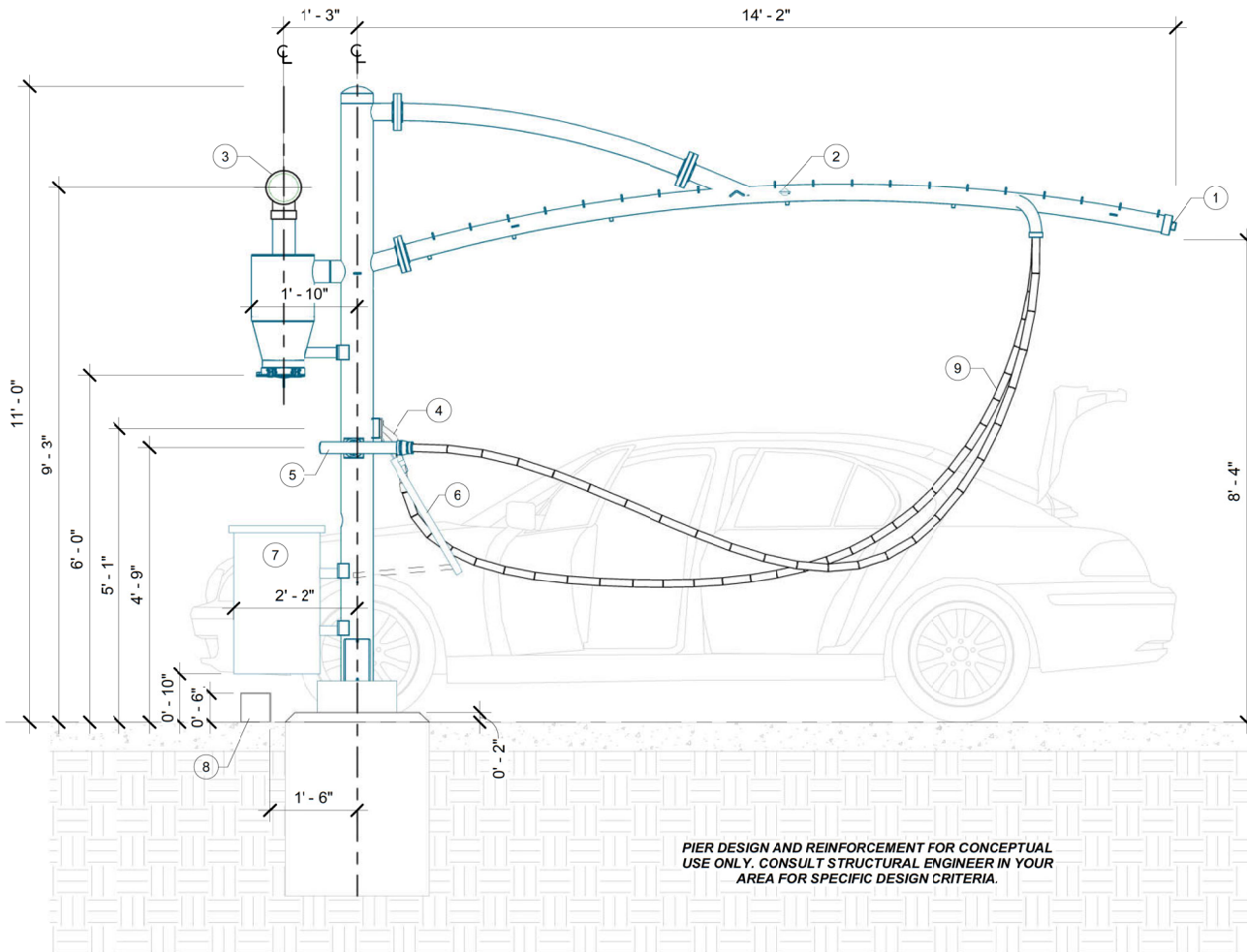
Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG

REVISIONED
Mar 8, 2021

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REVISIONED
Mar 8, 2021
Planning

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FIELD VERIFY ALL DIMENSIONS



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PARKING ELEVATION	
ITEM	DESCRIPTION
1	DUAL USER PALM ARCH
2	11' - 16' ADJUSTABLE CROSSBAR
3	6" OVERHEAD ALUMINUM VACUUM TUBE
4	CLAW VACUUM TOOL
5	CREVICE VACUUM TOOL
6	17" MAT RACK
7	30 GALLON WASTE RECEPTACLE
8	CURB
9	1-1/2"x15' VACUUM HOSE

1 PARKING ELEVATION

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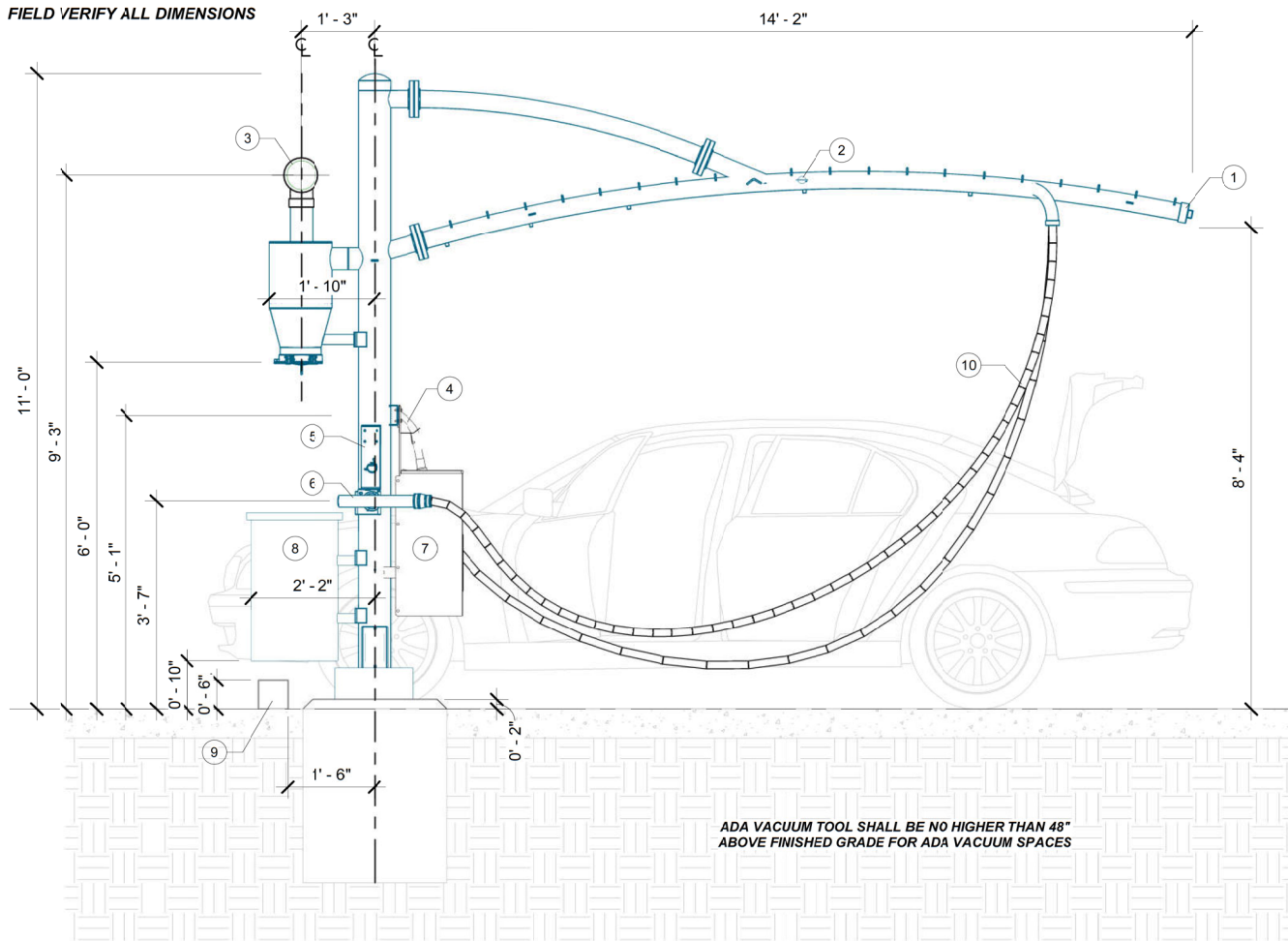
#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

PARKING ELEVATION

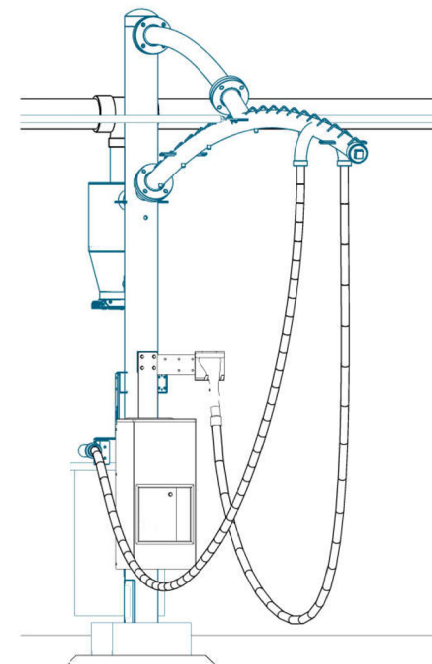
Project Number 20-0251
Date 4/21/20
Drawn By MB
Checked By KG

REVISION V301
Mar 8, 2021

FIELD VERIFY ALL DIMENSIONS



ADA VACUUM TOOL SHALL BE NO HIGHER THAN 48" ABOVE FINISHED GRADE FOR ADA VACUUM SPACES



F.G.
0' - 0"

ADA PARKING ELEVATION

ITEM	DESCRIPTION
1	DUAL USER PALM ARCH
2	11' - 16' ADJUSTABLE CROSSBAR
3	6" OVERHEAD ALUMINUM VACUUM TUBE
4	CLAW VACUUM TOOL
5	ADA TOOL MOUNT BRACKET
6	CREVICE VACUUM TOOL
7	TOWEL BIN
8	30 GALLON WASTE RECEPTACLE
9	CURB
10	1-1/2"x15' VACUUM HOSE

1 ADA PARKING ELEVATION

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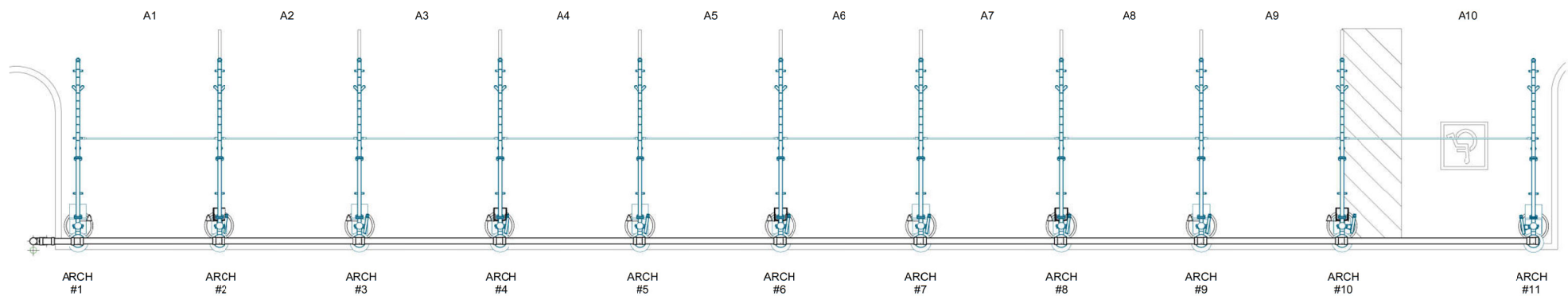
8830 South MCKEMY STREET
TEMPE, ARIZONA 85824

#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

ADA PARKING ELEVATION

Project Number 20-0251
Date 4/21/20
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① ARCH NUMBERING PLAN

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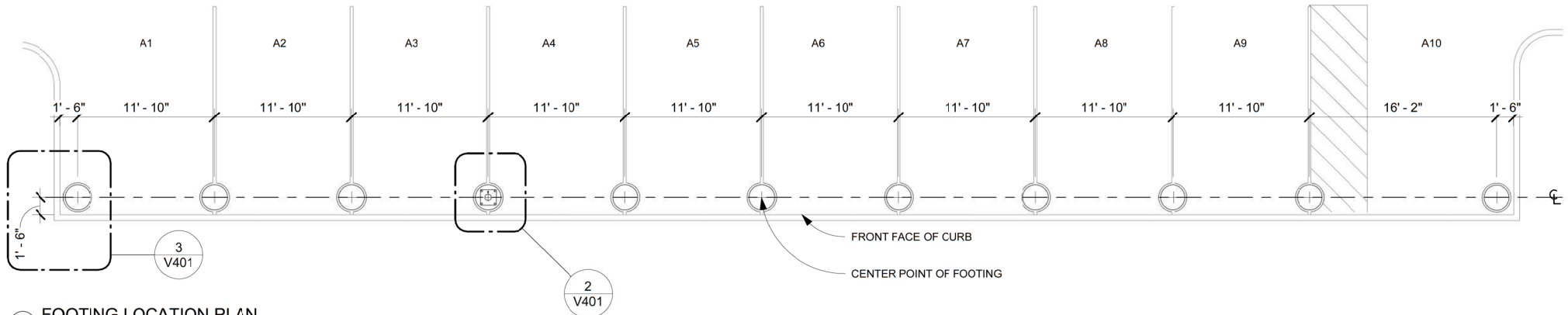
ARCH NUMBERING PLAN

Project Number 20-0251
Date 4/21/20
Drawn By MB
Checked By KG

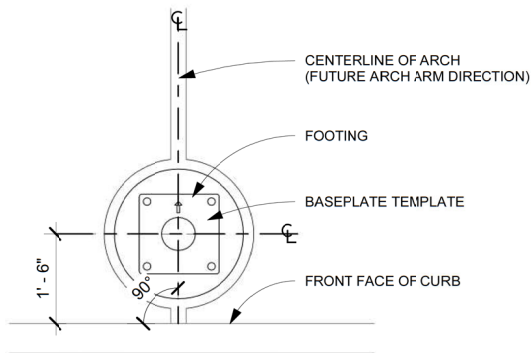


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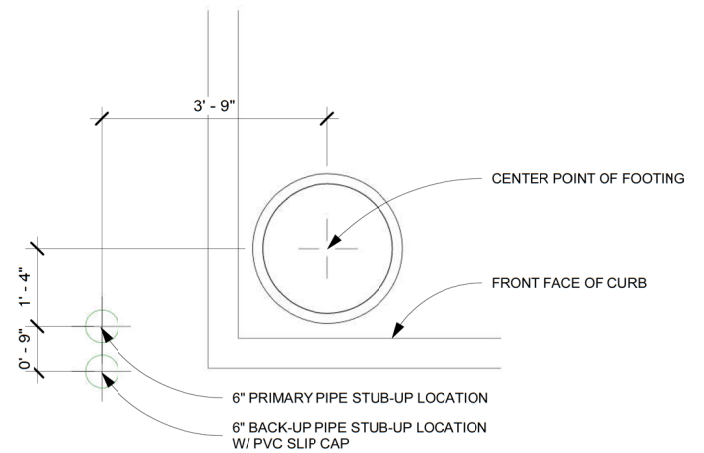
FIELD VERIFY ALL DIMENSIONS



1 FOOTING LOCATION PLAN



2 BASEPLATE TEMPLATE ORIENTATION



3 PIPE STUB-UP LOCATION

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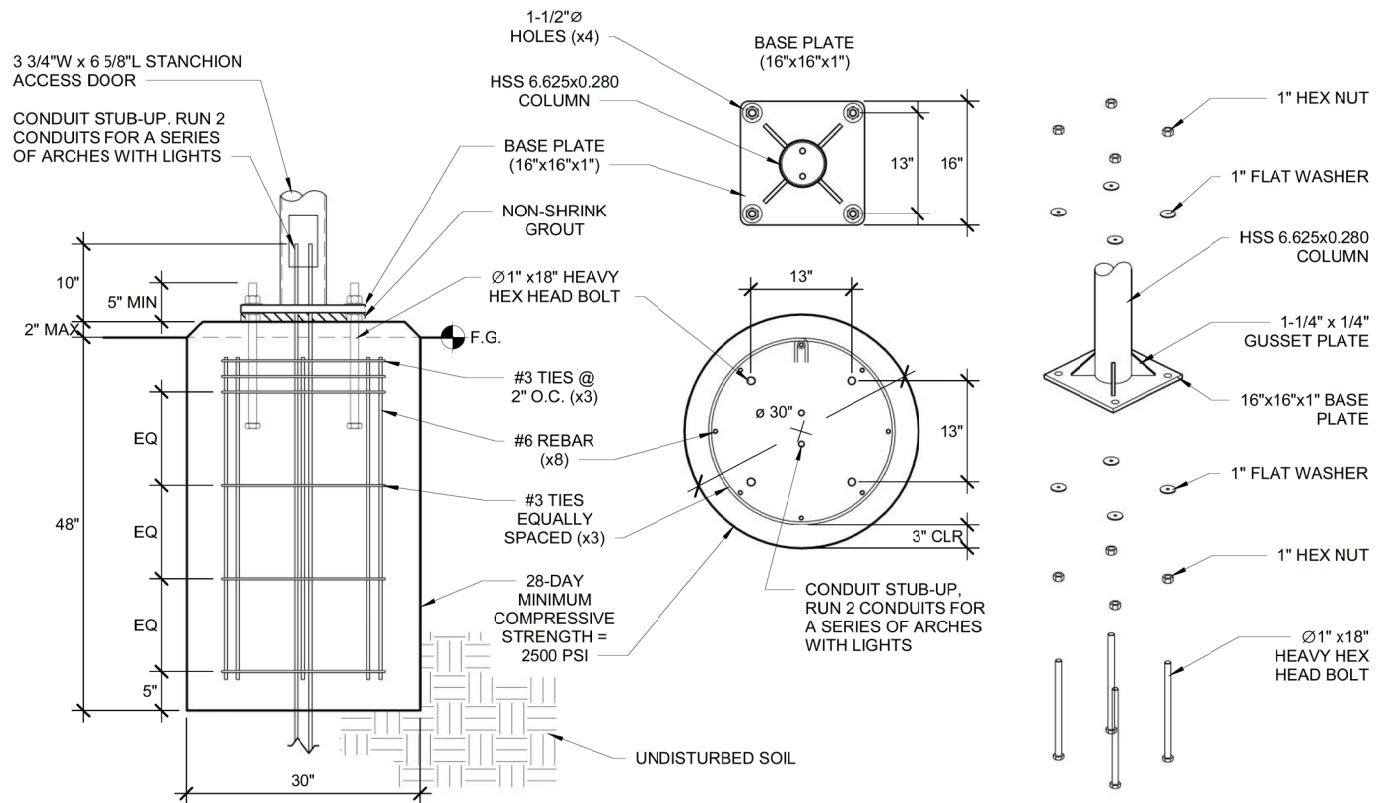
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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

FOOTING LOCATION PLAN

Project Number 20-0251
Date 4/21/20
Drawn By MB
Checked By KG





NOTE:
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① FOOTING - PALM ARCH

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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

FOOTING DETAIL

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG



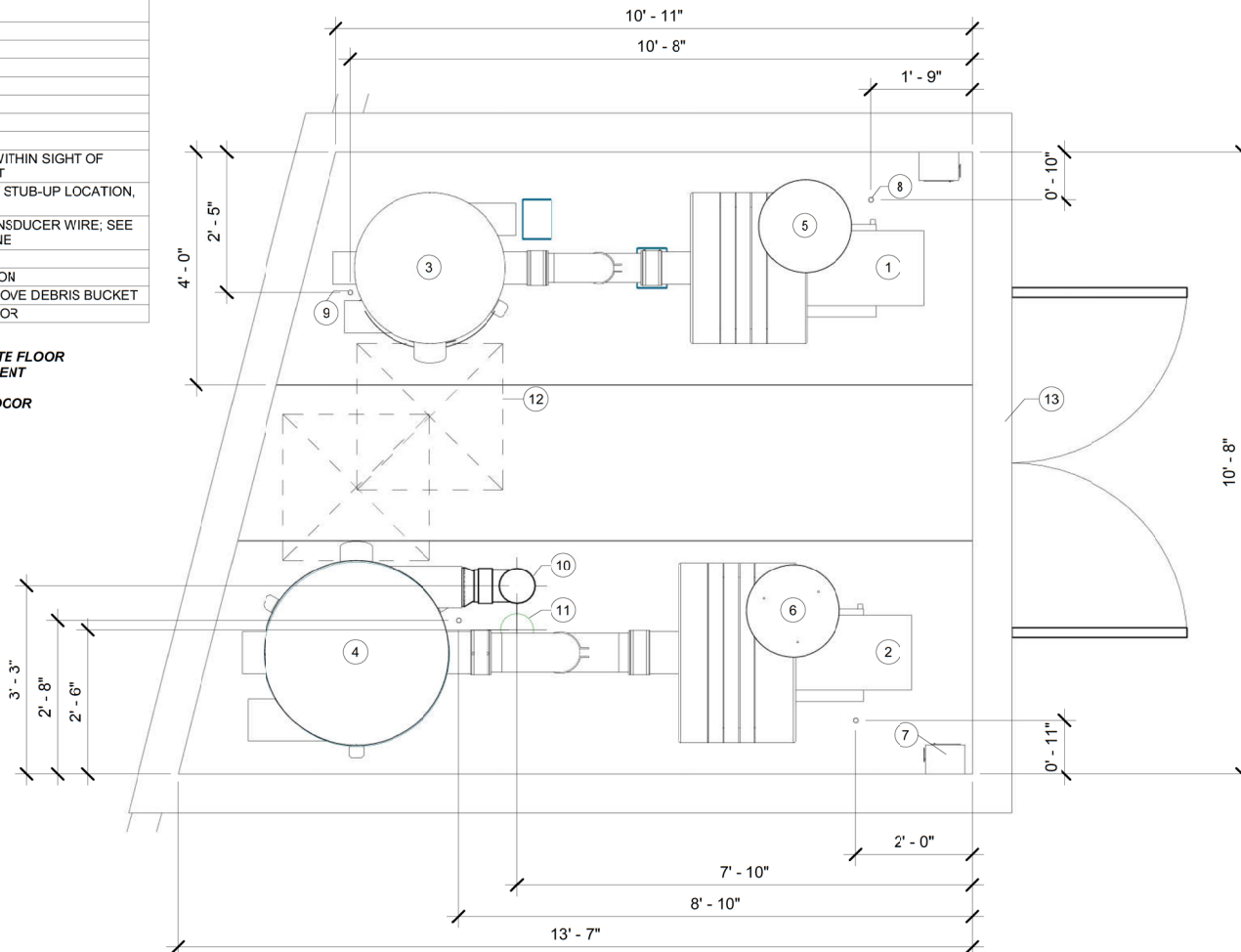
FIELD VERIFY ALL DIMENSIONS

NOTE: IF VACUUM EQUIPMENT IS ENCLOSED WITH ROOF/CEILING, REFER TO VENTILATION REQUIREMENTS UNDER EQUIPMENT WARRANTY INFORMATION

EQUIPMENT PLAN	
ITEM	DESCRIPTION
1	25HP T3 DIRECT DRIVE TURBINE
2	50HP T4 DIRECT DRIVE TURBINE
3	31x79 FILTER SEPARATOR
4	38x88 FILTER SEPARATOR
5	6' T3 OUTDOOR EXHAUST SILENCER
6	8' T4 OUTDOOR EXHAUST SILENCER
7	RECOMMENDED DISCONNECT LOCATION (WITHIN SIGHT OF TURBINE), CLEARANCE REQUIRED IN FRONT
8	RECOMMENDED TURBINE MOTOR CONDUIT STUB-UP LOCATION, SIZE PER N.E.C.
9	3/4" CONDUIT STUB-UP LOCATION FOR TRANSDUCER WIRE; SEE CONDUIT REQUIREMENT FOR VFD & TURBINE
10	6" VACUUM PIPE STUB-UP LOCATION
11	6" BACK-UP VACUUM PIPE STUB-UP LOCATION
12	30"x30" MINIMUM SPACE REQUIRED TO REMOVE DEBRIS BUCKET
13	VERIFY SEPARATOR WILL FIT THROUGH DOOR

14'Lx10'W MINIMUM FLAT AND LEVEL CONCRETE FLOOR SPACE REQUIRED FOR VACUUM EQUIPMENT

VERIFY SEPARATOR WILL FIT THROUGH DCOR (48" DOUBLE DOOR RECOMMENDED)



1 EQUIPMENT PLAN

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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

EQUIPMENT SITE PLAN

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG



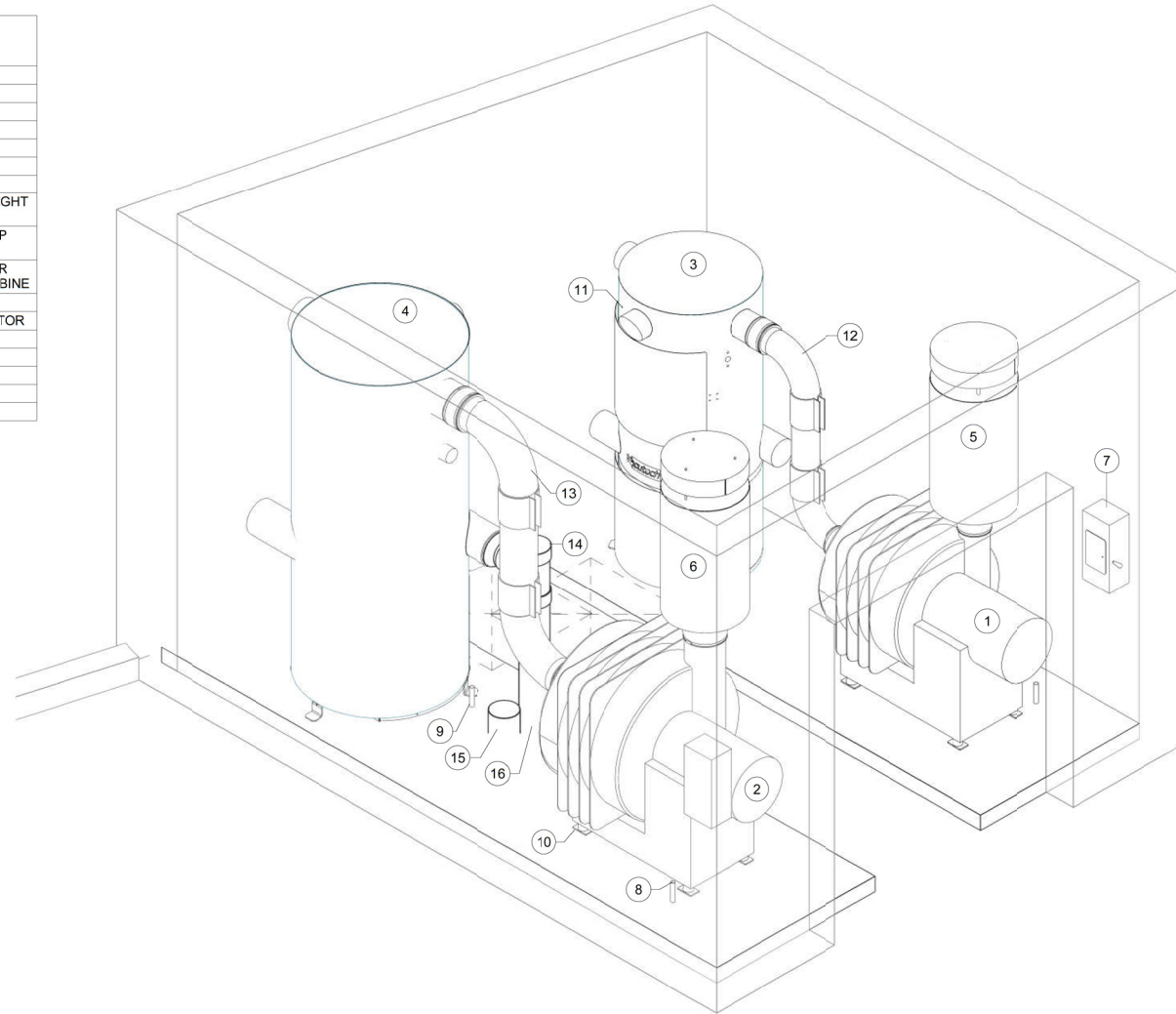
NOTE: IF VACUUM EQUIPMENT IS ENCLOSED WITH ROOF/CEILING, REFER TO VENTILATION REQUIREMENTS UNDER EQUIPMENT WARRANTY INFORMATION

EQUIPMENT ISOMETRIC

Key Value	Keynote Text
1	25HP T3 DIRECT DRIVE TURBINE
2	50HP T4 DIRECT DRIVE TURBINE
3	31x79 FILTER SEPARATOR
4	38x88 FILTER SEPARATOR
5	6" T3 OUTDOOR EXHAUST SLENCER
6	8" T4 OUTDOOR EXHAUST SLENCER
7	RECOMMENDED DISCONNECT LOCATION (WITHIN SIGHT OF TURBINE), CLEARANCE REQUIRED IN FRONT
8	RECOMMENDED TURBINE MOTOR CONDUIT STUB-UP LOCATION, SIZE PER N.E.C.
9	3/4" CONDUIT STUB-UP LOCATION FOR TRANSDUCER WIRE; SEE CONDUIT REQUIREMENT FOR VFD & TURBINE
10	TURBINE VIBRATION ISOLATOR
11	TRANSDUCER CONNECTION LOCATION ON SEPARATOR
12	6" SEPARATOR/TURBINE HOOK-UP KIT (ALUMINUM)
13	8" SEPARATOR/TURBINE HOOK-UP KIT (ALUMINUM)
14	6" CLEAN-OUT
15	6" BACK-UP VACUUM PIPE STUB-UP LOCATION
16	6" VACUUM PIPE STUB-UP LOCATION

14'Lx10'W MINIMUM FLAT AND LEVEL CONCRETE FLOOR SPACE REQUIRED FOR VACUUM EQUIPMENT

VERIFY SEPARATOR WILL FIT THROUGH DOOR (48" DOUBLE DOOR RECOMMENDED)



1 EQUIPMENT ISOMETRIC

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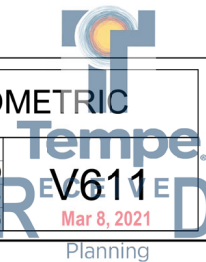
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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

EQUIP. SITE ISOMETRIC

Project Number	20-0251
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Drawn By	MB
Checked By	KG

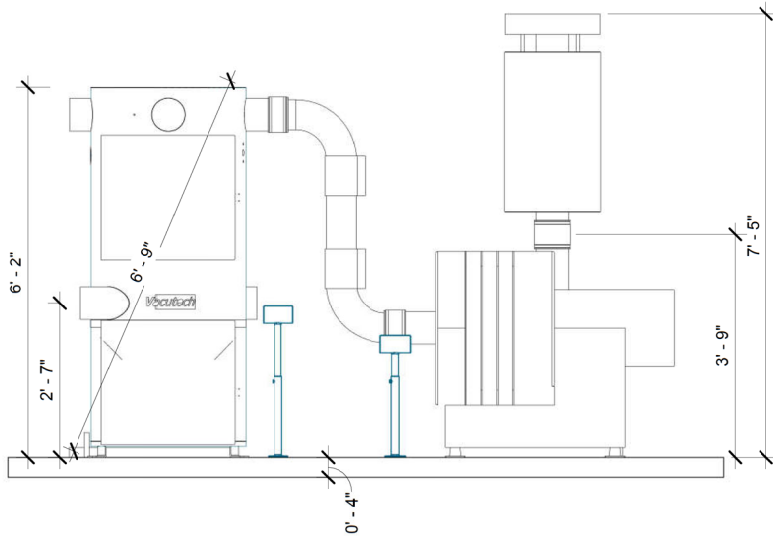


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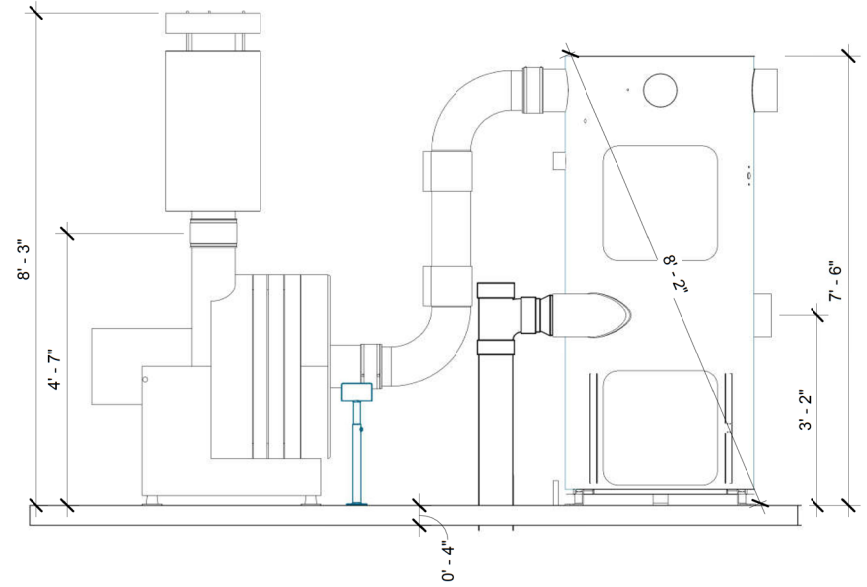
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FIELD VERIFY ALL DIMENSIONS

NOTE: IF VACUUM EQUIPMENT IS ENCLOSED WITH ROOF/CEILING, REFER TO VENTILATION REQUIREMENTS UNDER EQUIPMENT WARRANTY INFORMATION



① T3 / 31x79



② T4 / 38x88

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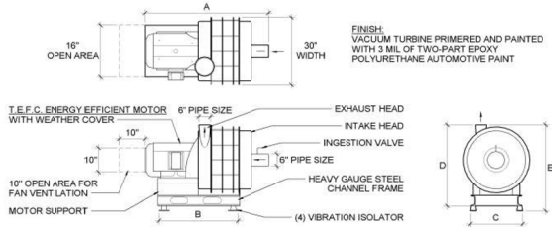
EQUIPMENT ELEVATION

Project Number 20-0251
Date 4/21/20
Drawn By MB
Checked By KG



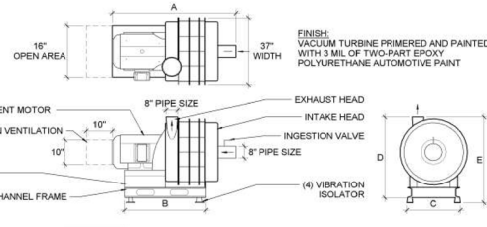
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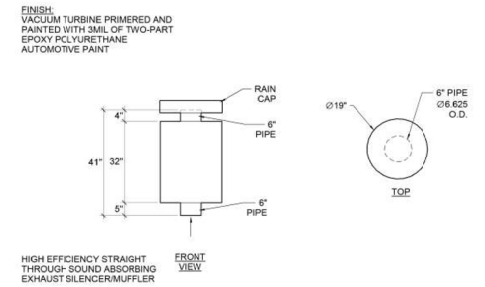
T3 DIRECT DRIVE VACSTAR TURBINE								
MODEL	HP	STAGES	A	B	C	D	E	APPROX. WT. (LBS)
FT-DD-T320HP4	20	4	45"	31"	16"	40"	41 7/8"	770
FT-DD-T325HP4	25	4	46 1/8"	31"	16"	40 3/4"	42 5/8"	860
FT-DD-T330HP4	30	4	48 1/8"	31"	16"	40 3/4"	42 5/8"	880
FT-DD-T340HP4	40	4	49 3/16"	37"	16"	42 1/4"	44 1/8"	1060

1 TURBINE - T3 DD

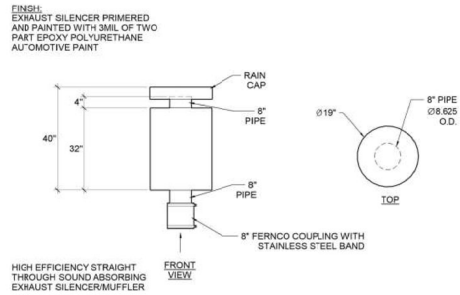


T4 DIRECT DRIVE VACSTAR TURBINE								
MODEL	HP	STAGES	A	B	C	D	E	APPROX. WT. (LBS)
FT-DD-T440HP3	40	3	49 9/16"	37"	16"	48 1/2"	50 3/8"	1170
FT-DD-T450HP3	50	3	51 1/8"	37"	16"	48 1/2"	50 3/8"	1210
FT-DD-T460HP3	60	3	52 1/16"	39"	19"	50 1/2"	52 3/8"	1510
FT-DD-T475HP3	75	3	53 1/16"	39"	19"	50 1/2"	52 3/8"	1580
FT-DD-T4100HP3	100	3	56 15/16"	39"	19"	50 1/4"	52 1/8"	1800

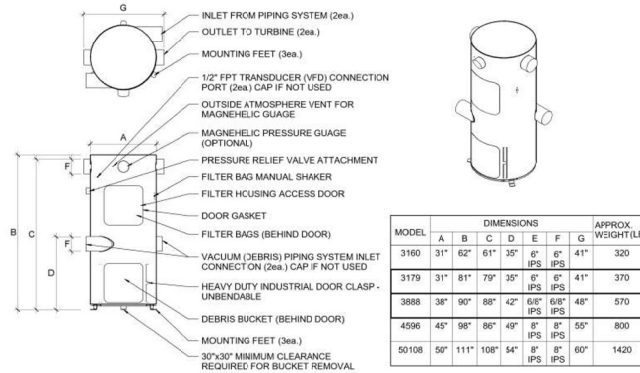
2 TURBINE - T4 DD



3 EXHAUST SILENCER - T3 OUTDOOR



4 EXHAUST SILENCER - T4 OUTDOOR



MODEL	DIMENSIONS							APPROX. WEIGHT(LBS)
	A	B	C	D	E	F	G	
3160	31"	62"	61"	35"	6"	6"	41"	320
3179	31"	81"	79"	35"	6"	6"	41"	370
3888	38"	90"	88"	42"	6"	6"	48"	570
4596	48"	98"	80"	49"	8"	8"	55"	800
50108	50"	111"	108"	54"	8"	8"	60"	1420

5 SEPARATOR - FILTER

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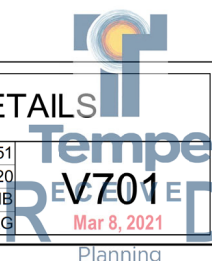
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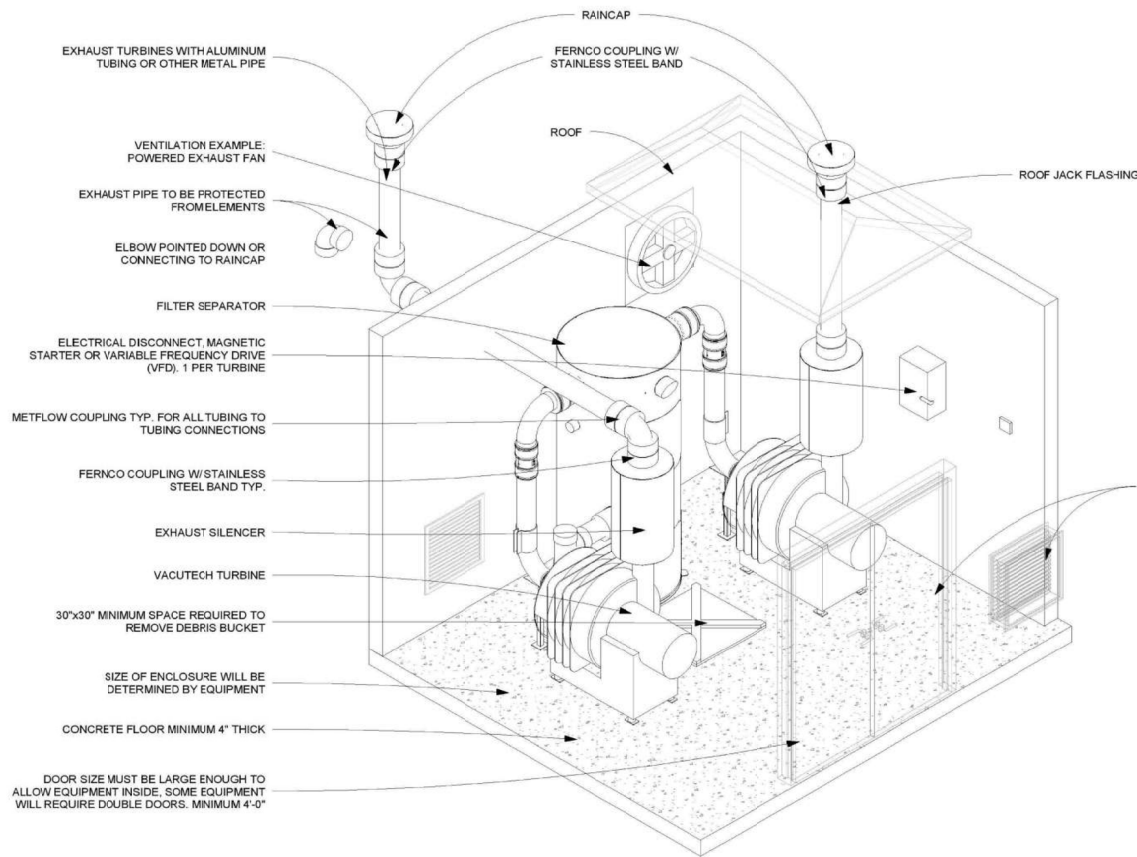
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TEMPE, ARIZONA 85824

#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

EQUIPMENT DETAILS	
Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG





VENTILATION EXAMPLE: LOUVERED ENCLOSURE DOOR, OR LOUVERS IN WALL

HEAT GENERATION TABLE

HP	Across the Line Starter		Variable Frequency Drive (VFD)	
	Heat Load (BTU/HR)	Required Airflow (CFM)	Heat Load (BTU/HR)	Required Airflow (CFM)
10	12722	915	2544	284
15	19084	1373	3817	426
20	25444	1830	5089	568
25	31805	2288	6361	710
30	38166	2745	7633	852
40	50889	3660	10178	1136
50	63611	4575	12722	1420
60	76333	5490	15267	1704
75	95416	6863	19083	2130
100	127222	9150	25444	2840

VACUUM EQUIPMENT INSTALLED IN AN ENCLOSURE WITH 4 WALLS AND A ROOF MUST BE ADEQUATELY VENTILATED OR ROOM CONDITIONED IN ORDER TO PROPERLY DISSIPATE THE HEAT GENERATED BY THE MECHANICAL AND ELECTRICAL EQUIPMENT. IMPROPER VENTILATION AND HEAT DISSIPATION CAN WILL RESULT IN DAMAGE TO THE MECHANICAL AND ELECTRICAL EQUIPMENT INCLUDING VFD'S, MOTOR STARTERS, ELECTRIC MOTORS AND VACUUM PRODUCERS. PLEASE REFERENCE THE HEAT GENERATION TABLE INCLUDED IN THIS DETAIL TO DETERMINE THE AMOUNT OF HEAT LOAD THAT THE TURBINE(S) AND STARTING EQUIPMENT WILL GENERATE AND THE CORRESPONDING REQUIRED AIR FLOW OF EXHAUST AND AIR INTAKE TO DISSIPATE THE HEAT GENERATED BY THE VACUTECH EQUIPMENT. IF ADDITIONAL EQUIPMENT IS INSTALLED IN THE EQUIPMENT ROOM (AIR COMPRESSORS, ELECTRICAL PANELS, TUNNEL CONTROLS, ETC.) PLEASE CONSULT YOUR HVAC DESIGN ENGINEER FOR PROPER TEMPERATURE CONTROL DESIGN OF YOUR EQUIPMENT ROOM. OPERATING TEMPERATURES ABOVE 104 °F (TYPICAL MAXIMUM ENVIRONMENTAL TEMPERATURE FOR ELECTRICAL EQUIPMENT) WILL SHORTEN THE LIFE OF THE VACUUM EQUIPMENT AND MAY INVALIDATE THE VACUTECH LLC WARRANTY.

THE VACUUM TURBINE MUST BE EXHAUSTED OUTSIDE WITH METALLIC PIPE NO SMALLER THAN THE DIAMETER OF THE EXHAUST OUTLET OF THE TURBINE. THE EXHAUST PIPE OPENING MUST BE PROTECTED FROM ELEMENTS. IF EXHAUST DISTANCE IS GREATER THAN 20 FEET USE ONE PIPE SIZE LARGER AFTER 10 FEET OF RUN (I.E. FOR A 20-FOOT RUN OF 8" EXHAUST, USE 8" FOR FIRST 10 FEET AND 10" FOR REMAINING 10 FEET OF THE OVERALL 20-FOOT RUN).

FOR EQUIPMENT ROOMS WITH MULTIPLE TURBINE SETUPS, ADD THE CFM REQUIREMENT PER TURBINE TO DETERMINE TOTAL CFM REQUIREMENT FOR THE EQUIPMENT ROOM. THIS ASSUMES EQUIPMENT ROOM DIMENSIONS 15' X 15' WITH 10' CEILINGS. THIS ASSUMES AN OUTSIDE AIR TEMPERATURE OF 90°F AND A MAXIMUM ROOM TEMPERATURE OF 104°F (NEMA CLASS F INSULATION RATING, MAXIMUM TEMPERATURE) AND DOES NOT ACCOUNT FOR RADIANT HEATING FROM THE ENVIRONMENT OR ANY OTHER EQUIPMENT INSTALLED IN EQUIPMENT ROOM. THESE VALUES ARE ESTIMATES ONLY AND DEPEND ON EQUIPMENT ROOM DIMENSIONS, GEOGRAPHIC LOCATION AND EQUIPMENT SETUP. TO CALCULATE YOUR SPECIFIC CONFIGURATION AND SITE CONDITIONS PLEASE CONSULT YOUR MECHANICAL HVAC DESIGNER AND ASHRAE STANDARDS.

1 ENCLOSURE - TYPICAL REQUIREMENTS

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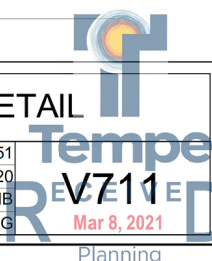
1350 HI-TECH DRIVE
SHERIDAN, WY 82801
PHONE: (307) 675-1992
EMAIL: info@vacutechllc.com
WEB: www.vacutechllc.com

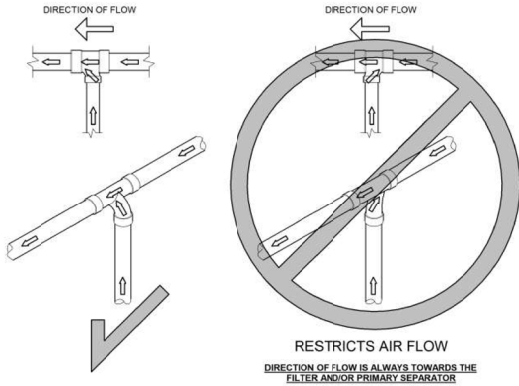
FRANCIS & SONS McKEMY

8830 South McKEMY STREET
TEMPE, ARIZONA 85824

#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	MS	KG	4/30/20

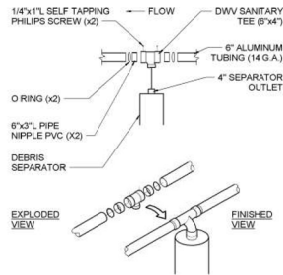
ENCLOSURE DETAIL	
Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG





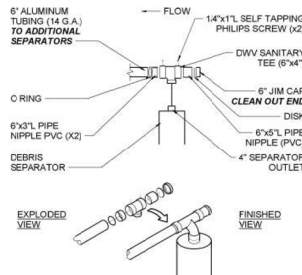
① PIPE - PIPE FLOW

TYPICAL SANITARY TEE & ALUMINUM TUBING CONNECTION:

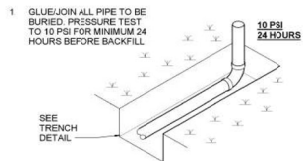
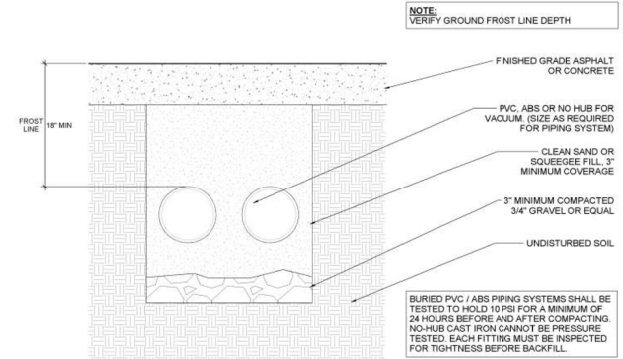


② PIPE - 6x4 TEE KIT

SANITARY TEE & TUBING CONNECTION AT CLEAN OUT END:



③ TRENCH - DUAL LINE



④ TRENCH - PRESSURE TEST

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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

PIPE DETAILS

Project Number	20-0251
Date	4/21/20
Drawn By	MB
Checked By	KG

RECEIVED
 V721
 Mar 8, 2021

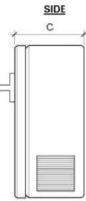
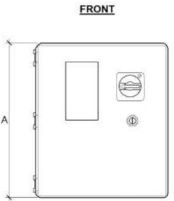
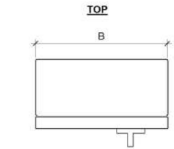


FRANKLIN CONTROLS NEMA 3R ENCLOSURE VARIABLE FREQUENCY DRIVE (VFD) LINE & OUTPUT REACTOR

WARRANTY INFORMATION:
EACH VFD MUST BE WIRED FROM MAIN DISTRIBUTION PANEL IN SEPARATE CONDUIT (SIZED PER CODE, BASED ON TURBINE H.P. AND VOLTAGE) TO EACH VFD AND FROM EACH VFD TO TURBINE MOTOR.

A SEPARATE CONDUIT SIZED PER N.E.C. MUST ALSO BE INSTALLED FROM VFD TO VACUUM PRESSURE TRANSDUCER INSTALLED ON FILTER SEPARATOR. IF TWO (2) OR MORE VFD'S ARE INSTALLED IN ONE (1) ENCLOSURE, A SEPARATE CONDUIT MUST BE INSTALLED FOR EACH VFD. INSTALL SEPARATE CONDUIT FROM ENCLOSURE TO EACH TURBINE MOTOR, AND EACH FILTER SEPARATOR IF THERE IS MORE THAN ONE (1), WHEN RUNNING MORE THAN ONE CONDUIT IN A TRENCH, MINIMUM SEPARATION MUST BE 8" TO PREVENT FREQUENCY INTERFERENCE.

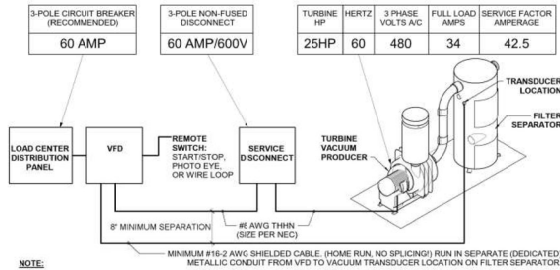
* WARNING! *
16/2 SHIELDED WIRE MUST BE SINGLE CONTINUOUS RUN AND MAY NOT BE SPLICED!



HORSEPOWER	DIMENSIONS (INCHES)			WEIGHT (lbs)
	A	B	C	
20HP	35	24	12	85
25HP	42	24	12	85
30HP	40	29	13	87
40HP	42	24	12	90
50HP	47	24	14	110
60HP	45	29	13	110
75HP	47	24	14	115
100HP	56	36	16	120
125HP	56	36	16	

① VFD - NEMA 3R - 480V

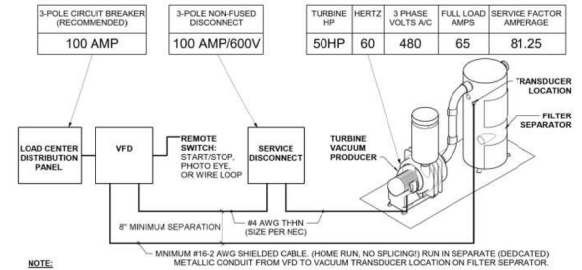
25HP TURBINE, 480V W/ VARIABLE FREQUENCY DRIVE



NOTE:
1. DIAGRAM DISPLAYS THE REQUIREMENTS FOR AN INDIVIDUAL VACUUM TURBINE MOTOR.
2. ALL MOTOR (LOAD) AND POWER (LINE) WIRES MUST BE RUN IN SEPARATE CONDUITS.
3. ALWAYS FOLLOW ALL NATIONAL AND LOCAL ELECTRICAL CODES.

② ELECTRICAL DIAGRAM - VFD - 25HP 480V

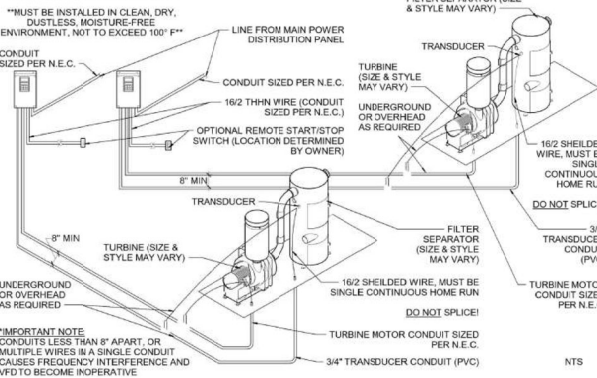
50HP TURBINE, 480V W/ VARIABLE FREQUENCY DRIVE



NOTE:
1. DIAGRAM DISPLAYS THE REQUIREMENTS FOR AN INDIVIDUAL VACUUM TURBINE MOTOR.
2. ALL MOTOR (LOAD) AND POWER (LINE) WIRES MUST BE RUN IN SEPARATE CONDUITS.
3. ALWAYS FOLLOW ALL NATIONAL AND LOCAL ELECTRICAL CODES.

③ ELECTRICAL DIAGRAM - VFD - 50HP 480V

VARIABLE FREQUENCY DRIVE (VFD)



④ CONDUIT - 2 SYSTEM VFD - NEMA 3R

VFD' OR 'VARIABLE FREQUENCY DRIVE' IS AN OPTIONAL STARTER CONTROL.

- VFD MUST BE INSTALLED IN A CLEAN, DRY, DUST-FREE, OIL-FREE & MOISTURE-FREE CLIMATE CONTROLLED ENVIRONMENT NOT TO EXCEED 104 DEGREES FAHRENHEIT.
- EXTERIOR RAIN-TIGHT NEMA 12 VFD ENCLOSURES ARE AVAILABLE FOR ADDITIONAL EXPENSE.
- CONDUIT FOR TRANSDUCER MUST BE 8" AWAY FROM ALL OTHER WIRING/CONDUIT AND MUST BE A HOME RUN (NO SPLICING) THAT SHALL NOT EXCEED 100'.
- ALL CONDUIT RUNS FOR VACUUM SYSTEM VFD(S) & MOTOR(S) MUST BE IN A SEPARATE CONDUIT A MINIMUM OF 12" APART.
- WHEN USING PVC CONDUIT, HIGH VOLTAGE LINE & LOAD WIRE MUST BE SHIELDED.

CARWASH EQUIPMENT ROOM IS NOT RECOMMENDED FOR VFD INSTALLATION, AND WILL AFFECT PRODUCT WARRANTY.

VFD MUST BE INSTALLED IN A DRY, CLEAN, OIL FREE, DUST FREE, MOISTURE FREE, CLIMATE CONTROLLED ENVIRONMENT

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#	Revision	By	Chk	Date
1	UPDATED TO NEW PROPOSAL	M5	KG	4/30/20

VFD DETAILS

Project Number 20-0251
Date 4/21/20
Drawn By MB
Checked By KG

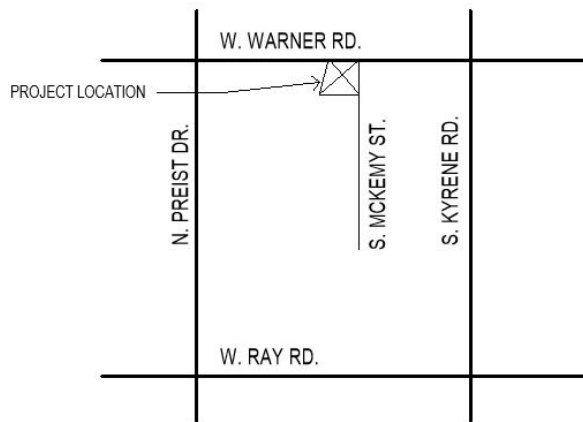
REVEALED
Mar 8, 2021
Planning

**NO GIMMICKS CARWASH
VACUUM INSTALLATION**

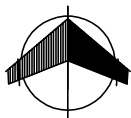
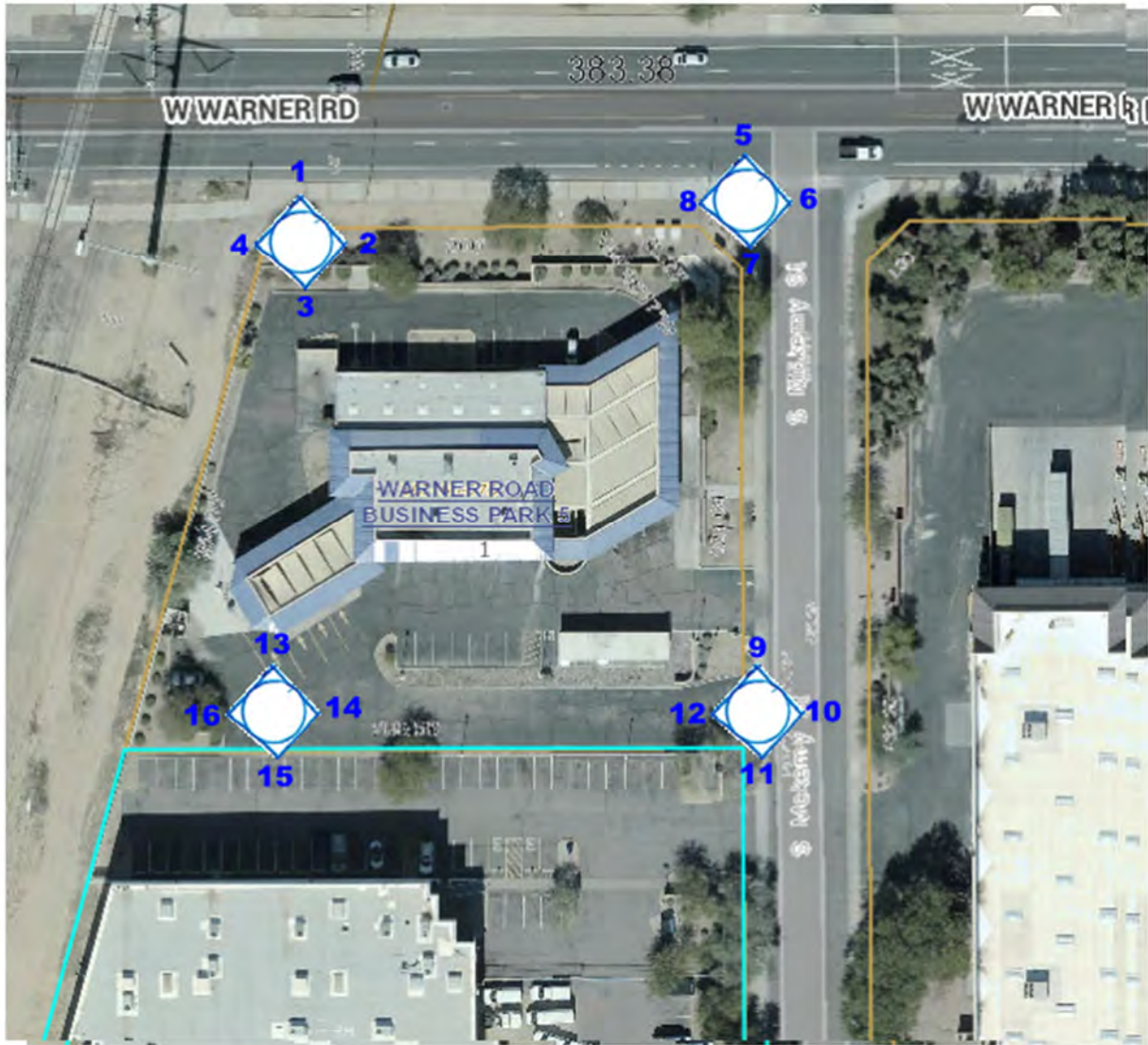
USE PERMIT

Photographs

8830 S. McKemy St.
Tempe, AZ 85284



Photograph Key Map



NOT TO SCALE



1. Northwest corner looking North.



2. Northwest corner looking East.



3. Northwest corner looking South.



4. Northwest corner looking West.



5. Northeast corner looking North.



6. Northeast corner looking East.



7. Northeast corner looking South.



8. Northeast corner looking West.



9. Southeast corner looking North.



10. Southeast corner looking East.



11. Southeast corner looking South.



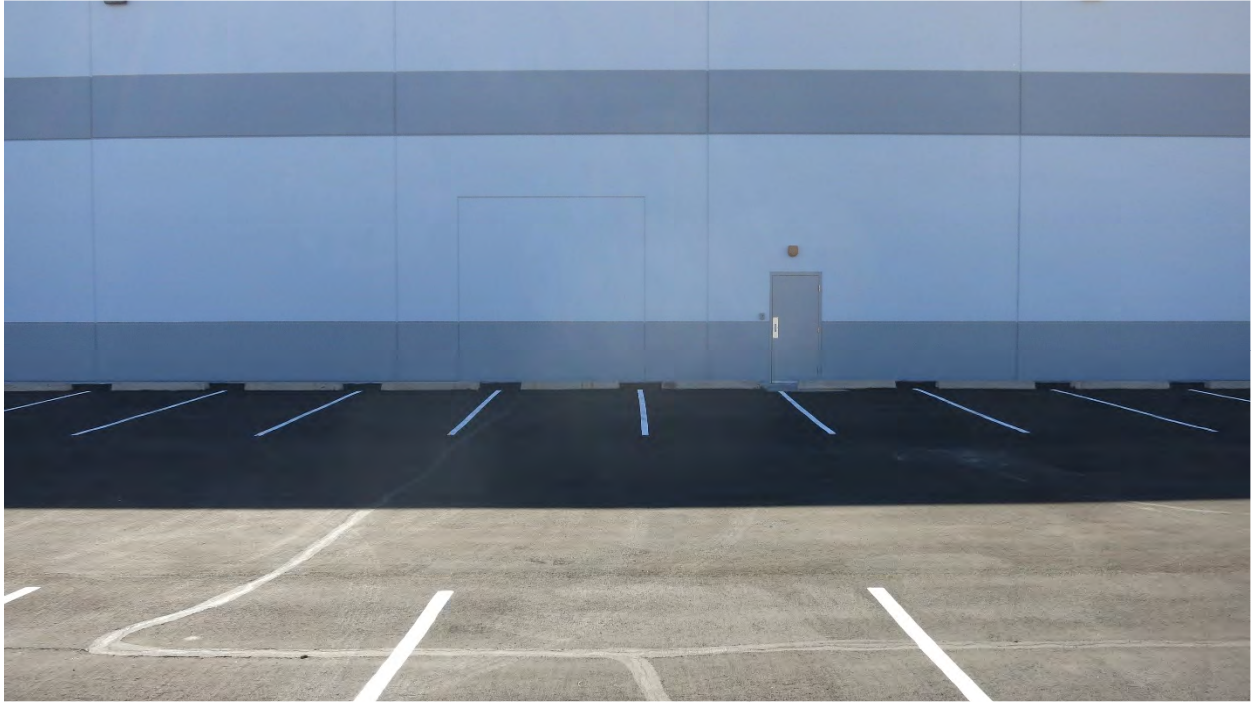
12. Southeast corner looking West.



13. Southwest corner looking North.



14. Southwest corner looking East.



15. Southwest corner looking South.



16. Southwest corner looking West.

