



CITY OF PLANO COUNCIL AGENDA ITEM

CITY SECRETARY'S USE ONLY				
<input type="checkbox"/> Consent <input type="checkbox"/> Regular <input type="checkbox"/> Statutory				
Council Meeting Date:		9/12/2016		
Department:		Policy and Government Relations		
Department Head		Brandi Youngkin		
Agenda Coordinator (include phone #): Andrea Park x 5113				
CAPTION				
A Resolution of the City of Plano, Texas, approving the terms and conditions of a Second Amendment to Communications Facilities License By and Between the City of Plano, Texas, and Dallas MTA, L.P. d/b/a Verizon Wireless, authorizing its execution by the City Manager or his designee; and providing an effective date.				
FINANCIAL SUMMARY				
<input checked="" type="checkbox"/> NOT APPLICABLE <input type="checkbox"/> OPERATING EXPENSE <input type="checkbox"/> REVENUE <input type="checkbox"/> CIP				
FISCAL YEAR:	2015-16	Prior Year (CIP Only)	Current Year	Future Years
		TOTALS		
Budget		0	0	0
Encumbered/Expended Amount		0	0	0
This Item		0	0	0
BALANCE		0	0	0
FUND(s): N/A				
COMMENTS: This item has no fiscal impact. STRATEGIC PLAN GOAL: Resolutions to approve and amend terms and conditions of Communications Facilities Licenses relate to the City's Goals of Financially Strong City with Service Excellence and Partnering for Community Benefit.				
SUMMARY OF ITEM				
This Resolution approves a Second Amendment to an existing Communications Facilities License originally approved by City Council on November 29, 2005, with a First Amendment approved on May 1, 2015.				
List of Supporting Documents:			Other Departments, Boards, Commissions or Agencies	
Resolution, Agreement, Appendix "A"				

A Resolution of the City of Plano, Texas, approving the terms and conditions of a Second Amendment to Communications Facilities License By and Between the City of Plano, Texas, and Dallas MTA, L.P. d/b/a Verizon Wireless, authorizing its execution by the City Manager or his designee; and providing an effective date.

WHEREAS, the City Council has been presented a proposed Second Amendment to Communications Facilities License between the City of Plano, Texas, and Dallas MTA, L.P. d/b/a Verizon Wireless, a substantial copy of which is attached hereto as Exhibit "A" and incorporated herein by reference (hereinafter called "Second Amendment"); and,

WHEREAS, the City of Plano, Texas, and Dallas MTA, L.P. d/b/a Verizon Wireless, entered into a Communications Facilities License on November 29, 2005, and a First Amendment to Communications Facilities License on May 1, 2015; and

WHEREAS, the City of Plano, Texas, and Dallas MTA, L.P. d/b/a Verizon Wireless, desire to amend said communications facilities license to replace in its entirety the original site plan; and

WHEREAS, upon full review and consideration of the Second Amendment, and all matters attendant and related thereto, the City Council is of the opinion that the terms and conditions thereof should be approved, and that the City Manager or his designee shall be authorized to execute it on behalf of the City of Plano.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF PLANO, TEXAS, THAT:

Section I. The terms and conditions of the Second Amendment, having been reviewed by the City Council of the City of Plano and found to be acceptable and in the best interests of the City of Plano and its citizens, are hereby in all things approved.

Section II. The City Manager, or his designee, is hereby authorized to execute the Second Amendment and all other documents in connection therewith on behalf of the City of Plano.

Section III. This Resolution shall become effective immediately upon its passage.

DULY PASSED AND APPROVED this the 12th day of September, 2016.

Harry LaRosiliere, MAYOR

ATTEST:

Lisa C. Henderson, CITY SECRETARY

APPROVED AS TO FORM:

Paige Mims, CITY ATTORNEY

Site Name: **Tennyson Center Water Tower**
Site Number: **165357**

**SECOND AMENDMENT TO
COMMUNICATIONS FACILITIES LICENSE**

THIS AMENDMENT TO COMMUNICATIONS FACILITIES LICENSE, (“Amendment”) is made effective as of the ____ day of _____, 2016 (“Effective Date”), by and between City of Plano, Texas, a home-rule municipal corporation (“City” or “Licensor”) and DALLAS MTA, L.P. d/b/a VERIZON WIRELESS (hereinafter referred to as “Licensee”).

WHEREAS, Pursuant to a Communications Facilities License dated November 29, 2005 (“Agreement”), City provided to Licensee a license to use the premises located at City’s elevated water tank at 6825 Communications Parkway, Plano, Collin County, TX 75086.

WHEREAS, On May 1, 2015, City and Licensee entered into a First Amendment to the Agreement that allowed Licensee to alter and make improvements to the property and premises and modified the rent payable under the original agreement.

WHEREAS, City and Licensee desire to amend the Agreement as set forth herein. In case of any inconsistencies between the terms and conditions contained in the Agreement and the terms and conditions contained herein, the terms and conditions herein shall control. Except as set forth below, all provisions of the Agreement remain unchanged and in full force and effect.

NOW THEREFORE, in consideration of the mutual covenants contained herein and for other good and valuable considerations, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

- 1.1 To replace in its entirety the original site plan with Appendix “A” (Site Plan) dated April 26, 2016, attached hereto and made a part hereof.

IN WITNESS THEREOF, the parties have caused their properly authorized representative to execute and seal this Amendment on the dates set forth below.

LICENSOR:
CITY OF PLANO, TEXAS,
A Home Rule Municipal Corporation

By Authority of Resolution
No. _____

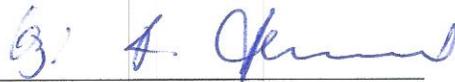
By: _____
Bruce D. Glasscock
City Manager

APPROVED AS TO FORM:

Paige Mims, CITY ATTORNEY

LICENSEE:
Dallas MTA, L.P.
d/b/a Verizon Wireless

By: Verizon Wireless Texas, LLC,
Its General Partner

By: 

Kazi Ahmed
Director – Network Field Engineering

Date: 08/17/16



OTHER UTILITIES NOT INCLUDED IN DIGGERS HOTLINE AND LOCAL UTILITY DISTRICTS AND COMPANIES SHALL ALSO BE NOTIFIED PRIOR TO EXCAVATION

BUILDING CODES:
INTERNATIONAL BUILDING CODE - 2015
NATIONAL ELECTRICAL CODE - 2014

CD REVIEW NOTE:
NOTE TO REVIEWER:
ANY PLAN SIZE LESS THAN 11X17 IS REDUCED IN SIZE AND SHOULD NOT BE SCALED

SCOPE OF WORK:
NET TOTAL: (6) TRI-BAND ANTENNAS, AWS/700 WILL SHARE 1 TRIBAND PER SECTOR. (6) 1-5/8" COAX, (1) MAIN OVP DISTRIBUTION BOX IN SHELTER OR NEAR BBU, (1) RUN OF 1-1/4" HYBRIFLEX LINE, (6X12), (1) MAIN OVP DISTRIBUTION BOX ON TOWER, (3) SECTOR BOXES, (3) 2X4 HYBRID FEEDERS FROM OVP TO SECTOR BOXES, (3) 5/8" HYBRIFLEX JUMPERS FROM SECTOR BOXES TO RRU'S (1X1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" COAX JUMPERS FROM RRU TO ANTENNA. THE PCS TMA'S WILL BE LEFT ALONE. (6) DIPLEXERS WILL BE REMOVED, (6) EXISTING COAX WILL GO TO PCS ONLY. (6) EXISTING ANTENNAS WILL BE REMOVED TO BE REPLACED WITH THE TRIBANDS. THE 1-1/4" WILL SHARE A CONDUIT WITH ONE OF THE 1-5/8" RUNS. PLEASE ORDER AISG 2.0 COMPATIBLE RET. PLEASE PLAN FOR RET KIT AISG 2.0 AND SCU- REMOVE IP ADDRESSABLE. CALL YUSUF DANAWALA @ 817-961-2989 FOR ANY QUESTIONS.

STRUCTURAL REVIEW NOTE:
A STRUCTURAL EVALUATION OF THE SITE WAS PERFORMED BY: MALOUF ENGINEERING INTL., WITH MEI PROJECT ID: TX03726N-14V2 DATED 06/09/2014.

PROJECT SIGNOFF:
REAL ESTATE: _____
RFD: _____
CONSTRUCTION: _____
OPERATIONS: _____



TENNYSON CENTER WT

6825 COMMUNICATIONS PKWY
PLANO, TX 75024

SITE ID # 165357

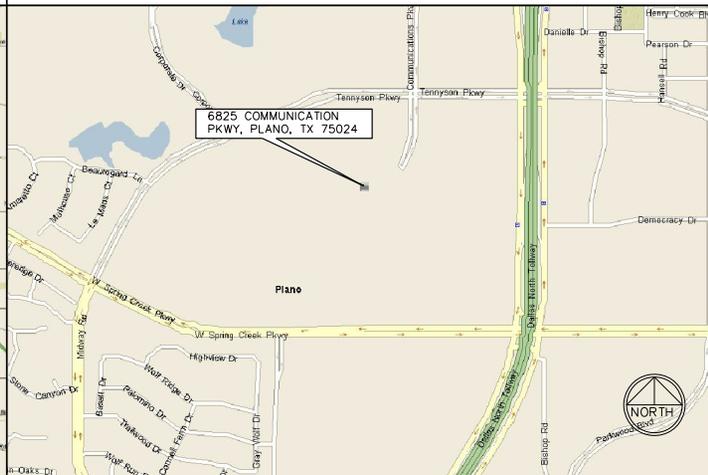
AWS ANTENNA ADDITION PROJECT AT EXISTING TELECOMMUNICATION SITE

VERIZON WIRELESS
1301 SOLANA BLVD
BLDG 2, SUITE # 2400
WESTLAKE, TEXAS 76262
PHONE: (817) 961-2572

VICINITY MAP 2014 © GOOGLE MAP DATA



LOCATION MAP 2014 © GOOGLE MAP DATA



DRAWING INDEX

SHEET NO.	DESCRIPTION	
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C-4	TOWER ELEVATION AFTER	
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A-2	PENETRATION DETAILS	
A-3	ANTENNA DIAGRAM	
A-4	TECH REVIEW	
A-5	DETAILS	
A-6	NOTES	
S01	TYPICAL NEW SECTOR LAYOUT (AS PER SA BY MALOUF ENGINEERING INTL., WITH MEI PROJECT ID: TX03726N-14V2 DATED 04/13/2016)	
S02	REWORKED ANTENNA WALL MOUNT (AS PER SA BY MALOUF ENGINEERING INTL., WITH MEI PROJECT ID: TX03726N-14V2 DATED 04/13/2016)	
8	04/26/16 CITY COMMENTS	
7	04/14/16 CITY COMMENTS	
6	10/14/15 CITY COMMENTS	
5	09/16/15 CITY COMMENTS	
4	12/11/14 CITY COMMENTS	
3	09/03/14 CITY COMMENTS	
2	08/04/14 CITY COMMENTS	
1	07/07/14 CITY COMMENTS	
0	07/02/14 FINAL CD	
F	06/18/14 ISSUED FOR REVIEW	
E	05/05/14 ISSUED FOR REVIEW	
D	04/25/14 ISSUED FOR REVIEW	
NO.	DATE	REVISION

DATA:
LATITUDE: 33° 04' 10.16"N
LONGITUDE: -96° 49' 47.96"W
ELEVATION: 698' AMSL
(TECH REVIEW DATED 05/29/2014)

POWER COMPANY: UNKNOWN

TELEPHONE COMPANY: UNKNOWN

SITE INFORMATION:
COUNTY: COLLIN
CITY: PLANO
OCCUPANCY: U-UTILITY
CONSTRUCTION TYPE: EXISTING

STRUCTURE OWNER:
CITY OF PLANO
1520 AVENUE K
PLANO, TX 75074
(972)941-7000

SITE REP:
PROJECT MANAGER
C.A.BASS LLC
RUSTIN FOWLER
(903) 596-8464

CONSTRUCTION CONTACT:
LARRY FOWLER
(214) 475-1475

PROFESSIONAL ENGINEER:
ALLPRO CONSULTING GROUP, INC.
9221 LYNDON B JOHNSON FREEWAY
SITE 204, DALLAS, TX 75243
PHONE: (972) 231-8893

STRUCTURAL ENGINEER:
MALOUF ENGINEERING INTL., INC
17950 PRESTON ROAD
SUITE 720, DALLAS, TX 75252
(972)783-2578

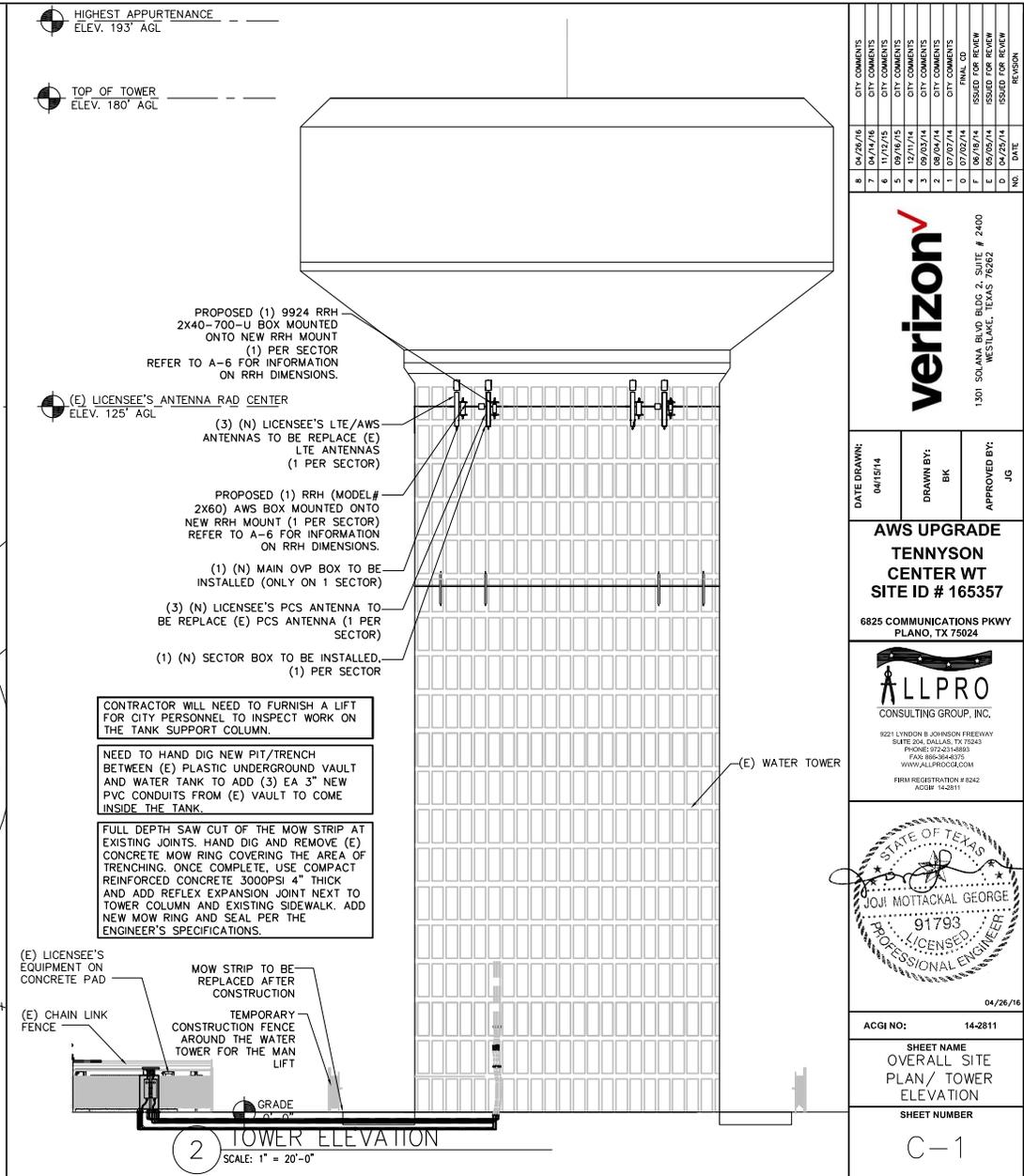
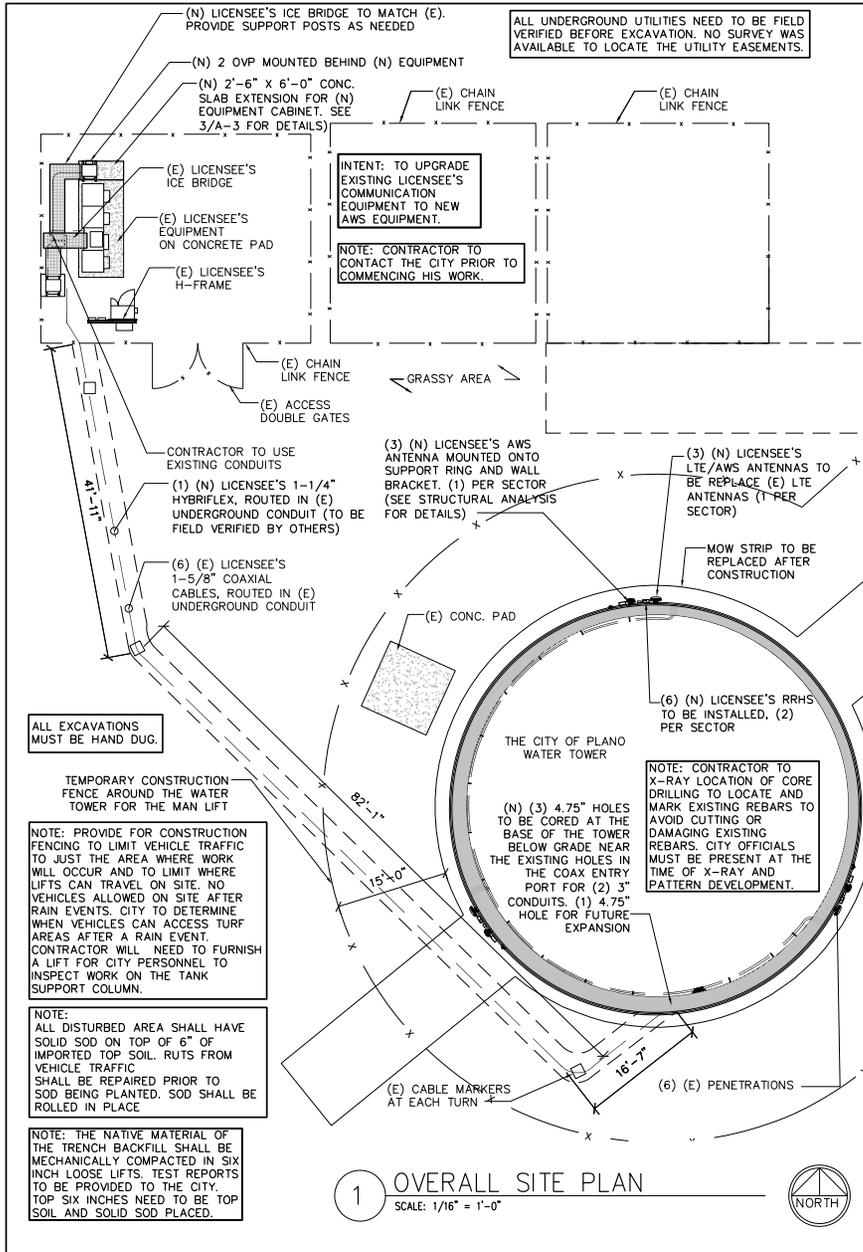
APPLICANT:
VERIZON WIRELESS
1301 SOLANA BLVD
BLDG 2, SUITE # 2400
WESTLAKE, TEXAS 76262
PHONE: (817) 961-2572

9221 LYNDON B JOHNSON FREEWAY
SUITE 204, DALLAS, TX 75243
PHONE: 972-231-8893
FAX: 866-364-8375
WWW.ALLPROCGI.COM
FIRM REGISTRATION # 8242
ACG# 14-2811

TENNYSON CENTER WT

DATE DRAWN: 04/15/14	DRAWN BY: BK
APPROVED BY: JG	ACGI NO. 14-2811
SITE ID # 165357	
SHEET: T-1	

Appendix "A"



NO.	DATE	REVISION
8	04/26/16	DIT COMMENTS
7	11/17/15	DIT COMMENTS
6	11/17/15	DIT COMMENTS
5	09/16/15	DIT COMMENTS
4	12/17/14	DIT COMMENTS
3	09/03/14	DIT COMMENTS
2	08/04/14	DIT COMMENTS
1	07/07/14	DIT COMMENTS
0	07/02/14	FINAL CD
E	05/05/14	ISSUED FOR REVIEW
D	04/25/14	ISSUED FOR REVIEW

verizon

1301 SOLANA BLVD. BLDG. 2, SUITE # 2400
WESTLAKE, TEXAS 76066

DATE DRAWN: 04/15/14	DRAWN BY: BK	APPROVED BY: JG
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AWS UPGRADE
TENNYSON CENTER WT
SITE ID # 165357

6825 COMMUNICATIONS PKWY
PLANO, TX 75024

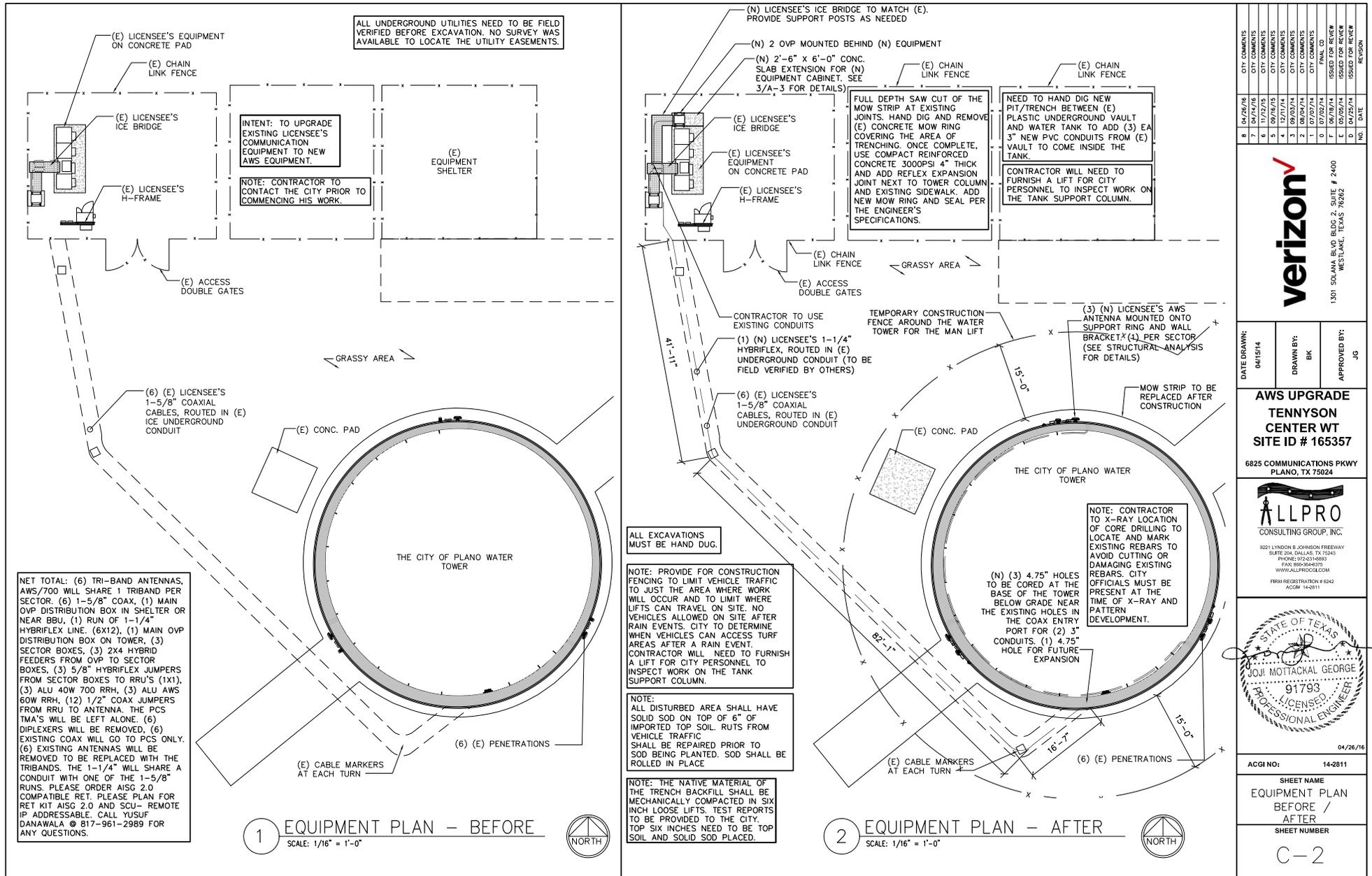
ALLPRO
CONSULTING GROUP, INC.

8221 LYNDON B JOHNSON FREEWAY
SUITE 204 DALLAS, TX 75243
PHONE: 972-213-1483
FAX: 972-213-1483
WWW.ALLPROCG.COM
FIRM REGISTRATION # 8242
ACCR: 142811

STATE OF TEXAS
JOLI MOTTACKAL GEORGE
91793
LICENSED PROFESSIONAL ENGINEER

ACGI NO:	14-2811
SHEET NAME	OVERALL SITE PLAN / TOWER ELEVATION
SHEET NUMBER	C-1

Appendix "A"

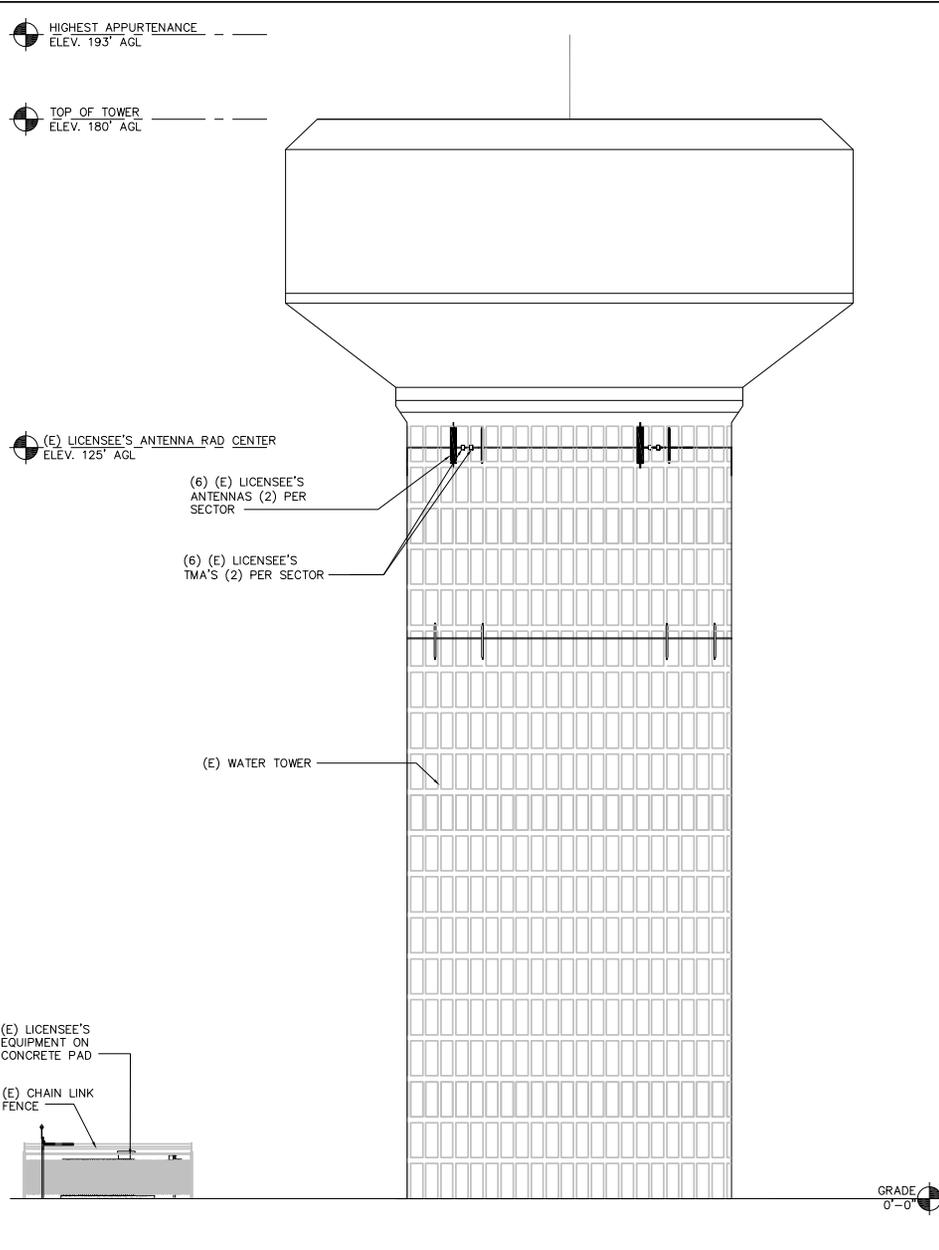


NO.	DATE	REVISION
8	04/25/16	CITY COMMENTS
7	04/25/16	CITY COMMENTS
6	12/07/15	CITY COMMENTS
5	06/06/15	CITY COMMENTS
4	12/01/14	CITY COMMENTS
3	09/03/14	CITY COMMENTS
2	08/04/14	CITY COMMENTS
1	07/07/14	CITY COMMENTS
		FINAL CD
		ISSUED FOR REVIEW
		ISSUED FOR REVIEW
		ISSUED FOR REVIEW

verizon	
1301 SOLANA BLVD. BLDG. 2, SUITE # 2400 WESTLAKE, TEXAS 76066	
DATE DRAWN: 04/15/14	DRAWN BY: BK
APPROVED BY: JG	

AWS UPGRADE	
TENNYSON CENTER WT	
SITE ID # 165357	
6825 COMMUNICATIONS PKWY PLANO, TX 75024	
ALLPRO CONSULTING GROUP, INC.	
<small>9221 LINDEN B. JOHNSON FREEWAY SUITE 204 DALLAS, TX 75243 PHONE: 972-231-5883 FAX: 972-231-5883 WWW.ALLPROCG.COM</small>	
<small>FIRM REGISTRATION # 8242 ACCM 142811</small>	
ACGI NO:	14-2811
SHEET NAME EQUIPMENT PLAN	
BEFORE / AFTER	
SHEET NUMBER C-2	

Appendix "A"



TECH REVIEW NOTE:

INDICATED INFORMATION IS BASED ON VERIZON TECH REVIEW DATED 05/29/14. CONTRACTOR TO VERIFY THIS INFORMATION WITH THE MOST CURRENT EDITION OF THE VERIZON WIRELESS TECH REVIEW IN COORDINATION WITH CLIENT REPRESENTATIVE FOR APPURTENANCE/EQUIPMENT/ COAX LOCATION, NUMBER, MAKE, MODEL, MOUNTING DETAILS, AZIMUTH, ETC PRIOR TO INSTALLATIONS.

STRUCTURAL ANALYSIS NOTE:

A STRUCTURAL EVALUATION OF THE SITE WAS PERFORMED BY: MALOUF ENGINEERING INTL., WITH MEI PROJECT ID: TX03726N-14V2 DATED 06/09/2014. MOUNTING DETAILS PROVIDED BY MALOUF ENGINEERING INTL., WITH MEI PROJECT ID: TX03726N-14V2 DATED 04/13/2016.

SCOPE OF WORK:

NET TOTAL: (6) TRI-BAND ANTENNAS, AWS/700 WILL SHARE 1 TRIBAND PER SECTOR. (6) 1-5/8" COAX, (1) MAIN OVP DISTRIBUTION BOX IN SHELTER OR NEAR BBU, (1) RUN OF 1-1/4" HYBRIFLEX LINE. (6X12), (1) MAIN OVP DISTRIBUTION BOX ON TOWER, (3) SECTOR BOXES, (3) 2X4 HYBRID FEEDERS FROM OVP TO SECTOR BOXES, (3) 5/8" HYBRIFLEX JUMPERS FROM SECTOR BOXES TO RRU'S (1X1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" COAX JUMPERS FROM RRU TO ANTENNA. THE PCS TMA'S WILL BE LEFT ALONE. (6) DIPLEXERS WILL BE REMOVED, (6) EXISTING COAX WILL GO TO PCS ONLY. (6) EXISTING ANTENNAS WILL BE REMOVED TO BE REPLACED WITH THE TRIBANDS. THE 1-1/4" WILL SHARE A CONDUIT WITH ONE OF THE 1-5/8" RUNS. PLEASE ORDER AISG 2.0 COMPATIBLE RET. PLEASE PLAN FOR RET KIT AISG 2.0 AND SCU- REMOTE IP ADDRESSABLE. CALL YUSUF DANAWALA @ 817-961-2989 FOR ANY QUESTIONS.

NO.	DATE	ISSUED FOR REVIEW	REVISION
B	04/25/14		
A	07/02/14		
C	08/05/14		
D	09/03/14		
E	08/04/14		
F	07/07/14		
G	07/02/14		
H	08/05/14		
I	04/25/14		

1301 SOLANA BLVD. BLDG. 2, SUITE # 2400
WESTLAKE, TEXAS 76066

DATE DRAWN: 04/15/14	DRAWN BY: BK	APPROVED BY: JG
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AWS UPGRADE
TENNYSON CENTER WT
SITE ID # 165357
6825 COMMUNICATIONS PKWY
PLANO, TX 75024

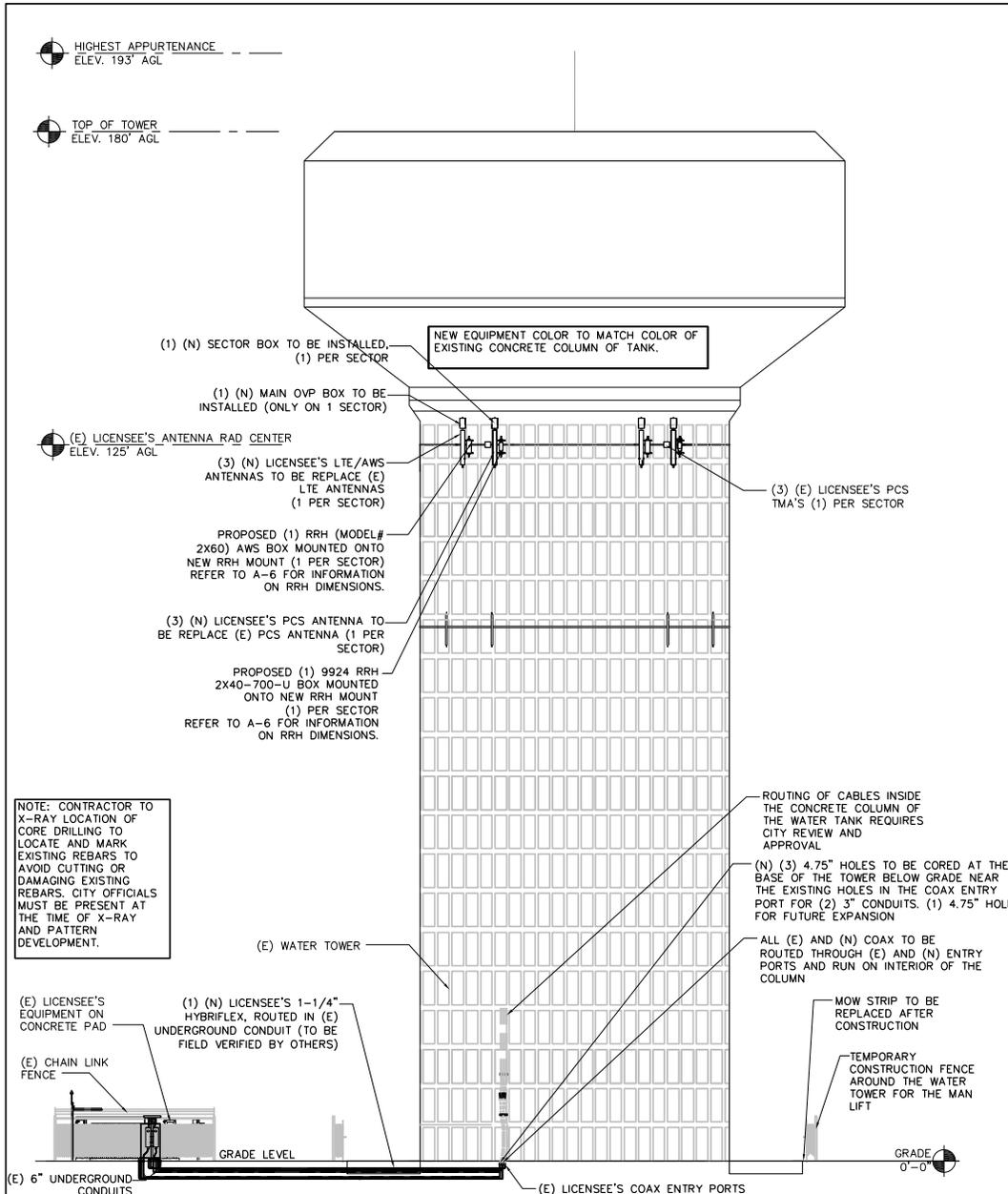
9221 LYNDON B JOHNSON FREEWAY
SUITE 204 DALLAS, TX 75243
PHONE: 972-313-8883
FAX: 972-313-8881
WWW.ALLPROCG.COM
FIRM REGISTRATION # 6242
ACGW 14-2811

04/26/16

ACGI NO:	14-2811
SHEET NAME	TOWER ELEVATION BEFORE
SHEET NUMBER	C-3

1 TOWER ELEVATION-BEFORE
SCALE: 1" = 20'-0"

Appendix "A"



TECH REVIEW NOTE:

INDICATED INFORMATION IS BASED ON VERIZON TECH REVIEW DATED 05/29/14. CONTRACTOR TO VERIFY THIS INFORMATION WITH THE MOST CURRENT EDITION OF THE VERIZON WIRELESS TECH REVIEW IN COORDINATION WITH CLIENT REPRESENTATIVE FOR APPURTENANCE/EQUIPMENT/ COAX LOCATION, NUMBER, MAKE, MODEL, MOUNTING DETAILS, AZIMUTH, ETC PRIOR TO INSTALLATIONS.

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SCOPE OF WORK:

NET TOTAL: (6) TRI-BAND ANTENNAS, AWS/700 WILL SHARE 1 TRIBAND PER SECTOR. (6) 1-5/8" COAX, (1) MAIN OVP DISTRIBUTION BOX IN SHELTER OR NEAR BBU, (1) RUN OF 1-1/4" HYBRIFLEX LINE. (6X12), (1) MAIN OVP DISTRIBUTION BOX ON TOWER, (3) SECTOR BOXES, (3) 2X4 HYBRID FEEDERS FROM OVP TO SECTOR BOXES, (3) 5/8" HYBRIFLEX JUMPERS FROM SECTOR BOXES TO RRU'S (1X1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" COAX JUMPERS FROM RRU TO ANTENNA. THE PCS TMA'S WILL BE LEFT ALONE. (6) DIPLEXERS WILL BE REMOVED, (6) EXISTING COAX WILL GO TO PCS ONLY. (6) EXISTING ANTENNAS WILL BE REMOVED TO BE REPLACED WITH THE TRIBANDS. THE 1-1/4" WILL SHARE A CONDUIT WITH ONE OF THE 1-5/8" RUNS. PLEASE ORDER AISG 2.0 COMPATIBLE RET. PLEASE PLAN FOR RET KIT AISG 2.0 AND SCU - REMOTE IP ADDRESSABLE. CALL YUSUF DANAWALA @ 817-961-2989 FOR ANY QUESTIONS.

CONTRACTOR WILL NEED TO FURNISH A LIFT FOR CITY PERSONNEL TO INSPECT WORK ON THE TANK SUPPORT COLUMN.

NEED TO HAND DIG NEW PIT/TRENCH BETWEEN (E) PLASTIC UNDERGROUND VAULT AND WATER TANK TO ADD (3) EA 3" NEW PVC CONDUITS FROM (E) VAULT TO COME INSIDE THE TANK.

FULL DEPTH SAW CUT OF THE MOW STRIP AT EXISTING JOINTS. HAND DIG AND REMOVE (E) CONCRETE MOW RING COVERING THE AREA OF TRENCHING. ONCE COMPLETE, USE COMPACT REINFORCED CONCRETE 3000PSI 4" THICK AND ADD REFLEX EXPANSION JOINT NEXT TO TOWER COLUMN AND EXISTING SIDEWALK. ADD NEW MOW RING AND SEAL PER THE ENGINEER'S SPECIFICATIONS.

NOTE: ALL DISTURBED AREA SHALL HAVE SOLID SOD ON TOP OF 6" OF IMPORTED TOP SOIL. RUTS FROM VEHICLE TRAFFIC SHALL BE REPAIRED PRIOR TO SOD BEING PLANTED. SOD SHALL BE ROLLED IN PLACE

NOTE: THE NATIVE MATERIAL OF THE TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED IN SIX INCH LOOSE LIFTS. TEST REPORTS TO BE PROVIDED TO THE CITY. TOP SIX INCHES NEED TO BE TOP SOIL AND SOLID SOD PLACED.

1 TOWER ELEVATION-AFTER
SCALE: 1" = 20'-0"

DATE	NO.	REVISION
04/26/16	1	ISSUED FOR REVIEW
04/15/14	2	ISSUED FOR REVIEW
06/06/15	3	ISSUED FOR REVIEW
12/17/14	4	ISSUED FOR REVIEW
09/03/14	5	ISSUED FOR REVIEW
08/04/14	6	ISSUED FOR REVIEW
07/07/14	7	ISSUED FOR REVIEW
07/02/14	8	ISSUED FOR REVIEW
05/29/14	9	ISSUED FOR REVIEW
04/25/14	10	ISSUED FOR REVIEW



1301 SOLANA BLVD. BLDG. 2, SUITE # 2400
WESTLAKE, TEXAS 76066

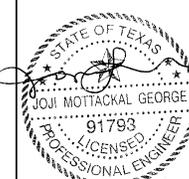
DATE DRAWN:	DATE
04/15/14	04/26/16
DRAWN BY:	APPROVED BY:
BK	JG

AWS UPGRADE
TENNYSON CENTER WT
SITE ID # 165357

6825 COMMUNICATIONS PKWY
PLANO, TX 75024



9221 LYNDON B JOHNSON FREEWAY
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FAX: 972-213-8883
WWW.ALLPROCG.COM
FIRM REGISTRATION # 6242
ACSW 142811



ACGI NO:	14-2811
SHEET NAME	TOWER ELEVATION AFTER
SHEET NUMBER	C-4

Appendix "A"

STRUCTURAL ANALYSIS NOTE:

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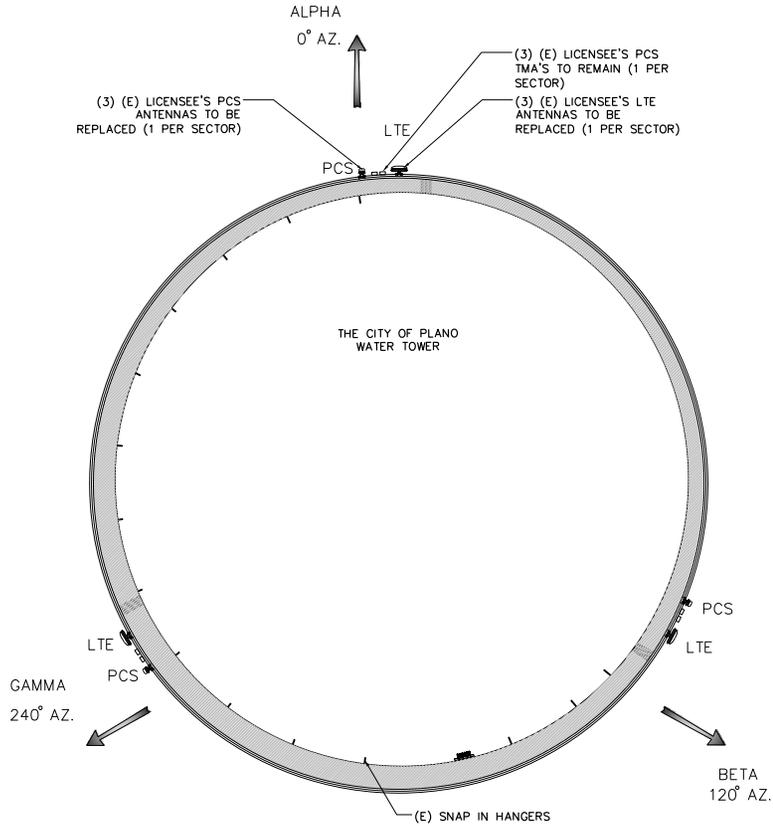
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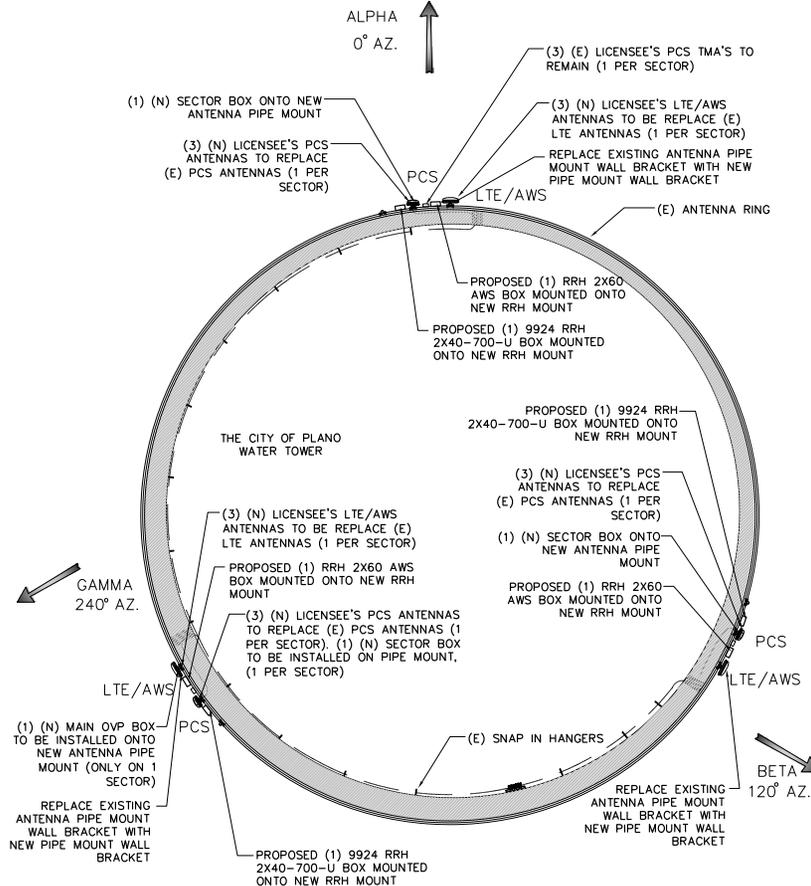
SCOPE OF WORK:

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INTENT: TO UPGRADE EXISTING LICENSEE'S COMMUNICATION EQUIPMENT TO NEW AWS EQUIPMENT.



1 EXISTING ANTENNA ORIENTATION PLAN
SCALE: 3/32" = 1'-0"



2 PROPOSED ANTENNA ORIENTATION PLAN
SCALE: 3/32" = 1'-0"



NO.	DATE	REVISION
B	04/25/14	QTY COMMENTS
A	11/27/13	QTY COMMENTS
C	06/16/13	QTY COMMENTS
D	12/17/14	QTY COMMENTS
E	09/03/14	QTY COMMENTS
F	08/04/14	QTY COMMENTS
G	07/07/14	QTY COMMENTS
H	07/02/14	FINAL CD
I	05/05/14	ISSUED FOR REVIEW
J	04/25/14	ISSUED FOR REVIEW

1301 SOLANA BLVD. BLDG. 2, SUITE # 2400
WESTLAKE, TEXAS 76066

DATE DRAWN: 04/15/14	DRAWN BY: BK	APPROVED BY: JG
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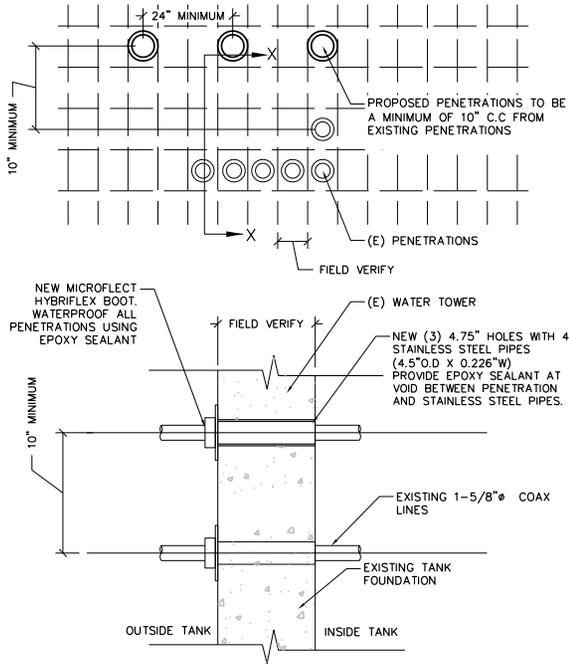
AWS UPGRADE
TENNYSON
CENTER WT
SITE ID # 165357
6825 COMMUNICATIONS PKWY
PLANO, TX 75024

ALLPRO CONSULTING GROUP, INC.
9221 LYNDON B JOHNSON FREEWAY
SUITE 204 DALLAS, TX 75243
PHONE: 972-213-1483
FAX: 972-213-1483
WWW.ALLPROCONSULTING.COM
FIRM REGISTRATION # 6242
ACSW 142811

STATE OF TEXAS
J. MOTACKAL GEORGE
91793
LICENSED PROFESSIONAL ENGINEER

ACGI NO:	14-2811
SHEET NAME	ANTENNA ORIENTATION PLAN
SHEET NUMBER	A-1

Appendix "A"

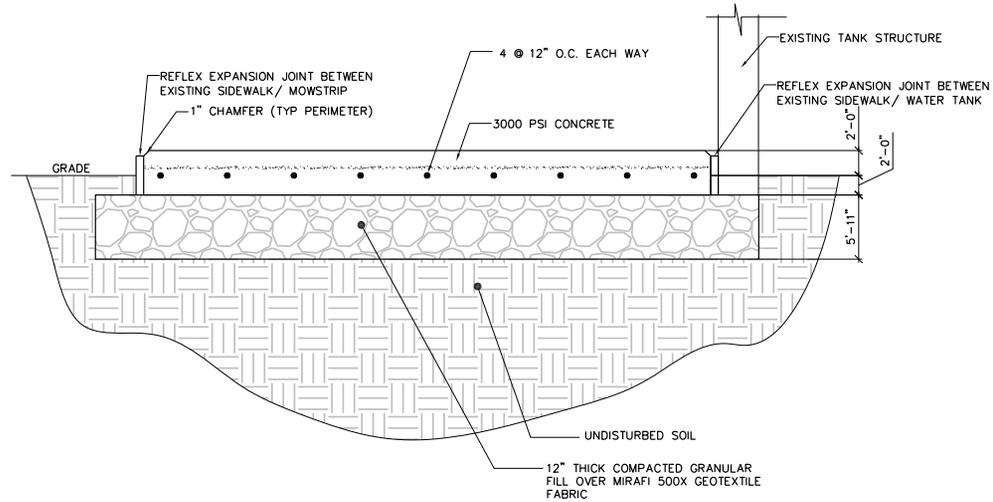


LOCATION OF THE EXISTING COAX ENTRY HOLES TO BE FIELD VERIFIED.

NOTE: CONTRACTOR TO X-RAY LOCATION OF CORE DRILLING TO LOCATE AND MARK EXISTING REBARS TO AVOID CUTTING OR DAMAGING EXISTING REBARS. CITY OFFICIALS MUST BE PRESENT AT THE TIME OF X-RAY AND PATTERN DEVELOPMENT.

WATER PROOF VOID SPACES IN CORES AND CONDUITS.

2 CONCRETE CORING DETAIL
SCALE: NONE



1 CONCRETE DETAIL
SCALE: NONE

NO.	DATE	ISSUED FOR REVIEW
B	04/26/16	CITY COMMENTS
A	04/15/14	CITY COMMENTS
6	11/02/15	CITY COMMENTS
5	09/16/15	CITY COMMENTS
4	12/17/14	CITY COMMENTS
3	09/03/14	CITY COMMENTS
2	08/04/14	CITY COMMENTS
1	07/07/14	CITY COMMENTS
D	07/02/14	FINAL CD
C	05/05/14	ISSUED FOR REVIEW
E	05/05/14	ISSUED FOR REVIEW
D	04/25/14	ISSUED FOR REVIEW

verizon

1301 SOAKAWAY BLVD. BLDG. 2, SUITE # 2400
WESTLAKE, TEXAS 76066

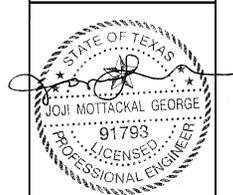
DATE DRAWN: 04/15/14
DRAWN BY: BIK
APPROVED BY: JG

AWS UPGRADE
TENNYSON CENTER WT
SITE ID # 165357
6825 COMMUNICATIONS PKWY
PLANO, TX 75024

ALLPRO
CONSULTING GROUP, INC.

9221 LYNDON B. JOHNSON FREEWAY
SUITE 504 DALLAS, TX 75243
PHONE: 972-213-8883
FAX: 972-213-8885
WWW.ALLPROCG.COM

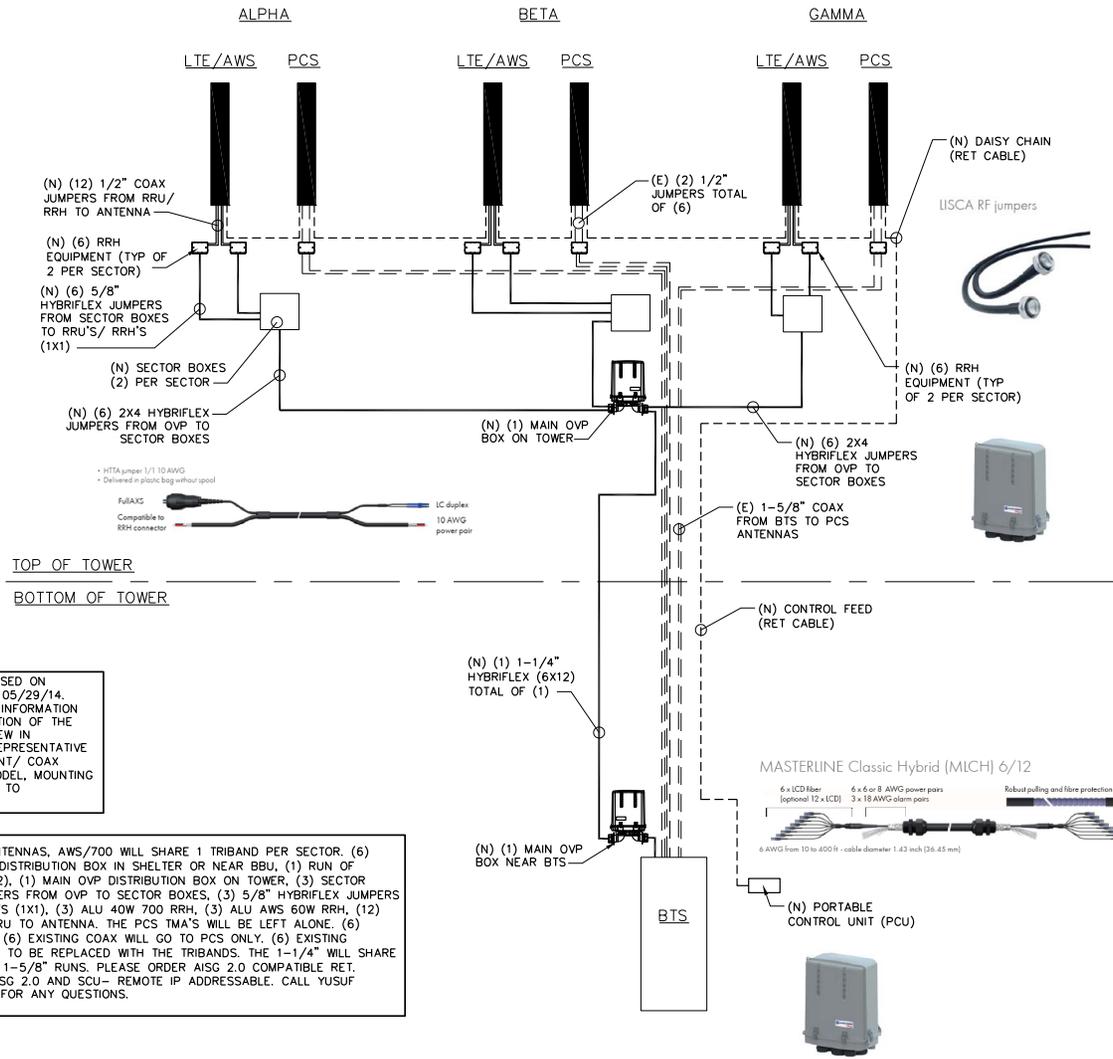
FIRM REGISTRATION # 8242
ACDW 142811



04/26/16

ACGI NO:	14-2811
SHEET NAME	PENETRATION DETAILS
SHEET NUMBER	A-2

Appendix "A"



TOP OF TOWER
 BOTTOM OF TOWER

TECH REVIEW NOTE:
 INDICATED INFORMATION IS BASED ON VERIZON TECH REVIEW DATED 05/29/14. CONTRACTOR TO VERIFY THIS INFORMATION WITH THE MOST CURRENT EDITION OF THE VERIZON WIRELESS TECH REVIEW IN COORDINATION WITH CLIENT REPRESENTATIVE FOR APPURTENANCE/EQUIPMENT/ COAX LOCATION, NUMBER, MAKE, MODEL, MOUNTING DETAILS, AZIMUTH, ETC PRIOR TO INSTALLATIONS.

NET TOTAL: (6) TRI-BAND ANTENNAS, AWS/700 WILL SHARE 1 TRIBAND PER SECTOR. (6) 1-5/8" COAX, (1) MAIN OVP DISTRIBUTION BOX IN SHELTER OR NEAR BBU, (1) RUN OF 1-1/4" HYBRIFLEX LINE. (6X12), (1) MAIN OVP DISTRIBUTION BOX ON TOWER, (3) SECTOR BOXES, (3) 2X4 HYBRID FEEDERS FROM OVP TO SECTOR BOXES, (3) 5/8" HYBRIFLEX JUMPERS FROM SECTOR BOXES TO RRU'S (1X1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" COAX JUMPERS FROM RRU TO ANTENNA. THE PCS TMA'S WILL BE LEFT ALONE. (6) DIPLEXERS WILL BE REMOVED, (6) EXISTING COAX WILL GO TO PCS ONLY, (6) EXISTING ANTENNAS WILL BE REMOVED TO BE REPLACED WITH THE TRIBANDS. THE 1-1/4" WILL SHARE A CONDUIT WITH ONE OF THE 1-5/8" RUNS. PLEASE ORDER AISG 2.0 COMPATIBLE RET. PLEASE PLAN FOR RET KIT AISG 2.0 AND SCU- REMOTE IP ADDRESSABLE. CALL YUSUF DANAWALA @ 817-961-2989 FOR ANY QUESTIONS.

INTENT: TO UPGRADE EXISTING LICENSEE'S COMMUNICATION EQUIPMENT TO NEW AWS EQUIPMENT.

1 ANTENNA DIAGRAM
 SCALE: N.T.S.

NO.	DATE	ISSUED FOR REVIEW
8	04/26/16	ISSUED FOR REVIEW
7	07/02/14	ISSUED FOR REVIEW
6	12/02/13	ISSUED FOR REVIEW
5	06/16/13	ISSUED FOR REVIEW
4	12/11/14	ISSUED FOR REVIEW
3	09/03/14	ISSUED FOR REVIEW
2	08/04/14	ISSUED FOR REVIEW
1	07/07/14	ISSUED FOR REVIEW
D	07/02/14	ISSUED FOR REVIEW
E	05/29/14	ISSUED FOR REVIEW
F	05/29/14	ISSUED FOR REVIEW
D	04/25/14	ISSUED FOR REVIEW

1301 SOLANA BLVD. BLDG. 2, SUITE # 2400
 WESTLAKE, TEXAS 76086

DATE DRAWN: 04/15/14
 DRAWN BY: BK
 APPROVED BY: JG

AWS UPGRADE
TENNYSON CENTER WT
SITE ID # 165357
 6825 COMMUNICATIONS PKWY
 PLANO, TX 75024

5221 LYNDON B JOHNSON FREEWAY
 SUITE 204 DALLAS, TX 75243
 PHONE: 972-213-1883
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 WWW.ALLPROGLO.COM
 FIRM REGISTRATION # 6242
 ACGW 142811

ACGI NO:	14-2811
SHEET NAME	ANTENNA DIAGRAM
SHEET NUMBER	A-3

Project Name : TENNYSON_CENTER_WT - AWS Carrier Add 10/11/2012 Task Submitted On : 05/29/2014
 Task Submitted By : Mohamed Danawala

Site Modification Change Order

Mod Type : LTE Modification

Project Title : TENNYSON_CENTER_WT - AWS Carrier Add 10/11/2012
Requestor Name : Ralph Coupet
Requestor Phone : 682-831-3217
RF Engineer : Sarah Parks
Expected Completed Date : 04/29/2013
BTA Name : Dallas-Fort Worth, TX
BTA Number : 101

GeoPlan Market : Dallas
Current Configuration : 7-0258-0000 TENNYSON_CENTER_WT
Proposed Configuration : 7-0258-AWS3 TENNYSON_CENTER_WT
Switch Identifier : 4119-7 Eules
Cluster # :

Site Information
Coordinates (NAD83) :
Latitude : 33-04-10.16 N
Longitude : 96-49-47.96 W
Ground Elevation (ft AMSL) : 698.0

Address :
Street : 6825 Communications Parkway
City, State, Zip : Plano TX 75024
County : Collin
LTE Phase : N/A

LTE Phase Type :
Site Type : [X] Colocation [] VZW Owned Tower [] Rooftop

Service Type: 700 Upper CURRENT			Service Type: 700 Upper PROPOSED		
Sector	0258-Alpha	0258-Beta	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	1	1	1	1	1
Manufacturer	CSS ANTENNA, INC.	CSS ANTENNA, INC.	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	X7C-665.6	X7C-665.6	CWXX063X25G0 0.702-750-(45)	CWXX063X25G0 0.702-750-(45)	CWXX063X25G0 0.702-750-(45)
Antenna gain (dBi)	13.6	13.6	14.2	14.2	14.2
Antenna Beamwidth (deg)	64	64	71	71	71
Sector Azimuth (deg TN)	0	120	0	120	240
Antenna Tip Height (for EME) (ft AGL)	127.90	127.90	129.01	129.01	129.01
Mechanical Down tilt (deg)	2	0	0	0	0
Adjustable Electrical Down tilt (deg)	6	6	2	2	2
Feedline Length (ft)					
Number of Lines per Antenna	2	2			
Feedline Model Number	1-5/8"quot;	1-5/8"quot;	hybriflex 1-1/4"quot;	hybriflex 1-1/4"quot;	hybriflex 1-1/4"quot;
RAD Center (ft AGL)	124.90	124.90	124.90	124.90	124.90

Service Type: PCS A CURRENT			Service Type: PCS A PROPOSED		
Sector	0258-Alpha	0258-Beta	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	1	1	1	1	1
Manufacturer	CSS ANTENNA, INC.	CSS ANTENNA, INC.	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	X7C-665.6	X7C-665.6	CWXX063X25G0 0.702-750-(45)	CWXX063X25G0 0.702-750-(45)	CWXX063X25G0 0.702-750-(45)
Antenna gain (dBi)	13.6	13.6	14.2	14.2	14.2
Antenna Beamwidth (deg)	64	64	71	71	71
Sector Azimuth (deg TN)	0	120	0	120	240
Antenna Tip Height (for EME) (ft AGL)	127.90	127.90	129.01	129.01	129.01
Mechanical Down tilt (deg)	2	0	0	0	0
Adjustable Electrical Down tilt (deg)	6	6	2	2	2
Feedline Length (ft)					
Number of Lines per Antenna	2	2			
Feedline Model Number	1-5/8"quot;	1-5/8"quot;	hybriflex 1-1/4"quot;	hybriflex 1-1/4"quot;	hybriflex 1-1/4"quot;
RAD Center (ft AGL)	124.90	124.90	124.90	124.90	124.90

1 TECH REVIEW
 SCALE: NONE

NET TOTAL: (6) TRI-BAND ANTENNAS, AWS/700 WILL SHARE 1 TRIBAND PER SECTOR, (6) 1-5/8" COAX, (1) MAIN OVP DISTRIBUTION BOX IN SHELTER OR NEAR BBU, (1) RUN OF 1-1/4" HYBRIFLEX LINE, (6X12), (1) MAIN OVP DISTRIBUTION BOX ON TOWER, (3) SECTOR BOXES, (3) 2X4 HYBRID FEEDERS FROM OVP TO SECTOR BOXES, (3) 5/8" HYBRIFLEX JUMPERS FROM SECTOR BOXES TO RRU'S (1X1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" COAX JUMPERS FROM RRU TO ANTENNA, THE PCS TMA'S WILL BE LEFT ALONE, (6) DIPLEXERS WILL BE REMOVED, (6) EXISTING COAX WILL GO TO PCS ONLY, (6) EXISTING ANTENNAS WILL BE REMOVED TO BE REPLACED WITH THE TRIBANDS, THE 1-1/4" WILL SHARE A CONDUIT WITH ONE OF THE 1-5/8" RUNS. PLEASE ORDER AISG 2.0 COMPATIBLE RET. PLEASE PLAN FOR RET KIT AISG 2.0 AND SCU- REMOTE IP ADDRESSABLE. CALL YUSUF DANAWALA @ 817-961-2989 FOR ANY QUESTIONS.

INTENT: TO UPGRADE EXISTING LICENSEE'S COMMUNICATION EQUIPMENT TO NEW AWS EQUIPMENT.

Sector	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	1	1	1
Manufacturer	JAYBEAM WIRELESS	JAYBEAM WIRELESS	JAYBEAM WIRELESS
Model Number	PCS0665-18-2	PCS0665-18-2	PCS0665-18-2
Antenna gain (dBi)	18.6	18.6	18.6
Antenna Beamwidth (deg)	62	62	62
Sector Azimuth (deg TN)	0	120	240
Antenna Tip Height (for EME) (ft AGL)	127.90	127.90	127.90
Mechanical Down tilt (deg)	0	0	0
Adjustable Electrical Down tilt (deg)	2	2	2
Feedline Length (ft)			
Number of Lines per Antenna	2	2	2
Feedline Model Number	1-5/8"quot;	1-5/8"quot;	1-5/8"quot;
RAD Center (ft AGL)	124.90	124.90	124.90

Service Type: AWS B CURRENT			Service Type: AWS B PROPOSED		
Sector	0258-Alpha	0258-Beta	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	1	1	1	1	1
Manufacturer	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	CWXX063X25G0 0.702-2100-(+45)-LEFT				
Antenna gain (dBi)	15.2	15.2	15.2	15.2	15.2
Antenna Beamwidth (deg)	63	63	63	63	63
Sector Azimuth (deg TN)	0	120	240	0	120
Antenna Tip Height (for EME) (ft AGL)	129.01	129.01	129.01	129.01	129.01
Mechanical Down tilt (deg)	0	0	0	0	0
Adjustable Electrical Down tilt (deg)	2	2	2	2	2
Feedline Length (ft)					
Number of Lines per Antenna					
Feedline Model Number	hybriflex 1-1/4"quot;				
RAD Center (ft AGL)	124.90	124.90	124.90	124.90	124.90

Service Type: AWS C CURRENT			Service Type: AWS C PROPOSED		
Sector	0258-Alpha	0258-Beta	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	0	0	0	0	0
Manufacturer	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	CWXX063X25G0 0.702-2100-(+45)-LEFT				
Antenna gain (dBi)	15.2	15.2	15.2	15.2	15.2
Antenna Beamwidth (deg)	63	63	63	63	63
Sector Azimuth (deg TN)	0	120	240	0	120
Antenna Tip Height (for EME) (ft AGL)	129.01	129.01	129.01	129.01	129.01
Mechanical Down tilt (deg)	0	0	0	0	0
Adjustable Electrical Down tilt (deg)	2	2	2	2	2
Feedline Length (ft)					
Number of Lines per Antenna					
Feedline Model Number	hybriflex 1-1/4"quot;				
RAD Center (ft AGL)	124.90	124.90	124.90	124.90	124.90

Following are Dual Band Antennas in the proposed configuration:

- AMPHENOL / CWXX063X25G00-2102-2100-(+45)-LEFT

Comments:

Net Total: (6) Tri-band Antennas, AWS/700 will share 1 triband per sector, (6) 1-5/8" coax, (1) Main OVP Distribution box in Shelter or Near BBU, (1) run of 1-1/4" Hybriflex line, (6x12), (1) Main OVP Distribution box on tower, (3) sector boxes, (3) 2x4 hybrid feeders from OVP to sector boxes, (3) 5/8" Hybriflex jumpers from sector boxes to RRU's (1x1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" Coax jumpers from RRU to Antenna. The PCS TMA's will be left alone, (6) Diplexers will be removed, (6) existing coax will go to PCS only, (6) Existing antennas will be removed to be replaced with the tribands. The 1-1/4" will share a conduit with one of the 1-5/8" runs. Please order AISG 2.0 compatible RET. Please plan for RET kit AISG 2.0 and SCU - remote IP addressable. Call Yusuf Danawala @ 817-961-2989 for any questions.

Sector	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	1	1	1
Manufacturer	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	CWXX063X25G0 0.702-1900-(+45)-LEFT	CWXX063X25G0 0.702-1900-(+45)-LEFT	CWXX063X25G0 0.702-1900-(+45)-LEFT
Antenna gain (dBi)	17.0	17.0	17.0
Antenna Beamwidth (deg)	70	70	70
Sector Azimuth (deg TN)	0	120	240
Antenna Tip Height (for EME) (ft AGL)	129.01	129.01	129.01
Mechanical Down tilt (deg)	0	0	0
Adjustable Electrical Down tilt (deg)	2	2	2
Feedline Length (ft)			
Number of Lines per Antenna	1-5/8"quot;	1-5/8"quot;	1-5/8"quot;
Feedline Model Number	1-5/8"quot;	1-5/8"quot;	1-5/8"quot;
RAD Center (ft AGL)	124.90	124.90	124.90

Service Type: AWS B PROPOSED			Service Type: AWS C PROPOSED		
Sector	0258-Alpha	0258-Beta	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	0	0	0	0	0
Manufacturer	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	CWXX063X25G0 0.702-2100-(+45)-LEFT				
Antenna gain (dBi)	15.2	15.2	15.2	15.2	15.2
Antenna Beamwidth (deg)	63	63	63	63	63
Sector Azimuth (deg TN)	0	120	240	0	120
Antenna Tip Height (for EME) (ft AGL)	129.01	129.01	129.01	129.01	129.01
Mechanical Down tilt (deg)	0	0	0	0	0
Adjustable Electrical Down tilt (deg)	2	2	2	2	2
Feedline Length (ft)					
Number of Lines per Antenna					
Feedline Model Number	hybriflex 1-1/4"quot;				
RAD Center (ft AGL)	124.90	124.90	124.90	124.90	124.90

Service Type: AWS C PROPOSED			Service Type: AWS B PROPOSED		
Sector	0258-Alpha	0258-Beta	0258-Alpha	0258-Beta	0258-Gamma
Antenna Quantity (Tx + Rx)	0	0	0	0	0
Manufacturer	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL	AMPHENOL
Model Number	CWXX063X25G0 0.702-2100-(+45)-LEFT				
Antenna gain (dBi)	15.2	15.2	15.2	15.2	15.2
Antenna Beamwidth (deg)	63	63	63	63	63
Sector Azimuth (deg TN)	0	120	240	0	120
Antenna Tip Height (for EME) (ft AGL)	129.01	129.01	129.01	129.01	129.01
Mechanical Down tilt (deg)	0	0	0	0	0
Adjustable Electrical Down tilt (deg)	2	2	2	2	2
Feedline Length (ft)					
Number of Lines per Antenna					
Feedline Model Number	hybriflex 1-1/4"quot;				
RAD Center (ft AGL)	124.90	124.90	124.90	124.90	124.90

QTY COMMENTS	DATE	NO.	REVISION
1	04/29/14	1	ISSUED FOR REVIEW
2	05/29/14	2	ISSUED FOR REVIEW
3	06/16/14	3	ISSUED FOR REVIEW
4	09/03/14	4	ISSUED FOR REVIEW
5	08/04/14	5	ISSUED FOR REVIEW
6	07/02/14	6	ISSUED FOR REVIEW
7	05/29/14	7	ISSUED FOR REVIEW
8	04/29/14	8	ISSUED FOR REVIEW



1301 SOLANA BLVD BLDG 2, SUITE # 2400
 WESTLAKE, TEXAS 76066

DATE DRAWN: 04/16/14
 DRAWN BY: BK
 APPROVED BY: JG

**AWS UPGRADE
 TENNYSON CENTER WT
 SITE ID # 165357**

6825 COMMUNICATIONS PKWY
 PLANO, TX 75024



9221 LINDEN B JOHNSON FREEWAY
 SUITE 204 DALLAS, TX 75243
 PHONE: 972-213-1883
 FAX: 972-213-1883
 WWW.ALLPROG.COM
 FIRM REGISTRATION # 8242
 ACQM 142811



04/26/16

ACGI NO: 14-2811

SHEET NAME
 TECH REVIEW

SHEET NUMBER
 A-4



Alcatel-Lucent RRH2x40-AWS
REMOTE RADIO HEAD

Technical specifications

Physical dimensions

- Height: 620 mm (24.4 in.)
- Width: 270 mm (10.63 in.)
- Depth: 170mm (6.7 in.)
- Weight (without mounting kit): less than 20 kg (44 lb)

Power

- Power supply: -48VDC

Operating environment

- Outdoor temperature range:
 - With solar load: -40°C to +50°C (-40°F to +122°F)
 - Without solar load: -40°C to +55°C (-40°F to +131°F)

- Passive convection cooling (no fans)
- Enclosure protection
 - IP65 (International Protection rating)

RF characteristics

- Frequency band: 1700/2100 MHz (AWS); 3GPP Band 4
- Bandwidth: up to 20 MHz
- RF output power at antenna port: 40 W nominal RF power for each Tx port
- Rx diversity: 2-way or 4-way with optional Rx Diversity module
- Noise figure: below 2.0 dB typical
- Antenna Line Device features
 - TMA and Remote electrical tilt (RET) support via AISG v2.0

Optical characteristics

Type/number of fibers

- Single-mode variant
 - One Single Mode Single Fiber per RRH2x, carrying UL and DL using CWDM
 - Single mode dual fiber (SM/DF)
- Multi-mode variant
 - Two Multi-mode fibers per RRH2x: one carrying UL, the other carrying DL

Optical fiber length

- Up to 500 m (0.31 mi), using MM fiber
- Up to 20 km (12.43 mi), using SM fiber

Digital Ports and Alarms

- Two optical ports to support daisy-chaining
- Six external alarms

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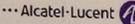
New AWS RF Modules for VzW RRHx60 – HW Characteristics

LR14.1

	RRH2x60
RF Output Power	2x60W
Instantaneous Bandwidth	45MHz
Target Reliability (Annual Return Rate)	<2%
Receiver	4 Branch Rx
Features	AISG 2.0 for RET/TMA
Power	-48VDC
	Internal Smart Bias-T
CPRI Ports	2 CPRI Rate 5 Ports
External Alarms	4 External User Alarms
Monitor Ports	TX, RX
Environmental	GR487 Compliance
RF Connectors	7/16 DIN (rear – facing downward)
Size	11"x37"x5"
Weight	60lb



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1 2X40W RRH DETAIL
SCALE: NONE

2 2X60W RRH DETAIL
SCALE: NONE

NET TOTAL: (6) TRI-BAND ANTENNAS, AWS/700 WILL SHARE 1 TRIBAND PER SECTOR. (6) 1-5/8" COAX, (1) MAIN OVP DISTRIBUTION BOX IN SHELTER OR NEAR BBU, (1) RUN OF 1-1/4" HYBRIFLEX LINE. (6X12), (1) MAIN OVP DISTRIBUTION BOX ON TOWER, (3) SECTOR BOXES, (3) 2X4 HYBRID FEEDERS FROM OVP TO SECTOR BOXES, (3) 5/8" HYBRIFLEX JUMPERS FROM SECTOR BOXES TO RRU'S (1X1), (3) ALU 40W 700 RRH, (3) ALU AWS 60W RRH, (12) 1/2" COAX JUMPERS FROM RRU TO ANTENNA. THE PCS TMA'S WILL BE LEFT ALONE. (6) DIPLEXERS WILL BE REMOVED, (6) EXISTING COAX WILL GO TO PCS ONLY. (6) EXISTING ANTENNAS WILL BE REMOVED TO BE REPLACED WITH THE TRIBANDS. THE 1-1/4" WILL SHARE A CONDUIT WITH ONE OF THE 1-5/8" RUNS. PLEASE ORDER AISG 2.0 COMPATIBLE RET. PLEASE PLAN FOR RET KIT AISG 2.0 AND SCU- REMOTE IP ADDRESSABLE. CALL YUSUF DANAWALA @ 817-961-2989 FOR ANY QUESTIONS.

INTENT: TO UPGRADE EXISTING LICENSEE'S COMMUNICATION EQUIPMENT TO NEW AWS EQUIPMENT.

NO.	DATE	ISSUED FOR REVIEW	ISSUED FOR REVIEW
8	04/26/16	QTY COMMENTS	
7	07/07/14	QTY COMMENTS	
6	11/07/13	QTY COMMENTS	
5	06/16/13	QTY COMMENTS	
4	12/11/14	QTY COMMENTS	
3	09/03/14	QTY COMMENTS	
2	08/04/14	QTY COMMENTS	
1	07/07/14	QTY COMMENTS	
	07/02/14	FINAL CD	
	06/25/14	ISSUED FOR REVIEW	
	04/25/14	ISSUED FOR REVIEW	

1301 SOLANA BLVD, BLDG 2, SUITE # 2400
WESTLAKE, TEXAS 76066

DATE DRAWN: 04/15/14	DRAWN BY: BK	APPROVED BY: JG
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AWS UPGRADE
TENNYSON CENTER WT
SITE ID # 165357
6825 COMMUNICATIONS PKWY
PLANO, TX 75024

9221 LYNDON B JOHNSON FREEWAY
SUITE 204 DALLAS, TX 75243
PHONE: 972-213-8883
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FIRM REGISTRATION # 6242
ACOW 142811

ACGI NO:	14-2811
SHEET NAME	DETAILS
SHEET NUMBER	A-5

Appendix "A"

GROUND INFORMATION

- A. ALL EXCAVATIONS MUST BE HAND DUG.
- B. PROVIDE FOR CONSTRUCTION FENCING TO LIMIT VEHICLE TRAFFIC TO JUST THE AREA WHERE WORK WILL OCCUR AND TO LIMIT WHERE LIFTS CAN TRAVEL ON SITE. NO VEHICLES ALLOWED ON SITE AFTER RAIN EVENTS. CITY TO DETERMINE WHEN VEHICLES CAN ACCESS TURF AREAS AFTER A RAIN EVENT. CONTRACTOR WILL NEED TO FURNISH A LIFT FOR CITY PERSONNEL TO INSPECT WORK ON THE TANK SUPPORT COLUMN.
- C. NEED TO HAND DIG NEW PIT/TRENCH BETWEEN (E) PLASTIC UNDERGROUND VAULT AND WATER TANK TO ADD (3) EA 3" NEW PVC CONDUITS FROM (E) VAULT TO COME INSIDE THE TANK.
- D. FULL DEPTH SAW CUT OF THE MOW STRIP AT EXISTING JOINTS. HAND DIG AND REMOVE (E) CONCRETE MOW RING COVERING THE AREA OF TRENCHING. ONCE COMPLETE, USE COMPACT REINFORCED CONCRETE 3000PSI 4" THICK AND ADD REFLEX EXPANSION JOINT NEXT TO TOWER COLUMN AND EXISTING SIDEWALK. ADD NEW MOW RING AND SEAL PER THE ENGINEER'S SPECIFICATIONS.
- E. THE NATIVE MATERIAL OF THE TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED IN SIX INCH LOOSE LIFTS. TEST REPORTS TO BE PROVIDED TO THE CITY. TOP SIX INCHES NEED TO BE TOP SOIL AND SOLID SOD PLACED.
- F. ALL DISTURBED AREA SHALL HAVE SOLID SOD ON TOP OF 6" OF IMPORTED TOP SOIL. RUTS FROM VEHICLE TRAFFIC SHALL BE REPAIRED PRIOR TO SOD BEING PLANTED. SOD SHALL BE ROLLED IN PLACE.
- G. COMPACT BACKFILL TO A 95 PERCENT COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 0-1557 OR WITHIN PLUS OR MINUS 3 PERCENT OF OPTIMUM MOISTURE CONTENT.
- H. IF REQUIRED COMPACTION DENSITY HAS NOT BEEN OBTAINED, REMOVE THE BACKFILL FROM THE TRENCH OR STRUCTURE, REPLACE WITH APPROVED BACKFILL AND RECOMPACT AS SPECIFIED.
- I. ANY SUBSEQUENT SETTLEMENT OF TRENCH OR STRUCTURE BACKFILL DURING MAINTENANCE PERIOD SHALL BE CONSIDERED THE RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY CORRECTED.
- J. BEFORE THE FINAL SURFACE COURSE IS PLACED, PRELIMINARY MICRO-SURFACING MATERIAL MAY BE REQUIRED TO FILL RUTS, UTILITY CUTS, DEPRESSIONS IN THE EXISTING SURFACE, ETC. RUTS OF ONE-HALF (1/2) INCH (12.7 MM) OR GREATER IN DEPTH SHALL BE FILLED INDEPENDENTLY WITH A RUT-FILLING SPREADER BOX, EITHER FIVE FOOT (5) (1.5 M) OR SIX FOOT (6) (1.8 M) IN WIDTH. FOR IRREGULAR OR SHALLOW RUTTING OF LESS THAN ONE-HALF (1/2) INCH (12.7 MM) IN DEPTH, A FULL-WIDTH SCRATCH-COAT PASS MAY BE USED AS DIRECTED BY THE B.A.R. RUTS THAT ARE IN EXCESS OF ONE AND ONE-HALF (1-1/2) INCHES (38.1 MM) IN DEPTH MAY REQUIRE MULTIPLE PLACEMENTS WITH THE RUT-FILLING SPREADER BOX TO RESTORE THE CROSS-SECTION. ALL RUT-FILLING LEVEL-UP MATERIAL SHOULD CURE UNDER TRAFFIC FOR AT LEAST A TWENTY-FOUR (24) HOUR PERIOD BEFORE ADDITIONAL MATERIAL IS PLACED ON TOP OF THE LEVEL UP.

TOWER RELATED INFORMATION

- A. CONTRACTOR TO X-RAY LOCATION OF CORE DRILLING TO LOCATE AND MARK EXISTING REBARS TO AVOID CUTTING OR DAMAGING EXISTING REBARS. CITY OFFICIALS MUST BE PRESENT AT THE TIME OF X-RAY AND PATTERN DEVELOPMENT.
- B. WATER PROOF VOID SPACES IN CORES AND CONDUITS.
- C. THE REBAR REINFORCEMENTS MUST NOT BE CUT IN THE PEDESTAL WALL. USE X-RAY TO LOCATE REBAR TO AVOID CUTTING IT. CITY REPRESENTATIVE MUST BE PRESENT AT TIME OF X-RAY AND PATTERN DEVELOPMENT. WHEN CORING TAKES PLACES, CITY REPRESENTATION MUST BE PRESENT.
- D. THE EXISTING LOWER AND UPPER PEDESTAL PENETRATIONS MUST BE RE-GROUTED OR OTHERWISE RE-SEALED AFTER CABLE INSTALLATION TO PREVENT MOISTURE FROM ENTERING THE PEDESTAL INTERIOR.
- E. ALL METALS IN DIRECT CONTACT WITH EXTERIOR CONCRETE SURFACES MUST BE STAINLESS STEEL, OR OTHER CORROSION RESISTANT MATERIAL, TO PREVENT RUSTING AND STREAKING ON PEDESTAL WALL.
- F. CONTRACTOR WILL NEED TO FURNISH A LIFT FOR CITY PERSONNEL TO INSPECT WORK ON THE TANK SUPPORT COLUMN.
- G. EQUIPMENT COLOR TO MATCH COLOR OF EXISTING CONCRETE COLUMN OF TANK.
- H. EXISTING STUDS ON CONCRETE COLUMN SHALL NOT BE CUT. EXISTING BRACKETS TO BE MODIFIED TO WORK WITH PRE-EXISTING ATTACHMENTS AND ANCHORS ON THE CONCRETE COLUMN.
- I. NEW EQUIPMENT COLOR TO MATCH COLOR OF EXISTING CONCRETE COLUMN OF TANK.

CITY OF PLANO REQUIREMENTS

- A. ALL BOLTS AND CONNECTION HARDWARE SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
- B. ALL SPRINKLER HEADS NEED TO BE MARKED OR FLAGGED PRIOR TO START OF CONSTRUCTION. IF SPRINKLER LINES ARE DAMAGED DURING CONSTRUCTION, ALL REPAIRS ARE TO BE MADE BY A STATE OF TEXAS LICENSED IRRIGATOR.
- C. ALL TRENCHES TO BE HAND DUG AND TO MECHANICALLY COMPACTED 95% STD. PROCTOR MECHANICALLY COMPACTED WHEN BACKFILLED. DO NO BACKFILL TRENCHES UNTIL INSPECTED AND APPROVED BY PUMPING FACILITIES SUPERINTENDENT. (972)727-1623. MIN DEPTH TO TOP OF CONDUIT 3'.
- D. NO ONSITE WORK IS TO BEGIN UNTIL APPROVED BY PUMPING STATION FACILITIES SUPERINTENDENT. (972) 727-1623. A 24 HR NOTICE SHALL BE GIVEN TO THE CITY BEFORE ANY WORK.
- E. NO CONCRETE TO BE POURED UNTIL BACKFILLED, REBAR, ETC. APPROVED BY CITY AND SUPERINTENDENT (972) 727-1623.
- F. GATE SHALL BE LOCKED AT ALL TIME.
- G. NO WORK ALLOWED ON THE STEEL PORTION OF THE TANK.

SITE PRESERVATION AND RESTORATION

ANY DAMAGE OCCURRING TO THE GROUNDS (SOD, IRRIGATION SYSTEM, ETC...) DURING CONSTRUCTION SHALL BE REPAIRED TO EXISTING CONDITIONS OR BETTER TO THE CITY MANAGERS SATISFACTION OR HIS DESIGNEE, FOR ACCEPTANCE OF THE SITE RESTORATION.

8	04/26/16	CITY COMMENTS
7	11/27/15	CITY COMMENTS
6	11/27/15	CITY COMMENTS
5	08/06/15	CITY COMMENTS
4	12/17/14	CITY COMMENTS
3	09/03/14	CITY COMMENTS
2	08/04/14	CITY COMMENTS
1	07/07/14	CITY COMMENTS
	07/02/14	FINAL CD
	06/26/14	ISSUED FOR REVIEW
	06/05/14	ISSUED FOR REVIEW
	04/25/14	ISSUED FOR REVIEW
NO.	DATE	REVISION



1301 SOLANA BLVD. BLDG. 2, SUITE # 2400
WESTLAKE, TEXAS 76086

DATE DRAWN:	04/15/14
DRAWN BY:	BK
APPROVED BY:	JG

AWS UPGRADE
TENNYSON
CENTER WT
SITE ID # 165357

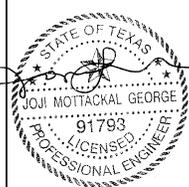
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04/26/16

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SHEET NUMBER	A-6