



# Staff Report

PLANNING DIVISION  
DEPARTMENT OF COMMUNITY AND NEIGHBORHOODS

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To: Salt Lake City Administrative Hearing Officer

From: Kelsey Lindquist  
kelsey.lindquist@slcgov.com  
(801) 535-7930

Date: August 23, 2018

Re: PLNPCM2018-00439 Salt Lake City Public Utilities Tower

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## Conditional Use

**PROPERTY ADDRESS: 4650 West 700 South, Salt Lake City, Utah 84104**  
**PARCEL ID: 15-16-100-003-0000**  
**MASTER PLAN: Northwest Quadrant Master Plan**  
**ZONING DISTRICT: M-1 (Light Manufacturing)**

**REQUEST:** The petitioner Kristeen Schumacher, representative for Salt Lake City Public Utilities, is seeking conditional use approval to install a 65' tall monopole at the subject property located at 4650 West 700 South. The proposed monopole will be utilized to implement a new water meter radio read system. This will enable Public Utilities to read the existing water meters. Section 21A.40.090.E requires a conditional use for monopoles over 60' in height.

**RECOMMENDATION:** Based on the information in this staff report, Planning Staff recommends that the Administrative Hearing Officer approve the proposal as proposed and subject to complying with all applicable regulations. Due to the potential for detrimental impacts created by the project, which are identified in this report, staff recommends the Administrative Hearing Officer applies the following conditions to the project:

1. Any modifications to the approved plans after the issuance of a building permit must be specifically requested and approved by the Planning Division prior to execution.
2. Conditional Use approval expires within one year of the date of approval unless all required permits are obtained.
3. The applicant shall comply with all other department/division requirements.

**ATTACHMENTS:**

- A. Vicinity Map
- B. Site Plan
- C. Elevations
- D. Plan Set
- E. Additional Applicant Information
- F. Site Photos
- G. Existing Conditions
- H. Analysis of Standards
- I. Public Process and Comments
- J. Department Comments
- K. Motions

**PROJECT DESCRIPTION:**

Kristeen Schumacher, representative for Salt Lake City Public Utilities, has submitted a Conditional Use Application to construct a new monopole with a mounted antennae at the property located at 4650 W. 700 S. The property is located in the M-1 (Light Manufacturing) zoning district. The new monopole will be utilized to transfer water utility information to the antennae. This will reduce the need to read meters manually.

**KEY ISSUE:**

The key issues listed below have been identified through the analysis of the project, neighbor and community input and department review comments.

1. As mentioned in the Zoning review, the applicant will need to work with various divisions to ensure that existing infrastructure is properly maintained and all zoning issues are met.

**Issue 1**

Comments received indicate that the applicant will need to work closely with various city departments to ensure that the existing infrastructure is not damaged during the installation or operation of the site. In addition, several comments have been provided with the zoning review, which are standard items that will be reviewed during the building permit review.

**DISCUSSION:**

No conditions of approval related to impacts are required.

**NEXT STEPS:**

Should the application be approved, there will be the standard ten day appeal period found in the Zoning Ordinance. Once the appeal period has ended or any appeal is finalized, the applicant will be able to seek approval of building permits for the project within one year of the approval date.

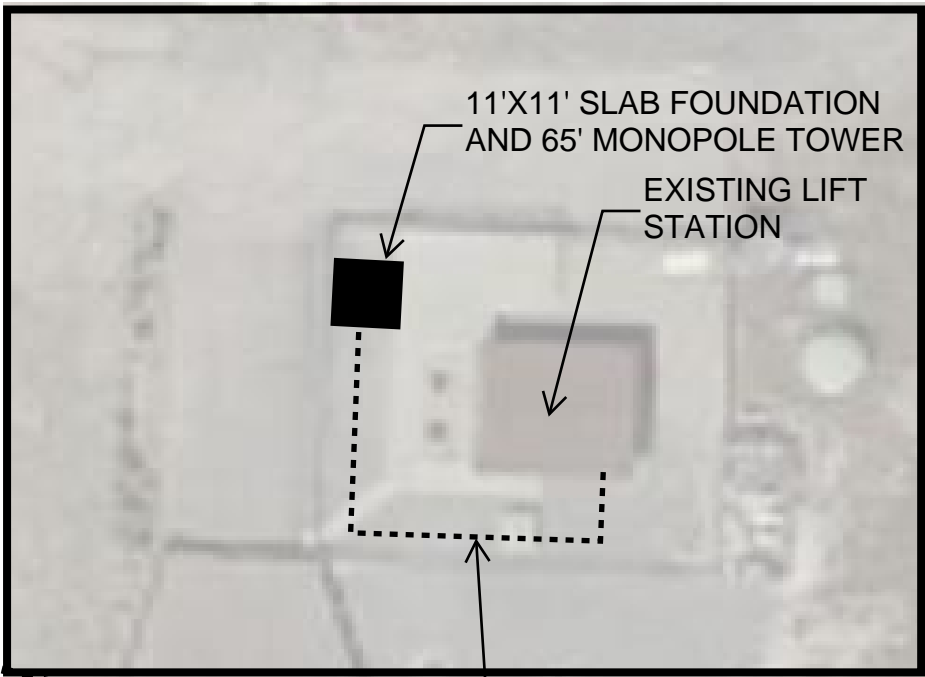
# ATTACHMENT A: VICINITY MAP

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# **ATTACHMENT B: SITE PLAN**

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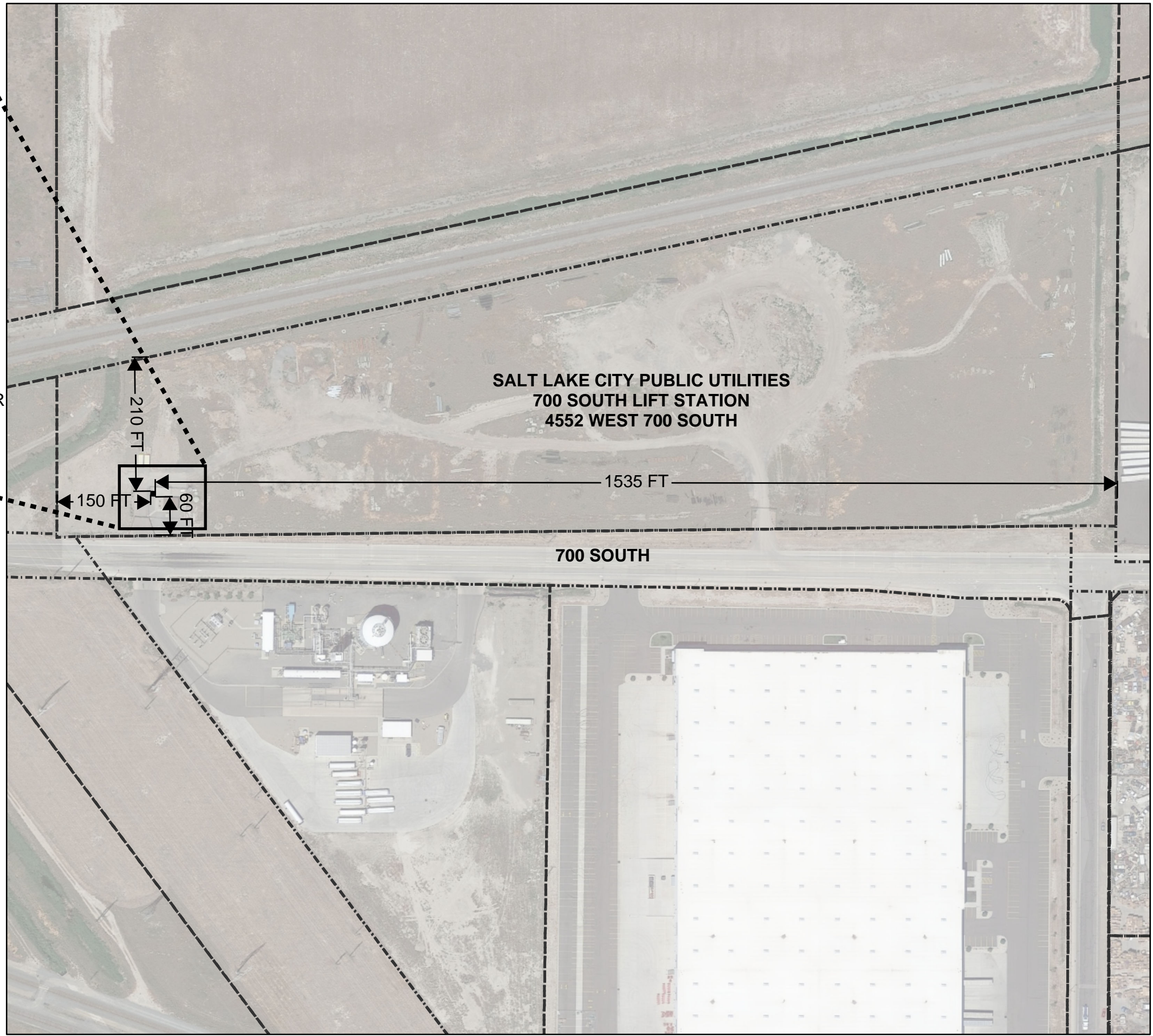
11'X11' SLAB FOUNDATION  
AND 65' MONOPOLE TOWER

EXISTING LIFT  
STATION

15 AMP ELECTRICAL SERVICE -  
EXISTING LIFT STATION POWER  
TO TOWER

NOTE: NO ELECTRICAL EQUIPMENT IS INCLUDED  
WITH THIS PROPOSAL.

# SITE PLAN



SALT LAKE CITY PUBLIC UTILITIES  
700 SOUTH LIFT STATION  
4552 WEST 700 SOUTH

1535 FT

700 SOUTH

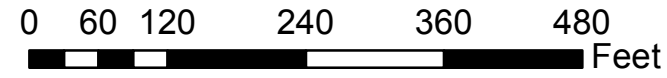
150 FT

210 FT

60 FT

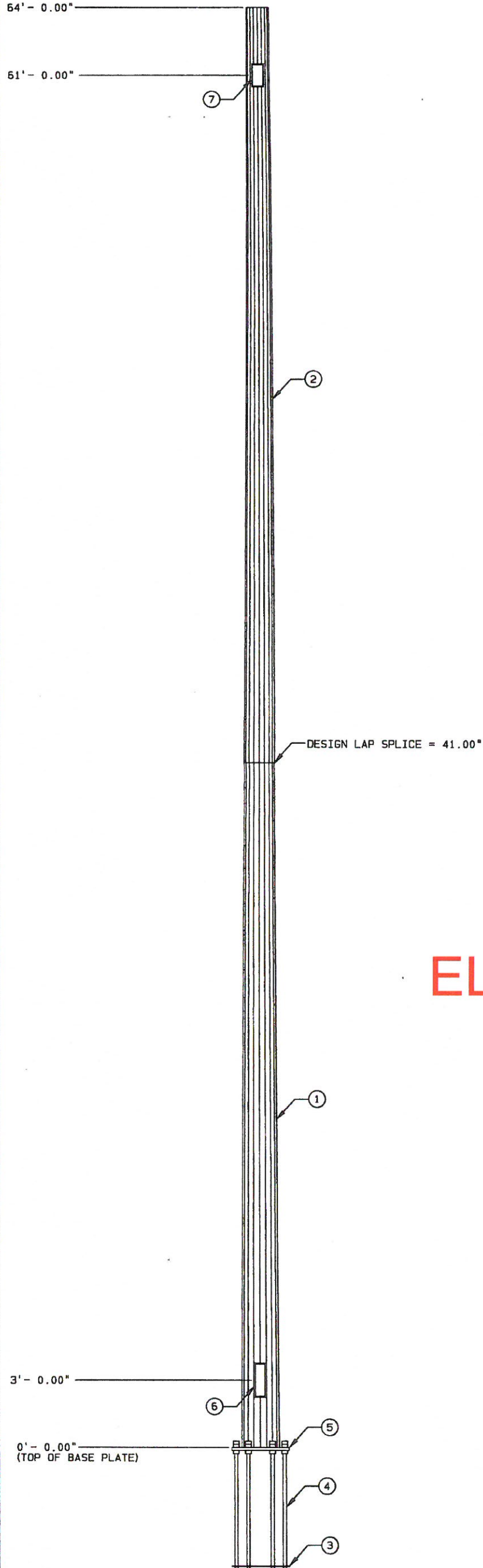
## Legend

 Property Lines

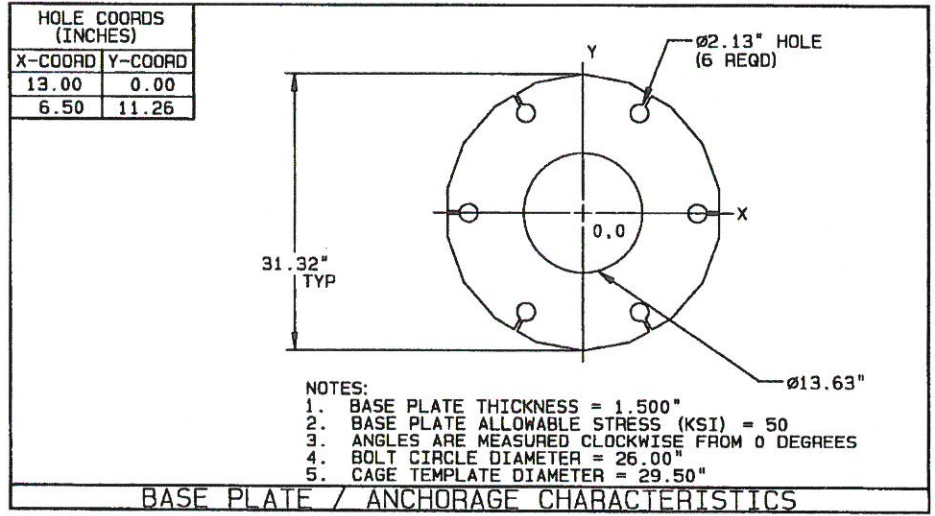


# **ATTACHMENT C: ELEVATIONS**

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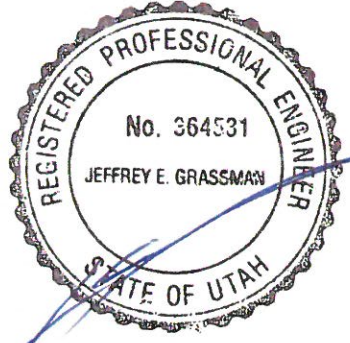
ITEM ID	NO. REQD	FEATURES	UNIT WEIGHT (LBS)	WEIGHT (LBS)
1	1	SECTION A VALMONT S-22 0.188" THK (A572 GR65)	1,203	1,203
2	1	SECTION B VALMONT S-22 0.188" THK (A572 GR65)	956	956
3	1	BOTTOM CAGE PLATE	52	52
4	6	1.75" ANCHOR BOLT, LENGTH=5.50' A615 GR75	64	381
5	1	BASE PLATE VALMONT S-56 1.500" THK (A572 GR50)	199	199
	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)	70	70
	1	SAFETY CLIMBING CABLE (LENGTH = 54.00')	63	63
	3	GROUNDING LUG	2	6
		GALVANIZING	82	82
	42	STEP AND CLIP (VALMONT STANDARD)	1	21
6	1	HAND HOLE STD (6" x 18")	18	18
7	2	HAND HOLE STD (6" x 12")	22	44
	1	POLE CAP	9	9



- NOTES:
- FACTORED REACTIONS FOR FOUNDATION DESIGN.  
 MOMENT = 1,430 IN-KIPS  
 SHEAR = 2,732 #  
 VERTICAL = 3,080 #
  - GALVANIZED PER ASTM A-123.
  - DESIGN CRITERIA: ANSI/TIA 222-G ADDENDUM 2
  - THIS STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LOADING:  
 EXPOSURE CATEGORY = C  
 STRUCTURE CLASSIFICATION = 2  
 TOPOGRAPHY CATEGORY = 1  
 EARTHQUAKE SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS  $S_s$  = 1.49  
 EARTHQUAKE SPECTRAL RESPONSE ACCELERATION AT ONE SECOND  $S_1$  = 0.50  
 EARTHQUAKE SITE CLASS = D  
 WIND LOAD CASES ARE BASED ON 3 SECOND GUST AND 50 YEAR WIND RETURN PERIOD  
 A. CASE 1: WIND = 90 MPH WIND SPEED  
 B. CASE 2: WIND = 40 MPH ICE AND WIND SPEED  
 DESIGN ICE THICKNESS = 0.25 INCH  
 C. CASE 3: WIND = 60 MPH WIND SPEED  
 D. CASE 4: SEISMIC  
 E. EQUIPMENT
- | DESCRIPTION             | ABP MTG HT. (FT) | ABP CENTROID HT. (FT) | WITHOUT ICE EPA (FT**2) | WT (LBS) | WITH ICE EPA (FT**2) | WT (LBS) |
|-------------------------|------------------|-----------------------|-------------------------|----------|----------------------|----------|
| 1-WPA-700102-BCF-EDIN-X | 64.00            | 64.00                 | 8.20                    | 40       | 9.70                 | 235      |
| 1-RWB-80015/90          | 64.00            | 64.00                 | 10.91                   | 31       | 7.51                 | 96       |
| 2-36" STANDOFF          | 64.00            | 64.00                 | 5.04                    | 132      | 13.80                | 212      |
- FEEDLINES ARE PLACED INTERIOR TO POLE SHAFT (UNLESS NOTED OTHERWISE).
  - TOTAL POLE HEIGHT IS 65 FT AGL.
  - ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE (APPROX. 1 FT AGL).
  - 18 SIDED SHAFT

# ELEVATION DRAWING

MAY 10 2018



SECTION INFORMATION						ORDER	PROJECT	FILE ID	SCALE	DATE	ENGR	valmont
ITEM ID	LENGTH	BASE OD	TOP OD	THK	MATL	403291	403291	403291	NONE	03/28/18	NAR1	
1	33'-9.00"	20.00"	15.58"	0.188"	A572 65 KSI	DESCRIPTION						
2	33'-8.00"	16.41"	12.00"	0.188"	A572 65 KSI	GRAYBAR 65' POLE, SITE: 700 SOUTH LIFT STATION, UT 403291						


# **ATTACHMENT D: PLAN SET**

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# valmont

## MICROFLECT

VALMONT/MICROFLECT  
3575 25<sup>TH</sup> ST. SE – P.O. BOX 12985  
SALEM, OR 97302-1190  
PHONE: 1-800-547-2151  
ENGINEER: NAR  
Reviewed by: NAR 

### SLAB FOUNDATION DESIGN CALCULATIONS

# FOUNDATION DESIGN CALCULATIONS

MAY 10 2018



Valmont Order No.: 403291  
Customer: Graybar  
Site: 700 South Lift Station, UT  
Pole Ht: 64 FT (65 FT AGL)

**valmont**  **Pole Foundation Mat Design**  
**MICROFLECT**

SLAB DESIGN Date: 03/28/18 Time: 13:04  
 Project: 403291 Run by: NAR  
 Input (Blue): Checked by: NAR  
 legs 1 1 = Pole \ 3 or 4 = Tower  
 otm\_t 119 k-ft total pole overturning moment  
 sh\_t 2.73 k total pole shear  
 sh\_l 2.73 k  
 wt 2.31 k total pole weight \* 0.9  
 f\_w 2.17 ft anchor bolt circle dia  
 b 11.00 ft slab width (rigid square slab only)  
 t 24.00 in slab thickness  
 net\_p\_a 2.00 ksf ultimate soil bearing pressure  
 s\_f 1.00 allowable stress increase factor (rebar)  
 c\_h 42.00 in cap height above slab  
 c\_s 48.00 in cap dia  
 d\_f 5.00 ft. depth from final grade to bottom of footing  
 d\_fl 36.00 in depth of fill over slab  
 dens\_c 0.088 kcf density of concrete  
 dens\_s 0.042 kcf density of soil  
 dens\_fl 0.042 kcf density of fill over slab  
 f\_c 4,000 psi concrete compres. strength  
 c\_type concrete type  
 f\_y 60,000 psi rebar yield strength  
 u 1.00 soil factor of safety: qult/qall  
 Output Summary (see complete calculations below):  
 s\_r 1.53 OK (overturning F.S. OK)  
 net\_p 0.89 ksf OK (net soil bearing pressure is OK)  
 vol\_c 10.59 cu.yd. Total volume of concrete.  
 slab two-way shear: (punching shear ok)  
 slab beam shear: (beam shear ok)

Slab Reinforcement (ASTM A615 Gr.60):

		Size	Quan. (E/W)	Len. (ft)	Spc. (in)	Total (lbs)		
Y	Top Bar	#4	13	10.50	10.50	182	<---OK	
	Options	#5	12	10.50	11.45	263	<---OK	
		#6	6	10.50	25.20	189		
		As>=2.57	#7	5	10.50	31.50	215	
		#8	4	10.50	42.00	224		
		#9	3	10.50	63.00	214		
Y	Bot.Bar	#4	16	10.50	8.40	224	<---OK	
	Options	#5	11	10.50	12.60	241	<---OK	
		#6	12	10.50	11.45	379	<---OK	
		As>=3.13	#7	6	10.50	25.20	258	
		#8	4	10.50	42.00	224		
		#9	4	10.50	42.00	286		

(special design req'd for cap shear reinforcement)  
 (special design req'd for cap flexural/tensile reinforcement.)

VALMONT MICROFLECT  
 3575 25TH STREET SE  
 SALEM, OR 97302  
 PHONE: 1-800-547-2151



### Pole Foundation Mat Design Special Cap Reinforcement

**Special Cap Reinforcement:**

Project 403291.00  
Date: 03/28/18

Vertical Reinforcement Size = # **9**  
 Quantity of vertical rebar = **10**  
 Total area of vert. rebar = 10.00 in<sup>2</sup> >= 0.005\*Acap = 9.05in<sup>2</sup>, OK  
 vertical rebar horiz. Spacing = 10.77 in >= 1.5db and >= 1.5in, OK (ACI)

Factored max moment in cap = M + (V\*h<sub>cap</sub>) = 129.4 ft-k (conservatively neglect passive pressure of soil)  
 Section Modulus of rebar = 102.4 in<sup>3</sup>  
 fb = M/S = 15.2 ksi <=54ksi, OK

Req'd vert. bar dev. length = (3d<sub>b</sub>/40)\*(f<sub>y</sub>/f'<sub>c</sub>)<sup>0.5</sup>\*(1/2.5) = 32.02 in provide min 33 in vert. rebar dev. length  
 concrete cover = **4.00** in  
 length of vert rebar = 5.00 ft  
 a = 60.00 in > 33 in of vert. rebar dev. length OK  
 d\* = 9.50 in  
 b = 1.52 ft  
 total wt of vert rebar = 222 lbs  
 radius of vert rebar = 18.94 in

Shear tie rebar size = # **4**  
 vertical spacing = **12.00** in

Factored max shear in cap = 2.7 k  
 Concrete shear capacity = 0.85\*2\*sqrt(f'<sub>c</sub>)\*bw\*d = 227.1 k, OK

**Anchor Bolt Embedment Check**

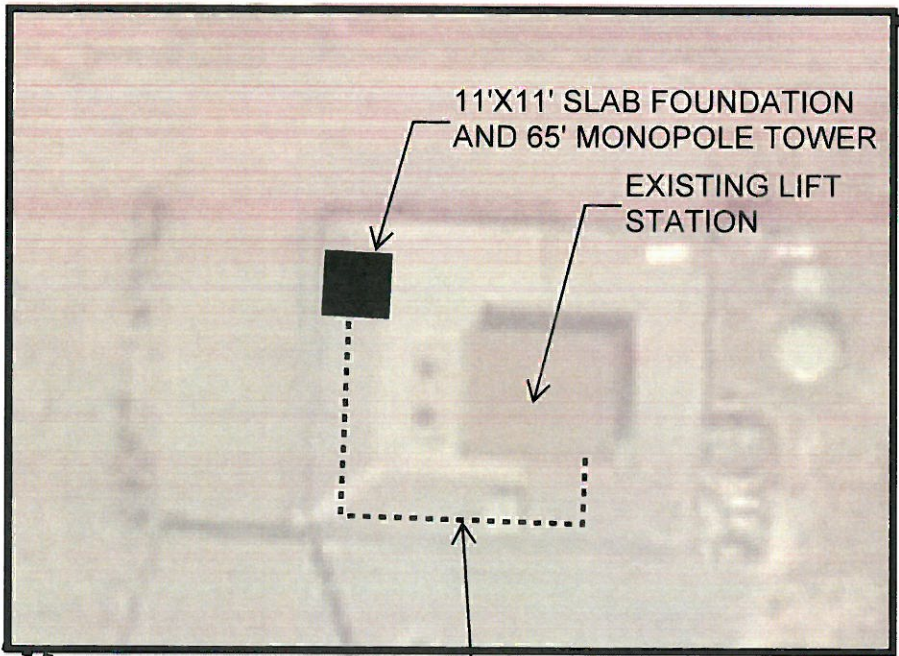
tie diameter (a) = 3.33 ft Bolt Length > Bolt Required Length  
 circumference = 10.47 ft 66 in > 42.8 in ==> OK  
 # of ties = 7.00  
 total wt of ties = 49 lbs  
 d\*\* = 2.00 in  
 6db = 5.00 in

Anchor Bolt Diameter = **1.75** in  
 Length Of Anchor Bolts = **66.00** in  
 Anchor Bolt Projection = **8.50** in  
 Depth of Pocket to Accommodate Anchor Bolts = -5.50 in  
 Total Depth from Final Grade = 5.00 ft  
 Pocket Vol = 0.00 ft<sup>3</sup>

REINFORCEMENT STEEL SCHEDULE											
Sym	Type	Rebar Size	Rebar Spacing	Dimensions					Weight (lbs)	Qty	
				a	b	c	d	(6db)			
CAP TIES	1	C	#4	EQUAL	3.33 ft			2 in	3 in	49	7
CAP VERTICAL REBAR	2	B	#9	-----	5.00 ft	1.52 ft		9.5 in		222	10
SLAB TOP STEEL	3	A	#5	11.45 in	10.50 ft					263	24
SLAB BOTTOM STEEL	4	A	#6	11.45 in	10.50 ft					379	24
TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION =										912	

VALMONT MICROFLECT  
 3575 25TH STREET SE  
 SALEM, OR 97302  
 PHONE: 1-800-547-2151

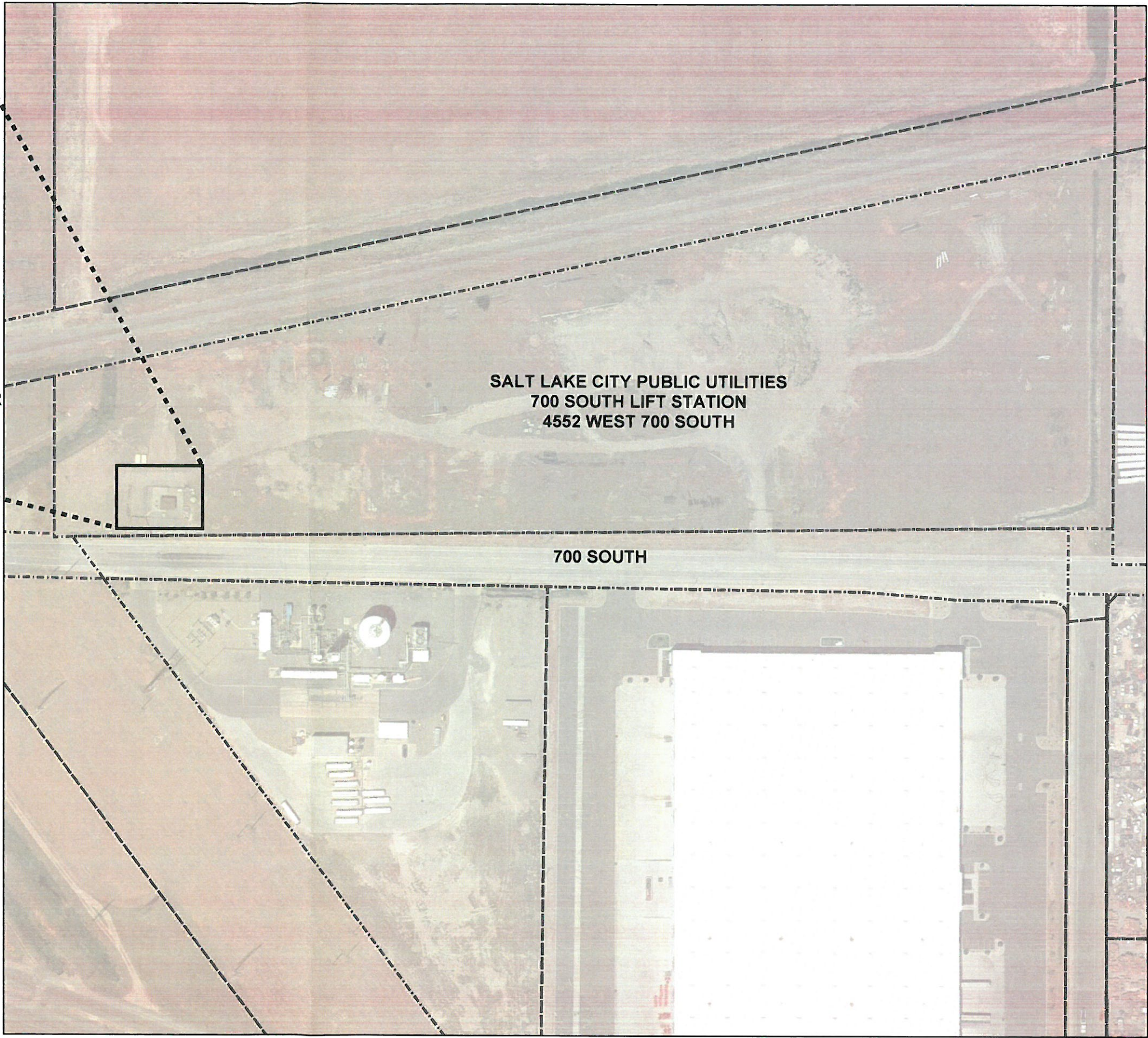
**TOTAL VOLUME OF CONCRETE FOR FOUNDATION INSTALLATION = 10.59 yd<sup>3</sup>**



11'X11' SLAB FOUNDATION  
AND 65' MONOPOLE TOWER

EXISTING LIFT  
STATION

15 AMP ELECTRICAL SERVICE -  
EXISTING LIFT STATION POWER  
TO TOWER



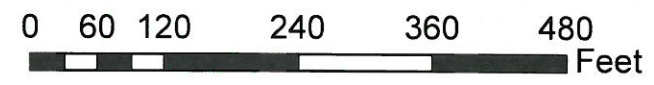
SALT LAKE CITY PUBLIC UTILITIES  
700 SOUTH LIFT STATION  
4552 WEST 700 SOUTH

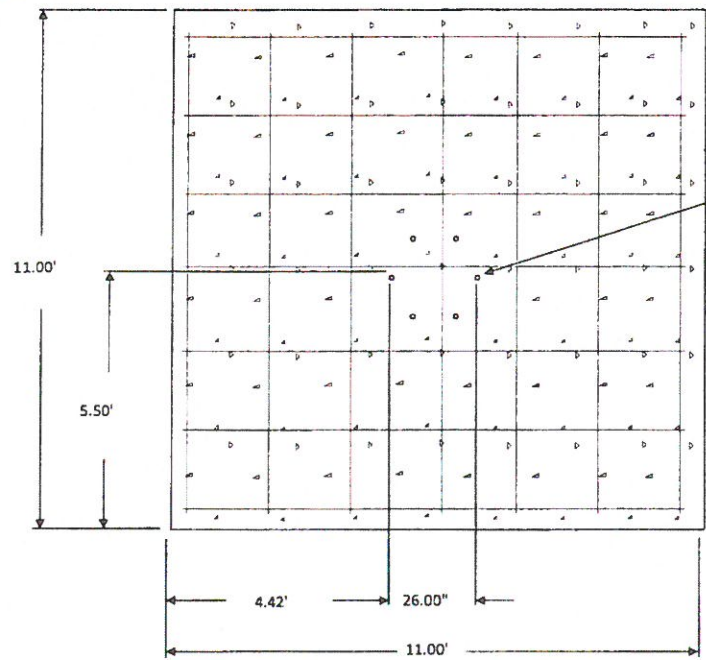
700 SOUTH

# SITE PLAN

## Legend

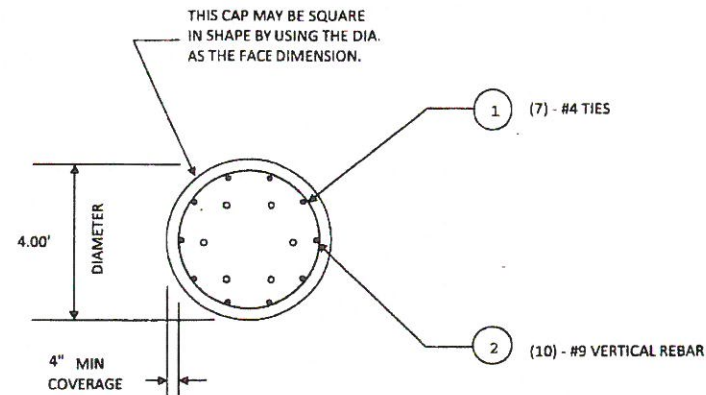
 Property Lines





SECTION A-A  
No Scale

(6)-1.75" DIAMETER X 66.00" LONG ANCHOR BOLTS ON A 26" BOLT CIRCLE MATCHING PROVIDED TEMPLATES



SECTION B-B  
No Scale

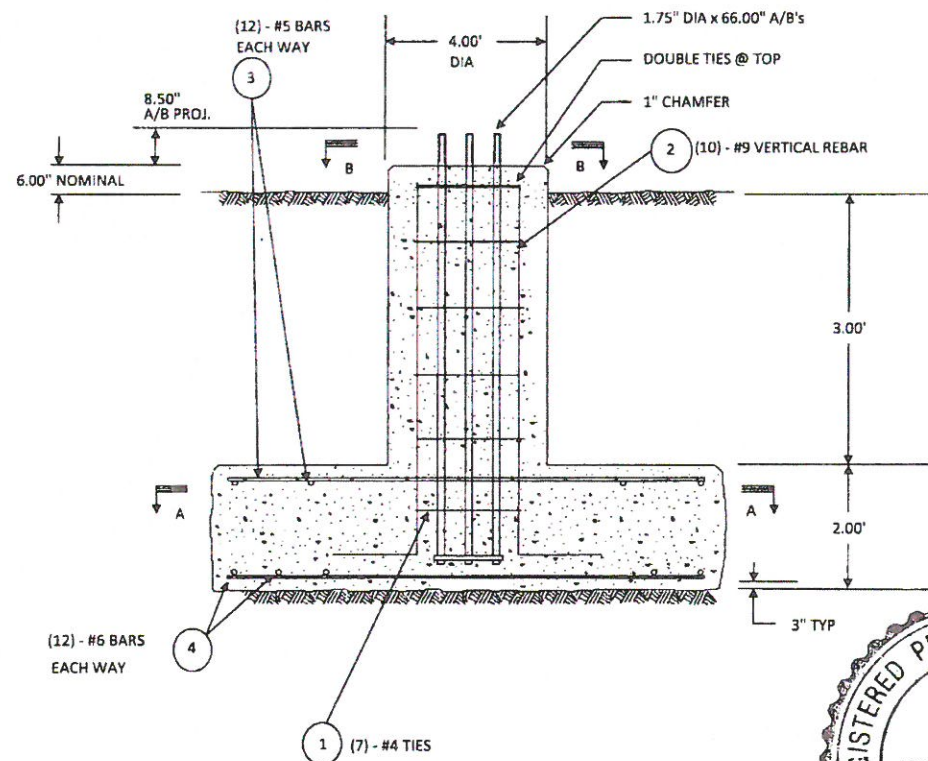
**GENERAL NOTES: SLAB FOUNDATION**

- Prior to excavation, check the area for underground facilities.
- All reinforcing shall be deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
- All concrete shall have a minimum compressive strength of 4000 psi @ 28 days. The requirement for the concrete shall be as given in the ACI "Building Code Requirements for Reinforced Concrete", ACI 318, the latest edition.
- Trowel top of foundation smooth.
- Concrete shall be placed against undisturbed soil to the depth indicated on the foundation drawing. The portion above grade shall be formed. If an area is excavated beyond the limits shown, this volume shall be filled with concrete or formed. After the forms are removed, the excess excavation shall be replaced and compacted.
- The ground water was encountered at 2' below grade during boring.
- Foundation design based on ultimate vertical bearing pressure of 2000 psf.
- Concrete is assumed to weigh 150 pcf.
- Estimated concrete volume = 10.59 cubic yards total.
- Design Based on the following loads from installation drawing for order No: 403291.

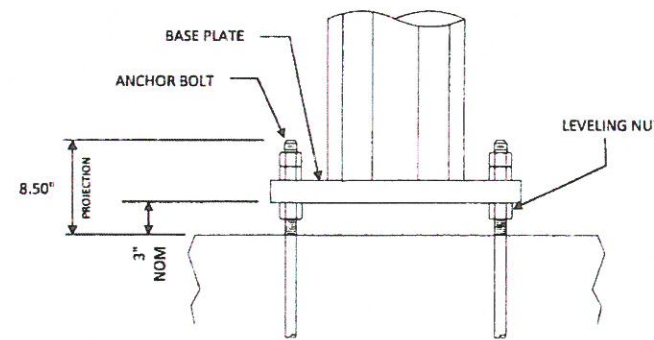
Factored Moment = 119 FT-KIPS      Overturning Safety Factor = 1.53  
 Factored Download = 2.3 KIPS      Max. Toe Bearing Pressure = 0.89 ksf  
 Factored Shear = 2.7 KIPS

- Backfill should be compacted to a density of 100 pcf.
- Anchor bolts to be ASTM A615, Gr. 75 ksi.
- Reference: GCI Project No. 17-858 Dated 07/19/17

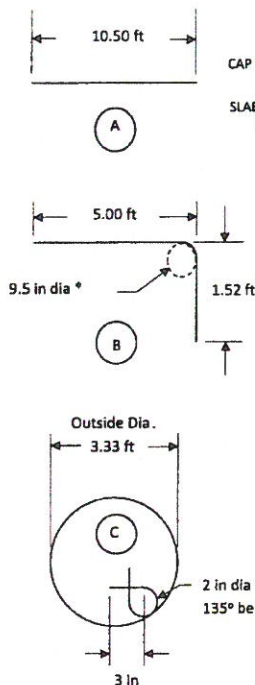
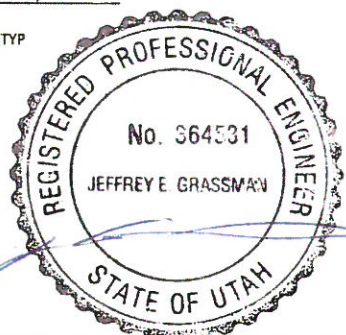
# CONCRETE SLAB FOUNDATION



ELEVATION  
No Scale



**ANCHOR BOLT INSTALLATION**  
 N.T.S.  
 EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE STRUCTURE



Sym	Type	Rebar Size	Rebar Spacing	Weight (lbs)	Qty
1	C	#4	EQUAL	49	7
2	B	#9	---	222	10
3	A	#5	11.45 in	263	24
4	A	#6	11.45 in	379	24
TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION =				912	

Size	Ask #	Wt/ft	6db (in)	d* (in)	d** (in)
#3	11-97203	0.38	2.25	2.25	1.50
#4	11-97204	0.67	3.00	3.00	2.00
#5	11-97205	1.04	3.75	3.75	2.50
#6	11-97206	1.50	4.50	4.50	4.50
#7	11-97207	2.04	5.25	5.25	4.25
#8	11-97208	2.67	6.00	6.00	6.00
#9	11-97209	3.40	6.77	9.50	-
#10	11-97210	4.30	7.62	10.75	-
#11	11-97211	5.31	8.46	12.00	-

\* Refers to ACI standard hook detail chart  
 \*\* Refers to ACI stirrup hook detail chart

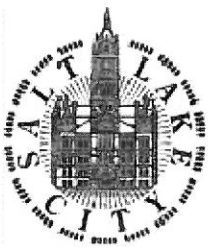
Rebar Size	Rebar Grade	Specified Concrete Strength	Overlap (inches)		
			Vert & Horiz	Bottom Horiz	Top Horiz
#3	60	4000 psi	13	15	21
#4	60	4000 psi	18	20	29
#5	60	4000 psi	22	26	36
#6	60	4000 psi	26	33	46
#7	60	4000 psi	38	45	62
#8	60	4000 psi	43	59	82
#9	60	4000 psi	49	74	104
#10	60	4000 psi	58	95	132
#11	60	4000 psi	71	116	163

Splicing is an alternative to specified material listed in rebar schedule. Lap Splice may be used on ties when Seismic Hook not required.

Rev	Description	Date	By/Ck	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	valmont MICROFLECT	3575 25TH STREET SE SALEM, OR 97302
				$\frac{x''}{16}$ - $\frac{x}{16}$ - $\frac{x}{16}$ $\frac{x''}{8}$ - $\frac{x}{8}$ - $\frac{x}{8}$ $\frac{x''}{4}$ - $\frac{x}{4}$ - $\frac{x}{4}$ $\frac{x''}{2}$ - $\frac{x}{2}$ - $\frac{x}{2}$	MAIN (503) 363-9267 FAX (503) 316-2040 By: NAR Check: NAR Date: 03/28/18 SLAB FOUNDATION LAYOUT Customer Graybar Site 700 South Lift Station, UT	
				S.O. 403291	SIZE - B	Dwg No. B-147722
						Sheet 1 of 1

# **ATTACHMENT E: ADDITIONAL APPLICANT INFORMATION**

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# Conditional Use

SALT LAKE CITY PLANNING

### OFFICE USE ONLY

Project #: <i>PLNPCM 2018-00439</i>	Received By: <i>CHRIS EARL</i>	Date Received: <i>6/7/2018</i>	Zoning:
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Project Name:  
*PUBLIC UTILITIES TOWER*

### PLEASE PROVIDE THE FOLLOWING INFORMATION

Request:  
Request for conditional use approval to install a 65 foot monopole tower in an M-1 zone.

Address of Subject Property:  
4552 West 700 South

Name of Applicant: Kristeen Schumacher	Phone: 801-483-6758
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Address of Applicant:  
1530 South West Temple

E-mail of Applicant: kristeen.schumacher@slcgov.com	Cell/Fax: 307-466-2484 (cell)
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Applicant's Interest in Subject Property:

Owner     Contractor     Architect     Other:

Name of Property Owner (if different from applicant):  
Kristeen Schumacher

E-mail of Property Owner: kristeen.schumacher@slcgov.com	Phone: 801-483-6758
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**Please note** that additional information may be required by the project planner to ensure adequate information is provided for staff analysis. All information required for staff analysis will be copied and made public, including professional architectural or engineering drawings, for the purposes of public review by any interested party.

### AVAILABLE CONSULTATION

Planners are available for consultation prior to submitting this application. Please call (801) 535-7700 if you have any questions regarding the requirements of this application.

### WHERE TO FILE THE COMPLETE APPLICATION

<i>Mailing Address:</i> Planning Counter PO Box 145471 Salt Lake City, UT 84114	<i>In Person:</i> Planning Counter 451 South State Street, Room 215 Telephone: (801) 535-7700
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### REQUIRED FEE

Filing fee of **\$758**  
 Plus additional cost of postage for mailing notice.

### SIGNATURE

If applicable, a notarized statement of consent authorizing applicant to act as an agent will be required.

Signature of Owner or Agent: <i>Kristeen Schumacher</i>	Date: <i>06/07/2018</i>
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**SUBMITTAL REQUIREMENTS**

Staff Review

- |                                     |   |
|-------------------------------------|---|
| <input type="checkbox"/>            | <b>1. Project Description</b> (please attach additional sheet)  |
| <input checked="" type="checkbox"/> | Written description of your proposal  |
| <input type="checkbox"/>            | <b>2. Conditional Use Information</b> (please attach additional sheet)                                  |
| <input checked="" type="checkbox"/> | If applicable, what is the anticipated operating/delivery hours associated with the proposed use        |
| <input checked="" type="checkbox"/> | What are the land uses adjacent to the property (abutting and across-the-street properties)             |
| <input checked="" type="checkbox"/> | How many employees are expected to work on-site during the highest shift                                |
| <input checked="" type="checkbox"/> | If applicable, how many seats will be provided as part of the conditional use                           |
| <input checked="" type="checkbox"/> | Have you discussed the project with nearby property owners?<br>If so, what responses have you received? |
| <input checked="" type="checkbox"/> | <b>3. Minimum Plan Requirements</b>   |
| <input type="checkbox"/>            | One paper copy (24" x 36") of each plan and elevation drawing   |
| <input type="checkbox"/>            | A digital (PDF) copy of the each plan and elevation drawing   |
| <input type="checkbox"/>            | One 11 x 17 inch reduced copy of each plan and elevation drawing  |
| <input type="checkbox"/>            | <b>4. Site Plan</b>   |
| <input checked="" type="checkbox"/> | Site plan (see <a href="#">Site Plan Requirements</a> flyer for further details)                        |
| <input type="checkbox"/>            | <b>5. Elevation Drawing</b> (if applicable)   |
| <input type="checkbox"/>            | Detailed elevation, sections and profile drawings with dimensions drawn to scale                        |
| <input type="checkbox"/>            | Type of construction and list the primary exterior construction materials                               |
| <input type="checkbox"/>            | Number, size, and type of dwelling units in each building, and the overall dwelling unit density        |

**INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED**

I acknowledge that Salt Lake City requires the items above to be submitted before my application can be processed. I understand that Planning will not accept my application unless all of the following items are included in the submittal package.

Updated 7/1/17



## Schumacher, Kristeen

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**From:** McCandless, Allen  
**Sent:** Wednesday, July 19, 2017 10:59 AM  
**To:** Schumacher, Kristeen  
**Cc:** Fredrickson, Brady  
**Subject:** RE: Public Utilities Communications Tower in AFPP

Kristeen,

We reviewed the proposed public utilities communications tower location. The airspace over the proposed tower site is approximately 137 feet above the ground level. The proposed tower would be 65 feet height and at this height would not penetrate the airspace that is established by the Federal Aviation Administration. We see no conflicts with airport operations.

Thank you for providing the information on the proposed tower location. –Allen McCandless, Director Planning & Environment, Salt Lake City Department of Airports

**From:** Schumacher, Kristeen  
**Sent:** Wednesday, July 19, 2017 9:25 AM  
**To:** McCandless, Allen <Allen.McCandless@slcgov.com>  
**Cc:** Fredrickson, Brady <Brady.Fredrickson@slcgov.com>  
**Subject:** RE: Public Utilities Communications Tower in AFPP

Allen,

Have you had a chance to review our proposed tower location in the AFPP? Please let me know if you have any questions or need anything else from me.

Thank you!

KRISTEEN SCHUMACHER, PE  
Engineer IV

ENGINEERING SERVICES  
DEPARTMENT of PUBLIC UTILITIES  
SALT LAKE CITY CORPORATION

TEL 801-483-6758  
FAX 801-483-6894

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# AIRPORT FLIGHT PATH PROTECTION APPROVAL

**From:** Schumacher, Kristeen  
**Sent:** Friday, June 30, 2017 4:18 PM  
**To:** McCandless, Allen <Allen.McCandless@slcgov.com>  
**Cc:** Fredrickson, Brady <Brady.Fredrickson@slcgov.com>  
**Subject:** RE: Public Utilities Communications Tower in AFPP

Allen,

I apologize for my delayed response. I was working with our team to get a better idea of where exactly we want to locate this tower. Attached is a site plan showing the proposed location. The tower would be a monopole or lattice tower at 65 feet. Please let me know if there is anything else you need from me.

Thank you!

KRISTEEN SCHUMACHER, PE  
Engineer IV

ENGINEERING SERVICES  
DEPARTMENT of PUBLIC UTILITIES  
SALT LAKE CITY CORPORATION

TEL 801-483-6758  
FAX 801-483-6894

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**From:** McCandless, Allen  
**Sent:** Friday, June 9, 2017 5:08 PM  
**To:** Schumacher, Kristeen <[Kristeen.Schumacher@slcgov.com](mailto:Kristeen.Schumacher@slcgov.com)>  
**Cc:** Fredrickson, Brady <[Brady.Fredrickson@slcgov.com](mailto:Brady.Fredrickson@slcgov.com)>  
**Subject:** RE: Public Utilities Communications Tower in AFPP

Kristeen,

To better determine the specific location and height, please provide a detail site plan drawing showing where the proposed tower would be located, along with the proposed height. We then can check the information here at the airport to see if there would be any issues. Thank you. –Allen McCandless.

**From:** Schumacher, Kristeen  
**Sent:** Wednesday, June 07, 2017 9:21 AM  
**To:** McCandless, Allen <[Allen.McCandless@slcgov.com](mailto:Allen.McCandless@slcgov.com)>  
**Subject:** Public Utilities Communications Tower in AFPP

Good Morning Allen,

Your name was given to me by Ken Brown in Building Services. I am hoping you can point me in the right direction to obtain approval for a communications tower in the Airport Flight Path Protection. Public Utilities is investigating installing a 65 foot monopole or lattice tower for water meter reading antennas at 4552 West 700 South. This location is zoned as M-1. The 65 foot structure is permitted in the zone, but the location also falls in Zone B of the AFPP.

Per 21A.28.020, approval is required from the Department of Airports. This section also requires that anything over 50 feet be approved by the Federal Aviation Administration.

KRISTEEN SCHUMACHER, PE  
Engineer IV

ENGINEERING SERVICES  
DEPARTMENT of PUBLIC UTILITIES  
SALT LAKE CITY CORPORATION

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## Conditional Use Application – 4552 West 700 South – Salt Lake City Department of Public Utilities

### 1. Project Description

Salt Lake City Department of Public Utilities is implementing a program to transfer all water meters to a radio read system. This will eliminate the need for water meters to be manually read each month. To convert the extensive system of water meters to this technology, several towers are required throughout the City and the County to mount antennas on to read the water meters. This project is for the installation of one of these towers for the water meter reading antenna.

The project is located at 4552 West 700 South. The site is owned by Public Utilities and currently operates as a sanitary sewer lift station. The parcel is 225.72 acres and is zoned M-1 Light Manufacturing. The parcel is bordered on the west by Utah Power & Light (3 parcels), on the north by I-80 and the SLC Airport, on the east by Salt Lake City owned property and one parcel owned by MID-3200, LLC, and on the south by 700 South and Utah Power & Light, Air Liquide Industrial, and Exeter 4475 West south of the roadway. All adjacent properties are also zoned M-1 Light Manufacturing. There is M-1 and OS zoning north of I-80. There is public right of way that runs through the bottom portion of the parcel. This right of way begins 258 north of the southwest property corner and 599 feet north of the southeast property corner.

The scope of work for this project is:

- Install 11'x11' concrete slab foundation.
- Install 65' monopole tower with single antenna.
- Run power to the monopole tower from the existing pump station.

The location of the foundation and tower, along with the route of the electrical service, is shown on the attached Site Plan.

The monopole tower is largest at the base (20 inches) and tapers gradually to a minimum diameter of 12 inches at the top of the tower. All tower design and dimensions are shown on the Tower Structural Drawings included with this application.

The tower and foundation are located approximately 150 feet east of the west property line and 60 north of the south property line. All construction is within existing fencing for the lift station. Construction may affect the existing fencing, but all fencing will be replaced as is. The excavation for the foundation and the trenching for the electrical service is all within the fenced area and will disturb existing graveled areas. Besides the area of the foundation, all gravel areas will be replaced to match existing conditions. The electrical trenching will disturb one 4-foot sidewalk, which will be replaced to existing conditions.

This project and construction will not change any conditions of the existing lift station building.

It should be noted that the property is located in the Airport Flight Path Protection zone. Attached to this application is an email from Allen McCandless, Director of Airport Planning and Capital Programming, indicating that the tower will be acceptable. The airspace is 137 feet in this area, so the tower will not penetrate the airspace.

## 2. Conditional Use Information

*If applicable, what is the anticipated operating/delivery hours associated with the proposed use?*

Once installed, there will be no associated operations with the tower and antenna. There are no associated deliveries with this proposed use. The antenna and tower will only require maintenance a few times a year. Any maintenance would take between 7:30 a.m. and 5:00 p.m., Monday through Friday.

*What are the land uses adjacent to the property (abutting and across-the-street properties)?*

The parcel is bordered on the west by Utah Power & Light (3 parcels), on the north by I-80 and the SLC Airport, on the east by Salt Lake City owned property and one parcel owned by MID-3200, LLC, and on the south by 700 South and Utah Power & Light, Air Liquide Industrial, and Exeter 4475 West south of the roadway. All adjacent properties are also zoned M-1 Light Manufacturing. There is M-1 and OS zoning north of I-80. There is public right of way that runs through the bottom portion of the parcel. This right of way begins 258 north of the southwest property corner and 599 feet north of the southeast property corner.

*How many employees are expected to work on-site during the highest shift?*

Public Utilities crews work in pairs. There should be no more than two employees at a time at the site for regular maintenance. If needed, a second crew would only increase the total employee count to four employees.

*If applicable, how many seats will be provided as part of the conditional use?*

Not applicable. There are no seats associated with this project.

*Have you discussed the project with nearby property owners? If so, what responses have you received?*

Flyers were sent out to neighbors to inform them of potential construction. No responses were received. We believe the area to be accepting of the proposed project, based on the public involvement flyer effort.

## 3. Minimum Plan Requirements

*One paper copy (24" x 36") of each plan and elevation drawing.*

These drawings will be delivered to the Planning office on ~~Wednesday, June 13~~ by Kristeen Schumacher.

*A digital (PDF) copy of the each plan and elevation drawing.*

correction: included with 06107118 submission

A PDF of the entire submittal, including all drawings, has been sent to Principal Planner Kelsey Lindquist.

*One 11x17 inch reduced copy of each plan and elevation drawing.*

These drawings will be delivered to the Planning office on ~~Wednesday, June 13~~ by Kristeen Schumacher.

## 4. Site Plan

Site Plan is included with this submittal.

correction: included with 06107118 submission

**5. Elevation Drawing (if applicable)**

*Detailed elevation, sections and profile drawings with dimensions drawn to scale.*

Elevation Drawing is included with this submittal.

*Type of construction and list the primary exterior construction materials.*

The tower foundation is constructed of concrete. The actual tower is constructed of steel.

*Number, size, and type of dwelling units in each building, and the overall dwelling density.*

There are no buildings or dwellings associated with this project.

Please contact Kristeen Schumacher with any questions.

Kristeen Schumacher

801-483-6758 (desk)

307-466-2484 (cell)

[kristeen.schumacher@slcgov.com](mailto:kristeen.schumacher@slcgov.com)

## **ATTACHMENT F: SITE PHOTOS**

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**Photo Viewing North**



**Photo Viewing North West**

## **ATTACHMENT G: EXISTING CONDITIONS**

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<b>Regulation</b>	<b>Zone Regulation</b>	<b>Proposal</b>	<b>In Compliance?</b>
<b>Use</b>	Monopole With Antennas and Antenna Support Structure greater than 2' wide	Monopole with Antenna Support Structure Greater than 2' Wide	Requires Conditional Use
<b>Height</b>	60' Or Exceeding the Maximum Height Limit of the Zone	The proposed monopole will reach approximately 65' in height.	Requires Conditional Use

### **ADJACENT LAND USE**

The subject property and the abutting and adjacent properties are located within the M-1 (Light Manufacturing) zoning district. The adjacent property to the south is owned and operated by Air Liquide Industrial. The adjacent property to the south east is also a light industrial use.

# **ATTACHMENT G: ANALYSIS OF STANDARDS**

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## **21A.54.080 Standards for Conditional Use**

The below standards apply to PLNPCM2018-00439

**Approval Standards:** A conditional use shall be approved unless the planning commission, or in the case of administrative conditional uses, the planning director or designee, concludes that the following standards cannot be met:

1. The use complies with applicable provisions of this title

**Analysis:** The property is located in the M-1, Light Manufacturing zoning district. Monopoles exceeding 60' in height are permitted as a conditional use in this zoning district. The applicant is proposing to construct an approximate 65' monopole.

**Finding:** The proposal complies with the applicable provisions of the Salt Lake City Zoning Ordinance, conditional upon meeting the conditions recommended as part of this staff report.

2. The use is compatible, or with conditions of approval can be made compatible, with surrounding uses;

**Analysis:** The parcel on which the proposed monopole will be located is currently used as a sanitary sewer lift station. The surrounding uses are similar in nature. The proposed monopole is compatible for the subject property and the surrounding area.

**Finding:** Staff finds that the proposed monopole will have little to no negative impact on the neighboring properties.

3. The use is consistent with applicable adopted city planning policies, documents, and master plans; and

**Analysis:** The site is located within the Northwest Quadrant Master Plan. The Northwest Quadrant Master Plan was adopted in 2016. The master plan designates the subject property as Light Industrial. The Northwest Quadrant Master Plan describes Light Industrial, as the following:

**Light Industrial:** *light industrial areas include uses that produce little or no pollution but require a lot of land. Uses such as warehousing, manufacturing, food production, assembly, and other similar uses are commonly found in the light industrial areas. Uses that require outdoor storage of new, clean materials are generally acceptable. Light industrial areas also include support services, such as restaurants, limited retail, fuel centers, and other uses necessary to support the light industrial uses.*

**Finding:** The proposed monopole meets the adopted city planning policies, documents and associated master plan.

4. The anticipated detrimental effects of a proposed use can be mitigated by the imposition of reasonable conditions. (Refer to Detrimental Impacts Chart for details)

**Analysis:** See Below.



**21A.54.080B: Detrimental Effects Determination:** In analyzing the anticipated detrimental effects of a proposed use, the planning commission, or in the case of administrative conditional uses, the planning director or designee, shall determine compliance with each of the following:

Criteria	Finding	Rationale
1. This title specifically authorizes the use where it is located	Complies	Monopoles over 60' in height are a conditional use in the M-1 zoning district and is therefore authorized depending on complying with all conditional use standards.
2. The use is consistent with applicable policies set forth in adopted citywide, community, and small area master plans and future land use maps	Complies	The use is located in an area zoned and designated by the associated master plan as "Light Industrial," see analysis from standard 3.
3. The use is well-suited to the character of the site, and adjacent uses as shown by an analysis of the intensity, size, and scale of the use compared to existing uses in the surrounding area	Complies	The uses that surround the subject property are similar in nature. The proposed roof mounted antennas will not impact the abutting or adjacent uses.
4. The mass, scale, style, design, and architectural detailing of the surrounding structures as they relate to the proposed have been considered	Complies	The adjacent building to the south east is utilized for light industrial use. The additional abutting and adjacent properties are vacant. The monopole will not impact the surrounding structures.
5. Access points and driveways are designed to minimize grading of natural topography, direct vehicular traffic onto major streets, and not impede traffic flows	Complies	The proposal will have no traffic impact.
6. The internal circulation system is designed to mitigate adverse impacts on adjacent property from motorized, non-motorized, and pedestrian traffic	Complies	There will be no impact on the subject or abutting parcels.
7. The site is designed to enable access and circulation for pedestrian and bicycles	Complies	The site is not regularly used for pedestrian or bicycle circulation.
8. Access to the site does not unreasonably impact the service level of any abutting or adjacent street	Complies	Transportation did not indicate any issues with street level of service.
9. The location and design of off-street parking complies with applicable standards of this code	Complies	No parking spaces are required for the conditional use.

10. Utility capacity is sufficient to support the use at normal service levels	Complies	The use has access to all necessary utilities.
11. The use is appropriately screened, buffered, or separated from adjoining dissimilar uses to mitigate potential use conflicts	Complies	The adjoining and surrounding uses contain light industrial uses. Additionally, a large portion of the subject property is vacant.
12. The use meets City sustainability plans, does not significantly impact the quality of surrounding air and water, encroach into a river or stream, or introduce any hazard or environmental damage to any adjacent property, including cigarette smoke	Complies	The use does not significantly impact sustainability plans nor does it encroach onto a stream or water way.
13. The hours of operation and delivery of the use are compatible with surrounding uses	Complies	Once the construction is complete, the monopole will have regular visits from maintenance crews.
14. Signs and lighting are compatible with, and do not negatively impact surrounding uses	Complies	Signs and lighting will meet all applicable Zoning Ordinance Requirements
15. The proposed use does not undermine preservation of historic resources and structures	Complies	There are no historic sites or features on the property.

**Finding:** Based on the analysis and rationale above, staff finds that there are no anticipated detrimental effects of the proposed cellular tower.

# **ATTACHMENT H: PUBLIC PROCESS AND COMMENT**

## **PUBLIC PROCESS AND INPUT**

Notice was sent to the Poplar Grove Community Council on June 11, 2018.  
Notice was sent to Jordan Meadows Community Council on June 25, 2018.  
Planning Division Open House was held on July 19, 2018.  
Notices were sent out for the Administrative Hearing on August 10, 2018.  
The site was posted on August 10, 2018.

No emails, comments or phone calls have been received regarding the proposal.

# **ATTACHMENT I: DEPARTMENT REVIEW COMMENTS**

**Alan McCandles - AIRPORT:** No objections.

**Michael Barry - TRANSPORTATION:** No objections.

**Ted Itchon - FIRE DEPARTMENT:** No objections

**Scott Teerlink - POLICE DEPARTMENT:** No objections.

**Jason Draper - PUBLIC UTILITIES:** No comments received.

**Vicki Bennett - SUSTAINABILITY:** No comments received.

**Scott Weiler -ENGINEERING:** No objections.

**Heather Gilcrease-BUILDING:** Separate building permit required.

**Ken Brown – ZONING:**

Pursuant to 21A.40.090

1. The total of each individual antenna structure mounted on a monopole shall not exceed two feet (2') in width. The maximum height of each individual antenna shall not exceed ten feet (10') in height (see subsection 21A.62.050G of this title). In the case of collocation, when there is more than one antenna located on a monopole, all additional antenna structures shall not exceed the above referenced dimensions.
2. Electrical equipment shall be located in the rear yard, interior side yard, or within the buildable area on a given parcel. In the case of a parcel with an existing building, the electrical equipment shall not be located between the front and/or corner facades of the building and the street.
3. Monopoles with antennas and antenna support structure less than two feet (2') in width, monopoles with antennas and antenna support structure greater than two feet (2') in width and lattice towers shall be allowed only in the rear yard area of any lot.
4. In addition to conditional use standards outlined in chapter 21A.54 of this title, the following shall be considered by the Planning Commission:
  - a. Compatibility of the proposed structure with the height and mass of existing buildings and utility structures;
  - b. Whether collocation of the antenna on the other existing structures in the same vicinity such as other towers, buildings, water towers, utility poles, etc., is possible without significantly impacting antenna transmission or reception;
  - c. The location of the antenna in relation to existing vegetation, topography and buildings to obtain the best visual screening;
  - d. Whether the spacing between monopoles and lattice towers creates detrimental impacts to adjoining properties.
5. Monopoles shall be fenced with a six foot (6') chainlink fence and the climbing pegs removed from the lower twenty feet (20') of the monopole. All power lines on the lot leading to the accessory building and antenna structure shall be underground.

# **ATTACHMENT K: MOTIONS**

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## **Hearing Officer Options**

If the project is approved, the applicant will need to comply with any conditions made part of the approval before building permits are issued.

A proposed conditional use shall be denied if:

1. The proposed use is unlawful; or
2. The reasonably anticipated detrimental effects of the proposed conditional use cannot be substantially mitigated as proposed in the conditional use application or by the imposition of reasonable conditions to achieve compliance with applicable standards set forth in this section.

## **Potential Motions**

The motion recommended by the Planning Division is located on the cover page of this staff report. The recommendation is based on the above analysis. Conditional uses are administrative items that are regulated by State Law as well as City Ordinance. State law 10-9a-507 Conditional Uses states that “a conditional use shall be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards.” If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with applicable standards, the conditional use may be denied. If the Administrative Hearing Officer determines that this is the case, then the Administrative Hearing Officer must make findings related specifically to one of the standards below, identify the reasonably anticipated detrimental effects, and find that the detrimental effects cannot be reasonably mitigated.

### **Consistent with Staff Recommendation:**

Based on the analysis in the staff report, it is the Planning Staff’s finding that the project generally meets the applicable standards for conditional approval for a monopole exceeding 60 feet in height located at 4650 W. 700 S.

### **Not Consistent with Staff Recommendation:**

Based on the testimony, plans presented and the following findings, I move that the conditional use is denied for the proposed monopole located at 4650 W. 700 S. The proposed conditional use will create detrimental effects, which cannot be reasonably mitigated. Therefore, the proposed conditional use is not compliant with the following standard or standards:

1. The use complies with applicable provisions of this title;
2. The use is compatible, or with conditions of approval can be made compatible, with surrounding uses;
3. The use is consistent with applicable adopted city planning policies, documents, and master plans; and
4. The anticipated detrimental effects of a proposed use can be mitigated by the imposition of reasonable conditions.