



TO: ANTIOCH PLANNING COMMISSION

FROM: Anne Hersch, AICP, Planning Manager

SUBJECT: UP-22-02, V-02-02 Use Permit, Variance and Design Review for T-Mobile El Campanil Wireless Facility, 602 West 2nd Street

DATE: June 1, 2022

Property Owner: El Campanil Theater Preservation Foundation 602 West 2nd St. Antioch, CA 94509	Applicant/Representative: The CBR Group c/o T-Mobile Cara Todd 2840 Howe Rd. Suite E Martinez, CA 94553
PROJECT: T-Mobile El Campanil Wireless FILE #: UP-22-03 APN: 066-071-013 GP LU: Downtown Specific Plan Focus Area ZONING: MU Mixed Use OVERLAY: Downtown Specific Plan PLANNER: Anne Hersch	Original filing: February 3, 2022 Date Deemed Incomplete: February 16, 2022 Date of Resubmittal: March 11, 2022 Date Deemed Complete: April 14, 2022 Date of Notice Posted/Mailed: May 19, 2022 Date of Public Initial Hearing/Tabled: May 4, 2022 Public Hearing: June 1, 2022 Total number of days to hearing: 109 days (excludes time between resubmittals)

REQUEST

The applicant is seeking approval of a use permit, variance and design review for a new roof-mounted wireless facility at 602 W 2nd Street (El Campanil Theater). The subject site is 0.28 acres with an existing 10,936 sq. ft. theater built in 1928. The project scope includes two new 98 sq. ft. roof enclosures with a total of six (6) new panel antennas. The enclosures are proposed to face east and west and are 10 ft. in height. The enclosures have been designed to match the existing building. Supporting equipment is proposed to be ground mounted at the rear of the building and screened. A variance is required to allow an exception to the height limit for the Mixed-Use Zoning Classification in the Downtown Specific Plan.

STAFF RECOMMENDATION

Staff recommends that the Planning & Zoning Commission adopt the Resolution approving a use permit, variance, and design review for a new roof-mounted wireless facility at 602 W. 2nd Street, the El Campanil Theater.

SITE LOCATION



Image 1. Site Location

Comparison of Adjacent Properties			
Vicinity	GP Land Use	Zoning	Current Use
North	Downtown Specific Plan	MU-Mixed Use	Waldie Plaza
South	Downtown Specific Plan	MU-Mixed Use	Restaurant
East	Downtown Specific Plan	MU-Mixed Use	Thrift Shop
West	Downtown Specific Plan	MU-Mixed Use	Salon

Table 1. Zoning & Adjacent Land Uses

STREET ELEVATION



BACKGROUND

The subject site is 0.28 acres with an existing 10,936 sq. ft. theater built in 1928. The property is known as the El Campanil Theater and operates as an entertainment venue with films and live entertainment. The subject site is located in the Downtown Specific Plan area and is zoned MU-Mixed Use.

The applicant is seeking use permit, variance and design review approval to install a new roof mounted wireless facility for T-Mobile. The project scope includes two new 98 sq. ft. roof enclosures with a total of six (6) new panel antennas. The enclosures are proposed to face east and west and are 10 ft. in height. The enclosures have been designed to match the existing building and include a decorative trim to match the existing building details. Supporting equipment is proposed to be ground mounted at the rear of the building and screened. If approved, this will be the first T-Mobile Wireless facility in Downtown.

There are currently no wireless facilities at the subject site. This will be a new facility with a “macro” installation as defined in the Antioch City Council Policy for Wireless Communications Facilities.

O. “macro wireless facility” or “macro wireless facilities” means any wireless facility that is not a small wireless facility as defined by the FCC in 47 C.F.R. § 1.6002(l), as may be amended or superseded.

The FCC definition for “facility” is included below. One wireless carrier is proposed on-site resulting in a stand-alone facility.

*(i) **Facility** or personal wireless service facility means an antenna facility or a structure that is used for the provision of personal wireless service, whether such service is provided on a stand-alone basis or commingled with other wireless communications services.*

ANALYSIS

Zoning Code

Section 9-5.3846 “WIRELESS COMMUNICATIONS FACILITIES” of the Antioch Municipal Code establishes the requirements for wireless communications facilities are administered and regulated through City Council Policy for Wireless Communications Facilities.

“All wireless communications facilities, and any modifications, collocations, expansions or other changes to existing wireless communications facilities, are subject to a permit as specified in City Council Policy for Wireless Communication Facilities, which may be adopted, amended and/or repealed by City Council resolution. All wireless communications facilities shall comply with City Council Policy for Wireless Communication Facilities.”

Wireless Policy

[Antioch Wireless Policy](#) was adopted by City Council on June 11, 2019 and is a policy separate from the City’s Municipal Code. The Policy establishes reasonable, uniform and comprehensive standards and procedures for wireless facilities deployment, construction, installation, collocation, modification, operation, relocation and removal within the City’s territorial boundaries, consistent with and to the extent permitted under federal and California state law. The standards and procedures contained in this policy are intended to protect and promote public health, safety and welfare, and balance the benefits that flow from robust, advanced wireless services with the City’s local values, which include without limitation the aesthetic character of the City, its neighborhoods and community.

Location & Findings

The subject site is located in the Downtown Specific Plan Area, which discourages but does not prohibit wireless facilities. The Policy requires Planning Commission review and action on a Use Permit for the operation of the facility and design review for the aesthetics. The Planning Commission is also required to make additional findings for a limited exception based on additional evidence submitted by the project applicant.

The additional findings and evidence as required through the City’s Wireless Policy are included below.

a. Required Findings for a Limited Exception. The Planning Commission shall not grant any limited exception, unless the applicant shows that:

i. the proposed wireless facility qualifies as a “personal wireless service facility” as defined in 47 U.S.C. § 332(c)(7)(C)(ii), as may be amended or superseded; and

Finding: The proposed project scope qualifies as a “personal wireless service facility” as it will provide additional support for the use of personal wireless devices including voice and data coverage.

ii. the applicant has provided the Planning Commission with a reasonable and clearly defined technical service objective to be achieved by the proposed wireless facility; and

Finding: The applicant has provided letter stating their need to establish improved wireless voice and data coverage in the Rivertown area of Antioch. (See Attachment B)

iii. the applicant has provided the Planning Commission with a written statement that contains a detailed and fact-specific explanation as to why the proposed wireless facility cannot be deployed in compliance with the applicable provisions in this policy; and

Finding: The applicant has provided a planning justification supplemental report (See Attachment G). The applicant has identified the entirety of Rivertown as a service area with a deficit of coverage. Locating outside of the Rivertown area would locate a new facility in close proximity to existing facilities and would result in reduced coverage for the area. The central location of the El Campanil Theater will provide expansive coverage.

iv. the applicant has provided the Planning Commission with a meaningful comparative analysis with the factual reasons why all alternative locations and/or designs identified in the administrative record (whether suggested by the applicant, the City, public comments or any other source) are not technically feasible or potentially available to reasonably achieve the applicant’s reasonable and clearly defined technical service objective to be achieved by the proposed wireless facility; and

Finding: The applicant states in their justification (See Attachment H) that other buildings within the coverage area have insufficient height to achieve coverage in the Rivertown area. The height of the El Campanil Theater will result in coverage that will serve T-Mobile customers in the Rivertown area. In order to achieve broad coverage, the facility must be located at a higher height. The El Campanil building is 60 ft. tall

v. the applicant has demonstrated to the Planning Commission that the proposed location and design is the least non-compliant configuration that will reasonably achieve the applicant’s reasonable and clearly defined technical service objective to be achieved by the proposed wireless facility, which includes without limitation a meaningful comparative analysis into multiple smaller or less intrusive wireless facilities dispersed throughout the intended service area.

Finding: T-Mobile has identified the service area to be the entirety of the Rivertown area which currently has limited service. The proposed location and roof-top installation provides the most expansive coverage due the building height and central location. The applicant has designed the proposed facility to be integrated into the existing architecture of the building by matching stucco materials and banding. Additionally, ground equipment is proposed to be screened and include mesh fencing.

Use Permit & Variance Findings

Pursuant to Section 9-5.2703 “Required Findings” the Planning Commission is required to make findings for a use permit and a variance. A use permit is required pursuant to the Downtown Specific Plan and Wireless Policy for the operation and maintenance of the new wireless facility. Draft findings and Conditions of Approval related to the use and operation of the facility are included in Attachment A.

A variance is required to allow an exception to the height standards for the Downtown Specific Plan. The maximum building height for the Downtown Specific Plan Area is 45 ft. Wireless facilities are permitted to exceed the maximum height up to 10 ft. This would result in a maximum height of 55 ft.

The existing building height is 59 ft. Therefore, the building is legal non-conforming with respect to height. Due to the existing conditions, there is no feasible way to install a wireless facility that satisfies the development standards for the Downtown Specific Plan.

The applicant has designed the proposed facility to with the 10 ft. height requirement for wireless facilities. The current proposal will result in an overall building height of 69 ft. Draft Variance findings are included in Attachment A.

Standard	45 ft. height
Allowable	55 ft. height (10 ft. above max height for Zoning District)
Actual/Existing	59 ft. height
Proposed	69 ft. height

Table 2. Height Standards & Conditions

When the applicant participated in the pre-application meeting with staff in 2021, different installation schemes were reviewed and discussed. The original plan included an installation that projected beyond the property lines, creating an airspace encroachment. Staff directed the applicant to redesign the installation to be completely contained on private property without any encroachments. This proposed scheme eliminates encroachments and allows for enhanced coverage in all sectors. The current proposal contains the facilities entirely on the roof with restricted access. A height justification prepared by the applicant is included in Attachment I.

Design Review

Pursuant to Section V (B) (5) (c) of the Antioch Wireless Policy, Rooftop-mounted equipment is required to be screened from view.

Section V (B) (5) (c) of the Antioch Wireless Policy

c. Rooftop-Mounted Equipment. All rooftop-mounted equipment must be screened from public view from the nearest right-of-way with concealment measures that match the underlying structure in proportion, quality, architectural style and finish. The approval authority may approve unscreened rooftop equipment only when it expressly finds that

such equipment is effectively concealed due to its low height and/or setback from the roofline.



Image. 1 Photo Simulation of Proposed Enclosure

The applicant has designed a roof-mounted equipment enclosure consistent with the proposed facility that are architecturally integrated into the building design. All equipment will be contained within the enclosures. The enclosures will be stucco with matching banding trim on the enclosures. Due to the height and location, visibility from the public right of way is limited.

FCC Shot Clock

In 2009, the Federal Communications Commission (FCC) established “Shot Clock” provisions for municipal land use planning authorities to insure timely processing of wireless applications. This decision was the result of CTIA-The Wireless Association, a trade organization representing the wireless industry, petitioning the FCC to limit local review length for application processing. The FCC’s ruling has resulted in a 90-day review limit for collocation applications and 150 day review for new macro facilities. Since this is a new facility request, the 150-day review applies.

Under federal law, localities may not:

1. Explicitly or effectively prohibit personal wireless services;
2. Unreasonably discriminate among functionally equivalent personal wireless service providers; or
3. Regulate environmental effects from radio frequency (RF) emissions to the extent that such emissions conform to all applicable FCC regulations.¹

In addition, localities must act on permit applications within a reasonable time, issue written denials, include reasons for any denial contemporaneously with any written denial and base all

¹ See 47 U.S.C. §§ 332(c)(7)(B)(i), (iv).

denials on substantial evidence in the written record.²

Effective Prohibition Framework

A single permit denial can effectively prohibit personal wireless services when the applicant shows that (1) a “significant gap” exists in the applicant’s own services and (2) the applicant proposed the “least intrusive means” to mitigate that gap.³ No “bright line” test exists to define a “significant” gap in services, and although not all gaps amount to a significant one, district courts in the Ninth Circuit and others from outside this Circuit indicate that the standard may be relatively low.⁴ In contrast, the “least intrusive means” has a more concrete definition. The least intrusive means refers to a site location and design that most closely conforms to the local values expressed in the local law that would otherwise support a denial.⁵

RF Emissions Compliance Regulations

The FCC regulates RF emissions, and establishes comprehensive rules for maximum permissible exposure levels (the “*FCC Guidelines*”).⁶ State and local governments cannot (1) regulate wireless facilities based on environmental effects from RF emissions when the emissions conform to the applicable *FCC Guidelines* or (2) establish their own RF exposure standards—whether more strict, more lenient or even the same.⁷

ENVIRONMENTAL REVIEW

Staff recommends that the proposed project be considered categorically exempt from the requirements of CEQA per Section 15303, “New Construction or Conversion of Small Structures” of the CEQA Guidelines. Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Staff has determined that the construction of two 98 sq. ft. roof mounted enclosures (196 sq. ft. total) on a 10,936 sq. ft. building are minor and result in modest exterior modifications with limited visibility.

² See 47 U.S.C. §§ 332(c)(7)(B)(ii), (iii); see also *T-Mobile South LLC v. City of Roswell*, 135 S.Ct. 808, 816 (2015).

³ See *American Tower Corp. v. City of San Diego*, 763 F.3d 1035, 1056 (9th Cir. 2014) (citing *Metro PCS, Inc. v. City and County of San Francisco*, 400 F.3d 715, 733 (9th Cir. 2005)).

⁴ See e.g., *MetroPCS, Inc.*, 400 F.3d at 733; *Orange Ctny.-Poughkeepsie Ltd. P’ship v. Town of E. Fishkill*, 84 F. Supp. 3d 274, 297 (S.D.N.Y. 2015); *T-Mobile West Corp. v. City of Agoura Hills*, No. CV 09-9077 DSF (PJWx), 2010 WL 5313398, *8–*9 (C.D. Cal. Dec. 20, 2010); *MetroPCS New York, LLC v. Village of East Hills*, 764 F. Supp. 2d 441, 454–55 (E.D.N.Y. 2011); *T-Mobile Northeast LLC v. City of Lowell*, No. 11-11551-NMG, 2012 U.S. Dist. LEXIS 180210, *10 (D. Mass. Nov. 27 2012); *USCOC of New Hampshire RSA No. 2 v. Town of Dunbarton*, No. Civ.04–CV–304–JD, 2005 WL 906354, *2 (D.N.H. Apr. 20, 2005). Many courts also appear to simply bypass the issue altogether and dive straight into the least intrusive means issues. See, e.g., *American Tower Corp.*, 763 F.3d at 1056; *T-Mobile West Corp. v. City of Huntington Beach*, No. CV 10–2835 CAS (Ex), 2012 WL 4867775, *6 (C.D. Cal. Oct. 10, 2012).

⁵ See *American Tower Corp.*, 763 F.3d at 1056–1057.

⁶ See 47 U.S.C. § 332(c)(7)(B)(iv); see also 47 C.F.R. § 1.1307 *et seq.*; FCC Office of Engineering and Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, OET Bulletin 65, ed. 97-01 (1997).

⁷ See 47 U.S.C. § 332(c)(7)(B)(iv).

CORRESPONDENCE RECEIVED

One letter in support of the project request was received and is included as Attachment I.

ATTACHMENTS

- A. Resolution 2022-xx with Exhibit A Conditions of Approval
- B. Project Application & Description
- C. Project Plans
- D. Photo Simulations
- E. Noise Study
- F. Radiofrequency Study
- G. T-Mobile Planning Justification
- H. T-Mobile Height Exception
- I. Letter of Support

ATTACHMENT A
RESOLUTION APPROVING A USE PERMIT, VARIANCE AND DESIGN REVIEW FOR
T-MOBILE AT 602 W. 2nd ST. (EL CAMPANIL THEATER)
UP-22-02 & VAR-02-02
WITH EXHIBIT A CONDITIONS OF APPROVAL
(SEPARATE PAGE)

**CITY OF ANTIOCH PLANNING COMMISSION
RESOLUTION NO. 2022-xx**

**RESOLUTION OF THE CITY OF ANTIOCH PLANNING COMMISSION
APPROVING A USE PERMIT, VARIANCE, AND DESIGN REVIEW FOR A NEW T-MOBILE
ROOF-MOUNTED WIRELESS TELECOMMUNICATIONS FACILITY AT 602 W. 2nd STREET
(EL CAMPANIL THEATER)**

WHEREAS, the City of Antioch received a Use Permit and Variance request for a new roof mounted wireless facility at 602 W. 2nd Street (El Campanil Theater) on February 3, 2022 on behalf of T-Mobile;

WHEREAS, the application was deemed complete on April 14, 2022;

WHEREAS, the proposed scope includes two new 98 sq. ft. east and west facing roof enclosures containing a total of six (6) new panel antennas;

WHEREAS, the proposed facility is a macro installation and will provide stand-alone service for T-Mobile;

WHEREAS, the subject site is MU-Mixed Use and is located in the Downtown Specific Plan Area, which discourages but does not prohibit wireless facilities;

WHEREAS, a use permit is required for the operation and maintenance of the wireless facility;

WHEREAS, a variance is required to allow an exception to the height standards for the proposed wireless facility in the Downtown Specific Plan Area;

WHEREAS, the project is Categorically Exempt from the California Environmental Quality Act Guidelines (CEQA) pursuant to Section 15303, "New Construction or Conversion of Small Structures" of the CEQA Guidelines, which allows the construction small facilities or structures;

WHEREAS, a public hearing notice was published in the East County Times and posted in three public places pursuant to California Government Code Section 65090 on April 22, 2022 for the public hearing held on May 4, 2022; and

WHEREAS, the Planning Commission held a public hearing and considered all public comments received, the presentation by City staff, the staff report, and all other pertinent documents regarding the proposed request.

NOW, THEREFORE, THE CITY OF ANTIOCH PLANNING COMMISSION DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1

FINDINGS FOR APPROVAL PURSUANT TO SECTION 9-5.2703 (B) (1) "REQUIRED FINDINGS" FOR USE PERMITS OF THE ANTIOCH MUNICIPAL CODE:

- a. The granting of such use permit will not be detrimental to the public health or welfare or injurious to the property or improvements in such zone or vicinity.

Finding: The telecommunications site will not be detrimental to the public health or welfare or injurious to the property or improvements. The installation has been designed to match existing architectural details of the building and antennas will be camouflaged from public view. Ground-mounted equipment will be screened by fencing to mitigate visual impacts and secure equipment. In addition, the proposed facility demonstrates compliance with applicable Federal Communications Commission regulations for exposure to radio frequency emissions. The subject site will benefit public welfare by providing improved wireless services to the area, such as mobile telephone services, emergency 911 services, data transfer, electronic mail, internet and web browsing, as well as video streaming for T-Mobile customers.

- b. The use applied at the location indicated is properly one for which a use permit is authorized.

Finding: The site is zoned MU- Mixed Use and per the Municipal Code, telecommunications sites are allowed with a use permit approved by the Planning Commission.

- c. That the site for the proposed use is adequate in size and shape to accommodate such use, and all yards, fences, parking, loading, landscaping, and other features required, to other uses in the neighborhood.

Finding: The site is adequate in size and shape to accommodate a roof-mounted telecommunications facility. All buildings and site features are adequate for this use because the proposed use is an unattended wireless facility that will not require additional parking.

- d. That the site abuts streets and highways adequate in width and pavement type to carry the kind of traffic generated by the proposed use.

Finding: It is anticipated that the use, an unattended wireless facility, will generate very little traffic and would only result in the occasional maintenance of the equipment and the shelter. The site is located at 602 W. 2nd Street which is both adequate in width and pavement type to carry the traffic generated by the use.

- e. That the granting of such use permit will not adversely affect the comprehensive General Plan.

Finding: The use is considered a telecommunications site and will not adversely affect the comprehensive General Plan because the proposed facility meets the applicable standards in the Municipal Code and, as conditioned, will incorporate appropriate camouflaging and concealment elements that are compatible with immediate surrounding area.

SECTION 2

FINDINGS FOR APPROVAL PURSUANT TO SECTION 9-5.2703 (B) (2) "REQUIRED FINDINGS" FOR VARIANCES OF THE ANTIOCH MUNICIPAL CODE:

- a. That there are exceptional or extraordinary circumstances or conditions applicable to the property involved, or to the intended use of the property, that do not apply generally to the property or class of use in the same zone or vicinity;

Finding: The existing structure pre-dates current Zoning and Specific Plan regulations resulting in a non-conforming status with respect to height.

- b. That the granting of such variance will not be materially detrimental to the public health or welfare or injurious to the property or improvements in such zone or vicinity;

Finding: The proposed installation is proposed to be roof mounted and will have restricted access with limited visibility. Adverse impacts are not expected with this project request.

- c. That because of special circumstances applicable to the subject property, including size, shape, topography, location, or surroundings, the strict application of the zoning provisions is found to deprive the subject property of privileges enjoyed by other properties in the vicinity under the identical zone classifications;

Finding: A strict interpretation of the Zoning code would effectively prohibit any installation on the property due to the existing conditions including zero lot lines on the east, west, and south elevations as well as building height. Without an exception to height limit, the installation would be limited to the building exterior resulting in visual impacts and reduced cellular coverage.

- d. That the granting of such variance will not adversely affect the comprehensive General Plan.

Finding: The proposed variance does not conflict any General Plan policies.

SECTION 3

FINDINGS FOR APPROVAL PURSUANT TO THE ANTIOCH WIRELESS POLICY

a. **Required Findings for a Limited Exception.** The Planning Commission shall not grant any limited exception unless the applicant shows that:

- i. the proposed wireless facility qualifies as a “personal wireless service facility” as defined in 47 U.S.C. § 332(c)(7)(C)(ii), as may be amended or superseded; and

Finding: The proposed project scope qualifies as a “personal wireless service facility” as it will provide additional support for the use of personal wireless devices including voice and data coverage.

- ii. the applicant has provided the Planning Commission with a reasonable and clearly defined technical service objective to be achieved by the proposed wireless facility; and

Finding: The applicant has provided letter stating their need to establish improved wireless voice and data coverage in the Rivertown area of Antioch. (See Attachment B)

iii. the applicant has provided the Planning Commission with a written statement that contains a detailed and fact-specific explanation as to why the proposed wireless facility cannot be deployed in compliance with the applicable provisions in this policy; and

Finding: The applicant has provided a planning justification supplemental report (See Attachment G). The applicant has identified the entirety of Rivertown as a service area with a deficit of coverage. Locating outside of the Rivertown area would locate a new facility in close proximity to existing facilities and would result in reduced coverage for the area. The central location of the El Campanil Theater will provide expansive coverage.

iv. the applicant has provided the Planning Commission with a meaningful comparative analysis with the factual reasons why all alternative locations and/or designs identified in the administrative record (whether suggested by the applicant, the City, public comments or any other source) are not technically feasible or potentially available to reasonably achieve the applicant's reasonable and clearly defined technical service objective to be achieved by the proposed wireless facility; and

Finding: The applicant states in their justification (See Attachment H) that other buildings within the coverage area have insufficient height to achieve coverage in the Rivertown area. The height of the El Campanil Theater will result in coverage that will serve T-Mobile customers in the Rivertown area. In order to achieve broad coverage, the facility must be located at a higher height. The El Campanil building is 60 ft. tall

v. the applicant has demonstrated to the Planning Commission that the proposed location and design is the least non-compliant configuration that will reasonably achieve the applicant's reasonable and clearly defined technical service objective to be achieved by the proposed wireless facility, which includes without limitation a meaningful comparative analysis into multiple smaller or less intrusive wireless facilities dispersed throughout the intended service area.

Finding: T-Mobile has identified the service area to be the entirety of the Rivertown area which currently has limited service. The proposed location and roof-top installation provides the most expansive coverage due the building height and central location. The applicant has designed the proposed facility to be integrated into the existing architecture of the building by matching stucco materials and banding. Additionally, ground equipment is proposed to be screened and include mesh fencing.

NOW, THEREFORE, BE IT RESOLVED the Planning Commission of the City of Antioch, after reviewing the staff report and considering testimony hereby **APPROVES** the use permit (UP-22-03), variance (VAR-02-02) and design review allowing the construction of new a wireless telecommunications facility at 602 W. 2nd Street subject to Exhibit A Conditions of Approval.

I HEREBY CERTIFY that the foregoing resolution was passed and adopted by the Planning Commission of the City of Antioch at a regular meeting thereof held on the 1st day of June 2022.

AYES:

NOES:

ABSTAIN:

ABSENT:

**FORREST EBBS,
SECRETARY TO THE PLANNING COMMISSION**

EXHIBIT A: CONDITIONS OF APPROVAL: 602 W. 2nd St. (T-Mobile)

		<u>Regulation Source</u>	<u>Timing/ Implementation</u>	<u>Enforcement/ Monitoring</u>	<u>Verification</u> (date and Signature)
	General Conditions				
1.	Project Approval. This Use Permit, Variance and Design Review approval is for 602 W. 2 nd St. (APN 066-071-013), as substantially shown and described on the project plans, except as required to be modified by conditions herein. Plans date received March 24, 2022, as presented to the Planning Commission on May 4, 2022 ("Approval Date."). For any condition herein that requires preparation of a Final Plan where the project applicant has submitted a conceptual plan, the project applicant shall submit final plan(s) in substantial conformance with the conceptual plan, but incorporate the modifications required by the conditions herein for approval by the City.	City of Antioch	On-Going	Planning Department	
2.	Project Approval Expiration. This Use Permit approval expires on June 8, 2023 (one year from the date on which this approval becomes effective) or at an alternate time specified as a condition of approval, unless a building permit has been issued and construction diligently pursued. The approval may be renewed by the Community Development Director for a period up to an additional two (2) years, provided that, at least ten (10) days before expiration of one (1) year from the date when the approval becomes effective, an application for renewal of the approval is filed with the Community Development Department. The Community Development Director may grant a renewal of an approval where there is no change in the original application, or there is no request to change any condition of approval for up to two additional years from the expiration date.	City of Antioch	On-Going	Planning Department	

EXHIBIT A: CONDITIONS OF APPROVAL

		<u>Regulation Source</u>	<u>Timing/ Implementation</u>	<u>Enforcement/ Monitoring</u>	<u>Verification (date and Signature)</u>
3.	<p>City Fees. The applicant shall pay any and all City and other related fees applicable to the property, as may be modified by conditions herein. Fees shall be based on the current fee structure in effect at the time the relevant permits are secured and shall be paid before issuance of said permit or before any City Council final action approval. Notice shall be taken specifically of Plan Check, Engineering, Fire and Inspection Fees. The project applicant shall also reimburse the City for direct costs of planning; building and engineering plan check and inspection, as mutually agreed between the City and applicant.</p> <p><i>Discretionary or ministerial permits/approvals will not be considered if the developer is not current on fees, balances, and reimbursement that are outstanding and owed to the City.</i></p>	City of Antioch	On-Going	Community Development Department	
4.	<p>Appeals. Pursuant to Section 9-5.2509 of the Antioch Municipal Code, any decision made by the Planning Commission which would otherwise constitute final approval or denial may be appealed to the City Council. Such appeal shall be in writing and shall be filed with the City Clerk within five (5) working days after the decision. All appeals to the City Council from the Planning Commission shall be accompanied by a filing fee established by a resolution of the City Clerk.</p>	City of Antioch	Within 5 Days of Planning Commission Action	Planning Department	

EXHIBIT A: CONDITIONS OF APPROVAL

5.	Requirement for Building Permit. Approval granted by the Planning Commission does not constitute a building permit or authorization to begin any construction or demolish an existing structure. A building permit issued by the Community Development Department must be obtained before constructing, enlarging, moving, converting, or demolishing any building or structure within the City.	City of Antioch	On-Going	Building Department	
6.	Modifications to Approved Plans. The project shall be constructed as approved and with any additional changes required pursuant to the Zoning Administrator or Planning Commission Conditions of Approval. Planning staff may approve minor modifications in the project design, but not the permitted land uses. A change requiring discretionary approval and any other changes deemed appropriate by the Planning staff shall require further Planning Commission approval through the discretionary review process.	City of Antioch	On-Going	Planning Department	
7.	Hold Harmless Agreement/Indemnification. The applicant (including any agent thereof) shall defend, indemnify, and hold harmless, the City of Antioch and its agents, officers and employees, from any claim, action, or proceeding against the City or its agents, officers or employees to attack, set aside, void, or annul the City's approval concerning this application. The City will promptly notify the applicant of any such claim action or proceeding and cooperate fully in the defense.	City of Antioch	On-Going	Planning Department	

EXHIBIT A: CONDITIONS OF APPROVAL

		<u>Regulation Source</u>	<u>Timing/ Implementation</u>	<u>Enforcement/ Monitoring</u>	<u>Verification</u> (date and Signature)
	Operational Conditions				
8.	Debris Removal. The site shall be kept clean of all debris (boxes, junk, garbage, etc.) at all times.	City of Antioch	On-Going	Community Development Department	
9.	Prohibited Signage. Illegal signs, banners, balloons, flags, or streamers are prohibited on-site at any time.	City of Antioch	On-Going	Community Development Department	
10.	Requirements for Signage. No signs shall be installed on site without prior to City approval.	City of Antioch	On-Going	Community Development Department	
11.	Restricted Site Access. The applicant shall keep all access points to the equipment enclosure locked at all times, except when active maintenance is performed.	City of Antioch	On-Going	Community Development Department	
12.	RF Signage. The applicant shall install and at all times maintain in good condition an "RF Notice" sign and a network operations center sign adjacent to all access points of the equipment enclosure. The signs required in this condition must be placed in a location where they are clearly visible to a person approaching the access point(s) whether in the open or closed positions.	City of Antioch	On-Going	Community Development Department	
13.	Requirements for RF Signage. The permittee shall ensure that all signage complies with FCC OET Bulletin 65 and ANSI C95.2 for color, symbol, and content conventions. All such signage shall	City of Antioch	On-Going	Community Development Department	

EXHIBIT A: CONDITIONS OF APPROVAL

	at all times provide a working local or toll-free telephone number to its network operations center, and such telephone number shall be able to reach a live person who can exert transmitter shut-down control over this site as required by the FCC.				
	Fire Standards				
14.	<p>The applicant shall comply with the following conditions provided by the Contra Costa County Fire Protection District:</p> <p>a. The applicant shall submit two (2) complete sets of building plans and specifications to the Fire District for review and approval prior to installation. Plan review and inspection fees shall be submitted at the time of plan review submittal.</p> <p>b. Submit plans to: Contra Costa Fire Protection District 2010 Geary Rd. Pleasant Hill, CA 94523</p>	Contra Costa Fire Protection District	Timing Required	Contra Costa Fire Protection District	

EXHIBIT A: CONDITIONS OF APPROVAL

		<u>Regulation Source</u>	<u>Timing/ Implementation</u>	<u>Enforcement/ Monitoring</u>	<u>Verification</u> (date and Signature)
	At the Time of Building Permit Issuance				
15.	Demolition Permit. Site demolition shall not occur until construction permits are issued for the development project. All demolition shall be in accordance with permits issued by the City and Bay Area Air Quality Management District (BAAQMD).	City of Antioch	At the time of Building Permit Issuance	Community Development Department	
16.	Encroachment Permit. The applicant shall obtain an encroachment permit from the Engineering Division before commencing any construction activities within any public right-of-way or easement.	City of Antioch	At the time of Building Permit Issuance	Community Development Department	

EXHIBIT A: CONDITIONS OF APPROVAL

		<u>Regulation Source</u>	<u>Timing/ Implementation</u>	<u>Enforcement/ Monitoring</u>	<u>Verification</u> (date and Signature)
	At the Time of Construction				
16.	Collection of Construction Debris. Gather all construction debris on a regular basis and place them in a Waste Management dumpster or other container that is emptied or removed on a weekly basis consistent with the Construction and Demolition Debris Ordinance. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.	City of Antioch	On-Going	Building Department	
17.	Construction Hours. Construction activity shall be as outlined in in the Antioch Municipal Code. Construction activity is limited to 8:00 AM to 5:00 PM Monday-Friday or as approved in writing by the City Manager. Requests for alternative construction hours shall be submitted in writing to the City Engineer. days/times restricted to the hours of 8:00 a.m. to 6:00 p.m.	City of Antioch	On-Going	Building Department/ Public Works Department	
18.	Demolition, Debris, Recycling. The project shall be in compliance with and supply all the necessary documentation for Antioch Municipal Code § 6-3.2: Construction and Demolition Debris Recycling.	City of Antioch	On-Going	Building Department/ Public Works Department	
19.	Dust Control. Standard dust control methods and designs shall be used to stabilize the dust generated by construction activities. The developer shall post dust control signage with a contact number of the developer, City staff, and the air quality control board.	City of Antioch	On-Going	Building Department/ Public Works Department	

EXHIBIT A: CONDITIONS OF APPROVAL

	Prior to Issuance of Occupancy Permit	<u>Regulation Source</u>	<u>Timing/ Implementation</u>	<u>Enforcement /Monitoring</u>	<u>Verification</u> (date and Signature)
53.	Planning Inspection. Planning staff shall conduct a site visit to review exterior building elevations for architectural consistency with the approved plans and landscape installation (if required). All exterior finishing details including window trim, paint, gutters, downspouts, decking, guardrails, and driveway installation shall be in place prior to scheduling the final inspection.	City of Antioch	Prior to Occupancy Permit	Planning Department	
54.	Debris Removal. All mud, dirt or construction debris carried off the construction site and shall be removed prior to scheduling the final Planning inspection. No materials shall be discharged onto a sidewalk, street, gutter, storm drain or creek.	City of Antioch	Prior to Occupancy Permit	Building Department	
55.	Fire Prevention. A final Fire inspection shall occur to inspect all fire prevention systems constructed as part of the project. Inspections shall occur prior to final occupancy permit issuance.	Contra Costa Fire District	Prior to Occupancy Permit	Fire Department	

ATTACHMENT B
PROJECT APPLICATION & DESCRIPTION
(SEPARATE PAGE)

**CITY OF ANTIOCH
DEVELOPMENT APPLICATION**

Site Location	602 W 2nd Street
Assessor's Parcel No. (s)	066071013
Total Acreage	0.28 (deeded), 0.25 (calculated)
Brief Description of Request: To improve cellular service in the downtown area by constructing a rooftop wireless facility at El Campanil Theatre.	

PROPERTY OWNER OF RECORD	
Name	El Campanil Theatre
Company Name	El Campanil Theatre Preservation Foundation
Address 602 W 2nd Street Antioch, CA 94509	
Phone #	(925) 757-9500
Email	admin@elcampaniltheatre.com
Signature	

APPLICANT	
Name	Cara Todd
Company Name	T-Mobile c/o The CBR Group, Inc.
Address 2840 Howe Rd., Suite E Martinez, CA 94553	
Phone #	(614) 769-5019
Email	Cara@thecbrgroup.com
Signature <i>Cara Todd</i>	

AGENT/DESIGNER

**CITY OF ANTIOCH
DEVELOPMENT APPLICATION**



Name	
Company Name	The CBR Group, Inc.
Address	2840 Howe Rd., Suite E Martinez, CA 94553
Phone #	(614) 769-5019
Email	Cara@thecbrgroup.com
Signature	

ANY OTHER PERSON THAT YOU WOULD LIKE THE CITY TO NOTIFY OF THE PUBLIC HEARING	
Name	
Company Name	
Address	
Phone #	
Email	
Signature	

FOR OFFICE USE ONLY T-Mobile c/o The CBR Group, Inc.	
Date Received:	File No.:
Title:	Account No.:
Type of Application	Notes:

PLEASE SIGN AND RETURN WITH YOUR APPLICATION

STATEMENT OF UNDERSTANDING

In signing this Statement of Understanding in conjunction with the attached application to the City of Antioch, Department of Community Development for Project:

BA91629A - 602 W 2nd Street

I understand that charges for materials and staff time spent processing this application will be billed monthly and is based on an hourly rate as identified in the current fiscal year fee schedule. Application processing includes but is not limited to plan checking and processing, meetings, phone calls, research, e-mail, and staff report preparation. Further, I understand that my initial deposit is not a fee and actual charges may be in excess of the deposit. The deposit will be returned to me at the conclusion of the process after all invoices have been paid. If invoices are not paid on a monthly basis, processing will be terminated until all past due amounts have been paid. Failure to pay invoices on a monthly basis may also result in an application being deemed incomplete; postponement of hearings or meetings; and/or inability to obtain a building permit.

I assume full responsibility for all costs incurred by the City in processing this application.

Further, I understand that approval of my project is NOT guaranteed and may be denied. In the case of a denial, I understand that I am still responsible for all costs incurred by the City in processing this application.

I hereby authorize employees, officials and agents of the City of Antioch to enter upon the subject property, as necessary, to inspect the premises and process this application.

DATE: 1/31/2022

NAME: CBK Group

SIGNATURE: Coverdale

.....
Property owner signature for authorization to enter property and process the application. This is required only if the applicant is not the property owner.

DATE: _____

NAME: _____

SIGNATURE: _____



January 31, 2022

REVISED

City of Antioch
Planning Division
200 H Street
Antioch, CA 94531

RE: T-Mobile Wireless "BA91629A" Permit Application for a New Wireless Facility
Coordinates: 38.01736200, -121.81399500,
Address: 602 West 2nd Street, Antioch, CA 94509
APN: 066071013

Dear Planning Division:

On behalf of T-Mobile Wireless, this letter provides information and an enhanced description to support the application's request for Planning Approval to install a wireless facility located on an existing rooftop at the referenced location.

The following is a detailed **Project Description** of the facility design, the project's purpose, and justifications to find support of the application.

Project Purpose:

The purpose of this project is to provide improved wireless voice and data coverage to the surrounding area. These wireless services include mobile telephone, wireless broadband, emergency 911, data transfers, electronic mail, Internet, web browsing, wireless applications, wireless mapping, and video streaming.

Location:

T-Mobile Wireless is proposing to install a wireless facility on an existing rooftop located at 38.01736200, -121.81399500, 602 West 2nd Street, Antioch, CA 94509. The APN is 066071013.

T-Mobile Wireless is the applicant and has approval with the property owner to locate on the existing rooftop (see attached LOA), allowing T-Mobile Wireless to apply for development review and other applicable planning or building permits.

Scope Of Work

ANTENNA AREA:

1. INSTALL (6)(N) ANTENNAS BEHIND (N) FRP SCREEN. PAINT TO MATCH.
2. INSTALL (6)(N) RADIOS BEHIND (N) FRP SCREEN. PAINT TO MATCH.

EQUIPMENT AREA:

3. INSTALL (1)(N) 6160 CABINET
4. INSTALL (3)(N) BASEBANDS INSIDE 6160 CABINET
5. INSTALL (1)(N) 6601 UNIT INSIDE 6160 CABINET
6. INSTALL (1)(N) BASEBAND INSIDE 6601 UNIT
7. INSTALL (1)(N) B160 CABINET
8. INSTALL (1)(N) PSU
9. INSTALL (1)(N) IXRE ROUTER
10. INSTALL (1)(N) SAR M ROUTER
11. INSTALL (24)(N) COAX CABLES
12. INSTALL (2)(N) HYBRID CABLE SYSTEM (HCS)
13. INSTALL (N) CABLE TRAY

The CBR Group Inc.
2840 Howe Rd. Suite E
Martinez, CA. 94553



Antennas/Radios:

There are six antennas proposed for this project. T-Mobile antenna AIR6449 B41 (3) is rectangle in shape, and measures 96" inches tall, 24" inches wide and 8.5" inches deep. T-Mobile antenna APXVALL24_43-U-NA20 (3) is rectangle in shape, and measures 33.1" inches tall, 20.6" inches wide and 8.3" inches deep. The antennas will have a RAD center of 64' feet above ground level. These units serve to run the equipment that interfaces with the T-Mobile Wireless communications network. The drawings and photographic simulations included with this application depict the design and its appearance.

Justification:

As the community's demands for data area are increasing exponentially, we are required to go more closely into the areas where people use their phones, such as neighborhoods, urban and downtown areas, and commercial complexes. Centrally located sites provide the best capacity for the most people in each community.

This site will increase the bandwidth needed to access data-rich applications like video and internet streaming, uploading, and downloading photos and video, applications in the area to serve existing customers, and future wireless needs.

Construction:

Once all required permits are received, the licensed General Contractor will pick up the permit(s) and ensure that the City's Municipal Code requirements for construction are met. Construction will take about a week with minimal disruption to the area.

Maintenance and Monitoring:

After the site construction is complete and the installation is operational, the installation will be an unmanned facility that requires occasional maintenance, about once a month or less, unless the equipment needs repair. All repair and installation work will comply with the City Development Services Department Requirements for conducting work on private property. Also, all non-emergency work may be done during non-peak traffic hours to alleviate traffic congestion.

Safety Standards:

Please note that the Federal Communications Commission (FCC) sets safety guidelines for wireless facilities and due to the location of this type of installation, the emission from this equipment is a small fraction of FCC permitted levels in any publicly accessible area. See FCC website for additional information at: <http://www.fcc.gov/oet/rfsafety/rf-faqs.html>. Included with our submittal is documentation from a 3rd party engineer stating how the proposed facility will comply with the FCC safety standards.

In conclusion, based on review of the above information and supporting documents included with our application, it is our hope we have provided substantial information to respectfully request The City of Antioch's Planning support of the Project thereby recommend application approval. The City of Antioch's Planning approval will enhance T-Mobile's Wireless service in the area that will better serve The City of Antioch's Planning residences, visitors, and the emergency service providers who rely on the T-Mobile Wireless network.

If you have questions, please feel free to contact me at (614) 769-5019 or Cara@theCBRgroup.com.

Sincerely,
The CBR Group, Inc.

Cara Todd

As Site Acquisition Manager for The CBR Group, Inc.
(Authorized Agent for T-Mobile Wireless)

The CBR Group Inc.
2840 Howe Rd. Suite E
Martinez, CA. 94553

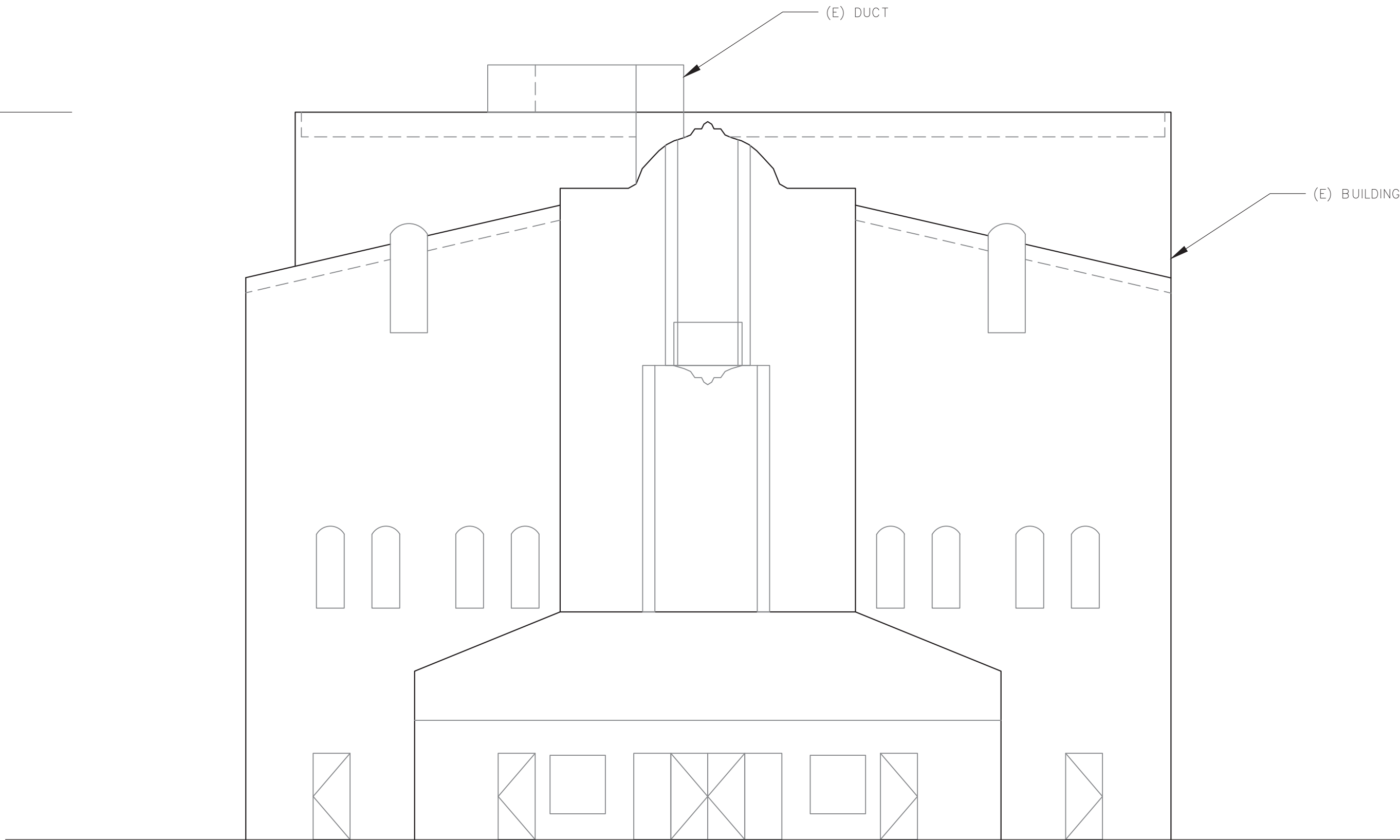
**ATTACHMENT C
PROJECT PLANS
(SEPARATE PAGE)**

[illegible]

E	03/21/2022	2ND PCC	ALR
D	03/04/2022	PLAN CHECK COMMENTS	ALR
C	01/21/2022	100%ZDs FOR REVIEW	JD
B	01/18/2022	100%ZDs FOR REVIEW	ALR
A	11/23/2021	90% ZDs FOR REVIEW	TK/ALR
REV	DATE	DESCRIPTION	BY

TOP OF (E) BUILDING
59'-0" A.G.L.

GROUND LEVEL
0'-0" A.G.L.



SCALE: 1/8" = 1'-0"
0' 4' 8' 16' 24'

1 EXISTING ELEVATION (SOUTH)

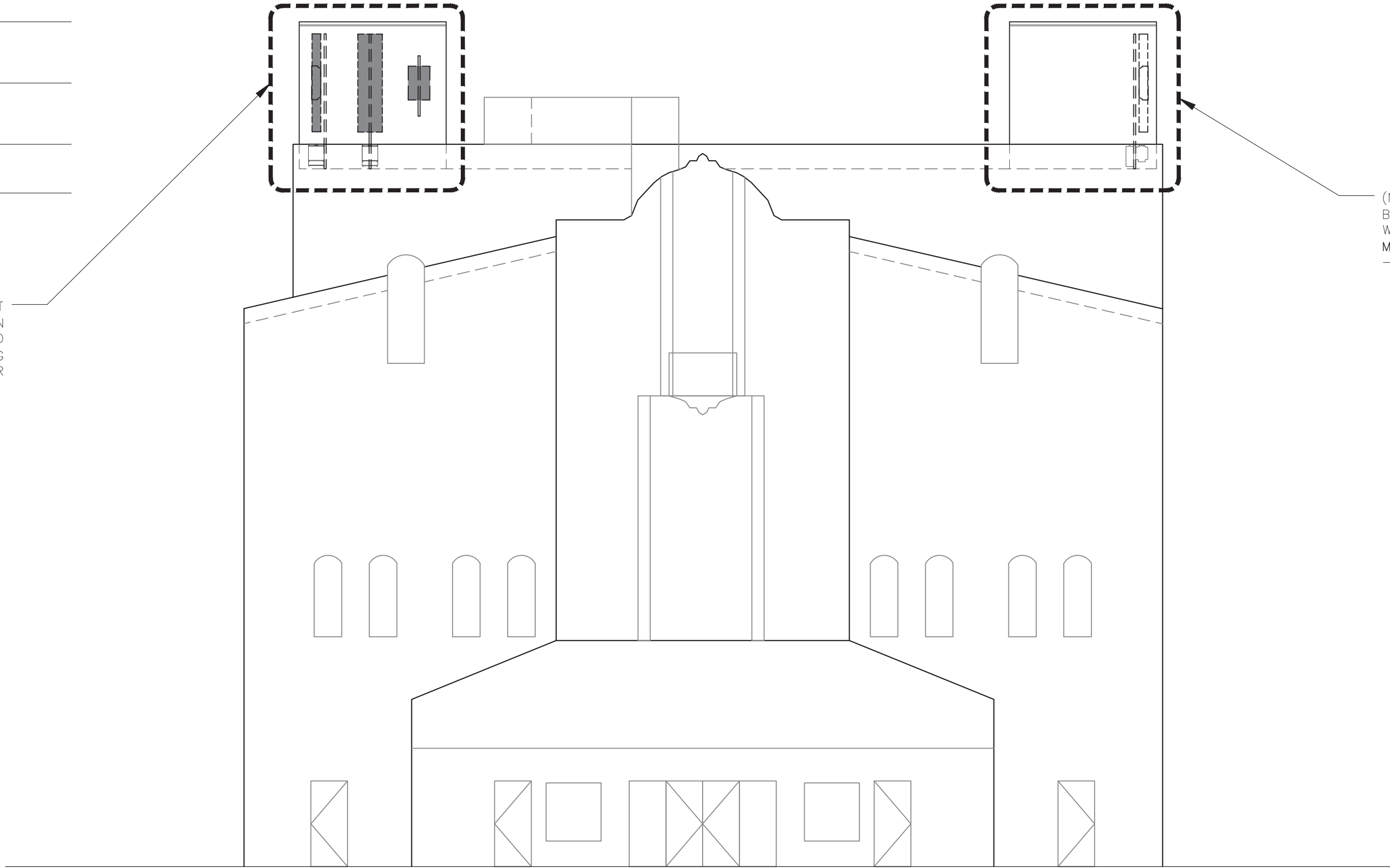
TOP OF (N) FRP SCREEN
±69'-0" A.G.L.

RAD CENTER OF (N) ANTENNA
±64'-0" A.G.L.

TOP OF (E) BUILDING
59'-0" A.G.L.

RAD CENTER OF (N) ANTENNA
±55'-0" A.G.L.

(N) T-MOBILE ANTENNAS AND EQUIPMENT
BEHIND (N) FRP SCREEN
WITH DECORATIVE TRIM PAINTED RED
MOUNTED ON (E) BUILDING
- GAMMA & BETA SECTOR



NOTE/S:
1. FRP SCREEN PAINTED TO MATCH BUILDING

SCALE: 1/8" = 1'-0"
0' 4' 8' 16' 24'

2 PROPOSED ELEVATION (SOUTH)

GROUND LEVEL
0'-0" A.G.L.

Prepared For:

T-Mobile
1855 GATEWAY BLVD. 9TH FLOOR
CONCORD, CA 94520

Engineer:

THE CBR GROUP
2840 HOWE ROAD, SUITE E
MARTINEZ, CA 94553
www.TheCBRGroup.com

T-Mobile ID:

BA91629A

Site Name:

BA91629A - NSB

Site Address:

602 W 2ND STREET
ANTIOCH, CA 94509

Issued For:

ZONING

E	03/21/2022	2ND PCC	ALR
D	03/04/2022	PLAN CHECK COMMENTS	ALR
C	01/21/2022	100%ZDs FOR REVIEW	JD
B	01/18/2022	100%ZDs FOR REVIEW	ALR
A	11/23/2021	90% ZDs FOR REVIEW	TK/ALR
REV	DATE	DESCRIPTION	BY

Jurisdiction:

IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER, TO
ALTER THIS DOCUMENT.

Licensors:

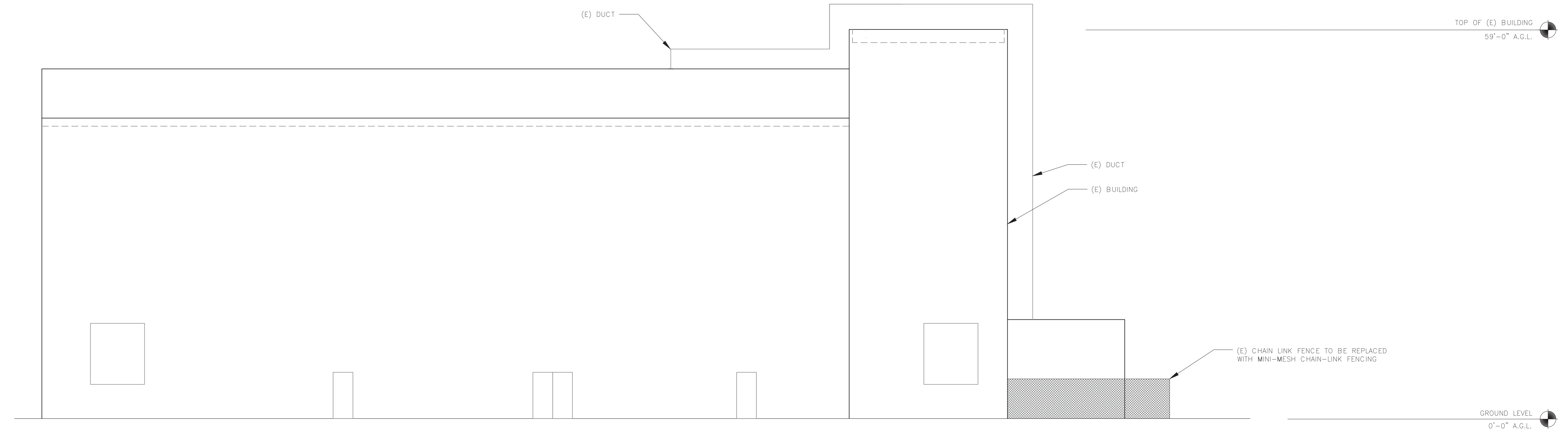
IT IS A VIOLATION OF LAW FOR ANY PERSON,
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ALTER THIS DOCUMENT.

Sheet Title:

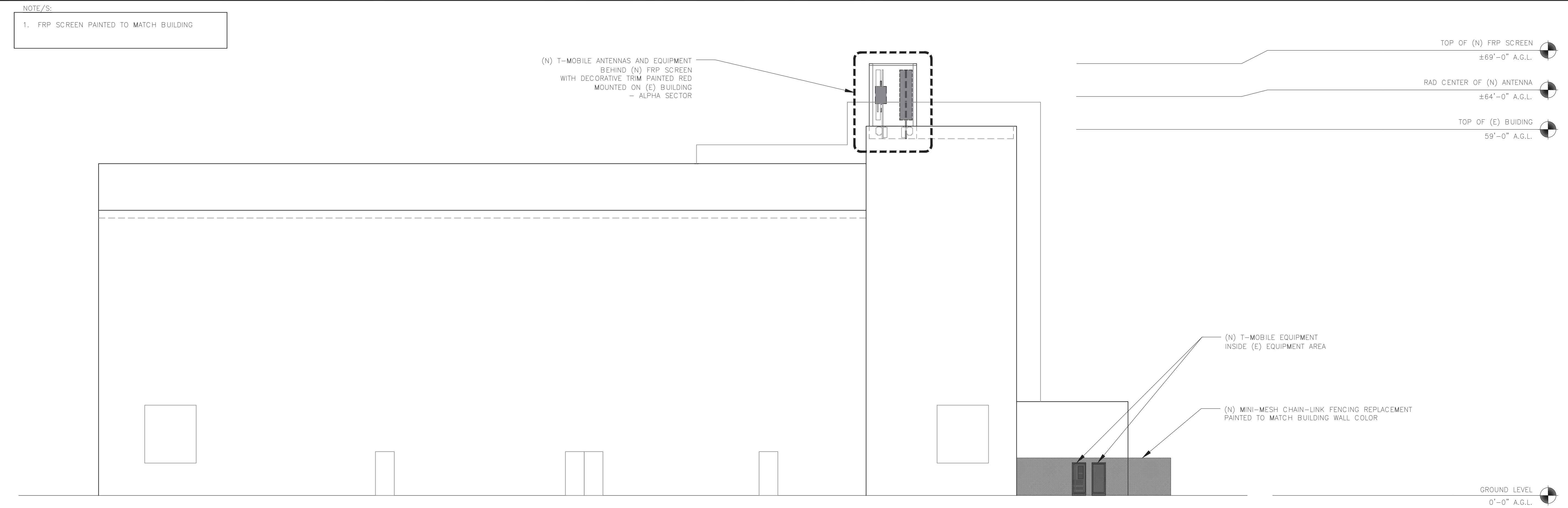
EXISTING AND PROPOSED
ELEVATIONS (SOUTH)

Sheet Number:

A-2



1 EXISTING ELEVATION (EAST)



2 PROPOSED ELEVATION (EAST)

Prepared For:

T-Mobile

1855 GATEWAY BLVD. 9TH FLOOR
CONCORD, CA 94520

Engineer:

THE CBR GROUP

2840 HOWE ROAD, SUITE E
MARTINEZ, CA 94553
www.TheCBRGroup.com

T-Mobile ID:
BA91629A

Site Name:
BA91629A - NSB

Site Address:
**602 W 2ND STREET
ANTIOCH, CA 94509**

Issued For:
ZONING

E	03/21/2022	2ND PCC	ALR
D	03/04/2022	PLAN CHECK COMMENTS	ALR
C	01/21/2022	100%ZDs FOR REVIEW	JD
B	01/18/2022	100%ZDs FOR REVIEW	ALR
A	11/23/2021	90% ZDs FOR REVIEW	TK/ALR
REV	DATE	DESCRIPTION	BY

Jurisdiction:

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Licensors:

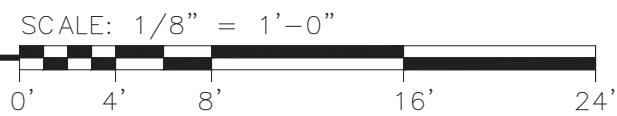
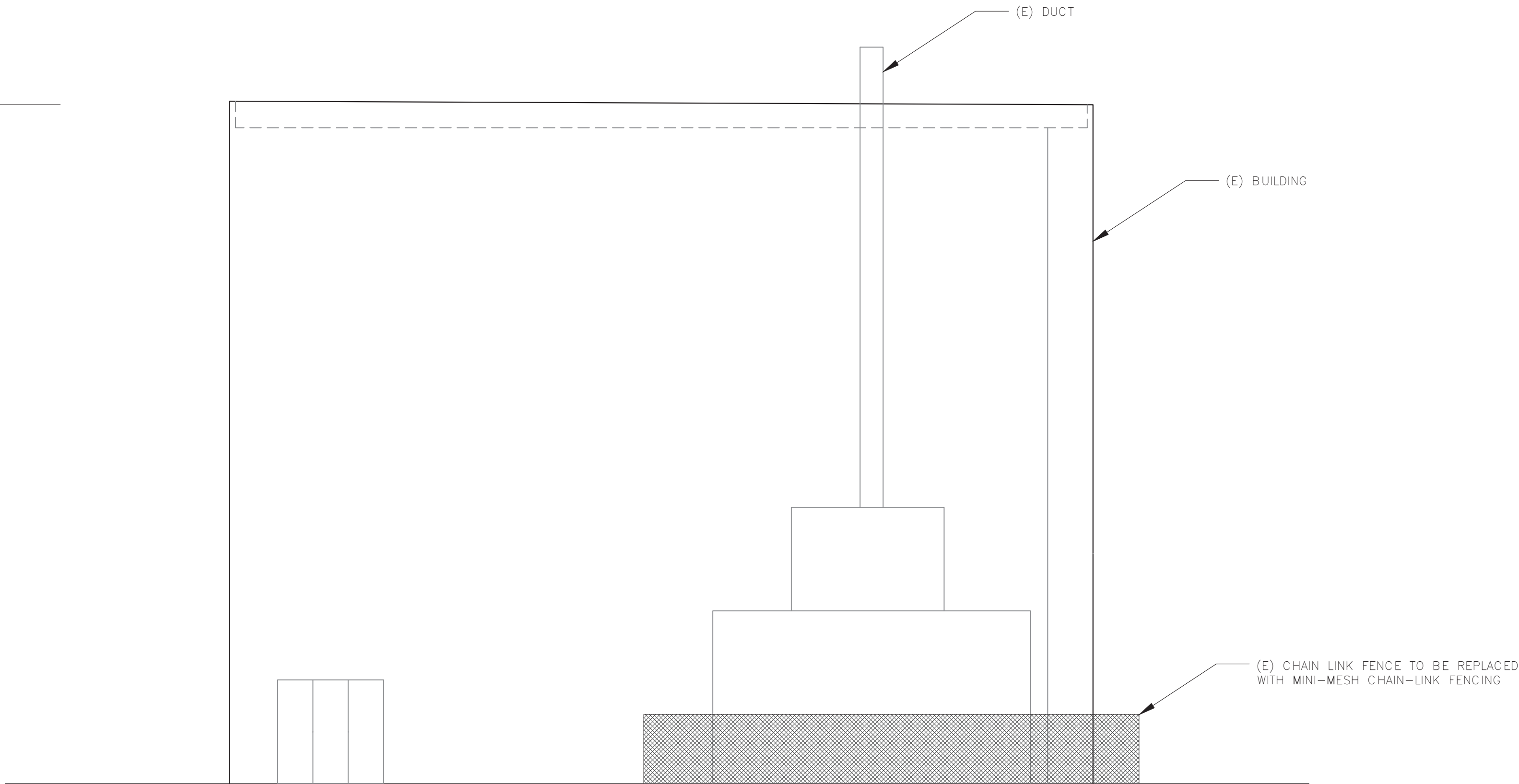
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

Sheet Title:
**EXISTING AND PROPOSED
ELEVATIONS (EAST)**

Sheet Number:
A-2.1

TOP OF (E) BUILDING
59'-0" A.G.L.

GROUND LEVEL
0'-0" A.G.L.



1

EXISTING ELEVATION (NORTH)

TOP OF (N) FRP SCREEN
±69'-0" A.G.L.

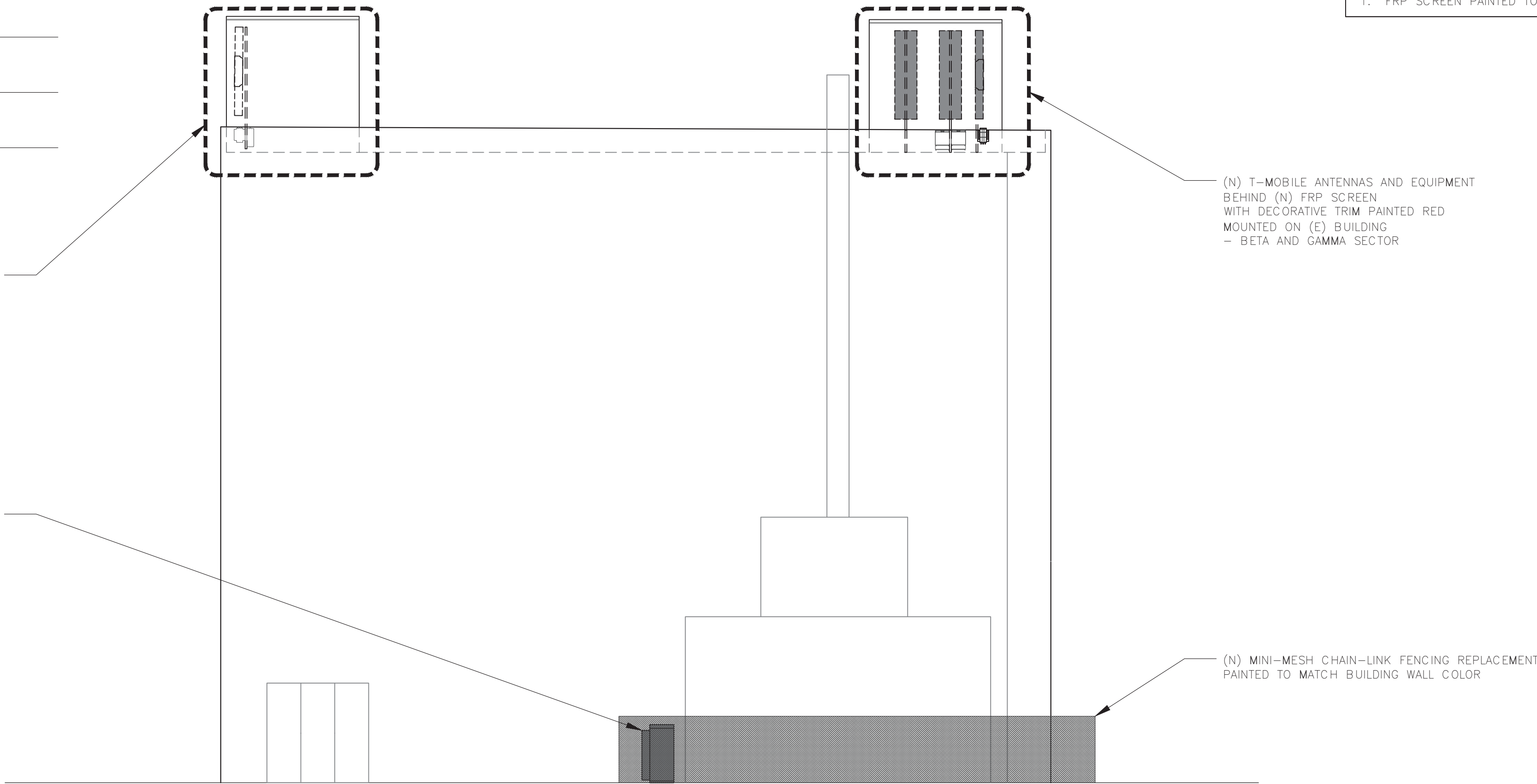
RAD CENTER OF (N) ANTENNA
±64'-0" A.G.L.

TOP OF (E) BUILDING
59'-0" A.G.L.

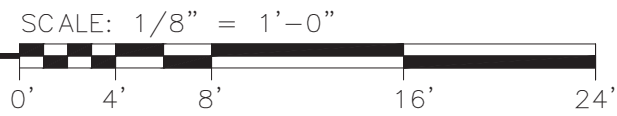
GROUND LEVEL
0'-0" A.G.L.

(N) T-MOBILE ANTENNAS AND EQUIPMENT
BEHIND (N) FRP SCREEN
WITH DECORATIVE TRIM PAINTED RED
MOUNTED ON (E) BUILDING
- ALPHA SECTOR

(N) T-MOBILE EQUIPMENT
INSIDE (E) EQUIPMENT AREA



NOTE/S:
1. FRP SCREEN PAINTED TO MATCH BUILDING



2

PROPOSED ELEVATION (NORTH)

Prepared For:

T-Mobile
1855 GATEWAY BLVD. 9TH FLOOR
CONCORD, CA 94520

Engineer:

THE CBR GROUP
2840 HOWE ROAD, SUITE E
MARTINEZ, CA 94553
www.TheCBRGroup.com

T-Mobile ID:
BA91629A

Site Name:
BA91629A - NSB

Site Address:
602 W 2ND STREET
ANTIOCH, CA 94509

Issued For:

ZONING

E	03/21/2022	2ND PCC	ALR
D	03/04/2022	PLAN CHECK COMMENTS	ALR
C	01/21/2022	100%ZDs FOR REVIEW	JD
B	01/18/2022	100%ZDs FOR REVIEW	ALR
A	11/23/2021	90% ZDs FOR REVIEW	TK/ALR
REV	DATE	DESCRIPTION	BY

Jurisdiction:

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ALTER THIS DOCUMENT.

Licensors:

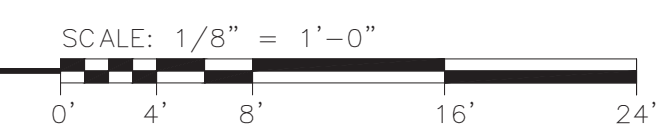
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OF A LICENSED PROFESSIONAL ENGINEER, TO
ALTER THIS DOCUMENT.

Sheet Title:

EXISTING AND PROPOSED
ELEVATIONS (NORTH)

Sheet Number:

A-3



SCALE: $1/8" = 1'-0"$

A horizontal scale bar with alternating black and white segments. Below the bar, tick marks are labeled 0', 4', 8', 16', and 24'.

A-3.1

**ATTACHMENT D
PHOTO SIMULATIONS
(SEPARATE PAGE)**

SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

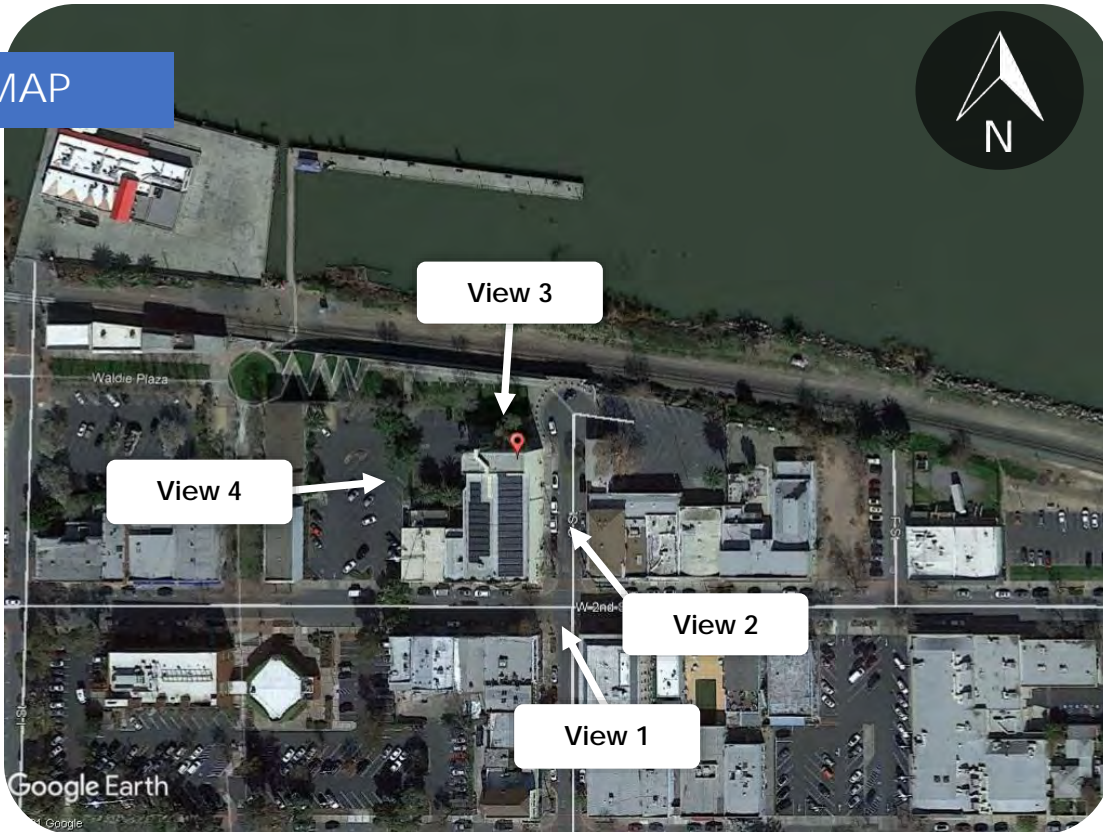
Site Coordinates 38.017362, -121.813995



PROPOSED SITE LOCATION

BA91629 - NSB

GOOGLE MAP



SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



EXISTING

ALPHA SECTOR



PROPOSED

T-MOBILE ANTENNAS AND EQUIPMENT
BEHIND FRP SCREEN MOUNTED ON
ROOFTOP ON ALPHA SECTOR



View 1: Looking northwest along G St. | Photosim produced 03/18/2022

SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



EXISTING

ALPHA SECTOR



PROPOSED

T-MOBILE ANTENNAS AND EQUIPMENT
BEHIND FRP SCREEN MOUNTED ON
ROOFTOP ON ALPHA SECTOR



View 2: Looking northwest along G St. | Photosim produced 03/18/2022

SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



EXISTING



PROPOSED



View 3: Looking south from behind building | Photosim produced 03/18/2022

SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



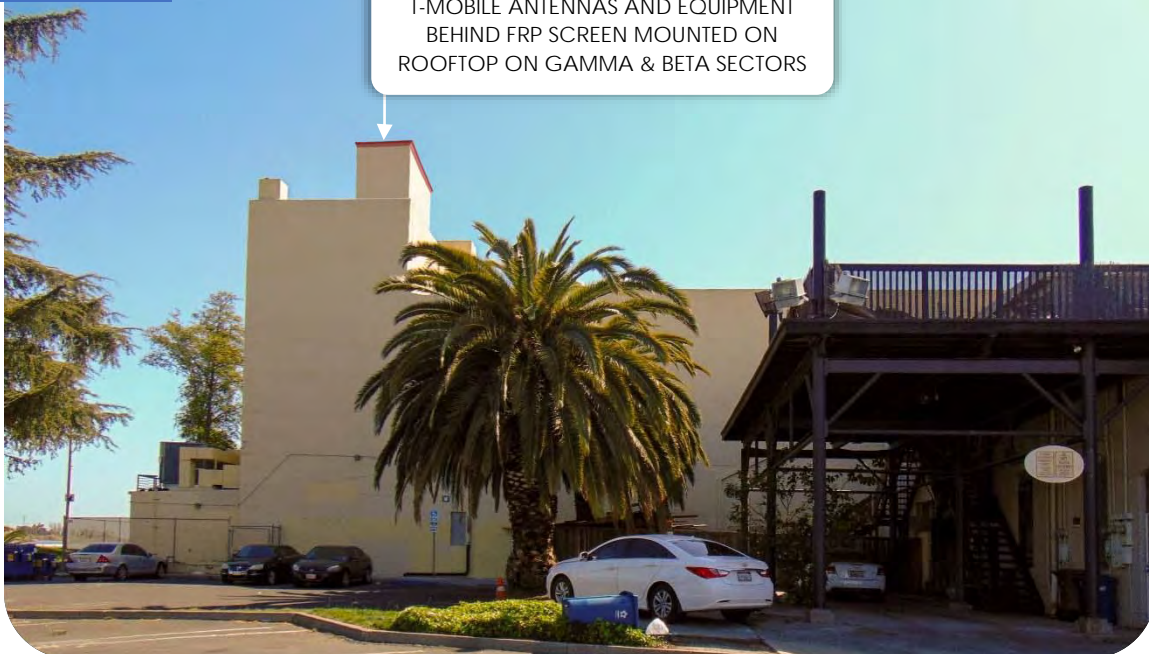
EXISTING

GAMMA SECTOR



PROPOSED

T-MOBILE ANTENNAS AND EQUIPMENT
BEHIND FRP SCREEN MOUNTED ON
ROOFTOP ON GAMMA & BETA SECTORS



View 4: Looking east across parking lot | Photosim produced 03/18/2022

**ATTACHMENT E
NOISE STUDY
(SEPARATE PAGE)**



ENVIRONMENTAL NOISE SAFETY COMPLIANCE REPORT

March 1, 2022

Purpose of Report:

Soteria RF Safety Consultants has been contracted as an independent/third party consultant to provide an Environmental Noise Safety Compliance Report to determine if the proposed wireless site listed below complies with exterior noise limits for wireless communication facilities as per local/municipal/jurisdiction code(s). This report summarizes:

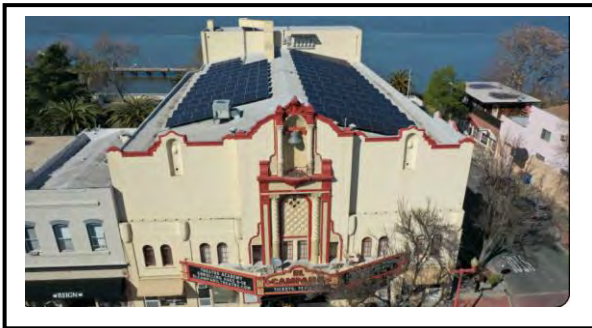
Front Page – Site Info / Compliance Statement	Section 3.0 – Calculation Methodology
Section 1.0 – Proposed Design	Section 4.0 – Results & Conclusions
Section 2.0 – Noise Standards & Guidelines	Section 5.0 – Recommended Mitigations

Wireless Site Info:

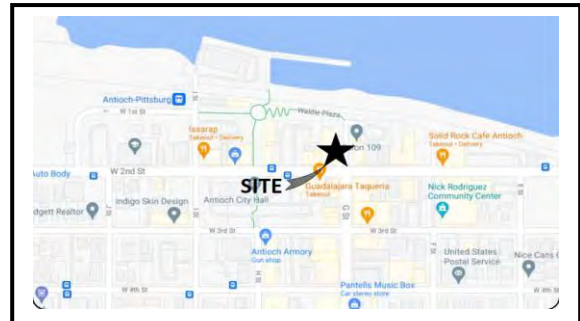
Carrier/Project: T-Mobile
Site ID: BA91629A-NSB
Structure Type: ROOFTOP
Pole ID: n/a

Address: 602 W. 2nd Street
Antioch, CA 94509
Latitude: 38.017362
Longitude: -121.813995

(Proposed Wireless Site – Photosim)



(Proposed Wireless Site Location – Google Maps)



Report Certification:

I have reviewed and approve of the following report and believe it to be true and accurate to the best of my knowledge.

Name: Wade M. Hojeij
Credential: Registered Professional Engineer
CA Registration No: E-16587
Expiration Date: 06/30/2022



COMPLIANCE STATEMENT

Based on location, proposed design, equipment type(s), and operational parameters given to Soteria RF Safety Consultants, along with accepted predictive acoustic modeling calculations and using worst-case scenario (operating 24x7x365/max power), the following wireless site:

BA91629A / BA91629-NSB

WILL COMPLY

with the City of Antioch Noise Standards - Ordinance 11.6.1.

No mitigation is required.

Section 1.0 – Proposed Design

The following proposed design equipment table is based upon construction drawings and radio frequency data sheet (RFDS) information received from the client.

Equipment Type	Manufacturer	Model Number	Qty	Reference Distance, Meters	Reference Distance, Feet	Equipment Noise Level (dBA)
radio/Antenna (roof)	Ericsson	4460	3	n/a	n/a	0
radio/Antenna (roof)	Ericsson	4480	3	n/a	n/a	0
Radio/Antenna (roof)	Ericsson	AIR6449	3	1	3.28	28
Antenna (roof)	RFS	APXVAALL24_43-U-NA20	3	n/a	n/a	0
Cabinet (fenced area)	Ericsson	6160	1	1	3.28	68
Cabinet (fenced area)	Ericsson	B160	1	1	3.28	68

Section 2.0 – Noise Standards & Guidelines

Noise is measured in decibels (dB), which are units of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level measured in dB. The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. To account for this variation, the A-weighted scale is used. A-weighting is a method of frequency weighting to account for the variation in sensitivity of the human ear to the range of frequencies of the audible spectrum. A 3-dBA increase is the smallest change in noise level perceptible to the average person.

Many standards provide guidance on the measurement, prediction, and limits of the noise level. These standards are used by local jurisdictions (counties and cities) to create their own noise level limits for the general public exposure. The two most commonly referenced federal agencies that have applicable standards for occupational or general public settings are the National Institute for Occupational Safety and Health (NIOSH) and the Environmental Protection Agency (EPA), respectively. There are also other noise limit standards published by the American National Standards Institute (ANSI); International Organization for Standardization (ISO), and the Institute of Electrical and Electronics Engineers (IEEE). (For additional information, see Appendix B)

Section 2.1 – Local Jurisdiction Governing Standard:

Ordinance 11.6.1 – Noise Standard.

- a. No person shall operate or cause to be operated any source of sound at any location within the city, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured on any receiving property to exceed the following noise level limits: Single Family: 60 dBA CNEL within rear yards - Multi-Family: 60 dBA CNEL within interior open space

Section 3.0 – Calculation Methodology

The following calculation methodology was used to determine the Community Noise Equivalent Level (CNEL) which represents the average equivalent sound level over a 24-hour period, with a penalty added for noise during the evening time 1900-2200 (5dB) and nighttime 2200-0700 (10dB). During the evening and nighttime periods, a 5 and 10dB penalties are added to reflect the impact of the noise. Equation (2) is used to calculate a known and/or measured noise level at various distances and Equation (3) is used to calculate a known and/or measured noise level from multiple sources.

Equation (1) – Community Noise Equivalent Level (CNEL):

The following equation calculates the equivalent noise level for a 24-hour period.

$$\text{CNEL} = 10 \log ((H_d(10^{L_d/10})/24 + H_e(10^{(L_e+5)/10})/24 + H_n(10^{(L_n+10)/10})/24)$$

Where: CNEL is community noise equivalent level

L_d is day noise level

L_e is evening noise level

L_n is night noise level

H_d is the hours of day

H_e is the hours of evening

H_n is the hours of night

Equation (2) – Prediction of noise level based on a given or measured noise level

The following equation calculates the noise level at various distances based on a known and/or measured noise level.

$$L_c = L_g + 20 \log (D_g/D_n)$$

Where: L_c is the calculated noise level based on measured or known

L_g is the measured or known noise level

D_n is the distance used to calculate new noise level

D_g is the measured or known distance for a known noise level

Equation (3) – Noise levels from multiple sources

The following equation calculates the noise level from multiple sources

$$L_T = 10 \log (10^{(L_1/10)} + 10^{(L_2/10)} + 10^{(L_3/10)} + \dots)$$

Where: L_T is the total noise level

L_1, L_2, L_3 , are the individual noise levels from different sources

Section 4.0 – Results & Conclusion

- **Results** – Table 1 - Calculated Noise Level Limits and Applicable Limits represents the community noise equivalent level limit (CNEL) from the proposed equipment operating under “worst-case” scenario (max facility/operational utilization) and is derived by using the calculation methodology, described in Section 3.0, and incorporates other parameters such as the City’s noise regulations and equipment manufacturer specifications.

Table 1 – Calculated Noise Level Limits and Applicable Limits

Calculated Noise Level	Distance from the Source (feet)	Noise Level Limit in dBA using CNEL formula	Compliant with City’s Noise Regulations
Proposed Design / Section 1.0. Roof equipment, i.e. radios and antennas	10	28.02 CNEL	Yes
Proposed Design / Section 1.0. Equipment in the fenced area of the building with a distance of 32 feet to nearest property line	37	56.6 CNEL	Yes
City’s Noise Level Limit	60 CNEL		

- **Conclusion** – Based on the results provided in Table 1 the calculated noise levels for Site ID: BA91629A, **WILL COMPLY**, with the City of Antioch Noise Standard – Ordinance 11.6.1.

Section 5.0 – Recommended Mitigations

None Recommended.

Appendix B – Technical References:

- ANSI (American National Standards Institute). American National Standard: Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools. ANSI/ASA S12.60-2002 (R2009). New York: ANSI.
- ANSI. 2005. American National Standard: Quantities and Procedures for Description and Measurement of Environmental Sound—Part 4: Noise Assessment and Prediction of Long-Term Community Response. ANSI S12.9-2005/Part 4. New York: ANSI.
- ANSI. 2007. American National Standard for the Computation of Loudness and Steady Sounds. ANSI S3.4-2007. New York: ANSI.
- ANSI. 2008. Methods for the Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes. American National Acoustical Society of America Standard S12.19-2008, Part 6. Melville, NY: Acoustical Society of America.
- EPA (U.S. Environmental Protection Agency). 1974. Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety . Document 550/9-74-004.
- ISO (International Organization for Standardization). Acoustics—Methods for Calculating Loudness Level. ISO-532 Standard.
- ISO. 2003. Acoustics—Description, Measurement, and Assessment of Environmental Noise—Part 1: Basic Quantities and Assessment Procedures.
- U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Public Health Service Centers for Disease Control and Prevention National Institute for Occupational Safety and Health. June 1998

**ATTACHMENT F
RADIO FREQUENCY STUDY
(SEPARATE PAGE)**



RF-EME SAFETY COMPLIANCE REPORT

March 1, 2022

Purpose of Report:

Soteria RF Safety Consultants has been contracted as an independent/third party consultant to provide a radiofrequency electromagnetic (RF-EME) assessment to determine if the proposed wireless facility listed below complies with the Federal Communications Commission – Office of Engineering and Technology Bulletin 65 (FCC-OET-65), which establishes Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. This report summarizes:

Front Page – Site Info / Compliance Statement
Section 1.0 – Proposed Design
Section 2.0 – FCC Standards & Guidelines

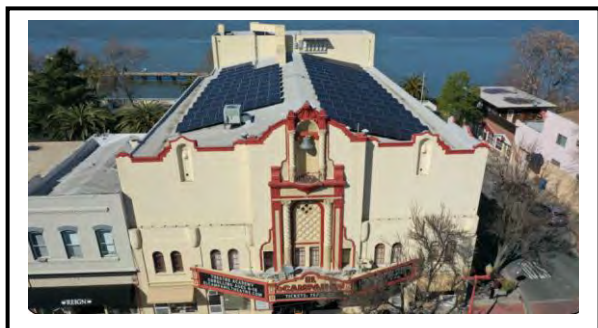
Section 3.0 – Calculation Methodology
Section 4.0 – Results & Conclusions
Section 5.0 – Recommended Mitigations

Wireless Facility Info:

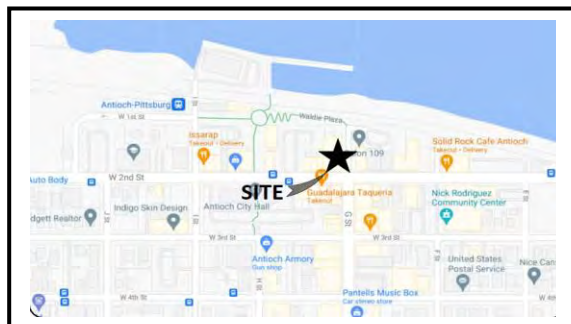
Carrier/Project: T-Mobile
Site Name: BA91629A/BA91629-NSN
Structure Type: Rooftop
Pole ID: n/a

Address: 602 W. 2nd Street
Antioch, CA 94509
Latitude: 38.017362
Longitude: -121.813995

(Proposed Wireless Facility Location)



(Proposed Wireless Facility Vicinity)



Report Certification:

I have reviewed and approve of the following report and believe it to be true and accurate to the best of my knowledge.

Name: Wafic M. Hojeij
Credential: Registered Professional Engineer
CA Registration No: E-16587
Expiration Date: 06/30/2022



COMPLIANCE STATEMENT

Based on location, proposed design, equipment, and operational parameters given to Soteria RF Safety Consultants, along with accepted predictive modeling based on worst-case scenario (maximum power, operating 24x7x365), the following wireless facility:

BA91629A / BA91629-NSB

WILL COMPLY

with the FCC's RF-EME Safety Guidelines, as set forth in the FCC-OET-65, regarding limits for human exposure to radiofrequency (RF) fields: provided all recommended mitigations identified in Section 5.0 of this report are implemented/adhered to.

Section 1.0 – Proposed Design

The following proposed design is based upon construction drawings and Radio Frequency Data Sheet information. All information is considered correct as supplied from the client.

The wireless facility is located on an existing Rooftop Structure designated for the wireless equipment. The installation and/or replacement of antennas are mounted at the elevation above ground level (AGL) listed in the antenna table below, and the antennas are connected to the radio equipment via cables. The antennas are grouped into sectors and are pointed in various directions (azimuths) to achieve the desired areas of coverage.

Figure 1 - Plan View

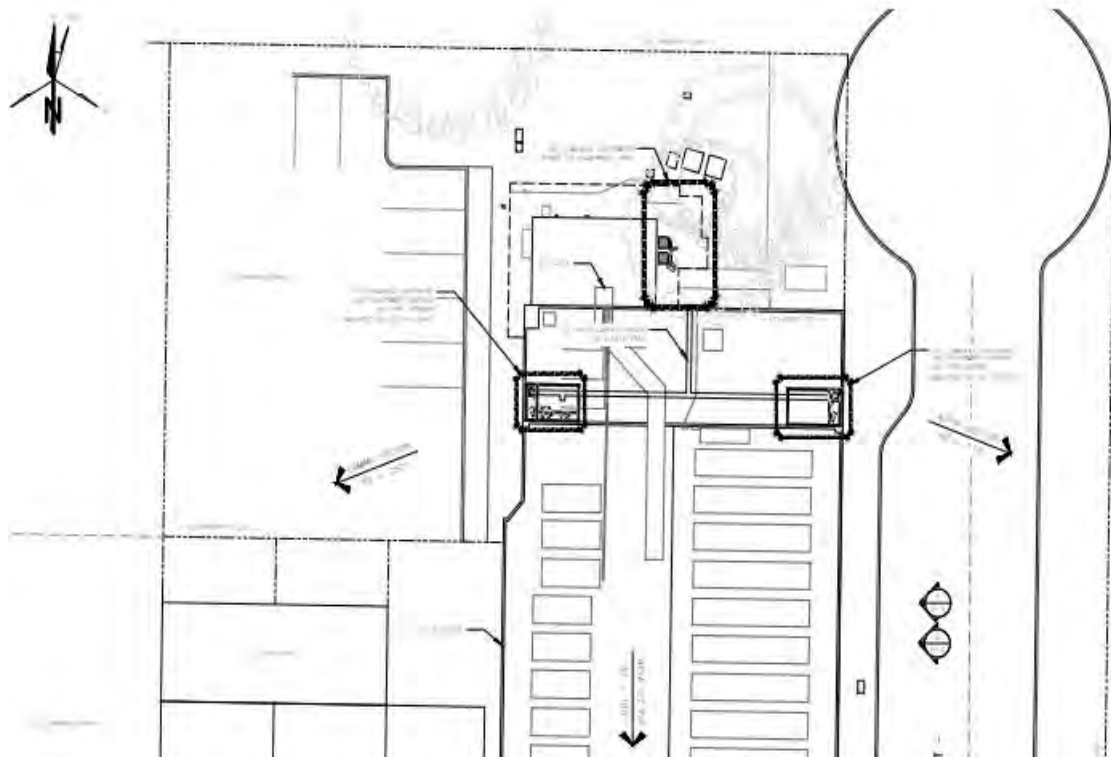


Figure 2 - Elevation View

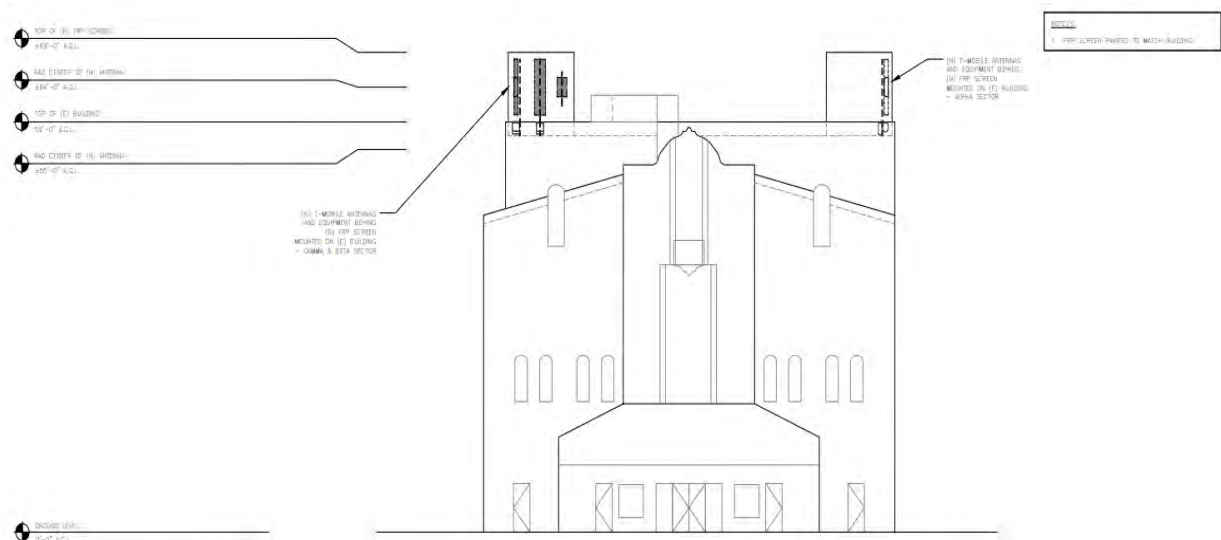


Table 1 - Antenna Inventory and Power Details:

Operator	Sector	Position	Technology	Frequency MHz	Manufacturer	Model	Azimuth (°TN)	AGL (ft)	Input Power (W)	Gain (dBd)	Power Output, ERP (W)
TMO	A	1	LTE	600	RFS	APXVAALL24_43-U-NA20	110	64	80	13.65	1854
TMO	A	1	N	600	RFS	APXVAALL24_43-U-NA20	110	64	80	13.65	1854
TMO	A	1	LTE	700	RFS	APXVAALL24_43-U-NA20	110	64	80	13.85	1941
TMO	A	1	GSM	1900	RFS	APXVAALL24_43-U-NA20	110	64	40	16.55	1807
TMO	A	1	LTE	1900	RFS	APXVAALL24_43-U-NA20	110	64	80	16.55	3615
TMO	A	1	LTE	2100	RFS	APXVAALL24_43-U-NA20	110	64	80	16.95	3964
TMO	A	2	LTE	2500	Ericsson	AIR6449	110	64	80	22.65	14726
TMO	A	2	N	2500	Ericsson	AIR6449	110	64	200	22.65	36815
TMO	B	1	LTE	600	RFS	APXVAALL24_43-U-NA20	180	64	80	13.65	1854
TMO	B	1	N	600	RFS	APXVAALL24_43-U-NA20	180	64	80	13.65	1854
TMO	B	1	LTE	700	RFS	APXVAALL24_43-U-NA20	180	64	80	13.85	1941
TMO	B	1	GSM	1900	RFS	APXVAALL24_43-U-NA20	180	64	40	16.55	1807
TMO	B	1	LTE	1900	RFS	APXVAALL24_43-U-NA20	180	64	80	16.55	3615
TMO	B	1	LTE	2100	RFS	APXVAALL24_43-U-NA20	180	64	80	16.95	3964
TMO	B	2	LTE	2500	Ericsson	AIR6449	180	64	80	22.65	14726
TMO	B	2	N	2500	Ericsson	AIR6449	180	64	200	22.65	36815
TMO	C	1	LTE	600	RFS	APXVAALL24_43-U-NA20	250	64	80	13.65	1854
TMO	C	1	N	600	RFS	APXVAALL24_43-U-NA20	250	64	80	13.65	1854
TMO	C	1	LTE	700	RFS	APXVAALL24_43-U-NA20	250	64	80	13.85	1941
TMO	C	1	GSM	1900	RFS	APXVAALL24_43-U-NA20	250	64	40	16.55	1807
TMO	C	1	LTE	1900	RFS	APXVAALL24_43-U-NA20	250	64	80	16.55	3615
TMO	C	1	LTE	2100	RFS	APXVAALL24_43-U-NA20	250	64	80	16.95	3964
TMO	C	2	LTE	2500	Ericsson	AIR6449	250	64	80	22.65	14726
TMO	C	2	N	2500	Ericsson	AIR6449	250	64	200	22.65	36815

Section 2.0 – FCC Standards & Guidelines

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to RF-EME fields based on consultation with numerous other federal health agencies including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), National Institute for Occupational Safety and Health (NIOSH) and the adoption of published standards by the American National Standards Institute (ANSI) and Institute of Electrical and Electronics Engineers (IEEE) C95.1 and the National Council on Radiation Protection and Measurement (NCRP) Report No. 86.

Collectively these standards and guidelines have been incorporated into the FCC-OET-65 "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." For complete detail on FCC-OET-65 use the following link:

https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf

The FCC's MPE limits for exposure incorporate two tiers of exposure limits based on whether exposure occurs in an occupational or "controlled" situation or whether the general population is exposed, or exposure is in an "uncontrolled" situation.

- **Occupational/controlled exposure** limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.
- **General public/uncontrolled exposures** apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

All FCC-regulated transmitters, wireless providers and licensees are required to determine if their transmitting equipment is in compliance with FCC's MPE limits, which may also include signage requirements, physical barriers, indicative markers and other policies/practices designed to prevent RF exposure in excess of existing safety standards.

Section 3.0 – Calculation Methodology

Soteria has incorporated the principles and methodologies described in FCC-OET-65 into a proprietary program to calculate the maximum power density from the facility at multiple locations. The calculations assume transmitting equipment is operating under “worst-case scenario” thus all frequencies are assumed to be transmitting at maximum power and are operating 24x7x365 (i.e. continuously). The program includes a number of other parameters such as antenna mounting specifications, frequency specific power input, line losses, frequency specific antenna gains, and frequency specific antenna horizontal and vertical beamwidths.

- **Power Density Calculation**

- I. Far-Field Calculation

$S = 0.0334 \cdot ERP / R^2$ is based on FCC-OET-65, Equation (9)

where: S = Power Density in mW/cm²

ERP = Effective Radiated Power in Watts

R = Distance in meters

- II. Near-Field Cylindrical Model Calculation

$S = (180 / \Theta_{BW}) P_{net} / \pi R h$ is based on FCC-OET-65, Equation (20)

where: S = Power Density in mW/cm²

P_{net} = Net Power Input to the antenna in mWatts

Θ_{BW} = Antenna half power horizontal beam width in degrees

h = Aperture height of the antenna in cm

R = Distance in cm

- **Distance Calculation**

$R = \text{SQRT}(H^2 + X^2)$ is based on FCC-OET-65, Figure (4)

where: R = Distance from center of antenna to ground location with highest % of public MPE

H = Height (ground level to center of antenna)

X = Distance from base of antenna facility to location with highest % of public MPE at ground level

Section 4.0 – Results & Conclusions

Table – 2: Ground Level

Ground Level	Distance from Base of Antenna Structure to Max % FCC MPE Limit (ft)	Max % of FCC MPE Limit	FCC MPE Limit Compliant
General Public / Uncontrolled Exposure Limit	879	1.20	YES

- Conclusion**

Based on worst-case scenario, accepted predictive modeling and in accordance with the FCC's guidelines on Limits for Maximum Permissible Exposure (MPE) as outlined in FCC-OET-65:

Ground Level (Table 2): The maximum *Ground Level* RF exposure is calculated to not exceed **1.20%** of the MPE and therefore **WILL COMPLY** with General Public/Uncontrolled exposure limits.

Table – 3: Antenna Face Level

Antenna Face Level	Horizontal Standoff Distance (ft)	% of FCC MPE Limit	FCC MPE Limit Compliant at Standoff Distance
General Public / Uncontrolled Exposure Limit	36	Less than 100%	YES
Occupational / Controlled Exposure Limit	16	Less than 100%	YES

- Conclusions** – Based on worst-case scenario, accepted predictive modeling and in accordance with the FCC's guidelines on Limits for Maximum Permissible Exposure (MPE) as outlined in FCC-OET-65:






Antenna Face Level (Table 3): Workers who have received RF awareness training (i.e. allowed to be exposed to the Occupational/Controlled tier) must maintain a horizontal standoff distance of at least **16 feet** from the face of the antenna to prevent exposures in excess of the occupational MPE. For all others (i.e. workers and members of the public who have not received RF awareness training) the lower MPE limits for the General Public/Uncontrolled tier apply. This group must maintain a horizontal standoff distance of at least **36 feet** from the face of the antenna to prevent exposures in excess of the public MPE.





Rooftop Lower level (Solar Panels Areas) Predicted RF Exposure Simulation

The following simulation (Figure 3) shows the maximum potential exposures at roof level from the antennas as a percent of the FCC's public MPE Limits. Uncolored areas represent where exposure levels are calculated to be at or below 5% of the MPE; **Green** between 5% & 100% of the MPE, **Blue** between 100% & 500% of the MPE, **Yellow** between 500% & 5000% & **Red** greater than 5000% of the MPE.

Figure 3 – Roofview Simulation



Antenna Locations	
	AT&T
	T-Mobile
	Metro PCS
	Verizon
	Other

Percent MPE Legend	
	5% - 100%
	100% - 500%
	500% - 5000%
	> 5000%
Public Limits	

• Conclusion

Individuals can safely occupy areas in the uncolored and **Green** areas for an indefinite period of time. However **Blue**, **Yellow** and **Red** areas must be restricted to workers or other individuals who have received RF awareness training (i.e., allowed to be exposed to the higher Occupational/Controlled exposure tier) and are fully aware of the potential for such areas of RF exposure and can exercise control over their exposure to prevent exposures in excess of regulatory limits.

Section 5.0 – Recommended Mitigations

Soteria's worst-case predictive modeling indicates there are no calculated RF exposure levels at ground level or nearest occupied structure that exceeds the FCC MPE guidelines for Occupational or General Public limits. To reduce the risk of exposure and/or injury, it is recommended that access to areas immediately adjacent to any active antenna be restricted and secured where possible. The following actions are recommended to ensure that workers are properly informed about the presence and location of active antennas and their associated RF-EME fields.

RF Signage

Installation: **NOTICE** and **CAUTION** signage should be placed as shown below.





	 Post at antenna area, visible from any approach to in front of antennas and to exclusion zones		 Post at antenna area, visible from any approach to in front of antennas and to exclusion zones
---	---	--	---

Figure 4 – Signage & Barriers



Notice and Caution signage should be placed as shown above. Only personnel with RF exposure training who are fully aware of the potential for and can exercise control of their RF exposure, can have access to the antenna areas as shown above in Figure 5. Also, carriers contact information should be available at the access point to antenna areas.

Appendix A – Technical References

- C95.1 – 1991 – IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

Source: https://standards.ieee.org/standard/C95_1-1991.html

- Report No. 86 – Biological Effect and Exposure Criteria for Radiofrequency Electromagnetic Fields (1986)

Source: <https://ncrponline.org/shop/reports/report-no-086-biological-effects-and-exposure-criteria-for-radiofrequency-electromagnetic-fields-1986/>

- FCC–OET–65: Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields.

Source: https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf

- Table 4 – The FCC’s MPE limits are based on continuous exposure at a wide range of frequencies and are deemed to provide a “substantial margin of safety” for all persons, regardless of age, gender, size or health.

Limits for Maximum Permissible Exposure (MPE) represents both the field strength and power density expressed in terms of the plane wave equivalent power density expressed in units of milliwatts per square centimeter (mW/cm^2) or alternatively, absorption of RF energy is a function of frequency (as well as body size and other factors). The limits vary with frequency. Standards are more restrictive for frequencies at and below 300 MHz. Higher intensity RF exposures are allowed for frequencies between 300 MHz and 6000 MHz than for those below 300 MHz.

Table 4 - FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure			
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)
0.3-3.0	614	1.63	100 [†]
3.0-30	1842/f	4.89/f	900/f ^{2†}
30-300	61.4	0.163	1
300-1500	-	-	f/300
1500-100,000	-	-	5

(B) Limits for General Population/Uncontrolled Exposure			
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)
0.3-3.0	614	1.63	100 [†]
3.0-30	842/f	2.19/f	180/f ^{2†}
30-300	27.5	0.073	0.2
300-1500	-	-	f/1500
1500-100,000	-	-	1

f = frequency in MHz

† = plane-wave equivalent power density

Source: For Table 4 – FCC OET Bulletin 65, Edition 97-01, p.67

Table 5 – Standard Minimum Font Sizes & Safe Viewing Distances for Signage

Minimum Safe Viewing Distance		Minimum Letter Height for FAVORABLE Reading Conditions		
(ft)	(m)	(point Size)	(in)	(cm)
<=4	<=1.2	16	0.16	0.4
6	1.8	24	0.24	0.6
8	2.4	32	0.32	0.8
10	3.0	40	0.40	1.0
15	4.6	60	0.60	1.5
20	6.1	80	0.80	2.0
30	9.1	120	1.20	3.0
40	12.2	160	1.60	4.1
60	18.3	240	2.40	6.1
80	24.4	320	3.20	8.1
100	30.5	400	4.00	10.2
125	38.1	500	5.00	12.7
150	45.7	600	6.00	15.2
200	61.0	800	8.00	20.3

Source: For Table 2 – ANSI Z535.2-2001 (Table B1)

**ATTACHMENT G
T-MOBILE PLANNING
JUSTIFICATION
(SEPARATE PAGE)**

**T-Mobile Proposed Wireless Facility for Downtown Antioch
El Campanil Theatre
"602 West 2nd Street, Antioch, CA 94509"**



T-Mobile's Engineering Objective:

The objective of this search ring area is to enable T-Mobile ***to offload surrounding sites in the south, east and west to improve coverage and capacity in the area in around the Old Section of Downtown Antioch, City Hall, and Plaza Area.*** The theatre serves as an excellent site to host a wireless facility as it holds capacity to blend in with the building as a concealed properly with little concerning visual impact to the building's roof line from public view.

El Campanil Theatre Candidate:

This is an existing historical movie house and stage theatre in the older section of downtown Antioch. T-Mobile's wireless service in the downtown area requires performance improvements to optimize their network. Adding a new wireless facility will improve coverage, especially indoors, and increase network capacity to the area.

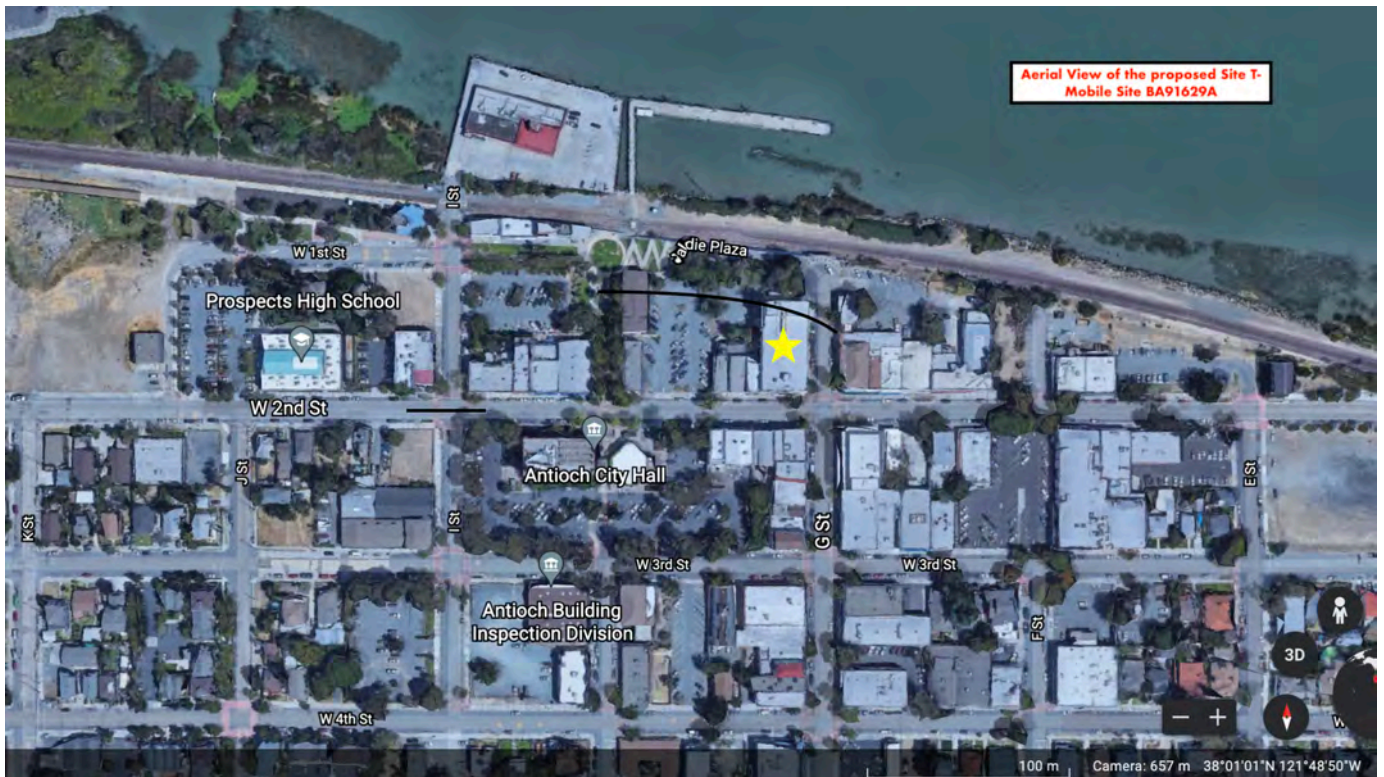
While the area is currently partially served, the network quality is decreasing as demand is increasing. More and more of T-Mobile's customers are using wireless devices beyond just a communication tool. Rather devices now serve as vital instruments for businesses, education, family networking, and an ever-growing entertainment source. The addition of this new wireless facility will offload surrounding wireless T-Mobile facilities and increase network capacity and quality to the area.

The facility design includes antennas on the back of the theatre concealment structure to screen the antennas. In addition, the facility would include installation of cabinets on the ground in the rear of the theatre where technicians may drive up to and conduct maintenance or equipment improvements without interfering with the Theatre operations. The facility will cause no interference to the Theatre.

Proposed site location on Street Map below



Site South of Waldie Plaza, Northeast of Antioch City Hall and Southeast of Marina in Antioch's Historical District



Design:

CBR is recommending mounting antennas on the roof of the theatre and placing cabinets in the back of the theatre's upper level box roof structure with proposed screening to conceal the antennas. The cabinets will be placed on the ground near other existing mechanical equipment in rear of the theatre behind proposed mesh fencing. The antenna screening and mesh fencing design is a collaborative design recommendation as proposed by Antioch Planning and agreed to by T-Mobile.

Antennas:

The proposed antennas are to be located on the back upper-level roof with three sectors of two antennas per sector. The antennas would be mounted on the roof and completely screened inside a fiberglass faux box structure. There would be two box structures on the roof, one box structure would screen 1 sector of 2 antennas and the other box would house 2 sectors of 4 antennas. The screening is spaced and dimensionally sized to be balanced and symmetrical as they are located evenly and setback from the front of the building on the upper rear roof.

The proposed screening structure will be painted and texturized to match the building. With the assistance of Antioch Planning, recommendations were made throughout the design process to ensure the concealment is contiguous with the building's overall scheme by mimicking what is currently on site. Antioch Planning also recommended to add trimming/stripping to box structures, placing them symmetrically on the building, be similar in size, and set back so as not be publicly visible from the building's front.

The proposed screening will not only house antennas but also include the radio remote units and cabling which will run from antennas to the ground cabinets along the back of the building inside a cable tray, also painted to match the building.

Ground Equipment:

The ground mounted outdoor equipment cabinets will be located at the rear of the building, the theatre's north side. The cabinets would be surrounded by proposed mesh fence and would not be visible from the front of the building, west 2nd Street. The cabinets would be placed near to existing mechanical equipment and not appear out of place.

Additionally, the proposed cabinets will be near existing city parking lot which is easily accessible for construction and field technicians to visit the cabinets. There is plenty of vacant space behind theatre that can accommodate T-Mobile's equipment while providing enough space for property line setbacks. The cabinets would be near the existing mechanical equipment, including power, to alleviate a long power run. Further, and significant to the landlord, this location will not interfere with theatre's operations. The equipment would be surrounded by a mesh fencing to protect the equipment and to help further screen the cabinets.

**Constructability:**

The constructability is ideal since the area is a flat with plenty of ground space to maneuver large equipment and would be away from theatre customers. All required utilities are present and may be routed within the building and across the parking lot. Available parking may be reserved to allow construction to use some parking spaces.

Environment:

This site was selected due to its location – it is within the search ring and in the center of the coverage and capacity objectives. The theatre is an extremely tall structure that serves to elevate antennas without the installation of a tall antenna support structure, such as a monopole or tower. There are surrounding trees that will help mitigate the view of the facility as you look up from Waldie Plaza.

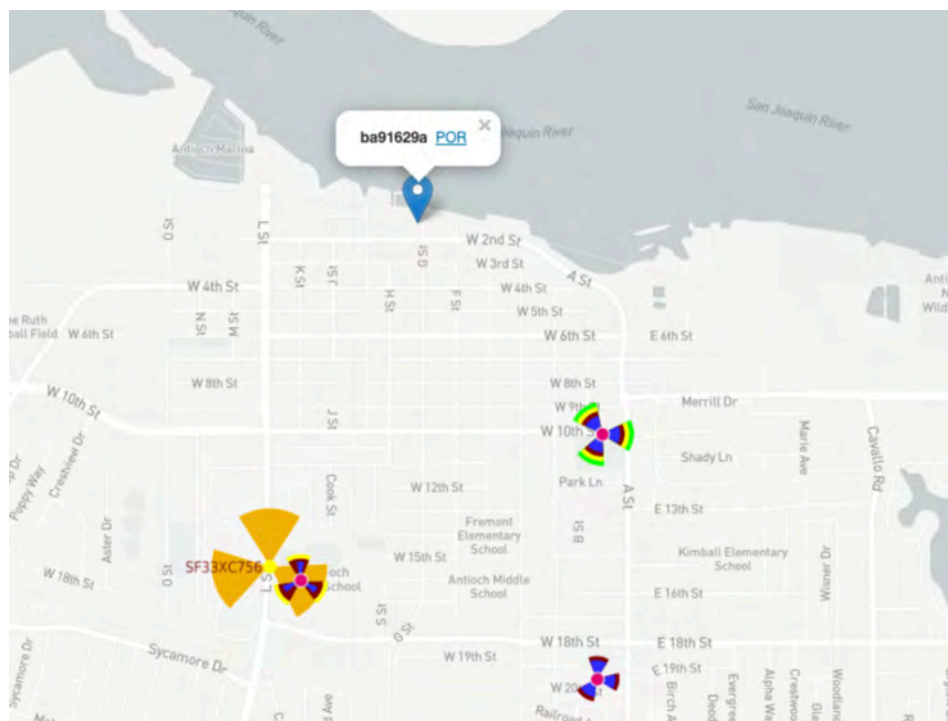
Zoning:

This site is located within the City of Antioch in zoning district identified "DTSP" Downtown Specific Plan. Under the City's Ordinance, the proposed Antenna on Building would be considered a "Major Facility" per City of Antioch Policy For Wireless Communications Facilities, adopted on June 11, 2019, Code Section V., A. Required Permits, 2. Use Permit – Planning Commission Review, any wireless facility proposed to be located in a Discouraged Location V.B.2; DTSP District, requires a Use Permit and Planning Commission approval.

Zoning Map for Proposed Site Location



Proposed Site in Relations to Existing T-Mobile Sites in the Area



Siting Challenges:

The entire search ring is in DTSP district it is not possible to locate outside this boundary. Moving the site outside the DTSP would move it too close to the existing wireless facilities. See map above of existing wireless facilities nearby. T-Mobile is challenged placing the facility outside the DTSP District since the going north is not an option and further east and south is too close to T-Mobile's existing sites.

Planning Justification Considerations:

The proposed antenna design is completely concealed and the original design submitted has been significantly redesigned as recommended by Planning to accommodate the potential aesthetic concerns while considering Antioch Wireless Policy Preference Concealment Techniques.

T-Mobile has altered the screening design to best blend in with building with installation of all rooftop equipment concealed behind existing or proposed faux screen walls. No equipment will be visible from the public. All screening has been designed to match the building style by proposing texturizing, painting, and stripping to match and will be consistent with the building's features while not interfering with Theatre's ornate historical front facing architectural design.

Antioch's Wireless Policy Section:

Please find below **highlighted in yellow** how the design proposed conforms specifically with Antioch's Wireless Policy

Building Mounted Wireless Facilities...policy excerpt and listed in yellow highlighted section are notable and applicable Policy sections:

- a. *Preferred Concealment Techniques. All applicants should, to the extent feasible, propose new non-tower wireless facilities that are completely concealed and architecturally integrated into the existing facade or rooftop features with no visible impacts from any publicly accessible areas (examples include, but are not limited to, antennas behind existing parapet walls or facades replaced with RF-transparent material and finished to mimic the replaced materials).-->[run on sentence, way too long] Alternatively, when integration with existing building features is not feasible, the applicant should propose completely concealed new structures or appurtenances designed to mimic the support structure's original architecture and proportions (examples include, but are not limited to, cupolas, steeples, chimneys and water tanks). Facilities must be located behind existing parapet walls or other existing screening elements to the maximum extent feasible.*
- b. *Facade-Mounted Equipment. When wireless facilities cannot be placed behind existing parapet walls or other existing screening elements, the approval authority may approve facade-mounted equipment in accordance with this subsection. All facade-mounted equipment must be concealed behind screen walls and mounted as flush to the facade as practicable. The approval authority may not approve "pop-out" screen boxes unless the design is architecturally consistent with the original building or support structure. Except in industrial zones, the approval authority may not approve any exposed*

facade-mounted antennas, including but not limited to exposed antennas painted to match the facade. To the extent feasible, facade-mounted equipment must be installed on the facade(s) along the building frontage that is the least prominent or publicly visible.

- c. *Rooftop-Mounted Equipment. All rooftop-mounted equipment must be screened from public view from the nearest right-of-way with concealment measures that match the underlying structure in proportion, quality, architectural style and finish. The approval authority may approve unscreened rooftop equipment only when it expressly finds that such equipment is effectively concealed due to its low height and/or setback from the roofline.*

Theatre Benefits:

T-Mobile takes pride where applicable to partner with small business and non-profits to help them grow as they support the community with the purpose causes. T-Mobile hopes that Planning and Antioch Commission considers the financial benefit to support the theatre who in turn supports to the community by allowing the theatre to provide continual operations allow the ever-disappearing historical theatre houses to remain as significant landmark and architectural resources by providing the following to the community:

- A venue for the presentation of cultural, entertainment, fundraising, and community events.
- Serve as a catalyst for cultural growth.
- Provide supportive, professional, and affordable arts education for young artists.
- Support the economic vitality of the community, especially in the downtown area of Antioch.

Note: This building is not registered with National Register of Historic Places.

Community Service Benefits:

The proposed site would improve service for T-Mobile's customers, small business owners, employees of small businesses, Antioch visitors, and the emergency service personnel who rely on T-Mobile's network. This is especially important in times of emergency where capacity is limited - especially during fires, power outages, earthquakes, etc. where additional wireless calling capacity is important to individuals who need to communicate during times of crisis.

Alternative Candidates Considered:

1. New Tower – Antioch Wireless Policy states “All applicants, ... propose new non-tower wireless facilities.”
2. All other buildings in the area are approximately 1-2 and 3 story high buildings, roughly 30% lower in height which limits reduces the coverage footprint accordingly. The theatre building is one the highest building in the area at 60' high.
3. Other similarly high buildings were considered; however, T-Mobile prefers to support and partner with small businesses and non-profits alike.
4. Fire Station Tower and Training Tower are too close to an existing T-Mobile site at the ballpark stadium lights.

Summary:

Please consider the proposed candidate as it will significantly improve T-Mobile's network in this area of Antioch. We respectfully request approval of this application for the installation of new T-Mobile wireless facility that will benefit the community, residences, business owners, visitor and the emergency service providers who rely on their service. Thank you for your time and attention to this project as we look forward to having this wireless facility site on air.

**ATTACHMENT H
T-MOBILE HEIGHT
EXCEPTION
(SEPARATE PAGE)**



May 11, 2022

City of Antioch
c/o Anne Hersch
Planning Division
200 H Street
Antioch, CA 94531

RE: T-Mobile Wireless "**BA91629A**" Design Justification
Address: 602 West 2nd Street, Antioch, CA 94509
APN: 066071013

Dear Ms. Anne Hersch,

On August 24, 2021, Planning recommended CBR to request a Pre-Application Meeting to collaboratively review the design and provide jurisdictional feedback. The meeting was held early September where we submitted photo simulations to show a possible design. On September 9, 2021, we received redlines on photo simulations as a possible alternative design recommendation from Planning, see attached. The redlines recommended were not feasible as:

1. The Planning proposed antenna screening for Alpha Sector would extend beyond the property line, see redlined photos, as the antenna screening box would overhang on the side of the building, extending over the sidewalk.
1. Planning proposed the other two antenna sectors (Gamma and Beta) would be placed on the back of the theatre building, see redlines recommendation. This design is not feasible as the antennas would be facing north, towards the water, where coverage is not needed.

We presented a revised conceptual design that would be feasible to provide optimal coverage at which Planning commented that they recommended to situate two antenna sectors (Beta and Gamma) to be mounted within a screen box on the side of the building, facing west, and the other sector to be within a faux screened box on the upper roof (Alpha sector). Beta and Gamma sector design would be blocked by the building itself thus this design was not optimal.

Given that we received no comment from Planning, except wanting to know the antenna box screen height when presented Alpha Sector Antenna screening design to place faux antenna screen box roof, we proceeded proposing the same design horizontally across, on the opposite end of the upper roof to host both Gamma and Beta sectors. The two-antenna screen box proposed would be same height and size as the Alpha Sector however one of the boxes would host both Gamma and Beta antenna sectors and the other box would only host the Alpha antenna sector.

The final antenna screening design for all three sectors formally submitted is the most balanced and symmetrical design. The antenna screening would be painted and texturized to match the building's aesthetic. Additionally, the two antenna screening boxes on the upper roof situated at the rear of the theatre building and would not visually impact the front of theatre where the most prominent historic and decorative building elements appear to the public.

The CBR Group Inc.
2840 Howe Rd. Suite E
Martinez, CA. 94553



Furthermore, there are some tall trees in the back of theatre that assists in screening the roof and antenna screening. Considering the view from vantage point, the rear theatre location, would be towards the water rather looking up at the Theatre roof.

To this, on February 16, 2022, we received a notice of incomplete letter from Planning advising that the antenna screening design should include the following details:

Design Review: The proposed antennae screening should avoid blank facades/ elevations, the proposed elevations show blank elevations with no form or mass. The screening should be designed to avoid blank facades and shall provide an architectural feature to add visual interest. Staff recommends adding horizontal and vertical banding that mimics the front/South elevation of the building to the antennae screening.

Given the historical comments over the past 6 months from Planning on the antenna location and screening, as early on back in September, CBR/T-Mobile has cooperatively tried as best as possible to revise the design to accommodate Planning's recommendations while creating a design that will provide optimal coverage and capacity to T-Mobile's network, not only for their customers but also to emergency service providers who rely on their service. Attached are coverage and capacity maps of the downtown Antioch area, both with and without the current design of the proposed wireless facility to support this need.

With that, we want to thank you very much for your continual support with processing of this application and we respectfully request for Planning Staff to recommend approval for the project as designed and presented.

If you have questions, please feel free to contact me at (614) 769-5019 or Cara@thecbrgroup.com.

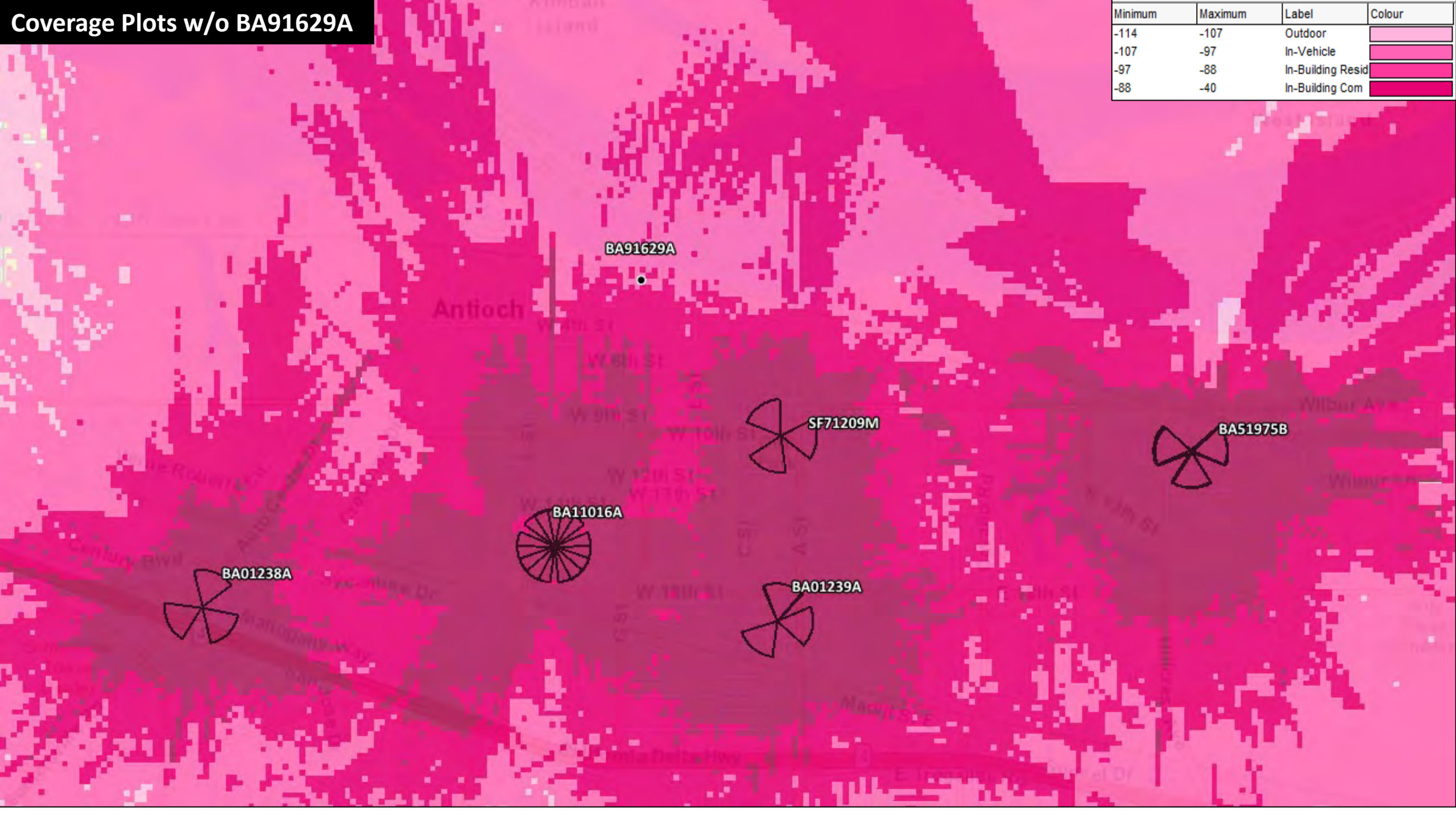
Sincerely,
The CBR Group, Inc.

Cara Todd

Cara Todd
As Site Acquisition Manager for The CBR Group, Inc.
(Authorized Agent for T-Mobile Wireless)

Coverage Plots w/o BA91629A

Minimum	Maximum	Label	Colour
-114	-107	Outdoor	
-107	-97	In-Vehicle	
-97	-88	In-Building Resid	
-88	-40	In-Building Com	



SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

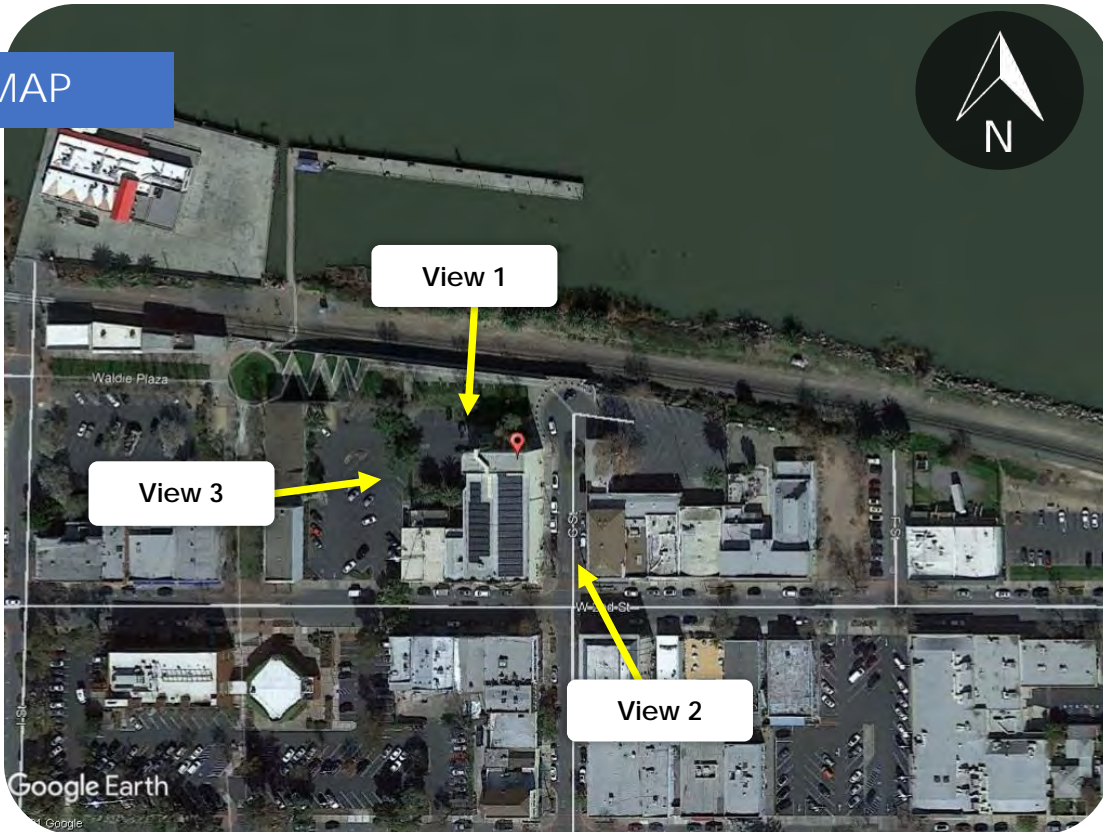
Site Coordinates 38.017362, -121.813995



PROPOSED SITE LOCATION

BA91629 - NSB

GOOGLE MAP



SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



EXISTING



BETA SECTOR

PROPOSED



View 1: Looking South from behind building |

Photosim produced 09/02/2021

SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



EXISTING

ALPHA SECTOR



PROPOSED

T-MOBILE ANTENNAS AND
EQUIPMENT BEHIND FRP SCREEN
MOUNTED ON ROOFTOP

How tall is this? can
you provide
dimensions?



View 2: Looking Northwest along G. St | Photosim produced 09/02/2021

SITE ID: BA91629A

El Campanil Theatre, 602 W 2nd Street, Antioch, CA 94509

Project Type: Cell Split (Brand New Macro Cell Site)

Site Coordinates 38.017362, -121.813995



EXISTING

GAMMA SECTOR



PROPOSED



View 3: Looking East across the parking lot | Photosim produced 09/02/2021

**ATTACHMENT I
LETTER OF SUPPORT
(SEPARATE PAGE)**

May 8, 2022

To
City of Antioch
Planning Department
200 "H" Street
Antioch, CA 94531

Hello,

I am writing in support of El Campanil Theatre's proposal to work with T-Mobile to install antennas on the north side of the building. Improved cell coverage will affect theatre goers, shopping customers, businesses and have a positive influence on downtown modernization.

The current Downtown Specific Plan addresses the need for additional Cellular Service in the downtown:

6.5 Cellular Service

"Existing Conditions. Per the leased cell tower record drawing for Antioch, dated October 2014, the closest cell tower to the Downtown is at the City Park on 10th and A Streets. This is the only cell tower north of State Route 4. "

"Cellular Service Constraints. Cell phone reception in the Downtown is reportedly poor for all carriers, based on Downtown stakeholder input from late 2014. This is in part based on Downtown's location at the edge of the wide San Joaquin River. This limitation, if it continues, could be a disincentive for businesses and residents considering locating within the Downtown. Improvement of service may come with pressure on cell providers from new residents or businesses. Better service could require placement of one or more cell antennas within the area."

We are hopeful for a positive decision on this proposal.

Thank you,



Rick Carraher
Board Member
El Campanil Theatre Preservation Foundation