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**PLANNING COMMISSION AGENDA
CITY HALL AUDITORIUM, 250 NORTH 5TH STREET**

TUESDAY, SEPTEMBER 24, 2019 @ 6:00 PM

Call to Order - 6:00 PM

1. Minutes of Previous Meeting(s) from August 23, 2019.
2. Consider a Request by the City of Grand Junction to amend multiple sections of the Zoning and Development Code to update the Transportation Capacity Payment and the Parks and Recreation Impact Fee and to adopt new impact fees for Police, Fire and Municipal Facilities.
3. Consider a request by P&L Entertainment, LLC for a Conditional Use Permit (CUP) for the property located 701 Main Street to allow for a bar/nightclub use.
4. Consider a request by Paul Adams to zone 1.99 acres from County RSF-4 (Residential Single Family – 4 du/ac) to a City R-8 (Residential – 8 du/ac) for the Adams II Annexation located at 216 27 ½ Road.
5. Consider a request by Roy and Marilyn Anderson to zone 1.82 acres from County RSF-R (Residential Single Family 5ac/du) to a City C-1 (Light Commercial) for Zona's Annexation located at 408 29 Road.
6. Consider a request by Colorado Mesa University (CMU) on behalf of the property owner, Johnny Jr. and Colleen Martin, to vacate a portion of the East-West Alley right-of-way (2,348 square feet) on the south side of the property located at 845 Orchard Avenue.
7. Consider a request by SSC representing Verizon Wireless, for a Conditional Use Permit (CUP) for a Concealed Telecommunication Facility (Cell Tower) in a Residential – 4 du/ac (R-4) zone district on 2.69862 acres at 2884 B ½ Road.

Other Business

Adjournment

GRAND JUNCTION PLANNING COMMISSION
August 27, 2019 MINUTES
6:00 p.m.

The meeting of the Planning Commission was called to order at 6:00 pm by Chairman Christian Reece.

Those present were Planning Commissioners; Chairman Christian Reece, Vice Chairman Bill Wade, George Gatseos, Kathy Deppe, Keith Ehlers, Sam Susuras, Andrew Teske, and Ken Scissors as an alternate.

Also present were Jamie Beard (Assistant City Attorney), Tamra Allen (Community Development Director), Dave Thornton (Principal Planner), Kristen Ashbeck (Principal Planner), Rick Dorris (Development Engineer), Senta Costello (Associate Planner), and Jace Hochwalt, (Associate Planner).

There were approximately 54 citizens in the audience.

1. Meeting of Previous Meeting(s)

The Planning Commission reviewed the meeting minutes from the July 23, 2019 meeting.

Commissioner Wade moved to approve the minutes as written. Commissioner Susuras seconded the motion.

The motion carried unanimously by a vote of 7-0.

2. Burkey Property Comprehensive Plan Amendment and Rezone

File# CPA-2019-433, RZN-2019-432

Consider a request by the City of Grand Junction for 1) a Comprehensive Plan Amendment from Park to Residential Medium, retaining the Mixed Use Corridor Designation along Patterson Road; and 2) Rezone from CSR (Community Services and Recreation) to R-8 (Residential Medium) and MXOC (Mixed Use Opportunity Corridor) on two properties that total 18.433 acres located at 2980 and 2982 Patterson Road currently known as the undeveloped Burkey Park land.

Staff Presentation

Kristen Ashbeck, Principal Planner, introduced exhibits into the record and presented a PowerPoint regarding the request.

Questions for Staff

Commissioner Deppe asked questions regarding Land Use designations, zone districts, density, the applicable annexation zone, and bulk standards.

Commissioner Ehlers asked a question regarding allowed uses in the R-8 zone district.

Public Comment

The following spoke against the request: Eric Farslow, Dusty Nielson, Mary Combs, Cindy Downs, Matthew Brock, Kevin Carson, William Springer, Rusty Ratzloff, Rachel Talley, Weston Witt, Darryn Jowers, Derrick Jowers, Anita Maxell, Bobbette Warrick, and Ken McLaughlin.

Robert Burkey made a comment in favor of the request.

Discussion

Rezone discussion included the legal history of the Burkey Deed, requirements of green space in the R-8 (Residential 8 dwelling units per acre) and PD (Planned Development) zone districts, the definition of rooming/boarding house, traffic studies on the property, and density.

Commissioner Deppe made a comment in opposition of the request.

Commissioners Gatseos, Wade and Scissors made a comment in support of the request for the Comprehensive Plan Amendment and in opposition for the Rezone request as it stands at R-8.

Commissioners Susuras and Ehlers made comments in favor of the request.

Motion and Vote

Commissioner Susuras made the following motion: "Madam Chairman, on the Comprehensive Plan Amendment request CPA-2019-433 and the Rezone request RZN-2019-432, concerning a total 18.433 acres located at 2980 and 2982 Patterson Road, I move that the Planning Commission recommended approval of the actions to:

1. amend the Comprehensive Plan from a designation of Park to a designation of Residential Medium, retaining the Mixed Use Corridor designation along Patterson Road; and
2. rezone a total of 18.433 acres located at 2980 and 2982 Patterson Road currently zoned Community Services and Recreation (CSR) to Residential 8 units per acre (R-8, 14.433 acres) and MXOC (Mixed Use Opportunity Corridor, 4 acres)."

Commissioner Ehlers seconded the motion. Motion failed with Commissioners Deppe, Scissors, Wade, and Gatseos voting NO.

Commissioner Gatseos moved to forward a recommendation of approval on the Comprehensive Plan Amendment request CPA-2019-433, concerning a total 18.433 acres located at 2980 and 2982 Patterson Road, to amend the Comprehensive Plan from a designation of Residential Medium, retaining the Mixed Use Corridor designation along Patterson Road. Commissioner Wade seconded the motion. Motion carried with Commissioner Deppe voting NO.

Commissioner Wade moved to forward a recommendation of approval on the Rezone request RZN-2019-432 for the properties located at 2980 and 2982 Patterson Road currently zoned Community Services and Recreation (CSR) to Residential 8 units per acre (R-8, 14.433 acres). Commissioner Susuras seconded the motion. Motion failed with Commissioners Deppe, Scissors, Wade, and Gatseos voting NO.

Commissioner Ehlers moved to retain and forward a recommendation of approval on the portion of the Rezone request RZN-2019-432 for the properties located at 2980 and 2982 Patterson Road currently zoned Community Services and Recreation (CSR) to MXOC (Mixed Use Opportunity Corridor, 4 acres). Commissioner Wade seconded the motion. Motion carried with Commissioners Deppe and Scissors voting NO.

Commissioners took a break at 7:47.

The meeting resumed at 7:57.

3. Chase Bank Variance File# VAR-2019-437

Consider a request by 660 Rood Avenue, LLC for approval of an exemption to the two-story height requirement for a proposed one-story bank building situated within the Greater Downtown Core Central Business District Overlay at 660 Rood Avenue.

Staff Presentation

Jace Hochwalt, Associate Planner, introduced exhibits into the record and gave a presentation regarding the request for exemption to the two-story height requirement for the property located at 660 Rood Avenue in a B-2 (Downtown Business) zone district.

Applicant's Presentation

Mike Foster, representing 660 Rood Avenue, LLC, was present and made a comment regarding the proposed request for a request on a height exemption.

Adam Cyrus, APMI, representing Chase Bank, gave a presentation regarding the objective of the project and Chase Bank's intent.

Public Comment

The following spoke in support of the request: Mark Austin, Brandon Stam, Erik Cornelison, Erik Cornelison on behalf of Matt Clark, David Hoerkamp, Christi Reece, Diane Schwenke, and Greg Motz.

Aaron Young made comments both in opposition and support of the request.

Discussion

Discussion included Zoning Code text clarification.

Motion and Vote

Commissioner Susuras made the following motion: "Madam Chairman, on the request for a height exemption, VAR-2019-437, I move to approve the two-story height exemption request as proposed." Commissioner Deppe seconded the motion.

Exemption discussion included Zoning Code text clarification and requirements.

Commissioner Teske made a comment in opposition of the request.

Commissioners Ehlers, Gatseos, Susuras, and Wade made comments in support of the request.

Motion carried with Commissioner Teske voting NO.

4. Monumental Beer Works Conditional Use Permit File# CUP-2019-401

Consider a request by Monumental Beer Works, LLC for a Conditional Use Permit (CUP) for the property located 2575 Highway 6 & 50 #C to allow a microbrewery and taproom which is categorized as a bar/nightclub use.

Staff Presentation

Jace Hochwalt, Associate Planner, introduced the exhibits to the record and presented a PowerPoint detailing the property and the request for a Conditional Use Permit for Monumental Beer Works.

Mr. Hochwalt and Staff found the application has satisfied the criteria for general approval and has demonstrated compliance with the criteria for a Conditional Use Permit with the condition of approval upon the Applicant obtaining an Access Permit from the Colorado Department of Transportation.

Applicant's Presentation

Brian Fischer, Applicant, was present and made a comment regarding the Applicant's coordination with the Colorado Department of Transportation.

Commissioner Susuras asked the Applicant a question regarding the number of employees this business will hire.

Public Comment

Nick Westfall spoke in support of the request.

Motion and Vote

Commissioner Wade made the following motion: "Madam Chairman, on the application for a Conditional Use Permit for the Monumental Beer Works located at 2575 Highway 6 & 50 #C, CUP-2019-401, I move that the Planning Commission recommend conditional approval with the findings of fact and condition as listed in the staff report." Commissioner Susuras seconded the motion.

The motion carried unanimously by a vote of 7-0.

5. POD 5 of "The Community" **File# PLD-2019-328**

Consider a request by Club Deal 127 Merk Grand Junction LP to rezone from Mixed Use (MU) to Planned Development (PD) and approve an Outline Development Plan (ODP) for approximately 39.25 acres at 2372 G Road.

Staff Presentation

Dave Thornton, Principal Planner, introduced exhibits into the record and presented a PowerPoint regarding the request for rezone and approval of an Outline Development Plan for the property at 2372 G Road.

Discussion

Discussion included allowable uses within the proposed Planned Development (PD), maximum density, buffering and the cohesiveness of residential and heavier commercial, industrial uses in the area.

Applicant's Presentation

Ted Ciavonne, representing the Applicant, was present and made comments explaining the project's history and scope.

Public Comment

Joe Coleman, representing the Landers Group, spoke in support of the request.

Discussion

Commissioners Reece and Ehlers spoke in support of the proposal.

Motion and Vote

Commissioner Susuras made the following motion: “Madam Chairman, on the request to rezone from Mixed Use (MU) to Planned Development (PD) and approve an Outline Development Plan (ODP) for approximately 39.25 acres as presented in file PLD-2019-328, I move that the Planning Commission forward a recommendation of approval with the findings of fact as listed in the staff report.” Commissioner Gatseos seconded the motion.

The motion carried unanimously by a vote of 7-0.

6. Code Text Amendments **File# ZCA-2019-421**

Commissioner Wade moved to postpone the next item on the agenda concerning Code Text Amendments to a later date. Commissioner Deppe seconded the motion.

The motion carried unanimously by a vote of 7-0.

7. Other Business

None.

8. Adjournment

The meeting was adjourned at 10:06pm.



Grand Junction Planning Commission

Regular Session

Item #2.

Meeting Date: September 24, 2019

Presented By: Greg Caton, City Manager, Trent Prall, Public Works Director, Tamra Allen, Community Development Director

Department: Community Development

Submitted By: Tamra Allen, Community Development Department Director

Information

SUBJECT:

Consider a Request by the City of Grand Junction to amend multiple sections of the Zoning and Development Code to update the Transportation Capacity Payment and the Parks and Recreation Impact Fee and to adopt new impact fees for Police, Fire and Municipal Facilities.

RECOMMENDATION:

Staff recommends approval of the request.

EXECUTIVE SUMMARY:

In July 2018, City Council provided direction to staff to conduct a study for the impact fees related to a variety of city capital facilities. In the Fall of 2018, the City contracted with TischlerBise a consultancy that conducts impact fee studies across the country. TischlerBise has provided a study for the maximum fee potential new impact fees related to police, fire and municipal facilities. Included in their study is an update for Parks Impact Fees, fees that have not been updated for more than 35 years.

Prior to the work with TischlerBise, the Grand Valley Metropolitan Planning Organization (GVMPO) had contracted with Duncan Associates to update the Transportation Impact Fees within the Grand Valley, including Mesa County, the City of Grand Junction, the City of Fruita and the Town of Palisade. An impact fee study was last conducted for transportation in 2002 and were, at that time, adopted at 52 percent of the recommended rate.

BACKGROUND OR DETAILED INFORMATION:

PURPOSE OF IMPACT FEES

Impact fees are one-time payments for new development's proportionate share of the capital cost of infrastructure. TischlerBise, on behalf of the City, has drafted an impact fee study for fire, police, municipal facilities and parks and recreation pursuant to the State enabling legislation and consistent with Colorado Revised Statutes regarding the purpose and methodology related to calculation of impact fees. The study specifically addresses the City of Grand Junction's Municipal Facilities, Fire, Police, and Parks and Recreation facilities.

Impact fees have limitations and should not be regarded as the total solution for infrastructure funding. Rather, they are one component of a comprehensive funding strategy to ensure provision of adequate public facilities. Impact fees may only be used for capital improvements or debt service for growth-related infrastructure. They may not be used for operations, maintenance, replacement of infrastructure, or correcting existing deficiencies.

IMPACT FEE STUDIES

The regional Grand Valley Metropolitan Planning Organization (GVMPO) completed an update to their 2002 Transportation Impact Fee study in Fall of 2018. The report was authored by Duncan Associates and recommended a significant increase in transportation impact fees, known as Transportation Capacity Payments (TCP).

In July 2018, the City Council directed staff to engage a separate consultant to conduct a nexus study for development impact fees for Fire, Police, Municipal Facilities and Parks. The City engaged the consultant TischlerBise in this effort and a report was completed in April 2019. The report found that a substantial fee could be assigned to growth's share of maintaining capacity at today's level of service in the capital facilities related to Fire, Police and Municipal Facilities. The report also recommended a significant increase in the Parks and Recreation Impact Fee.

Originally, the TCP was proposed to be adopted first, followed by discussion regarding the other impact fees, however concern was expressed during the Planning Commission's March 26, 2019 hearing that all the fees (TCP, Fire, Police, Municipal Facilities and Parks) be heard together. As a result, the TCP fees were withdrawn from hearing at the City Council's May 1, 2019 meeting.

OUTREACH

Since May 2018, staff has been working with a variety of stakeholders including representatives from the Chamber of Commerce, Western Colorado Contractor's Association, Homebuilders of Western Colorado (HBA), Associated Members of Growth and Development (AMGD), and Grand Junction Area Realtors Association (GJARA) to identify an implementation program for the fees that would be mutually agreeable between all stakeholders. The group has met five times since May to discuss

this topic.

Staff met with stakeholders multiple times between May and the end of July to discuss and negotiate the fee structure, keeping in mind that any fee would need to be defensible and its methodology aligned with a fee study. Based on these discussions and work sessions, negotiations resulted in several deviations from the original fee studies, based on the direct input from stakeholders. These changes were founded on additional work and analysis provided by either TischlerBise or Duncan Associates to ensure the methodology for the fee was legally defensible. The changes included:

§ Creating a fee for single-family that was stratified by size. This resulted in a decreased fee for smaller units to address issues expressed about affordability/attainability of homes based on price.

§ Reducing the Multi-family TCP to be consistent with the smallest single-family residential category to ensure parity between use types.

§ Compressing TCP fees for commercial into six categories. This resulted in a significant decrease in the collection of commercial TCP for specific uses such as medical offices.

§ Also, as a result of the passage of 2B, costs for vehicles for police were removed from the capital needs calculation.

The discussions with the industry stakeholders and workshop input resulted in the recommendations herein proposed by staff regarding fees and implementation schedule.

In advance of the August 5 workshop, the industry stakeholder group submitted a letter acknowledging that fees need to be updated but requesting fees for transportation and parks and recreation be updated at a rate of 50% of the proposed increase. They also requested that no fees be adopted for Fire, Police and Municipal Facilities.

The updated TCP study was presented to City Council and Planning Commission at a December 3, 2018 workshop and at a work with both City Council and Planning Commission held on March 4, 2019. Subsequent workshops have been held on impact fees in June, August and September, 2019.

EXISTING TRANSPORTATION CAPACITY PROGRAM

In 2004, the City adopted Ordinance No. 3641 that provided the approach for calculation and collection of the City's Transportation Capacity Payment (TCP) fee. The TCP was modeled so that the City would pay for improvements to the street system that either provided capacity to the system or added safety improvements. The streets

identified for the use of the TCP funds were only those streets shown on the adopted Grand Valley Circulation Plan functional classification map and that were considered part of the City's Major Street System. Though the Streets Policy required the City to pay for safety improvements (such as turn lanes or traffic signals) those costs were not included in the calculation of the TCP fee. The TCP fees and methodology were based on a fee study conducted by Duncan and Associates in 2002. The fees were originally adopted at a rate of 52% of what was recommended by the study. The fee was to be adopted annually by resolution of the Council and be adjusted annually for inflation in the Consumer Price Index. This has not happened regularly. Since adoption in 2004, the City adjusted the fee for residential development (based on the CPI) from \$1,500 to \$1,589 between 2004 and 2007 then to its current fee of \$2,554 in 2008 but which have not been adjusted since. The TCP fee for Commercial development was originally adopted at a rate of \$2,461 per 1,000 square feet (e.g. Shopping Center) and was adjusted upwards in 2008 to \$2,607 and then in 2013, 2014 and 2015 to a rate of \$4,189 per 1,000 square feet (e.g. Shopping Center) that is being collected today.

REDEVELOPMENT AREA INCENTIVE (TCP)

In 2013 the City Council adopted Resolution 15-13, which provided for infill and redevelopment incentives. Within the defined redevelopment area TCP fees were reduced. The boundary included Downtown, the river district area as well as the North Avenue corridor between State Highway 6 & 50 and I-70 Business Loop. It was intended to encourage development of infill parcels and redevelopment of underutilized land within certain areas of the City. The Redevelopment Area provides for significant incentive for redeveloping these area, especially if building more than one story. For example, a four-story hotel of 96 rooms outside of the redevelopment area today would pay a fee of \$231,072, while if it is constructed inside of the redevelopment area the fee would equate to \$28,884 (the formula = # of rooms x \$2,407 / 2 divided by # of stories). Staff is recommending maintaining the Redevelopment Area incentive as currently adopted.

GROWTH AND DEVELOPMENT RELATED STREETS POLICY

At the same time the City adopted updated TCP fees in 2004, the City adopted a Growth and Development Related Streets Policy. At that time the City determined that there were three key components to a meaningful growth and development related street/traffic policy. These included: 1. Collection of a realistic TCP fees for all new development projects, 2. A clear articulation of what minimum requirements (in addition to TCP fees) each development must construct; and, 3. City funding and/or other means of participation in construction of street improvements. The 2004 policy replaced the previous policy that required developers to pay for the improvement of the half of the street(s) that was directly abutting their project ("half street improvements") and eliminated the need for the developer to build any safety improvements (e.g., turn lanes into their development) as well as eliminated any need for the developer to pay for any off-site improvements (e.g., intersection improvements and traffic signals). As the

Policy and Fees are today, there are significant implications for how the City funds street capacity and safety improvements. Those include:

- 1) The City pays for all safety improvements, even those related to a specific development and benefiting only a specific development(s).
- 2) The obligation to improve that street (Collector designation or higher) is carried in full by the City – even if the improvements are necessary for access to a specific development. Only if the street is considered a "local or unclassified" street is the developer required to construct it.

The net effect has been two-fold, whereas:

- 1) The City carries the full cost of improving/constructing all streets (classified higher than local) and
- 2) The City finds itself moving capital dollars towards certain street projects to serve specific development, but that may not be of the greatest overall community benefit or need.

In a survey of other jurisdictions, staff found that cities almost always require the developer to pay for the adjacent street to be developed to a local street standard (or that are adequate to serve the development) including curb, gutter and sidewalk and then the city pays the portion of the cost required to "upsized" the street to a higher classification (e.g., collector or arterial, etc.). In addition, other cities require all safety improvements such as acceleration and deceleration lanes to be constructed as part of a development. Both on-site safety improvements (eg. Turn lanes to/from development) and off-site safety improvements (eg. signalized intersection a few blocks away) are generally required. Staff is recommending repealing the previous Growth and Development Related Streets Policy and modifying the language within the Zoning and Development Code to require developments to construct safety improvements related to the specific development. As discussed with industry stakeholder's this requirement would be implemented beginning January 1, 2021 to allow for the industry to prepare for this change.

EXISTING PARKS IMPACT FEE

The City currently has a Parks impact fee of \$225 that is collected per residential unit. This fee has been in place for more than 35 years and has not been updated since initial adoption. The TischlerBise study found that a significant increase in this fee is warranted in order for park and recreation capital improvements to maintain the existing level of service for the City related to parks and recreation. Since residents utilize parks, a Parks and Recreation fee is only charged to residential uses. Staff is recommending implementation of the full Parks and Recreation fee over three years in

equal annual increases starting January 1, 2020.

NEW IMPACT FEES (FIRE, POLICE, MUNICIPAL FACILITIES)

As directed by City Council in July 2018, an impact fee study included an analysis for the capital needs of Police, Fire and Municipal Facilities related to the impacts of growth on capital needs of these facilities. The study found that fees could be charged to growth to maintain the existing level of service for these facilities. Staff is recommending implementation of the full Fire, Police and Municipal Facilities fees over three years in equal annual increases starting January 1, 2020.

STAFF RECOMMENDATIONS

Staff recommends adopting the fee schedules as attached as well as the following implementation schedule:

Transportation Capacity Payments (TCP)

- a. Fee increases for TCP will begin January 1, 2020
- b. The City will implement the full fees over 3 years in equal biannual increases.
- c. After full implementation the fee will increase by a 10-year rolling average of CDOT's Construction Cost Index.
- d. For Single-Family (detached and attached) dwelling units, full fees will be collected at time of Planning Clearance.
- e. For Multi-Family dwelling units, excluding those intended to be separate fee simple ownership (eg. Duplex, Townhomes, Condominiums), implement the full fee. The fee would be established at time of complete application submittal and would be valid so long the project commenced construction within two years from the date of application submittal.
- g. Payment of fees will no longer be considered for deferral. Parks is currently the only City impact fee that cannot be deferred.
- h. The City will retain its Redevelopment Area boundary that provides for significant reductions in TCP fees for development in this area where street infrastructure is in place.

Fire, Police, Municipal Facilities, and Parks

- a. Fee increases for Parks and Recreation and new fees for Fire, Police, Municipal Facilities will begin January 1, 2020

- b. The City will implement the full fees over 3 years in equal increases.
- c. After full fee implementation, the fee will increase annually by the Construction Cost Index published by Engineering News Record.
- d. For Single-Family (detached and attached) dwelling units, full fees will be collected at time of Planning Clearance.
- e. For Multi-Family dwelling units, excluding those intended to be separate fee simple ownership (eg. Duplex, Townhomes, Condominiums), implement the full fee. The fee would be established at time of complete application submittal and would be valid so long the project commenced construction within two years from the date of application submittal.
- g. Payment of fees will no longer be considered for deferral. Parks is currently the only City impact fee that cannot be deferred.

Safety Improvements

- a. Commencing January 1, 2021, development such as a subdivision in which traffic warrants safety improvements (eg. Turn lane and deceleration lanes) for a development (as determined by a traffic study or similar methodology) will be required to make necessary safety improvements.
- b. Should the improvements benefit future adjacent development, a cost reimbursement agreement may be executed on behalf of the developer for a period up to 10 years.

NOTIFICATION REQUIREMENTS

Notice was completed as required by Section 21.02.080(g). Notice of the public hearing was published on September 14, 2019, in the Grand Junction Daily Sentinel.

ANALYSIS

In accordance with Section 21.02.140(c), a proposed text amendment shall address in writing the reasons for the proposed amendment. There are no criteria for review because a code amendment is a legislative act within the discretion of the City Council. Reasons for the proposed amendments are provided in the Background section of this report.

STAFF RECOMMENDATION AND FINDINGS OF FACT

In accordance with Section 21.02.140(c) of the Zoning and Development Code, the reasons for the amendment have been adequately addressed and include but are not limited to the amendments being necessary for growth to pay a proportionate share of

the cost of capital facilities to maintain adequate level of service for Fire, Police, Municipal Facilities, Parks and Recreation and Transportation and to provide mechanisms which will allow for the construction of safety improvements concurrent with development. Staff therefore recommends approval of the proposed amendments to the Zoning and Development Code.

SUGGESTED MOTION:

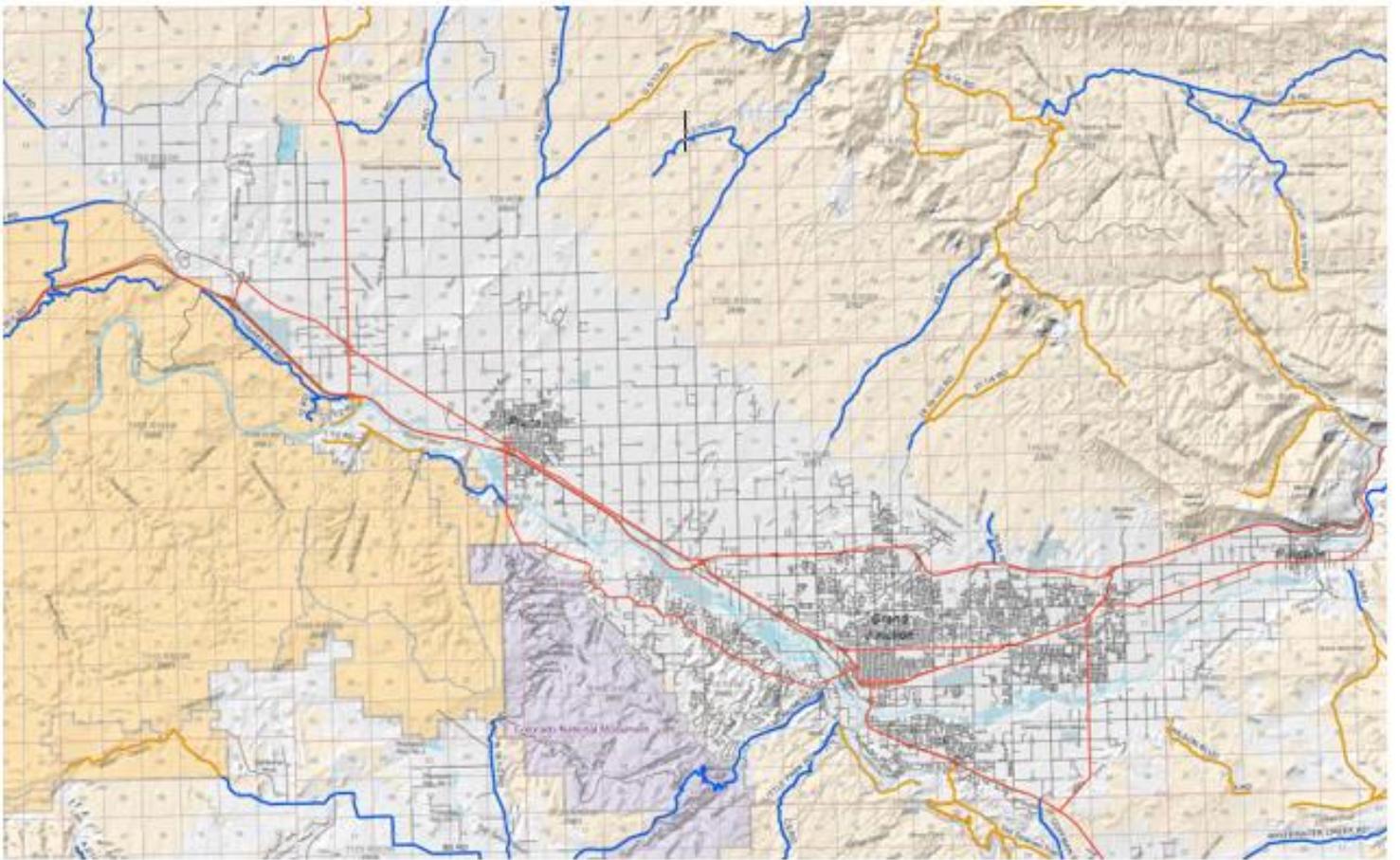
Madam Chairman, on the request to consider a Group of Actions Including

1. Amend Ordinance 3641 to remove the Growth and Development Related Street Policy; and
2. Adopt Ordinance _____, amending multiple sections of the zoning and development code to update transportation and parks and recreation impact fees and to adopt new impact fees for Fire, Police, and Municipal Facilities and requiring development to construct street safety improvements related to the direct impacts of a development.

I move that the Planning Commission forward a recommendation of approval, with the findings of fact as listed in the staff report.

Attachments

1. Grand Junction CO Dev Transportation Impact Fee Study 2019_FINAL
2. Grand Junction CO Dev Fire Police Facilities Parks Impact Fee Study 4.10.19
3. City Council Presentation for 8-19-19 Workshop - Tischler Bise
4. Police Fire MF Parks Implementation Schedule
5. TIF Implementation Schedule
6. Comparison Table Industry to Staff Proposed
7. Stakeholder Position letter on impact fees
8. Fee Comparison GJARA_MetroStudy
9. Fee Comparison - TischlerBise
10. Draft Ordinance Amending Ordinance No 3641
11. Ordinance No. 3641 - 2004
12. Ordinance Impact Fees Draft v1



Transportation Impact Fee Study for Mesa County, Colorado

prepared by

Duncan Associates

November 2018

with minor revisions February 2019

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EXECUTIVE SUMMARY

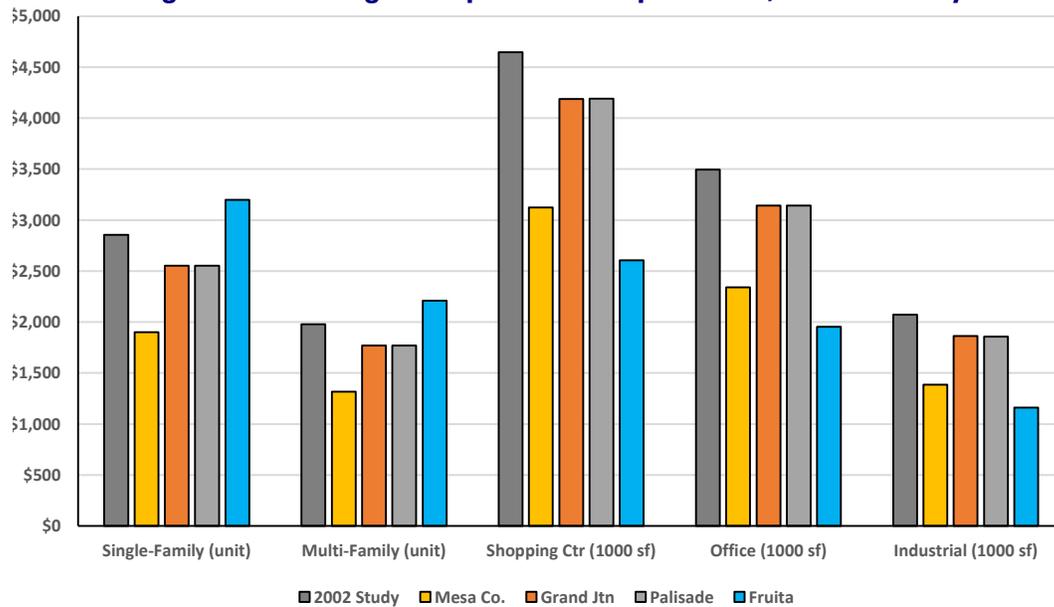
This is a slightly revised version of the November 28, 2018 study, which adds some alternative residential land use categories. Specifically, it (1) adds the option of single-family detached fees for four unit size categories, (2) breaks down the multi-family category into three potential subcategories (multi-family low-rise, multi-family mid-rise, and townhome), and (3) adds two senior adult housing categories (detached and attached). The changes modify Tables 7 and 17, and add a new Appendix E. In all other respects, the study is unchanged.

The purpose of this project is to assist Mesa County and participating municipalities (Grand Junction, Palisade and Fruita) by updating the county-wide transportation impact fees study. The previous study was prepared in 2002. The fees calculated in that study and the fees currently being charged by the participating jurisdictions are summarized in Table 1, and are illustrated in Figure 1 on the following page for five major land use categories. All jurisdictions originally adopted the fees at a lower rate than calculated in the 2002 study, and some have adjusted the fees periodically for inflation. Except for Fruita's residential fees, the current fees being charged are lower than the fees calculated 16 years ago.

Table 1. Current Transportation Impact Fees

Land Use	Unit	2002 Study	Mesa County	Grand Junction	Palisade	Fruita
Single-Family Detached	Dwelling	\$2,854	\$1,902	\$2,554	\$2,554	\$3,200
Multi-Family	Dwelling	\$1,979	\$1,317	\$1,769	\$1,769	\$2,208
Mobile Home/RV Park	Pad	\$1,435	\$958	\$1,284	\$1,284	\$795
Hotel/Motel	Room	\$2,687	\$1,795	\$2,407	\$2,407	\$1,494
Shopping Center (0 to <100k sf)	1,000 sf	\$4,646	\$3,124	\$4,189	\$4,190	\$2,606
Shopping Center (100k to <249k sf)	1,000 sf	\$4,393	\$2,935	\$3,933	\$3,935	\$2,447
Shopping Center (250k to <500k sf)	1,000 sf	\$4,267	\$2,843	\$3,805	\$3,815	\$2,368
Shopping Center (500k sf or more)	1,000 sf	\$3,942	\$2,627	\$3,525	\$3,521	\$2,193
Auto Sales/Service	1,000 sf	\$4,232	\$2,824	\$3,780	\$3,785	\$2,352
Bank	1,000 sf	\$7,117	\$4,744	\$6,359	\$6,365	\$3,957
Convenience Store w/Gas Sales	1,000 sf	\$10,191	\$6,818	\$9,143	\$9,149	\$5,689
Golf Course	Hole	\$6,578	\$4,439	\$5,951	\$5,954	\$3,702
Health Club	1,000 sf	\$3,813	\$2,542	\$3,422	\$3,410	\$2,129
Movie Theater	1,000 sf	\$11,834	\$7,889	\$10,574	\$10,584	\$6,578
Restaurant, Sit Down	1,000 sf	\$5,757	\$3,838	\$5,159	\$5,150	\$3,210
Restaurant, Fast Food	1,000 sf	\$12,846	\$8,596	\$11,544	\$11,532	\$7,182
Office, General (0 to <99k sf)	1,000 sf	\$3,494	\$2,342	\$3,141	\$3,142	\$1,954
Office, General (100 sf or more)	1,000 sf	\$2,973	\$1,997	\$2,682	\$2,675	\$1,668
Office, Medical	1,000 sf	\$9,807	\$6,607	\$8,862	\$8,865	\$5,514
Hospital	1,000 sf	\$4,554	\$3,069	\$4,112	\$4,117	\$2,558
Nursing Home	1,000 sf	\$1,276	\$860	\$1,149	\$1,153	\$715
Church	1,000 sf	\$2,184	\$1,462	\$1,967	\$1,961	\$1,224
Day Care Center	1,000 sf	\$4,553	\$3,052	\$4,086	\$4,094	\$2,542
Elementary/Secondary School	1,000 sf	\$713	\$478	\$639	\$641	\$397
Industrial Park	1,000 sf	\$2,073	\$1,385	\$1,864	\$1,857	\$1,160
Warehouse	1,000 sf	\$1,477	\$987	\$1,328	\$1,324	\$826
Mini-Warehouse	1,000 sf	\$512	\$344	\$460	\$463	\$286

Source: 2002 study fees from Duncan Associates, *Transportation Impact Fee Study for Mesa County, Colorado*, September 2002; Mesa County fees from resolution adjusting the fees for inflation adopted January 8, 2018; Palisade fees from Town of Palisade, February 5, 2018; Fruita fees from 2018 fee schedule from City of Fruita, February 5, 2018.

Figure 1. Existing Transportation Impact Fees, Mesa County

Note: Shopping center and office fees based on 100,000 sq. ft. building

Update Overview

This study retains the general methodology used in the 2002 study (see discussion of methodology in Appendix D). The original study calculated regional and non-regional fees, under the expectation that the participating jurisdictions would pool the regional fees and use them to improve regional roadways. Instead, the jurisdictions are spending the fees they collect to improve roads within their jurisdiction, regardless of the regional/non-regional road distinction. This update does not calculate separate fees for the two categories.

Participating jurisdictions can adopt the updated fees at any level up to 100% of the amounts calculated in this study. The adoption percentage should be the same for all land uses to retain the proportionality of the fees to the impact on the major roadway system. If disproportionate reductions are made in fees assessed on selected types of development, the shortfall should be made up with general fund revenue, and a revenue credit should be calculated to avoid non-favored development paying more than its fair share (see Proportionality section in Appendix C).

This study calculates fees that exclude right-of-way (ROW) costs, both to keep the fees from increasing so much and to give jurisdictions the option not to provide developer credits for ROW exactions. However, if a jurisdiction opts to not give developers credit against the fees for required ROW dedications, that jurisdiction should consider restricting the funds collected from being spent on ROW (see Developer Credit section of Appendix C).

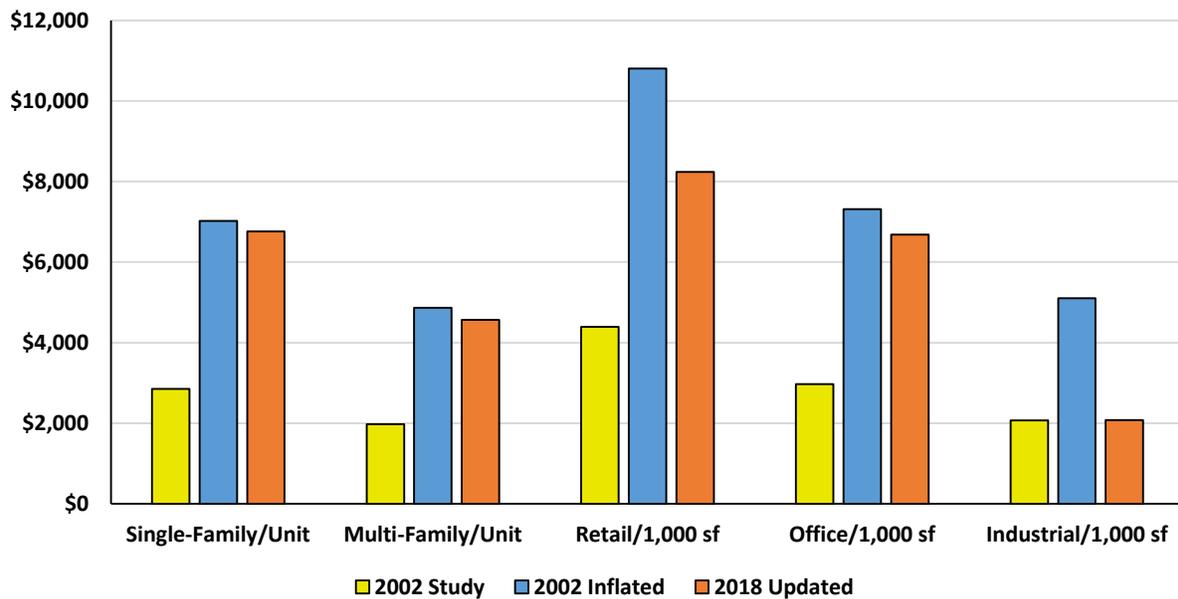
The inputs into the fee calculations are updated in this study based on the most current available data. Trip rates have been updated based on the September 2017 edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. Updated average trip lengths are from the U.S. Department of Transportation’s 2017 *National Household Travel Survey*. An updated inventory of the county-wide major roadway system is used to calibrate the travel demand factors and ensure that they are consistent with existing travel on the major roadway system in Mesa County.

Several modifications to the fee schedule land use categories are made in this update to better reflect current available data and/or simplify the process of fee determination and collection. A discussion of the reasons for individual changes can be found in the summary section of the Travel Demand chapter. Recommended definitions for the land use categories are provided in Appendix B.

Updated Fees

The updated fees are compared with the fees calculated in the 2002 study in Table 2 on the following page. Not surprisingly, the fees are considerably higher than those calculated 16 years ago for most land uses. Construction costs have increased considerably over this time. The Colorado Department of Transportation’s Construction Cost Index is 2.46 times what it was in 2002. Compared to inflation-adjusted 2002 study fees, the updated fees are lower for the majority of land uses, including the major categories of single-family, multi-family, retail/commercial, general office, and industrial/warehouse uses, as illustrated in Figure 2.

Figure 2. Comparison of Current and Updated Transportation Impact Fees



The wide variation in percentage changes between land use categories reflects changes in travel demand factors, including trip generation rates (1997 versus 2017 ITE manual), percent new trips (also from ITE manual), and average trip lengths (1995 versus 2017 national travel survey).

Table 2. Comparison of Current and Updated Transportation Impact Fees

Land Use Type	Unit	2002 Study		Updated Fees	% Change from	
		Original	Inflated		Original	Inflated
Single-Family Detached	Dwelling	\$2,854	\$7,021	\$6,763	137%	-4%
Multi-Family	Dwelling	\$1,979	\$4,868	\$4,570	131%	-6%
Mobile Home/RV Park	Pad	\$1,435	\$3,530	\$3,583	150%	1%
Hotel/Motel	Room	\$2,687	\$6,610	\$4,183	56%	-37%
Shopping Center/Commercial	1,000 sf	\$4,393	\$10,807	\$8,240	88%	-24%
Auto Sales/Service	1,000 sf	\$4,267	\$10,497	\$9,258	117%	-12%
Bank, Drive-In	1,000 sf	\$7,117	\$17,508	\$18,365	158%	5%
Convenience Store w/Gas Sales	1,000 sf	\$10,191	\$25,070	\$26,395	159%	5%
Golf Course	Hole	\$6,578	\$16,182	\$12,850	95%	-21%
Movie Theater	1,000 sf	\$11,834	\$29,112	\$33,028	179%	13%
Restaurant, Standard	1,000 sf	\$5,757	\$14,162	\$14,975	160%	6%
Restaurant, Drive-Through	1,000 sf	\$12,846	\$31,601	\$33,203	158%	5%
Office, General	1,000 sf	\$2,973	\$7,314	\$6,685	125%	-9%
Office, Medical	1,000 sf	\$9,807	\$24,125	\$25,665	162%	6%
Animal Hospital/Vet Clinic	1,000 sf	n/a	n/a	\$15,858	n/a	n/a
Hospital	1,000 sf	\$4,554	\$11,203	\$7,905	74%	-29%
Nursing Home	1,000 sf	\$1,276	\$3,139	\$3,120	145%	-1%
Place of Worship	1,000 sf	\$2,184	\$5,373	\$2,725	25%	-49%
Day Care Center	1,000 sf	\$4,553	\$11,200	\$4,485	-1%	-60%
Elementary/Secondary School	1,000 sf	\$713	\$1,754	\$1,688	137%	-4%
Public/Institutional	1,000 sf	n/a	n/a	\$3,813	n/a	n/a
Industrial	1,000 sf	\$2,073	\$5,100	\$2,078	0%	-59%
Warehouse	1,000 sf	\$1,477	\$3,633	\$1,248	-16%	-66%
Mini-Warehouse	1,000 sf	\$512	\$1,260	\$1,075	110%	-15%

Source: Original 2002 study fees from Duncan Associates, *Transportation Impact Fee Study for Mesa County, Colorado*, September 2002 (sum of regional road fees without major structure costs and nonregional road fees); inflated 2002 fees are 2.46 times the original fee, based on the increase in the Colorado Department of Transportation *Construction Cost Index* from 2nd quarter 2012 to 2nd quarter 2018; updated fees from Table 17.

Comparative Jurisdictions

Communities in the process of updating impact fees are naturally interested in knowing what other nearby or comparable jurisdictions are charging. However, concerns about “competitiveness” with other jurisdictions are not necessarily well-founded. Studies have found that reducing or eliminating fees did not have any perceptible effect on the rate of development that subsequently occurred. This is not surprising, given the myriad other market and regulatory factors that differ between jurisdictions besides transportation impact fees.

The fees from the 2002 study and this update are compared to transportation impact fees currently charged by 12 other Colorado jurisdictions in Table 3. Note that while only transportation fees are compared, two-thirds of the comparison jurisdictions also charge other types of impact fees.

Table 3. Transportation Impact Fees in Colorado

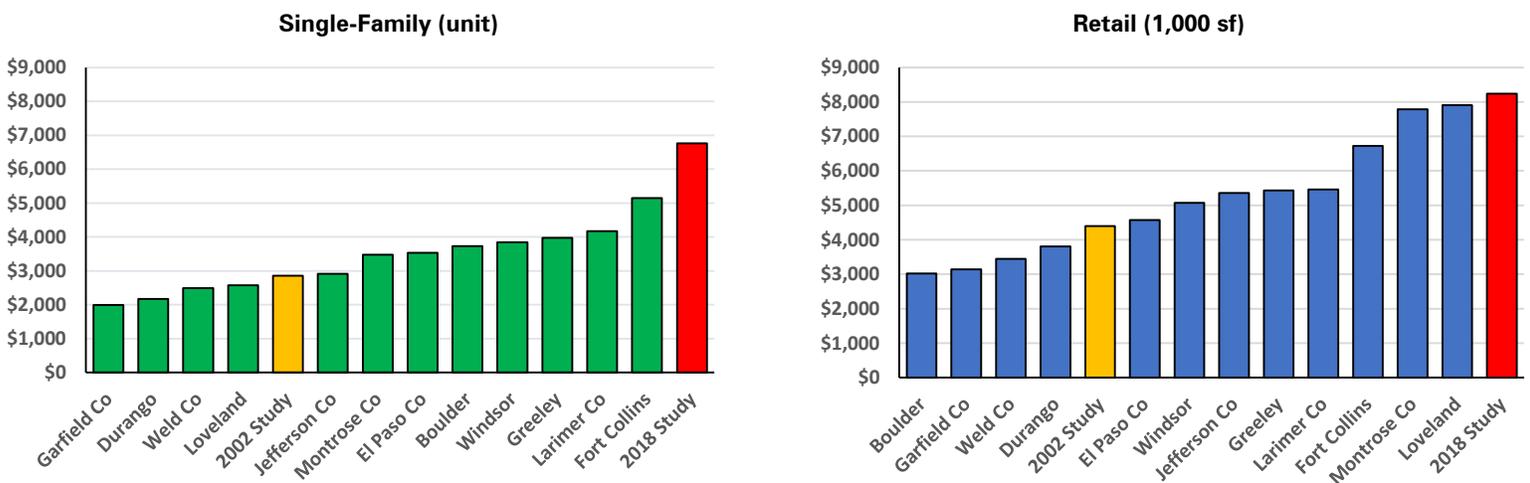
Jurisdiction	Study/ Adoption Year	Single- Family (per unit)	Multi- Family (per unit)	Retail (per 1,000 sq. ft.)	Office (per 1,000 sq. ft.)	Industrial (per 1,000 sq. ft.)
Boulder (1)	2017	\$3,734	\$2,702	\$3,020	\$2,700	\$2,620
Durango	n/a	\$2,169	\$1,298	\$3,810	\$2,823	\$1,963
El Paso County	2017	\$3,532	\$2,220	\$4,572	\$2,933	\$3,366
Fort Collins	2017	\$5,150	\$3,392	\$6,721	\$4,951	\$1,598
Garfield County (2)	2017	\$1,992	\$1,230	\$3,145	\$1,361	\$472
Greeley	2015	\$3,973	\$2,565	\$5,428	\$4,650	\$1,609
Jefferson County (3)	n/a	\$2,911	\$2,051	\$5,360	\$3,590	\$1,550
Larimer County	2018	\$4,168	\$2,955	\$5,461	\$3,213	\$1,296
Loveland	n/a	\$2,578	\$1,801	\$7,910	\$3,550	\$1,890
Mesa Co (2002)	2002	\$2,854	\$1,979	\$4,393	\$2,973	\$2,073
Mesa Co (updated)	2018	\$6,763	\$4,570	\$8,240	\$6,685	\$2,078
Montrose County	2007	\$3,480	\$2,440	\$7,790	\$4,000	\$2,530
Weld County	2011	\$2,488	\$1,630	\$3,450	\$2,275	\$2,251
Windsor	2017	\$3,838	\$2,436	\$5,076	\$4,674	\$2,016

Notes: (1) includes transportation excise tax; (2) average of two areas; (3) single-family fee is average of fees for up-to-two-car garages and three-or-more-car garages

Source: Duncan Associates internet survey, October 5, 2018 (where fees vary by size, assumes 2,000 sq. ft. single-family unit, 1,000 sq. ft. multi-family unit, and 1 million square foot retail center or office building).

Single-family and retail transportation fees charged by Mesa County and the other 12 Colorado jurisdictions are illustrated in the two charts below. The 2002 study fees for Mesa County are well below the median of the other jurisdictions for both single-family and retail. The updated fees are at the high end of what the other 12 jurisdictions currently charge. Multi-family and office fee comparisons are not shown, but are similar. Industrial fees are not going up much in this update.

Figure 3. Comparative Transportation Fees, Colorado Jurisdictions



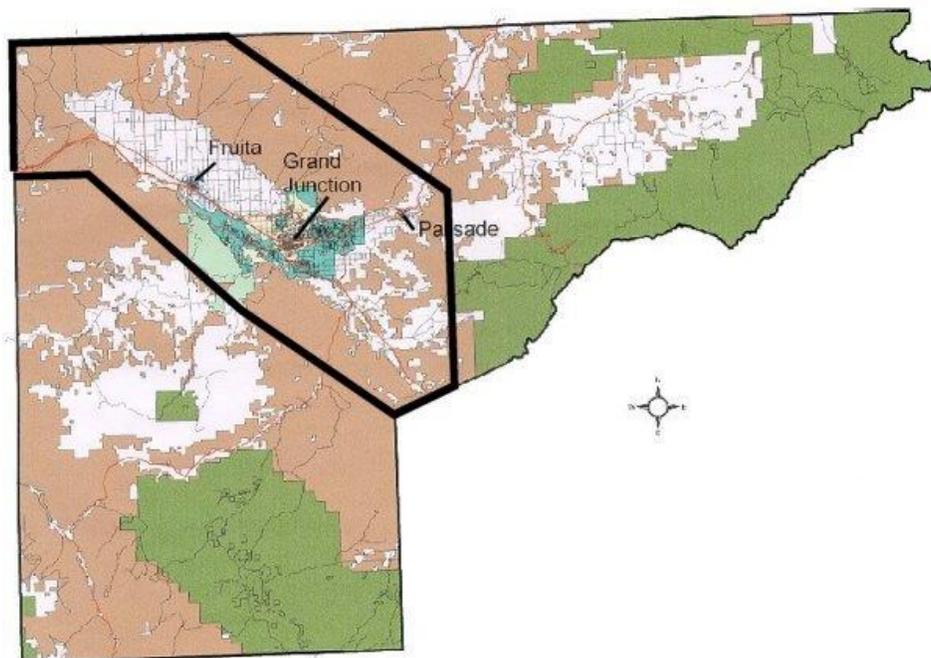
SERVICE AREAS

There are two kinds of geographic areas in impact fee systems: service areas and benefit districts. A service area is an assessment area that is served by a defined group of capital facilities and subject to a uniform impact fee schedule. A benefit district is an area within which fees collected are earmarked to be spent.

Generally, transportation impact fees tend to have a single service area and a uniform fee schedule, whether at the municipal level or the regional, county-wide level. That is because the arterial road system is designed to move traffic from one part of a community to another, and improvements to this system are generally of community-wide benefit. In some communities, major collectors may function as part of the arterial system as well.

The transportation impact fees apply only in the most rapidly developing area of the County. The boundaries of the Grand Valley Airshed as defined by the Colorado Department of Health for the purposes of monitoring air pollution is used as the transportation impact fee service area. Based on the 6,000-foot elevation line on the valley walls, the Airshed defines the developing area in and around the municipalities of Grand Junction, Palisade and Fruita. This transportation impact fee service area is about one-quarter of the area of the entire county, including roughly twice as much privately-owned land area as the area used in regional transportation planning. This area continues to be appropriate as the boundary of the service area for the transportation impact fees (see Figure 4).

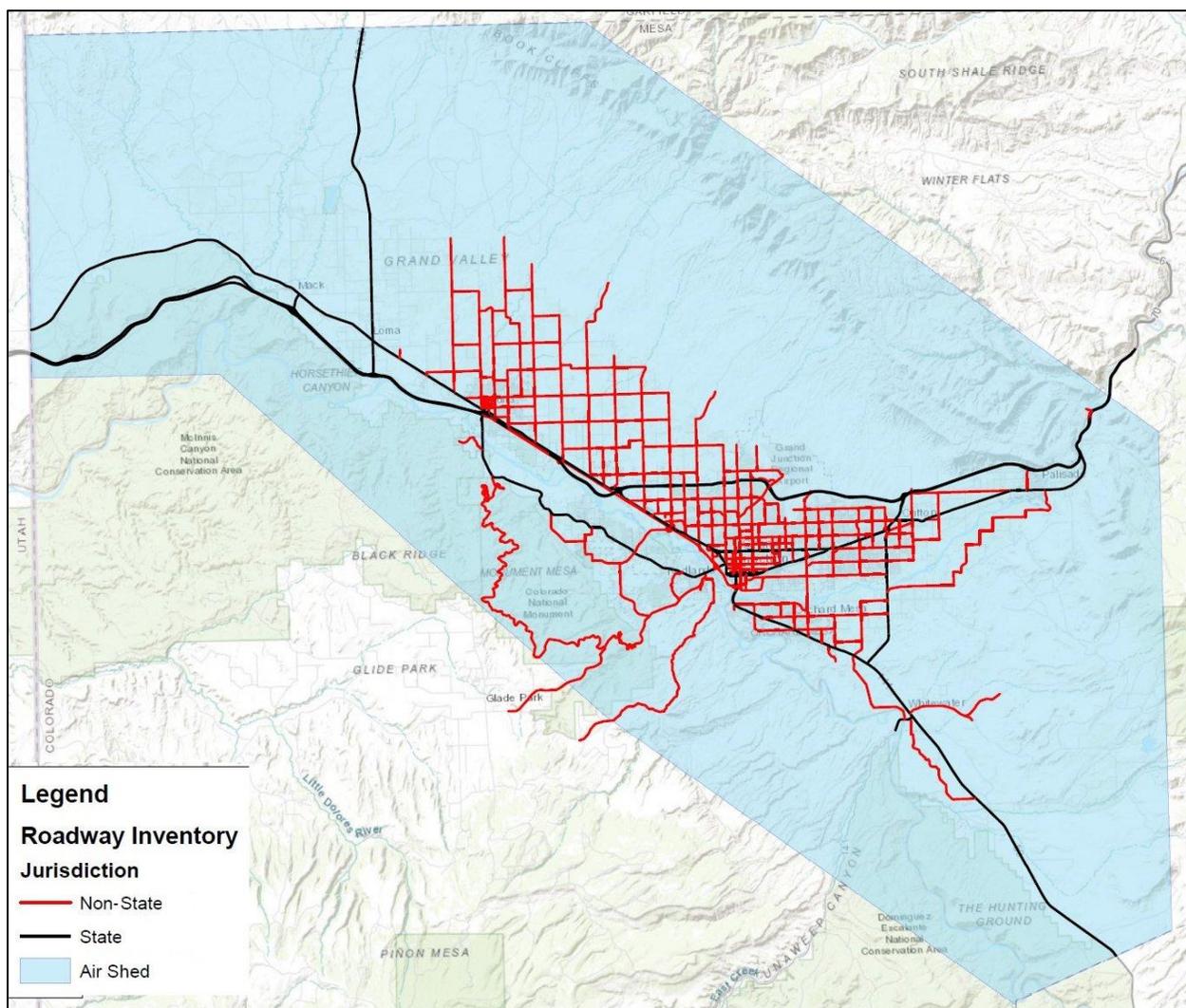
Figure 4. Transportation Impact Fee Service Area



MAJOR ROADWAY SYSTEM

A transportation impact fee system should include a clear definition of the major roadway system that is to be funded with the impact fees. The major roadway system consists of all state and federal highways (excluding I-70), principal arterials (e.g., 24 Road, Patterson Road), minor arterials, and major collector roads within the transportation impact fee service area (illustrated in Figure 5). Other roads will not be funded with transportation impact fees, nor will developer improvements to roads not included in the major roadway system be eligible for credits against the transportation impact fees. A detailed listing of the current road segments included in the major roadway system is provided in Table 18 in Appendix A.

Figure 5. Major Roadway System



TRAVEL DEMAND

The travel demand generated by specific land use types in Mesa County is a product of three factors: 1) trip generation, 2) percent new trips, and 3) average trip length. The first two factors are well documented in the professional literature – the average trip generation characteristics identified in studies of communities around the nation should be reasonably representative of trip generation characteristics in Mesa County. In contrast, trip lengths are much more likely to vary between communities, depending on the geographic size and shape of the community and its major roadway system.

Trip Generation

Trip generation rates are based on information published in the most recent edition of the Institute of Transportation Engineers' (ITE) Trip Generation manual. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trip ends. To avoid over counting, all trip rates are divided by two. This allocates travel equally between the origin and destination of the trip and avoids double charging. This update utilizes the most current edition of the ITE manual (the 10th edition published in 2017).

New Trip Factor

Trip rates must also be adjusted by a “new trip factor” to exclude pass by and diverted-linked trips. This adjustment is intended to reduce the possibility of over-counting by only including primary trips generated by the development. Pass by trips are those trips that are already on a particular route for a different purpose and simply stop at a development on that route. For example, a stop at a convenience store on the way home from the office is a pass by trip for the convenience store. A pass by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted-linked trip is similar to a pass by trip, but a diversion is made from the regular route to make an interim stop. The reduction for pass by and diverted-linked trips is drawn from ITE manual and other published information.

Average Trip Length

In the context of a transportation impact fee based on a consumption-based methodology, it is important to determine the average length of a trip on the major roadway system within Mesa County. The average trip length can be determined by dividing the total vehicle-miles of travel (VMT) on the major roadway system by the total number of trips generated by existing development in the service area. Total VMT on the major roadway system is estimated by multiplying the length of each road segment by the current traffic volume on that segment and summing for the entire system. Total trips can be estimated by multiplying existing land uses by the appropriate trip generation rates (adjusted for new trip factors and divided by two) and summing for all existing development in the service area.

Existing land use information was compiled for all jurisdictions within the transportation impact fee service area to determine an average trip length. Existing land uses in each of the general categories are multiplied by average daily trip generation rates and summed to determine a reasonable estimate of total daily trips within the service area. As shown in Table 4, existing land uses within the transportation impact fee service area generate approximately 428,000 average daily trips.

Table 4. Existing Average Daily Trips

Land Use Type	ITE Code	Unit	Existing Units	Trips/Unit	Daily Trips
Single-Family Detached	210	Dwelling	44,535	4.72	210,205
Multi-Family	220/221	Dwelling	11,383	3.19	36,312
Subtotal, Residential			55,918		246,517
Hotel/Motel	310/320	Rooms	3,806	2.92	11,114
Commercial	820	1,000 Sq. Ft.	13,754	8.30	114,158
Office	710	1,000 Sq. Ft.	3,028	4.87	14,746
Industrial	130	1,000 Sq. Ft.	3,655	1.68	6,140
Warehousing	150	1,000 Sq. Ft.	6,130	0.87	5,333
Public/Institutional	620	1,000 Sq. Ft.	8,999	3.32	29,877
Subtotal, Nonresidential			35,566		181,368
Total					427,885

Source: Existing development in service area from Mesa County GIS, March 12, 2018; trips per unit from Table 7.

A reasonable estimate of Mesa County’s average trip length can be derived by dividing total daily VMT on the major roadway system by the total number of daily trips generated by existing development within the service area. This calculation, presented in Table 5, indicates that the average trip length on the major roadway system is about 5.5 miles.

Table 5. Average Trip Length

Daily VMT on Major Roads	2,347,636
÷ Daily Trips in Service Area	427,885
Average Trip Length (miles)	5.49

Source: VMT from Table 18; trips from Table 4.

Average trip lengths by trip purpose for the western region are available from the U.S. Department of Transportation’s 2017 *National Household Travel Survey*. In addition, a residential trip length is determined, using a weighting of 20 percent work trips and 80 percent average trips. The average trip length on the major roadway system is 62.6% of the regional average trip length. Using this ratio, reasonable trip lengths were derived for specific trip purposes, including home-to-work trips, shopping, school/church and other personal trips, as shown in Table 6.

Table 6. Average Trip Lengths by Trip Purpose

Trip Purpose	Regional	Local Ratio	Local
	Trip Length (miles)		Trip Length (miles)
To or from work	10.77	0.626	6.74
Residential	9.16	0.626	5.73
Doctor/Dentist	9.42	0.626	5.90
School/Church	5.01	0.626	3.14
Family/Personal	6.00	0.626	3.76
Shopping	6.34	0.626	3.97
Average of All Trip Purposes*	8.76	0.626	5.49

* weighted (not simple average of trip purposes shown)
 Source: Regional average trip lengths for the western Census region from US Department of Transportation, *National Household Travel Survey*, 2017; regional residential trip length estimated based on weighting of 20% work trips and 80% average trips (20% work trip factor based on 2016 5-year U.S. Census sample data for Mesa County showing the average dwelling unit has 0.91 workers, and 0.91 work trips per unit is 20% of average trips per unit, derived from Table 4); average local trip length from Table 5; ratio is average local to regional trip length; local trip length by purpose is product of regional trip length and local ratio.

Travel Demand Summary

The result of combining trip generation rates, new trip factors, average trip lengths and the local adjustment factor is the travel demand schedule. The travel demand schedule establishes the average daily vehicle-miles of travel (VMT) generated by various land use types per unit of development in the service area. The updated demand schedule reflects updated trip generation rates from the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th edition, 2017. Average trip lengths are updated with the 2017 *National Household Travel Survey*. The adjustment factor ensures that the VMT generated by existing land uses does not exceed current observed VMT on the major roadway system. The updated travel demand schedule is presented in Table 7. For each land use, daily VMT is a factor of trip rate, trip length, new trip factor, and the local adjustment factor.

Some modifications to the land use categories are made in this update to better reflect available data and to simplify the process of fee determination and collection. Recommended definitions of all the categories are provided in Appendix B.

- The current four shopping center size categories are combined into a single retail/commercial category. It is based on average trip characteristics for shopping centers, which tend to include a relatively broad mix of commercial uses. While trip generation rates are available for shopping centers by size, data on new trip factors and average trip lengths by size are harder to come by. Trip generation rates tend to go down by shopping center size, but this is counterbalanced by fewer pass by trips and longer trip lengths. The average shopping center rate is the appropriate default for a wide range of retail and commercial uses not specifically identified in the fee schedule. Health club is merged into the new “Shopping Center/Commercial” category because the ITE manual does not have a daily trip generation rate, and the PM peak hour rate is similar to shopping center.

- The current two office categories by building size are combined into a single general office category, for the same reasons of data availability and counterbalancing applicable to shopping centers.
- Two new categories have been added: animal hospital/vet clinic and public/institutional. The new ITE manual now has an average daily trip rate for animal hospital. The public/institutional category, based on trip data for junior/community college, is intended to provide a default category for other public/institutional uses not specifically listed in the fee schedule.
- The sit-down and fast food restaurant categories have been renamed “standard” and “drive-through,” and are defined by whether they have drive-through/drive-in facilities. This provides an administratively simple way to distinguish between them and is consistent with the ITE category from which the fast food trip rate is derived.
- Church has been renamed “Place of Worship” to better reflect its nondenominational character. Industrial park has been renamed “Industrial” to reflect its broader applicability.
- Finally, several additional residential subcategories are provided as alternatives to adopting the broader single-family detached and multi-family categories. In addition, two categories are added for senior adult housing.

The updated travel demand schedule is presented in Table 7 on the following page.

Table 7. Travel Demand Schedule

Land Use Type	ITE Code	Unit	Trips	% New	Miles	VMT
Single-Family Detached	210	Dwelling	4.72	100%	5.73	27.05
<1,250 sq. ft. of living area	210	Dwelling	2.27	100%	5.73	13.01
1,250 - 1,649 sq. ft. of living area	210	Dwelling	3.79	100%	5.73	21.72
1,650 - 2,299 sq. ft. of living area	210	Dwelling	4.41	100%	5.73	25.27
2,300 or more sq. ft. of living area	210	Dwelling	5.96	100%	5.73	34.15
Multi-Family (including townhome)	220/221	Dwelling	3.19	100%	5.73	18.28
Multi-Family, Low-Rise (1-2 stories)	220	Dwelling	3.66	100%	5.73	20.97
Multi-Family, Mid-Rise (3-10 stories)	221	Dwelling	2.72	100%	5.73	15.59
Townhouse	230	Dwelling	2.90	100%	5.73	16.62
Senior Adult Housing - Detached	251	Dwelling	2.13	100%	5.73	12.20
Senior Adult Housing - Attached	252	Dwelling	1.85	100%	5.73	10.60
Mobile Home/RV Park	240	Pad	2.50	100%	5.73	14.33
Hotel/Motel	310/320	Room	2.92	100%	5.73	16.73
Shopping Center/Commercial	820	1,000 sf	18.87	44%	3.97	32.96
Auto Sales/Service	840	1,000 sf	13.92	67%	3.97	37.03
Bank, Drive-In	912	1,000 sf	50.01	37%	3.97	73.46
Convenience Store w/Gas Sales	853	1,000 sf	312.10	17%	1.99	105.58
Golf Course	430	Hole	15.19	90%	3.76	51.40
Movie Theater	444	1,000 sf	39.04	90%	3.76	132.11
Restaurant, Standard	931	1,000 sf	41.92	38%	3.76	59.90
Restaurant, Drive-Through	934	1,000 sf	235.47	30%	1.88	132.81
Office, General	710	1,000 sf	4.87	100%	5.49	26.74
Office, Medical	720	1,000 sf	17.40	100%	5.90	102.66
Animal Hospital/Vet Clinic	650	1,000 sf	10.75	100%	5.90	63.43
Hospital	610	1,000 sf	5.36	100%	5.90	31.62
Nursing Home	620	1,000 sf	3.32	100%	3.76	12.48
Place of Worship	560	1,000 sf	3.47	100%	3.14	10.90
Day Care Center	565	1,000 sf	23.81	24%	3.14	17.94
Elementary/Secondary School	520/522/530	1,000 sf	8.96	24%	3.14	6.75
Public/Institutional	540	1,000 sf	10.12	48%	3.14	15.25
Industrial	130	1,000 sf	1.45	100%	5.73	8.31
Warehouse	150	1,000 sf	0.87	100%	5.73	4.99
Mini-Warehouse	151	1,000 sf	0.75	100%	5.73	4.30

Source: 1-way trips are ½ of trip ends from Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017 (single-family by unit size from Table 23 in Appendix E); new trip percentages for retail/commercial uses from ITE, *Trip Generation Handbook*, 3rd Edition, 2017; new trip percentage for day care and schools based on Preston Hitchens, "Trip Generation of Day Care Centers," *1990 ITE Compendium*; average trip lengths from Table 6 (convenience store is one half retail, drive-through restaurant is one-half standard restaurant); VMT is product of trip rate, percent new trips, and trip length.

Comparisons of existing and updated travel demand factors are shown in Table 8. Travel demand per unit of development by land use type is lower for most land uses in this update. The change in travel demand per unit by land use exhibits considerable variation, ranging from a decline of 68% for warehouse to an increase of 7% for movie theater.

Table 8. Travel Demand Comparison

Land Use Type	Unit	VMT per Unit		Percent Change
		2002	Updated	
Single-Family Detached	Dwelling	29.70	27.05	-9%
Multi-Family	Dwelling	20.59	18.28	-11%
Mobile Home/RV Park	Pad	14.94	14.33	-4%
Hotel/Motel	Room	27.96	16.73	-40%
Shopping Center/Commercial	1,000 sf	44.91	32.96	-27%
Auto Sales/Service	1,000 sf	43.97	37.03	-16%
Bank, Drive-In	1,000 sf	73.94	73.46	-1%
Convenience Store w/Gas Sales	1,000 sf	106.28	105.58	-1%
Golf Course	Hole	69.15	51.40	-26%
Movie Theater	1,000 sf	122.94	132.11	7%
Restaurant, Standard	1,000 sf	59.82	59.90	0%
Restaurant, Drive-Through	1,000 sf	133.96	132.81	-1%
Office, General	1,000 sf	33.80	26.74	-21%
Office, Medical	1,000 sf	103.00	102.66	0%
Hospital	1,000 sf	47.83	31.62	-34%
Nursing Home	1,000 sf	13.40	12.48	-7%
Place of Worship	1,000 sf	22.80	10.90	-52%
Day Care Center	1,000 sf	47.55	17.94	-62%
Elementary/Secondary School	1,000 sf	7.45	6.75	-9%
Industrial	1,000 sf	21.57	8.31	-61%
Warehouse	1,000 sf	15.37	4.99	-68%
Mini-Warehouse	1,000 sf	5.38	4.30	-20%

Source: 2002 VMT from Duncan Associates, *Transportation Impact Fee Study*, September 2002; updated VMT from Table 7.

COST PER SERVICE UNIT

There are two components to determining the average cost to add a unit of capacity to the major roadway system: the cost of a set of improvements, and the capacity added by those improvements. This section describes both components used to calculate the average cost per service unit.

This update excludes right-of-way (ROW) costs from the fee calculation. The exclusion of ROW eliminates the most variable component of project costs, keeps the fees lower, and allows jurisdictions the option of not providing developer credit for ROW dedication.

Average Cost per Lane-Mile

The first step is to determine the cost to add an additional lane-mile of roadway. While transportation impact fees can be used to pay for a variety of types of improvements that expand the capacity of the major roadway system without adding lanes, such as intersection improvements and signalization, it is difficult to quantify the vehicle-miles of capacity (VMC) added by these types of improvements. The cost per lane-mile can be calculated based on a representative list of historical or planned improvements. The average cost per lane-mile developed for this study uses a weighted average of urban and rural road improvements. Right-of-way costs have been excluded in this update.

Costs for improving urban road sections are drawn from cost data provided by the City of Grand Junction. The estimated costs of the City's planned improvements over the next ten years are summarized in Table 9. Mesa County engineers confirm these costs are reasonably representative of urban road capacity expansion in other parts of the county. None of the projects include major structures, such as overpasses, elevated ramps or bridges. As shown, the weighted average cost of urban road expansions is about \$3.3 million per lane-mile.

Table 9. Urban Average Cost per Lane-Mile

Road	From	To	Miles	Lanes		New Ln-Mi.	Project Cost	Cost per Lane-Mile
				Ex.	Fut.			
24 Road	Patterson	I-70	1.20	3	5	2.40	\$8,100,000	\$3,375,000
25 Road	I-70B	F 1/4	0.75	3	5	1.50	\$7,290,000	\$4,860,000
25 Road	F 1/4 Road	G Road	0.75	2	3	0.75	\$3,060,000	\$4,080,000
26 Road	Patterson	H Road	2.00	2	3	2.00	\$6,480,000	\$3,240,000
26 1/2 Road	Horizon	Summerhill	2.20	2	3	2.20	\$8,019,000	\$3,645,000
28 1/4 Road	Patterson	Hawthorne	0.38	0	2	0.76	\$390,000	\$513,158
28 3/4 Road	North Ave	Orchard Ave	0.50	2	3	0.50	\$4,500,000	\$9,000,000
29 Rd Pkwy	F Road	I-70	1.00	2	5	3.00	\$9,000,000	\$3,000,000
Crosby Ave	25 1/2 Rd	Main St	0.63	2	3	0.63	\$4,025,700	\$6,390,000
D 1/2 Road	29 Road	30 Road	1.00	2	3	1.00	\$4,500,000	\$4,500,000
F 1/2 Pkwy	I-70B	F 1/4 Rd	1.70	0	3	5.10	\$9,720,000	\$1,905,882
G Road	24 Road	27 Road	3.00	2	3	3.00	\$10,700,000	\$3,566,667
Total			15.11			22.84	\$75,784,700	\$3,318,069

Source: Planned projects descriptions and costs in 2018 dollars from Trent Prall, Public Works Director, City of Grand Junction, September 19, 2018; cost per lane-mile is project cost divided by new lane-miles.

The cost of recent County rural road projects constructed or estimated in engineering studies are summarized in Table 10. All these projects or studies are from about three years ago and have been adjusted to current dollars. The costs do not include any bridge work, which the County often does as part of such projects. The list does not include any urban projects, or projects in the high country, which tend to cost quite a bit more. Many of these projects do not actually add new travel lanes, but rather the equivalent amount of pavement provided by new shoulders. The resulting average rural road cost is about \$1.68 million per lane-mile in current dollars.

Table 10. Rural Average Cost per Lane-Mile

Road	From	To	Project Description	Miles	Lanes		New Ln-Mi.	Project Cost	Cost/ Lane-Mile
					Ex.	Fut.			
22 Road	Ranchman's Ditch	H Road	Added 3rd lane w/shldrs	0.27	2	3	0.27	\$948,300	\$3,512,222
22 Road	H Road	H 1/2 Road	Added 3rd lane w/shldrs	0.41	2	3	0.41	\$1,046,400	\$2,552,195
22 Road	H 1/2 Road	I Road	Added 6' shoulders	0.59	2	3	0.59	\$997,350	\$1,690,424
22 Road	I Road	GVIC Canal	Added 6' shoulders	0.66	2	3	0.66	\$1,008,250	\$1,527,652
22 Road	GVIC Canal	J 1/2 Road	Added 6' shoulders	0.70	2	3	0.70	\$1,057,300	\$1,510,429
22 Road	J 1/2 Road	K Road	Added 6' shoulders	0.58	2	3	0.58	\$784,800	\$1,353,103
K Road	19 Road	19 1/2 Road	Added 6' shoulders	0.61	2	3	0.61	\$833,850	\$1,366,967
K Road	19 1/2 Road	20.2 Road	Added 6' shoulders	0.70	2	3	0.70	\$1,286,200	\$1,837,429
K Road	Adobe	20.8 Road	Added 6' shoulders	0.63	2	3	0.63	\$693,240	\$1,100,381
Total				5.15			5.15	\$8,655,690	\$1,680,717

Source: Mesa County Engineering, October 5, 2018; original costs inflated by the change in the CDOT Construction Cost Index over the last three years; cost per lane-mile is project cost divided by new lane-miles.

Average urban and rural costs per lane-mile identified above are converted to a weighted average cost per lane-mile in Table 11 based on the distribution of existing lane-miles. The weighted average is about \$2.8 million per lane-mile.

Table 11. Weighted Average Cost per Lane-Mile

	Urban	Rural	Total
Average Cost per Lane-Mile	\$3,318,069	\$1,680,717	n/a
x Percent of Lane-Miles	66.2%	33.8%	100.0%
Weighted Average Cost per Lane-Mile	\$2,196,562	\$568,082	\$2,764,644

Source: Average cost per lane-mile from Table 9 (urban) and Table 10; distribution of urban and rural major roadway lane-miles within the service area from Mesa County GIS, September 28, 2018.

Cost per Service Unit Summary

Dividing the weighted average cost per lane-mile by the average daily capacity per lane yields an average cost of per vehicle-mile of capacity or VMC. Under the modified consumption-based methodology, the cost per VMC needs to be multiplied by the VMC/VMT ratio (see discussion in Appendix D: Methodology) to determine the cost per vehicle-mile of travel or VMT. As shown in Table 12, the cost per service unit to accommodate the traffic generated by new development is \$353 per VMT. Note that this updated cost per service unit excludes ROW costs.

Table 12. Transportation Cost per Service Unit

Weighted Average Cost per Lane-Mile	\$2,764,644
÷ Average Daily Capacity per Lane	7,827
Average Cost per Vehicle-Mile of Capacity (VMC)	\$353
x VMC/VMT Ratio	1.00
Cost per Vehicle-Mile of Travel (VMT)	\$353

Source: Weighted average cost per lane-mile from Table 11; average capacity per lane derived from Table 18 (total VMC ÷ total lane-miles); VMC/VMT ratio is recommended ratio from Table 19.

NET COST PER SERVICE UNIT

As discussed in Appendix C: Legal Framework, revenue credits may be warranted for existing deficiencies, outstanding debt, the availability of State/Federal funding, and the historical use of local funding for major roadway expansion. There are no existing deficiencies from the perspective of the transportation impact fees because the fees are based on a level of service that is lower than what is currently provided to existing development.

The City of Grand Junction is the only one of the four jurisdictions that has any outstanding debt on existing major roadways. The City has about \$25 million in outstanding debt for the Riverside Parkway widening. However, Riverside Parkway accounts for only about 4% of the total excess capacity in the major roadway system that is available for new development. The fees that Grand Junction collects could be used to retire this debt, although that is not the City's current practice. Consequently, no revenue credit is required for the outstanding debt.

While not necessarily required, as discussed in the Revenue Credits section of Appendix C, revenue credits will be calculated for direct state and federal funding for road improvements, and for local government's historical use of funding for capacity-expanding improvements.

Direct funding of road improvements with State and Federal funds is programmed through the *Transportation Improvement Program (TIP)* prepared by the Grand Valley Metropolitan Planning Organization. The current TIP includes \$2.7 million in annual funding over next four years for improvements that are capacity-expanding. These improvements are summarized in Table 13.

Table 13. Average Annual State/Federal Road Capacity Funding, FY 2019-2022

Facility	Location	Description	Amount
I-70B	24 Rd-15th St	Widening	\$2,000,000
US 6	Clifton-Palisade	Preliminary Engineering	\$7,200,000
US 6	Fruita-I-70B	Highway & Intersection Improvements	\$1,650,000
Total State/Federal Funding			\$10,850,000
÷ Number of Years			4
Average Annual Funding			\$2,712,500

Source: Grand Valley Metropolitan Planning Organization, *Transportation Improvement Program, State FY 2019 to 2022*, amended October 22, 2018.

In addition to direct state and federal funding for road improvements, other state highway revenues, primarily highway user taxes and motor vehicle registration fees, are allocated to local jurisdictions and earmarked for transportation-related expenditures. Other major local sources of revenue for road expenditures include Mesa County's sales tax and Grand Junction's general fund. The consultant analyzed the four jurisdictions' annual reports for the last five years to determine how much is spent on right-of-way, new roads, and roadway capacity improvements. As can be seen from Table 14, local governments in Mesa County are spending about \$10 million annually on capacity improvements.

Table 14. Average Annual Local Road Capacity Expenditures

Jurisdiction	5-Yr. Avg.
Mesa County	\$7,184,091
City of Grand Junction	\$2,431,028
City of Fruita	\$441,301
Town of Palisade	\$0
Total	\$10,056,420

Source: Local Highway Finance Reports, 2012-2016 for Mesa County and Grand Junction, 2013-2017 for Fruita and Palisade.

The amount of the revenue credit is determined by first dividing the total annual funding available for road capacity improvements by total VMT on the major roadway system, then multiplying by a present value factor. This results in a credit per service unit that is the current equivalent of the future 30-year stream of funding that will be available to help defray the growth-related costs of improving the major roadway system.

Table 15. Transportation Funding Credit

Annual State/Federal Capital Funding	\$2,712,500
Annual Local Capital Expenditures	\$10,056,420
Total Annual Capital Funding	\$12,768,920
÷ Daily VMT on Major Road System	2,347,636
Annual Funding per Daily VMT	\$5.44
x Present Value Factor (30 Years)	18.86
Funding Credit per Daily VMT	\$103

Source: State/Federal funding from Table 13; local expenditures from Table 14; existing VMT from Table 18; present value factor is based on a discount rate of 3.30%, which is the national average yield on AAA 30-year municipal bonds from fmsbonds.com on November 27, 2018.

The net cost per service unit is the cost per VMT less the revenue credit for non-impact fee funding. As shown in Table 16, the net cost per service unit is \$250 per VMT.

Table 16. Transportation Net Cost per Service Unit

Cost per Vehicle-Mile of Travel	\$353
– Credit per Vehicle-Mile of Travel	-\$103
Net Cost per Vehicle-Mile of Travel	\$250

Source: Cost per VMT from Table 12; credit from Table 15.

NET COST SCHEDULE

The updated transportation impact fees for the various land use categories are shown in Table 17. Fees shown exclude ROW costs. The impact fee calculation for each land use category is the product of daily VMT per development unit on the major roadway system and the net cost per VMT, which takes into account the average cost to add roadway capacity as well as future revenue that will be generated by new development to help offset those costs. The comparison of the updated fees with current fees is presented in the Executive Summary.

Table 17. Updated Transportation Impact Fees

Land Use Type	Unit	VMT/ Unit	Net Cost/ VMT	Net Cost/ Unit
Single-Family Detached	Dwelling	27.05	\$250	\$6,763
<1,250 sq. ft. of living area	Dwelling	13.01	\$250	\$3,253
1,250 - 1,649 sq. ft. of living area	Dwelling	21.72	\$250	\$5,430
1,650 - 2,299 sq. ft. of living area	Dwelling	25.27	\$250	\$6,318
2,300 or more sq. ft. of living area	Dwelling	34.15	\$250	\$8,538
Multi-Family (including townhome)	Dwelling	18.28	\$250	\$4,570
Multi-Family, Low-Rise (1-2 stories)	Dwelling	20.97	\$250	\$5,243
Multi-Family, Mid-Rise (3-10 stories)	Dwelling	15.59	\$250	\$3,898
Townhouse	Dwelling	16.62	\$250	\$4,155
Senior Adult Housing - Detached	Dwelling	12.20	\$250	\$3,050
Senior Adult Housing - Attached	Dwelling	10.60	\$250	\$2,650
Mobile Home/RV Park	Pad	14.33	\$250	\$3,583
Hotel/Motel	Room	16.73	\$250	\$4,183
Shopping Center/Commercial	1,000 sf	32.96	\$250	\$8,240
Auto Sales/Service	1,000 sf	37.03	\$250	\$9,258
Bank, Drive-In	1,000 sf	73.46	\$250	\$18,365
Convenience Store w/Gas Sales	1,000 sf	105.58	\$250	\$26,395
Golf Course	Hole	51.40	\$250	\$12,850
Movie Theater	1,000 sf	132.11	\$250	\$33,028
Restaurant, Standard	1,000 sf	59.90	\$250	\$14,975
Restaurant, Drive-Through	1,000 sf	132.81	\$250	\$33,203
Office, General	1,000 sf	26.74	\$250	\$6,685
Office, Medical	1,000 sf	102.66	\$250	\$25,665
Animal Hospital/Vet Clinic	1,000 sf	63.43	\$250	\$15,858
Hospital	1,000 sf	31.62	\$250	\$7,905
Nursing Home	1,000 sf	12.48	\$250	\$3,120
Place of Worship	1,000 sf	10.90	\$250	\$2,725
Day Care Center	1,000 sf	17.94	\$250	\$4,485
Elementary/Secondary School	1,000 sf	6.75	\$250	\$1,688
Public/Institutional	1,000 sf	15.25	\$250	\$3,813
Industrial	1,000 sf	8.31	\$250	\$2,078
Warehouse	1,000 sf	4.99	\$250	\$1,248
Mini-Warehouse	1,000 sf	4.30	\$250	\$1,075

Source: VMT per unit from Table 17; net cost per VMT from Table 16.

APPENDIX A: MAJOR ROAD INVENTORY

Table 18. Existing Major Roadway Inventory

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
1 9/10 Rd	Highline Canal Rd	I-70	COL	0.588	2	12,000	97	7,056	57
4th Ave	S of S 7th St	S 9th 9th St	COL	0.558	2	12,000	228	6,696	127
14 Rd	Hwy 6 & 50	Node	COL	0.340	2	12,000	193	4,080	66
15 Rd	Hwy 6 & 50	L Rd	COL	0.114	2	12,000	151	1,368	17
15th St	North Ave	Patterson Rd	COL	0.998	2	12,000	838	11,976	836
16 Rd	Hwy 6 nd 50	Q Rd	COL	5.770	2	12,000	638	69,240	3,681
17 1/2 Rd	Applewood Dr	N 3/10 Rd	COL	2.827	2	12,000	1,502	33,924	4,246
17 Rd	K Rd	O Rd	COL	3.996	2	12,000	562	47,952	2,246
18 1/2 Rd	K Rd	N 3/10 Rd	COL	3.669	2	12,000	2,382	44,028	8,740
18 Rd	K 6/10 Rd	Node	COL	3.142	2	12,000	75	37,704	236
19 Rd	Hwy 6 and 50	Node	COL	6.690	2	12,000	3,349	80,280	22,405
20 1/2 Rd	Spoon Ct	E 3/4 Rd	COL	0.849	2	12,000	286	10,188	243
20 Rd	E 3/4 Rd	N Rd	COL	5.663	2	12,000	1,612	67,956	9,129
21 1/2 Rd	Hwy 6 & 50	I Rd	COL	0.979	2	12,000	536	11,748	525
21 Rd	Node	Node	COL	8.129	2	12,000	1,423	97,548	11,568
22 Rd	Hwy 6 & 50	Node	COL	5.128	2	12,000	146	61,536	749
23 Rd	Hwy 6 & 50	Orchard Ave	COL	5.600	2	12,000	2,928	67,200	16,397
24 1/2 Rd	Hwy 6 & 50	Patterson Rd	MA	0.301	4	40,000	11,141	12,040	3,353
24 1/2 Rd	Patterson Rd	F 3/8 Rd	COL	0.368	2	18,000	9,238	6,624	3,400
24 1/2 Rd	F 3/8 Rd	H Rd	COL	1.629	2	12,000	4,691	19,548	7,642
24 Rd	Node	Node	PA	0.466	2	18,000	5,041	8,388	2,349
24 Rd	Patterson Rd	I-70 Ramp	PA	1.290	2	26,000	14,869	33,540	19,181
24 Rd	I-70 Ramp	I-70 Ramp	COL	0.079	4	24,000	8,730	1,896	690
24 Rd	I-70 Ramp	K Rd	COL	3.438	2	12,000	6,335	41,256	21,780
25 1/2 Rd	Independent Ave	Patterson Rd	COL	0.753	2	18,000	4,696	13,554	3,536
25 1/2 Rd	Patterson Rd	Fall Valley Ave	COL	0.267	2	12,000	2,672	3,204	713
25 1/2 Rd	Fall Valley Ave	Moonridge Dr	COL	0.544	2	18,000	1,795	9,792	976
25 1/2 Rd	Moonridge Dr	G Rd	COL	0.201	2	12,000	1,309	2,412	263
25 Rd	Hwy 6 And 50	Riverside Pkwy	PA	0.332	4	44,000	17,671	14,608	5,867
25 Rd	Hwy 6 & 50	Patterson Rd	MA	0.610	2	24,000	18,733	14,640	11,427
25 Rd	Patterson Rd	Foresight Cir	MA	0.169	2	16,000	9,182	2,704	1,552
25 Rd	Foresight Cir	F 1/2 Rd	PA	0.326	2	18,000	9,066	5,868	2,956
25 Rd	F 1/2 Rd	Hayes Dr	MA	0.248	2	16,000	8,493	3,968	2,106
25 Rd	Hayes Dr	G Rd	MA	0.254	2	24,000	7,228	6,096	1,836
25 Rd	G Rd	Node	COL	4.344	2	12,000	2,728	52,128	11,850
26 1/2 Rd	Horizon Dr	H Rd	MA	1.740	2	16,000	254	27,840	442
26 1/2 Rd	H Rd	I Rd	COL	0.998	2	12,000	254	11,976	253
26 Rd	Patterson Rd	G 1/2 Rd	MA	1.453	2	16,000	6,526	23,248	9,482
26 Rd	G 1/2 Rd	Node	MA	0.110	2	24,000	4,332	2,640	477
26 Rd	Node	H Rd	MA	0.435	2	16,000	4,332	6,960	1,884
26 Rd	H Rd	I Rd	COL	0.999	2	12,000	1,113	11,988	1,112
27 1/2 Rd	Patterson Rd	Horizon Dr	COL	1.020	2	18,000	9,077	18,360	9,259
27 1/4 Rd	H Rd	Node	COL	0.926	2	12,000	52	11,112	48
27 Rd	B Rd	C Rd	COL	0.902	2	12,000	2,829	10,824	2,552
27 Rd	G Rd	H Rd	MA	0.999	2	16,000	3,138	15,984	3,135
28 1/2 Rd	Hwy 50	Orchard Ave	COL	1.944	2	12,000	6,159	23,328	11,973
28 1/4 Rd	North Ave	Orchard Ave	COL	0.504	2	18,000	2,666	9,072	1,344

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Table 18. Existing Major Roadway Inventory (continued)

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
28 1/4 Rd	Orchard Ave	Patterson Rd	MA	0.498	4	32,000	7,803	15,936	3,886
28 1/4 Rd	Patterson Rd	Park Dr	COL	0.210	2	18,000	2,666	3,780	560
28 Rd	B 1/2 Rd	UnawEEP Ave	COL	0.504	2	12,000	382	6,048	193
28 Rd	I-70 B	Node	MA	0.282	2	16,000	5,494	4,512	1,549
28 Rd	Node	Orchard Ave	MA	0.788	2	24,000	5,494	18,912	4,329
28 Rd	Patterson Rd	Ridge Dr	COL	0.498	2	18,000	3,302	8,964	1,644
28 Rd	Ridge Dr	Cortland Ave	COL	0.252	2	12,000	1,912	3,024	482
29 1/2 Rd	Hwy 50	F 1/2 Rd	COL	2.006	2	12,000	481	24,072	965
29 3/4 Rd	Old WW Rd	Hwy 50	COL	0.724	2	12,000	21	8,688	15
29 Rd	Hwy 50	UnawEEP Ave	COL	0.987	2	18,000	3,125	17,766	3,084
29 Rd	UnawEEP Ave	D Rd	PA	1.276	2	26,000	14,078	33,176	17,964
29 Rd	D Rd	D 1/2 Rd	PA	0.413	4	44,000	15,766	18,172	6,511
29 Rd	D 1/2 Rd	North Ave	PA	0.590	4	36,000	22,096	21,240	13,037
29 Rd	North Ave	Patterson Rd	MA	0.998	2	24,000	10,566	23,952	10,545
29 Rd	Patterson Rd	29 Rd	PA	0.876	2	18,000	5,850	15,768	5,125
29 Rd	G Rd	N I-70 Frontg Rd	COL	0.424	2	12,000	5	5,088	2
2nd St	Front St	F Rd	COL	0.276	2	12,000	1,410	3,312	389
30 Rd	Hwy 50	B 1/2 Rd	COL	1.231	2	12,000	766	14,772	943
30 Rd	D Rd	E Rd	MA	0.878	2	24,000	7,489	21,072	6,575
30 Rd	E Rd	Patterson Rd	MA	1.120	4	40,000	17,250	44,800	19,320
30 Rd	Patterson Rd	F 1/2 Rd	COL	0.497	2	12,000	6,188	5,964	3,075
31 1/2 Rd	E Rd	F 1/2 Rd	COL	1.456	2	12,000	3,895	17,472	5,671
31 Rd	Hwy 50	F 1/2 Rd	COL	4.399	2	12,000	1,440	52,788	6,335
32 Rd	I-70 B	Frontage Rd	MA	0.023	4	32,000	3,440	736	79
32 Rd	E 1/2 Rd	32 Rd	MA	0.217	4	40,000	5,896	8,680	1,279
32 Rd	32 Rd	F Rd	MA	0.246	2	16,000	6,713	3,936	1,651
32 Rd	F Rd	E 1/2 Rd	COL	0.500	2	12,000	2,518	6,000	1,259
32 1/2 Rd	E Rd	F Rd	COL	0.836	2	12,000	2,209	10,032	1,847
33 Rd	D 1/2 Rd	D 3/4 Rd	COL	0.249	2	12,000	1,877	2,988	467
33 Rd	D 3/4 Rd	E Rd	COL	0.751	2	18,000	369	13,518	277
33 Rd	E 1/2 Rd	Node	COL	1.672	2	12,000	91	20,064	152
34 1/2 Rd	C 1/2 Rd	D Rd	COL	0.504	2	12,000	1,319	6,048	665
34 Rd	E 1/4 Rd	G Rd	COL	1.757	2	12,000	48	21,084	84
35 1/2 Rd	E Rd	E 1/2 Rd	COL	0.497	2	12,000	454	5,964	226
35 Rd	34 1/2 Rd	E Rd	COL	1.435	2	12,000	1,319	17,220	1,893
36 Rd	E 1/2 Rd	F Rd	COL	0.496	2	12,000	454	5,952	225
37 1/4 Rd	F Rd	F 1/4 Rd	COL	0.243	2	12,000	1,079	2,916	262
37 3/10 Rd	G Rd	I-70	COL	0.777	2	12,000	2,168	9,324	1,685
38 Rd	Horse Mntn Rd	G Rd	COL	0.921	2	12,000	1,947	11,052	1,793
A 1/2 Rd	30 Rd	31 Rd	COL	0.999	2	12,000	182	11,988	182
American Way	Base Rock St	Maldonado St	COL	0.236	2	12,000	3867	2,832	913
B 1/2 Rd	Hwy 50	27 1/2 Rd	MA	0.208	2	24,000	4,382	4,992	911
B 1/2 Rd	27 1/2 Rd	32 Rd	MA	4.520	2	16,000	4382	72,320	19,807
B Rd	27 Rd	30 Rd	COL	3.055	2	12,000	2269	36,660	6,932
Base Rock	Node	Node	COL	0.556	2	18,000	4,509	10,008	2,507
Belford Ave	N 4th St	N 5th St	MA	0.092	4	16,000	1,447	1,472	133
Belford Ave	N 24th St	28 Rd	COL	0.199	2	12,000	3,642	2,388	725
Bookcliff Ave	26 1/2 Rd	N 12th St	COL	0.467	2	12,000	2,623	5,604	1,225
C 1/2 Rd	32 Rd	34 1/2 Rd	COL	2.549	2	12,000	1,656	30,588	4,221
C Rd	31 Rd	32 Rd	COL	0.998	2	12,000	128	11,976	128

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Table 18. Existing Major Roadway Inventory (continued)

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
Canon St	Node	Hwy 50	COL	0.221	2	12,000	2,839	2,652	627
Coffman Rd	Hwy 141	Broadway	COL	3.662	2	12,000	10	43,944	37
Colorado Ave	S 3rd St	S 7th St	COL	0.365	2	12,000	7,799	4,380	2,847
Cortland Ave	27 1/2 Rd	28 Rd	COL	0.500	2	12,000	2,735	6,000	1,368
Crosby Ave	American Way	Broadway	COL	0.465	2	12,000	2,367	5,580	1,101
Crossroads Blvd	27 Rd	Horizon Dr	MA	1.088	2	16,000	6,177	17,408	6,721
D 1/2 Rd	29 Rd	D 1/2 Ct	COL	0.245	2	18,000	7,050	4,410	1,727
D 1/2 Rd	D 1/2 Ct	30 1/4 Rd	COL	1.044	2	12,000	7,050	12,528	7,360
D 1/2 Rd	30 1/4 Rd	Node	COL	0.077	2	18,000	9,619	1,386	741
D 1/2 Rd	Node	33 Rd	COL	2.669	2	12,000	7,669	32,028	20,469
D Rd	Monument Rd	Rosevale Rd	COL	0.306	2	12,000	2,191	3,672	670
D Rd	Node	Node	MA	0.373	4	32,000	4,849	11,936	1,809
D Rd	Node	Node	MA	0.300	2	16,000	4,983	4,800	1,495
D Rd	Node	Riverside Pkwy	MA	0.044	4	32,000	4,983	1,408	219
D Rd	D Rd	Node	PA	0.054	2	26,000	12,164	1,404	657
D Rd	29 Rd	32nd Rd	MA	2.993	2	16,000	15,986	47,888	47,846
Desert Rd	Hwy 50	Hwy 141	COL	4.787	2	12,000	11	57,444	53
DS Rd	17 3/10 Rd	Rim Rock Dr	COL	4.883	2	12,000	979	58,596	4,780
E 1/2 Rd	30 Rd	36 Rd	MA	1.497	2	16,000	5,706	23,952	8,542
E 1/2 Rd	32 Rd	Aaron Ct	COL	1.606	2	12,000	3,642	19,272	5,849
E 1/4 Rd	33 Rd	34 Rd	COL	1.009	2	12,000	833	12,108	840
E 3/4 Rd	20 1/2 Rd	20 3/4 Rd	COL	0.247	2	12,000	996	2,964	246
E Aspen Ave	N Mesa St	N Peach St	COL	1.212	2	12,000	4,328	14,544	5,246
E Grand Ave	Hwy 6 And 50	S PINE St	COL	0.485	2	12,000	612	5,820	297
E Ottley Ave	N Mesa St	Node	COL	0.447	2	12,000	4,369	5,364	1,953
E Pabor Ave	N Mesa St	N Maple St	COL	0.249	2	12,000	846	2,988	211
E Rd	30 Rd	35 1/2 Rd	COL	3.539	2	12,000	10,048	42,468	35,560
Elm Ave	N 7th St	Houston Ave	COL	1.848	2	12,000	2,868	22,176	5,300
F Rd	I-70 B	33 Rd	PA	0.675	2	26,000	17,935	17,550	12,106
F Rd	33 Rd	33 1/2 Rd	PA	0.512	2	18,000	8,076	9,216	4,135
F Rd	31 Rd	33 1/2 Rd	PA	1.320	4	44,000	19,165	58,080	25,298
F Rd	33 1/2 Rd	37 1/4 Rd	COL	1.721	2	12,000	1,323	20,652	2,277
F 1/4 Rd	37 1/4 Rd	Horse Mntain Rd	COL	0.809	2	12,000	1,485	9,708	1,201
F 1/2 Rd	25 Rd	32 Rd	COL	4.041	2	12,000	2,078	48,492	8,397
Frontage Rd	Timber Falls Dr	Hwy 6 and 50	COL	0.777	2	12,000	2,992	9,324	2,325
Frontage Rd	31 1/2 Rd	32 Rd	MA	0.487	2	16,000	3,860	7,792	1,880
G Rd	Power Rd	Hwy 6 & 50	COL	0.048	2	12,000	3,338	576	160
G Rd	Hwy 6 & 50	Horizon Dr	MA	4.944	2	16,000	1,727	79,104	8,538
G Rd	33 Rd	Front St	COL	3.710	2	12,000	1,398	44,520	5,187
Grand Ave	N 1ST St	N 7th St	MA	0.532	4	40,000	19,966	21,280	10,622
Grand Ave	N 7th St	N 12th St	MA	0.466	2	24,000	8,449	11,184	3,937
Grand Ave	N 12th St	28 Rd	COL	1.009	2	12,000	6,344	12,108	6,401
Gunnison Ave	N 1st St	N 9th St	COL	0.706	2	12,000	6,335	8,472	4,473
Gunnison Ave	N 9th St	N 12th St	COL	0.290	2	18,000	7,753	5,220	2,248
Gunnison Ave	N 12th St	Mantlo Cir	COL	0.809	2	12,000	3,912	9,708	3,165
H Rd	21 Rd	26 1/2 Rd	COL	4.495	2	12,000	1,074	53,940	4,828
H Rd	26 1/2 Rd	Jamaica Dr	COL	0.204	2	18,000	4,329	3,672	883
H Rd	Jamaica Dr	North Crest Dr	COL	1.131	2	12,000	3,117	13,572	3,525
H Rd	North Crest Dr	Horizon Dr	COL	0.455	2	18,000	1,659	8,190	755
Horizon Dr	26 1/2 Rd	N 2th St	MA	0.670	2	16,000	7,489	10,720	5,018

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Table 18. Existing Major Roadway Inventory (continued)

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
O Rd	16 Rd	19 Rd	COL	1.999	2	12,000	185	23,988	370
Old 6 and 50	Node	2 8/10 Rd	MA	11.956	2	16,000	64	191,296	765
Orchard Ave	1st St	26 Rd	COL	2.016	2	12,000	4,826	24,192	9,729
Orchard Ave	28 Rd	30 Rd	MA	0.591	2	24,000	9,842	14,184	5,817
Orchard Ave	Normandy Dr	29 Rd	MA	0.397	2	16,000	8,059	6,352	3,199
Orchard Ave	29 Rd	29 1/2 Rd	MA	0.503	2	24,000	7,877	12,072	3,962
Orchard Ave	29 1/2 Rd	30 Rd	MA	0.500	2	16,000	5,282	8,000	2,641
Ottley Ave	Node	N Pine St	COL	0.300	2	12,000	2,779	3,600	834
Patterson Rd	Hwy 6 & 50	26 Rd	PA	2.417	4	44,000	8,723	106,348	21,083
Patterson Rd	26 Rd	Mira Vista Rd	PA	0.297	4	36,000	30,773	10,692	9,140
Patterson Rd	Mira Vista Rd	View Point Dr	PA	0.385	4	44,000	30,640	16,940	11,796
Patterson Rd	View Point Dr	Node	PA	0.209	4	36,000	28,741	7,524	6,007
Patterson Rd	Node	31 Rd	PA	4.108	4	44,000	26,667	180,752	109,548
Pkwy Ramp	Node	Riverside Pkwy	RMP	0.380	2	12,000	1,651	4,560	627
Pkwy Ramp	Node	Node	PA	0.027	1	9,000	186	243	5
Pkwy Ramp	Node	Node	RMP	0.542	2	6,000	2,915	3,252	1,580
Pitkin Ave	Ute Ave	2nd St	PA	0.114	4	18,000	13,144	2,052	1,498
Pitkin Ave	S 2nd St	S 12th St	PA	0.921	6	27,000	13,144	24,867	12,106
Pitkin Ave	S 12th St	Node	PA	0.440	4	18,000	12,263	7,920	5,396
Rabbit Valley Rd	Node	Node	RMP	0.170	2	12,000	9	2,040	2
Redlands Pkwy	S Broadway	Broadway	COL	0.440	2	12,000	7,715	5,280	3,395
Redlands Pkwy	Colorado River	Pkwy Ramp	PA	0.809	4	36,000	17,688	29,124	14,310
Redlands Pkwy	S Camp Rd	S Broadway	COL	0.262	2	12,000	7,715	3,144	2,021
Redlands Pkwy	Broadway	Colorado River	PA	0.827	2	18,000	12,843	14,886	10,621
Redlands Pkwy	Node	Node	PA	0.022	4	36,000	17,435	792	384
Redlands Pkwy	Node	Node	PA	0.336	2	18,000	8,540	6,048	2,869
Redlands-Riverside	Node	Node	RMP	0.095	2	6,000	608	570	58
Reeder Mesa Rd	Hwy 50	Goodfellow Ct	COL	2.567	2	12,000	381	30,804	978
Ridges Blvd	Ridgeway Ct	Broadway	COL	0.753	2	12,000	7,717	9,036	5,811
Rimrock Dr	N 16 1/2 Rd	S Camp Rd	COL	23.005	2	12,000	288	276,060	6,625
River Rd	Frontage Rd	Pkwy Ramp	COL	4.607	2	12,000	3,886	55,284	17,903
Riverside Pkwy	Pkwy Ramp	Overpass	COL	1.389	2	18,000	2,722	25,002	3,781
Riverside Pkwy	Node	Node	COL	0.161	2	12,000	1,980	1,932	319
Riverside Pkwy	Node	Node	COL	0.039	4	24,000	444	936	17
Riverside Pkwy	Node	29 Rd	MA	1.556	2	24,000	12,885	37,344	20,049
Riverside Pkwy	Node	Node	PA	0.306	2	9,000	1,215	2,754	372
Riverside Pkwy	Node	Node	PA	0.115	4	44,000	17,227	5,060	1,981
Riverside Pkwy	Node	Node	PA	0.132	2	9,000	1,536	1,188	203
Riverside Pkwy	Node	Node	PA	1.713	4	44,000	17,670	75,372	30,269
Riverside Pkwy	Hwy 50 Exit	Hwy 50 on-ramp	PA	0.230	4	44,000	12,420	10,120	2,857
Riverside Pkwy	Node	S 9th St	PA	0.330	4	44,000	12,276	14,520	4,051
Riverside Pkwy	S 9th St	D Rd	PA	1.011	2	26,000	10,253	26,286	10,366
Riverside Pkwy	Node	Node	RMP	0.252	2	6,000	10,313	1,512	2,599
Riverside Pkwy	Node	Node	RMP	0.255	1	6,000	177	1,530	45
Riverside Pkwy	Node	Node	RMP	0.264	2	6,000	9,264	1,584	2,446
Rood Ave	N 1st St	N 7th St	COL	0.529	2	12,000	3,134	6,348	1,658
Rosevale Rd	S Redlands Rd	D Rd	COL	0.820	2	12,000	1,570	9,840	1,287
S 1st St	Ute Ave	Main St	PA	0.116	4	36,000	25,971	4,176	3,013
S 5th St	Hwy 50	Pitkin Ave	EXP	1.143	4	24,000	14,590	27,432	16,676
S 5th St	Pitkin Ave	Ute Ave	MA	0.068	4	32,000	15,318	2,176	1,042

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Table 18. Existing Major Roadway Inventory (continued)

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
S 4th St	Pitkin Ave	Main St	MA	0.205	4	16,000	4,410	3,280	904
S 5th St	Ute Ave	Main St	MA	0.131	6	24,000	7,584	3,144	994
S 7th St	Riverside Pkwy	Pitkin Ave	COL	0.539	2	18,000	1,203	9,702	648
S 7th St	Pitkin Ave	Main St	MA	0.202	4	40,000	8,117	8,080	1,640
S 9th St	Riverside Pkwy	4th Ave	COL	0.230	2	12,000	848	2,760	195
S 9th St	4th Ave	Ute Ave	MA	0.416	2	16,000	1,526	6,656	635
S 12th St	Pitkin Ave	Colorado Ave	PA	0.133	2	18,000	3,127	2,394	416
S 12th St	Colorado Ave	Main St	PA	0.070	2	26,000	3,127	1,820	219
S Broadway	Mnmnt Canyon Dr	S Camp Rd	COL	3.462	2	12,000	5,224	41,544	18,085
SB Pkwy on-ramp	Broadway	Riverside Pkwy	RMP	0.224	2	6,000	3,872	1,344	867
S Camp Rd	Monument Rd	Rimrock Rd	COL	0.626	2	12,000	3,335	7,512	2,088
S Camp Rd	Rimrock Rd	Buffalo Dr	COL	0.873	2	12,000	3,166	10,476	2,764
S Camp Rd	Buffalo Dr	Mckinley Dr	COL	0.858	2	18,000	2,419	15,444	2,076
S Camp Rd	Mckinley Dr	S Broadway	COL	0.295	2	12,000	3,605	3,540	1,063
S Coulson St	Hwy 6 & 50	W Aspen Ave	COL	0.051	2	12,000	3,664	612	187
S Maple St	Hwy 6 & 50	E Aspen Ave	COL	0.358	2	12,000	1,864	4,296	667
S Mesa St	Hwy 6 & 50	W Aspen Ave	COL	0.184	2	12,000	2,109	2,208	388
S Pine St	Hwy 6 & 50	J 2/10 Rd	COL	0.339	2	18,000	8,893	6,102	3,015
S Pine St	J 2/10 Rd	E Aspen Ave	COL	0.371	2	12,000	7,461	4,452	2,768
S Redlands Rd	Mount Sopris Dr	Monument Rd	COL	0.402	2	12,000	3,057	4,824	1,229
Teller Ave	I-70 B	29 Rd	RMP	0.189	4	24,000	3,973	4,536	751
Unaweep Ave	Hwy 50	29 Rd	COL	2.847	2	18,000	9,028	51,246	25,703
Ute Ave	S 1st St	N 5th St	PA	0.355	4	18,000	10,652	6,390	3,781
Ute Ave	S 5th St	S 12th St	PA	0.646	6	27,000	11,357	17,442	7,337
Ute Ave	S 12th St	I-70 B	PA	0.424	4	18,000	10,777	7,632	4,569
Warrior Way	I-70 B	E 1/2 Rd	COL	0.112	2	18,000	7,513	2,016	841
West Ave	Broadway	Riverside Pkwy	COL	0.170	2	12,000	8,172	2,040	1,389
W Aspen Ave	N Coulson St	N Mesa St	COL	0.250	2	12,000	4,037	3,000	1,009
W Grand Ave	Mulberry St	N 1st St	PA	0.154	4	44,000	20,840	6,776	3,209
W Ottley Ave	Hwy 6 And 50	N Mesa St	COL	0.885	2	12,000	1,256	10,620	1,112
W Pabor Ave	N Cherry St	N Mesa St	COL	0.251	2	12,000	2,587	3,012	649
Whitewtr Crk Rd	Reeder Mesa Rd	Node	COL	1.633	2	12,000	111	19,596	181
Subtotal, Non-State Roads				350.168				5,325,416	1,326,921
EB Off-Ramp	Node	Node	RMP	0.224	2	6,000	9,260	1,344	2,074
EB Off-Ramp	Node	Node	RMP	0.047	2	6,000	49	282	2
EB On-Ramp	Node	Node	RMP	0.031	2	6,000	2,984	186	93
EB On-Ramp	Node	Node	RMP	0.055	2	6,000	313	330	17
EB On-Ramp	Node	Node	RMP	0.321	2	6,000	3,110	1,926	998
EB to EB Off-ramp	Node	Node	RMP	0.201	2	6,000	9,211	1,206	1,851
EB to WB Off-ramp	Node	Node	RMP	0.035	2	6,000	29	210	1
EB to WB On-ramp	Node	Node	RMP	0.061	2	6,000	80	366	5
Hwy 6	N 1st St	I-70 B	PA	3.819	4	44,000	25,380	168,036	96,926
Hwy 6	Node	Node	RMP	0.316	4	12,000	11,903	3,792	3,761
Hwy 6	Node	Node	RMP	0.477	2	6,000	10,907	2,862	5,203
Hwy 6	Node	Node	RMP	0.101	4	12,000	11,903	1,212	1,202
Hwy 6	Node	N 1st St	PA	0.101	4	44,000	22,848	4,444	2,308
Hwy 6	F Rd	G Rd	PA	3.320	2	18,000	7,854	59,760	26,075
Hwy 6	G Rd	Shiraz Dr	PA	0.284	2	26,000	8,038	7,384	2,283
Hwy 6	Shiraz Dr	37 3/10 Rd	PA	0.388	2	18,000	6,705	6,984	2,602

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Table 18. Existing Major Roadway Inventory (continued)

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
Hwy 6	37 3/10 Rd	Peach Ave	PA	0.382	2	26,000	5,940	9,932	2,269
Hwy 6	Peach Ave	Rapid Creek Rd	PA	2.482	2	18,000	3,985	44,676	9,891
Hwy 6	Node	Node	RMP	0.418	2	6,000	673	2,508	281
Hwy 6	Rapid Creek Rd	I-70	RMP	0.372	2	6,000	475	2,232	177
Hwy 6/50 offramp	Hwy 6 and 50	Redlands Pkwy	RMP	0.244	2	6,000	659	1,464	161
Hwy 6/50 onramp	Redlands Pkwy	Hwy 6 & 50	RMP	0.265	2	6,000	5,266	1,590	1,395
Hwy 6 and 50	Node	Old Hwy 6 & 50	EXP	0.763	2	24,000	446	18,312	340
Hwy 6 and 50	Hwy 6 & 50	past 22 Rd	EXP	13.894	2	24,000	1,082	333,456	15,033
Hwy 6 and 50	Node	Node	EXP	0.081	4	48,000	25,077	3,888	2,031
Hwy 6 and 50	Node	Node	EXP	0.430	4	24,000	11,656	10,320	5,012
Hwy 6 and 50	Node	Patterson Rd	EXP	2.003	4	48,000	29,287	96,144	58,662
Hwy 6 and 50	Node	Node	EXP	0.984	4	24,000	13,115	23,616	12,905
Hwy 6 and 50	Node	Node	EXP	0.155	6	36,000	15,170	5,580	2,351
Hwy 6 and 50	Node	Rimrock Ave	EXP	1.259	6	72,000	32,103	90,648	40,418
Hwy 6 and 50	Rimrock Ave	Node	EXP	0.794	6	24,000	19,314	19,056	15,335
Hwy 6 and 50	Node	Node	EXP	0.256	6	12,000	8,406	3,072	2,152
Hwy 6 and 50	Node	Node	EXP	0.514	6	24,000	10,339	12,336	5,314
Hwy 6 and 50	Node	Node	EXP	0.216	6	48,000	20,001	10,368	4,320
Hwy 50	Unaweep Ave	Palisade St	EXP	0.428	4	48,000	40,563	20,544	17,361
Hwy 50	Unaweep Ave	Unaweep Ave	EXP	1.116	4	24,000	19,139	26,784	21,359
Hwy 50	Palisade St	27 Rd	EXP	0.409	4	48,000	27,092	19,632	11,081
Hwy 50	27 Rd	B 1/2 Rd	EXP	0.294	4	24,000	13,212	7,056	3,884
Hwy 50	27 Rd	Hwy 50 Ramp	EXP	0.358	2	24,000	13,219	8,592	4,732
Hwy 50	B 1/2 Rd	27 1/2 Rd	EXP	0.375	4	24,000	9,085	9,000	3,407
Hwy 50	27 1/2 Rd	County Line	EXP	18.666	4	48,000	18,631	895,968	347,766
Hwy 50 Ramp	Hwy 50	Node	MA	0.135	2	8,000	4,114	1,080	555
Hwy 50 Ramp	Node	B 1/2 Rd	MA	0.221	2	24,000	4,148	5,304	917
Hwy 139	Node	Co Rd 258	MA	13.643	2	16,000	1,569	218,288	21,406
Hwy 141	Node	Hwy 50	MA	0.964	2	16,000	1,914	15,424	1,845
Hwy 141	Hwy 50	D Rd	PA	3.650	2	18,000	6,192	65,700	22,601
Hwy 141	D Rd	I-70 B	PA	1.792	4	44,000	17,659	78,848	31,645
Hwy 340	Raptor Rd	Red Cliffs Dr	MA	0.603	4	40,000	5,926	24,120	3,573
Hwy 340	Red Cliffs Dr	Kings View Rd	MA	0.655	4	32,000	3,553	20,960	2,327
Hwy 340	Kings View Rd	S Broadway	MA	4.026	2	16,000	2,884	64,416	11,611
Hwy 340	S Broadway	W Scenic Dr	PA	5.073	2	18,000	3,324	91,314	16,863
Hwy 340	W Scenic Dr	Pleasant Ridge Ln	PA	0.209	2	26,000	13,630	5,434	2,849
Hwy 340	Pleasant Ridge Ln	Ridges Blvd	PA	0.351	2	18,000	14,473	6,318	5,080
Hwy 340	Ridges Blvd	Country Club Park	PA	0.472	4	36,000	19,465	16,992	9,187
Hwy 340	Country Club Park	West Ave	PA	0.840	4	44,000	19,524	36,960	16,400
Hwy 340	West Ave	Pkwy On Ramp	PA	0.024	4	36,000	23,980	864	576
Hwy 340	Pkwy On Ramp	past Crosby Ave	PA	0.297	4	44,000	20,635	13,068	6,129
Hwy 340	W Aspen Ave	I-70	MA	0.209	4	40,000	15,948	8,360	3,333
Hwy 340	Ramp	Ramp	MA	0.095	4	40,000	14,906	3,800	1,416
I-70 B Ramp	I-70 B	29 Rd	RMP	0.277	2	6,000	5,356	1,662	1,484
I-70 Access Rd	Node	Node	RMP	0.179	2	6,000	6,429	1,074	1,151
I-70 Access Rd	Node	Node	RMP	0.529	2	6,000	5,558	3,174	2,940
I-70 Access Rd	Node	Node	RMP	0.562	2	6,000	5,733	3,372	3,222
I-70 B	Node	Node	EXP	0.147	4	24,000	17,021	3,528	2,502
I-70 B	Node	I-70 Off Ramp	EXP	5.886	4	48,000	18,112	282,528	106,607
I-70 B	Node	Node	EXP	0.377	4	24,000	12,901	9,048	4,864

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Table 18. Existing Major Roadway Inventory (continued)

Street	From	To	Type	Miles	Lns	Capacity	ADT	VMC	VMT
I-70 B	Node	Node	RMP	0.353	2	6,000	7,341	2,118	2,591
Ramp	Node	Node	RMP	0.049	2	6,000	2,799	294	137
WB Off-Ramp	Node	Node	RMP	0.015	2	6,000	3,068	90	46
WB Off-Ramp	Node	Node	RMP	0.287	2	6,000	3,224	1,722	925
WB On-Ramp	Node	Node	RMP	0.245	2	6,000	8,387	1,470	2,055
WB On-Ramp	Node	Node	RMP	0.010	2	6,000	8,331	60	83
WB-EB off-ramp	Node	Node	RMP	0.065	2	6,000	222	390	14
WB-WB off-ramp	Node	Node	RMP	0.084	2	6,000	3,280	504	276
WB-WB on-ramp	Node	Node	RMP	0.054	2	6,000	8,645	324	467
Subtotal, State Roads				99.317				2,925,706	1,020,715
Total				449.485				8,251,122	2,347,636

Notes: ADT is average daily traffic volume; VMC is vehicle-miles of capacity, VMT is vehicle-miles of travel

Source: Mesa County GIS, March 19, 2018.

APPENDIX B: LAND USE DEFINITIONS

Recommended definitions for the land uses in the updated impact fee schedule are provided below. If these are adopted by ordinance or resolution, those that differ from or overlap with zoning or general definitions should have a disclaimer that they only apply to the impact fee section.

Single-Family Detached means the use of a lot for only one dwelling unit, including a mobile home not located in a mobile home park, provided that a single-family detached use may also include an accessory dwelling unit, if allowed by zoning, which shall be assessed the rate for a multi-family unit.

Multi-Family means a building containing two or more dwelling units. It includes duplexes, apartments, residential condominiums, townhouses, and timeshares.

Mobile Home/RV Park means a parcel (or portion thereof) or abutting parcels of land designed, used or intended to be used to accommodate two or more occupied mobile homes or recreational vehicles, with necessary utilities, vehicular pathways, and concrete pads or vehicle stands.

Hotel/Motel means a building or group of buildings on the same premises and under single control, consisting of sleeping rooms kept, used, maintained or advertised as, or held out to the public to be, a place where sleeping accommodations are supplied for pay to transient guests or tenants. This land use category includes rooming houses, boardinghouses, and bed and breakfast establishments.

Shopping Center/Commercial means an integrated group of commercial establishments planned, developed, owned or managed as a unit, or a free-standing retail or commercial use not otherwise listed in the impact fee schedule. Uses located on a shopping center outparcel are considered free-standing for the purposes of this definition. A retail or commercial use shall mean the use of a building or structure primarily for the sale to the public of nonprofessional services, or goods or foods that have not been made, assembled or otherwise changed in ways generally associated with manufacturing or basic food processing in the same building or structure. This category includes but is not limited to all uses located in shopping centers and the following free-standing uses:

- Amusement park
- Auto parts store
- Auto wrecking yard
- Automobile repair
- Bank without drive-through facilities
- Bar and cocktail lounge
- Camera shop
- Car wash
- Convenience food and beverage store without gas pumps
- Department store
- Florist shop
- Food store
- Grocery
- Hardware store

Health or fitness club
Hobby, toy and game shop
Junkyard
Laundromat
Laundry or dry cleaning
Lawn and garden supply store
Massage establishment
Music store
Newsstand
Nightclub
Racetrack
Recreation facility, commercial
Rental establishment
Repair shop, other than auto repair
School, commercial
Specialty retail shop
Supermarket
Theater, indoor (excluding movie theaters)
Used merchandise store
Variety store
Vehicle and equipment dealer

Auto Sales/Service means an establishment primarily engaged in selling new or used motor vehicles, and which may also provide repair and maintenance services.

Bank, Drive-In means an establishment providing banking services to the public that includes drive-in or drive-through facilities.

Convenience Store w/Gas Sales means an establishment offering the sale of motor fuels and convenience items to motorists.

Golf Course means a golf course that is not restricted primarily for use by residents of a residential development of which it is a part, including commercial uses such as pro shop or bar that are designed primarily to serve patrons.

Movie Theater means a stand-alone establishment, not located in a shopping center, offering the viewing of motion pictures for sale to the public.

Restaurant, Standard means a stand-alone establishment, not located in a shopping center but may be located on an out-parcel, that sells meals prepared on site, and does not provide drive-through or drive-in service.

Restaurant, Drive-Through means a stand-alone establishment, not located in a shopping center but may be located on an out-parcel, that sells meals prepared on site, and provides drive-through or drive-in service.

Office, General means a building exclusively containing establishments providing executive, management, administrative, financial, or non-medical professional services, and which may include ancillary services for office workers, such as a restaurant, coffee shop, newspaper or candy stand, or child care facilities. It may be the upper floors of a multi-story office building with ground floor retail uses. Typical uses include banks without drive-in facilities, real estate, insurance, property management, investment, employment, travel, advertising, secretarial, data processing, telephone answering, telephone marketing, music, radio and television recording and broadcasting studios; professional or consulting services in the fields of law, architecture, design, engineering, accounting and similar professions; interior decorating consulting services; and business offices of private companies, utility companies, trade associations, unions and nonprofit organizations. This category does not include an administrative office that is ancillary to a principal commercial or industrial use.

Office, Medical means a building primarily used for the examination and/or treatment of patients on an outpatient basis (with no overnight stays by patients) by health professionals, and which may include ancillary services for medical office workers or a medical laboratory to the extent necessary to carry out diagnostic services for the medical office's patients.

Animal Hospital/Vet Clinic means the use of a site primarily for the provision of medical care and treatment of animals, and which may include ancillary boarding facilities.

Hospital means an establishment primarily engaged in providing medical, surgical, or skilled nursing care to persons, including overnight or longer stays by patients.

Nursing Home means an establishment primarily engaged in providing limited health care, nursing and health-related personal care but not continuous nursing services.

Place of Worship means a structure designed primarily for accommodating an assembly of people for the purpose of religious worship, including related religious instruction for 100 or fewer children during the week and other related functions.

Day Care Center means a facility or establishment that provides care, protection and supervision for six or more children unrelated to the operator and which receives a payment, fee or grant for any of the children receiving care, whether or not operated for profit. The term does not include public or nonpublic schools.

Elementary/Secondary School means a school offering an elementary through high school curriculum.

Public/Institutional means a governmental, quasi-public or institutional use, or a non-profit recreational use, not located in a shopping center or separately listed in the impact fee schedule. Typical uses include higher education institutions, city halls, courthouses, post offices, jails, libraries, museums, military bases, airports, bus stations, fraternal lodges, parks and playgrounds. It also includes bus terminals, fraternal clubs, adult day care centers, dormitories, and prisons.

Industrial means an establishment primarily engaged in the fabrication, assembly or processing of goods. Typical uses include manufacturing plants, industrial parks, research and development laboratories, welding shops, wholesale bakeries, dry cleaning plants, and bottling works.

Warehouse means an establishment primarily engaged in the display, storage and sale of goods to other firms for resale, as well as activities involving significant movement and storage of products or equipment. Typical uses include wholesale distributors, storage warehouses, trucking terminals, moving and storage firms, recycling facilities, trucking and shipping operations and major mail processing centers.

Mini-Warehouse means an enclosed storage facility containing independent, fully enclosed bays that are leased to persons for storage of their household goods or personal property.

APPENDIX C: LEGAL FRAMEWORK

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to “negotiated” developer exactions, impact fees are charges assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are a one-time, up-front charge, with the payment made at the time of building permit issuance. Impact fees require that each new development project pay a pro-rata share of the cost of new capital facilities required to serve that development.

Dual Rational Nexus Test

Impact fees were pioneered in states that lacked specific enabling legislation, and they have generally been legally defended as an exercise of local government’s broad “police power” to regulate land development in order to protect the health, safety and welfare of the community. To distinguish regulatory impact fees from unauthorized taxes, state courts have developed guidelines for constitutionally-valid impact fees, based on the “rational nexus” standard. The standard essentially requires that fees must be proportional to the need for additional infrastructure created by the new development, and the fees must be spent to provide that same type of infrastructure to benefit new development. A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was subsequently quoted and followed by the Florida Supreme Court in its 1991 St. Johns County decision:¹

In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.

The Need Test

To meet the first prong of the dual rational nexus test, it is necessary to demonstrate that new development creates the need for additional roadway facilities. The demand on roadways created by new developments of different types is quantified in the form of trip generation rates per housing unit and per various measures of nonresidential development. Transportation impact fees are designed to be proportional to the capacity needed to accommodate each new development.

The Benefit Test

To meet the second prong of the dual rational nexus test, it is necessary to demonstrate that new development subject to the fee will benefit from the expenditure of the impact fee funds. One requirement is that the fees actually be used to fill the need that serves as the justification for the fees under the first part of the test.

¹ St. Johns County v. Northeast Florida Builders Association, Inc., 583 So.2d 635, April 18, 1991

Colorado Statutes

Impact fees were pioneered by local governments in the absence of explicit state enabling legislation. Consequently, such fees were originally defended as an exercise of local government’s broad “police power” to protect the health, safety and welfare of the community. The courts gradually developed guidelines for constitutionally valid impact fees, based on a “rational nexus” that must exist between the regulatory fee or exaction and the activity that is being regulated.

Prior to 2001, the authority of counties in Colorado to impose transportation impact fees was not entirely clear. Several counties had adopted impact fees, which they felt were authorized under counties’ implied powers. This changed with the passage of SB 15 by the Legislature and its signature by the governor on November 16, 2001. Among other things, this bill created a new section 104.5: Impact Fees, in Article 20 of Title 29, Colorado Revised Statutes, which includes the following authorization and major requirements:

(1) Pursuant to the authority granted in section 29-20-104 (1) (g) and as a condition of issuance of a development permit, a local government may impose an impact fee or other similar development charge to fund expenditures by such local government ... needed to serve new development. No impact fee or other similar development charge shall be imposed except pursuant to a schedule that is:

- (a) Legislatively adopted;*
- (b) Generally applicable to a broad class of property; and*
- (c) Intended to defray the projected impacts on capital facilities caused by proposed development.*

(2) (a) A local government shall quantify the reasonable impacts of proposed development on existing capital facilities and establish the impact fee or development charge at a level no greater than necessary to defray such impacts directly related to proposed development. No impact fee or other similar development charge shall be imposed to remedy any deficiency in capital facilities that exists without regard to the proposed development.

...

(3) Any schedule of impact fees or other similar development charges adopted by a local government pursuant to this section shall include provisions to ensure that no individual landowner is required to provide any site specific dedication or improvement to meet the same need for capital facilities for which the impact fee or other similar development charge is imposed. ...

SB 15 clearly authorized counties in Colorado to assess impact fees. It also imposed requirements relating to level of service, proportionality, and developer credits. Another important legal requirement not addressed in Colorado statutes but firmly rooted in impact fee case law is the need to provide revenue credits to avoid double-charging by charging both impact fees and other taxes (rather than improvements required as a condition of development). These topics are discussed below. Other statutory provisions require accounting for fee revenues in special funds and authorize waivers of fees for affordable housing.

Level of Service

Subsection 104.5(2)(a) of the Impact Fees statute requires that the fees not exceed the cost directly related to the proposed development, and that they not be used to remedy any existing deficiency. The statute does not use the term “level of service,” but the concept is implicit in establishing the relationship of the cost of improvements to the new development, as well as in determining existing deficiencies. These provisions get to the heart of the one of the most fundamental principles established in impact fee case law, which is that impact fees should not charge new development for a higher level of service than is provided to existing development. Basing the fees on a higher level of service (LOS) than is being provided to existing development means there is a deficiency in existing facilities to provide the same LOS new development is paying for through the impact fee. Such a deficiency needs to be paid for in such a way that it does not burden new development. The methodology used in this study results in a fee that does not exceed the cost to maintain the existing LOS.

Proportionality

One of the fundamental legal principles of impact fee case law is that the fees for each individual land use type should be proportional to the impact of that use. This is reflected in subsection (2)(a), which requires that the fees be “directly related” to the impacts of new development. The language could also be read as allowing lower fees for some uses compared to others, as long as the fee for each use does not exceed the cost attributable to the development. However, if the fees are not based on the actual impact of the development, there is a risk that the courts may deem it to be an unauthorized tax rather than a fee. There may be a temptation to simply adopt fees at a lower rate for certain types of development that are seen as more desirable. A better approach would be to appropriate general fund monies to pay a portion of the fees for desired types of development. It would also be advisable to calculate a revenue credit to account for future general fund taxes that non-subsidized development will generate that will be used to subsidize fees for other classes of development.

Developer Credits

Another fundamental requirement articulated in impact fee case law is the need to avoid double-charging new development through impact fees and other requirements or taxes. Subsection 104.5(3) reflects this principle in the context of improvements required as a condition of development approval. It states that developers should not be required to make “site-specific dedications or improvements” that “meet the same need” being addressed by the impact fees while also being required to pay the fee. In general, impact fees should be reduced by the value of dedications or improvements required of developers for the same type of improvements that would be eligible to be funded with the impact fees. These reductions are referred to as developer credits.

It is reasonable to have some restrictions on the types of improvements that are eligible for credit. Granting credits is essentially spending future impact fees, and the fees should be spent for priority improvements that benefit the community at large. Developers should not be allowed to monopolize the fees for localized improvements if they choose to develop in areas that lack adequate infrastructure. For example, credit eligibility could be restricted to contributions related to projects identified in a

local or regional transportation master plan or capital improvements plan. However, developers should be eligible for credits for required improvements related to projects that are consistent with the jurisdiction's land use and capital plans.

The updated fees do not include the cost of rights-of-way (ROW). This does not mean that the fees cannot be spent to acquire ROW needed to accommodate future capacity-expanding improvements. However, if a jurisdiction decides not to give developers credit for required ROW dedications on the major roadway system related to a future capacity-expanding project, it might be appropriate to restrict the fees collected to be spent only on improvements. This issue has not been litigated, but the expenditure restriction would establish a bright line between what the fees are and are not designed to pay for, and avoid any argument that developments paying the fee are not getting the full benefit of the improvements they are paying for through the fees.

Revenue Credits

A revenue credit is a reduction from the cost per service unit designed to equalize the burden between existing and new development arising from the expenditure of future revenues that can be attributed in part to new development. While developer credits are provided on a case-by-case basis, revenue credits must be addressed in the fee calculation study.

As noted above, if there are existing deficiencies with respect to the level of service used in the fee calculation, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development. Given that new development will pay impact fees to provide the existing level of service for itself, the fact that new development may also be paying for the facilities that provide that level of service for existing development could amount to paying for more than its proportionate share. Consequently, impact fees should be reduced to account for future payments that will retire outstanding debt on existing facilities that provide the level of service on which the fees are based for existing development.

The issue is less clear-cut when it comes to other types of revenue that may be used to make capacity-expanding capital improvements of the same type being funded by impact fees. The clearest case occurs when non-impact fee general fund tax revenues are programmed for capacity-expanding improvements on an "as available" basis because impact fees are insufficient to fund all needed growth-related improvements. These capacity-adding projects that may be funded in the future with non-impact fee dollars will be paid for by both existing and new development and will increase the overall level of service, benefitting both existing development and future growth.

Similar considerations apply to dedicated funding sources, such as special taxes that can only be used for the same type of facilities as the impact fees. Like discretionary revenue, these types of dedicated revenue sources are typically not specifically dedicated only for capacity-expanding improvements, and even if they are, their use to fund capacity-related improvements improves the level of service for both existing and new development.

Outside funding or grants for capacity-expanding improvements to major roads that can reasonably be anticipated in the future could warrant a credit, but this is not clear-cut. In addition to the argument made above (i.e., the additional funding raises the level of service and benefits both new development and existing development), two additional arguments can be made against providing credits for such funding. First, new development in a community does not directly pay for State and Federal grants in the same way they pay local gasoline and property taxes. Second, future grant funding is far more uncertain than dedicated revenue streams.

While these arguments are compelling, they have not been litigated, and the law on whether revenue credits may be warranted in situations other than existing deficiencies or outstanding debt on existing facilities is currently unclear. In addition, such credits were provided in the original 2002 impact fee study. This update continues to incorporate revenue credits for both local and Federal/State non-impact fee funding anticipated to be available to help fund growth-related transportation improvements.

If fees are disproportionately reduced or waived for selected land use categories or types of development, a revenue credit should probably be provided for other land uses not subject to the reduction. Even if the targeted reductions are replaced with general funds, new development that is not eligible for the reduction will generate future general fund revenues that will be used to pay for the reduced fees for eligible development. This could arguably amount to new development that is not eligible paying more than its proportionate share of transportation improvement costs. While this issue has not been litigated, the prudent course would be either not to apply targeted fee reductions or else calculate an appropriate revenue credit for non-eligible development types.

APPENDIX D: METHODOLOGY

This appendix describes the methodology used to develop the transportation impact fees. A key concept in any transportation impact fee methodology is the definition of the “service unit,” which is described first. This description is followed by an explanation of the “consumption-based” model used in this study. Finally, the appendix concludes with a description of the formula used to calculate the transportation impact fees.

Service Unit

A service unit creates the link between supply (roadway capacity) and demand (traffic generated by new development). An appropriate service unit basis for transportation impact fees is vehicle-miles of travel (VMT). Vehicle-miles is a combination of the number of vehicles traveling during a given time period and the distance (in miles) those vehicles travel.

The two time periods most often used in traffic analysis are the 24-hour day (average daily trips or ADT) and the single hour of the day with the highest traffic volume (peak hour trips or PHT). The current transportation impact fee system is based on ADT. The regional transportation model is also based on ADT. Daily trips will continue to be used in this update.

Consumption-Based Model

The two traditional alternative methodologies for calculating transportation impact fees are the “improvements-driven” and “consumption-based” approaches. The consumption-based methodology continues to be recommended for Mesa County’s transportation impact fees.

The “improvements-driven” approach essentially divides the cost of growth-related improvements required over a fixed planning horizon by the number new service units (e.g., vehicle-mile of travel or VMT) projected to be generated by growth over the same planning horizon in order to determine a cost per service unit. The improvements-driven approach depends on accurate planning and forecasting. For example, the fees will be accurate only if the forecasted increase in traffic actually necessitates all of the improvements identified in the transportation master plan. If many of the planned improvements will provide excess capacity that will be available to serve additional development beyond the planning horizon on which the fees are based, the fees may be too high.

The “consumption-based” approach does not depend on knowing in advance what improvements will be made or what type or density of development will occur. The consumption-based model simply charges a new development the cost of replacing the capacity that it will consume on the major roadway system. That is, for every service unit of traffic generated by the development, the transportation impact fee charges the net cost to construct an additional service unit of capacity. Compiling a list of planned improvements needed to accommodate projected growth is not necessary for the development of consumption-based transportation impact fees, which can be calculated based on any representative list of road improvements, including an historical list or a list of projects needed at build-out.

In a consumption-based system, the list of road improvements is used to determine the cost per unit of capacity. Thus, doubling the total cost of the list of road improvements will not double the fee and in fact may very well not increase the fee at all. Only if the improvements added to the list were more expensive, per unit of capacity created, would their addition have the effect of increasing the impact fee.

In most rapidly growing communities, some roadways will be experiencing an unacceptable level of congestion at any given point in time. One of the principles of impact fees is that new development should not be charged, through impact fees, for a higher level of service than is provided to existing development. A consumption-based fee, unlike an improvements-driven one, is not designed to recover the full costs to maintain the desired LOS on all roadway segments. Instead, it is only designed to maintain a minimum system-wide ratio between demand and capacity. Virtually all major roadway systems have more capacity (VMC) than demand (VMT) on a system-wide basis. Consequently, under a consumption-based system, the level of service standard is the system-wide VMC/VMT ratio. If the major roadway system currently has a VMC/VMT ratio higher than the one on which the fees are based, there are no existing deficiencies.

Since travel is never evenly distributed throughout a roadway system, actual roadway systems require more than one unit of capacity for every unit of demand in order for the system to function at an acceptable level of service. Suppose, for example, that the community completes a major arterial widening project. The completed arterial is likely to have a significant amount of excess capacity for some time. If the entire system has just enough capacity to accommodate all the vehicle-miles of travel, then the excess capacity on this segment must be balanced by another segment being over-capacity. Clearly, roadway systems in the real world need more total aggregate capacity than the total aggregate demand, because the traffic does not always precisely match the available capacity. Consequently, the standard consumption-based model generally underestimates the full cost of growth.

A modified consumption-based transportation impact fee model that more accurately identifies the full growth-related cost of maintaining desired service levels uses the system-wide ratio of capacity to demand. Essentially, this approach requires that new development pay for the cost to construct more capacity than it directly consumes in order to maintain the system-wide ratio of capacity to demand. In this system, the cost per vehicle-mile of capacity (VMC) is multiplied by the system-wide ratio of VMC/VMT to determine the cost per VMT. The existing major roadway system has an overall ratio of 3.51 vehicle-miles of capacity for every vehicle-mile of travel, as shown in Table 19. However, that ratio may not be sustainable over the long term. As communities grow and become more urban, the ratio tends to fall. The 2002 study used a 1.50 VMC/VMT ratio. The 1.00 ratio implicit in the standard consumption-based methodology is recommended for this update.

Table 19. Existing Major Roadway Level of Service

	Non-State Roads	State Roads	Total System
Daily VMC on Major Roads	5,325,416	2,925,706	8,251,122
÷ Daily VMT on Major Roads	1,326,921	1,020,715	2,347,636
Existing VMC/VMT Ratio	4.01	2.87	3.51
Recommended VMC/VMT Ratio for Impact Fee Calculation			1.00

Source: VMC and VMT from Table 18 in the appendix.

The formula for the modified consumption-based methodology used in this study is summarized in Figure 6. The maximum fee calculated under this methodology is the number of service units (VMT) that will be generated by the development times the net cost per service unit. The inputs into the formula are described in more detail below.

Figure 6. Transportation Impact Fee Formula

$$\text{FEE} = \text{VMT} \times \text{NET COST/VMT}$$

Where:

$$\text{VMT} = \text{TRIPS} \times \% \text{ NEW} \times \text{LENGTH}$$

TRIPS = 1/2 average daily trip ends generated by the development during the work week

% NEW = Percent of trips that are primary trips, as opposed to passby or diverted-link trips

LENGTH = Average length of a trip on major roadway system

$$\text{NET COST/VMT} = \text{COST/VMT} - \text{CREDIT/VMT}$$

$$\text{COST/VMT} = \text{COST/VMC} \times \text{VMC/VMT}$$

COST/VMC = Average cost to create a new VMC based on historical or planned improvements

VMC/VMT = The system-wide ratio of capacity to demand in the major roadway system

CREDIT/VMT = Credit per VMT, based on revenues to be generated by new development

APPENDIX E: TRIP RATES BY UNIT SIZE

The calculation of average daily trip generation rates for single-family detached units by dwelling unit size is addressed in this appendix. Information from U.S. Census for the Mesa County area, the national American Housing Survey, and the National Cooperative Highway Research Program are utilized in the calculations.

The 2017 American Housing Survey provides national data on the average size of single-family units by number of bedrooms in square feet of living area. This data is based on a national sample of over 34,000 single-family detached units containing one or more bedrooms (efficiency units have a very small sample size and are excluded from the analysis). The average sizes of single-family units by number of bedrooms are summarized in Table 20. These national average sizes should be reasonably representative of existing development in Mesa County.

Table 20. Unit Size by Number of Bedrooms, Single-Family

No. of Bedrooms	Sample Units	Weighted Square Feet	Weighted Units	Average Size
1	602	1,600,040,501	1,486,842	1,076
2	4,768	15,727,551,611	11,053,273	1,423
3	16,920	70,835,665,150	38,294,217	1,850
4 or more	12,483	70,293,266,037	25,784,587	2,726
Total	34,773	158,456,523,300	76,618,920	2,068

Source: U.S. Census Bureau, 2017 American Housing Survey, national microdata.

The Census Bureau conducts annual surveys of housing units, which include information on the number of bedrooms and the number of persons residing in the unit. These annual surveys are combined into 5-year data sets. The most recent is the 5% sample covering the years 2013-2017 and including over 3,700 units. To get a large enough sample in all bedroom categories (other than efficiencies, which were excluded) it was necessary to use data for the region that includes Mesa County and four adjoining Colorado counties. Mesa County accounts for 64% of the population of the five-county region, according to U.S. Census population estimates for 2017. These recent, localized data identify the following average number of persons per unit by number of bedrooms, which should be representative of the average occupancy in single-family detached units in Mesa County.

Table 21. Persons per Unit by Bedrooms, Single-Family

No. of Bedrooms	Sample Units	Weighted Persons	Weighted Units	Persons/Unit
1	132	2,328	2,326	1.00
2	663	20,215	12,503	1.62
3	2,050	90,447	42,253	2.14
4 or more	883	47,398	17,068	2.78
Total	3,728	160,388	74,150	2.16

Source: U.S. Census Bureau, *American Community Survey*, 2013-2017 5% sample microdata for Mesa, Montrose, Delta, San Miguel, and Ouray Counties.

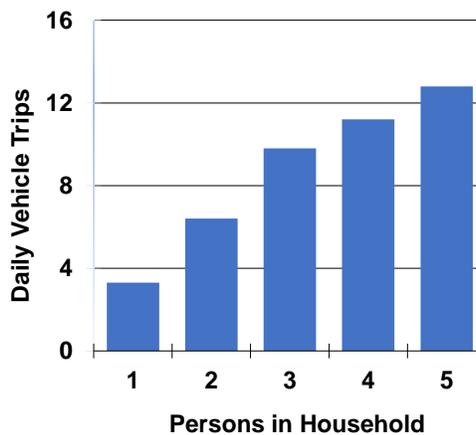
The National Cooperative Highway Research Program (NCHRP) of the National Research Council has developed estimates of average daily trip generation rates by the number of persons in a household. The NCHRP data indicate that trip generation is strongly related to the number of people residing in the unit, as shown in Table 22 and illustrated in Figure 7. While the trip rates themselves are somewhat dated due to the age of the study, the relative differences are still reasonable to rely on, if adjustments are made to account for the slight overall change in the average trip generation rates over the interval.²

Table 22. Trip Rates by Household Size

Household Size	Average Daily Trip Ends
One Person	3.3
Two Persons	6.4
Three Persons	9.8
Four Persons	11.2
Five or more Persons	12.8

Source: National Cooperative Highway Research Program, National Research Council, *NCHRP Report 365: Travel Estimation Techniques for Urban Planning*, Washington, D.C., 1998, Table 9: Trip estimation variables by urban size (for urban areas with population of 200,000-499,999)

Figure 7. Trip Rates by Household Size



² The average trip generation rate for a single-family detached unit declined 1.4% from the 6th edition (1997) to the 10th edition (2017) of the ITE *Trip Generation Manual* (9.57 in 1997 to 9.44 in 2017).

Data on unit size (in square feet) and the number of persons in the unit can be brought together because both sources also collect information on a related measure of unit size – the number of bedrooms. Then the number of persons in the unit can be related to trip generation, after adjusting for the overall decline in trip generation as well as the current average persons per unit for single-family units in Mesa County. The resulting trip generation rates for single-family detached units are presented in Table 23 for four unit size categories.

Table 23. Daily Trip Ends by Unit Size, Single-Family

No. of Bedrooms	Average Sq. Feet	Unit Size Range	Persons/ Unit	Daily Trips
1	1,076	<1,250 sf	1.00	4.54
2	1,423	1,250-1,649 sf	1.62	7.57
3	1,850	1,650-2,299 sf	2.14	8.81
4+	2,726	2,300 sf+	2.78	11.92
Total	2,068		2.16	9.44

Source: Average square feet from Table 20; unit size ranges based on approximate midpoints between the four average sizes; persons per unit from Table 21; daily trip ends based on linear interpolation between household size categories in Table 22, normalized for average persons per single-family unit from Table 21 and single-family average trip generation rate from Institute of Transportation Engineers, *Trip Generation Manual*, 2017.

2019 Impact Fee Study

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IMPACT FEE STUDY

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EXECUTIVE SUMMARY

Impact fees are one-time payments for new development's proportionate share of the capital cost of infrastructure. The following study addresses the City of Grand Junction's Municipal Facilities, Fire, Police, and Parks & Recreation facilities. Impact fees do have limitations and should not be regarded as the total solution for infrastructure funding. Rather, they are one component of a comprehensive funding strategy to ensure provision of adequate public facilities. Impact fees may only be used for capital improvements or debt service for growth-related infrastructure. They may not be used for operations, maintenance, replacement of infrastructure, or correcting existing deficiencies. Although Colorado is a "home-rule" state and home-rule municipalities were already collecting "impact fees" under their home-rule authority granted in the Colorado Constitution, the Colorado Legislature passed enabling legislation in 2001, as discussed further below.

Colorado Impact Fee Enabling Legislation

For local governments, the first step in evaluating funding options for facility improvements is to determine basic options and requirements established by state law. Some states have more conservative legal parameters that basically restrict local government to specifically authorized actions. In contrast, "home-rule" states grant local governments broader powers that may or may not be precluded or preempted by state statutes depending on the circumstances and on the state's particular laws. Home rule municipalities in Colorado have the authority to impose impact fees based on both their home rule power granted in the Colorado Constitution and the impact fee enabling legislation enacted in 2001 by the Colorado General Assembly.

Impact fees are one-time payments imposed on new development that must be used solely to fund growth-related capital projects, typically called "system improvements". An impact fee represents new growth's proportionate share of capital facility needs. In contrast to project-level improvements, impact fees fund infrastructure that will benefit multiple development projects, or even the entire service area, as long as there is a reasonable relationship between the new development and the need for the growth-related infrastructure.

According to Colorado Revised Statute Section 29-20-104.5, impact fees must be legislatively adopted at a level no greater than necessary to defray impacts generally applicable to a broad class of property. The purpose of impact fees is to defray capital costs directly related to proposed development. The statutes of other states allow impact fee schedules to include administrative costs related to impact fees and the preparation of capital improvement plans, but this is not specifically authorized in Colorado's statute. Impact fees do have limitations and should not be regarded as the total solution for infrastructure funding. Rather, they are one component of a comprehensive portfolio to ensure adequate provision of public facilities. Because system improvements are larger and costlier, they may require bond financing and/or funding from other revenue sources. To be funded by impact fees, Section 29-20-104.5 requires that the capital improvements must have a useful life of at least five years. By law, impact fees can only be used for

capital improvements, not operating or maintenance costs. Also, impact fees cannot be used to repair or correct existing deficiencies in existing infrastructure.

Additional Legal Guidelines

Both state and federal courts have recognized the imposition of impact fees on development as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. Land use regulations, development exactions, and impact fees are subject to the Fifth Amendment prohibition on taking of private property for public use without just compensation. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of impact fees, that interest is the protection of public health, safety, and welfare by ensuring development is not detrimental to the quality of essential public services. The means to this end is also important, requiring both procedural and substantive due process. The process followed to receive community input (i.e. stakeholder meetings, work sessions, and public hearings) provides opportunities for comments and refinements to the impact fees.

There is little federal case law specifically dealing with impact fees, although other rulings on other types of exactions (e.g., land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an “essential nexus” between the exaction and the interest being protected (see *Nollan v. California Coastal Commission*, 1987). In a more recent case (*Dolan v. City of Tigard*, OR, 1994), the Court ruled that an exaction also must be “roughly proportional” to the burden created by development.

There are three reasonable relationship requirements for impact fees that are closely related to “rational nexus” or “reasonable relationship” requirements enunciated by a number of state courts. Although the term “dual rational nexus” is often used to characterize the standard by which courts evaluate the validity of impact fees under the U.S. Constitution, TischlerBise prefers a more rigorous formulation that recognizes three elements: “need,” “benefit,” and “proportionality.” The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. Individual elements of the nexus standard are discussed further in the following paragraphs.

All new development in a community creates additional demands on some, or all, public facilities provided by local government. If the capacity of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Impact fees may be used to cover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle likely applies to impact fees. In this study, the impact of development on infrastructure needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the Dolan case and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate impact fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development (e.g. persons per household).

A sufficient benefit relationship requires that impact fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. The calculation of impact fees should also assume that they will be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the state enabling legislation requires that facilities funded with fee revenues be available exclusively to development paying the fees. In other words, benefit may extend to a general area including multiple real estate developments. Procedures for the earmarking and expenditure of fee revenues are discussed near the end of this study. All of these procedural as well as substantive issues are intended to ensure that new development benefits from the impact fees they are required to pay. The authority and procedures to implement impact fees is separate from and complementary to the authority to require improvements.

Proposed Maximum Supportable Impact Fee

The impact fees are based on the actual level of service for General Government, Police, Fire, and Parks & Recreation Facilities. The Parks & Recreation components includes improvements to parks, and recreational facilities. The Parks Impact Fee is only calculated for residential development while the fee for Municipal Facilities, Fire and Police are allocated to nonresidential development as well. A summary of methodologies used in the analysis is provided in Figure 1.

Figure 1. Summary of City of Grand Junction Impact Fees

<i>Fee Category</i>	<i>Service Area</i>	<i>Incremental Expansion</i>	<i>Plan-Based</i>	<i>Cost Recovery</i>	<i>Cost Allocation</i>
Fire	Citywide	Facilities, Apparatus	N/A	N/A	Population & Nonresidential Vehicle Trips
Police	Citywide	Facilities, Vehicles	N/A	N/A	Population & Nonresidential Vehicle Trips
Municipal Facilities	Citywide	Administrative Buildings	N/A	N/A	Population & Jobs
Parks and Recreation	201 Service Bdry	Amenities	N/A	N/A	Population

Maximum Supportable Impact Fees

Figure 2 provides a schedule of the maximum supportable impact fee for Municipal Services, Fire, Police, and Parks & Recreation. The fees represent the highest amount supportable for each type of residential

and nonresidential unit, which represents new growth’s fair share of the cost for capital facilities. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure 2. Maximum Supportable Impact Fee

Residential (Per Unit)

Type	Fire	Police	Parks and Recreation	Municipal Services	Maximum Supportable Fee	Current Fee	Difference
Single-Family	\$710	\$305	\$1,605	\$785	\$3,405	\$225	\$3,180
Multi-Family	\$467	\$200	\$1,055	\$516	\$2,238	\$225	\$2,013

Nonresidential (Per 1,000 square feet)

Type	Fire	Police	Parks and Recreation	Municipal Services	Maximum Supportable Fee	Current Fee	Difference
Retail/Commercial	\$489	\$206	\$0	\$471	\$1,167	\$0	\$1,167
Office/Institutional	\$191	\$81	\$0	\$598	\$870	\$0	\$870
Industrial	\$66	\$28	\$0	\$234	\$328	\$0	\$328
Warehousing	\$34	\$14	\$0	\$69	\$117	\$0	\$117

GENERAL METHODS FOR IMPACT FEES

There are three general methods for calculating impact fees. The choice of a particular method depends primarily on the timing of infrastructure construction (past, concurrent, or future) and service characteristics of the facility type being addressed. Each method has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss three basic methods for calculating impact fees and how those methods can be applied to City of Grand Junction.

Cost Recovery Method (past improvements)

The City of Grand Junction impact fees use the cost recovery method to address existing excess capacity provided at the Public Safety Building (police headquarters). The rationale for recoupment, or cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.

Incremental Expansion Method (concurrent improvements)

The City of Grand Junction impact fees use the incremental expansion method to document current level-of-service (LOS) standards for the infrastructure types included in the study, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development. The incremental expansion methodology is used for four infrastructure categories included in the study. This is a conservative approach, which limits the City's General Fund exposure. If a plan-based approach were utilized, reliance on long-range growth projections would be likely, which could force the City to spend more General Fund dollars to implement the plan if growth does not occur as projected.

Plan-Based Method (future improvements)

Although not used in City of Grand Junction, the plan-based method allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: 1) total cost of a public facility can be divided by total service units (average cost), or 2) the growth-share of the public facility cost can be divided by the net increase in service units over the planning timeframe (marginal cost).

Evaluation of Possible Credits

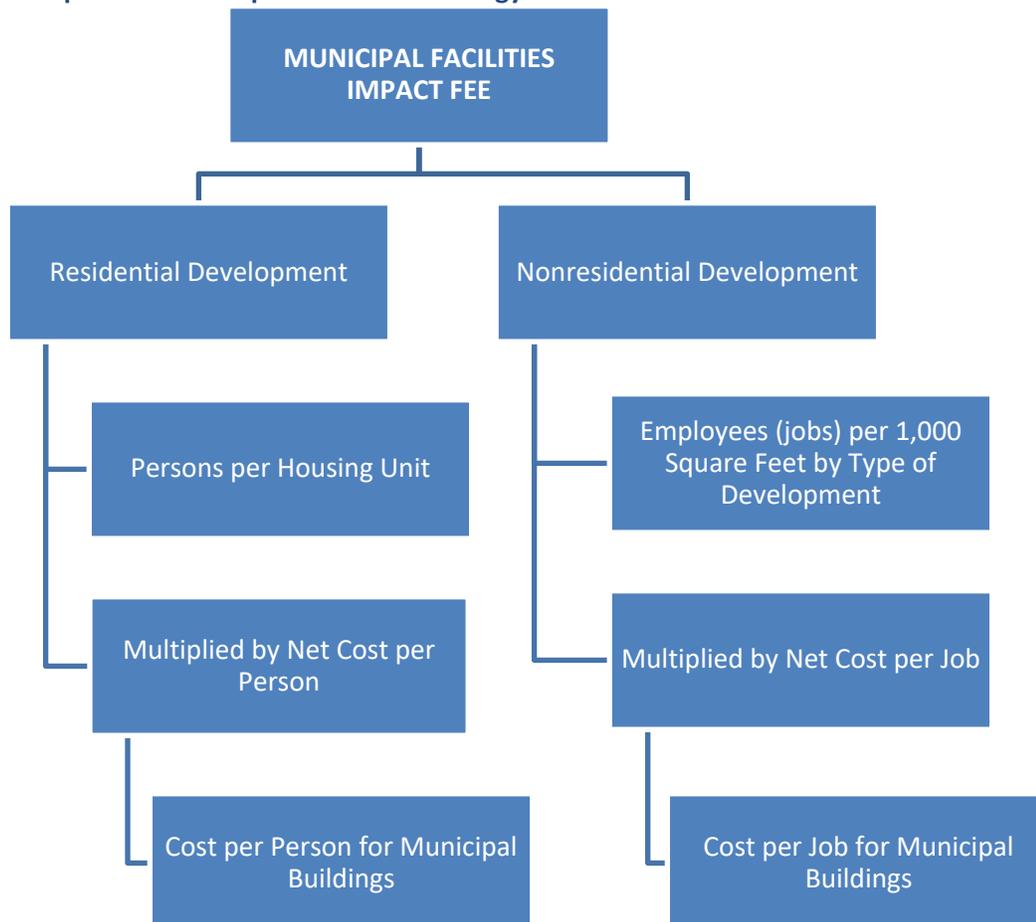
Regardless of the methodology, a consideration of “credits” is integral to the development of a legally defensible impact fee methodology. There are two types of “credits” with specific characteristics, both of which should be addressed in impact fee studies and ordinances. The first is a revenue credit due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the impact fee. This type of credit is integrated into the Fire impact fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for construction of system improvements. This type of credit is addressed in the administration and implementation of the development impact fee program.

Please note, calculations throughout this report are based on an analysis conducted using MS Excel software. Results are discussed in the memo using one- and two-digit places (in most cases). Figures are typically either truncated or rounded. In some instances, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

MUNICIPAL FACILITIES DEVELOPMENT IMPACT FEE

The Municipal Facilities Impact Fee is calculated on a per capita basis for residential development and a per employee basis for nonresidential development. Figure M1 illustrates the methodology used to determine the development fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the components. The residential portion is derived from the product of persons per housing unit (by type) multiplied by the net cost per person. The nonresidential portion is derived from the product of employees per 1,000 square feet of nonresidential space multiplied by the net cost per employee (job).

Figure M1. Municipal Facilities Impact Fee Methodology Chart



Municipal Facilities Proportionate Share Factors

Both residential and nonresidential developments increase the demand on Municipal Facilities infrastructure. To calculate the proportional share between residential and nonresidential demand on Municipal Facilities infrastructure, a functional population approach is used. The functional population approach allocates the cost of the facilities to residential and nonresidential development based on the activity of residents and workers in the City through the 24 hours in a day.

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Grand Junction are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Grand Junction are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2015 functional population data for Grand Junction, the cost allocation for residential development is 65 percent while nonresidential development accounts for 35 percent of the demand for municipal facilities, see Figure M2.

Figure M2. City of Grand Junction Functional Population

Demand Units in 2015		Demand Hours/Day	Person Hours	Proportionate Share
Residential				
Estimated Residents	60,588			
Residents Not Working	37,811	20	756,220	
Employed Residents	22,777			
Employed in Grand Junction	15,497	14	216,958	
Employed outside Grand Junction	7,280	14	101,920	
<i>Residential Subtotal</i>			1,075,098	65%
Nonresidential				
Non-working Residents	37,811	4	151,244	
Jobs in Grand Junction	42,565			
Residents Employed in Grand Junction	15,497	10	154,970	
Nonresident Workers (Inflow Commuters)	27,068	10	270,680	
<i>Nonresidential Subtotal</i>			576,894	35%
TOTAL			1,651,992	100%

Source: City of Grand Junction 2015 population estimate based on 2015 Census Estimate Data; U.S. Census Bureau OnTheMap 6.5 Web Application, 2015.

Municipal Facilities Level of Service and Capital Costs

The Municipal Facilities Impact Fee is based on six primary facilities serving the public, and their associated replacement costs. The use of existing standards means there are no existing infrastructure deficiencies. New development is only paying its proportionate share for growth-related infrastructure. The floor area has been provided by the City of Grand Junction staff.

The municipal buildings included in the impact fee calculation are listed in Figure M3. In total, there is 122,187 square feet of general government municipal floor area in the City.

The functional population split for the City of Grand Junction found in Figure M2 is used to allocate the square footage and corresponding replacement cost of Municipal Facilities infrastructure in Figure M3. Of the 122,187 square feet of applicable general government facilities, 65 percent is allocated to residential growth (79,518 square feet) and 35 percent (42,669 square feet) is allocated to nonresidential growth. The 2018 population or job totals divide the floor area allocations to find the residential and nonresidential level of service standard. For example, the residential level of service is 1.20 square feet per person (79,518 square feet / 66,425 residents = 1.20 square feet per person).

To estimate the replacement cost of the facilities, the average cost of \$277 per square foot is used. As a result, the replacement cost of City Facilities is \$33,845,799. To find the cost per person, the level of service standards is applied to the average replacement cost. For example, the residential cost per person is \$331.60 (1.20 square feet person x \$277 per square foot = \$331.60 per person).

Figure M3. Municipal Facilities Level of Service and Cost Factors

Facility	Square Feet	Cost Per SF*	Replacement Cost
Transportation Engineering Office	3,600	\$277	\$997,200
Municipal Service Center	38,485	\$277	\$10,660,345
Municipal Operations Center	23,345	\$277	\$6,466,565
Field Engineering Building	3,234	\$277	\$895,818
Facilities Building	7,523	\$277	\$2,083,871
City Hall	46,000	\$277	\$12,742,000
TOTAL	122,187		\$33,845,799

Level-of-Service (LOS) Standards

Population in 2018	66,425
Employment in 2018	58,660
Residential Share	65%
Nonresidential Share	35%
LOS: Square Feet per Person	1.20
LOS: Square Feet per Job	0.73

Cost Analysis

Cost per Square Foot*	\$277.00
LOS: Square Feet per Person	1.20
Cost per Person	\$331.60
LOS: Square Feet per Job	0.73
Cost per Job	\$201.49

Source: City of Grand Junction; TischlerBise analysis

*2018 National Building Cost Manual

Projection of Growth-Related Municipal Facilities Facility Needs

To estimate the 10-year growth needs for Municipal Facilities infrastructure, the current level of service (1.20 square feet per person and 0.73 square feet per job) is applied to the residential and nonresidential growth projected for the City of Grand Junction. The City is projected to increase by 12,025 residents and 11,035 jobs over the next ten years (see Appendix A). Figure M4 indicates that the City will need to construct 22,422 square feet of additional space to maintain current levels of service for Municipal Facilities. By applying the average cost of a building (\$277 per square feet), the estimated growth-related cost for Municipal Facilities is approximately \$6.2 million.

Figure M4. 10-Year Municipal Facilities Infrastructure Needs to Accommodate Growth

Type of Infrastructure	Level of Service		Demand Unit	Unit Cost / Sq. Ft.
Municipal Facilities	Residential	1.20	Square Feet	\$277
	Nonresidential	0.73		

Growth-Related Need for Municipal Facilities						
Year		Population	Jobs	Residential Square Feet	Nonresidential Square Feet	Total Square Feet
Base	2018	66,425	58,660	79,518	42,669	122,187
Year 1	2019	67,558	60,018	80,874	43,657	124,531
Year 2	2020	68,691	61,025	82,230	44,389	126,619
Year 3	2021	69,911	62,109	83,691	45,178	128,869
Year 4	2022	71,131	63,192	85,151	45,966	131,117
Year 5	2023	72,351	64,276	86,612	46,754	133,366
Year 6	2024	73,570	65,360	88,072	47,542	135,614
Year 7	2025	74,790	66,444	89,532	48,331	137,863
Year 8	2026	76,010	67,527	90,993	49,119	140,112
Year 9	2027	77,230	68,611	92,453	49,907	142,360
Year 10	2028	78,450	69,695	93,913	50,696	144,609
Ten-Year Increase		12,025	11,035	14,395	8,027	22,422
		Projected Expenditure		\$3,987,432	\$2,223,462	\$6,210,894

Growth-Related Expenditure on Municipal Facilities	\$6,210,894
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Maximum Supportable Municipal Facilities Impact Fee

Figure M5 shows the maximum supportable Municipal Facilities Impact Fee. Impact fees for Municipal Facilities are based on persons per housing unit for residential development and employees per 1,000 square feet for nonresidential development. For residential development, the total cost per person is multiplied by the persons per housing unit to calculate the proposed fee. For nonresidential development, the total cost per job is multiplied by the jobs per 1,000 square feet to calculate the proposed fee. The fees represent the highest amount supportable for each type of development, which represents new growth’s fair share of the cost for capital facilities. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure M5. Maximum Supportable Municipal Facilities Impact Fee

Fee Component	Cost per Person	Cost per Job
Municipal Facilities Space	\$331.60	\$201.49

Residential (per unit)

Development Type	Persons per Housing Unit	Maximum Supportable Fee
Single Family	2.37	\$785
Multi-Family	1.56	\$516

Nonresidential

Type	ITE Code	Unit	Employees*	Maximum Supportable Fee
Retail/Commercial	820	1,000 SF	2.34	\$471
Office/Institutional	710	1,000 SF	2.97	\$598
Industrial	130	1,000 SF	1.16	\$234
Warehousing	150	1,000 SF	0.34	\$69

*Employment densities were calculated using data from the Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition.

Revenue from Municipal Facilities Impact Fee

Revenue from the Municipal Facilities Impact Fee is estimated in Figure M6. There is projected to be 4,744 new housing units and 4.7 million square feet of nonresidential space in Grand Junction by 2028. To determine the revenue from each development type, the fee is multiplied by the growth. Overall, the revenue from the impact fee covers 93 percent of the capital costs generated by projected growth in the City of Grand Junction.

Figure M6. Estimated Revenue from Municipal Facilities Impact Fee

	Total Cost	Growth Cost
Municipal Facilities	\$6,210,894	\$6,210,894
Total Expenditures	\$6,210,894	\$6,210,894

Projected Development Impact Fee Revenue

		Single-Family	Multi-Family	Commercial / Retail	Office/Instit.	Industrial
		\$785 per unit	\$516 per unit	\$471 per 1,000 Sq Ft	\$598 per 1,000 Sq Ft	\$234 per 1,000 Sq Ft
Year		Housing Units		KSF	KSF	KSF
Base	2018	22,279	6,655	11,094	14,499	6,645
Year 1	2019	22,656	6,767	11,396	14,754	6,668
Year 2	2020	23,032	6,880	11,538	14,964	6,745
Year 3	2021	23,395	6,988	11,690	15,191	6,828
Year 4	2022	23,757	7,096	11,843	15,417	6,911
Year 5	2023	24,120	7,205	11,996	15,644	6,995
Year 6	2024	24,482	7,313	12,148	15,871	7,078
Year 7	2025	24,845	7,421	12,301	16,097	7,161
Year 8	2026	25,207	7,529	12,453	16,324	7,244
Year 9	2027	25,570	7,638	12,606	16,551	7,328
Year 10	2028	25,932	7,746	12,759	16,777	7,411
Ten-Year Increase		3,653	1,091	1,664	2,279	766
Projected Revenue =>		\$2,867,795	\$563,074	\$784,765	\$1,363,580	\$179,046
Projected Revenue =>						\$5,758,259
Total Expenditures =>						\$6,210,894
General Fund's Share =>						\$452,635

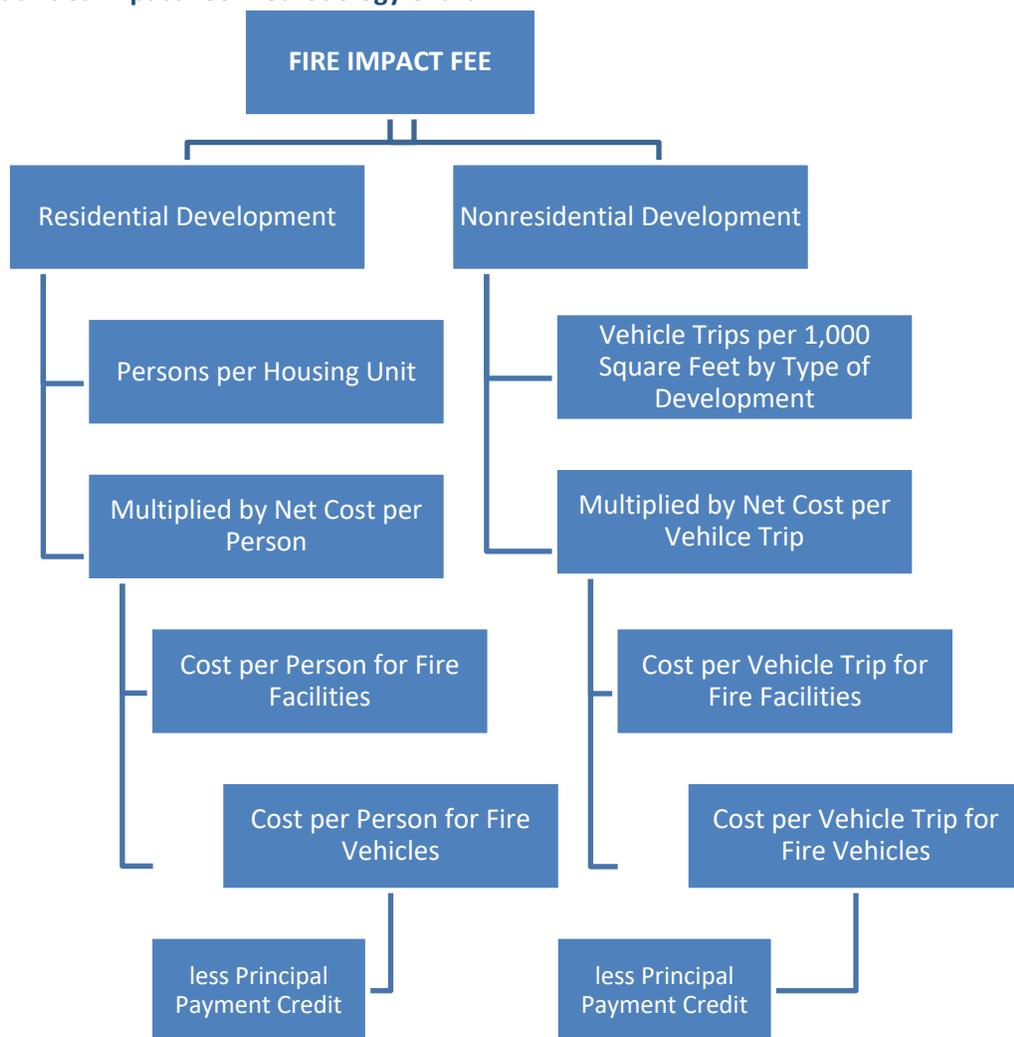
FIRE IMPACT FEE

The Fire Impact Fee is calculated on a per capita basis for residential development and a per vehicle trip basis for nonresidential development. Figure F1 illustrates the methodology used to determine the impact fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the components. The residential portion is derived from the product of persons per housing unit (by type) multiplied by the net cost per person. The nonresidential portion is derived from the product of vehicle trips generated per 1,000 square feet of nonresidential space multiplied by the net cost per vehicle trip. There are two components to the Fire Facilities Impact Fee:

- Fire Facilities
- Fire Apparatus

The residential fire impact fees are calculated per housing unit. Because the Grand Junction Fire Department also provides emergency medical services and these calls represent the largest percentage of calls to which the Department responds, TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for fire facilities and apparatus, as the trip rates will reflect the presence of people at nonresidential land uses. For example, vehicle trips are highest for commercial/retail developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for fire and emergency medical services and facilities from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, fire impact fees would be too high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses.

Figure F1. Fire Facilities Impact Fee Methodology Chart



Fire Service Area

The Grand Junction Fire Department serves an area greater than the City of Grand Junction and the 201 Service Area Boundary. Because of this, that portion of the demand cannot be attributed to City residents and businesses or the impact fees will be disproportionate to demand. Therefore, we asked the Grand Junction Fire Department to conduct an analysis of calls for service inside and outside the City in order to determine the amount of activity directed toward residents and business inside the City limits. As shown in Figure F2, over the last two calendar years, the City of Grand Junction Fire Department has responded to slightly over 32,000 incidents. Of that total, 83 percent of the incidents were inside the City limits.

Figure F2. Fire and EMS Incident Data for Two-Year Period

<i>Location</i>	<i>Incidents</i>	<i>%</i>
Inside the City	26,536	83%
Incidents outside the City	5,534	17%
Total	32,070	100%

Source: Grand Junction Fire Department

Fire Proportionate Share Factors

Both residential and nonresidential developments increase the demand on Fire facilities and vehicles. To calculate the proportional share between residential and nonresidential demand on Fire facilities and vehicles, a functional population approach is used. The functional population approach allocates the cost of the facilities to residential and nonresidential development based on the activity of residents and workers in the City through the 24 hours in a day.

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Grand Junction are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Grand Junction are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2015 functional population data for Grand Junction, the cost allocation for residential development is 65 percent while nonresidential development accounts for 35 percent of the demand for Fire infrastructure, see Figure F3.

Figure F3. City of Grand Junction Functional Population

Demand Units in 2015		Demand Hours/Day	Person Hours	Proportionate Share
Residential				
Estimated Residents	60,588			
Residents Not Working	37,811	20	756,220	
Employed Residents	22,777			
Employed in Grand Junction	15,497	14	216,958	
Employed outside Grand Junction	7,280	14	101,920	
		<i>Residential Subtotal</i>	1,075,098	65%
Nonresidential				
Non-working Residents	37,811	4	151,244	
Jobs in Grand Junction	42,565			
Residents Employed in Grand Junction	15,497	10	154,970	
Nonresident Workers (Inflow Commuters)	27,068	10	270,680	
		<i>Nonresidential Subtotal</i>	576,894	35%
		TOTAL	1,651,992	100%

Source: City of Grand Junction 2015 population estimate based on 2015 Census Estimate Data; U.S. Census Bureau OnTheMap 6.5 Web Application, 2015.

Fire Station Level of Service

The first component of the Fire Impact Fee is based on an inventory of existing Citywide facilities and replacement costs. The use of existing standards means there are no existing infrastructure deficiencies. New development is only paying its proportionate share for growth-related infrastructure. The floor area has been provided by the City of Grand Junction staff.

The Fire Department occupies 60,577 square feet in 7 facilities. To determine the level of service factors for the impact fee calculation, the amount of facility square footage (60,577) is multiplied by the percentage of activity directed inside the City limits (83%) and then by the functional population split for the City of Grand Junction (found in Figure F3) is used to allocate the square footage and corresponding replacement cost of the fire stations in Figure F4. For example, of the 60,577 square feet of fire space in the City, 50,279 square feet is directed toward City of Grand Junction (60,577 multiplied by 83%). Of this 50,279 impact fee eligible square footage, 32,721 square feet is allocated to residential growth and 17,558 square feet is allocated to nonresidential growth.

The allocated square feet of the Grand Junction fire stations are divided by the 2018 residential and nonresidential demand units (population and nonresidential vehicle trips). The result is the current level

of service for fire stations in the City. Specifically, there is 0.49 square feet of fire stations space per capita and 0.06 square feet per nonresidential vehicle trip.

To estimate the replacement cost of the fire stations, the average cost of \$450 per square foot is used. As a result, the total replacement cost for the 60,577 square feet of facilities is \$27,259,650. To find the cost per person or cost per nonresidential vehicle trip, the level of service standards is applied to the cost per square foot for fire stations. For example, the residential cost per person is \$253.92 (0.49 square feet per person x \$450 per square foot = \$221.67 per person).

Figure F4. Fire Station Level of Service and Cost Factors

Station	Square Footage	Cost per Square Foot*	Replacement Cost
Fire Administration Building	14,576	\$450.00	\$6,559,200
Fire Station No. 1	13,544	\$450.00	\$6,094,800
Fire Station No. 2	8,461	\$450.00	\$3,807,450
Fire Station No. 3	5,477	\$450.00	\$2,464,650
Fire Station No. 4	8,982	\$450.00	\$4,041,900
Fire Station No. 5 Training	1,916	\$450.00	\$862,200
Fire Station No. 5	7,621	\$450.00	\$3,429,450
TOTAL	60,577	\$450.00	\$27,259,650

Level-of-Service (LOS) Standards

Percentage of Activity in City of Grand Junction	83%
Population in 2018	66,425
Nonresidential Vehicle Trip Ends in 2018	271,362
Residential Share	65%
Nonresidential Share	35%
LOS: Sq. Ft. per Person	0.49
LOS: Sq. Ft. per Vehicle Trip End	0.06

Cost Analysis

Cost per Square Foot*	\$450
LOS: Square Feet per Person	0.49
Cost Per Person	\$221.67
LOS: Square Feet per Vehicle Trip End	0.06
Cost per Vehicle Trip End	\$29.12

*Source: City of Grand Junction

Fire Apparatus Level of Service

The second component of the Fire impact fee involves the fire apparatus. The City's current inventory of apparatus is contained in Figure F5, which consists of 38 pieces with a total replacement value of \$12.2 million, or a weighted average cost of \$322,771 per piece of apparatus. Similar to the facilities component, the apparatus inventory is compared to the percentage of activity directed inside the City of Grand Junction, and then allocated based on the proportionate share factors shown in Figure F3. For example, of the 38 pieces of apparatus in the City, approximately 31.5 pieces of the inventory are directed toward City of Grand Junction (38 pieces of apparatus multiplied by 83%). Of the 31.5 pieces of impact fee eligible apparatus, approximately 20.5 pieces are allocated to residential growth and approximately 11 pieces are allocated to nonresidential growth. These allocations are divided by the demand units (population for residential development and nonresidential vehicle trips for nonresidential development) to calculate the current level of service. The current level of service is multiplied by the weighted average cost per fire apparatus to calculate the cost per capita and nonresidential vehicle trip.

For example, there is .00031 pieces of fire apparatus per person in Grand Junction ($20.5 \text{ apparatus} / 66,425 \text{ persons} = .00031 \text{ apparatus per person}$). As discussed above, a new piece of fire apparatus has an average cost of \$322,771, which results in the residential cost equaling \$99.72 per person ($.00031 \text{ vehicles per person} \times \$322,711 \text{ per apparatus} = \99.72 per person).

Figure F5. Fire Apparatus Inventory and Level of Service

Description	Model	# of Units	Unit Cost*	Replacement Cost
Truck	Smeal 100' Quint	1	\$1,253,000	\$1,253,000
Truck	Smeal 75' Quint	1	\$1,253,000	\$1,253,000
Engine	Smeal	4	\$714,000	\$2,856,000
Engine	E-One Pumper	2	\$714,000	\$1,428,000
Battalion	Dodge Ram	1	\$65,000	\$65,000
HazMat	BLM	1	\$300,000	\$300,000
Ambulance	Dodge/Ford/Chevy	8	\$322,000	\$2,576,000
Medic	Ford F150	1	\$75,000	\$75,000
Rescue	SVI Heavy Rescue Truck	1	\$1,000,000	\$1,000,000
Brush	HME	1	\$379,000	\$379,000
Brush	Ford F450	1	\$294,000	\$294,000
Tender	International Tender	1	\$350,000	\$350,000
UTV	Yamaha Rhino	2	\$18,000	\$36,000
ATV	Suzuki	2	\$12,000	\$24,000
Air Trailer	Air Trailer	1	\$40,000	\$40,000
Trailers	Various	4	\$10,000	\$40,000
Administrative	SUV	3	\$55,000	\$165,000
Administrative	Pick Ups	3	\$43,000	\$129,000
TOTAL		38	\$322,711	\$12,263,000

Level-of-Service (LOS) Standards

Percentage of Activity in City of Grand Junction	83%
Population in 2018	66,425
Nonresidential Vehicle Trip Ends in 2018	271,362
Residential Share	65%
Nonresidential Share	35%
LOS: Units per Person	0.00031
LOS: Units per Vehicle Trip End	0.00004

Cost Analysis

Average Cost per Unit	\$322,711
LOS: Units per Person	0.00031
Cost per Person	\$99.72
LOS: Units per Vehicle Trip End	0.00004
Cost per Vehicle Trip End	\$13.10

*Source: City of Grand Junction.

Projection of Growth-Related Fire Needs

To estimate the 10-year growth needs for Fire infrastructure, the current level of service (0.49 square feet per person and 0.06 square feet per nonresidential vehicle trip) is applied to the residential and nonresidential growth projected for the City of Grand Junction. The City is projected to increase by 12,025 residents and 40,643 nonresidential vehicle trips over the next ten years (see Appendix A). As shown in Figure F6, there is a projected need for 8,554 square feet of Fire station space in the City to accommodate the growth at the present level of service. By applying the average cost of a building (\$450 per square feet), the total projected expenditure to accommodate new development is estimated \$3.8 million.

Figure F6. 10-Year Fire Infrastructure Needs to Accommodate Growth

Level-of-Service		Demand Unit	Unit Cost
Residential	0.49		
Nonresidential	0.06	per Trip End	

Growth-Related Need for Facilities						
Year	Population	Nonres. Vehicle Trips	Residential Sq. Ft.	Nonres. Sq. Ft.	Total	
Base	2018	66,425	271,362	32,721	17,558	50,279
Year 1	2019	67,558	277,672	33,279	17,966	51,245
Year 2	2020	68,691	281,244	33,837	18,197	52,035
Year 3	2021	69,911	285,089	34,438	18,446	52,884
Year 4	2022	71,131	288,934	35,039	18,695	53,734
Year 5	2023	72,351	292,779	35,640	18,944	54,584
Year 6	2024	73,570	296,625	36,241	19,193	55,434
Year 7	2025	74,790	300,470	36,842	19,441	56,283
Year 8	2026	76,010	304,315	37,443	19,690	57,133
Year 9	2027	77,230	308,160	38,044	19,939	57,983
Year 10	2028	78,450	312,005	38,645	20,188	58,832
<i>Ten-Year Increase</i>		12,025	40,643	5,924	2,630	8,554
Growth-Related Expenditure			\$2,665,693	\$1,183,388	\$3,849,081	

To estimate the 10-year growth needs for fire apparatus, the current level of service (.00031 apparatus per person and 0.00004 vehicles per nonresidential vehicle trip) is applied to the residential and nonresidential growth projected for the City of Grand Junction. The City is projected to increase by 12,025 residents and 40,643 nonresidential vehicle trips over the next ten years (see Appendix A). As shown in Figure F7, there is a projected need for approximately 5 additional growth-related pieces of apparatus. By applying the average cost of a vehicle (\$322,711), the total projected growth-related expenditure is estimated at approximately \$1.6 million.

Figure F7. 10-Year Fire Apparatus Needs to Accommodate Growth

Level-of-Service		Units	Demand Unit	Unit Cost
Residential	0.00031			per Person
Nonresidential	0.00004	per Trip End		

Growth-Related Need for Apparatus						
Year		Population	Nonres. Vehicle Trips	Residential Vehicles	Nonres. Vehicles	Total
Base	2018	66,425	271,362	21	11	32
Year 1	2019	67,558	277,672	21	11	32
Year 2	2020	68,691	281,244	21	11	33
Year 3	2021	69,911	285,089	22	12	33
Year 4	2022	71,131	288,934	22	12	34
Year 5	2023	72,351	292,779	22	12	34
Year 6	2024	73,570	296,625	23	12	35
Year 7	2025	74,790	300,470	23	12	35
Year 8	2026	76,010	304,315	23	12	36
Year 9	2027	77,230	308,160	24	13	36
Year 10	2028	78,450	312,005	24	13	37
<i>Ten-Year Increase</i>		12,025	40,643	4	2	5
Growth-Related Expenditure				\$1,290,842	\$645,421	\$1,613,553

Fire Debt Service Credit

The City of Grand Junction has existing debt obligations from past fire facility projects: Tax Revenue Bond Series 2010A and Tax Revenue Build America Bond Series 2010B. The proceeds from these bonds funded a number of fire facilities including Fire Station #1, #2 and the Fire Administration building for a total of \$7,100,000 of improvements, representing 20 percent of the 2010 Bonds. Figure F8 lists the remaining principal payment schedules for the bonds.

The total remaining annual principal payment schedule is distributed to the equivalent residential and nonresidential share, City's population and vehicle trip ends, to find the debt cost per attributed user. To account for the time value of money, annual payments are discounted using a net present value formula based on the applicable discount (7.1%) rate. This results in a credit of \$21.68 per person, and \$2.94 per nonresidential trip end.

Figure F8. Fire Debt Principal Payment Credit

Year	Principal Payment	Residential Share (65%)	Population	Debt Cost per Capita	Nonresidential Share (35%)	Nonres. Vehicle Trips	Debt Cost per Trip End
2019	\$165,000	\$107,250	67,558	\$1.59	\$57,750	277,672	\$0.21
2020	\$171,000	\$111,150	68,691	\$1.62	\$59,850	281,244	\$0.21
2021	\$177,000	\$115,050	69,911	\$1.65	\$61,950	285,089	\$0.22
2022	\$185,000	\$120,250	71,131	\$1.69	\$64,750	288,934	\$0.22
2023	\$193,000	\$125,450	72,351	\$1.73	\$67,550	292,779	\$0.23
2024	\$202,000	\$131,300	73,570	\$1.78	\$70,700	296,625	\$0.24
2025	\$211,000	\$137,150	74,790	\$1.83	\$73,850	300,470	\$0.25
2026	\$220,000	\$143,000	76,010	\$1.88	\$77,000	304,315	\$0.25
2027	\$230,000	\$149,500	77,230	\$1.94	\$80,500	308,160	\$0.26
2028	\$241,000	\$156,650	78,450	\$2.00	\$84,350	312,005	\$0.27
2029	\$252,000	\$163,800	79,862	\$2.05	\$88,200	316,292	\$0.28
2030	\$265,000	\$172,250	81,300	\$2.12	\$92,750	320,823	\$0.29
2031	\$278,000	\$180,700	82,763	\$2.18	\$97,300	325,436	\$0.30
2032	\$291,000	\$189,150	84,253	\$2.25	\$101,850	330,132	\$0.31
2033	\$306,000	\$198,900	85,769	\$2.32	\$107,100	334,912	\$0.32
2034	\$321,000	\$208,650	87,313	\$2.39	\$112,350	339,778	\$0.33
2035	\$337,000	\$219,050	88,885	\$2.46	\$117,950	344,732	\$0.34
2036	\$354,000	\$230,100	90,485	\$2.54	\$123,900	349,775	\$0.35
2037	\$372,000	\$241,800	92,113	\$2.63	\$130,200	354,909	\$0.37
2038	\$390,000	\$253,500	93,771	\$2.70	\$136,500	360,135	\$0.38
2039	\$409,000	\$265,850	95,459	\$2.78	\$143,150	365,456	\$0.39
2040	\$430,000	\$279,500	97,178	\$2.88	\$150,500	370,872	\$0.41
Total	\$6,000,000	\$3,900,000			\$2,100,000		

Discount Rate	7.1%
Net Present Value	\$21.68

Maximum Supportable Fire Impact Fee

Figure F9 shows the maximum supportable Fire Impact Fee. Impact fees for Fire are based on persons per housing unit for residential development and vehicle trips per 1,000 square feet for nonresidential development. For residential development, the total cost per person is multiplied by the persons per housing unit to calculate the proposed fee. For nonresidential development, the total cost per vehicle trip is multiplied by the trips per 1,000 square feet, hotel room or other applicable factor to calculate the proposed fee.

The fees represent the highest amount supportable for each type of development, which represents new growth's fair share of the cost for capital facilities. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure F9. Maximum Supportable Fire Impact Fee

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Vehicle Trip</i>
Facilities	\$221.67	\$29.12
Vehicles	\$99.72	\$13.10
Existing Principal Credit	(\$21.68)	(\$2.94)
NET COST PER DEMAND UNIT	\$299.71	\$39.28

Residential

<i>Housing Type</i>	<i>Persons per Housing Unit</i>	<i>Maximum Supportable Fee</i>
Single-Family	2.37	\$710
Multi-Family	1.56	\$467

Nonresidential

<i>Type</i>	<i>ITE Code</i>	<i>Unit</i>	<i>Average Daily Vehicle Trips*</i>	<i>Trip Adjustment Factor*</i>	<i>Maximum Supportable Fee</i>
Retail/Commercial	820	1,000 SF	37.75	33%	\$489
Office/Institutional	710	1,000 SF	9.74	50%	\$191
Industrial	130	1,000 SF	3.37	50%	\$66
Warehousing	150	1,000 SF	1.74	50%	\$34

*Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017

Revenue from Fire Impact Fee

Revenue from the Fire Impact Fee is estimated in Figure F10. There is projected to be 4,744 new housing units and 4.7 million square feet of new nonresidential development in Grand Junction by 2028. To find the revenue from each development type, the fee is multiplied by the growth. Overall, the revenue from the impact fee covers approximately 80 percent of the capital costs generated by projected growth in the City of Grand Junction.

Figure F10. Estimated Revenue from Fire Impact Fee

	Total Cost	Growth Cost
Facilities	\$3,849,081	\$3,849,081
Vehicles	\$1,613,553	\$1,613,553
Total Expenditures	\$5,462,634	\$5,462,634

Projected Fire and Rescue Impact Fee Revenue

		Single-Family	Multi-Family	Commercial/ Retail	Office/Instit.	Industrial
		\$710 per Unit	\$467 per Unit	\$489 per KSF	\$191 per KSF	\$66 per KSF
Year		Housing Units	Housing Units	KSF	KSF	KSF
Base	2018	22,279	6,655	11,094	14,499	6,645
1	2019	22,656	6,767	11,396	14,754	6,668
2	2020	23,032	6,880	11,538	14,964	6,745
3	2021	23,395	6,988	11,690	15,191	6,828
4	2022	23,757	7,096	11,843	15,417	6,911
5	2023	24,120	7,205	11,996	15,644	6,995
6	2024	24,482	7,313	12,148	15,871	7,078
7	2025	24,845	7,421	12,301	16,097	7,161
8	2026	25,207	7,529	12,453	16,324	7,244
9	2027	25,570	7,638	12,606	16,551	7,328
10	2028	25,932	7,746	12,759	16,777	7,411
<i>10-year Increase</i>		3,653	1,091	1,664	2,279	766
<i>10-year Projected Revenue</i>		\$2,593,395	\$509,224	\$814,447	\$435,874	\$50,701
Projected Revenue =>						\$4,403,640
Total Expenditures =>						\$5,462,634
General Fund's Share =>						\$1,058,994

POLICE IMPACT FEE

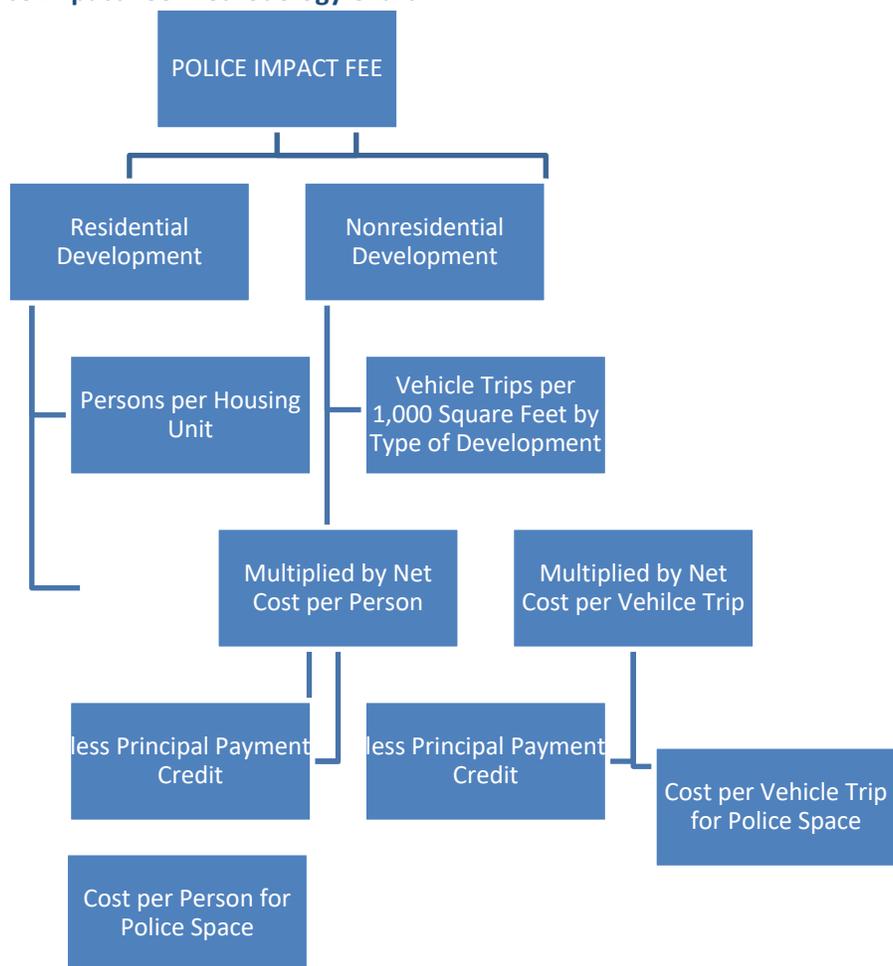
The Police Impact Fee is calculated on a per capita basis for residential development and a per vehicle trip basis for nonresidential development. Figure P1 illustrates the methodology used to determine the impact fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the components. The residential portion is derived from the product of persons per housing unit (by type) multiplied by the net cost per person. The nonresidential portion is derived from the product of vehicle trips generated per 1,000 square feet of nonresidential space multiplied by the net cost per vehicle trip. There are two components to the Police Impact Fee:

- Police Station – Incremental Expansion

One of the key considerations when developing impact fees is the ability to establish the existing level of service. Further detail about current and future level of service is provided in following sections of the report. For the police station component, the cost recovery methodology is used to calculate the portion of the facility attributed to future growth so that new development pays only its fair share of the cost of existing excess capacity which was provided by the original overbuilding of the facilities. In consideration of any outstanding debt associated with facility construction, TischlerBise incorporates a residential level-of-service debt recovery calculation based on the final year of debt payment, 2040, and the correlating residential population and vehicle trips. Additional detail regarding the debt recovery is provided in following sections of the report.

The residential police impact fees are calculated per housing unit. TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for police facilities. Trip generation rates are used for nonresidential development because vehicle trips are highest for commercial/retail developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for police services and facilities from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, police impact fees would be too high for office and institutional development because offices typically have more employees per 1,000 square feet than retail uses.

Figure P1. Police Impact Fee Methodology Chart



Police Proportionate Share Factors

Both residential and nonresidential developments increase the demand on police facilities. To calculate the proportional share between residential and nonresidential demand on police facilities, a functional population approach is used. The functional population approach allocates the cost of the facilities to residential and nonresidential development based on the activity of residents and workers in the City through the 24 hours in a day.

Residents that do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Grand Junction are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Grand Junction are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2015 functional population data for Grand

Junction, the cost allocation for residential development is 65 percent while nonresidential development accounts for 35 percent of the demand for police facilities, see Figure P2.

Figure P2. City of Grand Junction Functional Population

Demand Units in 2015		Demand Hours/Day	Person Hours	Proportionate Share
Residential				
Estimated Residents	60,588			
Residents Not Working	37,811	20	756,220	
Employed Residents	22,777			
Employed in Grand Junction	15,497	14	216,958	
Employed outside Grand Junction	7,280	14	101,920	
<i>Residential Subtotal</i>			1,075,098	65%
Nonresidential				
Non-working Residents	37,811	4	151,244	
Jobs in Grand Junction	42,565			
Residents Employed in Grand Junction	15,497	10	154,970	
Nonresident Workers (Inflow Commuters)	27,068	10	270,680	
<i>Nonresidential Subtotal</i>			576,894	35%
TOTAL			1,651,992	100%

Source: City of Grand Junction 2015 population estimate based on 2015 Census Estimate Data; U.S. Census Bureau OnTheMap 6.5 Web Application, 2015.

Police Station Level of Service

The first component of the Police Impact Fee is based on an inventory of existing citywide facilities and replacement costs. The use of existing standards means there are no existing infrastructure deficiencies. New development is only paying its proportionate share for growth-related infrastructure. The floor area has been provided by the City of Grand Junction staff.

The City of Grand Junction Police Department is housed in the Public Safety Building. The Police Department occupies 63,863 square feet. To determine the residential level of service, the current Police space square footage (63,863) is multiplied by the residential proportionate share factor (65%) and divided by the current population (66,425) for a level of service standard of 0.63 square feet per person. The nonresidential level of service standard of 0.08 square feet per nonresidential vehicle trip was determined by multiplying the current facility square footage (63,863) by the nonresidential proportionate share factor (35%) and divided by the current average daily nonresidential vehicle trips (271,362).

As shown in Figure P3, the estimated replacement cost is \$344.20 per square foot. I do know there was some concern about the fleet issue and our dire needs there. This cost is based on the estimated cost for construction of a future Police Annex prepared by the Blythe Group. When the residential (0.63 per person) and nonresidential (0.08 per vehicle trip) per square foot level of service standards are multiplied by the cost per square foot (\$344.20), the resulting cost per demand units are \$215.36 per person and \$28.29 per vehicle trip.

Figure P3. Police Station Level of Service and Cost Factors

<i>Facility Components</i>	<i>Square Footage</i>	<i>Cost per Square Foot*</i>	<i>Replacement Cost</i>
Police Station Building	63,863	\$344.20	\$14,317,814
TOTAL	63,863	\$344.20	\$14,317,814

*Source: City of Grand Junction

Level-of-Service (LOS) Standards

Population in 2018	66,425
Nonresidential Vehicle Trip Ends in 2018	271,362
Residential Share	65%
Nonresidential Share	35%
LOS: Square Feet per Person	0.63
LOS: Square Feet per Vehicle Trip End	0.08

Cost Analysis

Cost per Square Foot*	\$344.20
LOS: Square Feet per Person	0.63
Cost per Person	\$215.36
LOS: Square Feet per Vehicle Trip	0.08
Cost per Vehicle Trip	\$28.29

Projection of Growth-Related Police Facility Needs

To estimate the 10-year growth needs for Police space, the current level of service (.63 square feet per person and 0.08 square feet per nonresidential vehicle trip) is applied to the residential and nonresidential growth projected for the City of Grand Junction. The City is projected to increase by 12,025 residents and 40,643 nonresidential vehicle trips over the next ten years (see Appendix A). Listed in Figure P4, there is projected need for 10,864 square feet of growth-related Police space to accommodate new development in the City at the present level of service. By applying the average cost per square foot (\$344.20), the total projected growth-related building space expenditure is approximately \$3.7 million.

Figure P4. 10-Year Police Space Needs to Accommodate Growth

Level-of-Service		Demand Unit	Unit Cost
Residential	0.63	per Person	\$344
Nonresidential	0.08	per Trip End	

Growth-Related Need for Facilities						
Year		Population	Nonres. Vehicle Trips	Residential Sq. Ft.	Nonres. Sq. Ft.	Total
Base	2018	66,425	271,362	41,561	22,302	63,863
Year 1	2019	67,558	277,672	42,270	22,820	65,091
Year 2	2020	68,691	281,244	42,979	23,114	66,093
Year 3	2021	69,911	285,089	43,743	23,430	67,172
Year 4	2022	71,131	288,934	44,506	23,746	68,252
Year 5	2023	72,351	292,779	45,269	24,062	69,331
Year 6	2024	73,570	296,625	46,032	24,378	70,410
Year 7	2025	74,790	300,470	46,796	24,694	71,490
Year 8	2026	76,010	304,315	47,559	25,010	72,569
Year 9	2027	77,230	308,160	48,322	25,326	73,648
Year 10	2028	78,450	312,005	49,086	25,642	74,727
<i>Ten-Year Increase</i>		12,025	40,643	7,524	3,340	10,864
Growth-Related Expenditure				\$2,589,761	\$1,149,628	\$3,739,389

Police Debt Service Credit

The City of Grand Junction has existing debt obligations for the construction of the present Public Safety Building. The proceeds from these bonds funded a number of fire facilities including Fire Station #1, #2 and the Fire Administration building for a total of \$7,100,000 of improvements, representing 20 percent of the 2010 Bonds. Figure P5 lists the remaining principal payment schedule for the bonds, which is totals \$24 million.

The total remaining annual principal payment schedule is distributed to the equivalent residential and nonresidential share, City’s population and vehicle trip ends, to find the debt cost per attributed user. To

account for the time value of money, annual payments are discounted using a net present value formula based on the applicable discount (7.1%) rate. This results in a credit of \$86.71 per person, and \$11.74 per nonresidential trip end.

Figure P5. Police Debt Principal Payment Credit

Year	Principal Payment	Residential Share (65%)	Population	Debt Cost per Capita	Nonresidential Share (35%)	Nonres. Vehicle Trips	Debt Cost per Trip End
2019	\$660,000	\$429,000	67,558	\$6.35	\$231,000	277,672	\$0.83
2020	\$684,000	\$444,600	68,691	\$6.47	\$239,400	281,244	\$0.85
2021	\$708,000	\$460,200	69,911	\$6.58	\$247,800	285,089	\$0.87
2022	\$740,000	\$481,000	71,131	\$6.76	\$259,000	288,934	\$0.90
2023	\$772,000	\$501,800	72,351	\$6.94	\$270,200	292,779	\$0.92
2024	\$808,000	\$525,200	73,570	\$7.14	\$282,800	296,625	\$0.95
2025	\$844,000	\$548,600	74,790	\$7.34	\$295,400	300,470	\$0.98
2026	\$880,000	\$572,000	76,010	\$7.53	\$308,000	304,315	\$1.01
2027	\$920,000	\$598,000	77,230	\$7.74	\$322,000	308,160	\$1.04
2028	\$964,000	\$626,600	78,450	\$7.99	\$337,400	312,005	\$1.08
2029	\$1,008,000	\$655,200	79,862	\$8.20	\$352,800	316,292	\$1.12
2030	\$1,060,000	\$689,000	81,300	\$8.47	\$371,000	320,823	\$1.16
2031	\$1,112,000	\$722,800	82,763	\$8.73	\$389,200	325,436	\$1.20
2032	\$1,164,000	\$756,600	84,253	\$8.98	\$407,400	330,132	\$1.23
2033	\$1,224,000	\$795,600	85,769	\$9.28	\$428,400	334,912	\$1.28
2034	\$1,284,000	\$834,600	87,313	\$9.56	\$449,400	339,778	\$1.32
2035	\$1,348,000	\$876,200	88,885	\$9.86	\$471,800	344,732	\$1.37
2036	\$1,416,000	\$920,400	90,485	\$10.17	\$495,600	349,775	\$1.42
2037	\$1,488,000	\$967,200	92,113	\$10.50	\$520,800	354,909	\$1.47
2038	\$1,560,000	\$1,014,000	93,771	\$10.81	\$546,000	360,135	\$1.52
2039	\$1,636,000	\$1,063,400	95,459	\$11.14	\$572,600	365,456	\$1.57
2040	\$1,720,000	\$1,118,000	97,178	\$11.50	\$602,000	370,872	\$1.62
Total	\$24,000,000	\$15,600,000			\$8,400,000		

Discount Rate	7.1%
Net Present Value	\$86.71

Maximum Supportable Police Impact Fee

Figure P6 shows the maximum supportable Police Impact Fee. Impact fees for Police are based on persons per housing unit for residential development and vehicle trips per 1,000 square feet for nonresidential development. For residential development, the total cost per person is multiplied by the housing unit size to calculate the proposed fee. For nonresidential development, the total cost per vehicle trip is multiplied by the trips per 1,000 square feet to calculate the proposed fee.

The fees represent the highest amount supportable for each type of development, which represents new growth’s fair share of the cost for capital facilities. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure P6. Maximum Supportable Police Impact Fee

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Vehicle Trip</i>
Police Space	\$215.36	\$28.29
Existing Principal Credit	(\$86.71)	(\$11.74)
NET COST PER DEMAND UNIT	\$128.65	\$16.55

Residential

<i>Housing Type</i>	<i>Persons per Housing Unit</i>	<i>Maximum Supportable Fee</i>
Single-Family	2.37	\$305
Multi-Family	1.56	\$200

Nonresidential

<i>Type</i>	<i>ITE Code</i>	<i>Unit</i>	<i>Average Daily Vehicle Trips*</i>	<i>Trip Adjustment Factor*</i>	<i>Maximum Supportable Fee</i>
Retail/Commercial	820	1,000 SF	37.75	33%	\$206
Office/Institutional	710	1,000 SF	9.74	50%	\$81
Industrial	130	1,000 SF	3.37	50%	\$28
Warehousing	150	1,000 SF	1.74	50%	\$14

*Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017

Revenue from Police Impact Fee

Revenue from the Police Impact Fee is estimated in Figure P7. There is projected to be 4,744 new housing units and 4.7 million square feet of nonresidential development in Grand Junction by 2028. To find the revenue from each development type, the fee is multiplied by the growth for each land use. Overall, the projected revenue from the Police impact fee totals approximately \$1.6 million. Impact fee revenue is less than the projected expenditures due to the required debt credit.

Figure P7. Estimated Revenue from Police Impact Fee

	Growth Cost
Police Facilities	\$3,739,389
Total Expenditures	\$3,739,389

Projected Development Impact Fee Revenue

		<i>Single-Family</i>	Multi-Family	Commercial / Retail	Office/Instit.	Industrial
		\$305 per unit	\$200 per unit	\$81 per 1000 Sq Ft	\$81 per 1000 Sq Ft	\$28 per 1000 Sq Ft
Year		Housing Units	Housing Units	KSF	KSF	KSF
Base	2018	22,279	6,655	11,094	14,499	6,645
Year 1	2019	22,656	6,767	11,396	14,754	6,668
Year 2	2020	23,032	6,880	11,538	14,964	6,745
Year 3	2021	23,395	6,988	11,690	15,191	6,828
Year 4	2022	23,757	7,096	11,843	15,417	6,911
Year 5	2023	24,120	7,205	11,996	15,644	6,995
Year 6	2024	24,482	7,313	12,148	15,871	7,078
Year 7	2025	24,845	7,421	12,301	16,097	7,161
Year 8	2026	25,207	7,529	12,453	16,324	7,244
Year 9	2027	25,570	7,638	12,606	16,551	7,328
Year 10	2028	25,932	7,746	12,759	16,777	7,411
Ten-Year Increase		3,653	1,091	1,664	2,279	766
Projected Revenue =>		\$1,113,195	\$218,580	\$134,161	\$183,665	\$21,364
					Projected Revenue =>	\$1,670,965
					Total Expenditures =>	\$3,739,389
					General Fund's Share =>	\$2,068,424

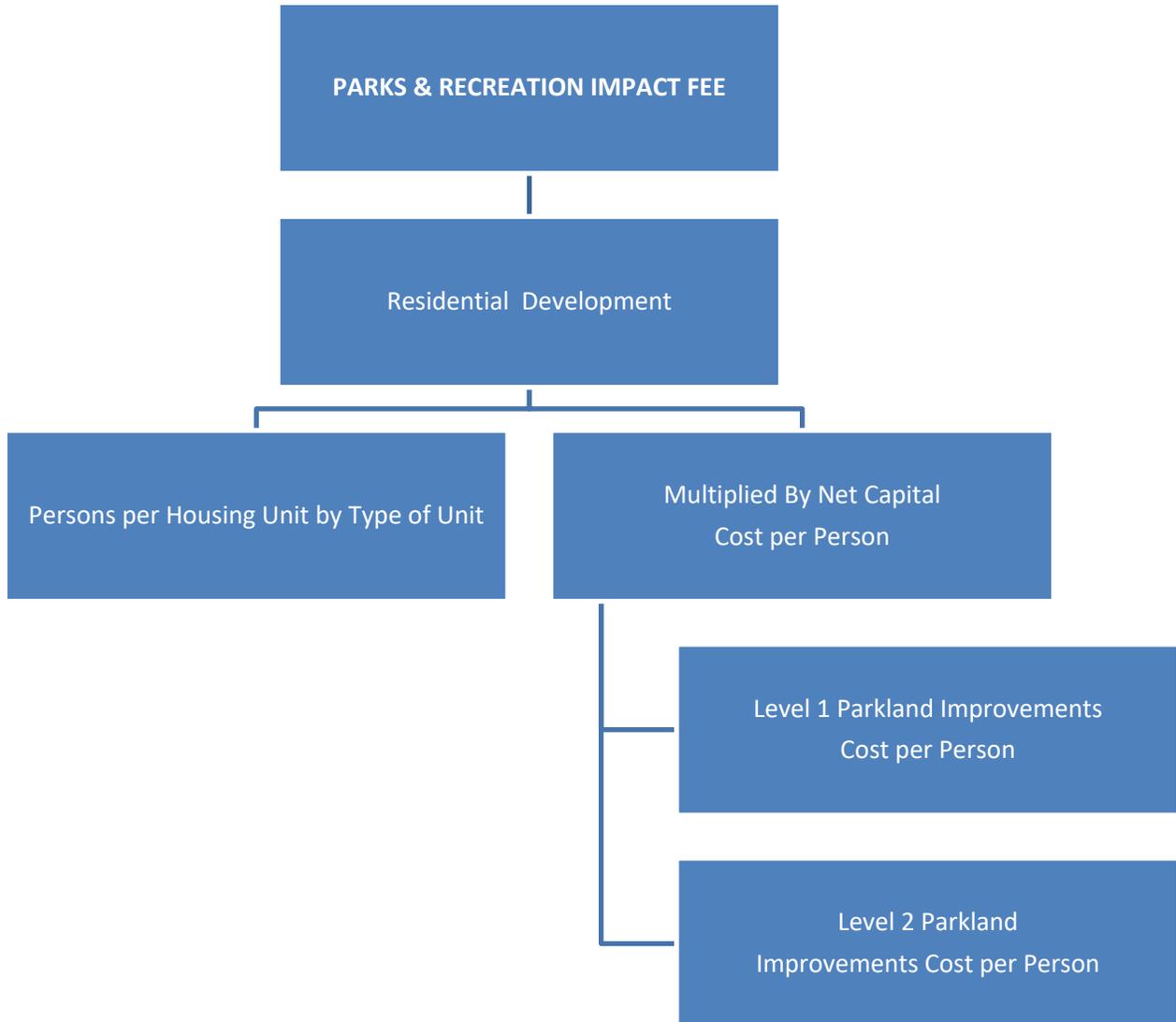
PARKS & RECREATION IMPACT FEE

The Parks & Recreation Impact Fee is based on the incremental expansion methodology. The impact fee methodology assumes the City will construct additional recreation improvements through the development of existing parks and banked park land to serve future growth to maintain current levels of service incrementally over time. The study includes only the replacement costs of improvements to park and recreational facilities, land acquisition is not included. However, the City will still maintain its current park land dedication requirement. Due to the recognition that Grand Junction Parks provide services to the larger population residing throughout the broader 201 Sewer Service Boundary, recreation capital improvements are allocated 100 percent to residential development within this area to establish the current level of service. No revenue credit is necessary to avoid double payments as there is no current debt obligations for the park improvements included in the impact fee calculations. There are two components to the Parks and Recreation Impact Fee:

- Level 1 Parkland Improvements
- Level 2 Parkland Improvements

Figure PR1 diagrams the general methodology used to calculate the Parks & Recreation impact fee. It is intended to read like an outline, with lower levels providing a more detailed breakdown of the impact fee components. The Parks and Recreation impact fee is derived from the product of persons per housing unit (by type of unit) multiplied by the net capital cost per person. The boxes in the next level down indicate detail on the components included in the fee.

Figure PR1. Parks & Recreation Impact Fee Methodology



Parks & Recreation Level of Service and Cost Factors

The Parks & Recreation Impact Fee is based on an inventory of existing developed City parks and current values of recreation improvements. The impact fee does not include a land purchase component as it is assumed the Parks and Recreation Department's focus over the next 5-10 years will be the buildout of existing park land. However, as mentioned previously, the City will still maintain its current park land dedication requirement. Improvement costs have been provided by the City of Grand Junction staff, referencing the *2011 City of Grand Junction Park Inventory and Future Needs Assessment* report, (updated in 2017). The use of existing standards means there are no existing infrastructure deficiencies. New development is only paying its proportionate share for growth-related infrastructure.

Discussions with City staff indicate the City's park system essentially serves residents who reside within the 201 Sewer Service Boundary. For purposes of determining level of service standards, this population base will be referred to as the "park population," which is larger than the existing population base of the City.

Current Inventory of Parkland and Improvements

Figure PR2 and PR3 lists the current inventory of parkland owned by the City of Grand Junction. For the purpose of this study, City staff allocated parks into one of two categories, Level-1 and Level-2 facilities. Figures PR2 and PR3 also indicate the total amount of Level-1 and Level-2 park acreage compared to the amount that is actually developed.

Level-1 parks are those improved with Phase-1 infrastructure, consisting of adequate soil preparation, irrigation systems, sewer and electrical services along with turf and tree plantings. Based on the development cost identified in the *Parks Inventory and Future Needs Assessment Report*, Phase-1 park improvements average \$112,500 per acre.

Level-2 parks are categorized as parks with Phase-II improvements, typically including a wide range of amenities including; restroom facilities, playgrounds, shelters and walking paths. Special features in these parks can include, but are not limited to; swimming pools, tennis courts, sports fields, disk golf, skate parks and many other like features.

The *Parks Inventory and Future Needs Assessment Report* estimates Phase-2 park improvements to average \$80,000 per acre (plus the cost of Level-1 improvements), for a total of \$192,500 per acre. In total, there are seven Level-1 parks with an improved value of \$812,250, and 29 Level-2 parks with a total improved value of \$56.7 million.

Parkland Improvements Level of Service

To calculate the current level of service, the existing developed parkland acreage, (10.32 for Level-1 parks and 357.54 for Level-2 parks) is divided by the current park population (103,224). This results in level of service standards of 0.0001 acres of developed Level-1 parkland per person and 0.0035 acres of developed Level-2 parkland per person.

The parkland improvements cost per acre (\$112,500 Level-1 and \$192,500 Level-2) is then utilized to generate a cost per person factor which is calculated by applying the level of service factor to the total development cost per acre. As shown in Figure PR2, Level-1 parkland improvements of 0.0001 acres per person x \$112,500 per acres = \$11.25 per person. Similarly, Figure PR3 displays the breakdown for Level-2 parkland in the City, which results in park development cost of \$666.76 per person.

Figure PR2. Level 1 Parkland Level of Service

Park	Park Type	Total Acreage	Developed Acreage	Improved Value
Autumn Ridge Park	Neighborhood/Mini Park	1.5	1.5	\$168,750
Hidden Valley Park	Neighborhood/Mini Park	7	1	\$112,500
Hillcrest Park	Neighborhood/Mini Park	0.23	0.23	\$25,875
Lilac Park	Undeveloped/Open Space	1.7	1.7	\$191,250
Ridges Tot Lot Park	Neighborhood/Mini Park	1.8	1.8	\$201,375
Shadow Lake Park	Neighborhood/Mini Park	5.7	1	\$112,500
Spring Valley Park	Neighborhood/Mini Park	3.1	3.1	\$348,750
TOTAL		21.02	10.32	\$1,161,000

Level-of-Service (LOS) Standards

Developed Acreage	10.32
Park Population in 2018 (includes 201 Boundary)	103,224
LOS: Improved Acres per Person	0.0001

Cost Analysis

Improvement Value per Acre*	\$112,500
LOS: Improved Acres per Person	0.0001
Cost per Person	\$11.25

*Source: City of Grand Junction

Figure PR3. Level 2 Parkland Level of Service

Park	Park Type	Total Acreage	Developed Acreage	Improved Value
Canyon View Park	Community/Regional Park	114.2	114.2	\$21,983,500
Columbine Park	Community/Regional Park	12	12	\$2,310,000
Cottonwood Meadows Park	Neighborhood/Mini Park	0.8	0.8	\$154,000
Darla Jean Park	Neighborhood/Mini Park	2.2	2.2	\$423,500
Duck Pond Orchard Mesa Park	Neighborhood/Mini Park	4.4	4.4	\$847,000
Duck Pond Park - Ridges	Neighborhood/Mini Park	2.82	2.82	\$542,850
Eagle Rim Park	Neighborhood/Mini Park	12	12	\$2,310,000
Emerson Park	Neighborhood/Mini Park	2.52	2.52	\$485,100
Hawthorne Park	Neighborhood/Mini Park	3.5	3.5	\$673,750
Honeycomb Park	Neighborhood/Mini Park	3.5	3.5	\$673,750
Las Colonias Park	Community/Regional Park	140	115	\$10,060,000
Lincoln Park	Community/Regional Park	42	42	\$8,085,000
Pineridge Park	Neighborhood/Mini Park	15.7	3	\$577,500
Paradise Hills Park	Neighborhood/Mini Park	5.57	2.78	\$535,150
Rocket Park	Neighborhood/Mini Park	2.7	2.7	\$519,750
Riverside Park	Neighborhood/Mini Park	1.5	1.5	\$288,750
Sherwood Park	Neighborhood/Mini Park	13.87	13.87	\$2,669,975
Spring Valley II Park	Neighborhood/Mini Park	2.52	2.52	\$485,100
Washington Park	Neighborhood/Mini Park	3	3	\$577,500
Whitman Park	Neighborhood/Mini Park	2.5	2.5	\$481,250
Williams Park	Neighborhood/Mini Park	0.37	0.37	\$71,225
Westlake Park	Neighborhood/Mini Park	10	5.5	\$1,058,750
Wingate Park	Neighborhood/Mini Park	4.86	4.86	\$935,550
Burkey Park North	Undeveloped/Open Space	18.37	0	\$0
Burkey Park South	Undeveloped/Open Space	9.61	0	\$0
Flint Ridge	Undeveloped/Open Space	3.3	0	\$0
Horizon Park	Undeveloped/Open Space	12.65	0	\$0
Matchett Park	Undeveloped/Open Space	205.52	0	\$0
Saccomanno Park	Undeveloped/Open Space	30.73	0	\$0
TOTAL		682.71	357.54	\$56,748,950

Level-of-Service (LOS) Standards

Developed Acreage	357.54
Park Population in 2018 (includes 201 Boundary)	103,224
LOS: Improved Acres per Person	0.0035

Cost Analysis

Improvement Value per Acre*	\$192,500
LOS: Improved Acres per Person	0.0035
Cost per Person	\$666.76

*Source: City of Grand Junction

Projection of Growth-Related Park Improvement Needs

To estimate the 10-year growth needs for Level 1 park improvements, the current level of service (0.0001 acres person) is applied to the projected park population growth. The 201 Sewer Service area is projected to increase by 18,688 residents over the next ten years (see Appendix A). As shown in Figure PR4, it is projected that the City will need to develop 1.3 acres of Level 1 park land to accommodate the needs generated by new development. By applying the average development cost for Level 1 parks (\$112,500 per acre), the estimated growth-related expenditure is approximately \$210,000.

Figure PR4. 10-Year Level 1 Park Improvement Needs to Accommodate Growth

Type	Level of Service	Demand Unit	Unit Cost / Acre
Level 1 Park Improvements	0.0001 Acres	per person	\$112,500

Growth-Related Need for Level 1 Park Improvements			
Year	Population	Improved Acres	
Base	2018	103,224	10.32
Year 1	2019	104,985	10.50
Year 2	2020	106,746	10.67
Year 3	2021	108,642	10.86
Year 4	2022	110,538	11.05
Year 5	2023	112,434	11.24
Year 6	2024	114,329	11.43
Year 7	2025	116,225	11.62
Year 8	2026	118,121	11.81
Year 9	2027	120,016	12.00
Year 10	2028	121,912	12.19
Ten-Year Increase		18,688	1.87
Projected Expenditure			\$210,375

Growth-Related Expenditure on Level 1 Park Improvements	\$210,375
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To estimate the 10-year growth needs for Level 2 park improvements, the current level of service (0.0035 acres person respectively for Level-2 improvements) is applied to the projected park population growth. The 201 Sewer Service area is projected to increase by 18,688 residents over the next ten years (see Appendix A). As shown in Figure PR5, it is projected that the City will need to develop 65 acres of Level 2 park land to accommodate the needs generated by new development. By applying the average development cost for Level 2 parks (\$192,500 per acre), the estimated growth-related expenditure is approximately \$12.5 million.

Figure PR5. 10-Year Level 2 Park Improvement Needs to Accommodate Growth

Type	Level of Service	Demand Unit	Unit Cost / Acre
Level 2 Park Improvements	0.0035 Acres	per 1,000 persons	\$192,500

Growth-Related Need for Level 2 Park Improvements			
Year		Population	Improved Acres
Base	2018	103,224	357.54
Year 1	2019	104,985	363.64
Year 2	2020	106,746	369.74
Year 3	2021	108,642	376.31
Year 4	2022	110,538	382.87
Year 5	2023	112,434	389.44
Year 6	2024	114,329	396.00
Year 7	2025	116,225	402.57
Year 8	2026	118,121	409.14
Year 9	2027	120,016	415.70
Year 10	2028	121,912	422.27
Ten-Year Increase		18,688	65
Projected Expenditure			\$12,512,500

Growth-Related Expenditure Level 2 Park Improvements	\$12,512,500
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Parks & Recreation Impact Fee

Figure PR6 shows the cost factors for each component of the City of Grand Junction’s Parks and Recreation Impact Fee. Impact fees for parks and recreation are based on persons per housing unit and are only assessed against residential development. The fees for park improvements are calculated per person, so by multiplying the total cost per person by the housing unit size calculates the maximum supportable fee.

The fees represent the highest amount supportable for each type of housing unit, which represents new growth’s fair share of the cost for capital facilities. The City may adopt fees that are less than the amounts shown. However, a reduction in impact fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in levels of service.

Figure PR6. Maximum Supportable Park & Recreation Impact Fee

Fee Component	Cost per Person
Level 1 Parkland Improvements	\$11.25
Level 2 Parkland Improvements	\$666.76
COST PER DEMAND UNIT	\$678.01

Type	Persons per Housing Unit	Maximum Supportable Fee	Current Fee	Increase / (Decrease)
Single-Family	2.37	\$1,605	\$225	\$1,380
Multi-Family	1.56	\$1,055	\$225	\$830

Revenue from Parks & Recreation Impact Fee

Revenue from the City’s Parks & Recreation Impact Fee is estimated in Figure PR7. Demand for park improvements is driven by both City residents and current/future residents within the 201 Sewer Service Boundary. Therefore, it is difficult to estimate impact fee revenue for parks and recreation because it is not known when (and if) the projected housing units in the 201 Sewer Service Boundary will be annexed into the City of Grand Junction prior to their construction (which is the time the impact fee is paid). Therefore, the impact fee revenue projection is based on projected units in the City of Grand Junction over the next ten years. By multiplying the projected residential growth in the City by the impact fee amounts, we estimate projected impact fee revenue of approximately \$7.0 million. Projected expenditures total \$12.7 million.

Figure PR7. Estimated Revenue from Parks & Recreation Impact Fee

	Growth Cost
Level 1 Parkland Improvements	\$210,375
Level 2 Parkland Improvements	\$12,512,500
Total Expenditures	\$12,722,875

Projected Development Impact Fee Revenue

		Single-Family	Multi-Family
		\$1,605 per unit	\$1,055 per unit
Year		Housing Units	Housing Units
Base	2018	22,279	6,655
Year 1	2019	22,656	6,767
Year 2	2020	23,032	6,880
Year 3	2021	23,395	6,988
Year 4	2022	23,757	7,096
Year 5	2023	24,120	7,205
Year 6	2024	24,482	7,313
Year 7	2025	24,845	7,421
Year 8	2026	25,207	7,529
Year 9	2027	25,570	7,638
Year 10	2028	25,932	7,746
Ten-Year Increase		3,653	1,091
Projected Revenue =>		\$5,863,453	\$1,151,246
		Projected Revenue =>	\$7,014,699
		Total Expenditures =>	\$12,722,875
		General Fund's Share =>	\$5,708,176

IMPLEMENTATION AND ADMINISTRATION

Impact fees should be periodically evaluated and updated to reflect recent data. City of Grand Junction will continue to adjust for inflation. If cost estimates or demand indicators change significantly, the City should redo the fee calculations.

Colorado's enabling legislation allows local governments to "waive an impact fee or other similar development charge on the development of low or moderate income housing, or affordable employee housing, as defined by the local government."

Credits and Reimbursements

A general requirement that is common to development impact fee methodologies is the evaluation of credits. A revenue credit may be necessary to avoid potential double payment situations arising from one-time development impact fees plus on-going payment of other revenues that may also fund growth-related capital improvements. The determination of revenue credits is dependent upon the development impact fee methodology used in the cost analysis and local government policies.

Policies and procedures related to site-specific credits should be addressed in the resolution or ordinance that establishes the development impact fees. Project-level improvements, required as part of the development approval process, are not eligible for credits against development impact fees. If a developer constructs a system improvement included in the fee calculations, it will be necessary to either reimburse the developer or provide a credit against the fees due from that particular development. The latter option is more difficult to administer because it creates unique fees for specific geographic areas.

Service Area

A development impact fee service area is a region in which a defined set of improvements provide benefit to an identifiable amount of new development. Within a service area, all new development of a type (single-family, commercial, etc.) is assessed at the same development impact fee rate. Land use assumptions and development impact fees are each defined in terms of this geography, so that capital facility demand, projects needed to meet that demand, and capital facility cost are all quantified in the same terms. Development impact fee revenue collected within a service area is required to be spent within that service area.

Implementation of a large number of small service areas is problematic. Administration is complicated and, because funds collected within the service area must be spent within that area multiple service areas may make it impossible to accumulate sufficient revenue to fund any projects within the time allowed.

As part of our analysis of the City and the type of facilities and improvements included in the development impact fee calculation, TischlerBise has determined that a citywide service area is appropriate for the City of Grand Junction for all impact fees with the exception of parks and recreation, which includes the 201 Service Area Boundary.

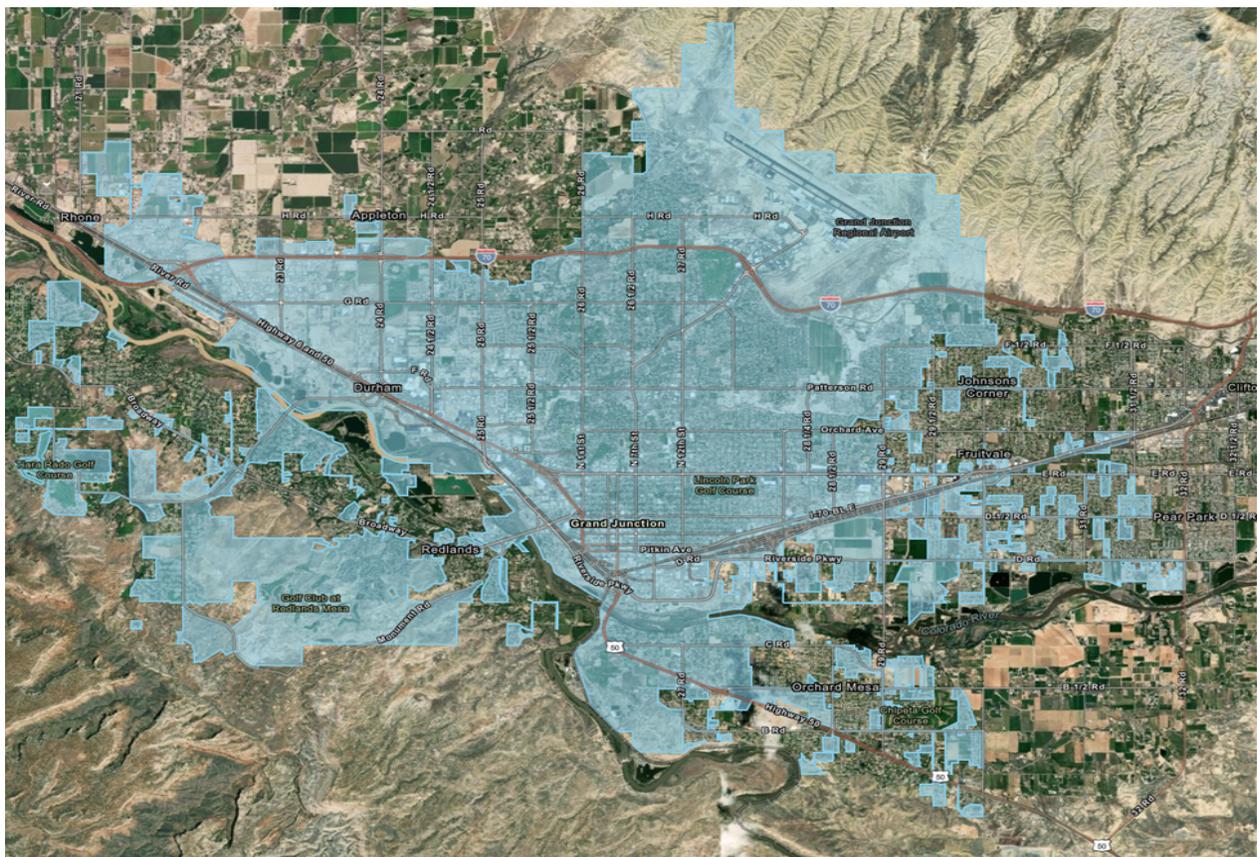
APPENDIX A: LAND USE ASSUMPTIONS

Overview

The City of Grand Junction, Colorado, retained TischlerBise to analyze the impacts of development on its capital facilities and to calculate impact fees based on that analysis. The population, housing unit, and job projections contained in this document provide the foundation for the impact fee study. To evaluate demand for growth-related infrastructure from various types of development, TischlerBise prepared documentation on demand indicators by type of housing unit, jobs and floor area by type of nonresidential development. These metrics (explained further below) are the demand indicators to be used in the impact fee study.

Impact fees are based on the need for growth-related capital improvements, and they must be proportionate by type of land use. The demographic data and development projections are used to demonstrate proportionality and to anticipate the need for future infrastructure. Demographic data reported by the U.S. Census Bureau, and data provided by Grand Junction and Mesa County Regional Transportation Planning Organization (RTPO) staff, are used to calculate base year estimates and annual *projections* for a 10-year horizon. Impact fee studies typically look out five to ten years, with the expectation that fees will be updated every three to five years.

Figure A1: Grand Junction Municipal Boundary



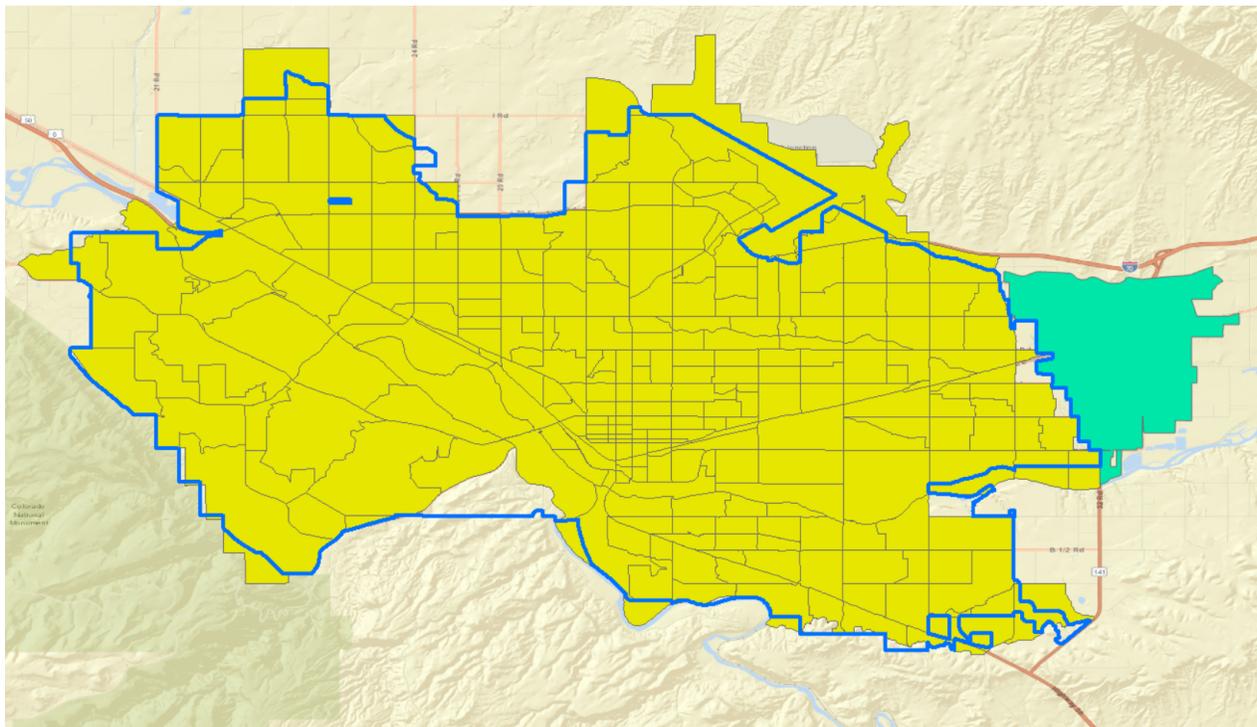
Residential Development

Current estimates and future projections of residential development are detailed in this section, including population and housing units by type (e.g., single-family versus multi-family units).

Population and Housing Units

Due to differing development patterns both in and outside of City limits, TischlerBise reviewed base year population and housing unit estimates for the City of Grand Junction and specific TAZ boundaries from the Transportation Master Plan which are also associated with the 201 Sewer Service Area Boundary. The task at hand is to provide baseline population and housing unit estimates for those areas of the 201 Sewer Service Area Boundary which can reasonably be expected to be annexed into the City of Grand Junction over the next ten years. Figure A2 depicts the 201 Sewer Service Area Boundary (light blue line) and TAZ areas (yellow) incorporated into the study population and housing estimates.

Figure A2: Map of 201 Sewer Service Boundary and TAZ Areas



Persons per Housing Unit

In 2010 the U.S. Census Bureau transitioned from the traditional long-form questionnaire to the American Community Survey (ACS), which is less detailed and has smaller sample sizes. As a result, Census data now has more limitations than before. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For impact fees in Grand Junction, “single-family” residential includes detached units and townhouses that share a common sidewall but are constructed on

an individual parcel of land. The second residential category includes all multi-family structures with two or more units on an individual parcel of land. The third residential category (All Other Types) includes mobile homes and recreational vehicles.

According to the Census Bureau, a household is a housing unit that is occupied by year-round residents. Impact fees often use per capita standards and persons per housing unit, or persons per household, to derive proportionate-share fee amounts. When persons per housing unit are used in the fee calculations, infrastructure standards are derived using year-round population. When persons per household are used in the fee calculations, the impact fee methodology assumes all housing units will be occupied, this requiring seasonal or peak population to be used when deriving infrastructure standards.

To estimate population for future years, the analysis applies growth assumptions derived from the *Grand Valley 2040 Transportation Master Plan 201 TAZ Estimates*, City GIS parcel data, 2018 ESRI Business Survey, Mesa County Building Permit data and standards from the Institute of Transportation Engineers, 10th addition. For the impact fee calculations, TischlerBise will rely on the above referenced as well as a variety of local and regional data sources including the 2017 ACS results shown at the top of Figure A3. Collectively, this information is used to indicate the relative number of persons per housing unit, by units in a residential structure, (2.37 PPHU Single-Family, 1.70 PPHU Multi-Family) and the housing mix (67% Single-Family, 27% Multi-Family) in Grand Junction. Because of the minimal seasonal population residing in the City, TischlerBise recommends that impact fees for residential development be imposed according to housing unit type.

Figure A3: Persons per Household and Persons per Housing Unit by Type of Housing

<i>Units in Structure</i>	<i>Persons</i>	<i>Households</i>	<i>Persons per Household</i>	<i>Housing Units</i>	<i>Persons per Housing Unit</i>	<i>Housing Mix</i>	<i>Vacancy Rate⁴</i>
Single-Family Units ¹	46,611	18,710	2.49	19,679	2.37	73%	4.92%
Multi-Family Units	11,391	6,788	1.68	7,316	1.56	27%	7.22%
Subtotal	58,002	25,498	2.27	26,995	2.15		5.55%
Group Quarters	2,880						
Total	60,882						

Source: U.S. Census Bureau, 2017 American Community Survey, Tables B25024, B25032, B25033, and B26001

1. Includes detached and attached units (i.e. townhouses) and mobile homes.

Recent Residential Construction

The City of Grand Junction provided TischlerBise with recent City residential building permit activity, shown in Figure A4. A total of 2,356 single-family and 514 multi-family permits were issued in the City from 2011 through 2018. Unit distribution over this period was 18 percent multi-family and 82 percent single-family. This ratio is slightly higher than the overall housing unit mix in the City which based on GIS parcel data analysis show that 77 percent of existing residential structures are single-family units and 23 percent are multi-family. It is worth mentioning that at the time of the writing of this report, over 150 multi-family units are in some stage of development review, which if constructed, would bring the 10-year average unit split closer to ratio reflected in the GIS parcel data.

Figure A4: Recent Grand Junction Residential Permit Activity

Year	Single Family	%	Multi-Family	%	Total
2011-2018	2,356	82%	514	18%	2,870

Source: City of Grand Junction, CO Building Permit Data

Current Population and Housing within Grand Junction City Limits

By December 31, 2018, Grand Junction’s population grew to approximately 66,425 residing in 28,934 housing units according to analysis performed by TischlerBise which relied on the 2017 DOLA population estimate of 66,224, plus 1,201 new residents which represents observed growth over 2018. This rate of growth is above the average annual growth from 2011-2018 of 359 units and 798 persons per year (295 SF units x 2.37 PPHU=699) +(64 MF units x 1.56 PPHU=99) as shown below in Figure A5.

Figure A5: Grand Junction 2018 Population and Housing Unit Estimate

	DOLA 2017 est.	2011-2018 New Construction ¹	Avg. Annual New Units 2011-2018	2018 Housing Units Added	PPHU ²	Est. 2018 Population Growth	Total
Single-Family Units		2,356	295	498	2.37	1,180	
Multi-Family Units		514	64	13	1.56	20	
Housing Units	28,423		359	511			28,934
Population	65,224					1,201	66,425

Sources: 1.City of Grand Junction Building Permit Data, TischlerBise Analysis
 2. U.S. Census 2017 ACS 5-year Estimate

Current Population and Housing within 201 Growth Area Boundary

Population and housing unit estimates for the 201 Sewer Service Area Boundary were compiled from sewer boundary specific TAZ areas, less specific portions of zones which included neighborhood sewer systems and therefore are unlikely to be annexed into the City. TischlerBise applied the population, housing unit estimates found within the *Grand Valley 2040 Transportation Master Plan* in each TAZ) to derive the number of existing housing units in the service area but outside of the City limits. The resulting estimates, shown in Figure A6, suggest approximately 14,217 housing units (28,934 units within current municipal boundary-43,151 units within the sewer service area) exist in the 201 Sewer Service Area Boundary, outside of the City limits for which *impact fees will not be collected*. Deducting the estimated 2018 Grand Junction population from the 201 Sewer Service Area Boundary TAZ area (66,425-103,224) results in an estimated population of 36,800 currently residing in the 201 Sewer Service Area, outside of City limits.

Figure A6: 2018 Population and Housing Unit Estimates 201 Boundary Selected TAZ

Development Type	2018	2018	
	City Limits	201 Sewer Service Boundary	Total
Population	66,425	36,800	103,224
Housing Units	28,934	14,217	43,151

Source: Grand Valley 2040 Transportation Master Plan 201 TAZ Estimates

Projected Population and Housing Units

The selected Transportation Master Plan TAZ areas, shown in Figure A7, include new housing unit projections from 2018 to 2028 of 708 units annually. A total of 50,227 housing units, (7,076 net new units) are projected in the area by 2028. Given historic housing dispersion throughout the 201 Sewer Boundary and observed residential unit composition for the area, housing estimates were broken down between existing City limits and areas currently outside but within the 201 Boundary. As observed within the City GIS parcel data, 77 percent of current Grand Junction housing units are single-family. City housing unit growth projections have mirrored this observed ratio resulting in an estimated addition of 3,653 single-family and 1,091 multi-family units by 2028. For areas outside current City limits but within the 201 Sewer Service Area Boundary, 100 percent the grow of new housing units, 2,331, have been attributed to single-family development reflecting the rural composition of the area.

The Transportation Master Plan model estimates a ten-year population increase of 18,688 persons for the selected 201 Sewer Service Area boundary TAZ areas. All totals shown below in Figure A7 represent estimates as of January 1st of each year.

Figure A7: Grand Junction Residential Development Projections for Selected TAZ Areas

	2018 <i>Base Year</i>	5-Year Increment					2028 <i>10</i>	10-Year Increase
		2019 <i>1</i>	2020 <i>2</i>	2021 <i>3</i>	2022 <i>4</i>	2023 <i>5</i>		
POPULATION								
Grand Junction	66,425	67,558	68,691	69,911	71,131	72,351	78,450	12,025
201 /Outside City	36,800	37,428	38,055	38,731	39,407	40,083	43,462	6,662
Total	103,224	104,985	106,746	108,642	110,538	112,434	121,912	18,688
HOUSING UNITS								
GJ Single-Family	22,279	22,656	23,032	23,395	23,757	24,120	25,932	3,653
GJ Multi-Family	6,655	6,767	6,880	6,988	7,096	7,205	7,746	1,091
Grand Junction Total	28,934	29,423	29,912	30,383	30,854	31,324	33,678	4,744
201 Bdry Single-Family	14,217	14,458	14,698	14,929	15,161	15,392	16,549	2,331
Total Housing Units	43,151	43,881	44,610	45,312	46,014	46,717	50,227	7,076

Nonresidential Development

In addition to data on residential development, the calculation of impact fees requires data on nonresidential development. All land use assumptions and projected growth rates are consistent with socioeconomic data from the Grand Valley 2040 Regional Transportation Plan and the 2018 ESRI Business Summary Report for Grand Junction. TischlerBise uses the term “jobs” to refer to employment by place of

work. In Figure A8, the nonresidential development prototypes used by TischlerBise to derive nonresidential floor area and average weekday vehicle trips ends are shown.

Employment Density Factors and Trip Generation Factors

The prototype for future projections of commercial / retail development is an average-size Shopping Center (ITE 820). Commercial / retail development (i.e. retail and eating / drinking places) is assumed to average 427 square feet per job. For future industrial development, Industrial Park (ITE 130) is a reasonable proxy with an average of 864 square feet per job. For office / other service development, General Office (ITE 710) is the prototype for future development, with an average of 337 square feet per job.

Figure A8: Nonresidential Demand Indicators

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit*	Wkdy Trip Ends Per Employee*	Emp Per Dmd Unit	Sq. Ft. Per Emp
110	Light Industrial	1,000 Sq Ft	4.96	3.05	1.63	615
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	3.93	2.47	1.59	628
150	Warehousing	1,000 Sq Ft	1.74	5.05	0.34	2,902
254	Assisted Living	bed	2.60	4.24	0.61	na
320	Motel	room	3.35	25.17	0.13	na
520	Elementary School	1,000 Sq Ft	19.52	21.00	0.93	1,076
530	High School	1,000 Sq Ft	14.07	22.25	0.63	1,581
540	Community College	student	1.15	14.61	0.08	na
550	University/College	student	1.56	8.89	0.18	na
565	Day Care	student	4.09	21.38	0.19	na
610	Hospital	1,000 Sq Ft	10.72	3.79	2.83	354
710	General Office (avg size)	1,000 Sq Ft	9.74	3.28	2.97	337
760	Research & Dev Center	1,000 Sq Ft	11.26	3.29	3.42	292
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.75	16.11	2.34	427

* Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Nonresidential Floor Area and Employment

To determine future employment growth TischlerBise utilized different data sources to forecast future nonresidential development in the study area. To project future employment, our analysis relies on the observed 2018 jobs to population ratio of .88 (88 jobs per 100 residents) resulting in a 1.8 percent annual growth in employment rather than the 2.3 percent annual growth forecasted in the Transportation Master Plan. In order better understand the relationship between Grand Junction City limits employment and nonresidential growth and areas outside but within the 201 Sewer Boundary, TischlerBise reviewed the areas separately. The findings show that for the base year of 2010, 99.5 percent of all 201 Boundary jobs were located within Grand Junction while .5 percent were located outside of the City. Utilizing this ratio as a proxy allows for the allocation of future projected nonresidential floor area and estimated job growth between the 201 Sewer Boundary and City limits.

Figure A9: 2010 Grand Junction vs. 201 Sewer Boundary Employment Distribution

Total Employment	2010		
	City Limits	Sewer Service Boundary	Total
Jobs	57,609	283	57,892

Source: Grand Valley 2040 Transportation Master Plan 201 TAZ Estimates for City Growth Boundary

TischlerBise then applied ESRI employment estimates (58,660) for Grand Junction to derive a 2018 base, with jobs allocated to one of three nonresidential categories: Commercial / Retail, Industrial / Flex, and Office / Institutional. Grand Junction staff provided floor area estimates from their GIS data for 2018 totaling approximately 32,237,608 million square feet of nonresidential construction. This results in a base year estimate of approximately 33 percent of jobs occupying 11 million square feet of Commercial / Retail development, 18 percent of jobs occupying 6.6 million square feet of Industrial development, and 49 percent of jobs occupying approximately 14.5 million square feet of Office / Institutional development.

Figure A10: Grand Junction Nonresidential Floor Area and Employment Estimates 2018

Industry Sector	2018 Jobs ¹	Share of Total Jobs	SF per Employee ²	2018 Estimated Floor Area ²	Jobs per 1,000 SF
Commercial/Retail ³	19,099	33%	581	11,094,208	1.72
Office/Institutional ⁴	28,811	49%	503	14,498,503	1.99
Industrial/Flex ⁵	10,750	18%	618	6,644,897	1.62
TOTAL	58,660	100%		32,237,608	

1. ESRI Business Summary, Grand Junction, CO, 2018.
2. City of Grand Junction GIS Parcel Data, 2018
3. Major sector is Eating & Drinking places.
4. Major sectors are Health Services and Other Services.
5. Major sector are Construction and Manufacturing.

Projected Nonresidential Floor Area and Employment

Once the 2018 employment data was derived for the City, TischlerBise then established future employment growth by industry across the entire 201 Sewer Service Area Boundary. TAZ employment growth projections were distributed according to observed 2018 ESRI employment sector percentages for the City of Grand Junction (33% Commercial/Retail, 49% Office/Institutional, 18 % Industrial/Flex) (Figure A10). The resulting analysis results in an increase of 11,090 jobs throughout the study area of which 11,035 (11,090 x 99.5%) can be attributed to growth within the City limits. To calculate growth of nonresidential floor area, TischlerBise applied ITE Sq. Ft. per employee estimates (Figure A8) by estimated sector employment to derive net new annual growth. Projected nonresidential development over the next ten years results in an increase of 4.73 million square feet of floor area of which 4.7 million Sq. Ft. are projected to be developed within existing City limits. All totals shown below in Figure A11 represent estimates as of January 1st of each year.

Figure A11: Nonresidential Development Projections—Selected 201 Boundary TAZ Areas

	2018 <i>Base Year</i>	5-Year Increment					2028 <i>10</i>	10-Year Increase
		2019 <i>1</i>	2020 <i>2</i>	2021 <i>3</i>	2022 <i>4</i>	2023 <i>5</i>		
POPULATION								
Grand Junction	66,425	67,558	68,691	69,911	71,131	72,351	78,450	12,025
201 /Outside City	36,800	37,428	38,055	38,731	39,407	40,083	43,462	6,662
Total	103,224	104,985	106,746	108,642	110,538	112,434	121,912	18,688
EMPLOYMENT BY TYPE								
GJ Commercial/Retail	19,099	19,806	20,138	20,496	20,853	21,211	22,999	3,900
GJ Office/Institutional	28,811	29,409	29,902	30,433	30,964	31,495	34,150	5,339
GJ Industrial/Flex	10,750	10,803	10,984	11,180	11,375	11,570	12,545	1,795
Grand Junction Total	58,660	60,018	61,025	62,109	63,192	64,276	69,695	11,035
201 Commercial/Retail	97	99	101	102	104	106	115	18
201 Office/Institutional	144	147	150	152	155	157	171	27
201 Industrial/Flex	53	54	55	56	57	58	63	10
Total Employment	58,953	60,318	61,330	62,419	63,508	64,597	70,043	11,090
NONRES. FLOOR AREA (X 1,000 SF)								
GJ Commercial/Retail	11,094	11,396	11,538	11,690	11,843	11,996	12,759	1,664
GJ Office/Institutional	14,499	14,754	14,964	15,191	15,417	15,644	16,777	2,279
GJ Industrial/Flex	6,645	6,668	6,745	6,828	6,911	6,995	7,411	766
Grand Junction Total	32,238	32,817	33,247	33,709	34,172	34,634	36,947	4,709
201 Commercial/Retail	41	42	43	44	44	45	49	8
201 Office/Institutional	48	50	50	51	52	53	58	9
201 Industrial/Flex	32	33	34	34	35	36	39	6
201 Bdry Total	122	125	127	129	132	134	145	23
Total Nonres. Floor Area	32,360	32,942	33,247	33,709	34,172	34,634	36,947	4,732

- * Nonres Floor Area derived from Trip Generation, Institute of Transportation Engineers, 10th Edition (2017) Sq. Ft Per Emp. Multiplied by net new employment by sector.
- * Population growth from TMP for Taz areas of 1.8%.
- * Housing unit growth from TMP for TAZ areas of 1.6%
- * Employment growth reflecting 2018 job/population ratio .8883. Applies sector % distribution from 2018 ESRI data.
- * 201 Outside City Employment .05% of Grand Junction employment held constant.

Summary of Growth Indicators

Key development projections for Grand Junction’s impact fee study are housing units and nonresidential floor area, summarized above. These projections are used to estimate impact fee revenue and to indicate the anticipated need for growth-related infrastructure. The goal is to have reasonable projections without being overly concerned with precision, because impact fees methodologies are designed to reduce sensitivity to development projections in the determination of the proportionate-share fee amounts. If actual development is slower than projected, impact fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, Grand Junction will receive more impact fee revenue, but it will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

Based on these projections, development in the combined 201 Sewer Service area and City over the next ten years is expected to average 707 residential units per year and 473,000 square feet of nonresidential floor area per year. Although significantly above the average annual increase of 359 housing units from 2011 to 2018, these projections include the larger 201 Sewer Growth Boundary.

Figure A12: Summary of Development Projections and Growth Rates

	5-Year Increment							2018 to 2028 Average Annual	
	2018	2019	2020	2021	2022	2023	2028	Increase	Compound Growth Rate
GJ Housing Units	28,934	29,423	29,912	30,383	30,854	31,324	33,678	474	1.53%
201 Growth Bdry Housing Units	14,217	14,458	14,698	14,929	15,392	16,549	16,549	233	1.53%
GJ Nonresidential Sq. Ft x1,000	32,238	32,817	33,247	33,709	34,172	34,634	36,947	471	1.37%
201 Growth Bdry Nonresidential Sq. Ft x1,000	122	125	127	129	132	134	145	2	1.74%

Development Projections

Provided below is a summary of cumulative development projections used in the development impact fee study. Base year estimates for 2018 are used in the development impact fee calculations and *reflect the entirety of the City and Sewer Service 201 growth boundary*. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands. All totals represent estimates as of January 1st of each year.

Figure A13: Development Projections Summary Selected TAZ Areas

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	10-Year Increase
	Base Year	1	2	3	4	5	6	7	8	9	10	
POPULATION												
Grand Junction	66,425	67,558	68,691	69,911	71,131	72,351	73,570	74,790	76,010	77,230	78,450	12,025
201 /Outside City	36,800	37,428	38,055	38,731	39,407	40,083	40,759	41,435	42,110	42,786	43,462	6,662
Total	103,224	104,985	106,746	108,642	110,538	112,434	114,329	116,225	118,121	120,016	121,912	18,688
HOUSING UNITS												
GJ Single-Family	22,279	22,656	23,032	23,395	23,757	24,120	24,482	24,845	25,207	25,570	25,932	3,653
GJ Multi-Family	6,655	6,767	6,880	6,988	7,096	7,205	7,313	7,421	7,529	7,638	7,746	1,091
Grand Junction Total	28,934	29,423	29,912	30,383	30,854	31,324	31,795	32,266	32,737	33,208	33,678	4,744
201 Bdry Single-Family	14,217	14,458	14,698	14,929	15,161	15,392	15,623	15,855	16,086	16,317	16,549	2,331
Total Housing Units	43,151	43,881	44,610	45,312	46,014	46,717	47,419	48,121	48,823	49,525	50,227	7,076
EMPLOYMENT BY TYPE												
GJ Commercial/Retail	19,099	19,806	20,138	20,496	20,853	21,211	21,569	21,926	22,284	22,642	22,999	3,900
GJ Office/Institutional	28,811	29,409	29,902	30,433	30,964	31,495	32,026	32,557	33,088	33,619	34,150	5,339
GJ Industrial/Flex	10,750	10,803	10,984	11,180	11,375	11,570	11,765	11,960	12,155	12,350	12,545	1,795
Grand Junction Total	58,660	60,018	61,025	62,109	63,192	64,276	65,360	66,444	67,527	68,611	69,695	11,035
201 Commercial/Retail	97	99	101	102	104	106	108	110	111	113	115	18
201 Office/Institutional	144	147	150	152	155	157	160	163	165	168	171	27
201 Industrial/Flex	53	54	55	56	57	58	59	60	61	62	63	10
Total Employment	58,953	60,318	61,330	62,419	63,508	64,597	65,687	66,776	67,865	68,954	70,043	11,090
NONRES. FLOOR AREA (X 1,000 SF)												
GJ Commercial/Retail	11,094	11,396	11,538	11,690	11,843	11,996	12,148	12,301	12,453	12,606	12,759	1,664
GJ Office/Institutional	14,499	14,754	14,964	15,191	15,417	15,644	15,871	16,097	16,324	16,551	16,777	2,279
GJ Industrial/Flex	6,645	6,668	6,745	6,828	6,911	6,995	7,078	7,161	7,244	7,328	7,411	766
Grand Junction Total	32,238	32,817	33,247	33,709	34,172	34,634	35,097	35,559	36,022	36,484	36,947	4,709
201 Commercial/Retail	41	42	43	44	44	45	46	47	48	48	49	8
201 Office/Institutional	48	50	50	51	52	53	54	55	56	57	58	9
201 Industrial/Flex	32	33	34	34	35	36	36	37	37	38	39	6
201 Bdry Total	122	125	127	129	132	134	136	138	141	143	145	23
Total Nonres. Floor Area	32,360	32,942	33,247	33,709	34,172	34,634	35,097	35,559	36,022	36,484	36,947	4,732

* Nonres Floor Area derived from Trip Generation, Institute of Transportation Engineers, 10th Edition (2017) Sq. Ft Per Emp. Multiplied by net new employment by sector.
 * Population growth from TMP for Taz areas of 1.8%.
 * Housing unit growth from TMP for TAZ areas of 1.6%
 * Employment growth reflecting 2018 job/population ratio .8883. Applies sector % distribution from 2018 ESRI data.
 *201 Outside City Employment .05% of Grand Junction employment held constant.

Found below in Figure A14, in the base year, there is a total of 271,362 average weekday vehicle trips in the City of Grand Junction. The trip totals are calculated by multiplying the average weekday vehicle trip factors with the base year nonresidential floor area.

To project the 10-year increase in trips, the growth in nonresidential floor area is used. It is projected that over the next ten years there will be an increase of 40,643 nonresidential vehicle trips in the City of Grand Junction.

Figure A14: Nonresidential Vehicle Trip Projections

	5-Year Increment-->							10-Year Increase
	2018 Base Yr	2019 1	2020 2	2021 3	2022 4	2023 5	2028 10	
Commercial/Retail	184,275	189,286	191,641	194,176	196,711	199,246	211,921	27,647
Office/Institutional	70,608	71,850	72,875	73,979	75,083	76,186	81,705	11,097
Industrial/Flex	16,479	16,536	16,727	16,934	17,140	17,347	18,379	1,900
Total Nonres. Vehicle Trips	271,362	277,672	281,244	285,089	288,934	292,779	312,005	40,643

1. Trip rates are customized for Grand Junction.

2. Trip rates are from the Institute of Transportation Engineers (ITE) Trip Generation Manual (2017).

APPENDIX B: LAND USE DEFINITIONS

Residential Development

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. Grand Junction will collect development fees from all new residential units. One-time development fees are determined by site capacity (i.e. number of residential units). This category also contains mobile homes and recreational vehicles

Single-Family: Single-Family detached is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has open space on all four sides. Also included in the definition is Single family attached (townhouse), which is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

Multi-Family: 2+ units (duplexes and apartments) are units in structures containing two or more housing units, further categorized as units in structures with “2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments.”

Nonresidential Development

The proposed general nonresidential development categories (defined below using 2017 ITE Land Use Code) can be used for all new construction within Grand Junction. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

Land Use: 820 Shopping Center Description. A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center’s composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Factory outlet center (Land Use 823) is a related use.

Land Use: 710 General Office Building Description. A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers, and tenant services, such as a bank or savings and loan institution, a restaurant, or cafeteria and service retail facilities. A general office building with a gross floor area of 5,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are

additional related uses. If information is known about individual buildings, it is suggested that the general office building category be used rather than office parks when estimating trip generation for one or more office buildings in a single development. The office park category is more general and should be used when a breakdown of individual or different uses is not known. If the general office building category is used and if additional buildings, such as banks, restaurants, or retail stores are included in the development, the development should be treated as a multiuse project. On the other hand, if the office park category is used, internal trips are already reflected in the data and do not need to be considered. When the buildings are interrelated (defined by shared parking facilities or the ability to easily walk between buildings) or house one tenant, it is suggested that the total area or employment of all the buildings be used for calculating the trip generation. When the individual buildings are isolated and not related to one another, it is suggested that trip generation be calculated for each building separately and then summed.

Land Use: 130 Industrial Park Description. An industrial park contains a number of industrial or related facilities. It is characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities—some with a large number of small businesses and others with one or two dominant industries. General light industrial (Land Use 110) and manufacturing (Land Use 140) are related uses.

Land Use: 150 Warehousing Description. A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), high-cube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.



Impact Fee Study Workshop

Grand Junction, Colorado
8/19/19

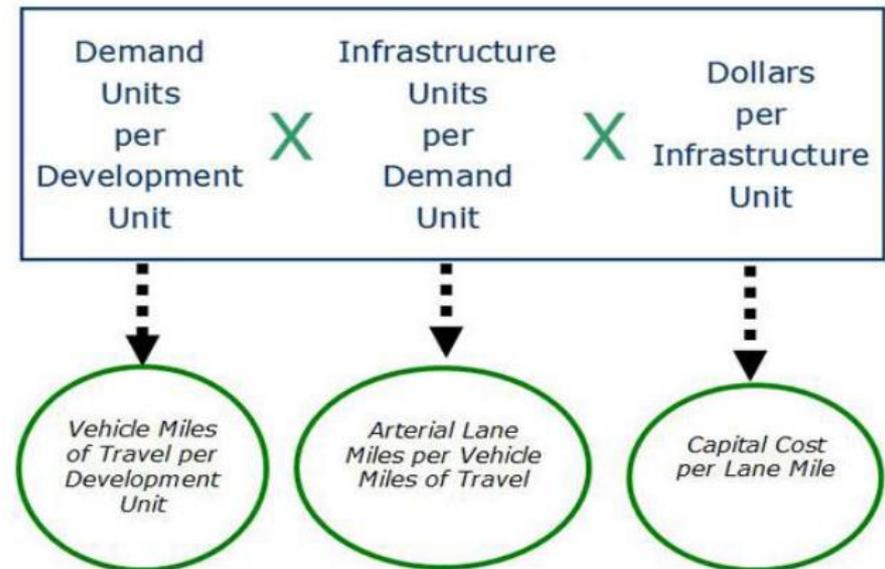


- 40-Year National Practice
 - » Impact fees
 - » Fiscal impact analysis
 - » Economic impact analysis
 - » Infrastructure funding strategies
 - » Market feasibility

Adams County	Arapahoe County	Aurora	Boulder
Castle Pines	Castle Rock	Centennial	Colorado Springs
Durango	Eaton	Erie	Evans
Fort Collins	Garfield County	Grand Junction	Greeley
Johnstown	La Plata County	Larimer County	Lone Tree
Longmont	Louisville	Mead	Mesa County
Montezuma County	Parker	Pitkin County	Pueblo
Steamboat Springs	Thornton	Vail	Westminster

Legal and Methodology

- One time payments to fund system improvements
- Cannot be deposited into General Fund
- Basic legal requirements are need, benefit, and proportionality
- General Methods
 - » Plan Based
 - » Cost Recovery
 - » Incremental Expansion



Impact Fees in Colorado

- Governed by Senate Bill 15
 - » October 2001
- Improvement or facility that:
 - » Is directly related to any service that a local government is authorized to provide;
 - » Has a useful life of five years or longer
- Specific accounting requirements
- Allows a local government to waive an impact fee on the development of low/moderate income housing
 - » Does not address whether the local government is required to “make up” the difference

Grand Junction Impact Fee Program

- Existing impact fees
 - » Parks
 - » Water plant investment fee
 - » Wastewater plant investment fee
- Potential impact fees as part of this study
 - » Parks (updated)
 - » Fire/EMS (new)
 - » Police (new)
 - » Municipal facilities (new)



Fire Impact Fee

- Consumption-based approach
- Service area exceeds City limits
 - » 83% of incidents are inside City
- Components
 - » Stations
 - » Vehicles/Apparatus
- Credit for existing debt

Fire 10-Year Facility/Apparatus Demand

Level-of-Service		Demand Unit	Unit Cost
Residential	0.49	Square Feet per Person per Trip End	\$450
Nonresidential	0.06		

Growth-Related Need for Facilities						
Year	Population	Nonres. Vehicle Trips	Residential Sq. Ft.	Nonres. Sq. Ft.	Total	
Base	2018	66,425	271,362	32,721	17,558	50,279
Year 1	2019	67,558	277,672	33,279	17,966	51,245
Year 2	2020	68,691	281,244	33,837	18,197	52,035
Year 3	2021	69,911	285,089	34,438	18,446	52,884
Year 4	2022	71,131	288,934	35,039	18,695	53,734
Year 5	2023	72,351	292,779	35,640	18,944	54,584
Year 6	2024	73,570	296,625	36,241	19,193	55,434
Year 7	2025	74,790	300,470	36,842	19,441	56,283
Year 8	2026	76,010	304,315	37,443	19,690	57,133
Year 9	2027	77,230	308,160	38,044	19,939	57,983
Year 10	2028	78,450	312,005	38,645	20,188	58,833
Ten-Year Increase		12,025	40,643	5,924	2,630	8,554
		Growth-Related Expenditure		\$2,665,693	\$1,183,388	\$3,849,081

Level-of-Service		Demand Unit	Unit Cost
Residential	0.00031	Units per Person per Trip End	\$322,711
Nonresidential	0.00004		

Growth-Related Need for Apparatus						
Year	Population	Nonres. Vehicle Trips	Residential Vehicles	Nonres. Vehicles	Total	
Base	2018	66,425	271,362	21	11	32
Year 1	2019	67,558	277,672	21	11	32
Year 2	2020	68,691	281,244	21	11	33
Year 3	2021	69,911	285,089	22	12	33
Year 4	2022	71,131	288,934	22	12	34
Year 5	2023	72,351	292,779	22	12	34
Year 6	2024	73,570	296,625	23	12	35
Year 7	2025	74,790	300,470	23	12	35
Year 8	2026	76,010	304,315	23	12	36
Year 9	2027	77,230	308,160	24	13	36
Year 10	2028	78,450	312,005	24	13	37
Ten-Year Increase		12,025	40,643	4	2	5
		Growth-Related Expenditure		\$1,290,842	\$645,421	\$1,613,553

Maximum Supportable Fire Impact Fee

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Vehicle Trip</i>
Facilities	\$221.67	\$29.12
Vehicles	\$99.72	\$13.10
Existing Principal Credit	(\$21.68)	(\$2.94)
NET COST PER DEMAND UNIT	\$299.71	\$39.28

Residential

<i>Housing Type</i>	<i>Persons per Housing Unit</i>	<i>Maximum Supportable Fee</i>
Single-Family	2.37	\$710
Multi-Family	1.56	\$467

Nonresidential

<i>Type</i>	<i>ITE Code</i>	<i>Unit</i>	<i>Average Daily Vehicle Trips*</i>	<i>Trip Adjustment Factor*</i>	<i>Maximum Supportable Fee</i>
Retail/Commercial	820	1,000 SF	37.75	33%	\$489
Office/Institutional	710	1,000 SF	9.74	50%	\$191
Industrial	130	1,000 SF	3.37	50%	\$66
Warehousing	150	1,000 SF	1.74	50%	\$34

*Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017



Police Impact Fee

- Consumption-based approach
- Components
 - » Police space
 - » Vehicles funded through Proposition 2B
- Citywide service area

Police 10-Year Facility Demand

Police Station Level-of-Service Standards

Level-of-Service		Demand Unit	Unit Cost
Residential	0.63	Square Feet	\$344
Nonresidential	0.08		
			per Trip End

Growth-Related Need for Facilities						
Year		Population	Nonres. Vehicle Trips	Residential Sq. Ft.	Nonresidential Sq. Ft.	Total
Base	2018	66,425	271,362	41,561	22,302	63,863
Year 1	2019	67,558	277,672	42,270	22,820	65,091
Year 2	2020	68,691	281,244	42,979	23,114	66,093
Year 3	2021	69,911	285,089	43,743	23,430	67,172
Year 4	2022	71,131	288,934	44,506	23,746	68,252
Year 5	2023	72,351	292,779	45,269	24,062	69,331
Year 6	2024	73,570	296,625	46,032	24,378	70,410
Year 7	2025	74,790	300,470	46,796	24,694	71,490
Year 8	2026	76,010	304,315	47,559	25,010	72,569
Year 9	2027	77,230	308,160	48,322	25,326	73,648
Year 10	2028	78,450	312,005	49,086	25,642	74,727
Ten-Year Increase		12,025	40,643	7,524	3,340	10,864
Growth-Related Expenditure				\$2,589,761	\$1,149,628	\$3,739,389

Maximum Supportable Police Impact Fee

<i>Fee Component</i>	<i>Cost per Person</i>	<i>Cost per Vehicle Trip</i>
Police Space	\$215.36	\$28.29
Existing Principal Credit	(\$86.71)	(\$11.74)
NET COST PER DEMAND UNIT	\$128.65	\$16.55

Residential

<i>Housing Type</i>	<i>Persons per Housing Unit</i>	<i>Maximum Supportable Fee</i>
Single-Family	2.37	\$305
Multi-Family	1.56	\$200

Nonresidential

<i>Type</i>	<i>ITE Code</i>	<i>Unit</i>	<i>Average Daily Vehicle Trips*</i>	<i>Trip Adjustment Factor*</i>	<i>Maximum Supportable Fee</i>
Retail/Commercial	820	1,000 SF	37.75	33%	\$206
Office/Institutional	710	1,000 SF	9.74	50%	\$81
Industrial	130	1,000 SF	3.37	50%	\$28
Warehousing	150	1,000 SF	1.74	50%	\$14

*Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017



Municipal Facilities Impact Fee

- Consumption-based approach
- Citywide service area
- Components
 - » General Government Space

Municipal Facilities 10-Year Demand

Type of Infrastructure	Level of Service		Demand Unit	Unit Cost / Sq. Ft.
Municipal Facilities	Residential	1.20	Square Feet	per persons
	Nonresidential	0.73		per jobs
				\$277

Growth-Related Need for Municipal Facilities						
Year		Population	Jobs	Residential Square Feet	Nonresidential Square Feet	Total Square Feet
Base	2018	66,425	58,660	79,518	42,669	122,187
Year 1	2019	67,558	60,018	80,874	43,657	124,531
Year 2	2020	68,691	61,025	82,230	44,389	126,619
Year 3	2021	69,911	62,109	83,691	45,178	128,869
Year 4	2022	71,131	63,192	85,151	45,966	131,117
Year 5	2023	72,351	64,276	86,612	46,754	133,366
Year 6	2024	73,570	65,360	88,072	47,542	135,614
Year 7	2025	74,790	66,444	89,532	48,331	137,863
Year 8	2026	76,010	67,527	90,993	49,119	140,112
Year 9	2027	77,230	68,611	92,453	49,907	142,360
Year 10	2028	78,450	69,695	93,913	50,696	144,609
Ten-Year Increase		12,025	11,035	14,395	8,027	22,422
Projected Expenditure				\$3,987,432	\$2,223,462	\$6,210,894

Growth-Related Expenditure on Municipal Facilities \$6,210,894

Maximum Supportable Municipal Facilities Impact Fee

Fee Component	Cost per Person	Cost per Job
Municipal Facilities Space	\$331.60	\$201.49

Residential (per unit)

Development Type	Persons per Housing Unit	Maximum Supportable Fee
Single Family	2.37	\$785
Multi-Family	1.56	\$516

Nonresidential

Type	ITE Code	Unit	Employees*	Maximum Supportable Fee
Retail/Commercial	820	1,000 SF	2.34	\$471
Office/Institutional	710	1,000 SF	2.97	\$598
Industrial	130	1,000 SF	1.16	\$234
Warehousing	150	1,000 SF	0.34	\$69

*Employment densities were calculated using data from the Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition.

Parks and Recreation Impact Fee

■ Consumption-based approach

- » Assumes the City does not purchase additional park land in the short-term
- » Impact fees go to develop existing parks and banked park land

■ Citywide service area

- » Residents within the 201 Service Area population is used as “Park Population”

■ Components

- » Level 1 and 2 park improvements

Level 1 Park Improvement Needs

Level 1 Park Infrastructure Level-of-Service Standards

Type	Level of Service	Demand Unit	Unit Cost / Acre
Level 1 Park Improvements	0.0001 Acres	per person	\$112,500

Growth-Related Need for Level 1 Park Improvements			
Year		Population	Improved Acres
Base	2018	103,224	10.32
Year 1	2019	104,985	10.50
Year 2	2020	106,746	10.67
Year 3	2021	108,642	10.86
Year 4	2022	110,538	11.05
Year 5	2023	112,434	11.24
Year 6	2024	114,329	11.43
Year 7	2025	116,225	11.62
Year 8	2026	118,121	11.81
Year 9	2027	120,016	12.00
Year 10	2028	121,912	12.19
Ten-Year Increase		18,688	1.87
Growth-Related Expenditure on Level 1 Park Improvements			\$210,375

Level 2 Park Improvement Needs

Level 2 Park Infrastructure Level-of-Service Standards

Type	Level of Service	Demand Unit	Unit Cost / Acre
Level 2 Park Improvements	0.0035 Acres	per 1,000 persons	\$192,500

Growth-Related Need for Level 2 Park Improvements			
Year		Population	Improved Acres
Base	2018	103,224	357.54
Year 1	2019	104,985	363.64
Year 2	2020	106,746	369.74
Year 3	2021	108,642	376.31
Year 4	2022	110,538	382.87
Year 5	2023	112,434	389.44
Year 6	2024	114,329	396.00
Year 7	2025	116,225	402.57
Year 8	2026	118,121	409.14
Year 9	2027	120,016	415.70
Year 10	2028	121,912	422.27
Ten-Year Increase		18,688	65
Growth-Related Expenditure Level 2 Park Improvements			\$12,512,500

Maximum Supportable Park Impact Fee

Fee Component	Cost per Person
Level 1 Parkland Improvements	\$11.25
Level 2 Parkland Improvements	\$666.76
COST PER DEMAND UNIT	\$678.01

Type	Persons per Housing Unit	Maximum Supportable Fee	Current Fee	Increase
Single-Family	2.37	\$1,605	\$225	\$1,380
Multi-Family	1.56	\$1,055	\$225	\$830

Maximum Supportable Fee Summary

Residential (Per Unit)

Type	Fire	Police	Parks and Recreation	Municipal Facilities	Maximum Supportable Fee	Current Fee	Difference
Single-Family	\$710	\$305	\$1,605	\$785	\$3,405	\$225	\$3,180
Multi-Family	\$467	\$200	\$1,055	\$516	\$2,238	\$225	\$2,013

Nonresidential (Per 1,000 square feet)

Type	Fire	Police	Parks and Recreation	Municipal Facilities	Maximum Supportable Fee	Current Fee	Difference
Retail/Commercial	\$489	\$206	\$0	\$471	\$1,167	\$0	\$1,167
Office/Institutional	\$191	\$81	\$0	\$598	\$870	\$0	\$870
Industrial	\$66	\$28	\$0	\$234	\$328	\$0	\$328
Warehousing	\$34	\$14	\$0	\$69	\$117	\$0	\$117

Water Plant Investment Fee

- Last updated pre-1990s
- In 2015, Raftelis Financial Consultants proposed 2016 PIF:
 - » \$4,100 per capacity unit (Cash Financed)
 - » System net equity = \$69.9 million
 - » System capacity = 16.3 million gallons per day (16,900 capacity units)
 - » Does not include recovery of proportionate share of City's water rights
- 2019 PIF: \$4,480 (3% escalation)

Fee	Purpose	Cost
Plant Investment Fee	<ul style="list-style-type: none"> • Recover the cost of constructing the system. • Cost range based on size of service line and meter (3/4" – 6"). 	\$300 - \$8,500
Tap Fee	<ul style="list-style-type: none"> • Recover cost of City crews making physical connection to water main line and supplying meter. • Cost range based on size of service line and meter (3/4" – 6"). 	\$700 – 19,850

Proposed Water Plant Investment Fees

Water Plant Investment Fees

SIZE (inch)	TAP	PIF	TOTAL CONNECTION FEE	PROPOSED
3/4 x 5/8	\$700	\$300	\$1,000	\$5,180
3/4 x 3/4				
1	\$875	\$375	\$1,250	\$6,850
1.5	\$2,050	\$900	\$2,950	\$12,580
2	\$2,900	\$1,250	\$4,150	\$18,520
3	\$6,875	\$2,975	\$9,850	\$33,360
4	\$12,850	\$5,550	\$18,400	\$54,480
6	\$19,850	\$8,500	\$28,400	\$155,632

Comparison of Water-Related Fees

Water Plant Investment Fees

SIZE (inch)	PROPOSED	Ute Water (2019)	Clifton Water (2019)	Denver Water (2019) (1)	Aurora	Greeley	Pueblo (4)	Flagstaff, AZ (5)	Cheyenne, WY
Single Family (1-2 bath, 1/8 ac lot)					\$ 8,773.69				
Single Family (3-4 bath, 1/8 ac lot)					\$ 15,530.69				
Single Family (5+ bath, 1/8 ac lot)					\$ 22,755.69				
Multi-family (per unit)					\$ 9,760.00		\$ 2,880.00		
Single Family (2000 sf)				\$ 4,430.00					
Multi-family (2 DU)				\$ 1,040.00					
Multi-family (8 DU)				\$ 24,560.00					
Multi-family (20 DU)				\$ 47,840.00					
3/4 x 5/8	\$5,180	\$7,000	\$7,000	\$ 10,730.00	\$ 22,195.00	\$ 10,800.00	\$ 5,069.00	\$ 5,728.00	\$ 8,030.00
3/4 x 3/4		\$8,750	\$8,750						
1	\$6,850	\$10,500	\$16,250	\$ 19,170.00	\$ 39,729.00	\$ 18,000.00	\$ 4,909.00	\$ 9,566.00	\$ 19,420.00
1.5	\$12,580	\$15,725	\$18,000	\$ 42,180.00	\$ 87,227.00	\$ 36,000.00	\$ 25,029.00	\$ 19,074.00	\$ 38,730.00
2	\$18,520	\$23,150	\$27,000	\$ 76,690.00	(3)	\$ 57,500.00	\$ 31,725.00	\$ 30,530.00	\$ 61,990.00
3	\$33,360	\$41,700	\$40,500	\$ 126,426.00	(3)	\$ 126,000.00	\$ 60,973.00	\$ 57,279.00	\$ 168,640.00
4	\$54,480	\$73,100	\$60,840	\$ 229,971.00	(3)	\$ 216,600.00	\$ 210,439.00	\$ 95,484.00	\$ 290,760.00
6	\$155,632	\$182,800	\$91,260	\$ 517,374.00		\$ 450,000.00	\$ 434,157.00	\$ 190,910.00	\$ 620,260.00
8			\$136,890	\$ 774,957.00			\$ 1,007,583.00	\$ 305,468.00	
10			\$205,336	\$ 1,200,204.00				\$ 439,157.00	
12				\$ 1,235,855.00					

(1) Denver Water Rates

Single Family Residential

Base Charge

\$ per sf

ADU

Multi-family

First two DU

Next 6 DU

Over 8 DU, \$ per unit

Fees for specific tap sizes are for nonresidential.

(2) Aurora Water Rates

Residential

Outdoor Use Fee (per sf lot size)

Outdoor use fee for common areas in non-fee simple lots will be supplied by an irrigation meter.

Commercial

Fees for specific tap sizes are for nonresidential.

(3) Commercial Water Connection fees for meters 2-inches and greater are based on the estimated daily volume of water and assessed at \$63.82 per gallon/per day for connection and water transmission development fee. Consumption beyond initial allocation may be addressed through monthly bill or payment of additional connection fees.

Outdoor Use Fee (per sf lot size)

--Non-water Conserving

--Water Conserving

(4) Pueblo

Plant investment fee only, water tap fee charged separately

(5) Flagstaff

Water Capacity fee only, separate tap fee

Historical/Projected Water Revenue

City Water Meter Sales

Meter Size	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	Total Mtrs	PIF/Tap Revenue	Proposed PIF/Tap	Revenue Difference
2019 Year to Date	16	0	0	0	0	1	17	\$34,400.00	\$137,720.00	\$103,320.00
2018	36	0	1	5	3	0	45	\$89,250.00	\$391,740.00	\$302,490.00
2017	42	1	3	2	0	0	48	\$60,400.00	\$299,190.00	\$238,790.00

2020 Estimated Meter Sales

	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	Total Mtrs	
2020	30	0	0	3	0	4	37	\$430,320.00

Fire, Police, Parks and Recreation and Municipal Services Impact Fee Implementation Schedule and Comparison

			Jan 1 2020	Jan 1 2021	Jan 1 2022	Stakeholder Proposed	
					Staff Proposed		
Land Use Type	Unit	Current Fees	33%	66%	100%	8/30/2019	
Residential	Single Family						
	Fire	Dwelling	\$0	\$234	\$469	\$710	\$0
	Police	Dwelling	\$0	\$101	\$201	\$305	\$0
	Parks and Recreation	Dwelling	\$225	\$680	\$1,136	\$1,605	\$803
	Municipal Services	Dwelling	\$0	\$259	\$518	\$785	\$0
	Multi-Family						
	Fire	Dwelling	\$0	\$154	\$308	\$467	\$0
	Police	Dwelling	\$0	\$66	\$132	\$200	\$0
Parks and Recreation	Dwelling	\$225	\$499	\$773	\$1,055	\$528	
Municipal Services	Dwelling	\$0	\$170	\$341	\$516	\$0	
Commercial & Industrial	Retail/Commercial						
	Fire	1,000 sf	\$0	\$161	\$323	\$489	\$0
	Police	1,000 sf	\$0	\$68	\$136	\$206	\$0
	Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0	\$0
	Municipal Services	1,000 sf	\$0	\$155	\$311	\$471	\$0
	Office/Institutional						
	Fire	1,000 sf	\$0	\$63	\$126	\$191	\$0
	Police	1,000 sf	\$0	\$27	\$53	\$81	\$0
	Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0	\$0
	Municipal Services	1,000 sf	\$0	\$197	\$395	\$598	\$0
	Industrial						
	Fire	1,000 sf	\$0	\$22	\$44	\$66	\$0
	Police	1,000 sf	\$0	\$9	\$18	\$28	\$0
	Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0	\$0
	Municipal Services	1,000 sf	\$0	\$77	\$154	\$234	\$0
Warehousing							
Fire	1,000 sf	\$0	\$11	\$22	\$34	\$0	
Police	1,000 sf	\$0	\$5	\$9	\$14	\$0	
Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0	\$0	
Municipal Services	1,000 sf	\$0	\$23	\$46	\$69	\$0	

Transportation Impact Fee Implementation Schedule and Comparison Chart

				Jan 1 2020	July 1 2020	Jan 1 2021	Jul 1 2021	Jan 1 2022	July 1 2022	Stakeholder Proposed	TIF Study
				16.7%	33%	50%	67%	83%	100%	8/30/2019	100%
				Staff Proposed							
Land Use Type		Unit	Current Fees								
Residential	All Multi-Family	Dwelling	\$ 1,769	\$ 2,016	\$ 2,263	\$ 2,511	\$ 2,758	\$ 3,005	\$ 3,252	\$ 2,511	\$ 4,570
	<1,250 sq.ft of living area	Dwelling	\$ 2,554	\$ 2,670	\$ 2,787	\$ 2,903	\$ 3,019	\$ 3,136	\$ 3,252	\$ 2,903	
	1,250 to 1,649 sq.ft of living area	Dwelling	\$ 2,554	\$ 3,033	\$ 3,513	\$ 3,992	\$ 4,472	\$ 4,951	\$ 5,430	\$ 3,992	\$ 6,763
	1,650 to 2,299 sq.ft of living area	Dwelling	\$ 2,554	\$ 3,181	\$ 3,809	\$ 4,436	\$ 5,064	\$ 5,691	\$ 6,318	\$ 4,436	
	2,300 or more of living area	Dwelling	\$ 2,554	\$ 3,552	\$ 4,549	\$ 5,547	\$ 6,544	\$ 7,542	\$ 8,538	\$ 5,546	
Commercial & Industrial	Hotel/Motel	Room	\$ 2,407	\$ 2,703	\$ 2,999	\$ 3,295	\$ 3,591	\$ 3,887	\$ 4,183	\$ 3,295	\$ 4,183
	Shopping Center/Commercial	1,000 sf	\$ 4,189	\$ 4,864	\$ 5,540	\$ 6,215	\$ 6,890	\$ 7,566	\$ 8,240	\$ 6,215	\$ 8,240
	Auto Sales/Service	1,000 sf	\$ 3,780	\$ 4,523	\$ 5,267	\$ 6,010	\$ 6,754	\$ 7,497	\$ 8,240	\$ 6,010	\$ 9,258
	Golf Course	Hole	\$ 5,951	\$ 6,333	\$ 6,714	\$ 7,096	\$ 7,477	\$ 7,859	\$ 8,240	\$ 7,096	\$ 12,850
	Movie Theater	1,000 sf	\$ 10,574	\$ 10,185	\$ 9,796	\$ 9,407	\$ 9,018	\$ 8,629	\$ 8,240	\$ 8,240	\$ 33,028
	Restaurant, Standard	1,000 sf	\$ 5,159	\$ 5,673	\$ 6,186	\$ 6,700	\$ 7,213	\$ 7,727	\$ 8,240	\$ 6,700	\$ 14,975
	Bank, Drive-In	1,000 sf	\$ 6,359	\$ 8,360	\$ 10,362	\$ 12,363	\$ 14,365	\$ 16,366	\$ 18,365	\$ 12,352	\$ 18,365
	Convenience Store w/Gas Sales	1,000 sf	\$ 9,143	\$ 10,680	\$ 12,218	\$ 13,755	\$ 15,292	\$ 16,830	\$ 18,365	\$ 13,754	\$ 26,395
	Restaurant, Drive-Through	1,000 sf	\$ 11,544	\$ 12,681	\$ 13,818	\$ 14,955	\$ 16,092	\$ 17,229	\$ 18,365	\$ 14,955	\$ 33,203
	Office, General	1,000 sf	\$ 3,141	\$ 3,732	\$ 4,323	\$ 4,913	\$ 5,504	\$ 6,095	\$ 6,685	\$ 4,913	\$ 6,685
	Office, Medical	1,000 sf	\$ 8,862	\$ 8,499	\$ 8,136	\$ 7,773	\$ 7,410	\$ 7,047	\$ 6,685	\$ 6,685	\$ 25,665
	Animal Hospital/Vet Clinic	1,000 sf	\$ 8,862	\$ 8,499	\$ 8,136	\$ 7,773	\$ 7,410	\$ 7,047	\$ 6,685	\$ 6,685	\$ 15,858
	Hospital	1,000 sf	\$ 4,112	\$ 4,541	\$ 4,970	\$ 5,399	\$ 5,828	\$ 6,257	\$ 6,685	\$ 5,399	\$ 7,905
	Nursing Home	1,000 sf	\$ 1,149	\$ 1,239	\$ 1,329	\$ 1,419	\$ 1,508	\$ 1,598	\$ 1,688	\$ 1,419	\$ 3,120
	Place of Worship	1,000 sf	\$ 1,967	\$ 1,920	\$ 1,874	\$ 1,827	\$ 1,781	\$ 1,734	\$ 1,688	\$ 1,688	\$ 2,725
	Day Care Center	1,000 sf	\$ 4,086	\$ 3,686	\$ 3,287	\$ 2,887	\$ 2,487	\$ 2,087	\$ 1,688	\$ 1,688	\$ 4,485
	Elementary/Secondary School	1,000 sf	\$ 639	\$ 814	\$ 989	\$ 1,164	\$ 1,338	\$ 1,513	\$ 1,688	\$ 1,164	\$ 1,688
	Public/Institutional	1,000 sf	\$ 639	\$ 826	\$ 998	\$ 1,171	\$ 1,343	\$ 1,516	\$ 1,688	\$ 1,164	\$ 3,813
	Industrial	1,000 sf	\$ 1,864	\$ 1,900	\$ 1,935	\$ 1,971	\$ 2,007	\$ 2,042	\$ 2,078	\$ 1,971	\$ 2,078
	Warehouse	1,000 sf	\$ 1,328	\$ 1,286	\$ 1,244	\$ 1,201	\$ 1,159	\$ 1,117	\$ 1,075	\$ 1,075	\$ 1,248
Mini-Warehouse	1,000 sf	\$ 460	\$ 563	\$ 665	\$ 768	\$ 870	\$ 973	\$ 1,075	\$ 768	\$ 1,075	

Business Stakeholder Group Recommendation for items marked in red is that the 50% formula not be applied and that the new fees be adopted at 100% immediately

City of Grand Junction
 Comparison of Staff Proposed to Industry Proposed
 September 16, 2019

Residential Single Family (1,650 to 2,299 sq.ft.)									
	Current	Annual Increase (avg)	Bi-Annual Increase (avg)	Staff Proposed at 100%	Total Increase	Industry Proposed at 100%	Total Increase	Industry Less Than Proposed	
Transportation	\$ 2,554		\$ 627	\$ 6,318	\$ 3,764	\$ 4,436	\$ 1,882	\$ (1,882)	-30%
Fire	-	237		710	710	-	-	(710)	-100%
Police	-	102		305	305	-	-	(305)	-100%
Parks	225	460		1,605	1,380	915	690	(690)	-43%
Municipal Services	-	262		785	785	-	-	(785)	-100%
Total	\$ 2,779			\$ 9,723	\$ 6,944	\$ 5,351	\$ 2,572	\$ (4,372)	-45%

Residential Multi-Family									
	Current	Annual Increase (avg)	Bi-Annual Increase (avg)	Staff Proposed at 100%	Total Increase	Industry Proposed at 100%	Total Increase	Industry Less Than Proposed	
Transportation	\$ 1,769		\$ 247	\$ 3,252	\$ 1,483	\$ 2,511	\$ 742	\$ (741)	-23%
Fire	-	156		467	467	-	-	(467)	-100%
Police	-	67		200	200	-	-	(200)	-100%
Parks	225	277		1,055	830	640	415	(415)	-39%
Municipal Services	-	172		516	516	-	-	(516)	-100%
Total	\$ 1,994			\$ 5,490	\$ 3,496	\$ 3,151	\$ 1,157	\$ (2,339)	-43%

Retail Commercial Shopping Center									
	Current	Annual Increase (avg)	Bi-Annual Increase (avg)	Staff Proposed at 100%	Total Increase	Industry Proposed at 100%	Total Increase	Industry Less Than Proposed	
Transportation	\$ 4,189		\$ 675	\$ 8,240	\$ 4,051	\$ 6,215	\$ 2,026	\$ (2,025)	-25%
Fire	-	163		489	489	-	-	(489)	-100%
Police	-	69		206	206	-	-	(206)	-100%
Parks	-	-		-	-	-	-	-	n/a
Municipal Services	-	157		471	471	-	-	(471)	-100%
Total	\$ 4,189			\$ 9,406	\$ 5,217	\$ 6,215	\$ 2,026	\$ (3,191)	-34%



HOUSING AND BUILDING
ASSOCIATION
of
WESTERN COLORADO



August 12, 2019

Mr. Greg Caton, City Manager
250 N. 5th Street
Grand Junction, CO 81501

RE: Current position on Proposed Impact Fees

The stakeholder groups that have participated in the current discussion of Impact fees for Grand Junction which includes the Grand Junction Chamber of Commerce, Western Colorado Contractors Association, Grand Junction Area Realtors Association, Association Members for Growth and Development, and the Homebuilders Association of Western Colorado have appreciated the collaborative nature of our meetings with you and other city staff to discuss and work at refining the development fees that will help the city address the need for building infrastructure capacity while not stymieing growth and economic development.

Recognizing that many residential and commercial projects are competitive in nature this stakeholder group commissioned a comparison of six cities in an attempt to as closely as possible compare current fees. That comparison is attached and we would ask that you share it and this letter with the City Council at your August 19th briefing during the Council Workshop.

In essence, the study concluded that Grand Junction is currently 52% above average on development fees for a single-family residence and 27% higher than the average on a commercial office project when compared to the five other selected cities. It is important to note that this is based on current fees and does not include the city's proposal for increasing the traffic capacity payment fees and park fees along with adding new impact fees for fire, police and facilities. It also does not include the proposal for more off-

site improvement costs being borne by the developer. In other words, we are already on the threshold of being much higher than our comparison cities with **no fee increases**.

The stakeholder group considers it important for policy decision makers to consider the following:

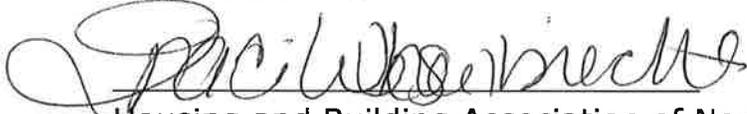
- There are additional revenues via sales, use and property taxes that the city will receive from the economic activity generated by new development that were not considered by the consultant study that recommended the increases in fees and levying of new fees. The National Realtor Association for example, has estimated that every new single-family home adds two jobs and \$80,000 to an area's economy.
- Any increase in fees is ultimately borne by the homeowner or business owner as those costs are passed through to them by the developer which makes housing costs and business expansions more expensive. The Grand Junction Area Realtors Association has estimated that just 37% of Mesa County residents can currently afford a median priced home at the rate of \$250,000.
- Area wages have been increasing for the past two year but are still substantially below those of other areas in Colorado. The most recent comparison from the Mesa County Workforce Center indicated that between third quarter of 2017 and third quarter of 2018 (most recent data available) the average wage increased a modest 4% to \$854 per week. Such wages coupled with the increased fees for residential development will make housing even more unaffordable for the city's residents.
- According to information from Elizabeth Peetz, Government Affairs Director, Colorado Association of Realtors as of May 2019 **32,000 households on the Western Slope** are weighed down by the cost of housing which means they are already paying more that 30% of their income for housing. This includes renters.
- Representatives of the development community have asked that all fees be brought to the table for consideration. However, a proposed increase in water tap fees was only introduced to them in July and were not factored into our other discussions. It is our understanding that the proposal will take current tap fees from \$1,000 to over \$5,000 for the smallest tap fee on nonresidential projects.

As a result of our meetings and the additional information that we have been able to gather along with recognizing the need for increased

infrastructure capacity and an environment that does not stifle growth our organizations are proposing the following:

- Implement 50% of proposed increase in TCP (transportation capacity payment) fees for residential developments and commercial developments that were presented and agreed to during Discussion Meeting #4 on July 29th over a 3-year schedule. At that time once again review the fee to determine if adjustments should be made. This will increase fees to a manageable level acceptable by the development community without halting progress. The review will help allow for adjustments based on current market prices and needs.
- Implement 50% of the proposed fee increase for parks presented at Discussion Meeting #4 on July 29th over the next three years with a review and recommendation back to Council at the end of that period regarding fee adjustments.
- Do not implement any new fees (i.e. fire, police and facilities) at this time.

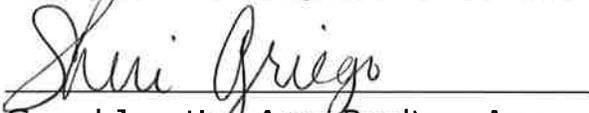
Thank you for your continued collaboration on this proposal and the consideration of the suggested solution by the collective stakeholders in Grand Junction.



Housing and Building Association of Northwest Colorado



Grand Junction Chamber of Commerce



Grand Junction Area Realtors Assn.



Western Colorado Contractors Association



Associated Members for Growth and Development



GRAND JUNCTION DEVELOPMENT IMPACT FEE COMPARATIVE ANALYSIS

GRAND JUNCTION, COLORADO

PREPARED FOR:

GRAND JUNCTION AREA REALTOR ASSOCIATION

August 6, 2019

Metrostudy | A Hanley Wood company

Denver Colorado Office

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Centennial, CO 80112

www.metrostudy.com

Phone: 720.493.2020 Fax: 720.493.9222

August 6, 2019

Mrs. Diane Schwenke
Grand Junction Area Realtor Association
2743 Crossroads Blvd
Grand Junction, CO 81506

RE: Grand Junction Development Impact Fee Comparative Analysis ("Analysis")

Dear Mrs. Schwenke:

Metrostudy is pleased to present this Analysis of the development impact fees for comparative municipalities to the City of Grand Junction, Colorado. We have provided a detailed analysis of the development impact fees as well as accompanying demographic and housing, and mill levy and tax information on the following pages and Appendix for the Grand Junction Area Realtor Association ("Client"). This Analysis was conducted by Steven Saules, Manager. Metrostudy has been engaged in analyzing residential market conditions with its proprietary lot-by-lot survey nationally since 1975, and locally within the state of Colorado since 2001.

Please contact us at your convenience with any comments or questions regarding this Analysis, or with any other matters relevant to your real estate market research needs.

Respectfully Submitted,

Metrostudy

metrostudy

The following Grand Junction Development Impact Fee Comparative Analysis included herein summarizes the total estimated development impact fees associated with the new construction of two (2) property types ("Property Types") within the City of Grand Junction, Colorado ("City"), as well as within five (5) comparative Colorado municipalities. The Property Types include a 2,000 square foot single-family detached home and a 10,000 square foot single-structure office building. The five municipalities include the Town/City of Fruita, Montrose, Gunnison, Pueblo, and Sterling, Colorado (collectively the "Municipalities"). The development impact fees are collected for capital infrastructure items categorized for; however, not limited to police, fire, school, transportation, parks and recreation, public safety, etc., as well as those development impact fees pertaining to water and sewer plant investment fees exclusive of raw water rights (collectively the "DIFs"). The current Municipality DIFs are summarized in **Table-1** of the Analysis, while the detailed analysis for both Property Types is shown in **Table-2** and in **Table-3** on the following pages.

The current DIFs included in this Analysis are based on estimates and calculations derived from the applicable Municipalities' 2019 or most current fee schedules and Municipality provided data. The DIFs were affirmed through multiple iterations of research and conversations with Municipality staff and associated external entities.

Additionally, Metrostudy has reviewed and provided accompanying demographic and housing, and mill levy and tax information in order to further the Client's understanding of how the Municipalities' DIFs truly compare within the context of additional housing market affordability factors. Certain DIFs shown in the Analysis required different calculations depending on the Municipality.

Finally, the assumptions upon which all DIFs in this Analysis were estimated is shown by Product Type in **Exhibit-A**, while a map of the Municipalities' locations is detailed in **Exhibit-B** of the Appendix. As shown below, the DIFs associated with the construction of a new 2,000 square foot single-family detached home, and a new 10,000 square foot office building in Grand Junction are approximately 52.8 percent and 27.3 percent higher than that of the average of the comparative Municipalities, respectively.

Table-1: Summary of Total Development Impact Fees by Municipality

<i>Total Development Impact Fees (\$)</i>	<i>Fruita</i>	<i>Montrose</i>	<i>Gunnison</i>	<i>Pueblo</i>	<i>Sterling</i>	<i>Average</i>	<i>Grand Junction</i>	<i>Difference (%)</i>
<u>Single-Family Detached</u>								
<i>Metric: \$/unit</i>								
Total (\$)	23,315	11,554	7,500	8,227	5,040	11,127	17,000	52.8%
<u>Office</u>								
<i>Metric: \$/building</i>								
Total (\$)	53,903	14,200	13,500	9,800	7,623	19,805	25,216	27.3%

Source: Municipality/DPPFG

Table-2: Single-Family Detached Development Impact Fee Detailed Analysis (\$/unit)

Development Impact Fees*	Fruita**	Montrose***	Gunnison	Pueblo****	Sterling*****	Average	Grand Junction*****	Difference
Demographics and Housing								
Population	13,463	20,328	6,602	111,368	11,271	27,505	59,121	-
Households	5,035	8,300	2,583	45,209	4,867	13,199	24,495	-
Median Household Income (\$)	56,018	44,801	45,219	37,453	39,519	44,602	48,844	-
Average New Home Price (All) (\$)	372,509	299,771	299,000	263,409	251,579	297,254	311,739	-
Annual Income to Home Price	15.0%	14.9%	15.1%	14.2%	15.7%	15.0%	15.7%	4.4%
Annual Taxes								
Mill Levy	82.2370	70.2120	55.1480	88.7630	77.4420	74.7604	69.3920	-
Average New Home Price (All) (\$)	372,509	299,771	299,000	263,409	251,579	297,254	311,739	-
Annual Taxes (\$)	2,206	1,515	1,187	1,683	1,403	1,600	1,558	-
Annual Taxes to Home Price	0.59%	0.51%	0.40%	0.64%	0.56%	0.54%	0.50%	-7.2%
Development Impact Fees (\$)								
Chip and Seal	80	-	-	-	-	-	-	-
Drainage	1,706	-	-	-	-	-	-	-
Inspection	-	-	-	-	-	-	-	-
Police	-	1,000	-	-	-	-	-	-
Parks, Open Space and Trails	1,860	1,575	-	-	-	-	-	-
Public Safety Fee	-	-	-	740	-	-	-	-
School	920	679	-	-	-	-	920	-
Transportation, Street, Road	3,200	1,500	-	-	-	-	2,554	-
Water Plant Investment Fees	8,750	2,635	2,500	5,747	2,690	-	8,750	-
Sewer Plant Investment Fees	6,800	4,165	5,000	1,740	2,350	-	4,776	-
Total Per Unit	23,315	11,554	7,500	8,227	5,040	11,127	17,000	52.8%
School District								
Fee	<i>Mesa County Valley 51</i>	<i>Montrose County RE-1J</i>	<i>Gunnison Watershed RE1J</i>	<i>Pueblo City 60</i>	<i>RE-1 Valley</i>	-	<i>Mesa County Valley 51</i>	-
Source	Diana Sirko 970-254-5100	Laurie Laird 970-252-7902	Leslie Nichols 970-641-7770	Dave Horner 719-549-7113	Jan Delay 970-522-0792	-	Diana Sirko 970-254-5100	-
Fire District								
Fee	<i>Lower Valley Fire Protection</i>	<i>Montrose Fire Protection</i>	<i>Gunnison Volunteer Fire Dept.</i>	<i>Pueblo Fire Dept.</i>	<i>Sterling Fire Dept.</i>	-	<i>Grand Junction Fire Dept.</i>	-
Source	Frank Cavaliere 970-858-3133	Lindsey Wiley 970-249-9181	Eric Jansen 970-641-8090	James Riddell 719-553-2830	Levon Ritter 970-522-3823	-	Ken Watkins 970-549-5801	-
Police District								
Fee	<i>Fruita City Police Dept.</i>	<i>Montrose Police Dept.</i>	<i>Gunnison Police Dept.</i>	<i>Pueblo Police Dept.</i>	<i>Sterling Police Dept.</i>	-	<i>Grand Junction Police Dept.</i>	-
Source	Glenda Willis 970-858-3008	Tim Cox 970-252-5200	Keith Robinson 970-641-8200	Troy Davenport 719-553-2420	Tyson Kerr 970-522-3512	-	Doug Shoemaker 970-242-6707	-
Total DIF Per Unit	23,315	11,554	7,500	8,227	5,040	11,127	17,000	52.8%
DIF to Home Price	6.3%	3.9%	2.5%	3.1%	2.0%	3.5%	5.5%	53.6%

Source

- (1) Metrostudy, Property Analysis, Steven Saukes - 720-493-2020
- (2) County GIS mapping system and Colorado Department of Local Affairs
- (3) Fruita, Planning, Henry Hemphill - 970-858-0786
- (4) Fruita, Engineering, Sam Atkins - 970-858-8377
- (5) Ute Water Conservancy District, Jim Daugherty - 970-242-7491
- (6) Montrose, Planning, Archie Byers - 970-240-1437
- (7) Montrose, Engineering, Scott Murphy - 970-240-1498
- (8) Gunnison, Building, Eric Jansen - 970-641-8090
- (9) Pueblo, Planning, Alan Lamberg - 719-553-2241
- (10) Pueblo, Land Use, Scott Hobson - 719-553-2244
- (11) Pueblo, Board of Water Works, Rhonda Navarette - 719-584-0270
- (12) Sterling, Public Works, George Good - 970-522-9700
- (13) Grand Junction, Community Development, Lance Gloss - 970-244-1422
- (14) Grand Junction, Residential Sewer, Amy Castaneda - 970-256-4027
- (15) Grand Junction, Commercial Water/Sewer, Debi Overhol - 970-244-1520

Footnotes (residential)

- *DIFs may vary by subdivision or subdivision filing within each jurisdiction. Metrostudy has included all known DIFs regardless of their inclusions or exclusions across subdivisions. Metrostudy has only utilized neighborhood specific DIFs when DIFs are not uniform across the municipality. Neighborhood or development agreement specific DIFs, DIF waivers, land dedication requirements, and/or DIF credits may impact actual DIFs within each jurisdiction. DIFs do not include facility fees where developers may be partially reimbursed from builders for initial upfront infrastructure investments. Water and sewer plant investment fees do not include additional acquisition costs for raw water rights. Any applicable landscaping/irrigation costs are based on T-ing off of the main water line. Residential home sales prices based on 7/1/2018 to 6/30/2019 time period. Colorado residential assessment rate of 7.20% and Municipality mill levy rates are based on 2018 figures. DIFs may be collected at time of annexation, platting, planning approvals, building permit issuance, certificate of occupancy, or other.
- ** (Fruita) Chip and seal DIFs based on actual costs for Brannon Estates Filing 2C with 10 lots. Drainage DIFs (\$17,060 across 10 lots) are shown above; however, were exempted from Brannon Estates due to developer funding of detention ponds. DIFs payable at time of planning approval for issuance of building permit.
- *** (Montrose) Transportation DIFs based on building permit fee estimate for Estates of Stone Ridge Filing 2. Park DIFs were exempted from the development due to developer land dedication, which is standard. DIFs payable at time of building permit issuance. Police DIFs were not confirmed with documents but over the phone at approximately \$1,000 per unit/lot.
- **** (Pueblo) At subdivision platting there is park dedication requirement of 8% of land (excluding right of way); however, most projects in recent times have dedicated land. City mitigates DIF costs by utilizing a facility fee. DIFs negotiated at annexation and apply only to those properties being annexed into the City. Transportation Department may assess traffic DIFs when a new building triggers new traffic signals, signs and/or pavement markings required by a subdivision improvement agreement (SIA); however, there are not recent examples that the municipality can provide. Public Safety DIFs based on 0.37 cents per square foot of residential structure.
- ***** (Sterling) Park and/or street site requirements are development specific; requirements are not payments in lieu of DIFs.
- ***** (Grand Junction) Transportation DIFs may be deferred prior to the issuance of a certificate of occupancy. DIFs payable at time of planning approval for issuance of building permit.

Table-3: Office Development Impact Fee Detailed Analysis (\$/building)

Development Impact Fees*	Fruita**	Montrose***	Gunnison	Pueblo****	Sterling*****	Average	Grand Junction*****	Difference
Demographics								
Population	13,463	20,328	6,602	111,368	11,271	27,505	59,121	-
Households	5,035	8,300	2,583	45,209	4,867	13,199	24,495	-
Mill Levy								
Mill Levy	82.2370	70.2120	55.1480	88.7630	84.6600	-	74.8040	-
Total	82.2370	70.2120	55.1480	88.7630	84.6600	76.2040	74.8040	-1.8%
Development Impact Fees (\$)								
Chip and Seal	3.45	6.7	8	9,10.11	12	-	13.15	-
Drainage	17,058	-	-	-	-	-	-	-
Inspection	-	-	-	-	-	-	550	-
Police	-	-	-	-	-	-	-	-
Parks, Open Space and Trails	-	-	-	-	-	-	-	-
Public Safety Fee	-	-	-	1,060	-	-	-	-
School	-	-	-	-	-	-	-	-
Transportation, Street, Road	19,545	-	-	-	-	-	18,640	-
Water Plant Investment Fees	10,500	4,140	4,500	5,830	3,940	-	1,250	-
Sewer Plant Investment Fees	6,800	10,060	9,000	2,910	3,683	-	4,776	-
Total Per Unit	53,903	14,200	13,500	9,800	7,623	19,805	25,216	27.3%
School District								
Fee	Mesa County Valley 51	Montrose County RE-1J	Gunnison Watershed RE1J	Pueblo City 60	RE-1 Valley	-	Mesa County Valley 51	-
Source	Diana Sirko 970-254-5100	Laurie Laird 970-252-7902	Leslie Nichols 970-641-7770	Dave Homer 719-549-7113	Jan Delay 970-522-0792	-	Diana Sirko 970-254-5100	-
Fire District								
Fee	Lower Valley Fire Protection	Montrose Fire Protection	Gunnison Volunteer Fire Dept.	Pueblo Fire Dept.	Sterling Fire Dept.	-	Grand Junction Fire Dept.	-
Source	Frank Cavaliere 970-858-3133	Lindsey Wiley 970-249-9181	Eric Jansen 970-641-8090	James Riddell 719-553-2830	Levon Ritter 970-522-3823	-	Ken Watkins 970-549-5801	-
Police District								
Fee	Fruita City Police Dept.	Montrose Police Dept.	Gunnison Police Dept.	Pueblo Police Dept.	Sterling Police Dept.	-	Grand Junction Police Dept.	-
Source	Glenda Willis 970-858-3008	Tim Cox 970-252-5200	Keith Robinson 970-641-8200	Troy Davenport 719-553-2420	Tyson Kerr 970-522-3512	-	Doug Shoemaker 970-242-6707	-
Total DIF Per Building	53,903	14,200	13,500	9,800	7,623	19,805	25,216	27.3%

Source

- (1) Metrostudy, Property Analysis, Steven Saules - 720-493-2020
- (2) County GIS mapping system and Colorado Department of Local Affairs
- (3) Fruita, Planning, Henry Hemphill - 970-858-0786
- (4) Fruita, Engineering, Sam Atkins - 970-858-8377
- (5) Ute Water Conservancy District, Jim Daugherty - 970-242-7491
- (6) Montrose, Planning, Archie Byers - 970-240-1437
- (7) Montrose, Engineering, Scott Murphy - 970-240-1498
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- (9) Pueblo, Planning, Alan Lamberg - 719-553-2241
- (10) Pueblo, Land Use, Scott Hobson - 719-553-2244
- (11) Pueblo, Board of Water Works, Rhonda Navarette - 719-584-0270
- (12) Sterling, Public Works, George Good - 970-522-9700
- (13) Grand Junction, Community Development, Lance Gloss - 970-244-1422
- (14) Grand Junction, Residential Sewer, Amy Castaneda - 970-256-4027
- (15) Grand Junction, Commercial Water/Sewer, Debi Overholt - 970-244-1520

Footnotes (office)

- *DIFs may vary by area or filing within each jurisdiction. Metrostudy has included all known DIFs regardless of their inclusions or exclusions across areas. Metrostudy has only utilized location specific DIFs when DIFs are not uniform across the municipality. Development agreement specific DIFs, DIF waivers, land dedication requirements, and/or DIF credits may impact actual DIFs within each jurisdiction. Does not include facility fees. Water and sewer plant investment fees do not include additional acquisition costs for raw water rights. Any applicable landscaping/irrigation costs are based on T-ing off of the main water line. Colorado mill levy rates are based on 2018 figures. DIFs may be collected at time of annexation, platting, planning approvals, building permit issuance, certificate of occupancy, or other.
- ** (Fruita) DIFs payable at time of planning approval for issuance of building permit. The base rate for transportation DIFs for a 10,000 square foot commercial office buildings is \$1,589 per 1,000 square feet multiplied by a 1.23 factor.
- *** (Montrose) Park and/or street site requirements are development specific; requirements are not payments in lieu of DIFs.
- **** (Pueblo) Drainage DIFs have the potential to exist; however, recent projects reviewed by the municipality have mitigated these costs by developer management of drainage slope on site as opposed to entering into discussions of associated DIFs; this form/process is expected to continue. Public Safety DIFs based on 0.106 cents per square foot of commercial structure.
- ***** (Sterling) Park and/or street site requirements are development specific; requirements are not payments in lieu of DIFs.
- ***** (Grand Junction) Commercial DIFs are project specific. Commercial sewer fees were estimated based on 20 employees and 500 square feet of space per employee. Transportation DIFs may be deferred prior to the issuance of a certificate of occupancy and are based on \$1,864 per 1,000 square feet. DIFs payable at time of planning approval for issuance of building permit.

Disclaimer:

The development impact fees shown in this Analysis will vary depending on a multitude of factors, including; however, not limited to development timing, specific municipality and/or subdivision and/or subdivision phase/filing, school/fire/police jurisdictions development impact fee collection procedures, project size and square feet/acreage, number of units or buildings, water and sewer line requirements, landscaped area and/or necessity for additional water lines, impervious area, etc. The development impact fees shown in the Analysis were based on the Municipalities 2019 or most recent fee schedule, which may not be revised after the production of this Analysis. This Analysis did not consider timeline and upcoming changes to the development impact fees shown.

It is understood by the Client that Metrostudy can make no guarantees about the findings and/or recommendations in this Analysis. To protect the Client and to assure that Metrostudy's research results will continue to be accepted as objective and impartial by the business community, Metrostudy's fee for this Study is in no way dependent upon the specific conclusions reached or the nature of the advice given in this Analysis.

Reasonable efforts have been made to ensure that the data contained in this Analysis reflect the most accurate and timely information possible and are believed to be reliable. This Analysis is based on estimates, assumptions, and other information developed by Metrostudy from its independent research effort, general knowledge of the industry and consultations with the Client and its representatives. No responsibility is assumed for inaccuracies in reporting by the Client, its agents and representatives or any other data source used in preparing or presenting this Analysis. This Analysis is based on market-wide information that was current as of the production of the Analysis. While every reasonable effort was made to collect this information and it is deemed reliable, it cannot be guaranteed for accuracy. Metrostudy makes no warranty or representation that any of the estimated values or results in this Study will be achieved, and actual results will vary depending on project and development specific details.

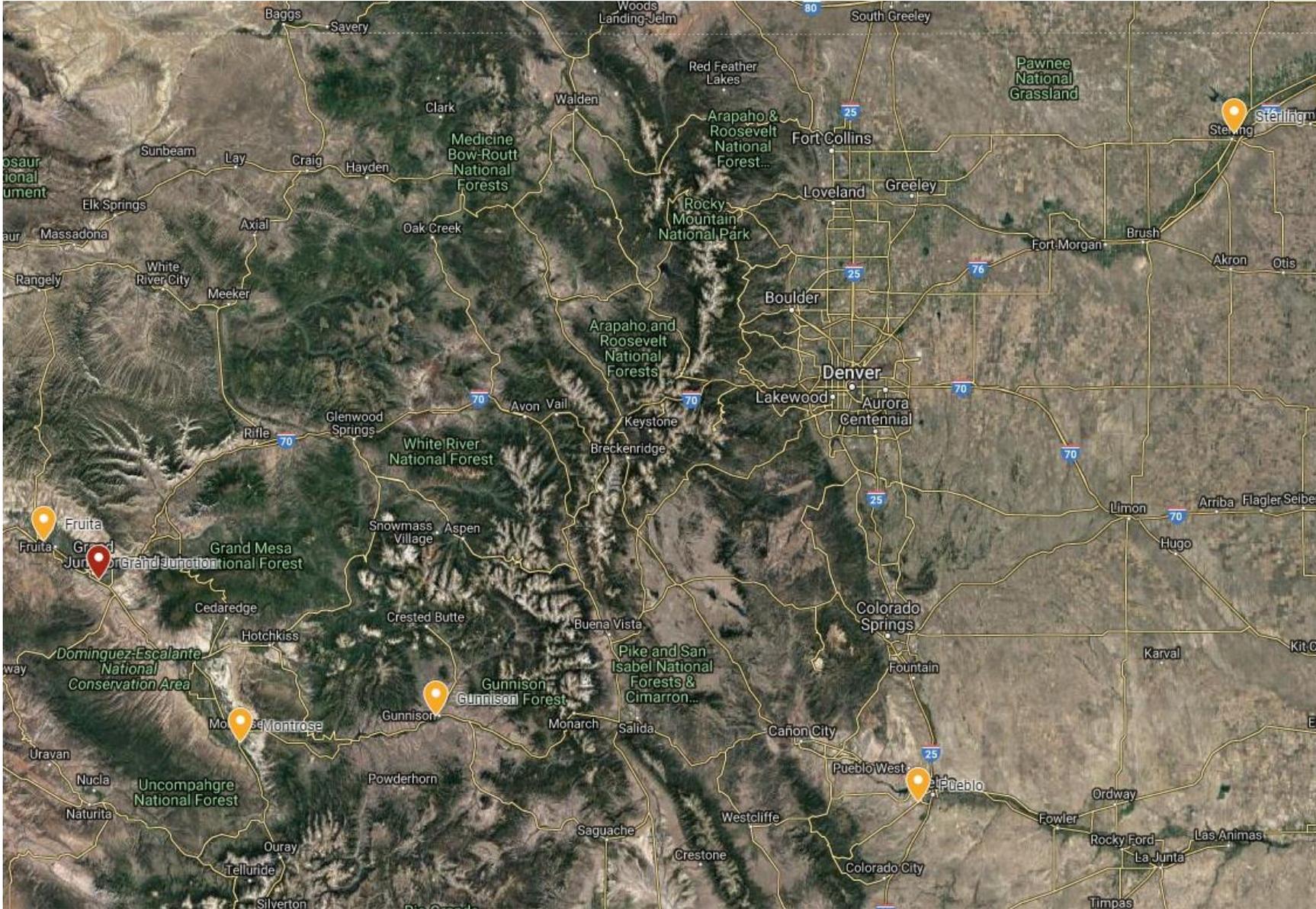
Appendix:

Exhibit A: Development Impact Fee Assumptions

Assumptions	Single-Family Detached	Office
Square Feet	2,000	10,000
Project Acres	0.25	0.50
Project Impervious Percent	50%	90%
Water Tap Size	3/4"	1"
Project Address / Location		
Fruita	1518 Myers Ln, Fruita, CO 81521	1672 Highway 6 50, Fruita, CO 81521
Montrose	3400 Ridgeline Dr, Montrose, CO 81401	1546 E Oak Grove Rd, Montrose, CO 81401
Gunnison	1499 W Gunnison Ave, Gunnison, CO 81230	499 W Georgia Ave, Gunnison, CO 81230
Pueblo	5601 Bellagio Way, Pueblo, CO 81005	718 W 6th St, Pueblo, CO 81003
Sterling	832 Nicole Rd, Sterling, CO 80751	218 N 2nd St, Sterling, CO 80751
Grand Junction	554 Crestwood Ave, Grand Junction, CO 81504	398 I-70BL, Grand Junction, CO 81501

Source: Municipality/Metrostudy

Exhibit B: Development Impact Fee Municipality Map



This Analysis was prepared by Metrostudy, a consulting firm and the nation's leading provider of primary and secondary market information to the housing, retail, and related industries nationwide.



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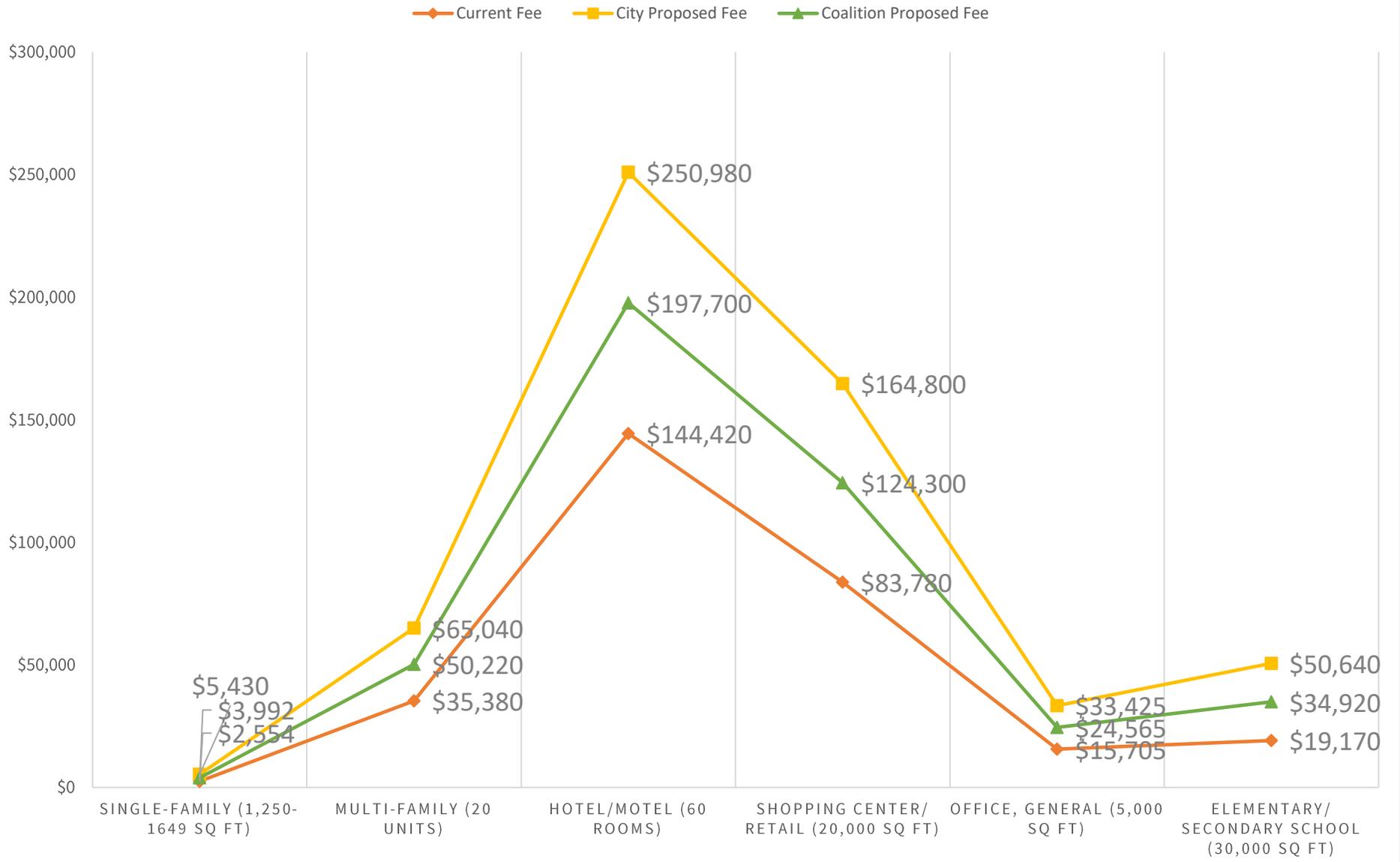
Centennial, Colorado 80112

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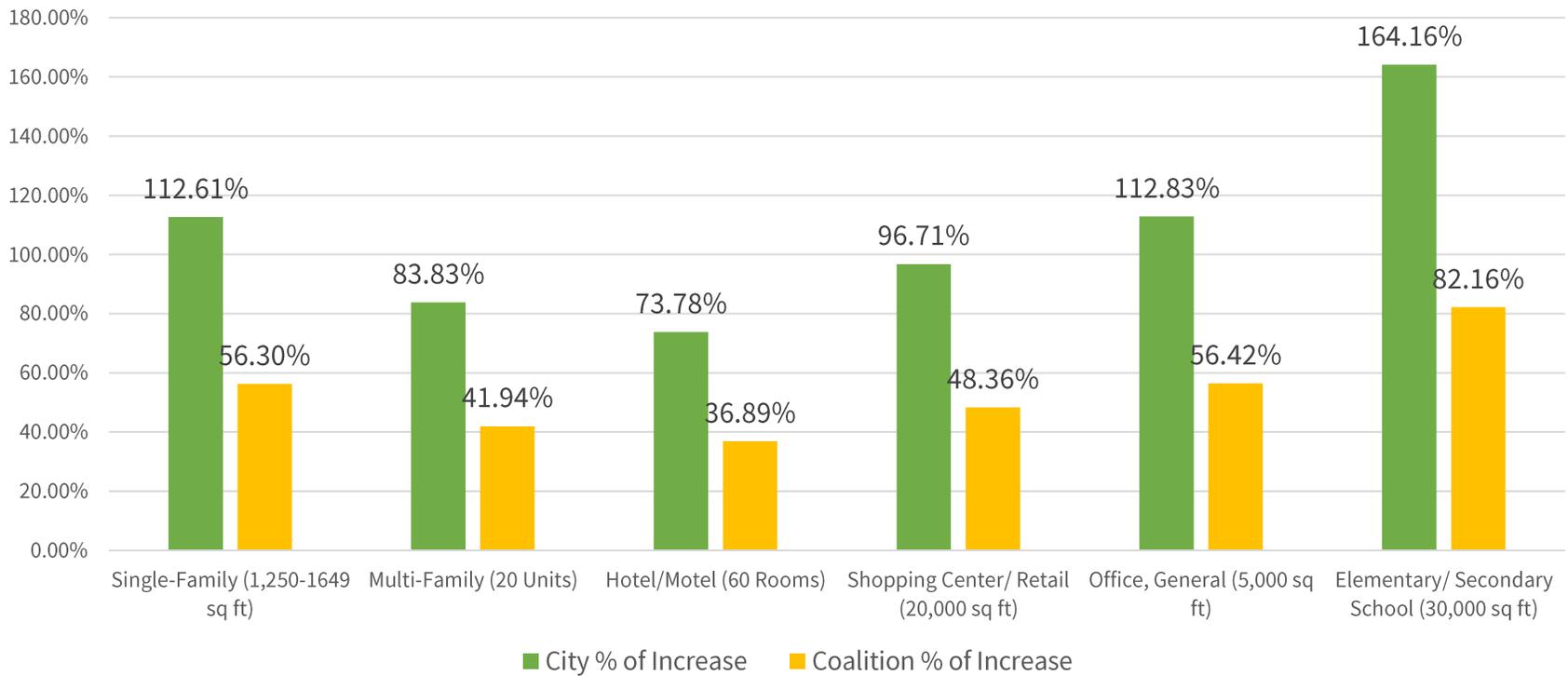
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TCP FEE INCREASE PROPOSALS



PERCENTAGE OF INCREASE OF PROPOSED TCP FEES



All fees are for single-family detached units of any size unless															
Communities	General Government	Police	Parks & Recreation	Schools	Transp.	Storm Drainage		Fire	Trails	Water	Sewer	Fire District	Recreation District		
Aurora	\$189	\$94	\$240		\$589	\$1,242	per acre	\$92		\$0	[3]	\$550	No	No	
Aurora - 2019#	\$235	\$116	\$1,901		\$612	\$115							No	No	
Castle Rock - 2019(Single family housing unit of 2,500 sq ft)	\$355	\$542	\$3,720		\$7,004	\$1,098							No	No	
Castle rock (Single-family detached or attached unit of 2,000-2,499 sq ft)	\$325	\$497	\$3,406		\$7,004	\$843		\$1,005					No	No	
Fort Collins	\$523	\$220	\$1,743		\$3,112	\$1,548	[4]	\$440		\$730 + \$0.36 per sq ft of lot area	[5]	\$3,537	Yes 10.95 mills	No	
Glenwood Springs**			\$5,775	\$2,471				\$1,290		\$5,004	[6]	\$5,380	No	No	
Golden ##										\$20,742		\$3,486	No	No	
Greeley (Single-family residence)	-	\$135	\$3,131		\$4,194	\$392		\$603	\$434	\$10,800	[1]	\$5,700	[2]		
Littleton - 2019	\$1,904	\$399	-		\$1,049	\$1,170							Yes 9.25 mills	Yes 8.496 mills	
Lone Tree - 2018, TischlerBise Proposed Fee*	\$1,152	\$619	\$7,286		-	-							Yes 9.25 mills	Yes 8.496 mills	
Longmont (For any residential unit between 1,601-2,400 sq ft)			\$6,962	[10]	\$1,746	\$923							No	No	
Montrose %		\$919	\$1,575		\$679					\$1,882	[9]	\$3,889	[9]	Yes 8.56 mills	
Parker - 2019 Max Supportable Fee	\$381	\$387	\$5,289		\$3,063	\$293									
Westminster			\$1,993		\$876					\$15,039	[7]	\$5,733	[7]	No	

Sources: Fees have been gathered from localities' websites and studies

[1], [2], [5] 'Plant Investment Fee' based on 3/4" tap size for residential units

[3] Water transmission development fee for extension of water transmission facilities is included in the water service connection fee; water connection fee = \$6100 for single-family detached units of 1-2 bathrooms, not including half baths

[4] Example fee for a single-family unit with lot soze or 8,600 sq ft plus 6,156 sq ft of common area. This 'Plant Invertment Fee' is based on a base rate of \$9,142 per gross acre

[6] Fee for 1 EQR, or the equivalent of a single-family unit up to 3BR and 2BA in size.

[7] Fees for single-family detached units with < 4 BR; fee includes treatment and transportation costs, but does not include connection charge

[8] Known as the City Operations and Police Services (COPS) Fee - to be used for both general government and police services

[9] Capacity charge, but does not include connection fee

[10] Combination of Recreation Buildings Fee (\$1086.85) and Parks Improvement Fee (\$8573.83)

* The fees listed for the City of Lone Tree

** Impact fees passed by Council

Most recent development fee schedule is from January 1, 2014

% Does not adopt impact fees in according to Colorado statue requirements; so the fees are not technically impact fees

Park Development Fee calculated as the fee-in-lieu option for park development. All fees listed are assessed on

CITY OF GRAND JUNCTION

ORDINANCE NO. ____

AN ORDINANCE AMENDING ORDINANCE NO. 3641 CONCERNING GROWTH AND DEVELOPMENT RELATED STREET POLICY

Recitals:

Safe and efficient streets are one of the most important services provided by the City, the City Council finds and determines that it is proper to provide a specific financing mechanism that will continue to allow safe and functional streets and for new growth and development to pay its way to an equitable degree.

The Council further determines that the resources of the City are properly allocated to maintaining and improving, including capital additions to, the existing streets and roads and those annexed over time, as resources permit, together with additional improvements to the system near and around developing areas of the City. The citizens and users of the street system pay for the upkeep and general improvement to the system by the payment of sales and use taxes. Sales and use taxes are not sufficient, however, to pay for all the road needs and there are limited resources available to the City, from other sources, to add to the system and/or to make improvements in the rapidly developing areas of the City.

The Council has found and affirms that an equitable method of imposing a portion of the costs of paying for additional or improved capacity, necessitated because of Growth, and promoting safe and effective access to and from new developments to the public street system is best addressed by requiring developers to pay for and install public right-of-way improvements that are required for such safe and effective access.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT ORDINANCE NO. 3641 AMENDED AS SHOWN: (For text, deletions are ~~struckthrough~~ and additions are underlined; for graphics, deletions are crossed through with an X.)

Growth and Development Related Street Policy

~~The City of Grand Junction requires that new development pay a Transportation Capacity Payment to help defray the cost to the City for the impact of development on City streets. The City has experienced steady growth for over a decade and during that time has struggled with how to fairly collect and administer impact fees assessed against development, how to credit some or all of those fees against taxes otherwise paid and what, if any, role the City should have in funding/contributing to the cost of providing additional traffic/street capacity and/or traffic/street capacity in accordance with community expectations.~~

~~The City has determined that there are three key components to a meaningful growth and development related street/traffic policy. They are:~~

~~—1. Collection of a realistic TCP for all new development projects. The TCP shall be annually reviewed and adjusted in accordance with 6.2B2d of the ZDC.~~

~~—2. A clear articulation of what minimum requirements (in addition to the TCP) each development must construct; and~~

~~—3. City funding and/or other means of participation in construction of street improvements.~~

~~Because the City has determined that traffic is a community problem, the TCP shall be uniform throughout the City and subject to criteria stated below; funding may be provided to street improvements anywhere within the City.~~

~~The principles of this policy are:~~

~~1. All development projects that create a traffic impact, as defined by the City ZDC, shall pay a TCP as established by and in accordance with the ZDC. The fundamental precept of the City's TCP policy is that new development must pay its fair share for the added traffic that development creates.~~

~~2. The TCP fee has been set to ensure that trips from each new development are calculated and that the developer contributes to the value of _____ capacity consumption of City streets in proportion to the traffic that the development is reasonably anticipated to generate. The fee also recognizes as a credit the value of taxes generated from development.~~

~~3. TCP funds are intended to be used for improvements to the major roadway system as identified on the most current version of the Grand Valley Circulation Plan functional classification map (Minor Collector or above). Improvements to the local roadway system will continue to be the responsibility of the property owners abutting the local roadway. The TCP fee is not intended to be used for debt service for the Riverside Parkway project.~~

~~4. Minimum Street Access Improvements — The intent of this section is to describe the improvements necessary to connect a proposed development to the existing street system. SUCH IMPROVEMENTS SHALL BE PUBLIC IMPROVEMENTS AND SHALL BE THE MAINTENANCE RESPONSIBILITY OF THE CITY WHETHER SUCH PUBLIC IMPROVEMENTS ARE IDENTIFIED THROUGH A TRAFFIC STUDY OR OTHERWISE MADE A CONDITION OF APPROVAL FOR DEVELOPMENT. Construction of these improvements will be the responsibility of the developer and shall be constructed or guaranteed at the time of development. These improvements are needed to provide safe ingress/egress and shall meet the minimum standards in Section CHAPTERS 5 AND 6 AND THE UNNUMBERED CHAPTER ENTITLED Fire Department Access of the TEDS Manual — Fire Department Access. These improvements are not intended to include off-site, Half Street or perimeter improvements necessary to increase the capacity or improve the safety of adjacent or perimeter streets.~~

- ~~• Absent unique needs or characteristics of the development, Minimum Street Access Improvements shall mean construction of full asphalt radii, and necessary drainage improvements in accordance with the City standard detail for each intersection with a perimeter street and/or improvements necessitated if the proposed development creates lots with direct access to the perimeter street(s) as determined by the Director. An owner or developer may appeal a determination of Minimum Street Access Improvements to the Transportation Engineering Design Standards (TEDS) Exception~~

Committee. That Committee consists of the PW&U Director, the Fire Chief and the Community Development Director.

- ~~Curb, gutter and sidewalk improvements shall be constructed as part of minimum access improvements when connecting directly to a street with like improvements.~~
- ~~The City's multi-modal plan, including bike lanes, trails, paths, alternate pedestrian connections and bus stops and transit shall be incorporated into determining what improvements are required associated with a connection to the adjacent street system.~~
- ~~Right of Way—The development shall dedicate necessary ROW (per Code and TEDS) to provide safe ingress/egress to the proposed development.~~
- ~~Drainage Structures including Bridges—The development shall construct drainage structures and/or bridges associated the connection of the development to the street system.~~
- ~~Traffic Studies—Preparation of Traffic Studies shall be the responsibility of new development as currently defined by the Code.~~
- ~~Utilities—The extension of utilities including water, sewer, storm water improvements gas, electric, cable and telephone, etc will continue to be the responsibility of new development.~~

~~5.—In addition to the TCP and Minimum Street Access Improvements, the developer must fully construct (or if current needs do not require construction, then the developer must guarantee for future construction) all internal streets, roads, alleys, and future connections in accordance with the development's approved plan.~~

~~6.—The developer is responsible for the cost of the design of all features of the Minimum Street Access Improvements as required by TEDS, the GVCP, and other applicable City code(s), ordinance(s), policy(ies) or resolution(s).~~

~~7.—Reimbursable Street Expenses — In the event a development triggers the need for public improvements beyond available City funding from the TCP, the City and the developer may enter into an agreement that would provide for the reimbursement of a portion of the costs of the public improvements.~~

~~Safe and adequate streets are a priority for the City. To help meet that need, a fund will be established to allow the City to fund and/or partner with developers or other governments. City funding or participation in street improvements shall be used for three purposes:~~

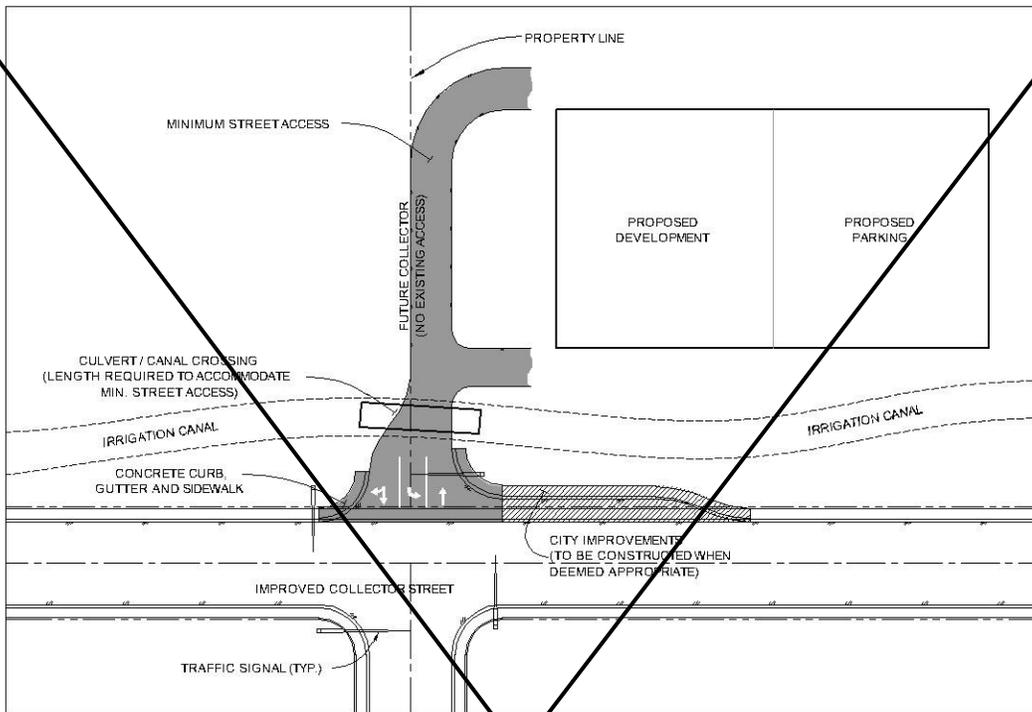
~~1.—Construction of larger scale improvements along corridors which are deficient in street improvements (i.e., capacity, safety or physical improvements including pavement, curbs, gutters, and sidewalks).~~

~~2.—Specific street or intersection improvements either adjacent or off-site from a new development where the existing condition is deficient as defined by City code.~~

3. ~~Participation in a larger regional project in cooperation with the participating agencies of the Grand Valley MPO.~~

~~City funding and/or other means of participation in street improvements is conditioned on:~~

- ~~• Construction will improve traffic safety;~~
- ~~• Construction will improve traffic flow;~~
- ~~• Construction will improve pedestrian safety;~~
- ~~• Construction will improve capacity.~~



MINIMUM STREET ACCESS INCLUDES

- ◆ CULVERT/CANAL CROSSING TO ACCOMMODATE DEVELOPMENT NEEDS (TRAFFIC STUDY). IF LESS THAN LENGTH REQUIRED FOR ULTIMATE STREET SECTION, CITY MAY CONTRIBUTE TO COMPLETE THE LENGTH.
- ◆ FIRE ACCESS IMPROVEMENTS BETWEEN COLLECTOR AND STORE ACCESS (MIN. 20' OF PAVEMENT WIDTH, OR GREATER AS REQUIRED BY THE TRAFFIC STUDY. DOES NOT INCLUDE CURB, GUTTER OR SIDEWALK, UNLESS NECESSARY FOR TRANSITION WITH EXISTING).
- ◆ DEDICATION OF R.O.W. PER DEVELOPMENT NEEDS OR PER MAJOR STREET PLAN, WHICH EVER IS GREATER.
- ◆ DRAINAGE IMPROVEMENTS AS NECESSARY.

CITY OF GRAND JUNCTION BUILDS

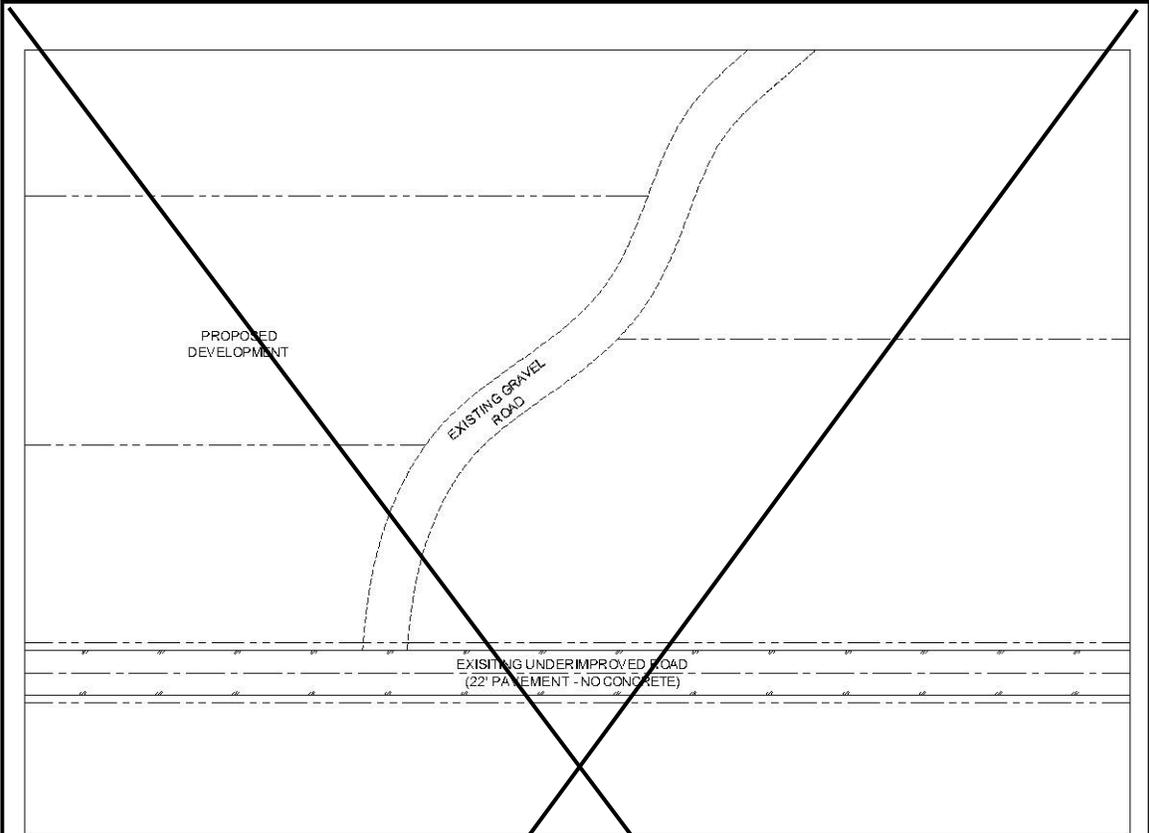
- ◆ TRAFFIC SIGNAL
- ◆ DECELERATION LANE

DRAWN BY: JAH
 DATE: 6-10-2004
 SCALE: N.T.S.
 APPR. BY: T.M.
 FILE NO. EXAMPLE.DWG

*PUBLIC WORKS & UTILITIES
 ENGINEERING DIVISION*

EXAMPLE 1





MINIMUM STREET ACCESS INCLUDES

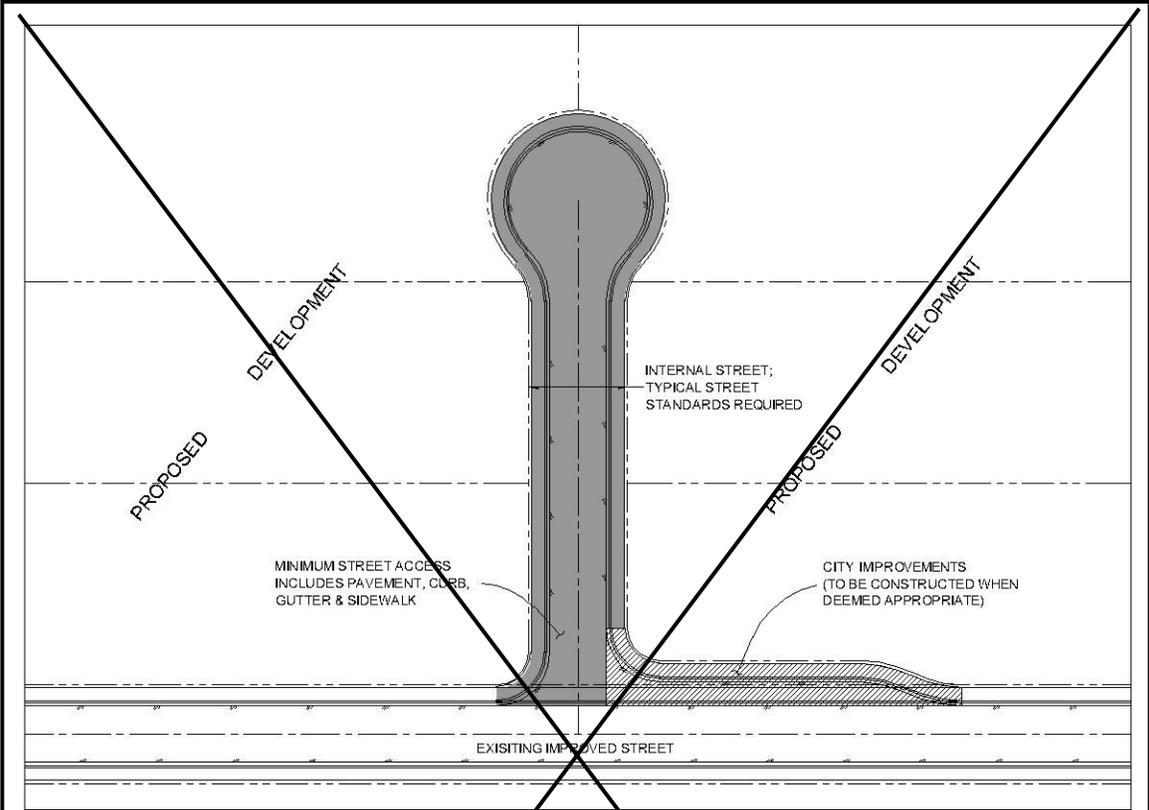
- ◆ IMPROVE GRAVEL ROAD PER FIRE STANDARDS.
- ◆ DRAINAGE IMPROVEMENTS AS NECESSARY.
- ◆ R.O.W. DEDICATION TO ACCOMODATE DEVELOPMENT NEEDS.

DRAWN BY: TAH
DATE: 5-10-2004
SCALE: N.T.S.
APPR. BY: T.M.
FILE NO. EXAMPLE.DWG

*PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION*

EXAMPLE 2





MINIMUM STREET ACCESS INCLUDES

- ◆ CONNECTION OF CURBS, GUTTERS AND SIDEWALKS TO EXISTING IMPROVEMENTS.
- ◆ DRAINAGE IMPROVEMENTS AS NECESSARY.

CITY OF GRAND JUNCTION BUILDS

- ◆ DECELERATION LANE

DRAWN BY: JAH
 DATE: 5-10-2004
 SCALE: N.T.S.
 APPR. BY: T.M.
 FILE NO. EXAMPLE.DWG

PUBLIC WORKS & UTILITIES
 ENGINEERING DIVISION

EXAMPLE 3



This Ordinance shall be effective on January 1, 2021.

Introduced on first reading this _____ day of March 2019.

PASSED and ADOPTED and ordered published in pamphlet form this _____ day of _____
2019.

President of the Council

Barbara Traylor Smith

Attest:

Wanda Winkelmann, City Clerk

CITY OF GRAND JUNCTION

ORDINANCE NO. 3641

AN ORDINANCE AMENDING ORDINANCE NO. 2750 AS CODIFIED AS SECTION 6.2 OF THE GRAND JUNCTION ZONING AND DEVELOPMENT CODE CONCERNING TRANSPORTATION CAPACITY PAYMENTS INCLUDING CALCULATIONS THEREOF, CREDITS AND APPROVED METHODOLOGIES

Recitals:

The existing City ordinances require that a developer of land adjacent to a right-of-way which is unimproved or does not meet current standards ("under-improved") either improve the abutting half of the right-of-way for the frontage of the development or pay a sum of money determined by an assumption of additional traffic that will be created from the development. Also, current City policy allows the City to require additional improvements to the existing roadway system when it is determined that the proposed development has negative impacts to the capacity and/or safety of the existing system.

While this method assures that a development pays its fair share of the cost of the associated impact to the transportation system, there has been concern raised that this method of addressing traffic impacts is not always fair. This method has the disadvantage of requiring the first development in an area of under-improved public infrastructure to complete these improvements but allows others, who follow later, to develop without similar costs.

Another disadvantage is that a developer of land immediately adjacent to one or more unimproved or under-improved streets may be required to pay for the improvement of all adjacent street improvements, yet another development, due to location or the configuration of the parcels such that it does not abut an unimproved street, may not be required to make the same improvements to the street system, even though each development may add the same amount of traffic.

Because safe and efficient streets are one of the most important services provided by the City, the Council does hereby amend the Code to provide a specific financing mechanism, which will continue to allow safe and functional streets while refining the calculation of payment for and costs attributable to development.

The Council determines that the resources of the City are properly allocated to maintaining and improving, including capital additions to, the existing 370 miles of streets and roads and that, as resources permit, additional improvements to the system should be made near and around developing areas of the City as growth occurs. The citizens and users of the street system pay for the upkeep and general improvement to

the system nearly exclusively by the payment of sales and use taxes. Sales and use taxes are not sufficient, however, to pay for all the road needs and there are limited resources available to the City, from other sources, to add to the system or to make improvements in the rapidly developing areas of the City.

Therefore, the Council finds and affirms that it is in the public interest to continue the practice of collecting Transportation Capacity Payments (TCP) and appropriately increase the amount of that fee to more accurately reflect the cost of improvements that are reasonably attributable to new development, new residents and new business activities (collectively "Growth").

The Council further finds that the TCP shall be set at a level that a substantial portion of the cost to build new transportation facilities caused by Growth is paid for by the Growth that has caused the need.

The Council is well aware that Growth and new development creates additional vehicular traffic that consumes a portion of the existing transportation infrastructure capacity. In support of the TCP methodology, the City has adopted the data, assumptions and conclusions of the Institute of Transportation Engineer's Trip Generation Manual ("ITE") for purposes of projecting the number of trips created by development. The ITE is a valid, nationally recognized basis to estimate traffic generated by a development and shall continue to be used by the City. The most recent version of the ITE is incorporated herein by this reference as if fully set forth.

The Council has found and affirms that a fair method of imposing a portion of the costs of paying for additional or improved capacity, necessitated because of Growth, is a fee based on a formula that considers among other things the number of trips generated by different types of development (based on ITE), the average trip length, and the percentage of new trips as variables. The specific formula for the TCP provided for herein has been studied and found to be valid by the 2002 Transportation Impact Fee Study prepared by Duncan Associates. That study is incorporated herein by this reference as if fully set forth.

Because the traffic impacts of new trips are not always easily ascertained or allocated to a particular intersection or street, and because the City is not so large that there are distinct areas of the City which are wholly unrelated to the others, the Council finds that it is not reasonable to define discrete time and distance limits for the spending of TCP funds in relation to each development. Nevertheless, expenditure and the prioritization of projects for expenditure shall, to the extent reasonable, be as near in time and distance as is possible to the location from which the payment was derived.

The Council has considered, but rejected as impracticable, a proposal whereby the City would be divided into quadrants or other sub-areas, in which quadrant or sub-area funds attributable to a particular subdivision or development must be spent within certain specified time limits. Such a method, while attractive to a developer, ignores the professional judgments which traffic engineers must make and ignores the reality that

sub-funds, which track TCP funds from particular areas or neighborhoods, may never have enough money to pay for needed improvements.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT SECTION 6.2 B1& B2 OF THE ZONING AND DEVELOPMENT CODE ARE AMENDED AS SHOWN:

Additions are shown in ALL CAPS, except for the entire section entitled “Growth and Development Related Street Policy” which is new, even though it is not capitalized. Adoption of this ordinance shall constitute a repeal of inconsistent terms and provisions of the existing ordinance and/or the codification including the analytical and other justification and descriptive materials which were adopted by reference in Ordinance No. 2750.6.2B1(f) Dedications required by subparagraph shall be at no cost to the City. Dedications shall not be eligible for, or require a refund or TCP credit.

6.2B1(f) Dedications required by subparagraph 6.2B1c shall be at no cost to the City. Dedications shall not be eligible for or require a refund or TCP credit.

6.2B2 Transportation Capacity Payment (TCP) and Right-of-Way Improvements.

6.2B2 a. The developer shall pay to the City a Transportation Capacity Payment (TCP) and Right-of-Way Improvements as required by the Public Works Director (DIRECTOR.)

a. The developer shall pay to the City a Transportation Capacity Payment (TCP) as required by the Public Works Director (DIRECTOR).

b. THE DIRECTOR MAY REQUIRE THAT THE DEVELOPER PAY FOR AND/OR CONSTRUCT IMPROVEMENTS necessary for the safe ingress and/or egress of traffic to the development. THOSE IMPROVEMENTS ARE DEFINED AS MINIMUM STREET ACCESS IMPROVEMENTS. MINIMUM STREET ACCESS IMPROVEMENTS SHALL BE DEFINED BY THE MOST RECENT VERSION OF THE CITY’S GROWTH AND DEVELOPMENT RELATED STREET POLICY AND/OR TEDS. THE GROWTH AND DEVELOPMENT RELATED STREET POLICY SHALL BE REVIEWED BY CITY STAFF AND ADOPTED ANNUALLY BY COUNCIL RESOLUTION.

c. No PLANNING CLEARANCE FOR A building permit for any use or activity requiring payment of the TCP pursuant to this Ordinance shall be issued until the TCP HAS BEEN PAID AND MINIMUM STREET ACCESS IMPROVEMENTS HAVE BEEN CONSTRUCTED, PAID FOR OR ADEQUATELY SECURED AS DETERMINED BY THE DIRECTOR. ADEQUATE SECURITY SHALL BE THAT ALLOWED OR REQUIRED FOR A DEVELOPMENT IMPROVEMENT AGREEMENT (DIA) UNDER SECTION 2.19 OF THIS CODE.

d. The amount of the TCP shall be as set forth ANNUALLY BY THE CITY COUNCIL in ITS adopted fee RESOLUTION. THE TCP IS MINIMALLY SUBJECT

TO ANNUAL ADJUSTMENT FOR INFLATION BASED ON THE CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS (CPI-U), WESTERN REGION, SIZE B/C, PUBLISHED MONTHLY BY THE UNITED STATES DEPARTMENT OF LABOR. (THIS INFORMATION CAN BE FOUND AT THE INTERNET SITE OF <http://data.bls.gov/labjava/outside.jsp?survey=cu>)

e. THE TCP shall be used BY THE DIRECTOR TO MAKE capital improvements to the transportation facilities in the City IN ACCORDANCE WITH THE CITY'S GROWTH AND DEVELOPMENT RELATED STREET POLICY, THIS ORDINANCE, AND OTHER APPLICABLE PROVISIONS OF THE ZONING AND DEVELOPMENT CODE.

(1) TO PAY DEBT SERVICE ON ANY PORTION OF ANY CURRENT OR FUTURE GENERAL OBLIGATION BOND OR REVENUE BOND ISSUED AFTER THE EFFECTIVE DATE OF THIS ORDINANCE AND USED TO FINANCE MAJOR ROAD SYSTEM IMPROVEMENTS;

(2) FOR THE RECONSTRUCTION AND REPLACEMENT OF EXISTING ROADS, THE CONSTRUCTION OF NEW MAJOR ROAD SYSTEMS, AND IMPROVEMENTS AND/OR FOR THE PAYMENT OF REIMBURSABLE STREET EXPENSES (AS THAT TERM IS DEFINED FROM TIME TO TIME BY THE CITY'S GROWTH AND DEVELOPMENT RELATED STREET POLICY) THAT ARE INTEGRAL TO AND THAT ADD CAPACITY TO THE STREET SYSTEM;

(3) TRAFFIC CAPACITY IMPROVEMENTS DO NOT INCLUDE ONGOING OPERATIONAL COSTS OR DEBT SERVICE FOR ANY PAST GENERAL OBLIGATION BOND OR REVENUE BOND ISSUED PRIOR TO THE EFFECTIVE DATE OF THIS SECTION OR ANY PORTION OF ANY CURRENT OR FUTURE BOND ISSUED AFTER THE EFFECTIVE DATE OF THIS SECTION AND NOT USED TO FINANCE MAJOR ROAD SYSTEM IMPROVEMENTS.

(4) Capital spending decisions shall be guided by the principles, among others, that TCP funds shall be used to make capacity AND SAFETY improvements but not used to upgrade existing deficiencies except incidentally in the course of making improvements; TCP fund expenditures which provide improvements which are near in time and/or distance TO the development FROM WHICH THE FUNDS ARE COLLECTED are preferred over expenditures for improvements which are more distant in time and/or distance.

(5) No TCP funds shall be used for maintenance.

(6) TCP funds will be ACCOUNTED FOR SEPARATELY BUT may be commingled with other funds of the City.

(7) The DIRECTOR shall determine when and where TCP funds shall be spent.

(i) AS PART OF THE TWO-YEAR BUDGET PROCESS

(ii) AS REQUIRED TO KEEP PACE WITH DEVELOPMENT

(8) The TCP shall not be payable if THE DIRECTOR IS SHOWN by clear and convincing evidence, that at least one of the following applies:

(i) alteration or expansion of an existing structure will not create additional trips;

(ii) the construction of an accessory structure will not create additional trips produced by the principal building or use of the land. A garage is an example of an accessory structure which does not create additional trips;

(iii) the replacement of a destroyed or partially destroyed structure with a new building or structure of the same size and use that does not create additional trips;

(iv) a structure is constructed in a development for which a TCP fee has been paid within the prior EIGHTY FOUR (84) months or the structure is in a development with respect to which the developer constructed Street Access Improvements and the City accepted such improvements and the warranties have been satisfied.

f. IF THE TYPE OF IMPACT-GENERATING DEVELOPMENT FOR WHICH A BUILDING PERMIT IS REQUESTED IS FOR A CHANGE OF LAND USE OR FOR THE EXPANSION, REDEVELOPMENT OR MODIFICATION OF AN EXISTING DEVELOPMENT, THE FEE SHALL BE BASED ON THE NET INCREASE IN THE FEE FOR THE NEW LAND USE TYPE AS COMPARED TO THE PREVIOUS LAND USE TYPE.

g. IN THE EVENT THAT THE PROPOSED CHANGE OF LAND USE, REDEVELOPMENT OR MODIFICATION RESULTS IN A NET DECREASE IN THE FEE FOR THE NEW USE OR DEVELOPMENT AS COMPARED TO THE PREVIOUS USE OR DEVELOPMENT, THE DEVELOPER MAY APPLY FOR A REFUND OF FEES PREVIOUSLY PAID WITH THE CONSENT OF THE PREVIOUS PERSON HAVING MADE THE PAYMENT AND OR CONSTRUCTED THE IMPROVEMENTS.

h. FOR FEES EXPRESSED PER 1,000 SQUARE FEET, THE SQUARE FOOTAGE SHALL BE DETERMINED ACCORDING TO GROSS FLOOR AREA, MEASURED FROM THE OUTSIDE SURFACE OF EXTERIOR WALLS AND EXCLUDING UNFINISHED BASEMENTS AND ENCLOSED PARKING AREAS.

THE FEES SHALL BE PRORATED AND ASSESSED BASED ON ACTUAL FLOOR AREA, NOT ON THE FLOOR AREA ROUNDED TO THE NEAREST 1,000 SQUARE FEET.

- i. Any claim for credit shall be made not later than the time of application or request for a planning clearance. Any claim not so made shall be deemed waived. Credits shall not be transferable from one project or development to another nor otherwise assignable or transferable.

2.5 MINIMUM STREET ACCESS IMPROVEMENTS INCLUDE street and road improvements required to PROVIDE FOR THE SAFE ingress and egress needs of the development AS DETERMINED BY THE DIRECTOR.

- a. Quality of service FOR ANY NEW DEVELOPMENT AND/OR FOR TRAFFIC CAPACITY IMPROVEMENTS shall be DETERMINED BY THE DIRECTOR. THE DIRECTOR SHALL DETERMINE THE ACCEPTABLE QUALITY OF SERVICE TAKING INTO CONSIDERATION EXISTING TRAFFIC, STREETS, AND PROPOSED DEVELOPMENT.

- b. REQUIRED RIGHT-OF-WAY DEDICATIONS SHALL BE AT NO COST TO THE CITY.

2.6 Definitions. The following terms and words shall have the meanings set forth for this section.

- a. Average trip length: The average length of a vehicle trip as determined by the limits of the City, the distance between principle trip generators and as modeled by the CITY'S, THE COUNTY'S, THE STATE'S OR THE MPO'S COMPUTER program(S). IN THE EVENT THAT THE MODELS ARE INCONSISTENT, THE MOST ADVANTAGEOUS TO THE CITY SHALL BE USED.
- b. "Convenience store," "hotel/motel," "retail," and other terms contained and with the meaning set forth in the Trip Generation Manual.
- c. Lane-mile: Means one paved lane of a right-of-way mile in length fourteen (14) feet in width, including curb and gutter, sidewalk, storm sewers, traffic control devices, earthwork, engineering, and construction management including inspections. The value of right-of-way is not included.
- d. Percentage of new trips: Based on THE MOST CURRENT VERSION of ITE Transportation and Land Development Manual, and of the ITE Trip Generation Manual.
- e. Unimproved/under-improved floor area: Has the meaning as defined in the adopted building codes.

2.7 CALCULATION OF FEE.

a. ANY PERSON WHO APPLIES FOR A BUILDING PERMIT FOR AN IMPACT-GENERATING DEVELOPMENT SHALL PAY A TRANSPORTATION IMPACT FEE IN ACCORDANCE WITH THE MOST RECENT FEE SCHEDULE PRIOR TO ISSUANCE OF A BUILDING PERMIT. IF ANY CREDIT IS DUE PURSUANT TO SECTION i ABOVE, THE AMOUNT OF SUCH CREDIT SHALL BE DEDUCTED FROM THE AMOUNT OF THE FEE TO BE PAID.

Land Use Type	ITE Code	Unit	Fee	Factor
Residential				
Single Family	210	Dwelling	\$1,500	1.00
Multi-Family	220	Dwelling	\$1,039	0.69
Mobile Home/RV Park	240	Pad	\$ 754	0.50
Hotel/Motel	310/320	Room	\$1,414	0.94
Retail/Commercial				
Shopping Center (0-99KSF)	820	1000 SF	\$2,461	1.64
Shopping Center (100-249KSF)	820	1000 SF	\$2,311	1.54
Shopping Center (250-499KSF)	820	1000 SF	\$2,241	1.49
Shopping Center (500+KSF)	820	1000 SF	\$2,068	1.38
Auto Sales/Service	841	1000 SF	\$2,223	1.48
Bank	911	1000 SF	\$3,738	2.49
Convenience Store w/Gas Sales	851	1000 SF	\$5,373	3.58
Golf Course	430	Hole	\$3,497	2.33
Health Club	493	1000 SF	\$2,003	1.34
Movie Theater	443	1000 SF	\$6,216	4.14
Restaurant, Sit Down	831	1000 SF	\$3,024	2.02
Restaurant, Fast Food	834	1000 SF	\$6,773	4.52
Office/Institutional				
Office, General (0-99KSF)	710	1000 SF	\$1,845	1.23
Office, General >100KSF	710	1000 SF	\$1,571	1.05
Office, Medical	720	1000 SF	\$5,206	3.47
Hospital	610	1000 SF	\$2,418	1.61
Nursing Home	620	1000 SF	\$ 677	0.45
Church	560	1000 SF	\$1,152	0.77
Day Care Center	565	1000 SF	\$2,404	1.60
Elementary/Sec. School	520/522/530	1000 SF	\$ 376	0.25
Industrial				
Industrial Park	130	1000 SF	\$1,091	0.73
Warehouse	150	1000 SF	\$ 777	0.52
Mini-Warehouse	151	1000 SF	\$ 272	0.18

b. IF THE TYPE OF IMPACT-GENERATING DEVELOPMENT FOR WHICH A BUILDING PERMIT IS REQUESTED IS NOT SPECIFIED ON THE FEE SCHEDULE, THEN THE DIRECTOR SHALL DETERMINE THE FEE ON THE BASIS OF THE FEE APPLICABLE TO THE MOST NEARLY COMPARABLE LAND USE ON THE FEE SCHEDULE. THE DIRECTOR SHALL DETERMINE

COMPARABLE LAND USE BY TRIP GENERATION RATES CONTAINED IN THE MOST CURRENT EDITION OF ITC *TRIP GENERATION MANUAL*.

c. IN MANY INSTANCES, A BUILDING MAY INCLUDE SECONDARY OR ACCESSORY USES TO THE PRINCIPAL USE. FOR EXAMPLE, IN ADDITION TO THE PRODUCTION OF GOODS, MANUFACTURING FACILITIES USUALLY ALSO HAS OFFICE, WAREHOUSE, RESEARCH AND OTHER ASSOCIATED FUNCTIONS. THE TCP FEE SHALL GENERALLY BE ASSESSED BASED ON THE PRINCIPAL USE. IF THE APPLICANT CAN SHOW THE DIRECTOR IN WRITING BY CLEAR AND CONVINCING EVIDENCE THAT A SECONDARY LAND USE ACCOUNTS FOR OVER 25% OF THE GROSS FLOOR AREA OF THE BUILDING AND THAT THE SECONDARY USE IS NOT ASSUMED IN THE TRIP GENERATION FOR THE PRINCIPAL USE, THEN THE TCP MAY BE CALCULATED ON THE SEPARATE USES.

d. TCP FEE CALCULATION STUDY -- AT THE ELECTION OF THE APPLICANT OR UPON THE REQUEST OF THE DIRECTOR, FOR ANY PROPOSED DEVELOPMENT ACTIVITY, FOR A USE THAT IS NOT ON THE FEE SCHEDULE OR FOR WHICH NO COMPARABLE USE CAN BE DETERMINED AND AGREED BY THE APPLICANT AND THE DIRECTOR OR FOR ANY PROPOSED DEVELOPMENT FOR WHICH THE DIRECTOR CONCLUDES THE NATURE, TIMING OR LOCATION OF THE PROPOSED DEVELOPMENT MAKES IT LIKELY TO GENERATE IMPACTS COSTING SUBSTANTIALLY MORE TO MITIGATE THAN THE AMOUNT OF THE FEE THAT WOULD BE GENERATED BY THE USE OF THE FEE SCHEDULE, A TCP FEE CALCULATION STUDY MAY BE PERFORMED.

e. THE COST AND RESPONSIBILITY FOR PREPARATION OF A FEE CALCULATION STUDY SHALL BE DETERMINED IN ADVANCE BY THE APPLICANT AND THE DIRECTOR.

f. THE DIRECTOR MAY CHARGE A REVIEW FEE AND/OR COLLECT THE COST FOR RENDERING A DECISION ON SUCH STUDY. THE DIRECTOR'S DECISION ON A FEE OR A FEE CALCULATION STUDY MAY BE APPEALED TO THE ZONING BOARD OF APPEALS IN ACCORDANCE WITH 2.18B OF THIS CODE.

g. THE TCP FEE CALCULATION STUDY SHALL BE BASED ON THE SAME FORMULA, QUALITY OF SERVICE STANDARDS AND UNIT COSTS USED IN THE IMPACT FEE STUDY. THE FEE STUDY REPORT SHALL DOCUMENT THE METHODOLOGIES AND ALL ASSUMPTIONS.

h. THE TCP FEE CALCULATION STUDY SHALL BE CALCULATED ACCORDING TO THE FOLLOWING FORMULA.

FEE	=	VMT X NET COST/VMT X RF
WHERE:		
VMT	=	TRIPS X % NEW X LENGTH ÷ 2
TRIPS	=	DAILY TRIP ENDS GENERATED BY THE DEVELOPMENT DURING THE WORK WEEK
% NEW	=	PERCENT OF TRIPS THAT ARE PRIMARY, AS OPPOSED TO PASSBY OR DIVERTED-LINK TRIPS
LENGTH	=	AVERAGE LENGTH OF A TRIP ON THE MAJOR ROAD SYSTEM
÷ 2	=	AVOIDS DOUBLE-COUNTING TRIPS FOR ORIGIN AND DESTINATION
NET COST/VMT	=	COST/VMT - CREDIT/VMT
COST/VMT	=	COST/VMC X VMC/VMT
COST/VMC	=	AVERAGE COST TO CREATE A NEW VMC BASED ON HISTORICAL OR PLANNED PROJECTS (\$306 EXCLUDING MAJOR STRUCTURES)
VMC/VMT	=	THE SYSTEM-WIDE RATIO OF CAPACITY TO DEMAND IN THE MAJOR ROAD SYSTEM (1.0 ASSUMED)
CREDIT/VMT	=	CREDIT PER VMT, BASED ON REVENUES TO BE GENERATED BY NEW DEVELOPMENT (\$82)
RF	=	REDUCTION FACTOR ADOPTED BY POLICY AT 52.6%

i. A TCP FEE CALCULATION STUDY SUBMITTED FOR THE PURPOSE OF CALCULATING A TRANSPORTATION IMPACT FEE MAY BE BASED ON DATA, INFORMATION AND ASSUMPTIONS THAT ARE FROM:

- (1) AN ACCEPTED STANDARD SOURCE OF TRANSPORTATION ENGINEERING OR PLANNING DATA; OR
- (2) A LOCAL STUDY ON TRIP CHARACTERISTICS PERFORMED BY A QUALIFIED TRANSPORTATION PLANNER OR ENGINEER PURSUANT TO AN ACCEPTED METHODOLOGY OF TRANSPORTATION PLANNING OR ENGINEERING THAT HAS BEEN APPROVED BY THE DIRECTOR.

Growth and Development Related Street Policy

The City of Grand Junction requires that new development pay a Transportation Capacity Payment to help defray the cost to the City for the impact of development on City streets. The City has experienced steady growth for over a decade and during that time has struggled with how to fairly collect and administer impact fees assessed against development, how to credit some or all of those fees against taxes otherwise paid and what, if any, role the City should have in funding/contributing to the cost of providing additional traffic/street capacity and/or traffic/street capacity in accordance with community expectations.

The City has determined that there are three key components to a meaningful growth and development related street/traffic policy. They are:

1. Collection of a realistic TCP for all new development projects. The TCP shall be annually reviewed and adjusted in accordance with 6.2B2d of the ZDC.
2. A clear articulation of what minimum requirements (in addition to the TCP) each development must construct; and
3. City funding and/or other means of participation in construction of street improvements.

Because the City has determined that traffic is a community problem, the TCP shall be uniform throughout the City and subject to criteria stated below; funding may be provided to street improvements anywhere within the City.

The principles of this policy are:

1. All development projects that create a traffic impact, as defined by the City ZDC, shall pay a TCP as established by and in accordance with the ZDC. The fundamental precept of the City's TCP policy is that new development must pay its fair share for the added traffic that development creates.
2. The TCP fee has been set to ensure that trips from each new development are calculated and that the developer contributes to the value of capacity consumption of City streets in proportion to the traffic that the development is reasonably anticipated to generate. The fee also recognizes as a credit the value of taxes generated from development.
3. TCP funds are intended to be used for improvements to the major roadway system as identified on the most current version of the Grand Valley Circulation Plan functional classification map (Minor Collector or above). Improvements to the local

roadway system will continue to be the responsibility of the property owners abutting the local roadway. The TCP fee is not intended to be used for debt service for the Riverside Parkway project.

4. Minimum Street Access Improvements -- The intent of this section is to describe the improvements necessary to connect a proposed development to the existing street system. SUCH IMPROVEMENTS SHALL BE PUBLIC IMPROVEMENTS AND SHALL BE THE MAINTENANCE RESPONSIBILITY OF THE CITY WHETHER SUCH PUBLIC IMPROVEMENTS ARE IDENTIFIED THROUGH A TRAFFIC STUDY OR OTHERWISE MADE A CONDITION OF APPROVAL FOR DEVELOPMENT. Construction of these improvements will be the responsibility of the developer and shall be constructed or guaranteed at the time of development. These improvements are needed to provide safe ingress/egress and shall meet the minimum standards in ~~Section~~ CHAPTERS 5 AND 6 AND THE UNNUMBERED CHAPTER ENTITLED Fire Department Access of the TEDS Manual – Fire Department Access. These improvements are not intended to include off-site, Half Street or perimeter improvements necessary to increase the capacity or improve the safety of adjacent or perimeter streets.

- Absent unique needs or characteristics of the development, Minimum Street Access Improvements shall mean construction of full asphalt radii, and necessary drainage improvements in accordance with the City standard detail for each intersection with a perimeter street and/or improvements necessitated if the proposed development creates lots with direct access to the perimeter street(s) as determined by the Director. An owner or developer may appeal a determination of Minimum Street Access Improvements to the Transportation Engineering Design Standards (TEDS) Exception Committee. That Committee consists of the PW&U Director, the Fire Chief and the Community Development Director.
- Curb, gutter and sidewalk improvements shall be constructed as part of minimum access improvements when connecting directly to a street with like improvements.
- The City's multi-modal plan, including bike lanes, trails, paths, alternate pedestrian connections and bus stops and transit shall be incorporated into determining what improvements are required associated with a connection to the adjacent street system.
- Right of Way - The development shall dedicate necessary ROW (per Code and TEDS) to provide safe ingress/egress to the proposed development.
- Drainage Structures including Bridges - The development shall construct drainage structures and/or bridges associated the connection of the development to the street system.

- Traffic Studies - Preparation of Traffic Studies shall be the responsibility of new development as currently defined by the Code.
- Utilities – The extension of utilities including water, sewer, storm water improvements gas, electric, cable and telephone, etc will continue to be the responsibility of new development.

5. In addition to the TCP and Minimum Street Access Improvements, the developer must fully construct (or if current needs do not require construction, then the developer must guarantee for future construction) all internal streets, roads, alleys, and future connections in accordance with the development's approved plan.

6. The developer is responsible for the cost of the design of all features of the Minimum Street Access Improvements as required by TEDS, the GVCP, and other applicable City code(s), ordinance(s), policy(ies) or resolution(s).

7. Reimbursable Street Expenses – In the event a development triggers the need for public improvements beyond available City funding from the TCP, the City and the developer may enter into an agreement that would provide for the reimbursement of a portion of the costs of the public improvements.

Safe and adequate streets are a priority for the City. To help meet that need, a fund will be established to allow the City to fund and/or partner with developers or other governments. City funding or participation in street improvements shall be used for three purposes:

1. Construction of larger scale improvements along corridors which are deficient in street improvements (i.e., capacity, safety or physical improvements including pavement, curbs, gutters, and sidewalks).

2. Specific street or intersection improvements either adjacent or off-site from a new development where the existing condition is deficient as defined by City code.

3. Participation in a larger regional project in cooperation with the participating agencies of the Grand Valley MPO.

City funding and/or other means of participation in street improvements is conditioned on:

- Construction will improve traffic safety;
- Construction will improve traffic flow;
- Construction will improve pedestrian safety;
- Construction will improve capacity.

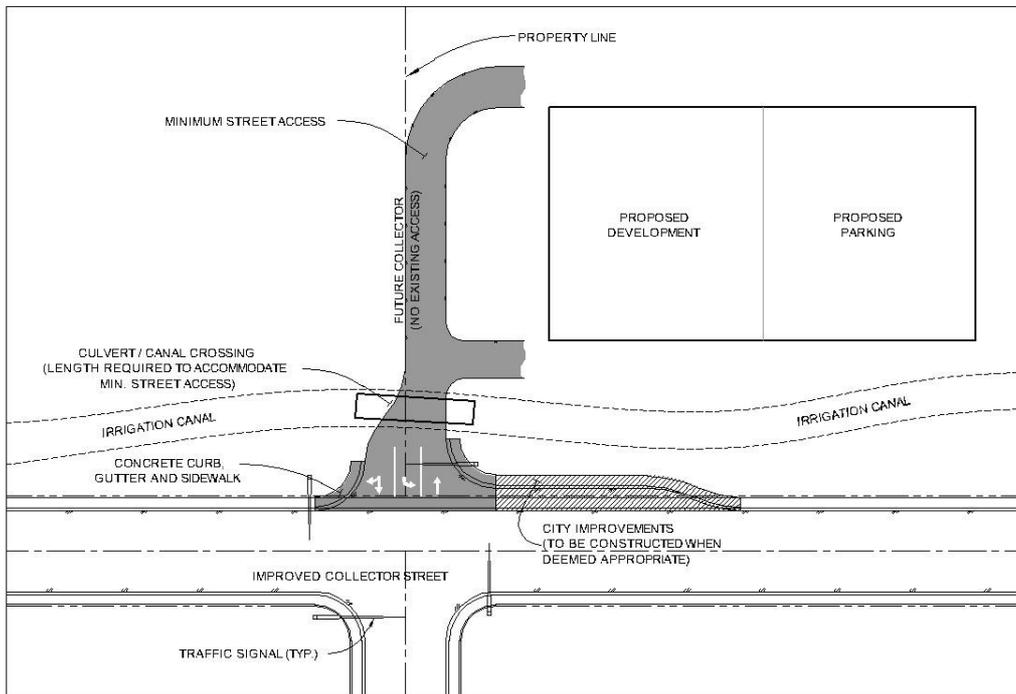
Introduced on First Reading this 19th day of May 2004.

PASSED and ADOPTED on second reading this 2nd day of June 2004.

/s/: Bruce Hill
President of the Council

Attest:

/s/: Stephanie Tuin
City Clerk



MINIMUM STREET ACCESS INCLUDES

- ◆ CULVERT/CANAL CROSSING TO ACCOMMODATE DEVELOPMENT NEEDS (TRAFFIC STUDY). IF LESS THAN LENGTH REQUIRED FOR ULTIMATE STREET SECTION, CITY MAY CONTRIBUTE TO COMPLETE THE LENGTH.
- ◆ FIRE ACCESS IMPROVEMENTS BETWEEN COLLECTOR AND STORE ACCESS (MIN. 20' OF PAVEMENT WIDTH, OR GREATER AS REQUIRED BY THE TRAFFIC STUDY. DOES NOT INCLUDE CURB, GUTTER OR SIDEWALK, UNLESS NECESSARY FOR TRANSITION WITH EXISTING).
- ◆ DEDICATION OF R.O.W. PER DEVELOPMENT NEEDS OR PER MAJOR STREET PLAN, WHICH EVER IS GREATER.
- ◆ DRAINAGE IMPROVEMENTS AS NECESSARY.

CITY OF GRAND JUNCTION BUILDS

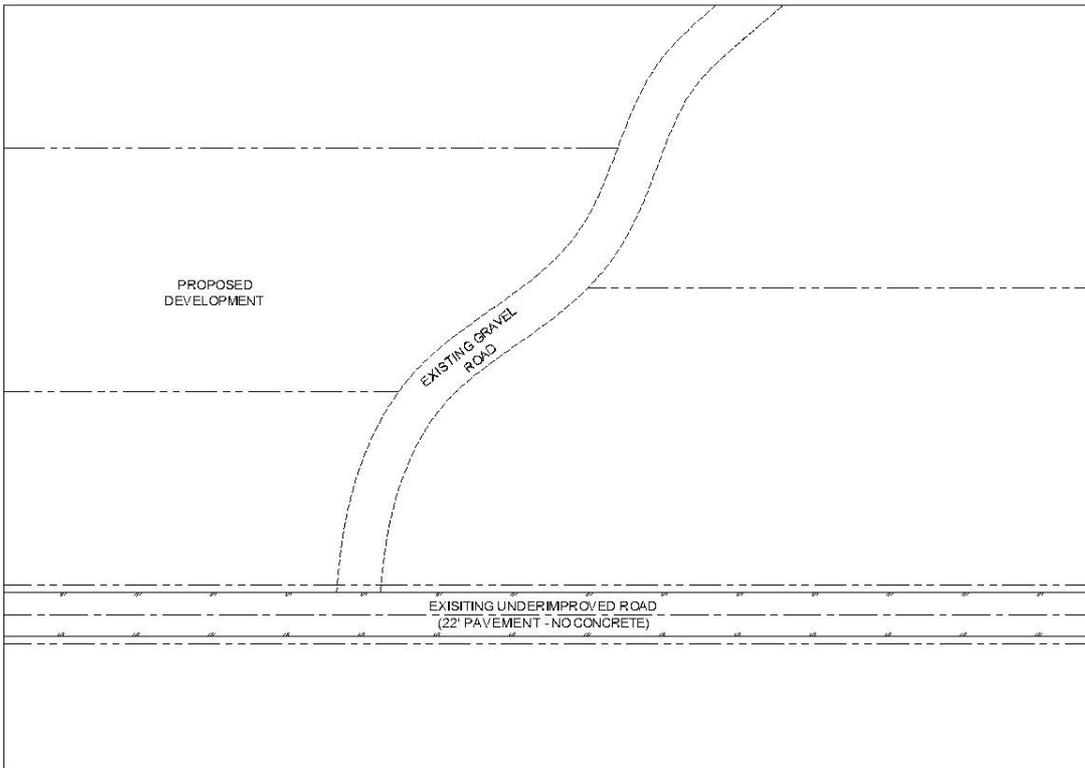
- ◆ TRAFFIC SIGNAL
- ◆ DECELERATION LANE

DRAWN BY: JAH
 DATE: 5-10-2004
 SCALE: N.T.S.
 APPR. BY: T.M.
 FILE NO. EXAMPLE.DWG

*PUBLIC WORKS & UTILITIES
 ENGINEERING DIVISION*

EXAMPLE 1





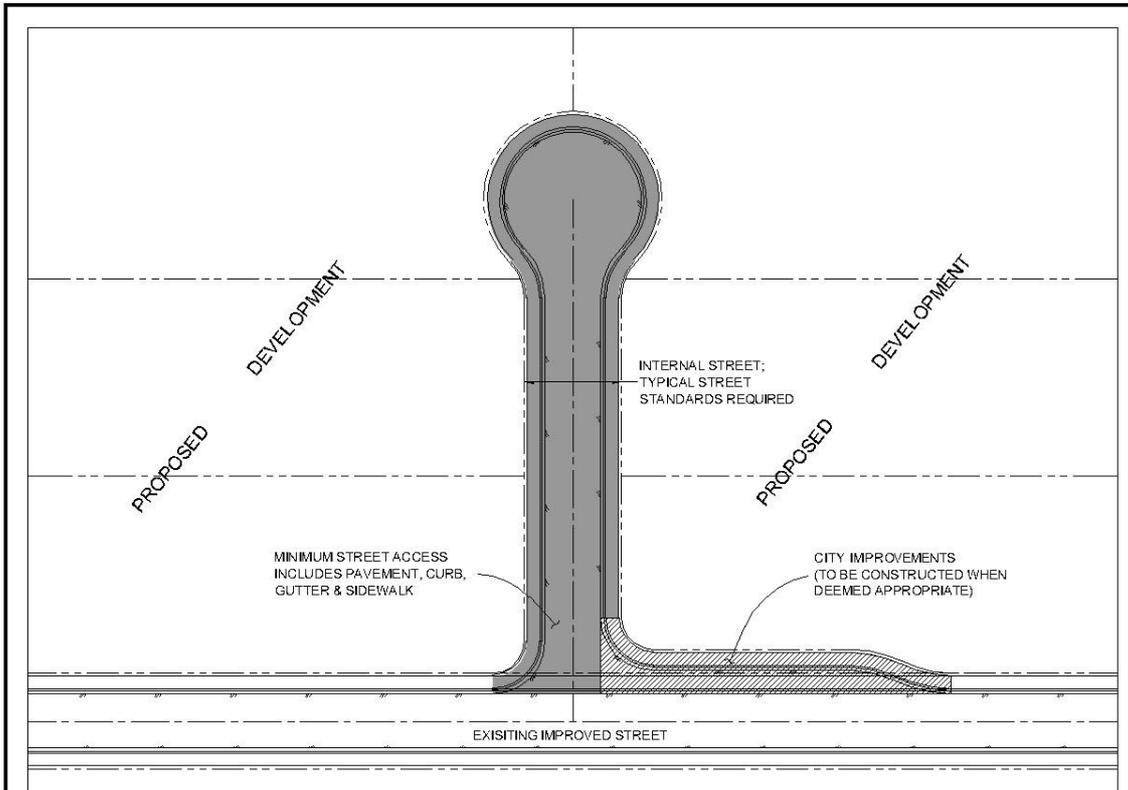
MINIMUM STREET ACCESS INCLUDES

- ◆ IMPROVE GRAVEL ROAD PER FIRE STANDARDS.
- ◆ DRAINAGE IMPROVEMENTS AS NECESSARY.
- ◆ R.O.W. DEDICATION TO ACCOMMODATE DEVELOPMENT NEEDS.

DRAWN BY: JAH
 DATE: 5-10-2004
 SCALE: N.T.S.
 APPR. BY: T.M.
 FILE NO. EXAMPLE.DWG

*PUBLIC WORKS & UTILITIES
 ENGINEERING DIVISION*
 EXAMPLE 2





MINIMUM STREET ACCESS INCLUDES

- ◆ CONNECTION OF CURBS, GUTTERS AND SIDEWALKS TO EXISTING IMPROVEMENTS.
- ◆ DRAINAGE IMPROVEMENTS AS NECESSARY.

CITY OF GRAND JUNCTION BUILDS

- ◆ DECELERATION LANE

DRAWN BY: JAH
 DATE: 5-10-2004
 SCALE: N.T.S.
 APPR. BY: T.M.
 FILE NO. EXAMPLE.DWG

*PUBLIC WORKS & UTILITIES
 ENGINEERING DIVISION*

EXAMPLE 3



CITY OF GRAND JUNCTION

ORDINANCE NO. ____

AN ORDINANCE AMENDING SECTION 21.06 OF THE GRAND JUNCTION ZONING AND DEVELOPMENT CODE CONCERNING THE UPDATING OF AND ADOPTION OF NEW DEVELOPMENT IMPACT FEES.

Recitals:

The City Council having duly considered the policy and pragmatic implications of updating and enacting land development fees, which are also known as impact fees, (“Fees”) finds that Fees are a necessary component of funding the capital costs of infrastructure required to maintain the current level of service for city residents, and further finds that development should pay its proportionate share of the capital costs of fire, police, municipal facilities, parks and recreation and transportation infrastructure.

The City recently completed two Fee studies and pursuant to State law regarding the purpose and methodology related to calculation and imposition of Fees, the fee studies were presented to City Council. The Fee studies found that development created a demand on capital facilities and that the City’s current fees do not support the Council policy that development should pay a proportionate share of the capital costs of fire, police, municipal facilities, parks and recreational and transportation infrastructure and that and that updating and adopting new Fees as described in the Fee Studies would be reasonably related to the overall cost of the services or improvements to be provided by the City.

The City Council further finds and determines that resources of the City are properly allocated to maintaining and improving streets and that further resources are needed to defray the capital facilities costs related to new development.

Therefore, the City Council finds and affirms that it is in the public interest to continue the practice of collecting transportation and parks and recreation impact fees and there is a need to increase the amount of those Fees to more accurately reflect the cost of improvements that are reasonably attributable to new development, new residents and new business activities.

The Council further finds and affirms that it is in the public interest to collect impact fees for the fire, police and municipal facilities to reflect the cost of capital improvements that are reasonably attributable to new development, new residents and new business activity.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT SECTION 21.06. OF THE ZONING AND DEVELOPMENT CODE IS AMENDED AS SHOWN: (Deletions ~~struckthrough~~; additions underlined.)

ADD ALL OF THE FOLLOWING:

21.06.110 Development Impact Fees

- (a) Title. This section shall be known and may be cited as the "Grand Junction, Colorado Impact Fee Ordinance" or "Impact Fee Ordinance."
- (b) Authority. The City has the authority to adopt this Chapter pursuant to Article XX, § 6 of the Colorado State Constitution, the City's home rule charter, the City's general police powers, and other laws of the State of Colorado.
- (c) Application. This shall apply to all development within the territorial limits of the City, except development exempted pursuant to §21.06.110(f)(2), Exemptions.
- (d) Purpose.
 - (1) The intent of this Chapter is to ensure that new development pays a proportionate share of the cost of city parks and recreation, fire, police, municipal government and transportation capital facilities.
 - (2) It is the intent of this Chapter that the impact fees imposed on new development are no greater than necessary to defray the impacts directly related to proposed new development.
 - (3) Nothing in this Chapter shall restrict the City from requiring an applicant for a development permit to construct reasonable capital facility improvements designed and intended to serve the needs of the applicant's project, whether or not such capital facility improvements are of a type for which credits are available under §21.06.110(g), Credits.
- (e) Definitions.

For the purposes of this section, the following terms shall have the following meanings:

 - 1) Planning Clearance. A planning clearance issued by the Director permitting the construction of a building or structure within the City of Grand Junction.
 - 2) Capital facilities. Any improvement or facility that: a. Is directly related to any service that the City is authorized to provide; b. Has an estimated useful life of five years or longer; and c. Is required by the Charter, ordinances or policy of the City pursuant to a resolution or ordinance.
 - 3) Commencement of impact-generating development. Commencement of impact-generating development occurs upon either:

- a. Planning Clearance for residential uses intended for fee simple ownership such as single family homes, townhomes or condominiums, or
 - b. The submittal of a complete application for the development of a non-residential development or multi-family for rent development for which construction commences on or before two years from the date of complete application submittal
- 4) Development. Any construction or expansion of a building, structure, or use, any change in use of a building or structure, or any change in the use of land, which creates additional demand for parks and recreation, fire, police and municipal government capital facilities.
 - 5) Development permit. Any final approval of an application for a rezoning, an approved Planned Development Ordinance, conditional use permit, subdivision, development or site plan, planning clearance, planning clearance or similar application for new construction.
 - 6) Fee payer. A person commencing impact-generating development who is obligated to pay an impact fee in accordance with the terms of this section.
 - 7) Fee schedule or impact fee schedule. The impact fees for Police, Fire, Municipal Facilities, Parks and Recreation and Transportation established by this section. The impact fee schedule is set forth in the Fee Schedule to this section and is incorporated herein by reference.
 - 8) Impact fee study. The study entitled City of Grand Junction, Colorado 2019 Impact Fee Study, prepared by TischlerBise dated August 8, 2019 or the study entitled Transportation Impact Fee Study by Duncan Associates dated November 2019 with Minor Revisions February 28, 2019.
 - 9) Independent fee calculation study. A study prepared by a fee payer, calculating the cost of parks and recreation capital facilities, fire capital facilities, police capital facilities and municipal government capital facilities required to serve the fee payer's proposed development, that is performed on an average cost (not marginal cost) methodology, uses the level of service standards, service units and unit construction costs stated in the impact fee study, and is performed in compliance with any criteria for such studies established by this section.
 - 10) Level of service (LOS). A measure of the relationship between service capacity and service demand for capital facilities.
 - 11) Floor area. The total finished square footage of all levels included within the outside walls of a building or portion thereof, but excluding courts, garages having no habitable area, uninhabitable areas that are located above the highest habitable level, or uninhabitable areas that are located below the first floor level.
 - 12) Successor-in-interest. A person, as defined by this section, who is conveyed a fee simple interest in land for which an impact fee is paid or a credit is approved pursuant to the terms of this section.

For the purposes of this section, site-related improvements such as minimum street improvements and safety improvements shall not constitute transportation capital facilities.

(f) Development impact fees to be imposed.

(1) Fee obligation, payment and deposit.

- i. Obligation to pay and time of payment. Commencing January 1, 2020, any person who causes the commencement of impact-generating development, except those exempted pursuant to §21.06.110(f)(2), Exemptions, shall be obligated to pay impact fees before ... and pursuant to the terms of this section. The obligation to pay the impact fees shall run with the land. The amount of the impact fees shall be determined in accordance with §21.06.110(f)(3), Calculation of amount of impact fees and the Fee Schedule in effect at the time of issuance of a planning clearance and paid to the Director at the time of issuance of a planning clearance. If any credits are due pursuant to §21.06.110(h), Credits, those shall be determined prior to the issuance of a planning clearance and payment of the impact fees.
- ii. Fees promptly deposited into accounts. All monies paid by a fee payer pursuant to this section shall be identified as impact fees and shall be promptly deposited in the appropriate impact fee trust accounts established and described in §21.06.110(h), Impact fee trust accounts.
- iii. Extension of previously issued development permit. If the fee payer is applying for an extension of a development permit issued prior to January 1, 2020, the impact fees required to be paid shall be the net increase between the impact fees applicable at the time of the current permit extension application and any impact fees previously paid pursuant to this section, and shall include any impact fees established subsequent to such prior payment.
- iv. Fee based on development permitted. If the planning clearance is for less floor area than the entire development approved pursuant to the development permit, the fee shall be computed separately for the floor area of development covered by the planning clearance, and with reference to the use categories applicable to such development covered by the planning clearance.
- v. Permit for change in use, expansion, redevelopment, modification. If the fee payer is applying for a planning clearance to allow for a change of use or for the expansion, redevelopment, or modification of an existing development, the impact fees required to be paid shall be based on the net increase in the impact fees for the new use as compared to the

previous use and actual fee paid for the previous use, and shall include any impact fees established subsequent to such prior payment.

- vi. Prior conditions and/or agreements. Any person who prior to January 1, 2020 has agreed in writing with the City, as a condition of permit approval to pay an impact fee shall be responsible for the payment of the impact fees under the terms of such agreement, and the payment of the impact fees may be offset against any impact fees due pursuant to the terms of this section.

(2) Exemptions. The following types of development shall be exempted from payment of the impact fees. Any claim for exemption shall be made no later than the time when the applicant applies for the first planning clearance. Any claim for exemption not made at or before that time shall be waived. The Director shall determine the validity of any claim for exemption pursuant to the standards set forth below.

- i. Replacing existing residential unit with new unit. Reconstruction, expansion, alteration or replacement of a previously existing residential unit that does not create any additional residential units.
- ii. New impact-generating development creates no greater demand than previous development. New impact-generating development that the fee payer can demonstrate will create no greater demand over and above that produced by the existing use or development.
- iii. Building after fire or catastrophe. Rebuilding the same amount of floor space of a structure that was destroyed by fire or other catastrophe.
- iv. Accessory structures. Construction of unoccupied accessory structures related to a residential unit.
- v. Previous payment of same amount of impact fees. Impact-generating development for which an impact fee was previously paid in an amount that equals or exceeds the impact fee that would be required by this section.
- vi. Government. Development by the federal government, the state, school district, or the city.
- vii. Complete development application approved prior to effective date of section. For development for which a complete application for a planning

clearance was approved prior to January 1, 2020 and for non-residential and multi-family development. For which a complete application was submitted prior to January 1, 2020 so long as construction commences by January 1, 2022. For the purposes of this section, a development application shall not be considered complete unless and until (a) all the required information and submittal materials required by all relevant city ordinances, resolutions, rules and regulations are submitted and received by the Director, and (b) the Director has determined the application is complete. The decision of the Director with respect to completeness is final.

- viii. Small additions and renovations for residential uses. Construction of an addition to an existing dwelling unit of 500 square feet or less, or expansion of finished space for an existing dwelling unit of 500 square feet or less. This exemption shall only be used one time for each dwelling unit and does not apply to accessory dwelling units.

(3) Calculation of amount of impact fees.

- i. Except for those electing to pay impact fees pursuant to §21.06.110(f)(3)(ii), Independent fee calculation study, the impact fees applicable to the impact-generating development shall be as determined by the Fee Schedule, which is hereby adopted and incorporated herein. The Impact Fee Schedule is based on the impact fee study. It applies to classes of land uses within the City, differentiates between types of land uses, and is intended to defray the projected impacts caused by proposed new development on city capital facilities. The determination of the land use category(ies) in the Impact Fee Schedule that is applicable to impact-generating development shall be made by the Director with reference to the Impact Fee Study and the methodologies therein; the then-current edition of the ITE Trip Generation Manual, published by the Institute of Traffic Engineers; the City zoning code; the then-current land use approvals for the development; and any additional criteria set forth in duly administrative rules.

- 1. Annual adjustment of impact fees to reflect effects of inflation. The Impact Fee Schedule, shall be adjusted annually. On January 1, 2021, and on January 1 of each subsequent year each impact fee amount set forth in Fee Schedule shall be adjusted for inflation.

- a. For transportation impact fees, the fees shall be adjusted for inflation based on latest 10-year average of the Colorado Department of Transportation Construction Cost Index, published quarterly by CDOT.
 - b. For Fire, Police, Parks and Municipal Facilities, the fees shall be adjusted for inflation based on the most recent Construction Cost Index published by Engineering News Record.
 - c. Adjusted Fees/the adjusted Impact Fee Schedule shall become effective immediately upon calculation and certification by the City Manager and shall not require additional action by the City Council to be effective.
2. Impact-generating development not listed in the Impact Fee Schedule. If the proposed impact-generating development is of a type not listed in the Impact Fee Schedule, then the impact fees applicable to the most nearly comparable type of land use. . The determination of the most nearly comparable type of land use shall be made by the Director with reference to the impact fee study and City code.
 3. Mix of uses. If the proposed impact-generating development includes a mix of those uses listed in the Impact Fee Schedule, then the impact fees shall be determined by adding the impact fees that would be payable for each use as if it was a freestanding use pursuant to the Impact Fee Schedule.
- ii. Independent fee calculation study. In lieu of calculating the amount(s) of impact fees by reference to the Impact Fee Schedule, a fee payer may request that the amount of the required impact fee be determined by reference to an independent fee calculation study.
 1. Preparation of independent fee calculation study. If a fee payer requests the use of an independent fee calculation study, the fee payer shall be responsible for retaining a qualified professional (as determined by the Director) to prepare the independent fee calculation study that complies with the requirements of this section, at the fee payer's expense.
 2. General parameters for independent fee calculation study. Each independent fee calculation study shall be based on the same

LOS standards and unit costs for the capital facilities used in the impact fee study, and shall document the relevant methodologies and assumptions used.

3. Procedure.

- a. An independent fee calculation study shall be initiated by submitting f an application to the Director together with an application fee to defray the costs associated with the review of the independent fee calculation study.
- b. The Director shall determine if the application is complete. If it is determined the application is not complete, a written statement outlining the deficiencies shall be sent by mail to the person submitting the application. The Director shall take no further action on the application until it is complete.
- c. When it is determined the application is complete, the application shall be reviewed by the Director and a written decision rendered on whether the impact fees should be modified, and if so, what the amount should be, based on the standards in §21.06.110(g)(1), *Standards*.

- 4. Standards. If, on the basis of generally recognized principles of impact analysis the Director determines the data, demand information and assumptions used by the applicant to calculate the impact fees in the Independent Fee Calculation Study more accurately measures the proposed impact-generating development's impact on the appropriate capital facilities, the impact fees determined in the Independent Fee Calculation Study shall be deemed the impact fees due and owing for the proposed development. The fee adjustment shall be set forth in a fee agreement. If the Independent Fee Calculation Study fails to satisfy these requirements, the impact fees applied shall be the impact fees established in the Impact Fee Schedule.

(g) Credits.

(1) Standards.

- i. General. Any person causing the commencement of impact-generating development may apply for credit against impact fees otherwise due, up to but not exceeding the full obligation of impact fees proposed to be paid

pursuant to the provisions of this section, for any contributions or construction (as determined as appropriate by the Director) accepted in writing by the City for capital facilities. Credits against impact fees shall be provided only for that impact fee for which the fee should be collected.

ii. Valuation of credits.

1. Construction. Credit for construction of capital facilities shall be valued by the City based on complete engineering drawings, specifications, and construction costs estimates submitted by the fee payer to the City. The Director shall determine the amount of credit, if any, due based on the information submitted, or, if he/she determines the information is inaccurate or unreliable, then on alternative engineering or construction costs acceptable to the Director.
2. Contributions. Contributions for capital facilities shall be based on the value of the contribution or payment at the time it is made to the City.

iii. When credits become effective.

1. Construction. Credits for construction of capital facilities shall become effective after the credit is approved pursuant to this section, a credit agreement is entered into and (a) all required construction has been completed and has been accepted by the City (b) suitable maintenance and financial warranty has been received and approved by the City, and (c) all design, construction, inspection, testing, financial warranty, and acceptance procedures have been completed in compliance with all applicable city requirements. Approved credits for the construction of capital facilities may become effective at an earlier date if the fee payer posts security in the form of an irrevocable letter of credit or escrow agreement and the amount and terms of such security are accepted by the City Manager. At a minimum, such security must be in the amount of the approved construction credit plus 20 percent, or an amount determined to be adequate to allow the city to construct the capital facilities for which the credit was given, whichever is higher.
2. Contribution. Credits for contributions for capital facilities shall become effective after the credit is approved in writing pursuant to

this section, a credit agreement is entered into and the contribution is actually made to the City in a form acceptable to the City.

- iv. Transferability of credits. Credits for contributions, construction or dedication of land shall be transferable within the same development and for the same capital facility for which the credit is provided, but shall not be transferable outside the development. Credit may be transferred pursuant to these terms and conditions by a written instrument, to which the City is a signatory that clearly identifies which credits issued under this section are to be transferred. The instrument shall be signed by both the transferor and transferee, and the document shall be delivered to the Director for registration of the change in ownership. If there are outstanding obligations under a credit agreement, the City may require that the transferor or transferee, or both (as appropriate) enter into an amendment to the credit agreement to assure the performance of such obligations.
- v. Total amount of credit. The total amount of the credit shall not exceed the amount of the impact fees due for the specific facility fee (eg. Fire, Police, Parks).
- vi. Capital contribution front-ending agreement. The City may enter into a capital contribution front-ending agreement with any person who proposes to construct capital facilities to the extent the fair market value of the construction of these capital facilities exceed the obligation to pay impact fees for which a credit is provided pursuant to this section. The capital contribution front-ending agreement shall provide proportionate and fair share reimbursement linked to the impact-generating development's use of the capital facilities constructed.

(2) Procedure.

- i. Submission of application. In order to obtain a credit against impact fees otherwise due, the fee payer shall submit an offer for contribution or construction. The offer shall be submitted to the Director, and must specifically request a credit against impact fees.
- ii. Contribution Offer contents. The offer for contribution credit shall include the following:

1. Construction. If the proposed credit involves construction of capital facilities:
 - a. The proposed plan of the specific construction certified by a duly qualified and licensed Colorado engineer.
 - b. The projected costs for the suggested improvement, which shall be based on local information for similar improvements, along with the construction timetable for the completion thereof. Such estimated costs may include the costs of construction or reconstruction, the costs of all labor and materials, the costs of all lands, property, rights, easements and franchises acquired, financing charges, interest prior to and during construction and for one year after completion of construction, costs of plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction;
 - c. A statement under oath of the facts that qualify the fee payer to receive a contribution credit.
 2. Contribution. If the proposed offer involves a credit for any contribution for capital facilities, the following documentation shall be provided:
 - a. A copy of the planning clearance for which the contribution was established;
 - b. If payment has been made, proof of payment; or
 - c. If payment has not been made, the proposed method of payment.
 - iii. Determination of completeness. The Director shall determine if the application is complete. If it is determined that the proposed application is not complete, the Director shall send a written statement to the applicant outlining the deficiencies. No further action shall be taken on the application until all deficiencies have been corrected.
 - iv. Decision. The Director shall determine if the offer for credit is complete, the offer shall be reviewed and approved if it complies with the standards in §21.06.110(g)(1) *Standards*.
- (3) Credit agreement. If the offer for credit is approved by the Director, a credit agreement shall be prepared and signed by the applicant and the City Manager. The credit agreement shall provide for the construction or contribution of capital facilities, the time by which it shall be dedicated, completed, or paid, , and the

value (in dollars) of the credit against the impact fees the fee payer shall receive for the construction or contribution.

- (4) Accounting of credits. Each time a request to use approved credits is presented to the City, the Director shall reduce the amount of the impact fees, and shall note in the City's records and the credit agreement the amount of credit remaining, if any.

(h) Impact fee trust accounts.

(1) Establishment of trust accounts.

- i. Establishment of trust accounts. For the purpose of ensuring impact fees collected pursuant to this section are designated for the mitigation of capital facility impacts reasonably attributable to new impact-generating development that paid the impact fees.
- ii. Establishment of accounts. Impact fees shall be deposited into four (4) accounts: parks and recreation, capital facilities, fire capital facilities, police capital facilities, and municipal government capital facilities accounts.

(2) Deposit and management of accounts.

- i. Managed in conformance with CRS 29-1-801 et. seq. The impact fee accounts shall be maintained as interest bearing and shall be managed in conformance with CRS 29-1-801 et. seq.
- ii. Immediate deposit of impact fees in appropriate account. All impact fees collected by the City pursuant to the Chapter shall be promptly deposited into the appropriate account.
- iii. Interest earned on trust account monies. Any Impact Fees not immediately necessary for expenditure shall be deposited in interest-bearing accounts. Interest earned on monies in the accounts shall be considered part of such account, and shall be subject to the same restrictions on use applicable to the impact fees deposited in such account.
- iv. Income derived retained in accounts until spent. All income derived from the deposits shall be retained in the accounts until spent pursuant to the requirements of this section.
- v. Expenditure of impact fees. Monies in each account shall be considered to be spent in the order collected, on a first-in/first-out basis.

(i) Expenditure of impact fees.

- (1) Capital facilities impact fees. The monies collected from each capital facilities impact fee shall be used only to acquire or construct capital facilities within the city.
- (2) No monies spent for routine maintenance, rehabilitation or replacement of capital facilities. No monies shall be spent for periodic or routine maintenance.

rehabilitation, or replacement of any city parks and recreation, fire, police or municipal government capital facilities.

- (3) No monies spent to remedy deficiencies existing on effective date of section. No monies shall be spent to remedy existing deficiencies in parks and recreation capital facilities, fire capital facilities, police capital facilities, or municipal government capital facilities.

(4) Transportation impact fee monies may be used to pay debt service on any portion of any current or future general obligation bond or revenue bond issued after July 6, 2004, and used to finance major road system improvements.

- (4) Transportation impact fee monies may be spent for the reconstruction and replacement of existing roads, the construction of new major road systems and improvements and/or for the payment of reimbursable street expenses.

(5)

(6) Annual impact fee budget. At least once during each fiscal year of the City, the City Manager shall present to the City Council a proposed impact fee capital facilities budget for parks and recreation, fire, police, municipal facilities and transportation. The impact fee capital facilities budget shall recommend the City Council appropriate monies from each impact fee account to specific city parks and recreation capital facilities, fire capital facilities, police capital facilities, and municipal government capital facilities. Any monies, including any accrued interest, not budgeted and appropriated to specific capital facility projects and not expended shall be retained in the same impact fee account until budgeted, appropriated and expended according to the City Charter and ordinances.

(j) Refund of impact fees paid.

(1) Refund of impact fees not spent or encumbered in ten years. A fee payer or the fee payer's successor-in-interest may request a refund of any impact fees not been spent or encumbered within ten years from the date the fee was paid, along with interest actually earned on the fees. Impact fees shall be deemed to be spent on the basis of the first fee collected shall be the first fee spent.

(2) Procedure for refund. The refund shall be administered by the Director, and shall be undertaken through the following process:

i. Submission of refund application. A refund application shall be submitted within one year following the end of the 10th year from the date on which the planning clearance was issued. The refund application shall include the following information:

1. A copy of the dated receipt issued for payment of the impact fee;
2. A copy of the planning clearance; and

- ii. Determination of completeness. The Director shall determine if the refund application is complete. If the application is not complete, the Director shall mail the applicant a written statement outlining the deficiencies. The Director shall take no further action on the refund application until it is complete.
- iii. Decision on refund application. When the refund application is complete, it shall be reviewed and approved if the Director determines a fee has been paid which has not been spent within the 10-year period. The refund shall include the fee paid plus interest actually earned on the impact fee.

(3) Limitations.

- i. Expiration of planning clearance without possibility of extension. If a fee payer has paid an impact fee required by this section and obtained a planning clearance, and the planning clearance for which the impact fee was paid later expires without the possibility of further extension, then the fee payer or the fee payer's successor-in-interest shall be entitled to a refund of the impact fee paid, without interest. In order to be eligible to receive a refund of impact fees pursuant to this subsection, the fee payer or the fee payer's successor-in-interest shall be required to submit an application for such refund to the Director within 30 days after the expiration of the planning clearance for which the fee was paid. If a successor-in-interest claims a refund of impact fee, the City may require written documentation that such rights have been conveyed to the claimant. If there is uncertainty as to the person to whom the refund is to be paid, or if there are conflicting demands for such refund, the City Attorney may interplead such funds.
- ii. No refund if project demolished, destroyed, altered, reconstructed or reconfigured. After an impact fee has been paid pursuant to this section, no refund of any part of such fee shall be made if the development for which the impact fee was paid is later demolished, destroyed, or is altered, reconstructed, reconfigured, or changed in use so as to reduce the size or intensity of the development or the number of units in the development.

(k) Low-Moderate Income Housing.

In order to promote the provision of low-moderate income housing in the City, the City Council may agree in writing to pay some or all of the impact fees imposed on a proposed low income housing development by this section from other unrestricted funds of the City. Payment of impact fees on behalf of a fee payer shall be at the discretion of the City Council and may be made pursuant to goals and objectives adopted by the City Council to promote affordable housing.

(l) Administration, Appeals and Updates of determination or decision of Director to City Manager.

(1) Review every seven years. The impact fees described in this section and the administrative procedures of this section shall be reviewed at least once every seven years by the City Manager to ensure that (a) the demand and cost assumptions underlying the impact fees are still valid, (b) the resulting impact fees do not exceed the actual costs of constructing capital facilities that are of the type for which the impact fees are paid and that are required to serve new impact-generating development, (c) the monies collected or to be collected in each impact fee accounts have been and are expected to be spent for capital facilities for which the impact fees were paid, and (d) the capital facilities for which the impact fees are to be used will benefit the new development paying the impact fees.

(2) Appeal.

- i. Any determination or decision made by the Director under this section may be appealed to the City Manager by filing with the City Manager within 30 days of the determination or decision for which the appeal is being filed: (1) a written notice of appeal on a form provided by the city manager, (2) a written explanation of why the appellant feels the determination or decision is in error, and (3) an appeal fee established by the city.
- ii. City manager review. The City Manager shall fix a time and place for hearing the appeal, and shall mail notice of the hearing to the appellant at the address given in the notice of appeal. The hearing shall be conducted at the time and place stated in the notice given by the City Manager. At the hearing, the City Manager shall consider the appeal and either affirm or modify the decision or determination of the Director based on the relevant standards and requirements of this section. The decision of the City Manager shall be final.

(3) Administrative rules. The City Manager and Director, and their respective designees may from time to time establish written administrative rules, not inconsistent with the provisions of this section, to facilitate the implementation of this section. Without limiting the foregoing, the Director is authorized to establish written administrative rules, not inconsistent with the provisions of this section, for use in the determination of the land use category(ies) in the impact fee schedule that is applicable to impact-generating development. All administrative rules adopted pursuant hereto shall be published in written form and copies thereof

maintained in the offices of the community development department and City Clerk. Fee payers shall be advised of any administrative rules adopted pursuant hereto and a copy of such rules shall be made available without charge to such fee payers and other persons requesting a copy thereof.

DRAFT

FEE SCHEDULE

FIRE, POLICE, PARKS AND RECREATION, AND MUNICIPAL FACILITIES IMPACT FEE SCHEDULE

			Jan 1 2020	Jan 1 2021	Jan 1 2022	
Land Use Type	Unit	Current Fees	33%	66%	100%	
Residential	Single Family					
	Fire	Dwelling	\$0	\$234	\$469	\$710
	Police	Dwelling	\$0	\$101	\$201	\$305
	Parks and Recreation	Dwelling	\$225	\$680	\$1,136	\$1,605
	Municipal Services	Dwelling	\$0	\$259	\$518	\$785
	Multi-Family					
	Fire	Dwelling	\$0	\$154	\$308	\$467
	Police	Dwelling	\$0	\$66	\$132	\$200
	Parks and Recreation	Dwelling	\$225	\$499	\$773	\$1,055
	Municipal Services	Dwelling	\$0	\$170	\$341	\$516
Commercial & Industrial	Retail/Commercial					
	Fire	1,000 sf	\$0	\$161	\$323	\$489
	Police	1,000 sf	\$0	\$68	\$136	\$206
	Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0
	Municipal Services	1,000 sf	\$0	\$155	\$311	\$471
	Office/Institutional					
	Fire	1,000 sf	\$0	\$63	\$126	\$191
	Police	1,000 sf	\$0	\$27	\$53	\$81
	Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0
	Municipal Services	1,000 sf	\$0	\$197	\$395	\$598
	Industrial					
	Fire	1,000 sf	\$0	\$22	\$44	\$66
	Police	1,000 sf	\$0	\$9	\$18	\$28
	Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0
	Municipal Services	1,000 sf	\$0	\$77	\$154	\$234
	Warehousing					
Fire	1,000 sf	\$0	\$11	\$22	\$34	
Police	1,000 sf	\$0	\$5	\$9	\$14	
Parks and Recreation	1,000 sf	\$0	\$0	\$0	\$0	
Municipal Services	1,000 sf	\$0	\$23	\$46	\$69	

All fees to be adjusted annually commencing January 1, 2023 in accordance with this chapter.

FEE SCHEDULE
TRANSPORATION IMPACT FEE SCHEDULE

Land Use Type	Unit	Jan 1 2020	July 1 2020	Jan 1 2021	July 1 2021	Jan 1 2022	July 1, 2022
		16.7%	33%	50%	67%	83%	100%
All Multi-Family	Dwelling	\$ 1,893	\$ 2,016	\$ 2,140	\$ 2,263	\$ 2,387	\$ 3,252
<1,250 sq.ft of living area	Dwelling	\$ 2,612	\$ 2,670	\$ 2,729	\$ 2,787	\$ 2,845	\$ 3,252
1,250 to 1,649 sq.ft of living area	Dwelling	\$ 2,794	\$ 3,033	\$ 3,273	\$ 3,513	\$ 3,753	\$ 5,430
1,650 to 2,299 sq.ft of living area	Dwelling	\$ 2,868	\$ 3,181	\$ 3,495	\$ 3,809	\$ 4,123	\$ 6,318
2,300 or more of living area	Dwelling	\$ 3,053	\$ 3,552	\$ 4,050	\$ 4,549	\$ 5,048	\$ 8,538
Mobile Home/RV Park	Pad	\$ 1,476	\$ 1,667	\$ 1,859	\$ 2,050	\$ 2,242	\$ 3,583
Hotel/Motel	Room	\$ 2,555	\$ 2,703	\$ 2,851	\$ 2,999	\$ 3,147	\$ 4,183
Retail/Commercial/Restaurant	1,000 sf	\$ 4,527	\$ 4,864	\$ 5,202	\$ 5,540	\$ 5,877	\$ 8,240
Convenience Commercial (gas/drive thru)s	1,000 sf	\$ 7,360	\$ 8,360	\$ 9,361	\$ 10,362	\$ 11,363	\$ 18,365
Office	1,000 sf	\$ 3,436	\$ 3,732	\$ 4,027	\$ 4,323	\$ 4,618	\$ 6,685
Institutional/Public	1,000 sf	\$ 1,194	\$ 1,239	\$ 1,284	\$ 1,329	\$ 1,374	\$ 1,688
Industrial	1,000 sf	\$ 1,882	\$ 1,900	\$ 1,918	\$ 1,935	\$ 1,953	\$ 2,078
Warehouse	1,000 sf	\$ 1,286	\$ 1,244	\$ 1,201	\$ 1,159	\$ 1,117	\$ 1,075

All fees to be adjusted annually commencing January 1, 2023 in accordance with this chapter.

Delete Strikethrough Text, Add Underlined Text [Parks and Open Space]

21.06.020 Public and private parks and open spaces.

(a) ~~Public Parks and Open Space Fee Required.~~

~~(1) For all new residential development requiring rezoning, subdivision and/or planned development approval or site plan review, the owner shall pay into the City escrow fund for parks and open space acquisition and development that amount determined by the City to be necessary or required to defray the cost of and provide parks and open space.~~

~~(2) The dedication of land and/or the payment of the cash equivalent will enable the City to provide parks in the proper location and of the proper size to serve the citizens of the City. This regulation is also adopted to help discourage the proliferation of small parcels, tracts and out lots that are ostensibly created as open space and/or parks but are not sized, maintained or otherwise functional sites.~~

~~(3) For subdivisions, the open space fee is required and payable at the time of platting, when applicable. For all other reviews, the open space fee is required to be paid before the issuance of a planning clearance. For the purposes of this section only, "development" shall mean construction of one or more dwelling unit.~~

~~(4) Private open space and/or recreational area in any development, or outdoor living area required in a multifamily development, shall not be a substitute for the required open space fee, park impact fee or land dedication.~~

~~(5) The parks impact fee shall be as adopted by City Council by resolution.~~

~~(6) The parks impact fee shall not be waived or deferred for any development. The open space fee/dedication is discretionary, as provided for herein.~~

(a) **Open Space Dedication.**

(1) The owner of any residential development of 10 or more lots or dwelling units shall dedicate 10 percent of the gross acreage of the property or the equivalent of 10 percent of the value of the property. The decision as to whether to accept money or land as required by this section shall be made by the Director. Subdivisions with less than 10 lots or residential dwelling units are not required to dedicate 10 percent of the gross acreage of the property or the equivalent of 10 percent of the value of the property unless the developer or owner owns land adjacent to the proposed subdivision, in which case the Planning Commission shall determine the open space requirement.

(2) For any residential development required to provide open space, the owner shall hire an MAI appraiser to appraise the property. For purposes of this requirement, the property

shall be considered the total acreage notwithstanding the fact that the owner may develop or propose to develop the property in filings or phases.

(3) The appraiser's report shall be submitted to the City for purposes of determining fair market value and otherwise determining compliance with this section. The owner shall pay all costs of the appraisal. The owner waives any privilege and/or protection that may exist or be asserted to exist over the details of the appraisal. The appraisal is and shall be considered by the City as an open record under the Colorado Open Records Act.

(4) The required dedication and/or payment shall be subject to and made in accordance with this code. The City Council may accept the dedication of land in lieu of payment so long as the fair market value of the land dedicated to the City is not less than 10 percent of the value of the property.

(5) As part of any project approval, the owner shall dedicate, at no cost to the City, public trails, rights-of-way and waterfront greenbelts/access as designed on and as needed to implement adopted plans of the City. If such dedication is claimed to exceed constitutional standards, the owner shall so inform the City Attorney who, if he agrees, shall ask the City Council to pay a fair share of the value of such dedication or waive all or part of such required dedication.

(6) For creation of a homeowners' association, each subdivision of five or more lots shall record covenants which shall contain provisions for assessments, liens and enforcement of maintenance of all private open space areas and provisions for enforcement by and reimbursement to the City should the homeowners' association fail to maintain the areas properly and the City elects to do so.

(7) For subdivisions, the land dedication or open space fee is required and payable at the time of platting, when applicable. [moved from section 21.06.020(a)(3)]

(8) Private open space and/or recreational area in any development, or outdoor living area required in a multifamily development, shall not be a substitute for the required ~~open space fee, park impact fee or~~ land dedication. [moved from section 21.06.020(a)(4)]

Delete Strikethrough Text, Add Underlined Text [Transportation Impact Payments/Infrastructure Standards]

21.06.010 Infrastructure standards.

(a) General.

(1) Public Improvements. The improvements described in this section must be built by the applicant and constructed in accordance with adopted standards, unless otherwise indicated. ~~The applicant/developer shall either complete construction of all such improvements (in this section “infrastructure”) prior to final City approval (such as a subdivision plat) or shall execute a development improvements agreement. [redundant to below]~~ No improvements shall be made until the following required plans, profiles and specifications have been submitted to, and approved by, the City:

- (i) Roads, streets and alleys;
- (ii) Street lights and street signs for all street intersections;
- (iii) Sanitary sewer pipes and facilities;
- (iv) Fire hydrants and water distribution system and storage;
- (v) Storm drainage system;
- (vi) Irrigation system;
- (vii) Right-of-way landscaping;
- (viii) Other improvements and/or facilities as may be required by changing technology and the approval process;
- (ix) Permanent survey reference monuments and monument boxes (see § 38-51-101 C.R.S.).

(2) Guarantee of Public Improvements. No development shall be approved until the City has accepted constructed infrastructure or the developer has executed a development improvements agreement along with adequate security (see GJMC 21.02.070(m)).

(3) No planning clearance for any use or activity shall be issued until minimum street access improvements have been constructed, paid for or adequately secured. [moved from iii, below]

(4) City Participation. The City may elect to require the developer to coordinate construction with the City as required in this chapter. ~~If the developer, in order to provide~~

~~safe access and circulation, must build or improve an arterial or collector street, the City may choose to participate in paying for a portion of the costs of paving these streets, including engineering, site preparation, base and pavement mat.~~

(b) **Streets, Alleys, Trails and Easements.**

(1) Design Standards.

(i) Streets, alleys, sidewalks, trails and bike paths shall be designed and constructed in accordance with applicable City standards, ~~including Street and alley layouts shall conform to adopted street plans and other policies, as well as TEDS (GJMC Title 29).~~

(ii) No owner or developer shall propose a site design or plan which could result in the applicant controlling access to a street, alley or right-of-way.

(ii) Easements shall be provided as required for improvements and utilities. Alleys may be used for placement of utilities and infrastructure. ~~may be used.~~

(iv) If needed to provide safe and adequate access and circulation for residents, visitors, users and occupants, the applicant shall provide off-site infrastructure.

(v) Each project with one or more buildings (except detached dwellings) shall provide paved pedestrian walkway/sidewalk connections to nearby rights-of-way. Said connections shall be separate from parking and driveway areas.

~~(vi) Dedications required by subsection (b)(1)(iii) of this section shall be at no cost to the City. Dedications shall not be eligible for or require a refund or TCP credit.~~

(2) ~~Transportation Capacity Payment (TCP) and Right-of-Way~~ Right of Way Dedication

(i) A developer shall dedicate to the City such rights-of-way (e.g., streets, sidewalks, trails, bicycle paths and easements) needed to serve the project in accordance with: ~~(A) the adopted Functional Classification Map and Grand Junction Circulation Plan, as amended. from time to time.~~ [moved from iii, above]

(ii) Required right-of-way dedications shall be at no cost to the City. [moved from B. below]. Such dedications shall not be eligible for transportation impact fee credit.

(3) Required Improvements.

(i) The developer shall ~~pay to the City a transportation capacity payment (TCP) and construct right-of-way improvements considered~~ minimum street improvements, local streets, alleys, sidewalks, trails and bike paths ~~as minimum street access~~

~~improvements as well as improvements necessary for the safe ingress and/or egress of traffic to the development, as required by the Code. Director. The type of improvements and required design (eg. Cross sections) shall be those provided in TEDS.~~

~~(a) (ii) The Director may require that the developer pay for and/or construct improvements necessary for the safe ingress and/or egress of traffic to the development. Those improvements are defined as minimum street access improvements. Minimum street improvements shall be those required for the safe ingress and egress of traffic to and from the development and include the design and construction of all streets internal to and fronting a development that are designed as Local or Unclassified in the Grand Junction Circulation Plan, defined by the most recent version of the City's growth and development related street policy and/or TEDS (GJMC Title 29). The growth and development related street policy shall be reviewed by City staff and adopted periodically by Council resolution.~~

~~(b) Any unbuilt street that is designated in the Grand Junction Circulation Plan as a Collector or Arterial and is internal to the development shall be constructed to a Local street standard by the developer.~~

~~a. The City may require the developer based on the City's Circulation Plan and input from the Public Works Director to design and construct the street to a Collector or Arterial standard, thereby requiring the oversizing of streets.~~

~~b. When oversizing is required, the developer may be eligible for a city cost-share agreement in the differential amount between the required Local street improvement and the required Collector or Arterial street improvement~~

~~(c) All streets connecting the existing street network to the development shall be at least 20 feet wide, or as required by the development's traffic demands and the Fire Code, and designed structurally to meet fire equipment load requirements.~~

~~(ii) Commencing January 1, 2021, The developer shall construct improvements necessary for the safe ingress and/or egress of traffic to the development, [moved from above] as required by the Director.~~

~~(d) To achieve safe ingress and/or egress, if turn lanes to and from the development are warranted based on a Traffic Impact Study, the developer will be responsible for the construction of said lanes.~~

~~(e) Where a safety improvement is for the benefit of a development but will benefit other future developments, the developer may request the City to provide a reimbursement agreement for a period of 10 years to recapture a~~

portion of the improvement costs. Based on a proportionate usage of the improvement as determined by an approved traffic study.

~~(ii) The Director may require that the developer pay for and/or construct improvements necessary for the safe ingress and/or egress of traffic to the development. Those improvements are defined as minimum street access improvements. Minimum street access improvements shall be defined by the most recent version of the City's growth and development related street policy and/or TEDS (GJMC Title 29). The growth and development related street policy shall be reviewed by City staff and adopted periodically by Council resolution.~~

~~(iii) No planning clearance for a planning clearance for any use or activity requiring payment of the TCP shall be issued until the TCP has been paid and minimum street access improvements have been constructed, paid for or adequately secured, as determined by the Director. Adequate security shall be that allowed or required for a development improvement agreement (DIA) under GJMC 21.02.070(m).~~

~~(iv) The amount of the TCP shall be as set forth annually by the City Council in its adopted fee resolution. The TCP is minimally subject to annual adjustment for inflation based on the Colorado Department of Transportation's (CDOT) Construction Cost Index, published quarterly by the CDOT (this information can be found at the Internet site of <http://www.coloradodot.info/business/eema/construction-cost-index>).~~

~~(v) The TCP shall be used by the Director to make capital improvements to the transportation facilities in the City in accordance with the City's growth and development related street policy, this section, and other applicable provisions of the Zoning and Development Code.~~

~~(A) To pay debt service on any portion of any current or future general obligation bond or revenue bond issued after July 6, 2004, and used to finance major road system improvements.~~

~~(B) For the reconstruction and replacement of existing roads, the construction of new major road systems and improvements and/or for the payment of reimbursable street expenses (as that term is defined from time to time by the City's growth and development related street policy) that are integral to and that add capacity to the street system.~~

~~(C) Traffic capacity improvements do not include ongoing operational costs or debt service for any past general obligation bond or revenue bond issued prior to July 6, 2004, or any portion of any current or future bond issued after July 6, 2004, and not used to finance major road system improvements.~~

~~(D) Capital spending decisions shall be guided by the principles, among others, that TCP funds shall be used to make capacity and safety improvements but not used to upgrade existing deficiencies except incidentally in the course of making improvements; TCP fund expenditures which provide improvements which are near in time and/or distance to the development from which the funds are collected are preferred over expenditures for improvements which are more distant in time and/or distance.~~

~~(E) No TCP funds shall be used for maintenance.~~

~~(F) TCP funds will be accounted for separately but may be commingled with other funds of the City.~~

~~(G) The Director shall determine when and where TCP funds shall be spent:~~

~~a. As part of the two-year budget process.~~

~~b. As required to keep pace with development.~~

~~(H) The TCP shall not be payable if the Director is shown by clear and convincing evidence that at least one of the following applies:~~

~~a. Alteration or expansion of an existing structure will not create additional trips;~~

~~b. The construction of an accessory structure will not create additional trips produced by the principal building or use of the land. A garage is an example of an accessory structure which does not create additional trips;~~

~~c. The replacement of a destroyed or partially destroyed structure with a new building or structure of the same size and use that does not create additional trips;~~

~~d. A structure is constructed in a development for which a TCP fee has been paid within the prior 84 months or the structure is in a development with respect to which the developer constructed street access improvements and the City accepted such improvements and the warranties have been satisfied.~~

~~(vi) If the type of impact-generating development for which a planning clearance is requested is for the expansion, redevelopment or modification of an existing development, the fee shall be based on the net increase in the fee for the new land use type as compared to the previous land use type.~~

~~(vii) In the event that the proposed expansion, redevelopment or modification results in a net decrease in the fee for the new use or development as compared to the previous use or development, the developer may apply for a refund of fees previously paid with the consent of the previous person having made the payment and/or constructed the improvements.~~

~~(viii) A request for a change of use permit that does not propose the expansion of an existing structure shall not require the payment of the TCP. If, however, a request for a change of use permit does propose the expansion of an existing structure, the TCP shall only be applied to the expansion and not the existing structure.~~

~~(ix) For fees expressed per 1,000 square feet, the square footage shall be determined according to gross floor area, measured from the outside surface of exterior walls and excluding unfinished basements and enclosed parking areas. The fees shall be prorated and assessed based on actual floor area, not on the floor area rounded to the nearest 1,000 square feet.~~

~~(x) Any claim for credit shall be made not later than the time of application or request for a planning clearance. Any claim not so made shall be deemed waived. Credits shall not be transferable from one project or development to another nor otherwise assignable or transferable.~~

~~(xi) Minimum street access improvements include street and road improvements required to provide for the safe ingress and egress needs of the development as determined by the Director.~~

~~(A) Quality of service for any new development and/or for traffic capacity improvements shall be determined by the Director. The Director shall determine the acceptable quality of service taking into consideration existing traffic, streets and proposed development.~~

~~(B) Required right-of-way dedications shall be at no cost to the City.~~

~~(xii) Definitions. The following terms and words shall have the meanings set forth for this section:~~

~~(A) "Average trip length" means the average length of a vehicle trip as determined by the limits of the City, the distance between principal trip generators and as modeled by the City's, the County's, the State's or MPO's computer program. In the event that the models are inconsistent, the most advantageous to the City shall be used.~~

~~(B) —“Convenience store,” “hotel/motel,” “retail,” and other terms contained in and with the meaning set forth in the Trip Generation Manual.~~

~~(C) —“Lane-mile” means one paved lane of a right-of-way one mile in length and 14 feet in width, including curb and gutter, sidewalk, storm sewers, traffic control devices, earthwork, engineering, and construction management including inspections. The value of right of way is not included.~~

~~(D) —“Percentage of new trips” is based on the most current version of the ITE Transportation and Land Development Manual, and the ITE Trip Generation Manual.~~

~~(E) —“Unimproved/under improved floor area” has the meaning as defined in the adopted building codes.~~

~~(xiii) — Calculation of Fee.~~

~~(A) —Any person who applies for a planning clearance for an impact-generating development shall pay a transportation impact fee in accordance with the most recent fee schedule prior to issuance of a planning clearance. If any credit is due pursuant to subsection (b)(2)(x) of this section, the amount of such credit shall be deducted from the amount of the fee to be paid.~~

~~(B) —If the type of impact-generating development for which a planning clearance is requested is not specified on the fee schedule, then the Director shall determine the fee on the basis of the fee applicable to the most nearly comparable land use on the fee schedule. The Director shall determine comparable land use by the trip generation rates contained in the most current edition of the ITE Trip Generation Manual.~~

~~(C) —In many instances, a building may include secondary or accessory uses to the principal use. For example, in addition to the production of goods, manufacturing facilities usually also have office, warehouse, research and other associated functions. The TCP fee shall generally be assessed based on the principal use. If the applicant can show the Director in writing by clear and convincing evidence that a secondary land use accounts for over 25 percent of the gross floor area of the building and that the secondary use is not assumed in the trip generation for the principal use, then the TCP may be calculated on the separate uses.~~

~~(D) —TCP Fee Calculation Study. At the election of the applicant or upon the request of the Director, for any proposed development activity, for a use that is not on the fee schedule or for which no comparable use can be determined and~~

agreed to by the applicant and the Director or for any proposed development for which the Director concludes the nature, timing or location of the proposed development makes it likely to generate impacts costing substantially more to mitigate than the amount of the fee that would be generated by the use of the fee schedule, a TCP fee calculation study may be performed.

(E) The cost and responsibility for preparation of a fee calculation study shall be determined in advance by the applicant and the Director.

(F) The Director may charge a review fee and/or collect the cost for rendering a decision on such study. The Director's decision on a fee or a fee calculation study may be appealed to the Zoning Board of Appeals in accordance with GJMC 21.02.210(b).

(G) The TCP fee calculation study shall be based on the same formula, quality of service standards and unit costs used in the impact fee study. The fee study report shall document the methodologies and all assumptions.

(H) The TCP fee calculation study shall be calculated according to the following formula:

FEE	=	VMT x NET COST/VMT x RF
VMT	=	TRIPS x % NEW x LENGTH ÷ 2
TRIPS	=	DAILY TRIP ENDS GENERATED BY THE DEVELOPMENT DURING THE WORK WEEK
% NEW	=	PERCENT OF TRIPS THAT ARE PRIMARY, AS OPPOSED TO PASSBY OR DIVERTED-LINK TRIPS
LENGTH	=	AVERAGE LENGTH OF A TRIP ON THE MAJOR ROAD SYSTEM
÷ 2	=	AVOIDS DOUBLE-COUNTING TRIPS FOR ORIGIN AND DESTINATION
NET COST/VMT	=	COST/VMT — CREDIT/VMT
COST/VMT	=	COST/VMC x VMC/VMT
COST/VMC	=	AVERAGE COST TO CREATE A NEW VMC BASED ON HISTORICAL OR PLANNED PROJECTS (FEES SET BY CITY COUNCIL)
VMC/VMT	=	THE SYSTEM-WIDE RATIO OF CAPACITY TO DEMAND IN THE MAJOR ROAD SYSTEM (1.0 ASSUMED)
CREDIT/VMT	=	CREDIT PER VMT, BASED ON REVENUES TO BE GENERATED BY NEW DEVELOPMENT (FEES SET BY CITY COUNCIL)

RF	=	REDUCTION FACTOR ADOPTED BY POLICY (FACTOR SET BY CITY COUNCIL)
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~~(f) — A TCP fee calculation study submitted for the purpose of calculating a transportation impact fee may be based on data information and assumptions that are from:~~

~~a. — An accepted standard source of transportation engineering or planning data; or~~

~~b. — A local study on trip characteristics performed by a qualified transportation planner or engineer pursuant to an accepted methodology of transportation planning or engineering that has been approved by the Director.~~

(3) Existing Streets

(i) Existing Local Residential Streets.

(a) General. Many areas of the City were developed in the unincorporated areas of Mesa County without modern urban street and drainage facilities. In many such neighborhoods and areas, the existing local residential streets do not have curbs, gutters or sidewalks. ~~Where structures houses are already built on most or all of such lots, the character of the neighborhood is well established.~~ Given that there are no serious safety or drainage problems associated with these local residential streets, there is no current reason to improve these streets or to install curbs, gutters and/or sidewalks. When an owner in one of these ~~well-established~~ neighborhoods or chooses to subdivide a lot or parcel or an owner in a commercial or industrial area chooses to develop a lot or parcel, unless such improvements are extended off site to connect to a larger system, the new “short runs” of curbing, gutters and/or sidewalks are of little value as drainage facilities or pedestrian ways until some future development or improvement district extends them to other connecting facilities.

~~The Public Works and Planning Director shall determine the acceptable minimum improvements. (G) — If all of the criteria have been met, Instead of constructing requiring these “short run” improvements, the Public Works and Planning owner may apply to the Director to defer full and permanent improvements (“permanent improvements”) by 1. Signing an agreement to form an ~~may, determine the in his or her discretion a signed agreement from the owner~~ an improvement district for the construction of certain required curb(s), gutter(s), and sidewalk(s) and street improvement(s) (“Temporary Improvements”) in lieu of construction at the time of~~

approval of the development application and 2. Constructing, as required by the City, certain temporary curb(s), gutters(s), sidewalk(s), and street improvement(s) required by the City as a condition of approval of the development application. Temporary improvements shall be constructed with the same materials and to the same standards as required of permanent improvements. The agreement to form an improvement district shall be in a form approved by the City Attorney. The agreement shall run with the land and shall be recorded with the Mesa County Clerk and Recorder.

The Director may defer residential street improvements if all of the following criteria are met:

- (A) The development is for three or less residential lots;
- (B) The zoning or existing uses in the block or neighborhood are residential. The Director shall determine the boundaries of the block or neighborhood, based on topography, traffic patterns, and the character of the neighborhood;
- (C) The existing local residential street that provides access to the lots or development meets minimum safety and drainage standards, and has a design use of less than 1,000 average daily traffic (“ADT”) based on an assumed typical 10 trips per day per residence and the volume is expected to be less than 1,000 ADT when the neighborhood or block is fully developed;
- (D) At least 80 percent of the lots and tracts in the neighborhood or block are already built upon, so that the street and drainage character is well established;
- (E) If an existing safety hazard or drainage problem, including pedestrian or bicycle traffic, exists and it can be improved or remedied without the street improvements being built; and
- (F) There is at least 250 feet from any point on the development to the nearest existing street improvements (on the same side of the street) that substantially comply with the City standard for similar street improvements.
- ~~(G) If all of the criteria have been met, instead of requiring these “short run” improvements, the Public Works and Planning Director may in his or her discretion accept a signed agreement from the owner to form an improvement district for the construction of curbs, gutters, and sidewalks in lieu of construction. The agreement shall be in a form approved by the City Attorney. The agreement shall run with the land and shall be recorded with the Mesa County Clerk and Recorder. [incorporated into above]~~

~~(ii) Existing Local Nonresidential Streets. Many commercial and industrial areas of the City were developed in the unincorporated areas of Mesa County without modern urban street and drainage facilities. In many of these areas the existing local nonresidential streets do not have curbs, gutters or sidewalks. Given that there are no serious safety or drainage problems associated with these local nonresidential streets, there is no current reason to improve these streets or to install curbs, gutters and/or sidewalks. When an owner in a commercial or industrial area chooses to develop a lot or parcel, the new "short runs" of curbing, gutters and/or sidewalks are of little value as drainage facilities or pedestrian ways unless the improvements are extended off site to connect to a larger system or until some future development or improvement district extends them to other connecting facilities.~~

~~The Public Works and Planning Director shall determine the acceptable minimum improvements. In order to promote development of infill properties The Director may defer nonresidential street improvements if all of the following criteria have been met:~~

- ~~(A) The development is for a single commercial or industrial lot or parcel that does not create a new lot or parcel;~~
- ~~(B) The proposed development or use of the lot or parcel must be consistent with the allowed uses and requirements of the current zone district;~~
- ~~(C) The lot or parcel size is two acres or less;~~
- ~~(D) The lot or parcel does not have more than 500 feet of frontage on the local nonresidential street;~~
- ~~(E) If an existing safety hazard or drainage problem, including pedestrian or bicycle traffic, exists and it can be improved or remedied without the local nonresidential street improvements being built; and~~
- ~~(F) There is at least 250 feet from any point on the development to the nearest existing street improvements (on the same side of the street) that substantially comply with the City standard for similar local nonresidential street improvements.~~

~~(G) If all of the criteria have been met, instead of requiring these "short run" improvements, the Public Works and Planning Director may in his or her discretion accept a signed agreement from the owner to form an improvement district for the construction of curbs, gutters and sidewalks in lieu of construction. The agreement shall be in a form approved by the City Attorney. The agreement shall run with the land and shall be recorded with the Mesa County Clerk and Recorder.~~

(4) Public Right-of-Way and Private Parking Lot Use.

(i) No structure, fence, sign, parking lot, detention/retention pond, or other temporary or permanent object or structure shall be constructed, maintained, or erected in any portion of any public right-of-way first obtaining a revocable permit has been issued by the City. The City Engineer or other City official may allow traffic control devices, street signs, public notices, utility poles, lines and street banners consistent with this Code. (see this chapter).

(ii) No person shall use, store, display or sell any goods, merchandise or any structure without having first obtained a revocable permit, except that this provision shall not be enforced in a manner which limits unreasonably any person's freedom of speech or assembly.

(iii) No commercial vehicle which exceeds one and one-half tons rated carrying capacity shall be parked in a public right-of-way which abuts any residential zone.

(iv) Parking of an RV or any vehicle for more than 72 hours shall not be allowed in a public right-of-way or on any vacant lot.*

~~*Code reviser's note — Ordinance 4833, which amends this subsection (b)(4)(iv), provides, "Sunset Clause. Within sixty days of the third anniversary of the adoption of this ordinance the City Council shall consider the effectiveness of the ordinance at achieving its stated purposes. Without further action by the City Council, the terms and provisions of this ordinance shall expire on the third anniversary of the effective date hereof without subsequent action by the City Council." [effective date is May 19, 2019]~~

(6) Street Naming and Addressing System. A street naming system shall be maintained to facilitate the provisions of necessary public services (police, fire, mail), reduce public costs for administration, and provide more efficient movement of traffic. For consistency, this system shall be adhered to on all newly platted, dedicated, or named streets and roads. The Director shall check all new street names for compliance to this system and issue all street addresses. Existing streets and roads not conforming to this system shall be made conforming as the opportunity occurs.



Grand Junction Planning Commission

Regular Session

Item #3.

Meeting Date: September 24, 2019
Presented By: Jace Hochwalt, Associate Planner
Department: Community Development
Submitted By: Jace Hochwalt, Associate Planner

Information

SUBJECT:

Consider a request by P&L Entertainment, LLC for a Conditional Use Permit (CUP) for the property located 701 Main Street to allow for a bar/nightclub use.

RECOMMENDATION:

Staff recommends approval.

EXECUTIVE SUMMARY:

The Applicant, P&L Entertainment, LLC, is requesting approval of a Conditional Use Permit for the property located at 701 Main Street in a B-2 Zone District, to allow a bar/nightclub where alcoholic beverages will comprise more than 25 percent of the gross receipts. The proposed business name is Ciara's Café and Cantina.

BACKGROUND OR DETAILED INFORMATION:

The Applicant, P&L Entertainment, LLC, is requesting approval of a Conditional Use Permit for a bar/nightclub use in an existing building that is currently vacant but was formerly known as the Cabaret Dinner Theatre up until its closure in 2008. The lot is approximately 7,018 square feet (or 0.16 acres) in size with an existing 3,621 square foot building. Las Marias Mexican Restaurant is adjacent to the south, a surface parking lot is located to the east, the Avalon Theatre is located to the west, and a 37,000 square foot, four-story office building is currently under construction to the north. In addition, there is a vacant lot to the north which is expected to be an expansion of the office building under construction to the northeast, although no plans have been submitted at this time.

The subject site and all neighboring properties are zoned B-2. Properties on the east side of 7th Street are within the Greater Downtown Central Business District Overlay (this is inclusive of the subject site), while properties to the west are within the Greater Downtown Core Central Business District. Notably, the Zoning and Development Code requires a Conditional Use Permit for a bar/nightclub use where the sale of alcoholic beverages will comprise more than 25% of the gross receipts in a B-2 zone district.

The existing building was constructed in 1924. The Applicant intends to use the 3,621 square foot building for restaurant and bar/nightclub. The building was recently renovated with some façade improvements, and the Applicant intends to do a large-scale interior remodel inside the building. In addition, the existing building on site has a large covered canopy area on the northwest portion of the site, which the Applicant intends to utilize as outdoor seating space. The Applicant is planning some additional facade improvements and the extensive interior remodel. Operating hours are proposed for Monday through Wednesday from 4:00pm to 10:00pm, Thursday and Friday from 4:00pm to 2:00am, and Saturday and Sunday from 11:00am to 2:00am.

The subject site is situated within the Downtown Development Authority (DDA) boundary area. Based on the site plan, the Applicant anticipates the utilization of space on the north side of the building that is in City right-of-way. This small area is proposed to be utilized as an outdoor seating area that will be fenced in. This type of proposal requires that the Applicant obtain a “permitted lease” from the DDA. This lease has not yet been obtained, but the Applicant is working with the DDA to satisfy all applicable requirements.

NOTIFICATION REQUIREMENTS

A Neighborhood Meeting was held on May 2nd, 2019 consistent with the requirements of Section 21.02.080(e) of the Zoning and Development Code. Four citizens attended the meeting along with the Applicant and city staff. The Applicant discussed the proposed request and plans to operate the business if the CUP is approved. There were no concerns expressed at that time and attendees expressed general excitement in seeing a new use in the vacant building. No other public comments have been received to date.

Notice was completed consistent to the provisions in Section 21.02.080(g) of the City’s Zoning and Development Code. The subject property was posted with application signs on September 10, 2019. Mailed notice of the application submittal, in the form of notification cards, was sent to surrounding property owners within 500 feet of the subject property and notice of the public hearing was published in the Grand Junction Sentinel.

ANALYSIS

The review of a Conditional Use Permit is subject to both the General Approval Criteria

for all permits requiring a public hearing (Section 21.02.080(d)) as well as the specific review criteria for Conditional Use Permits.

(d) General Approval Criteria. No permit may be approved unless all of the following criteria are satisfied:

(1) Compliance with the Comprehensive Plan and any applicable adopted plan.

The site is currently zoned B-2 (Downtown Business) with the Comprehensive Plan Future Land Use Map identifying the site as Downtown Mixed Use. The proposed land use furthers Goal 4 of the Comprehensive Plan, which states: "Support the continued development of the downtown area of the City Center into a vibrant and growing area with jobs, housing, and tourist attractions." The proposed restaurant/bar would contribute to the vibrancy of the downtown area by providing both a destination and entertainment for residents and visitors, improving the building, and operating primarily during afternoon and evening hours.

The proposed land use also furthers Goal 6 of the Comprehensive Plan, which states: "Land use decisions will encourage preservation and appropriate reuse." The renovation and reuse of the building will further this Comprehensive Plan goal by reusing the existing building.

In addition, the proposed land use furthers Goal 3 of the Greater Downtown Plan, Downtown District Goals and Policies, which states: "Develop a pedestrian-oriented, walkable Downtown Core." The proposal will help create an activated space in the ground floor of a building with zero setback street frontage along both Main Street and 7th Street. This is consistent with Goal 3 Policy 3a, which states: "Discourage uses on ground level that do not support pedestrian activity."

The site is within the Greater Downtown Central Business District Overlay. However, the district standards do not apply as the proposal is to remodel an existing building (see Zoning and Development Code 24.12.060(b)).

Staff finds this request is in compliance with the Comprehensive Plan and Greater Downtown Plan.

(2) Compliance with this zoning and development code.

The site meets the standards of the B-2 zone. The building was constructed in 1923 and continues to meet the bulk standards required for this district, including the 15-foot minimum height for the first floor. The proposed bar/nightclub use is allowable in a B-2 zone with an approved Conditional Use Permit.

As mentioned, the site is within the Greater Downtown Central Business District Overlay. The standards for this overlay apply for construction of new buildings, or substantial additions/exterior remodels. Standards do not apply to interior remodels of existing buildings, which is what the Applicant is proposing. Regardless, the proposal meets many of the visions, concepts, and policies of the overlay.

Staff finds this request is in compliance with the Zoning and Development Code.

(3) Conditions of any prior approvals.

There are no conditions of prior approvals regarding this site/property therefore staff finds this criterion to be met.

(4) Public facilities and utilities shall be available concurrent with the development.

Public facilities and utilities including water, sewer, electric and gas are available to serve this development. Utility agencies were included in the review process and had either no objections or no comments for the proposed CUP.

Staff therefore finds this criterion has been met.

(5) Received all applicable local, State and federal permits.

The Applicant will be required to obtain a liquor license through the State and City to operate their business. In order to obtain the license, the Applicant must first obtain a Conditional Use Permit through this application and review process. Should this CUP application be approved, the Applicant may then obtain a liquor license to be in compliance with the City's Zoning and Development Code and State and Local law. Operation as a bar is subject to their ongoing maintenance of a liquor license under State and Local laws.

Based on the site plan, the Applicant anticipates the utilization of space on the north side of the building that is in City right-of-way. This small area is proposed to be utilized as an outdoor seating area that will be fenced in. This type of proposal requires that the Applicant obtain a "permitted lease" from the DDA. This lease has not yet been obtained, but the Applicant is working with the DDA to satisfy all applicable requirements. Therefore, staff finds this criterion has been met.

Pursuant to Section 21.02.110 (a) of the Grand Junction Zoning and Development Code, a Conditional Use review is to provide an opportunity to utilize property for an activity which under usual circumstances could be detrimental to other permitted uses, and which normally is not permitted within the same district. A Conditional Use may be permitted under circumstances particular to the proposed location and subject to

conditions that provide protection to adjacent land uses. A Conditional Use is not a use by right; it is one that is otherwise prohibited within a given zone district without approval of a Conditional Use Permit. The application shall demonstrate that the proposed development will comply with the following:

(1) District Standards. The underlying zoning districts standards established in Chapter 21.03 of the Grand Junction Municipal Code, except density when the application is pursuant to GJMC 21.08.020(c) ;

The site is zoned B-2 (Downtown Business). The proposal conforms with and meets the purpose of the B-2 zone by adding to the vitality of the downtown area and promoting pedestrian circulation. There will be a large outdoor patio area on the northwest corner of the subject property, abutting the 7th Street and Main Street intersection. Because there is no on-site surface parking or park strip, no landscaping is required. Additionally, the proposal meets the outdoor storage and display performance standards as all operations will be indoors other than a covered outdoor patio that will be fenced as required by liquor law standards.

Staff finds this criterion has been met.

(2) Specific Standards. The use-specific standards established in Chapter 21.04 GJMC;

The use falls under the retail sales and service portion of the Code. There are no use-specific standards for a restaurant/bar, therefore staff finds this criterion has been met.

(3) Availability of Complementary Uses. Other uses complementary to, and supportive of, the proposed project shall be available including, but not limited to: schools, parks, hospitals, business and commercial facilities, and transportation facilities.

The general atmosphere of the downtown area, with pedestrian oriented retail, services, and entertainment is complimentary to the proposed land use. The restaurant/bar fits well with the context of a downtown activity center. Specific nearby complimentary uses include the Avalon Theatre, multiple hotels, the Convention Center, and numerous downtown employers. The downtown area also has facilities for multiple transportation modes, including bicycle, pedestrian, transit, and automobile. Parks and schools, which is generally not perceived as complementary, are well over 1,000 feet away.

Staff therefore finds this criterion has been met.

(4) Compatibility with Adjoining Properties. Compatibility with and protection of

neighboring properties through measures such as:

(i) Protection of Privacy. The proposed plan shall provide reasonable visual and auditory privacy for all dwelling units located within and adjacent to the site. Fences, walls, barriers and/or vegetation shall be arranged to protect and enhance the property and to enhance the privacy of on-site and neighboring occupants;

The proposed site is an existing building constructed in 1923, and not directly adjacent to residential uses. The subject property is zoned B-2, as are all adjacent properties. The Applicant is proposing to utilize an existing covered canopy for outdoor seating for use by its patrons on the northwest side of the building. This seating area will be fenced (as required by liquor laws).

Staff therefore finds this criterion has been met.

(ii) Protection of Use and Enjoyment. All elements of the proposed plan shall be designed and arranged to have a minimal negative impact on the use and enjoyment of adjoining property;

No building expansion is proposed with this application and the Applicant wishes to utilize an existing building that has been vacant for several years. There are a variety of uses in the immediate area of the subject site that include both daytime and nighttime uses. The new use of a restaurant/bar will bring increased foot traffic and vibrancy to the 7th Street and Main Street intersection. The Applicants are proposing to fence an existing covered canopy area which will be used as outdoor seating for patrons. The Applicant and Staff do not anticipate that the use will have any negative impact on surrounding uses or the enjoyment of adjoining properties.

Staff therefore finds this criterion has been met.

(iii) Compatible Design and Integration. All elements of a plan shall coexist in a harmonious manner with nearby existing and anticipated development. Elements to consider include; buildings, outdoor storage areas and equipment, utility structures, building and paving coverage, landscaping, lighting, glare, dust, signage, views, noise, and odors. The plan must ensure that noxious emissions and conditions not typical of land uses in the same zoning district will be effectively confined so as not to be injurious or detrimental to nearby properties.

The proposed restaurant/bar will occupy the existing building. No building expansion is proposed with this application. The Applicant is proposing to utilize the existing outdoor area on the northwestern side of the property for outdoor seating and will be required to fence the patio space per the liquor license requirements. The bulk dimensions of the building meet the standards of the B-2 zone district and match the zero setback street

frontage of the adjacent buildings. The orientation of these buildings promotes pedestrian circulation, which is intended by the B-2 zone district.

Staff has found the proposed site to be compatible in design and well integrated into this portion of downtown, therefore staff has found this criterion has been met.

STAFF RECOMMENDATION AND FINDINGS OF FACT

After reviewing the Conditional Use Permit application, for Ciara's Café and Cantina CUP-2019-489, the following findings of fact have been made with the conditions of approval as provided:

1. In accordance with Section 21.02.080(d) of the Zoning and Development Code, the application has satisfied the criteria for general approval.
2. In accordance with Section 21.02.110 of the Zoning and Development Code, the application has demonstrated compliance with the criteria for a Conditional Use Permit.

Condition 1. The Applicant shall obtain a "permitted lease" from the DDA prior to the utilization of any right-of-way for operations.

Condition 2. The Applicant will be required to obtain a liquor license through the State and City prior to operation of the business.

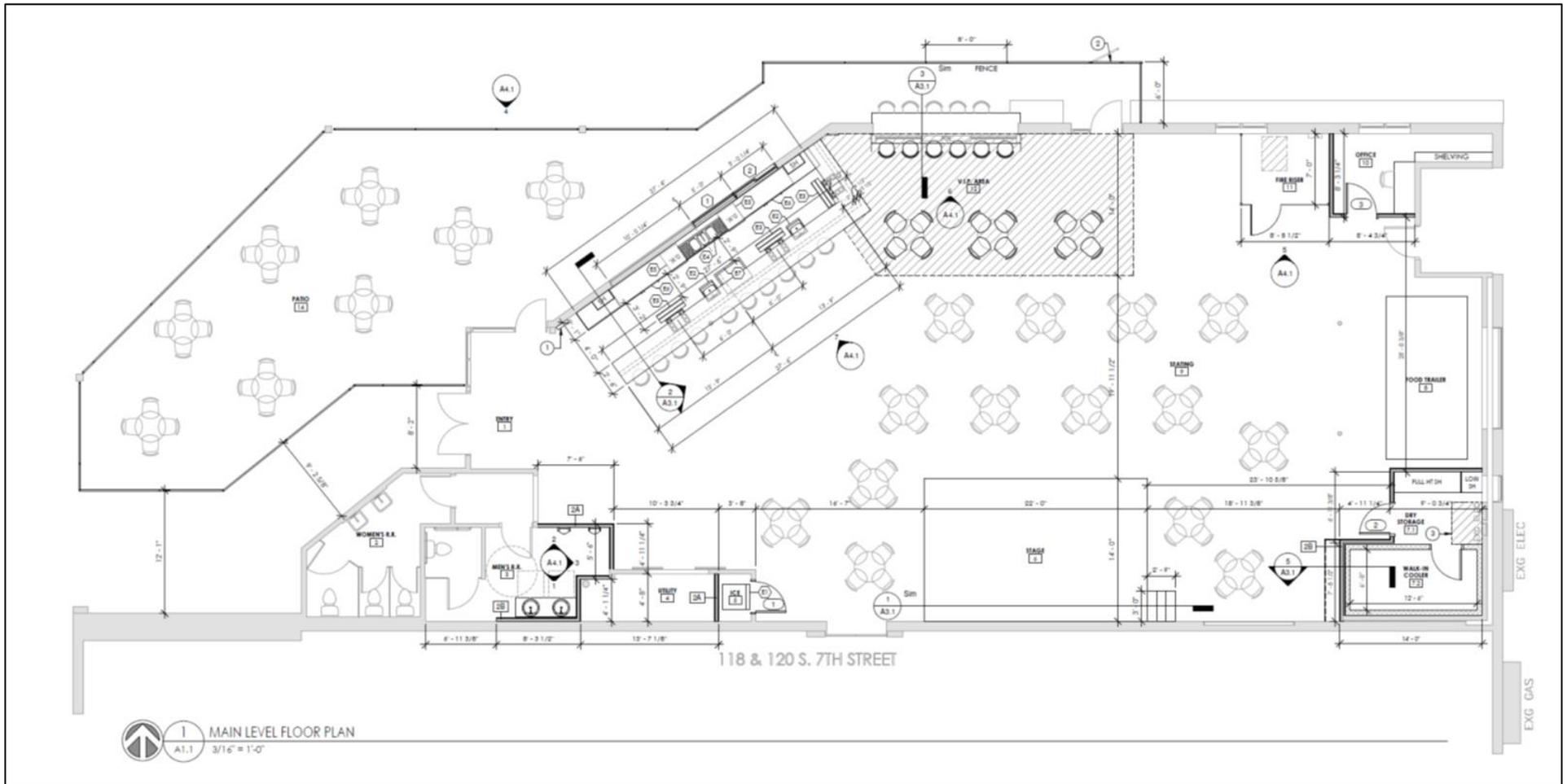
SUGGESTED MOTION:

Madam Chairman, on the application for a Conditional Use Permit for Ciara's Café and Cantina located at 701 Main Street, CUP-2019-489, I move that the Planning Commission recommend conditional approval with the findings of fact and conditions as listed in the staff report.

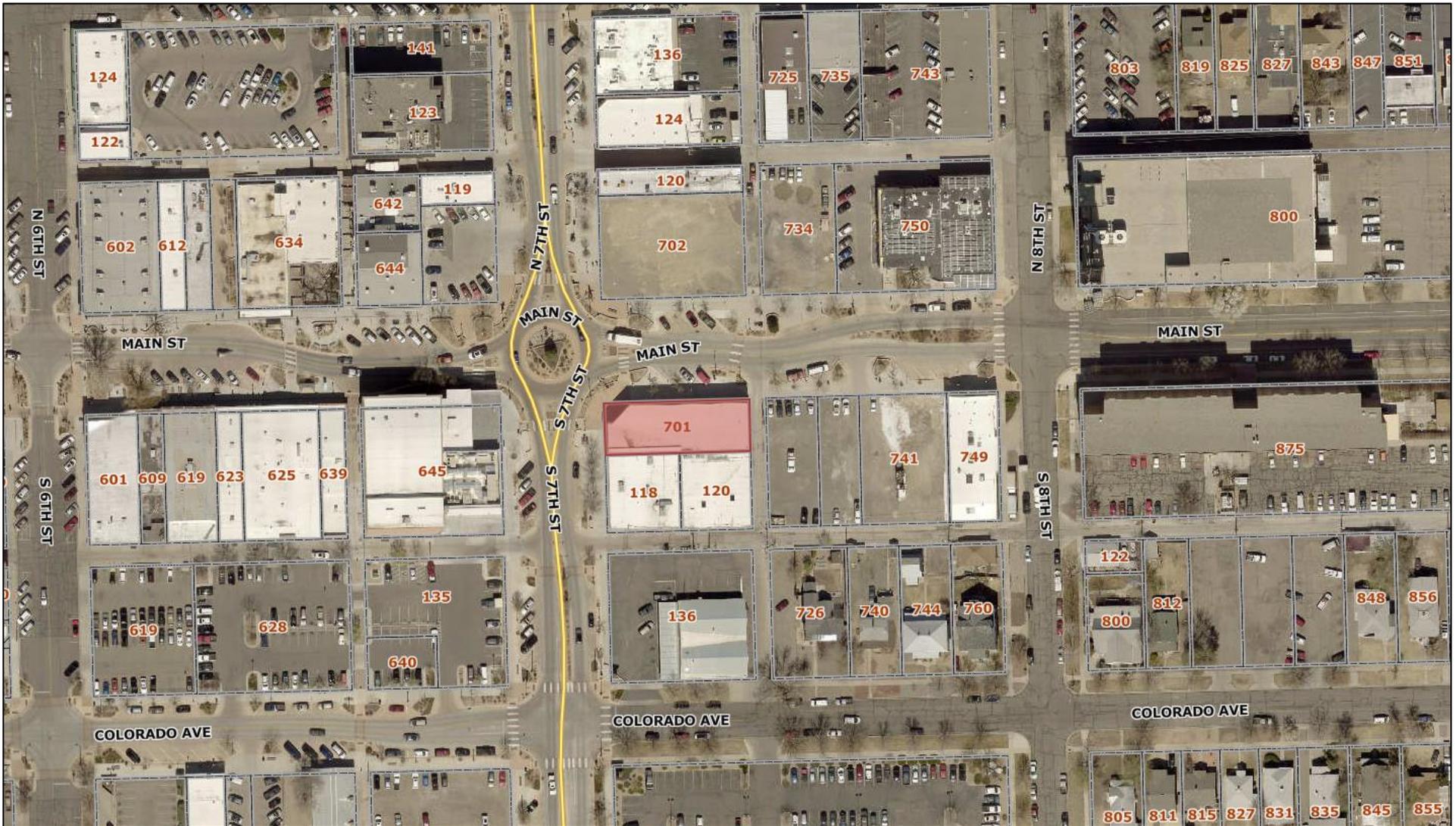
Attachments

1. Maps and Exhibits
2. Application Binder

FLOOR PLAN



AERIAL PHOTO



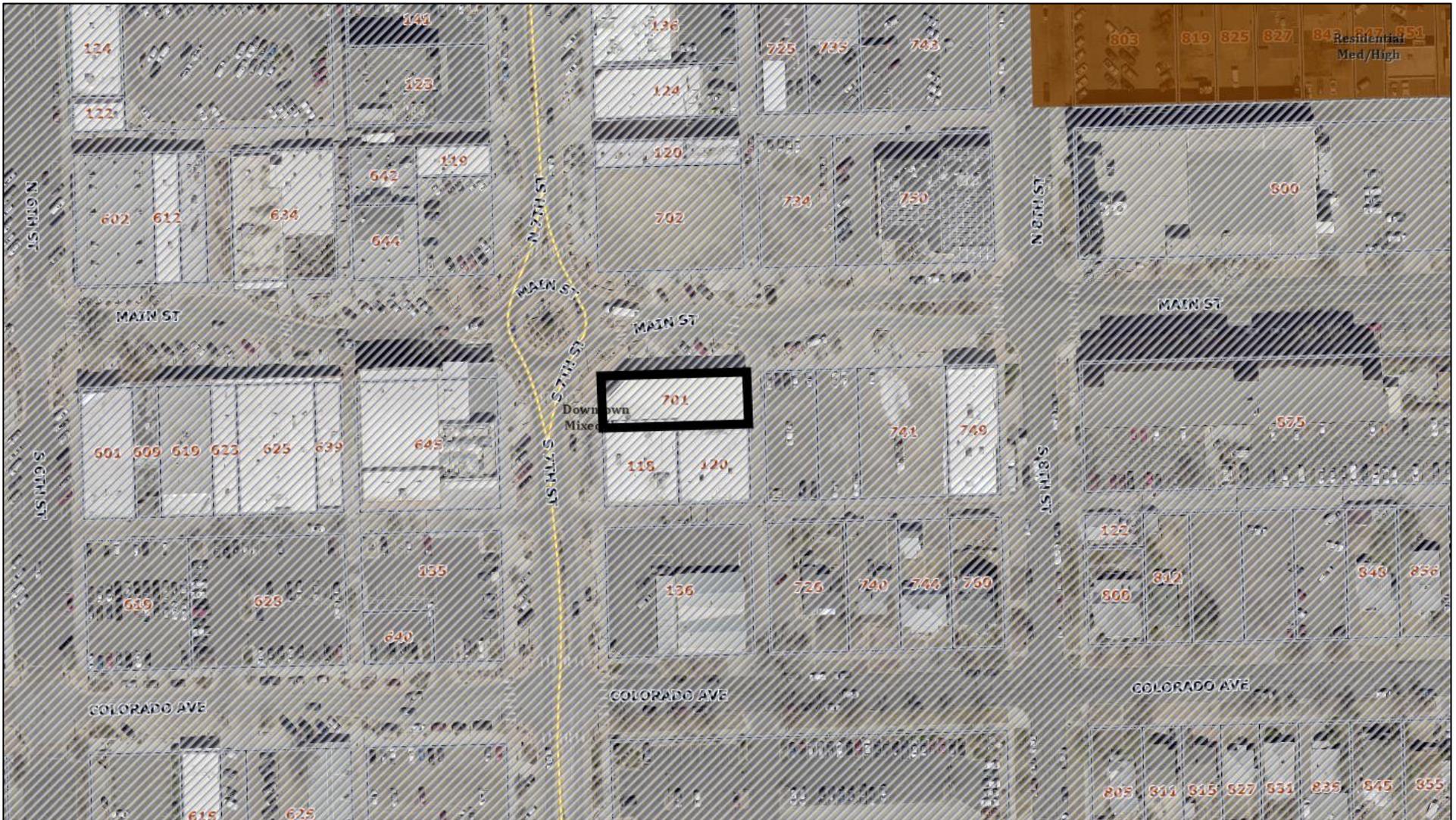
AERIAL PHOTO (ZOOMED IN)



ZONING MAP



FUTURE LAND USE MAP



Development Application

We, the undersigned, being the owner's of the property adjacent to or situated in the City of Grand Junction, Mesa County, State of Colorado, as described herein do petition this:

Petition For: Conditional Use Permit

Please fill in blanks below only for Zone of Annexation, Rezones, and Comprehensive Plan Amendments:

Existing Land Use Designation N/A	Existing Zoning N/A
Proposed Land Use Designation N/A	Proposed Zoning N/A

Property Information

Site Location: 701 Main Street	Site Acreage:
Site Tax No(s): 2945-144-20-014	Site Zoning:
Project Description: Renovating existing building for Bar/Restaurant	

Property Owner Information

Name: Cabaret LLC.

Street Address: 2072 Stagecoach Ct.

City/State/Zip: 81501

Business Phone #: 970-250-4268

E-Mail: robhanson1961@gmail.com

Fax #: N/A

Contact Person: Brad Humphrey

Contact Phone #: 970-250-4268

Applicant Information

Name: P&J Entertainment LLC.

Street Address: 2805 1/2 Village Park Drive

City/State/Zip: Grand Junction, CO. 81506

Business Phone #: 970-589-7393

E-Mail: romeropaul164@gmail.com

Fax #: N/A

Contact Person: Paul Romero

Contact Phone #: 970-589-7393

Representative Information

Name: Paul Romero

Street Address: 2805 1/2 Village Park Drive

City/State/Zip: Grand Junction, CO 81506

Business Phone #: 970-589-7393

E-Mail: romeropaul164@gmail.com

Fax #: N/A

Contact Person: Paul Romero

Contact Phone #: 970-589-7393

NOTE: Legal property owner is owner of record on date of submittal.

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the review comments. We recognize that we or our representative(s) must be present at all required hearings. In the event that the petitioner is not represented, the item may be dropped from the agenda and an additional fee may be charged to cover rescheduling expenses before it can again be placed on the agenda.

Signature of Person Completing the Application 	Date 8/26/19
Signature of Legal Property Owner 	Date

Project Description

The proposed project is to renovate an existing downtown building, single story building at 701 Main Street to house a new restaurant/bar. The building requires a conditional use permit due to a significant percentage of alcohol sales per Zoning and Development Code.

1. The hours planned for the facility are Monday-Wednesday 4 pm-10 pm, Thursday-Friday 4 pm-2 am, Saturday-Sunday 11 am-2 am
2. We intend on managing day to day operations as the owners and 6-8 hourly employees.
3. The main entrance will be on 7th Street with deliveries made via the east alley entrance in the rear of the building. There will be plenty of parking in several public lots in the general area.
4. The project will include a covered patio on the west entrance of the building.
5. The west side patio overhang will have the sign which will include the logo for Ciara's Café & Cantina.
6. The building is currently vacant. The project will renovate the building interiors including new flooring, paint, lighting, and sound. We will be upgrading the current electric in order to accommodate anything that requires electrical. The current bathrooms will remain the same other than the men's bathroom which will require more urinal systems as well as extending it out.

Approval Criteria

District Standard B-2: Downtown businesses

To provide concentrated downtown retail, service, office and mixed uses not including major/ regional shopping centers or large outdoor sales area. The B-2 district promotes the vitality of downtown area as provided by the comprehensive plan. Pedestrian circulation is encouraged as are common parking spaces.

- A. Ciara's Café & Cantina will seat approximately 120 people with the patio seating about 30-40 people.
- B. The bar/restaurant will attract the happy hour crowd of the local downtown area and patrons throughout the Grand Junction area. The nightlife crowd will frequent the Bar/Restaurant as well with a number of different theme nights and live music.
- C. A new and fresh Bar/Restaurant will attract, revitalize and increase the the pedestrian traffic and visitors to the Local Downtown area.

Specific Standards

- A. Retail sales and service. This use is allowed under a Conditional Use Permit under table 24.01

Schedule

The building is currently undergoing renovation. The architect and mechanical engineer have been working diligently on the floor plans for the proposed location. The General Contractors have and will be working in and throughout the building with proper permits. The approximate opening date will be late October pending renovation and/or all permits and licenses in order to operate.

WARRANTY DEED

DOC FEE:\$47.50

THIS DEED, made this 17th day of April, 2018, between Mary C. Donlan of the County of Mesa and State of Colorado, grantor(s), and Hanson Gang, LLC, a Colorado Limited Liability Company

whose legal address is 2072 Stagecoach Court, Grand Junction, CO 81507 of the County of Mesa and State of Colorado, grantees:

WITNESS, that the grantor(s), for and in consideration of the sum of FOUR HUNDRED SEVENTY FIVE THOUSAND AND 00/100 DOLLARS (\$475,000.00), the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm unto the grantees, their heirs and assigns forever, all the real property, together with improvements, if any, situate, lying and being in the County of Mesa and State of Colorado, described as follows:

Lots 9 and 10 in Block 115 of CITY OF GRAND JUNCTION, County of Mesa, State of Colorado

also known by street and number as: 701 Main Street, Grand Junction, CO 81501

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, or in anyway appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the grantor(s), either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances;

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantees, their heirs and assigns forever. The grantor(s), for himself, his heirs, and personal representatives, does covenant, grant, bargain and agree to and with the grantees, their heirs and assigns, that at the time of the ensembling and delivery of these presents, he is well seized of the premises above conveyed, has good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and has good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments, encumbrances and restrictions of whatever kind or nature soever, except general taxes for the current year and subsequent years, and except easements, covenants, conditions, restrictions, reservations, and rights of way of record, if any.

The grantor(s) shall and will WARRANT AND FOREVER DEFEND the above-bargained premises in the quiet and peaceable possession of the grantees, their heirs and assigns, against all and every person or persons lawfully claiming the whole or any part thereof.

The singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

IN WITNESS WHEREOF, the grantor has executed this deed on the date set forth above.

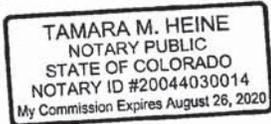
Mary C. Donlan by Barbara R. Butler as her Attorney-In-Fact
Mary C. Donlan, by Barbara R. Butler as her Attorney-In-Fact

State of Colorado }
County Of MESA } ss.

The foregoing instrument was acknowledged before me this April 18, 2018, by Barbara R. Butler as Attorney-In-Fact for Mary C. Donlan.

My Commission expires:

Witness my hand and official seal.
Tamara M. Heine
Notary Public



Grand Junction Fire Department New Development Fire Flow Form

SECTION B

[To be completed by the Water Supplier]

Attach fire flow test data for the hydrants

Failure to attach the fire flow test data and/or diagram may delay your project review.

1. Circle the name of the water supplier: Ute Clifton Grand Junction
2. List the approximate location, type and size of supply lines for this project, or attach a map with the same information:

10" PVC

3. Attach the fire flow test data @ 20 p.s.i. for the fire hydrants nearest to the development/project that must be use to determine available fire flow. Test data is to be completed within the previous 12 months or year. Identify the fire hydrants used to determine the fire flow: 02-262-005 4357 gpm @ 20 PSI

02-262-006 3647 gpm @ 20 PSI Average Flow 4002 gpm @ 20 PSI

[Or: 1. attach a map or diagram with the same information, or 2. attach a map/diagram with flow modeling information.]

4. If new lines are needed (or if existing lines must be looped) to supply the required fire flows, or if more information is needed to state the available minimum g.p.m. @ 20 p.s.i. residual pressure, please list what the applicant/developer must do or obtain: _____

Print Name and Title of Water Supplier Employee completing this Form:

Ron Key Water Service Supervisor

Date: 8-29-19

Contact phone/E-mail of Water Supplier: _____

Note: Based on the facts and circumstances, the Fire Chief may require the applicant/developer to engage an engineer⁵ to verify/certify that the proposed water system improvements, as reflected in the approved utility plans submitted in support of the application/development, will provide the minimum fire flows to all structures in this project. If required, a State of Colorado Licensed Professional Engineer shall submit a complete stamped-seal report to the Grand Junction Fire Department. All necessary support documentation shall be included.

¹ There are three drinking water suppliers: Ute Water 970-242-7491, Clifton Water 970-434-7328 and City of Grand Junction water 970-244-1572.

² Address: City -- 250 N 5th St, Grand Junction, CO 81501, County -- PO Box 20000, Grand Junction, CO 81502

³ International Fire Code, 2012 Edition

⁴ <http://www.gjcity.org/residents/public-safety/fire-department/fire-prevention-and-contractors/>

⁵ City Code defines engineer as one who is licensed as a P.E. by the state of Colorado

Grand Junction Fire Department New Development Fire Flow Form

Instructions to process the application: Step 1) Applicant's engineer should first fill out all items in Section A. Step 2) Deliver/mail this form to the appropriate water purveyor.¹ The water supplier signs and provides the required information of Section B. Step 3) Deliver/mail the completed and fully signed form to the City or County Planning Department.²

SECTION A

Date: 08/27/18
Project Name: Ciara's Cafe & Cantina
Project Street Address: 701 Main Street
Assessor's Tax Parcel Number: 2945-144-20-014
Project Owner Name: Paul Romero
City or County project file #: _____
Name of Water Purveyor: Grand Junction
Applicant Name/Phone Number: Paul Romero/970-589-7393
Applicant E-mail: romeropaul164@gmail.com

1. If the project includes one or more one or two-family dwelling(s):
 - a. The maximum fire area (see notes below) for each one or two family dwelling will be _____ square feet.
 - b. All dwelling units will , will not include an approved automatic sprinkler system.
Comments: _____
2. If the project includes a building other than one and two-family dwelling(s):
 - a. List the fire area and type of construction (See International Building Code [IBC] for all buildings used to determine the minimum fire flow requirements:
4860 Square Feet in a historic brick construction building. One large box, no rooms
 - b. List each building that will be provided with an approved fire sprinkler system:
Just the single commercial building
3. List the minimum fire flow required for this project (based on Appendix B and C in the International Fire Code [IFC]):

Comments: _____

Note:

Fire Area: The aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls or horizontal assemblies of a building. Areas of the building not provided with surrounding walls shall be included in the fire area if such areas are included within the horizontal projection of the roof or floor next above.

Fire Flow Rule: The City's Fire Code³ sets minimum fire flows for all structures. In general, at least 1000 g.p.m. at 20 p.s.i. is required for residential one or two family dwellings up to 3,600 square feet (sf) of fire area. For dwellings greater than 3,600 sf of fire area or all commercial structures, the minimum fire flow is 1,500 gpm at 20 p.s.i. (See Fire Flow Guidance Packet⁴). Inadequate fire flows are normally due to water supply pipes that are too small or too little water pressure, or a combination of both.

Applicant/Project Engineer: Refer to City of Grand Junction most recently adopted IFC, Appendix B and C, [IFC 2012], to determine the minimum fire flow required for this project, based on the Water Purveyor's information (*i.e.*, location, looping and size of water lines; water pressure at the site, *etc.*) and the type, density and location of all structures. Base your professional judgment on the City approved utility plans and Water Provider information shown on this Form. Each time the utility plans/other information relating to treated water changes, resubmit this form just as you did the first time.

End of Section A. Section B continues on the next page



Industrial Pretreatment Division
Persigo Wastewater Plant
2145 River Road
Grand Junction, CO 81505
970-256-4180

Industrial Pretreatment Clearance

This clearance is issued by the City of Grand Junction Industrial Pretreatment Division for approval at the following facility:

Date: September 3, 2019

Facility Name: Ciara's Café & Cantina

Address: 701 Main Street

City/State/Zip: Grand Junction, CO 81501

Food Service

Based on the information provided to this office, the existing 1000 gallon minimum two compartment grease interceptor with proper downturns/T-fittings with extensions is required. The facility must clean the interceptor once every 13 weeks and follow requirements and regulation found in the Fats, Oils and Grease Sector Control Policy. If there are any significant changes to the facility or operations, this office must be notified to re-evaluate the pretreatment requirements.

May 2, 2019

Notice of Neighborhood Meeting
Conditional Use Permit
Pre-application Requirement for a Public Hearing

Dear Neighbor,

We are in the process of submitting an application for a Conditional Use Permit to the City of Grand Junction Planning Department. One of the requirements necessary prior to submitting the application is to hold a “neighborhood meeting” and provide information to our surrounding neighbors.

The meeting is for informational purposes and to receive feedback from you as we move through the application process. This is **not** a Public Hearing before a governing body of City or County. Once the application is submitted and processed, a public hearing date will be scheduled. Prior to the scheduled date you will receive a notification from the City of Grand Junction Planning Department regarding the public hearing via postal mail and/or a display on the property for which the Conditional Use Permit is applied.

The Neighborhood Meeting details are as follows:

Date: Thursday May 16th

Time: 5:30 pm

Location: 701 Main Street, Grand Junction, CO 81501

The project is summarized below:

Site Location: 701 Main Street, Grand Junction, CO 81501

Proposed use: Bar

We look forward to the neighborhood meeting and encourage you to attend. At that time we will answer any question you have.

Please **do not** contact the City of Grand Junction Planning Department regarding this meeting. This is a **pre-application** requirement and we have not submitted the application for consideration at this time.

Sincerely,

Paul Romero and Jessica Martinez

Ciarasclubgj@gmail.com

970-589-7393

P&J ENTERTAINMENT LLC
NEIGHBORHOOD MEETING NOTES FOR CHANGE OF USE PERMIT
701 MAIN STREET

05/02/2019
City of Grand Junction

NOTES

A neighborhood meeting was conducted 05/02/2019 at 701 Main Street. The following invitees attended:

- Jessica Martinez
- Paul Romero
- Jace Hochwalt

COMMENTS

- The few attendees were very excited to see something new in the building being that it was vacant for many years.
- Received some good feedback on ideas for the patio.
- No concerns from attendees.

CAFE & CANTINA

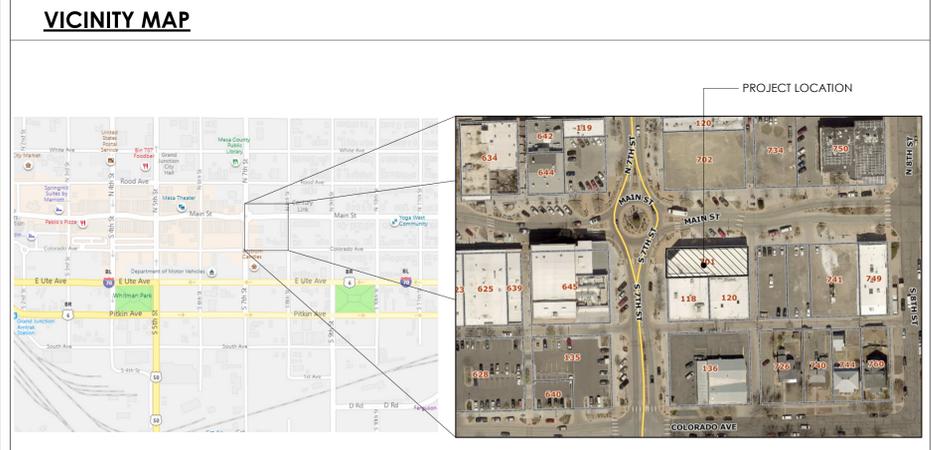
701 MAIN STREET
 GRAND JUNCTION, CO

OWNER:
 P & J Entertainment LLC
 701 MAIN STREET
 GRAND JUNCTION, CO 81501
 T:

ARCHITECT
KRAAI DESIGN ARCHITECTURE
 417 MONUMENT RD., SUITE 7
 GRAND JUNCTION, CO 81507
 T: 970.712.5045
 www.kraaidesign.com

CONSULTANTS			
CIVIL	LANDSCAPE	STRUCTURAL	GOVERNMENT
--	--	--	MESA COUNTY BUILDING DEPARTMENT 200 S. SPRUCE ST. GRAND JUNCTION, CO 81501 T: 970.244.1631
MEP	GEOTECHNICAL	CONTRACTOR	
BIGHORN CONSULTING ENGINEERS 386 INDIAN ROAD GRAND JUNCTION, CO 81501 T: 970.241.8709	--	EMPIRE TOOLS 2678 HIGHWAY 50 GRAND JUNCTION, CO 81503 T: 970.241.3647	

SHEET INDEX		SHEET INDEX	
SHEET NUMBER	SHEET NAME	SHEET NUMBER	SHEET NAME
COVER		MECHANICAL	
T1.1	TITLE SHEET	MI-1	MECHANICAL - FLOOR PLAN
ARCHITECTURAL		PLUMBING	
D1.1	DEMO PLAN	P1-1	PLUMBING - FLOOR PLAN
A1.0	LIFE SAFETY PLANS	ELECTRICAL	
A1.1	MAIN LEVEL PLAN	E1-1	LIGHTING - FLOOR PLAN
A1.2	REFLECTED CEILING PLAN	E1-2	LIGHTING - LEGEND, SCHEDULE, DETAILS, NOTES
A3.1	SECTIONS / DETAILS	E2-1	ELECTRICAL - FLOOR PLAN
A4.1	INTERIOR ELEVATIONS	E2-2	ELECTRICAL - LEGEND, SCHEDULE, DETAILS
A4.2	ADA DETAILS	E2-3	ELECTRICAL - NOTES

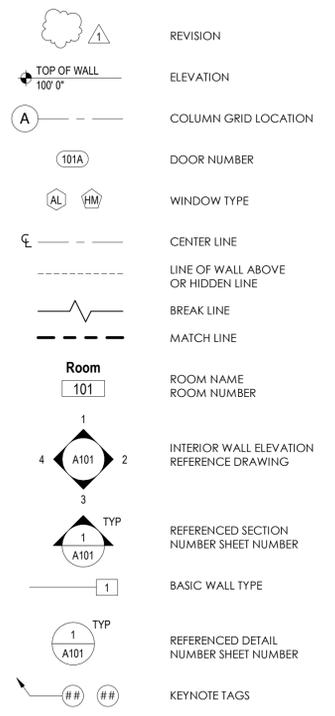


NOT FOR CONSTRUCTION

GENERAL NOTES

- CONTRACTOR SHALL PRIOR TO COMMENCEMENT OF WORK, FIELD VERIFY ALL EXISTING PROJECT CONDITIONS INCLUDING DIMENSIONS AND UTILITY LOCATIONS AND UTILITY SIZES. FIELD CONFIRMATION OF DISCREPANCIES SHALL BE RECORDED ON A REPRODUCIBLE DOCUMENT AND IMMEDIATELY TRANSMITTED TO ARCHITECT FOR PROJECT RECORD, COORDINATION, AND NECESSARY RESOLUTION PRIOR TO CONTINUING WITH WORK. CONTRACTOR SHALL VERIFY, AND BE RESPONSIBLE FOR, ALL WORK AND MATERIALS - INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED SIZES; DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATIONS. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES, PRIOR TO CONTINUING WITH WORK. ALL DIMENSIONS ON PLANS ARE TO CENTERLINE OF WALLS AND COLUMNS, AND FACE OF FINISH (FOF) OR FACE OF MASONRY (FOM), UNLESS NOTED OTHERWISE.
- ALL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF ALL APPLICABLE BUILDING CODES, REFER TO PROJECT DATA, THE AMERICANS WITH DISABILITIES ACT, AS WELL AS ALL OTHER LOCAL GOVERNING CODES AND ORDINANCES.
- CONTRACTOR SHALL REPORT TO THE OWNER ANY ERRORS, OMISSIONS, OR INCONSISTENCIES HE MAY DISCOVER ON THE SPECIFICATIONS OR DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY ERROR AFTER THE START OF CONSTRUCTION, WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE OWNER, AT THE CONTRACTOR'S EXPENSE. THE MEANS OF CORRECTING ANY ERROR SHALL FIRST BE APPROVED BY THE OWNER. THE GENERAL BUILDING PERMITS SHALL BE PAID FOR BY THE OWNER AND SECURED BY THE GENERAL CONTRACTOR. ALL OTHER REQUIRED PERMITS SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR OR SUBCONTRACTOR DIRECTLY RESPONSIBLE. ALL REQUIRED CITY AND COUNTY LICENSES SHALL BE ACQUIRED AND PAID FOR BY THE INDIVIDUAL TRADES.
- ALL CONTRACTORS SHALL HAVE VALID CERTIFICATES OF WORKMAN'S COMPENSATION ON FILE WITH THE APPROPRIATE AGENCIES. INSURANCE REQUIREMENT MUST BE MET PER LEASE AGREEMENT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR THE REPAIR OR REPLACEMENT OF UTILITIES AND ALL OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH EXECUTION OF WORK.
- CONTRACTOR SHALL PROVIDE TEMPORARY FIELD OFFICE, TELEPHONES, FAX MACHINE, TEMPORARY SECURITY FENCE, WATER, POWER, AND TOILET FACILITIES. COORDINATE LOCATIONS WITH ALL APPROPRIATE AGENCIES. FIELD OFFICE SHALL ALSO CONTAIN CURRENT COPIES OF ALL GOVERNING BUILDING CODES AND AMENDMENTS.
- CITY APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE (1) COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE JOB IS IN PROGRESS UNTIL WORK IS COMPLETE.
- CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A CLEAN AND ORDERLY MANNER. ALL DEBRIS SHALL BE REMOVED FROM PREMISES AND ALL AREAS SHALL BE LEFT IN BROOM-CLEAN CONDITION AT ALL TIMES. CONTRACTOR SHALL LOCATE AND MAINTAIN A TRASH BIN AT THE SITE. SUCH BIN SHALL BE OF ADEQUATE DIMENSION TO KEEP SITE CLEAN AT ALL TIMES. DUST RESULTING FROM SALVAGE, DEMOLITION AND REMOVAL WORK SHALL BE CONTROLLED TO PREVENT THE IMPOSITION OF A NUISANCE OR HAZARDOUS CONDITION TO THE ADJOINING PORTION OF THE PROJECT. THE USE OF WATER WILL NOT BE PERMITTED WHEN SUCH USE WOULD RESULT IN HAZARDOUS, OR OTHERWISE OBJECTIONABLE CONDITIONS.
- CONTRACTOR SHALL PROVIDE PEDESTRIAN PROTECTION IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES.
- CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES. CONTRACTOR SHALL PROVIDE REQUIRED PROTECTION INCLUDING, BUT NOT LIMITED TO, SHORING, BRACING, AND ALL OTHER SUPPORTS (INCLUDING ENGINEERING OF SYSTEMS) NECESSARY TO MAINTAIN OVERALL STRUCTURAL INTEGRITY OF THE BUILDING. ALL DEMOLITION AND CUTTING SHALL BE PERFORMED IN A MANNER AND BY METHODS WHICH ENSURE AGAINST DAMAGE TO EXISTING WORK.
- INTERIOR WALL AND CEILING FINISHES FOR DINING, AND WAITING AREAS SHALL NOT EXCEED FLAME SPREAD CLASSIFICATIONS DICTATED BY ALL APPLICABLE BUILDING CODES.
- NO STRUCTURAL MEMBERS SHALL BE CUT TO ACCEPT PIPES, VENTS, DUCTS, OR OTHER PENETRATIONS, EXCEPT AS DETAILED OR SPECIFIED HEREIN.
- GYPSUM BOARD AND SUSPENDED CEILING SYSTEMS SHALL CONFORM TO ALL LOCAL GOVERNING BUILDING CODES AND ORDINANCES.
- ALL GLASS AND GLAZING SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES AS WELL AS THE U.S. CONSUMER PRODUCT SAFETY COMMISSION, SAFETY STANDARDS FOR ARCHITECTURAL GLAZING MATERIALS (47 FR, 13516 TITLE NO. 16, CHAPTER 11, PART 1201).
- CONTRACTOR SHALL ASSIST OWNER IN OBTAINING FINAL APPROVAL OF LOCAL HEALTH DEPARTMENT AND THE TEMPORARY AND FINAL CERTIFICATES OF OCCUPANCY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REMEDY, REPAIR, OR REPLACE ANY FAULTY, IMPROPER OR INFERIOR WORKMANSHIP OR MATERIALS AND ANY RELATED DAMAGE CAUSED BY THESE WHICH SHALL APPEAR WITHIN ONE (1) YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT. REFER TO SPECIFICATIONS FOR WARRANTY REQUIREMENTS IN EXCESS OF ONE (1) YEAR. IN ADDITION TO EQUIPMENT WARRANTIES, FURNISH OWNER A WRITTEN GUARANTEE AGAINST LATENT AND PATENT DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE (1) YEAR. GUARANTEE SHALL INCLUDE REPAIR, DAMAGE TO, OR REPLACEMENT OF, ANY PART OF EQUIPMENT PROVIDED.
- PIPES, CONDUITS, OR DUCTS EXCEEDING ONE THIRD OF THE SLAB OR MEMBER THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL DRAWINGS FOR LOCATION OF SLEEVES AND OTHER ACCESSORIES.
- ALL ELECTRICAL, MECHANICAL, AND PLUMBING WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION.
- ALL EQUIPMENT ON THE FOOD SERVICE DRAWINGS IS TO BE EXCLUDED FROM THE GENERAL CONTRACT UNLESS OTHERWISE STATED. BACKING, ROUGH-INS, AND FINAL HOOK-UPS ARE A PART OF THE GENERAL CONTRACT. ALL PLUMBING FIXTURE VACUUM BREAKERS NECESSARY PER LOCAL CODE REQUIREMENTS, ARE TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. ELECTRICAL CONNECTIONS AND DISCONNECTS NECESSARY TO MEET LOCAL CODE REQUIREMENTS WILL BE SUPPLIED WITH KITCHEN EQUIPMENT WITH FINAL HOOK-UPS ONLY BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE BACKING FOR SUPPORT OF ALL WALL, CEILING, AND PARTITION MOUNTED ITEMS SUCH AS TABLE BRACKETS, LIGHT FIXTURES, ARTIFACTS, SHELVING, EQUIPMENT, AND TELEVISIONS. COORDINATE LOCATIONS AND REQUIREMENTS WITH THE PLUMBING, MECHANICAL, ELECTRICAL, AND FOOD SERVICE DRAWINGS AS WELL AS INTERIOR DESIGN CONSULTANT AND OWNER.
- CONTRACTOR SHALL VERIFY LOCATIONS OF FOOD SERVICE EQUIPMENT AND COORDINATE LOCATIONS OF FLOOR SINKS, FLOOR DRAINS, TROUGH DRAINS, SLAB DEPRESSIONS, RAISED CURBS, ELECTRICAL STUB-OUTS, PLUMBING STUB-OUTS, AND ALL OTHER WORK UNDER THE SCOPE OF RESPONSIBILITIES RELATED TO THIS EQUIPMENT. REFER TO THE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION.
- PROVIDE ATTIC DRAFT STOPS AND VENTILATION IN CONFORMANCE WITH ALL APPLICABLE BUILDING CODES.
- ALL PAINT COLOR AND/OR MATERIAL TRANSITIONS ARE TO OCCUR AT INSIDE CORNERS (UNLESS NOTED OTHERWISE).
- COMPLETE SHOP DRAWINGS AND EQUIPMENT SUBMITTALS SHALL BE PROVIDED TO THE ARCHITECT FOR REVIEW AND COMMENT PRIOR TO FABRICATION OR ORDERING OF ANY EQUIPMENT, FIXTURES, MATERIALS, OR ASSEMBLIES. OWNER'S REPRESENTATIVE OR ARCHITECT WILL REVIEW AND COMMENT ON ALL SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN INTENT OF THE PROJECT ONLY. THE APPROVAL OF A SINGLE COMPONENT SHALL NOT INDICATE THE APPROVAL OF AN ASSEMBLY IN WHICH THE ITEM FUNCTIONS. ALL SHOP DRAWINGS AND SUBMITTALS SHALL BE ROUTED THROUGH THE CONTRACTOR. NO DOCUMENTS SHALL BE SUBMITTED DIRECTLY TO THE ARCHITECT, OR TO THE ARCHITECT'S CONSULTANTS. SUBMIT ALL SHOP DRAWINGS IN THE FORM OF ONE (1) 30" X 42" TRANSPARENCY (SEPIA) OF EACH SHEET. BLUELINES OR BLACKLINES ARE NOT ACCEPTABLE. WHEN SHOP DRAWINGS INVOLVE MANUFACTURER'S DATA OR MATERIAL LIST, SUBMIT A MINIMUM OF FIVE (5) COPIES FOR REVIEW AND COMMENT.
- EXTERIOR OPENINGS SHALL COMPLY WITH ALL SECURITY REQUIREMENTS AS OUTLINED IN ALL LOCAL BUILDING CODES AND ORDINANCES.
- ACCURATE AS-BUILT DRAWINGS SHALL BE GENERATED BY CONTRACTOR DURING CONSTRUCTION AND SUBMITTED TO OWNER UPON COMPLETION OF FINAL PUNCH LIST, BUT PRIOR TO REQUEST FOR FINAL PAYMENT, WITHIN TWO WEEKS AFTER C.O. IS ACQUIRED.
- FOUR (4) SETS OF EQUIPMENT OPERATING AND MAINTENANCE MANUALS SHALL BE SUBMITTED TO THE OWNER UPON COMPLETION OF PROJECT, BUT PRIOR TO REQUEST FOR FINAL PAYMENT, WITHIN TWO WEEKS AFTER C.O. IS ACQUIRED.
- CONTRACTOR SHALL NOT ALLOW ANY PERSON TO DESCEND INTO ANY TRENCH OR HOLE, OR CREATE ANY SUCH EXCAVATIONS, WITHOUT THE PRIOR APPROVAL OF BUILDING DEPARTMENT AS WELL AS ALL OTHER AGENCIES HAVING JURISDICTION.
- VERIFY FIRE EXTINGUISHER REQUIREMENTS AND LOCATIONS WITH FIRE MARSHAL AND OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL SEAL ALL GAPS, HOLES, AND CRACKS IN BUILDING CONSTRUCTION AS REQUIRED TO CONTROL INFILTRATION OF INSECTS.
- CONTRACTOR SHALL INSTRUCT SUBCONTRACTORS TO CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS IN THEIR ENTIRETY. INFORMATION REGARDING COMPLETE WORK OF SPECIFIC TRADES AND SUB-TRADES IS DISPERSED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS AND CANNOT BE DETERMINED BY REFERENCE TO ANYTHING OTHER THAN COMPLETE SETS OF DOCUMENTS.
- NOTHING IN THESE DOCUMENTS IS TO BE INTERPRETED AS RELIEVING THE CONTRACTOR OF SOLE RESPONSIBILITY FOR THE METHODS AND MEANS OF CONSTRUCTION, AS WELL AS SAFETY AT THE JOB SITE.
- THE LIFE SAFETY INSPECTOR WILL MAKE FINAL DETERMINATION OF FIRE LANES BEFORE FINAL INSPECTION IS MADE. SEE SITE PLAN FOR REQUIREMENTS.

LEGEND



ABBREVIATION SYMBOL

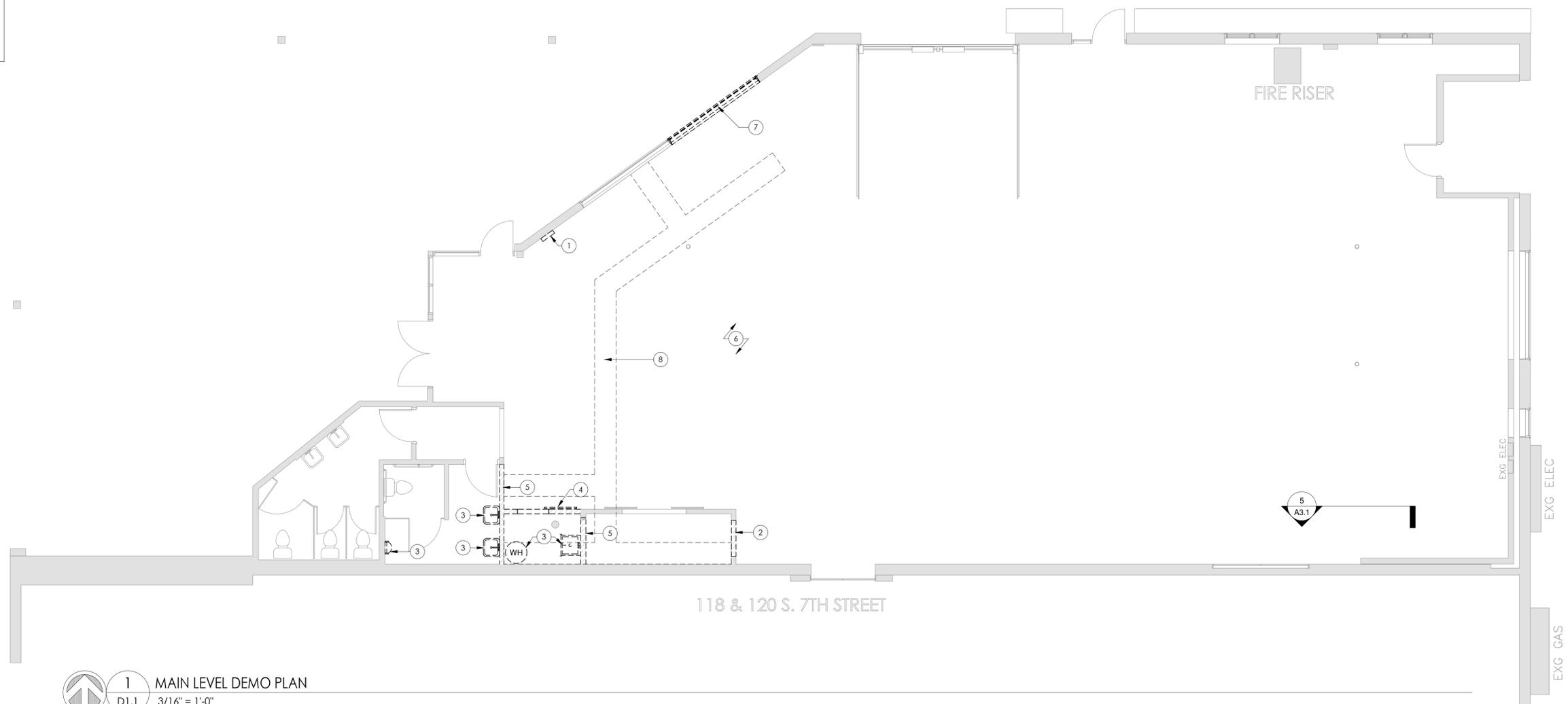
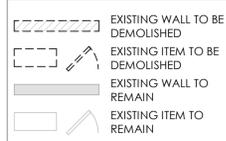


ABBREVIATIONS

ABV above	N north
ACC accessories	N/A not applicable
ADJ adjacent	NIC not in contract
AFJ above finished floor	NCM nominal
ALT alternate	NTS not to scale
AL aluminum	NECY necessary
APC acoustical panel ceiling	
ARCH architect (ural)	OC on center (s)
ASPH asphalt	OD outside diameter
A/C air conditioning	OFCI owner furnished, contractor installed
	OFD overflow drain
BCS baby changing station	OFOI owner furnished, owner installed
BD board	OH overhead
BLDG building	OPG opening
BLKG blocking	OPH opposite hand
B.O. bottom of bearing	OPP opposite
	OSB oriented strand board
	OTS open to structure
CBU cementitious backer unit	
CG corner guard	PB particle board
CJ control joint	PERF perforate (d)
CLG ceiling	PERIM perimeter
CLR clear (ance)	PLAM plastic laminate
CMU concrete masonry unit	PLT plate
COL column	PNL panel
CONC concrete	PNT paint (ed)
CONT continuous or continue	PR pair
CORR corridor	PROJ projector, projection
CPT carpet (ed)	PSF pounds per square foot
CSMT casement	PSI pounds per square inch
CT ceramic tile	PTD pressed treated
CTR center	PTD paper towel dispenser
CWOG center wall on grid	PTN partition
	PVC polyvinyl chloride
DBL double	PVMT pavement
DEMO demolish / demolition	PWD plywood
DF drinking fountain	
DIM dimension (s)	QT quarry tile
DIR direction	
DISP dispenser	R riser, radius
DN down	RB rubber base
DR door	REC recycling
DS downspout	RCMD recommend (ed) (ations)
DTL detail	RE reference
DWG drawing	REF refrigerator
DWR drawer	REIN reinforce (d) (ing)
	REQ'D required
E east	RQMT(S) requirement(s)
EA each	REV revision (s), revised
EC evaporative cooler	RD roof drain
EG etched glass/glazing	RFG roofing
EIFS exterior insul finish sys	RH robe hook
EJ expansion joint	RI room
EL elevation	RO rough opening
ELEC electric (al)	ROW right of way
EM emergency	RR restroom
EWC electric water cooler	RTU roof top unit
EWG end wall corner guard	RUB rubber
EQ equal	
EXG existing	S south
EXH exhaust	SAG susp acoustic grid
EXP exposed	SC shower curtain rod & hooks
EXT exterior	SCH schedule
	SD soap dispenser
FBO furnished by owner	SHT sheet
FD floor drain	SHTG sheathing
FDN foundation	SIM similar
FE fire extinguisher	SND sanitary napkin dispenser
FEC fire extinguisher cabinet	SNV sanitary napkin vendor
FEP finished end panel	SPEC specification
FEE finished floor elevation	SPKR speaker
FIN finish	SQ square
FLG flashing	SS solid surface
FLR floor (ing)	SST stainless steel
FLUR fluorescent	STD standard
FO face of	STL steel
FOF face of finish	STOR storage
FRMG framing	STR structural
FRP fiber reinforced plastic	SUSP suspended
FT foot (feet)	
FTG footing	T tread
	TB towel bar
GA gage, gauge	TEL telephone
GAL gallon	T.O. top of
GALV galvanized	TOC top of concrete
GB grab bar	TOS top of steel
GC general contractor	TOW top of wall
GL glass, glazing	TPD toilet paper dispenser
GWB gypsum wallboard	TS tube steel
GYP gypsum	TYP typical
	T&G tongue and groove
HAS headed anchor stud	UNO unless noted otherwise
HB hose bibb	
HCP handicap (ed)	VB vapor barrier
HDR header	VCT vinyl composition tile
HDW hardware	VERT vertical
HM hollow metal	VIF verify in field
HOR horizontal	VM vending machine
HSS hollow structural sections	VNL vinyl sheet
HT height	VTR vent through roof
HVAC heating /ventilation / air conditioning	
HWD hardwood	W west, wide, width
	W/ with
INCL include (d) (ing)	WB wood base
INSUL insulate (d) (ing)	WC watercloset
INT interior	WD wood
INV invert	WDW window
	WF wide flange
JST joist	WG wire glass
JT joint	W/O without
	WP waterproof (ing)
L length, angle	WR waste receptacle
LAM laminate (d)	WRB weather resistive barrier
LAV lavatory	WWM welded wire mesh
LB pound	
LF lineal foot	
LG laminated glass, glazing	
LIN linoleum	
LT light	
	MA match
MA masonry	MATL material
MATL material	MAX maximum
MAX maximum	MB marker board
MB marker board	MECH mechanic (al)
MECH mechanic (al)	MFR manufacture (r) (d)
MFR manufacture (r) (d)	MH manhole
MH manhole	MIN minimum
MIN minimum	MISC miscellaneous
MISC miscellaneous	MLD molding, moulding
MLD molding, moulding	MO masonry opening
MO masonry opening	MT mount (ed) (ing)
MT mount (ed) (ing)	MTL metal
MTL metal	

- SEE PROJECT MANUAL SPECIFICATIONS AND REQUIREMENTS FOR DEMOLITION.
- THE DOCUMENTS SHOW THE OVERALL EXTENT OF DEMOLITION REQUIRED. ALTHOUGH EACH COMPONENT MAY NOT BE SHOWN OR REFERENCED, REMOVE ITEMS CONSISTENT WITH THE NATURE OF DEMOLITION INDICATED.
- ALL CONDITIONS ARE EXISTING; IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT CONDITIONS, RECORD AND REPORT ALL DEVIATIONS TO THE ARCHITECT AS SOON AS POSSIBLE.
- DO NOT DEMOLISH STRUCTURAL ELEMENTS WITHOUT APPROVAL FROM STRUCTURAL ENGINEER. PROVIDE TEMPORARY SHORING AND BRACING AS NEEDED TO MAINTAIN STRUCTURAL INTEGRITY.
- REMOVE LOOSE OR CRACKED MATERIAL AT AREAS ADJACENT TO INDICATED DEMOLITION IF DAMAGED BY DEMOLITION OPERATIONS. PATCH AREAS WITH MATCHING MATERIAL AND WORKMANSHIP.
- SLAB REMOVAL MAY BE REQUIRED IN ORDER TO INSTALL NEW PIPING BELOW EXISTING SLABS ON GRADE. REFER TO PLUMBING DRAWINGS FOR PIPE DEPTH AND SLOPE. EXACT LIMITS OF DEMOLITION SHALL BE DETERMINED BY CONTRACTOR FOR PIPE DEPTH AND WORKING ACCESS.
- PERIMETER STRUCTURAL CONDITIONS ARE UNKNOWN. CONTRACTOR IS TO COORDINATE ALL PLUMBING EXIT POINTS WITH STRUCTURAL ENGINEER PRIOR TO PENETRATING GRADE BEAMS.
- AT WALLS, FLOORS AND CEILING AREAS INDICATED FOR DEMOLITION, REMOVE ALL INTEGRAL DEVICES AND EQUIPMENT PRESENT UNLESS OTHERWISE INDICATED.
- WHERE EXISTING PLUMBING OR ELECTRICAL PIPING, TO BE ABANDONED, IS LOCATED IN THE EXISTING SLAB, CHIP AROUND THE PIPE OR FITTING A MINIMUM OF 2 INCHES, CAP THE PIPE A MINIMUM OF 4 INCHES BELOW THE FINAL FINISHED FLOOR ELEVATION AND FILL WITH CONCRETE. PREPARE CONCRETE TO RECEIVE NEW FINISHES.
- ITEMS NOT NOTED FOR DEMOLITION ARE TO BE PROTECTED FROM DAMAGE AND PREPARED TO RECEIVE NEW WORK. SURFACES TO REMAIN THAT ARE DAMAGED DURING THE PERFORMANCE OF REQUIRED DEMOLITION SHALL BE PATCHED AND/OR PAINTED TO MATCH EXISTING TO REMAIN ADJACENT SURFACES UNLESS NOTED OTHERWISE.
- RECYCLE MERCHANTABLE MATERIALS TO THE GREATEST EXTENT POSSIBLE, I.E. STEEL.
- RESTORE THE FIRE PROTECTION RATING OF FIRE-PROTECTED CONSTRUCTION INDICATED TO REMAIN IF DAMAGED BY DEMOLITION OPERATIONS. FIRE-PROTECTED CONSTRUCTION INCLUDES STRUCTURAL MEMBERS, WALL, FLOOR, CEILING AND ROOF ASSEMBLIES COVERED WITH SPRAY FIREPROOFING OR DESIGNATED AS A RATED COMPONENT OR ASSEMBLY WITHIN THE DOCUMENTS.

DEMO LEGEND



- KEYNOTES:
- EXG ELEC PANEL TO BE RELOCATED ON SAME WALL - RE: FLOOR PLAN
 - DEMO PORTION OF WALL FOR NEW DOOR
 - DEMO EXG PLUMBING FIXTURES - VERIFY ITEMS TO BE SALVAGED W/ G.C./OWNER
 - DEMO EXG DOOR - VERIFY IF TO BE SALVAGED W/ G.C./OWNER
 - DEMO EXG WALL, OR PORTION OF EXG WALL
 - SAW CUT CONCRETE FOR NEW PLUMBING LINES - RE: MEP DRAWINGS FOR DETAILS
 - DEMO HALF WINDOW & REPLACE W/ FIXED WINDOW & SLIDER IN EXISTING OPENING
 - SAWCUT EXG. CONC. SLAB FOR NEW PLUMBING

REVISION:

DD

PROJECT NO:
 1949

SHEET NAME:
 DEMO PLAN

DATE: 08/22/2019

SHEET NO:

D1.1

SCALE: As indicated

1 MAIN LEVEL DEMO PLAN
 D1.1 3/16" = 1'-0"

NOT FOR CONSTRUCTION

CODE IN USE:

2018 INTERNATIONAL BUILDING CODE (IBC)
 2018 INTERNATIONAL MECHANICAL CODE (IMC)
 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
 2018 INTERNATIONAL PLUMBING CODE (IPC)
 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
 2017 NATIONAL ELECTRICAL CODE (NEC)
 2009 ICC A.117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
 2018 INTERNATIONAL EXISTING BUILDING CODE (IEBC)

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION:

NAME	TOTAL GSF	OCCUPANCY TYPE
SEATING AREA & BAR	3,110 SF	A-2
RESTROOMS	348 SF	
KITCHEN / STORAGE	588 SF	
FIRE RISER & OFFICE	190 SF	
UTILITY ROOM	105 SF	
TOTAL GSF:	6,265 SF	

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS:

ALLOWABLE FLOOR AREA: (TABLE 506.2, 504.3, 504.4)	TYPE
	V-B FULLY SPRINKLERED
	24,000 PER STORY, 2 STORIES
	60' HEIGHT

REQUIRED SEPARATION OF OCCUPANCIES:
(TABLE 508.4) N/A

- R = REQUIRED EXIT
- FE = FIRE EXTINGUISHER
- FEC = FIRE EXTINGUISHER CABINET

CHAPTER 6 - TYPES OF CONSTRUCTION:

FIRE RESISTANCE FOR BUILDING ELEMENTS:
(TABLE 601)

STRUCTURAL FRAME	EXT WALLS BEARING	EXT WALLS NON-BEARING	INT WALLS BEARING	INT WALLS ROOF NON-BEARING	ROOF
0	0	0	0	0	0

CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES:

EXTERIOR WALLS (SECTION 705.5)	N/A	FLOOR AND ROOF ASSEMBLIES (SECTION 711)	N/A
FIRE WALLS (AREA SEPARATION) (SECTION 706)	YES, EXG.	VERTICAL OPENINGS (SECTION 712)	N/A
FIRE BARRIERS (OCCUPANCY SEPARATION) (SECTION 707)	N/A	SHAFT ENCLOSURES (SECTION 713)	N/A
FIRE PARTITIONS (CORRIDORS) (SECTION 708)	N/A	FIRE RESISTANT JOINT SYSTEMS (SECTION 715)	N/A
OPENING PROTECTIVES (SECTION 716)	N/A	OPENING PROTECTIVES (SECTION 716)	N/A
SMOKE BARRIERS (SECTION 709)	N/A	DUCTS AND AIR TRANSFER OPENINGS (SECTION 717)	N/A
SMOKE PARTITIONS (SECTION 710)	N/A	CONCEALED SPACES (SECTION 718)	N/A

CHAPTER 9 - FIRE PROTECTION AND LIFE SAFETY SYSTEMS:

FIRE PUMP AND RISER ROOM (SECTION 902)	YES
AUTOMATIC SPRINKLER SYSTEMS (SECTION 903)	YES
STANDPIPE (SECTION 905)	YES
PORTABLE FIRE EXTINGUISHERS (SECTION 906)	YES - 75'
FIRE ALARMS/DETECTION SYSTEMS (SECTION 907)	NO

CHAPTER 10 - MEANS OF EGRESS:

OCCUPANT LOAD:
(TABLE 1004.5)

NAME	TOTAL GSF	OCCUPANCY TYPE	FLOOR AREA PER OCCUPANT	NUMBER OF OCCUPANTS
SEATING / BAR	4,744 SF	A-2	15	316
KITCHEN / STORAGE	1,521 SF	???	???	???
RESTROOMS	348 SF			
FIRE RISER / OFFICE	190 SF			
UTILITY ROOM	105 SF			
TOTAL:	6,265 SF			

NUMBER OF EXITS AND EXIT ACCESS DOORWAYS:
(SECTION 1006) REQ'D 2 EXITS

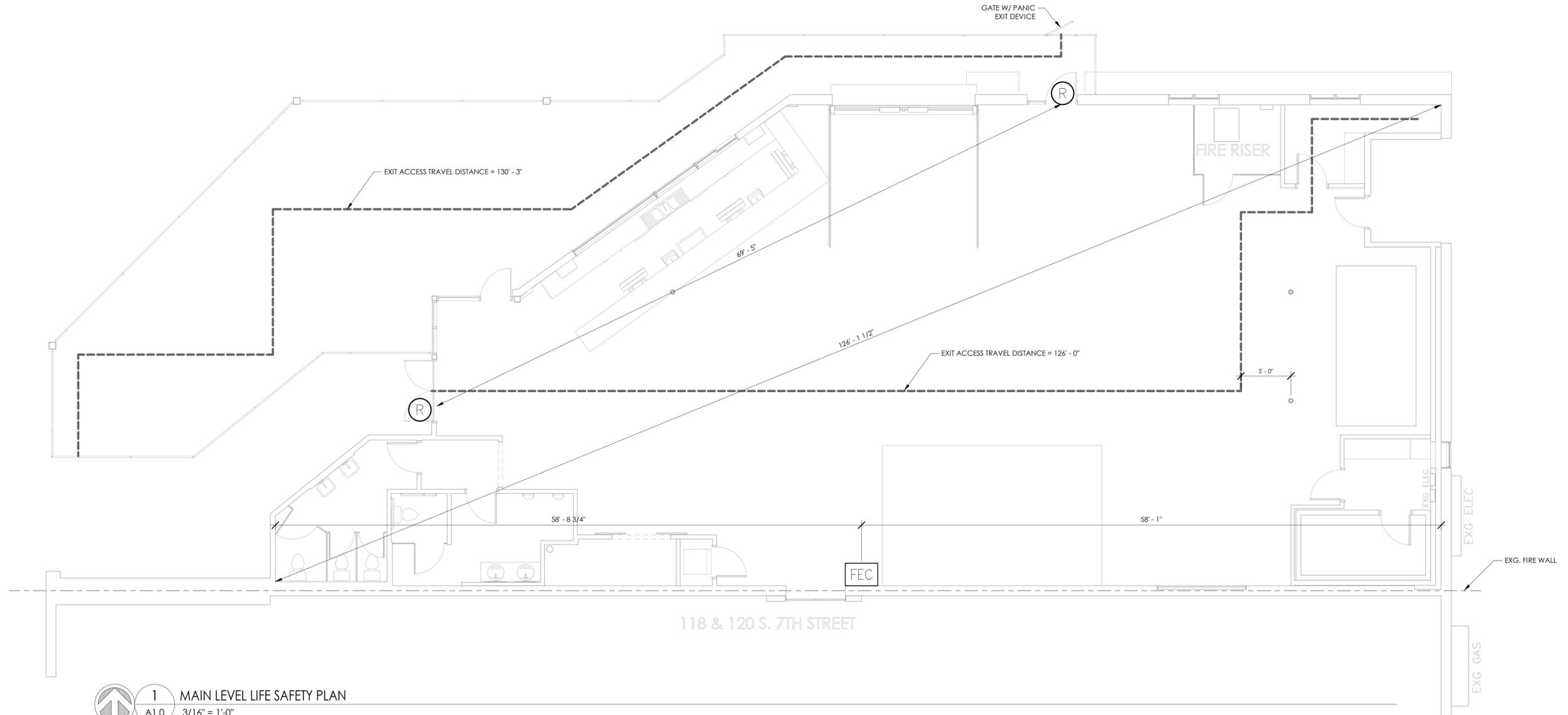
MAXIMUM COMMON PATH OF EGRESS TRAVEL:
(TABLE 1006.2.1) N/A

EGRESS ILLUMINATION:
(SECTION 1008) YES

ACCESSIBLE EGRESS:
(SECTION 1009.1) 1 PER MEANS OF EGRESS

HARDWARE:
(SECTION 1010.1.9.1) NO MANUALLY OPERATED FLUSH OR SURFACE MOUNTED BOLTS ARE PERMITTED ON EXIT DOORS AND HARDWARE MUST NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST

EXIT ACCESS TRAVEL DISTANCE:
(SECTION 1017.2) 250' - 0"



1 MAIN LEVEL LIFE SAFETY PLAN
 A1.0 3/16" = 1'-0"

NOT FOR CONSTRUCTION

REVISION:

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LIFE SAFETY PLANS

DATE:

08/22/2019

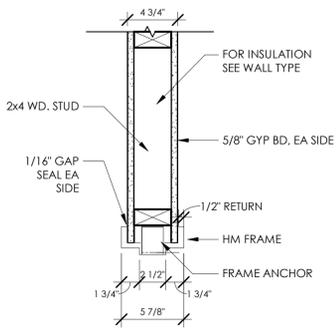
SHEET NO:

A1.0

SCALE:

As indicated

- DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION FROM THE ARCHITECT PRIOR TO CONTINUING CONSTRUCTION.
- ITEMS NOT NOTED ON THE DRAWINGS SHALL BE CONSIDERED THE SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN THE SAME MANNER.
- PROVIDE TREATED SOLID WOOD BLOCKING FOR ALL WALL EQUIPMENT, TOILET ACCESSORIES, MILLWORK AND OTHER WALL MOUNTED ITEMS. SEE ELEVATIONS AND EQUIPMENT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- CONTRACTOR SHALL CAULK AT THE INTERFACE OF INTERIOR FACES OF DOOR FRAMES WITH ADJACENT MATERIALS THOUGH JOINT MAY NOT BE VISIBLE.
- WHERE EXISTING FINISHES ARE REQUIRED TO BE REMOVED TO INSTALL NEW FINISHES, PATCH AND REPAIR WALL SURFACES TO ACCEPT NEW FINISHES AND CONCEAL ALL TRANSITIONS. MAINTAIN RATINGS OF EXISTING WALLS, PATCH AND REPAIR ANY NEW OR EXISTING OPENINGS IN RATED WALLS WITH UL ASSEMBLY APPROVED FOR PENETRATING ITEM AND WALL ASSEMBLY.
- PROVIDE TRANSITION STRIPS BETWEEN FLOOR MATERIALS OF DISSIMILAR HEIGHTS. CENTER TRANSITION STRIPS UNDER DOORS OR OTHER PLACES OUT OF SIGHT.
- NEW HM DOOR FRAMES SHALL MATCH EXISTING FOR PROFILE AND CONSTRUCTION.
- RECONFIGURE SPRINKLER HEADS AS REQUIRED BY CODE.
- RECONFIGURE FIRE ALARM DEVICES AS PER THE ELECTRICAL CODE OR AS INDICATED. PROVIDE NEW FIRE ALARM DEVICES IF EXISTING ARE NOT OPERATIONAL.
- NEW RATED STUD WALLS ARE TO BE GA #WP 1072- 1HR RATED WITH 3-1/2" FIBERGLASS BATTS WITH A 47 STC.
- FIELD VERIFY EXISTING CORRIDOR WALLS AND ROOM SEPARATION WALLS ARE 1HR RATED (WP 1072) WITH REQUIRED PENETRATION FIRESTOPPING. WHERE THESE WALLS DO NOT CURRENTLY MEET THE REQUIRED RATING MODIFY WALL TO MEET UL ASSEMBLY FOR 1HR WP 1072 OR EQUAL WITH SOUND BATTS.
- FINISHES SHALL MATCH EXISTING UNLESS OTHERWISE NOTED.
- DUE TO SLAB CONSTRUCTION REUSE EXISTING WASTE PIPING IN FLOOR. CAP ALL UNUSED WASTE PIPING AT OR BELOW FLOOR LEVEL SO THAT FLOOR FINISHES CAN BE INSTALLED.
- MAIN STRUCTURE IS EXISTING AND THE CONFIGURATION OF THE SUPPORTING FOUNDATIONS ARE UNKNOWN. CONTRACTOR SHALL MAKE MODIFICATIONS AS NEEDED TO THE UNDERSLAB PLUMBING ROUTING TO MAINTAIN THE INTEGRITY OF THE STRUCTURE. ALL MODIFICATIONS THAT IMPACT THE LOCATION OF PLUMBING FIXTURES MUST BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
- PROVIDE POSITIVE SLOPE ON ALL FLOOR DRAINS. MINIMUM OF 1/8" PER FOOT. SLOPE FLOOR ALL AROUND FROM ADJACENT WALLS TO FLOOR DRAINS. DO NOT DEPRESS ONLY THE AREA IMMEDIATELY AROUND THE DRAIN.
- REFER TO THE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR THE LOCATIONS OF PIPING, VENTS, DUCTS, CURBS, FANS AND OTHER ITEMS WHICH PENETRATE THE ROOF PLANE.
- DOOR JAMB LOCATION OFF FACE OF WALL IS 4" TYPICAL, UNLESS NOTED OTHERWISE.



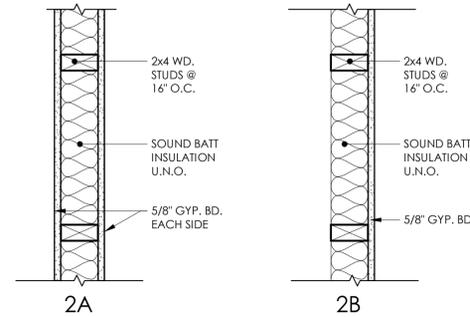
DOOR JAMB DETAIL
1 1/2" = 1'-0"

DOOR SCHEDULE								
MARK	TYPE	WIDTH	HEIGHT	FRAME	PANEL	PANEL TYPE	HARDWARE GROUP	COMMENTS
1	HINGED	3'-0"	7'-0"	WD.	WD	F	2	
2	HINGED	3'-0"	7'-0"	WD.	WD	F	2	
3	HINGED	3'-0"	7'-0"	WD.	WD	V	1	

WINDOW SCHEDULE				
MARK	TYPE	WIDTH	HEIGHT	COMMENTS
1	PICTURE	5'-0"	3'-6"	
2	SLIDER	5'-0"	3'-6"	

THE MANUFACTURE USED ARE:
 HINGES: STANLEY
 LOCKSETS & CYLINDERS: SCHLAGE
 ELECTRIC STRIKES/EXIT DEVICES: VON DUPRIN
 DOOR CLOSERS: NORTON
 KICK PLATES: PUSH/PULL, FLUSH BOLTS, DUST PROOF STRIKES
 MUTES & STOPS: ROCKWOOD
 THRESHOLDS, WEATHERSTRIP, SWEEPS, SMOKE/SOUND SEAL,
 AUTO DOOR BOTTOMS: PEMKO
 STOREFRONT: PUSH/PULLS: HIAWATHA, HINGES TUBELITE

ARCH REF. QTY:	ITEM NUMBER:	TYPE:	MFG:	SUBTYPE:
HDW-1	1.0 CB168 4.5 X 4.5 US26D	HDWE	STA	HINGE
	1.0 XQL81-SB-26D-306-Q71-ARKD	HDWE	ROC	LOCK/ENTRANCE
	1.0 409 US32D	HDWE	ROC	STOP
	1.0 608	HDWE	ROC	SILEN
	1.0 10 X 34.050 US32D	HDWE	ROC	KICK
HDW-2	1.0 CB179 4.5 X 4.5 US26D	HDWE	STA	HINGE
	1.0 XQL82-SB-26D-306-Q71-ARKD	HDWE	SCH	STORAGE ROOM
	1.0 7500 AL-689 SNB	HDWE	NOR	CLOSER
	1.0 10 X 34.050 US32D	HDWE	ROC	KICK
	1.0 409 US32D	HDWE	ROC	STOP
	1.0 608	HDWE	ROC	SILEN



WALL NOTES:

- ALL EXTERIOR WALL TYPES ARE SHOWN WITH THE EXTERIOR WALL FACING LEFT UNLESS OTHERWISE NOTED.
- WALL TAGS BEGINNING WITH #1 DENOTES FOR EXTERIOR WALLS
- WALL TAGS BEGINNING WITH #2 DENOTES FOR INTERIOR WALLS
- TAG WITH #3 DENOTES FOR EXTERIOR AND INTERIOR FLOORS.
- PROVIDE GLASS MAT WATER-RESISTANT BACKER BOARD IN LIEU OF GYPSUM WALL BOARD BEHIND ALL WALL TILE.
- GYPSUM BOARD SHALL BE MOISTURE-RESISTANT AT THE FOLLOWING LOCATIONS: WALLS AND CEILINGS OF ALL RESTROOMS AND SHOWERS
- WALL TYPE CHANGES OCCUR AT CORNERS OR INTERSECTIONS OF WALLS UNLESS NOTED OTHERWISE.
- ALL INTERIOR WALLS TO BE TYPE [2A] UNLESS NOTED OTHERWISE.
- REFER TO FINISH PLANS AND INTERIOR ELEVATIONS FOR WALL FINISHES.
- "X" AFTER WALL DESIGNATION DENOTES WALL TO EXTEND TO STRUCTURE
- STUD WALL TO HAVE SOUND BATT. INSUL.

WALL TYPES

ROOM FINISH SCHEDULE										
#	NAME	FLOOR FINISH	BASE FINISH	WALL FINISHES			CEILING FINISH		CEILING HEIGHT	
				N	S	E	W			
1	ENTRY	1	1	2	2	2	1			
2	WOMEN'S R.R.	1	1	1	1	1	1			
3	MEN'S R.R.	3	1	2/3	2/3	2/3	2/3			
4	UTILITY	1	1	1	1	1	1			
5	ICE	1	1	1	1	1	1			
6	STAGE	4	2	1	1	1	1			
7.1	DRY STORAGE	2	1	1	1	1	1			
7.2	WALK-IN COOLER	2	1	1	1	1	1			
8	FOOD TRAILER	2	1	1	1	1	1			
9	SEATING	2	1	1	1	1	1			
10	OFFICE	2	1	1	1	1	1			
11	FIRE RISER	1	1	1	1	1	1			
12	V.I.P. AREA	2	1	1	1	1	1			
13	BAR	2	1	1	1	1	1			
14	PATIO	1	1	1	1	1	1			

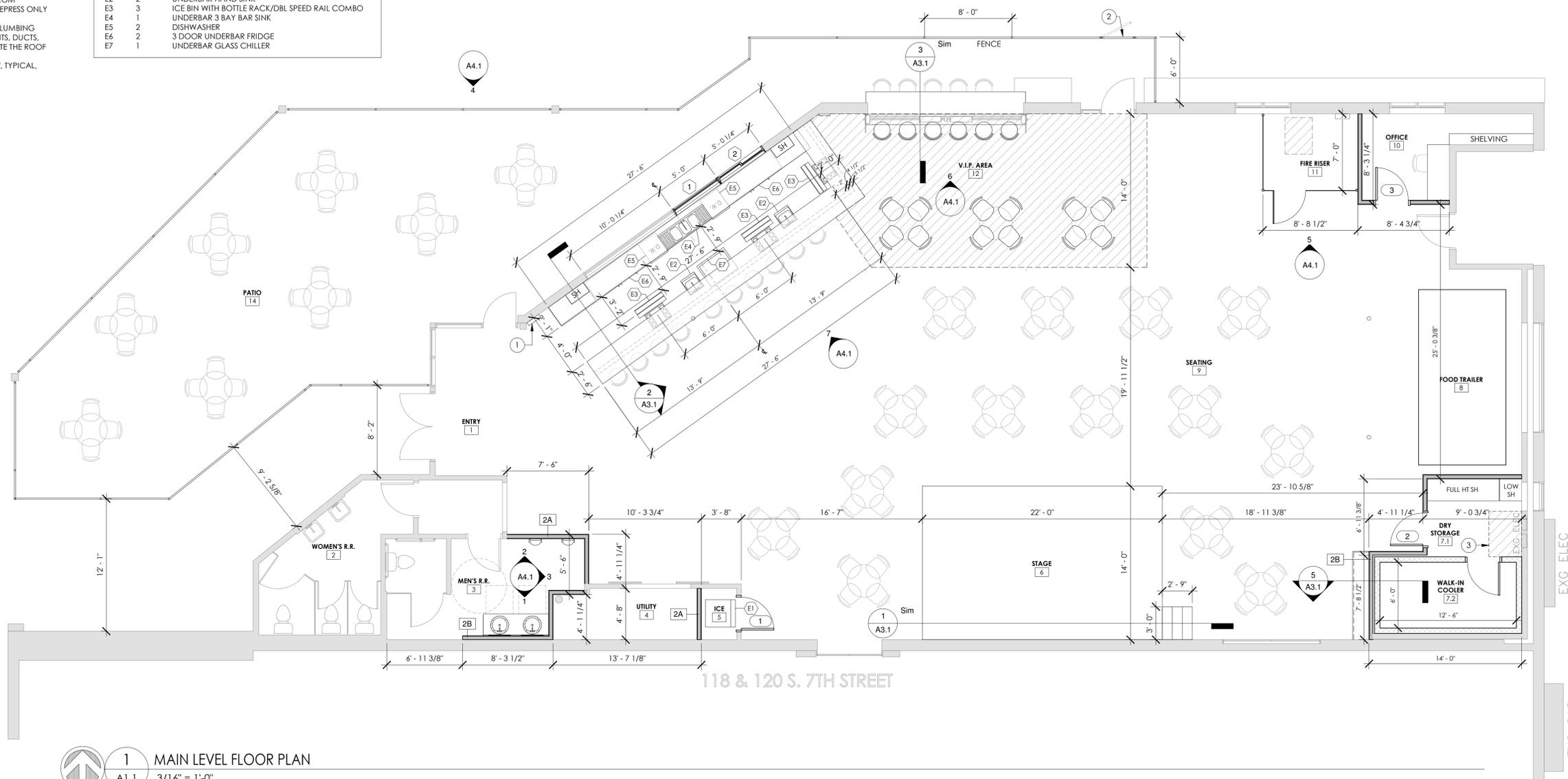
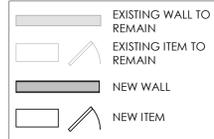
FLOOR	BASE	WALLS	CEILING
1. EXISTING	1. EXISTING	1. EXISTING	1. EXISTING
2. EPOXY	2. RUBBER	2. GYP. BD. - PNT.	
3. TILE		3. TILE	
4. VINYL			

KEYNOTES:

- RELOCATED ELECTRICAL PANEL LOCATION
- GATE W/ PANIC EXIT DEVICE
- 36" CLEAR DEPTH IN FRONT OF ELEC. PANELS

BAR EQUIPMENT SCHEDULE (EH)		
TAG:	QTY:	DESCRIPTION:
E1	1	ICE MAKER/BIN COMBO
E2	2	UNDERBAR HAND SINK
E3	3	ICE BIN WITH BOTTLE RACK/DBL SPEED RAIL COMBO
E4	1	UNDERBAR 3 BAY BAR SINK
E5	2	DISHWASHER
E6	2	3 DOOR UNDERBAR FRIDGE
E7	1	UNDERBAR GLASS CHILLER

REMODEL LEGEND



1 MAIN LEVEL FLOOR PLAN
A1.1
3/16" = 1'-0"

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MAIN LEVEL PLAN

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SCALE: As indicated

NOT FOR CONSTRUCTION

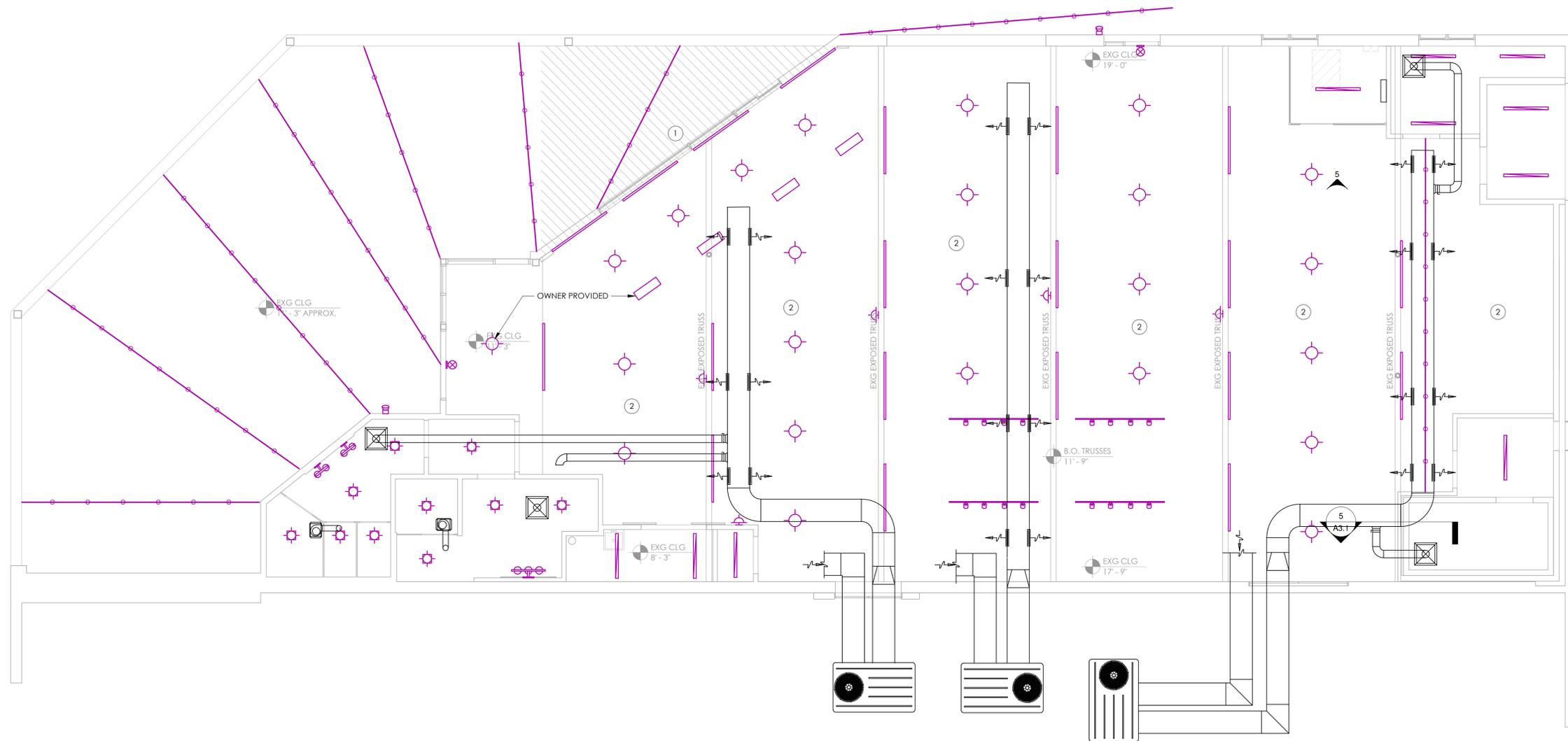
LEGEND

 EXPOSED TO EXISTING STRUCTURE	 RECESSED DOWNLIGHT CAN LIGHT - RE: ELEC	 SUPPLY AIR GRILLE, RE: MECH
 GYP BD, PAINT	 SURFACE WALL MOUNTED LED EMERGENCY DOWN LIGHT - RE: ELEC	 EXHAUST FAN, RE: MECH
	 OVER THE DOOR LED EMERGENCY EGRESS LIGHT - RE: ELEC	 RETURN AIR GRILLE, RE: MECH
	 EXIT SIGN, INDICATING DIRECTIONAL ARROW & SIGN ORIENTATION, RE: ELEC	 VENT FLOW DIRECTION, RE: MECH.
	 TRIPLE VANITY LIGHT - RE: ELEC	 OCCUPANCY SENSOR, RE: ELEC
	 DOUBLE VANITY LIGHT - RE: ELEC	NOTE: CENTER LIGHT FIXTURES IN SPACE AS SHOWN ON REFLECTED CEILING PLANS WHEN LIGHT FIXTURES ARE NOT DIMENSIONED. (TYP)
	 4' LED STRIP LIGHT - RE: ELEC	 SMOKE DETECTOR, RE: ELEC
	 SUSPENDED DECORATIVE STRING LIGHT SYSTEM - RE: ELEC	 CEILING MOUNTED PROJECTOR
	 STAGE LIGHTS - 8'L SINGLE CIRCUIT TRACK - RE: ELEC	 CEILING MOUNTED SPEAKER
	 6'L BEAM 2 WALL MOUNTED LED LINEAR FIXTURE - RE: ELEC	
	 18" DIA. OUTFIELD/GRIDIRON SERIES STEM MOUNTED PENDANT FIXTURE - RE: ELEC	
	 PENDANT LIGHT BY OWNER	

KEYNOTES:
 1. SHELF AREA TO BE PROVIDED WITH SWITCHED POWER FOR SIGNAGE, TV'S, LIGHTING ETC.

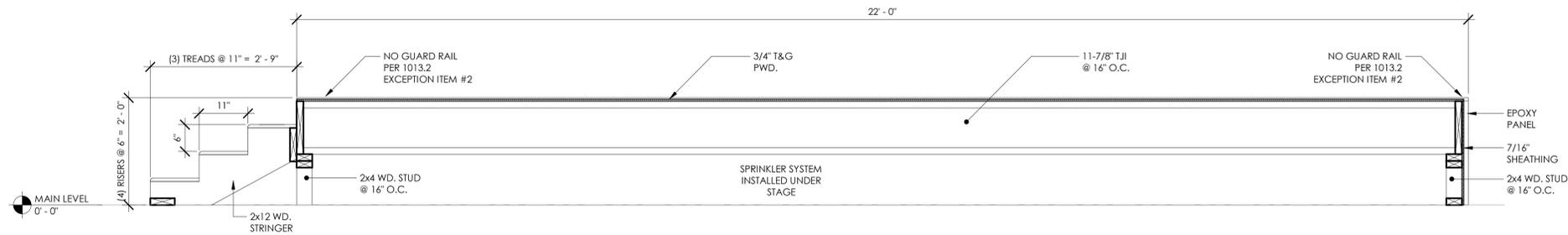
REMODEL LEGEND

 EXISTING WALL TO REMAIN	 EXISTING ITEM TO REMAIN
 NEW WALL	 NEW ITEM

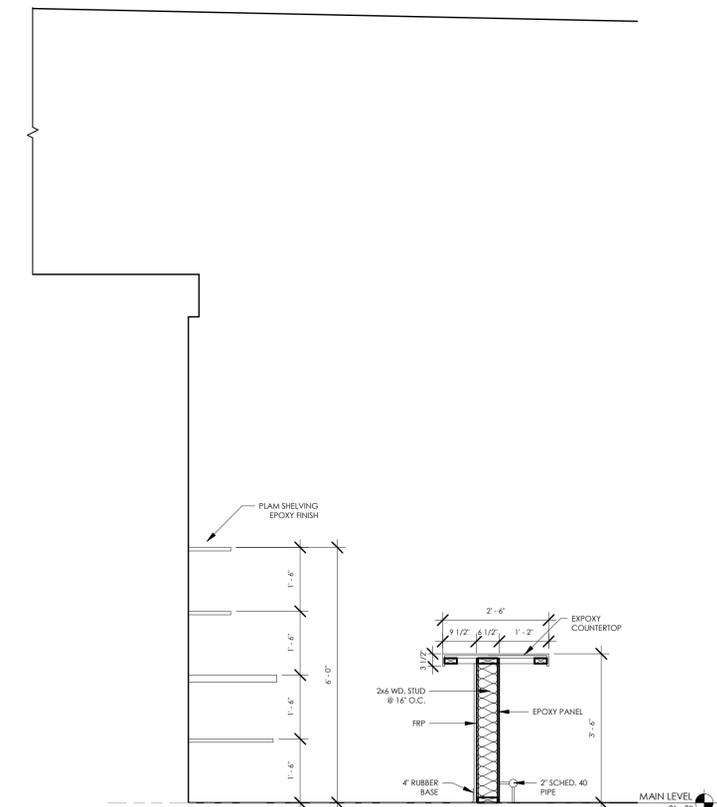


 **1** MAIN LEVEL - REFLECTED CEILING PLAN
 A1.2 3/16" = 1'-0"

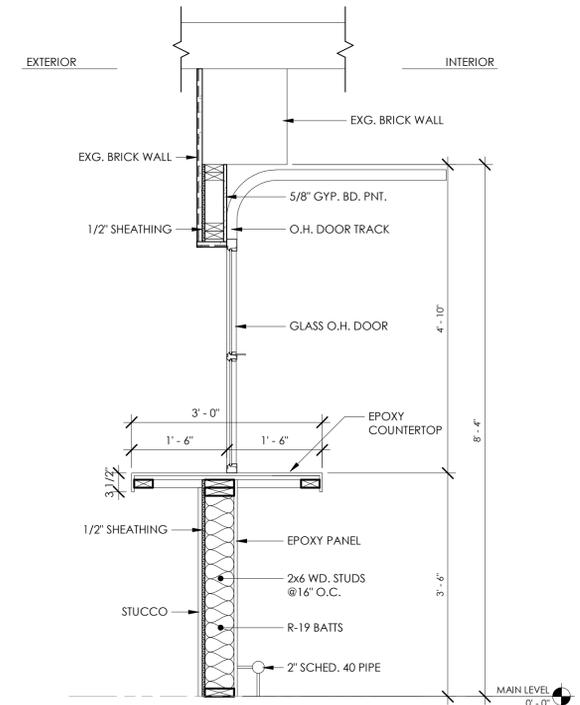
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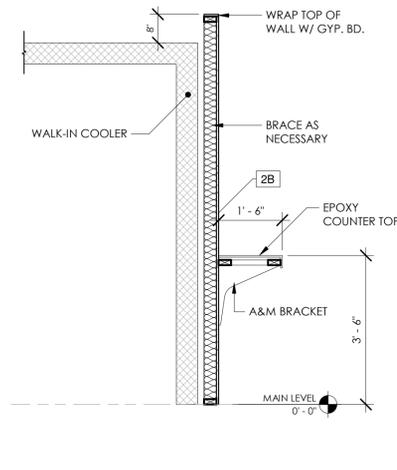
1 TYPICAL SECTION @ STAGE
A3.1 3/4" = 1'-0"



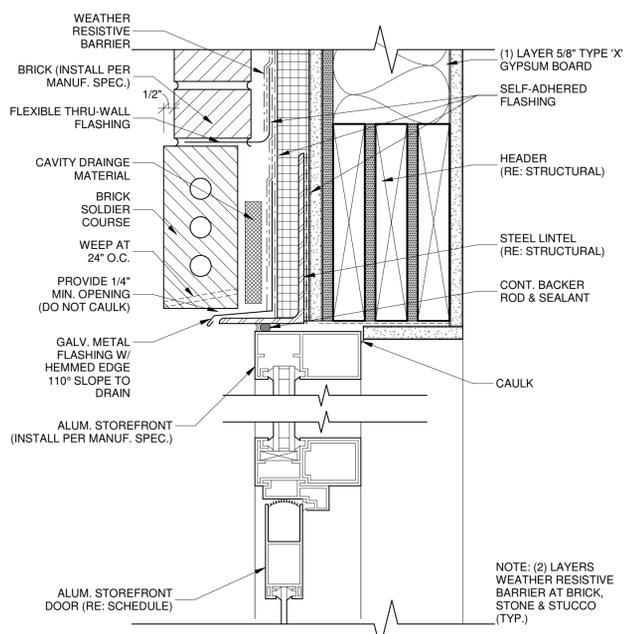
2 SECTION @ BAR
A3.1 1/2" = 1'-0"



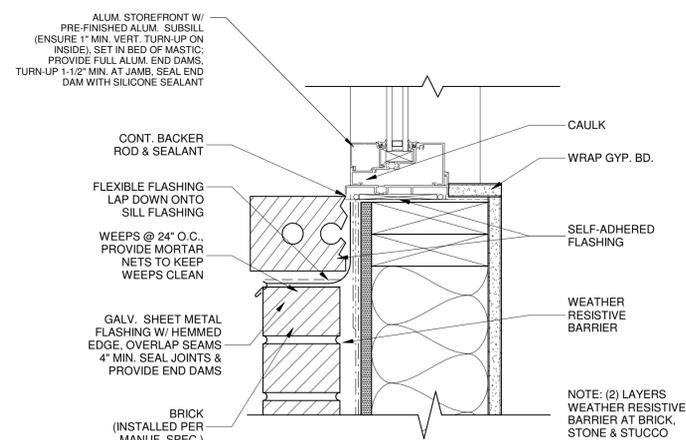
3 SECTION @ O.H. DOOR
A3.1 3/4" = 1'-0"



5 SECTION @ W.I.C.
A3.1 1/2" = 1'-0"



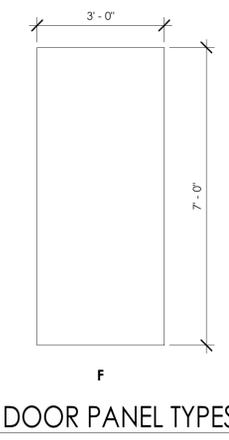
6 STOREFRONT - DOOR - HEAD - BRICK
A3.1 3" = 1'-0"



7 STOREFRONT - SILL - BRICK - WD
A3.1 3" = 1'-0"

THE MANUFACTURE USED ARE:
HINGES; STANLEY
LOCKSETS & CYLINDERS; SCHLAGE
ELECTRIC STRIKES/EXIT DEVICES; VON DUPRIN
DOOR CLOSERS; NORTON
KICK PLATES; PUSH/PULL; FLUSH BOLTS, DUST PROOF STRIKES
MUTES & STOPS; ROCKWOOD
THRESHOLDS, WEATHERSTRIP, SWEEPS, SMOKE/SOUND SEAL
AUTO DOOR BOTTOMS; PEMKO
STOREFRONT; PUSH/PULLS; HIAWATHA, HINGES TUBELITE

ARCH REF:	QTY:	ITEM NUMBER:	TYPE:	MFG:	SUBTYPE:
ENTRY DOOR DBL	HDW-1	3.0 C8168 4.5 X 4.5 US26D NRP 1.0 E 88 75 L BE 1.0 UNI - 7500 AL - 689 SNB 1.0 271A 36 1.0 303AS 1/36 X 2/84 1.0 315CN 36 1.0 6200	HDWE	STA VON NOR PEM PEM PEM VON	HINGE EXIT CLOSER THRES WSTP SWEEP STRIKE
OFFICE DOORS	HDW-2	3.0 C8179 4.5 X 4.5 US26D 1.0 ND50 PD RHO 626 1.0 409 US32D 3.0 608 2.0 10X34.050 US 32D	HDWE	STA SCH ROC ROC ROC	HINGE LOCK/ENTRANCE STOP SILEN KICK
PRIVATE BATH	HDW-3	1.0 C8179 4.5 X 4.5 US26D 1.0 ND40 S RHO 626 2.0 10 X 34.050 US32D 1.0 409 US32D 3.0 608	HDWE	STA SCH ROC ROC ROC	HINGE LOCK/PRIVATE BATH KICK STOP SILEN
COMPRESSOR	HDW-4	3.0 C8179 4.5 X 4.5 US26D 1.0 N80 PD RHO 626 1.0 7500 AL-689 SNB 2.0 10 X 34.050 US32D 1.0 409 US32D 3.0 608	HDWE	STA SCH NOR ROC ROC ROC	HINGE STORAGE ROOM CLOSER KICK STOP SILEN
DOOR TO SHOP	HDW-5	3.0 C8168 4.5 X 4.5 US26D NRP 1.0 ND50 PD RHO 626 1.0 S100-689 ES 1.0 UNI - 7500 AL - 6589 SNB 2.0 10 X 34.050 US32D 1.0 271A 36 1.0 303AS 1/36 X 2/84 1.0 315CN 36	HDWE	STA SCH VON NOR ROC ROC PEM PEM	HINGE LOCK/CORRIDOR STRIKE CLOSER KICK THRES WSTP SWEEP
	HDW-6	6.0 C8179 4.5 X 4.5 US26D 2.0 ND170 2.0 10 X 34.050 US32D 2.0 409 US32D	HDWE	STA SCH ROC ROC	HINGE SINGLE KICK STOP
FIRE RISER ROOM	HDW-7	3.0 C8179 4.5 X 4.5 US26D 1.0 ND10 S RHO 626 1.0 7500 AL - 689 SNB 2.0 10 X 34.050 US32D 1.0 409 US32D 3.0 608	HDWE	STA SCH NOR ROC ROC ROC	HINGE LOCK/PASSAGE CLOSER KICK STOP SILEN
FIRE RISER ROOM	HDW-8	3.0 C8179 4.5 X 4.5 US26D 1.0 98 47 DT 06 US26D 1.0 7500 AL - 689 SNB 1.0 10 X 34.050 US32D 1.0 409 US32D 3.0 608 1.0 315CN 36 1.0 303AS 1/36 X 2-84	HDWE	STA SCH NOR ROC ROC ROC ROC	HINGE PANIC CLOSER KICK STOP SILEN WSTP
PRIVATE CLOSET	HDW-9	3.0 C8179 4.5 X 4.5 US26D 1.0 ND10 S RHO 626 2.0 10 X 34.050 US32D 1.0 409 US32D 3.0 608	HDWE	STA SCH ROC ROC	HINGE LOCK/PASSAGE KICK STOP SILEN
RESTROOM/MULTI SEX	HDW-10	3.0 C8168 4.5 X 4.5 US26D NRP 1.0 708 US32D 1.0 102 X 708 US32D 1.0 7500 AL - 689 SNB 1.0 412CRL 36 1.0 S88D 17 2.0 10 X 34.050 US32D 1.0 409 US32D	HDWE	STA ROC ROC NOR PEM ROC ROC	HINGE PUSH PULL CLOSER AUTO DB SM SEA KICK STOP



NOT FOR CONSTRUCTION

REVISION:

DD
PROJECT NO: 1949
SHEET NAME: SECTIONS / DETAILS
DATE: 08/22/2019
SHEET NO: A3.1
SCALE: As indicated

REVISION:

DD

PROJECT NO:

1949

SHEET NAME:

INTERIOR ELEVATIONS

DATE:

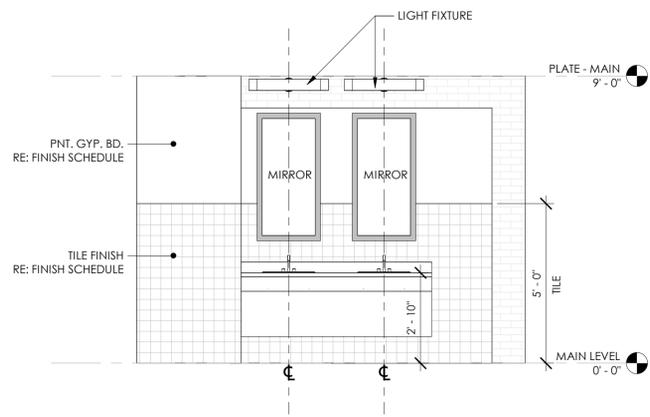
08/22/2019

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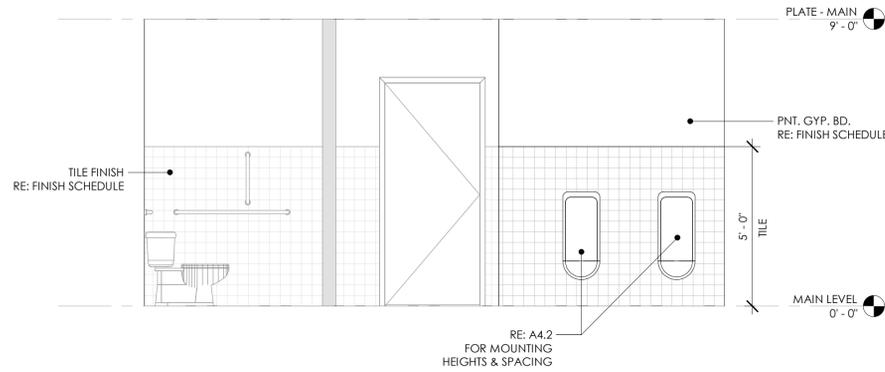
A4.1

SCALE:

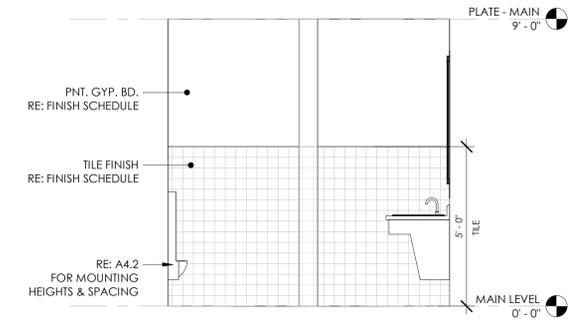
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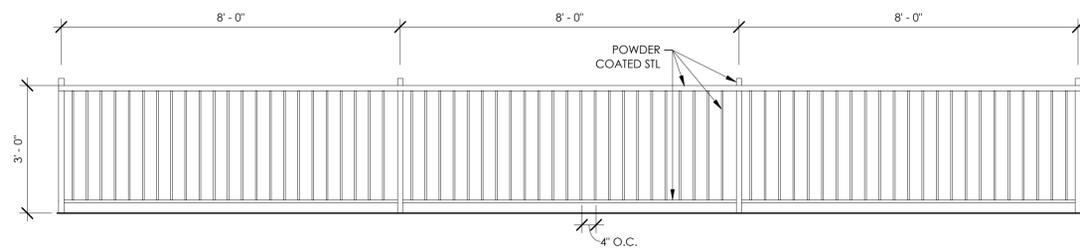
1 MEN's - 1
 A4.1 3/8" = 1'-0"



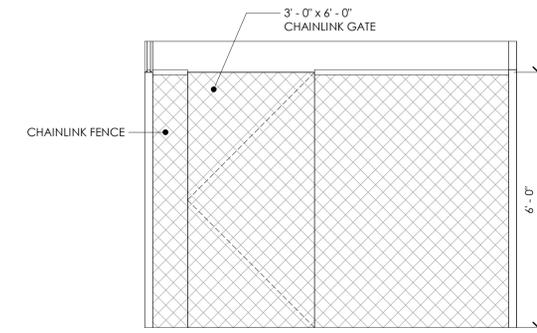
2 MEN's - 2
 A4.1 3/8" = 1'-0"



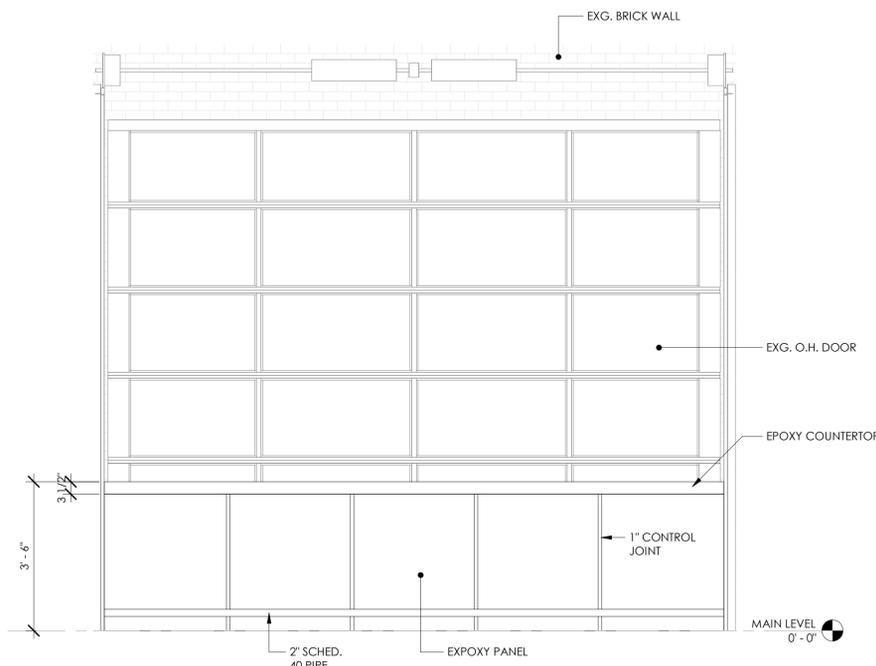
3 MEN's - 3
 A4.1 3/8" = 1'-0"



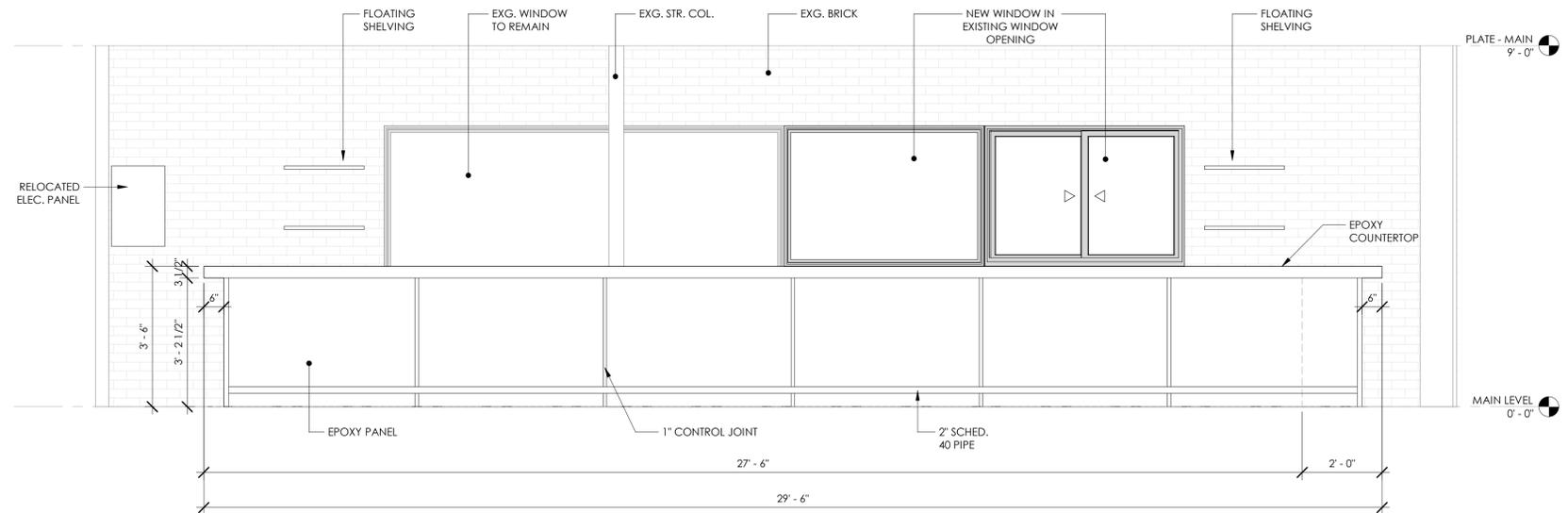
4 ELEVATION @ PATIO GUARD RAIL
 A4.1 1/2" = 1'-0"



5 I.E. @ FIRE RISER GATE
 A4.1 1/2" = 1'-0"

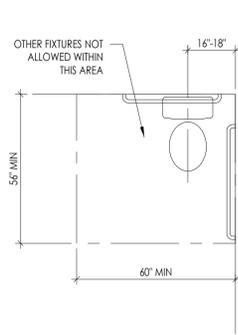


6 I.E. @ O.H. DOOR / VIP
 A4.1 1/2" = 1'-0"

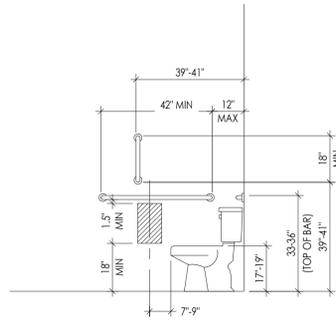


7 I.E. @ BAR
 A4.1 1/2" = 1'-0"

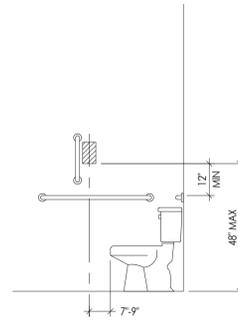
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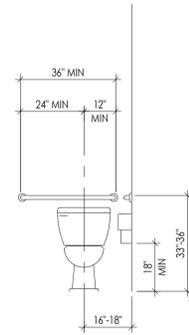
TOILET LOCATION AND CLEARANCE
SCALE: 3/8" = 1'-0"



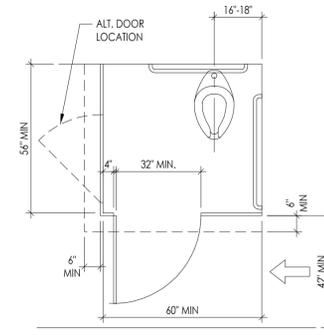
TOILET HEIGHT, SIDE WALL GRAB BAR, AND DISPENSER LOCATION BELOW GRAB BAR
SCALE: 3/8" = 1'-0"



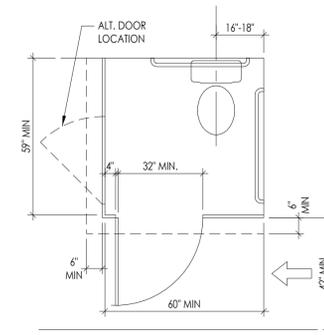
DISPENSER LOCATION ABOVE GRAB BAR
SCALE: 3/8" = 1'-0"



REAR WALL GRAB BAR
SCALE: 3/8" = 1'-0"



WALL HUNG TOILET COMPARTMENT, COMPARTMENT DOOR, AND COMPARTMENT TOE CLEARANCE
SCALE: 3/8" = 1'-0"



FLR. MOUNTED TOILET COMPARTMENT, COMPARTMENT DOOR, AND COMPARTMENT TOE CLEARANCE
SCALE: 3/8" = 1'-0"

ADA REQUIREMENTS FOR RESTROOM

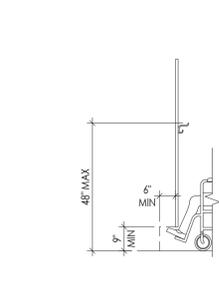
BUILDINGS AND FACILITIES SHALL BE DESIGNED AND CONSTRUCTED TO BE ACCESSIBLE IN ACCORDANCE WITH IBC 2015 & ICC A117.1.

WATER CLOSETS

- ICC A117.1 GENERAL: ACCESSIBLE WATER CLOSETS SHALL COMPLY WITH SEC. 604.1
- ICC A117.1 CLEAR FLOOR SPACE: CLEAR FLOOR SPACE FOR WATER CLOSETS NOT IN STALLS SHALL COMPLY WITH SEC. 604.3.1. CLEAR FLOOR SPACE MAY BE ARRANGED TO ALLOW EITHER A LEFT-HANDED OR RIGHT-HANDED APPROACH.
- ICC A117.1 HEIGHT: THE HEIGHT OF WATER CLOSETS SHALL BE 17" TO 19" (430mm TO 485 mm) MEASURED TO THE TOP OF THE TOILET SEAT SEATS SHALL NOT BE SPRUNG TO RETURN TO A LIFTED POSITION.
- ICC A117.1 GRAB BARS: GRAB BARS FOR WATER CLOSETS NOT LOCATED IN STALLS SHALL COMPLY WITH SEC. 604.3. THE GRAB BAR BEHIND THE WATER CLOSET SHALL BE 36" (915 mm) MINIMUM.
- ICC A117.1 FLUSH CONTROLS: FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC AND SHALL COMPLY WITH SEC. 604.6. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET.
- ICC A117.1 DISPENSERS: TOILET PAPER DISPENSERS SHALL BE INSTALLED WITHIN REACH. DISPENSERS THAT CONTROL DELIVERY OR THAT DO NOT PERMIT CONTINUOUS PAPER FLOW SHALL NOT BE USED.

LAVATORIES AND MIRRORS

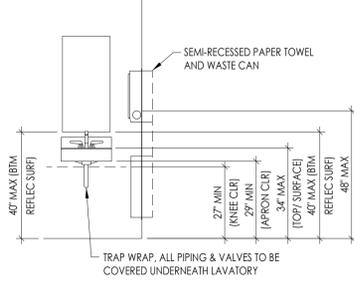
- ICC A117.1 GENERAL: THE REQUIREMENTS OF SEC. 606 SHALL APPLY TO LAVATORY FIXTURES, VANITIES AND BUILT-IN LAVATORIES.
- ICC A117.1 HEIGHT AND CLEARANCES: LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO HIGHER THAN 34" (865 mm) ABOVE THE FINISH FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29" (735 mm) ABOVE THE FINISH FLOOR TO THE BOTTOM OF THE APRON, KNEE AND TOE CLEARANCE SHALL COMPLY WITH SEC. 306.
- ICC A117.1 CLEAR FLOOR SPACE: A CLEAR FLOOR SPACE 30" X 48" (760 mm X 1220 mm) COMPLYING SEC. 303.3 SHALL BE PROVIDED IN FRONT OF A LAVATORY TO ALLOW FORWARD APPROACH. SUCH CLEAR FLOOR SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE AND SHALL EXTEND A MAXIMUM OF 19" (485 mm) UNDERNEATH THE LAVATORY.
- ICC A117.1 EXPOSED PIPES AND SURFACES: HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
- ICC A117.1 FAUCETS: FAUCETS SHALL COMPLY WITH SEC. 606.3. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGN. IF SELF-CLOSING VALVES ARE USED THE FAUCET SHALL REMAIN OPEN FOR AT LEAST 10 SECONDS.
- ICC A117.1 MIRRORS: MIRRORS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE NO HIGHER THAN 40" (1015 mm) ABOVE THE FINISH FLOOR.
- ICC A117.1 GENERAL: ALL HANDRAILS, GRAB BARS, AND TUB AND SHOWER SEATS, REQUIRED TO BE ACCESSIBLE BY SEC. 305, 404.5, 404.5.1, 404.5.2, 607.4.1.2, 607.4.2



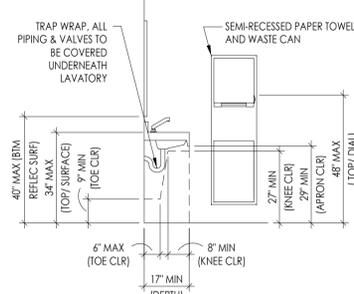
COAT HOOK HEIGHT AND COMPARTMENT TOE CLEARANCE
SCALE: 3/8" = 1'-0"



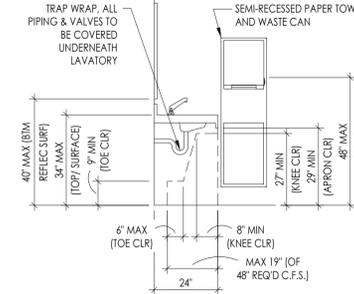
LAVATORY CLEAR SPACE
SCALE: 3/8" = 1'-0"



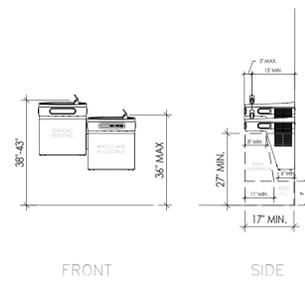
LAVATORY HEIGHT, MIRROR, AND KNEE CLEAR SPACE
SCALE: 3/8" = 1'-0"



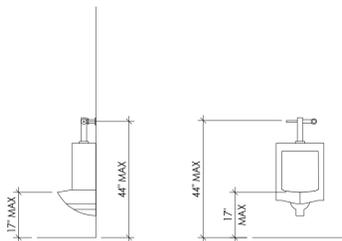
WALL HUNG LAVATORY HEIGHT, MIRROR AND KNEE CLEAR SPACE
SCALE: 3/8" = 1'-0"



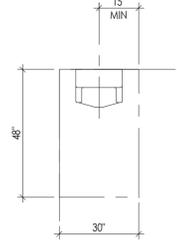
COUNTERTOP LAVATORY HEIGHT, MIRROR AND KNEE CLEAR SPACE
SCALE: 3/8" = 1'-0"



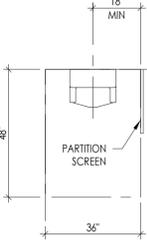
DRINKING FOUNTAIN
SCALE: 3/8" = 1'-0"



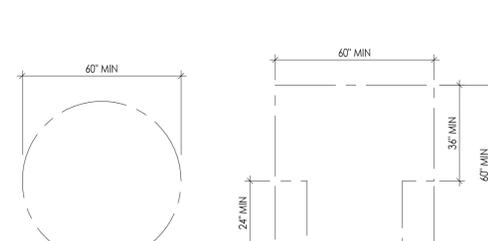
URINAL HEIGHT AND FLUSH CONTROL HEIGHT
SCALE: 3/8" = 1'-0"



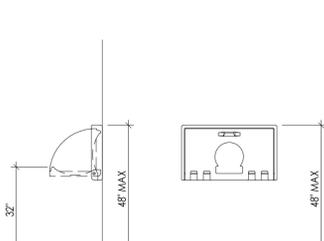
URINAL CLEAR FLOOR SPACE
SCALE: 3/8" = 1'-0"



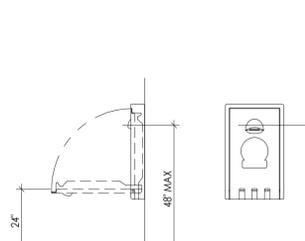
CIRCULAR TURNING SPACE
SCALE: 3/8" = 1'-0"



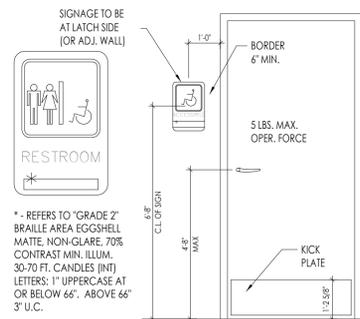
T-SHAPED TURNING SPACE
SCALE: 3/8" = 1'-0"



HORIZONTAL BABY CHANGING HEIGHT
SCALE: 3/8" = 1'-0"



VERTICAL BABY CHANGING HEIGHT
SCALE: 3/8" = 1'-0"



RESTROOM SIGNS & DOOR
SCALE: N.T.S.

SWINGING DOOR MANEUVERING CLEARANCES
PER ICC A117.1-2009 (ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES), SECTION 404.2.3.2

CONFIG	APPROACH	SIDE	DIST 1	DIST 2	DIST 3	HARDWARE
a1	FRONT	PULL	18" MIN.	60" MIN.	0"	ANY
b1	FRONT	PUSH	0"	48" MIN.	0"	NONE or CLOSER or LATCH
b2	FRONT	PUSH	12" MIN.	48" MIN.	0"	CLOSER & LATCH
c	SIDE (HINGE)	PULL	36" MIN.	60" MIN.	0"	ANY
d	SIDE (HINGE)	PULL	42" MIN.	54" MIN.	0"	ANY
e1	SIDE (HINGE)	PUSH	0"	42" MIN.	22" MIN.	NONE or CLOSER or LATCH
e2	SIDE (HINGE)	PUSH	12" MIN.	48" MIN.	22" MIN.	CLOSER & LATCH
f1	SIDE (LATCH)	PULL	24" MIN.	48" MIN.	0"	NONE or LATCH
f2	SIDE (LATCH)	PULL	24" MIN.	54" MIN.	0"	CLOSER or CLOSER & LATCH
g1	SIDE (LATCH)	PUSH	24" MIN.	42" MIN.	0"	NONE or LATCH
g2	SIDE (LATCH)	PUSH	24" MIN.	48" MIN.	0"	CLOSER or CLOSER & LATCH

THE PLANS AND ELEVATIONS ON THIS SHEET ARE FOR ADA REFERENCE FOR SPACE AND HEIGHT REQUIREMENTS. SEE SHEET A4.1 FOR ACTUAL PLANS, ELEVATIONS, AND ACCESSORIES USED ON THIS PROJECT.

DIMENSIONS ARE TAKEN FROM FACE OF FINISH MATERIAL.

REVISION:

DD

PROJECT NO:

1949

SHEET NAME:
ADA DETAILS

DATE: 08/22/2019

SHEET NO:

A4.2

SCALE: 3/8" = 1'-0"

701 Main Street

eBricks! Outlet <ebricksoutletstore@gmail.com>

Thu 9/12/2019 11:13 AM

To: Jace Hochwalt <jaceh@gjcity.org>

**** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - ****

Hey again, Jace!

I won't be able to make the hearing, however, we're in favor of the CUP for the bar/nightclub proposal.

Happy Thursday!

-K

--

Best regards,

Kenneth @ eBricks

970-812-8516

7-days a week 10am-6pm



Grand Junction Planning Commission

Regular Session

Item #4.

Meeting Date: September 24, 2019

Presented By: Scott D. Peterson, Senior Planner

Department: Community Development

Submitted By: Scott D. Peterson, Senior Planner

Information

SUBJECT:

Consider a request by Paul Adams to zone 1.99 acres from County RSF-4 (Residential Single Family – 4 du/ac) to a City R-8 (Residential – 8 du/ac) for the Adams II Annexation located at 216 27 ½ Road.

RECOMMENDATION:

Staff recommends approval of the requested Zone of Annexation.

EXECUTIVE SUMMARY:

The Applicant, Paul Adams, is requesting a zone of annexation to R-8 (Residential – 8 du/ac) for the Adams II Annexation. The 1.99-acre parcel of land is located in Orchard Mesa, directly west of the Mesa County Fairgrounds at the intersection of B ¼ Road and 27 ½ Road, south of Highway 50 and has a Comprehensive Plan Future Land Use Map designation of Residential Medium (4 – 8 du/ac). The property currently contains a single-family detached home along with various accessory buildings.

The Applicant is requesting annexation into the City limits per the Persigo Agreement between Mesa County and the City of Grand Junction in order to market and sell the property in conjunction with the neighboring property to the west of 13.31 acres that is also owned by the Applicant and recently annexed and zoned R-8 (Residential – 8 du/ac) (Adams Annexation) in 2018. The request for annexation will be considered separately by the City Council.

BACKGROUND OR DETAILED INFORMATION:

The Applicant, Paul Adams, has requested annexation of a parcel of land into the City

limits located at 216 27 ½ Road, in anticipation of future residential subdivision development. Though there is not a pending development application, should the Applicant or future owner want to develop they would be subject to annexation as compelled by the 1998 Persigo Agreement with Mesa County. This agreement requires all future residential development that is considered annexable development be annexed, zoned and reviewed by the City. The property currently contains a single-family detached home and various accessory buildings and is approximately 1.99-acres in size. There is no dedicated right-of-way included in the annexation, however, the Applicant's property extends to the centerline of both B ¼ and 27 ½ Road through the use of a road easement. Through the annexation process, the City would take ownership and maintenance obligations for this 6,400 square feet of roadway. The Applicant is requesting a zone of annexation to R-8 (Residential – 8 du/ac) to match the zoning district on the adjacent 13.31-acre parcel of land which is also owned by the Applicant.

The property is currently in the County and retains a County zoning of RSF-4 (Residential Single Family – 4 du/ac). Surrounding and adjacent properties are also zoned RSF-4 in the County, ranging in size from 0.56 to 3.88 acres, with the exception of the Mesa County Fairgrounds property which is zoned PUD (Planned Unit Development). Adjacent property within the City limits to the west is zoned R-8 with C-2 (General Commercial) zoning to the north and contains the land use of Humphrey RV. The subject property has a Comprehensive Plan Future Land Use designation of Residential Medium (4 – 8 du/ac). The requested zone district of R-8 is in conformance with the Future Land Use designation for the area.

NOTIFICATION REQUIREMENTS

Neighborhood Meeting:

A Neighborhood Meeting regarding the proposed Annexation and Zoning was held on June 10, 2019 in accordance with Section 21.02.080 (e) of the Zoning and Development Code. The Applicant and City staff were present, however no citizens attended the meeting. To date, no concerns have been voiced by the neighborhood and City staff has not received any comments from the public regarding this request. An official application for annexation and zoning was submitted to the City of Grand Junction for review on July 5, 2019.

Notice was completed consistent with the provisions in Section 21.02.080 (g) of the City's Zoning and Development Code. The subject property was posted with an application sign on July 31, 2019. Mailed notice of the public hearings before Planning Commission and City Council in the form of notification cards was sent to surrounding property owners within 500 feet of the subject property on September 13, 2019. The notice of the Planning Commission public hearing was published September 17, 2019 in the Grand Junction Daily Sentinel.

ANALYSIS

The criteria for review is set forth in Section 21.02.140 (a) and includes that the City may rezone property if the proposed changes are consistent with the vision, goals and policies of the Comprehensive Plan and must meet one or more of the following rezone criteria as identified:

- (1) Subsequent events have invalidated the original premises and findings; and/or

The property owner has petitioned for annexation into the City limits with a requested zoning district of R-8 which is compatible with the existing Comprehensive Plan Future Land Use Map designation of Residential Medium (4 – 8 du/ac). Since the property is currently in the County, the annexation of the property is a subsequent event that will invalidate the original premise; a county zoning designation. The requested annexation and zoning is also in accordance with the Persigo Agreement between Mesa County and the City of Grand Junction, which states that all new development shall be annexed into the City limits. Therefore, Staff has found this criterion has been met.

- (2) The character and/or condition of the area has changed such that the amendment is consistent with the Plan; and/or

The adoption of the Comprehensive Plan in 2010, designated this property as Residential Medium (4 – 8 du/ac). The Applicant is requesting an allowable zone district that is consistent with the higher end of the density range allowed by the Residential Medium category. The character and/or condition of the surrounding area has not changed in recent years as the area is made up of larger residential acreage that has remained undeveloped or underdeveloped and/or commercially zoned properties, however, the requested zone district of R-8 is compatible with the Comprehensive Plan designation. Further subdivision development and/or lot splits are feasible in the future for this and other properties in the area that are large enough to accommodate such development.

Because there has been no apparent change of character and/or condition and the area has not significantly changed, Staff finds that this criterion has not been met.

- (3) Public and community facilities are adequate to serve the type and scope of land use proposed; and/or

Adequate public and community facilities and services are available to the property and are sufficient to serve land uses associated with the R-8 zone district. City Sanitary Sewer and Ute Water are presently both available within the 27 ½ Road & B ¼ Road rights-of-way respectfully. Property can also be served by Xcel Energy natural gas and

Grand Valley Power electric. A short distance away is Dos Rios Elementary School and further to the north along Highway 50 are commercial retail centers that includes offices, convenience stores and gas islands, restaurants, commercial businesses and a grocery store. The property is also directly west of the Mesa County Fairgrounds.

The public and community facilities are adequate to serve the type and scope of the residential land use proposed, therefore, staff finds this criterion has been met.

(4) An inadequate supply of suitably designated land is available in the community, as defined by the presiding body, to accommodate the proposed land use; and/or

The property and surrounding area to the north, west and south is designated on the Comprehensive Plan Future Land Use Map as Residential Medium (4 – 8 du/ac) with Commercial to the north and Park designations to the east. The proposed zoning of R-8 meets with the intent of achieving the desired density for the property, with this request, to develop at the higher end of the Residential Medium (4 – 8 du/ac) category. The adjacent 13.31-acres, owned by the applicant was recently annexed into the City limits in 2018 and zoned R-8. The R-8 zone district comprises the largest amount of residential acreage within the City limits. However, in Orchard Mesa and south of Highway 50, there exists limited R-8 zoning. The lack of supply for this zone type impedes the ability to provide a diverse supply of housing types; a key principle in the Comprehensive Plan. Because of lack of supply in this part of the community, Staff finds this criterion to be met.

(5) The community or area, as defined by the presiding body, will derive benefits from the proposed amendment.

Annexation and zoning of the property will create consistent land use jurisdiction within the City consistent with an Intergovernmental Agreement with the County. The requested zone district will also provide an opportunity for housing within a range of density that is consistent with the Comprehensive Plan in this area to meet the needs of the growing community. This principle is supported and encouraged by the Comprehensive Plan and furthers the plan's goal of promoting a diverse supply of housing types; a key principle in the Comprehensive Plan. Therefore, Staff finds that the community and area will benefit from this proposed request and that this criterion has been met.

Section 21.02.160 (f) of the Grand Junction Zoning and Development Code provides that the zoning of an annexation area shall be consistent with the adopted Comprehensive Plan and the criteria set forth. Though other zone districts could be considered, the R-8 zone district is consistent with the recommendations of the Plan's Future Land Use Map.

In addition to the zoning requested by the petitioner, the following zone districts would also be consistent with the Comprehensive Plan designation of Residential Medium (4 – 8 du/ac) for the subject property.

R-4 (Residential – 4 du/ac)

R-5 (Residential – 5 du/ac)

R-12 (Residential – 12 du/ac)

R-16 (Residential – 16 du/ac)

R-O (Residential Office)

In reviewing the other zoning district options for the Residential Medium designation, the zoning districts of R-4, R-5, R-8 & R-O allow single-family detached residential development as an allowed land use. However, the residential zone districts of R-12, R-16 and R-O would allow multi-family residential development through the use of the Blended Land Use Map and have a higher maximum residential density than what the Comprehensive Plan anticipates for this property and area of the community.

Further, the zoning request is consistent with the following goals and policies of the Comprehensive Plan:

Goal 1 / Policy A: Land use decisions will be consistent with Future Land Use Map.

Goal 3: The Comprehensive Plan will create ordered and balanced growth and spread future growth throughout the community.

Goal 5: To Provide a broader mix of housing types in the community to meet the needs of a variety of incomes, family types and life stages.

Policy C: Increasing the capacity of housing developers to meet housing demand.

STAFF RECOMMENDATION AND FINDINGS OF FACT

After reviewing the Adams II Annexation, ANX-2019-384, for a Zone of Annexation from County RSF-4 (Residential Single Family – 4 du/ac) to a City R-8 (Residential – 8 du/ac), the following findings of fact have been made:

1. In accordance with Section 21.02.140 (a) of the Zoning and Development Code, the application meets one or more of the rezone criteria.
2. In accordance with Section 21.02.160 (f) of the Zoning and Development Code, the application is consistent with the adopted Comprehensive Plan.

Therefore, City Staff recommends approval of the requested Zone of Annexation.

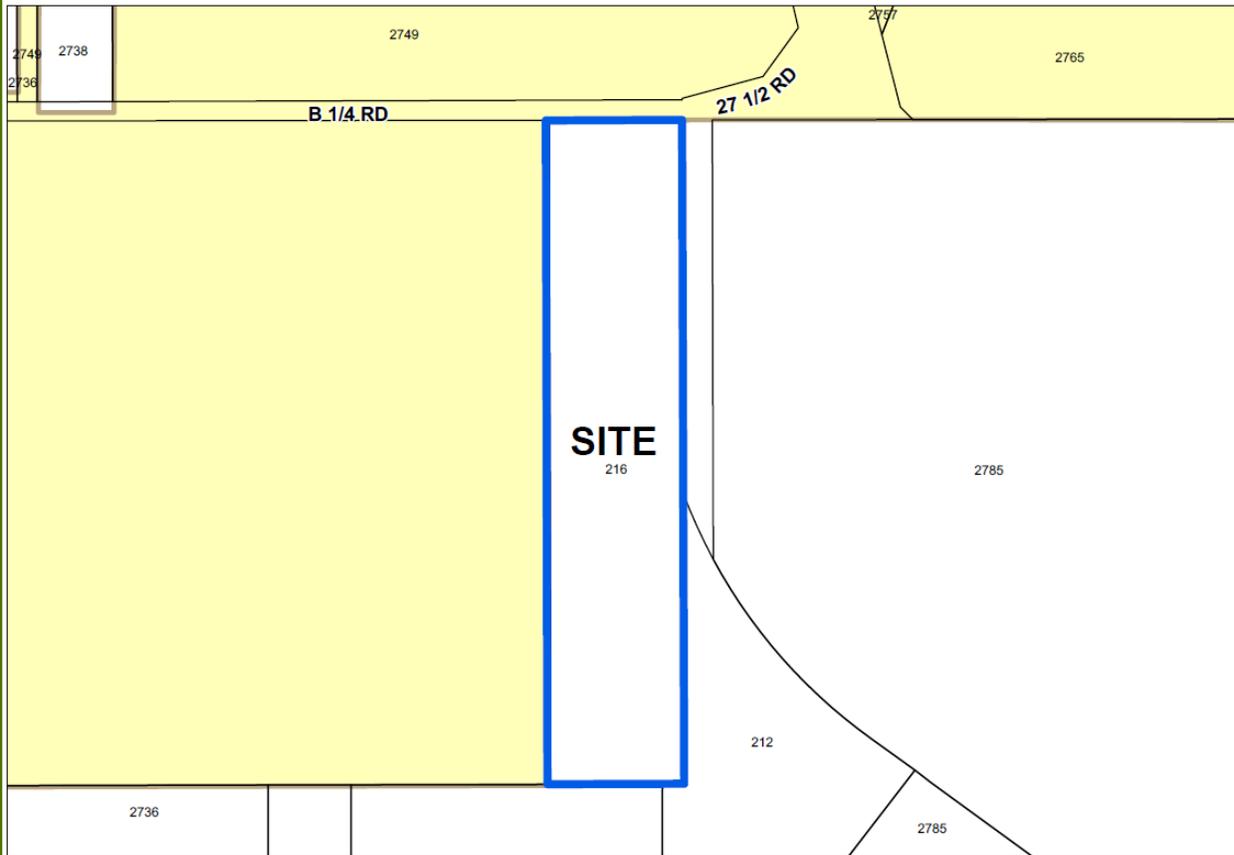
SUGGESTED MOTION:

Madam Chairman, on the Zone of Annexation for the Adams II Annexation to R-8 (Residential – 8 du/ac) zone district, file number ANX-2019-384, I move that the Planning Commission forward a recommendation of approval to City Council with the findings of fact listed in the staff report.

Attachments

1. Exhibit List - Adams II Zone of Annexation
2. Exhibit 2 - Site Location & Zoning Maps, etc.
3. Exhibit 3 - Development Application dated July 5, 2019

Adams II Annexation



0 25 50 100 Feet

 Annexation Boundary

 City Limits

8/6/2019



Adams II Annexation



0 25 50 100 Feet

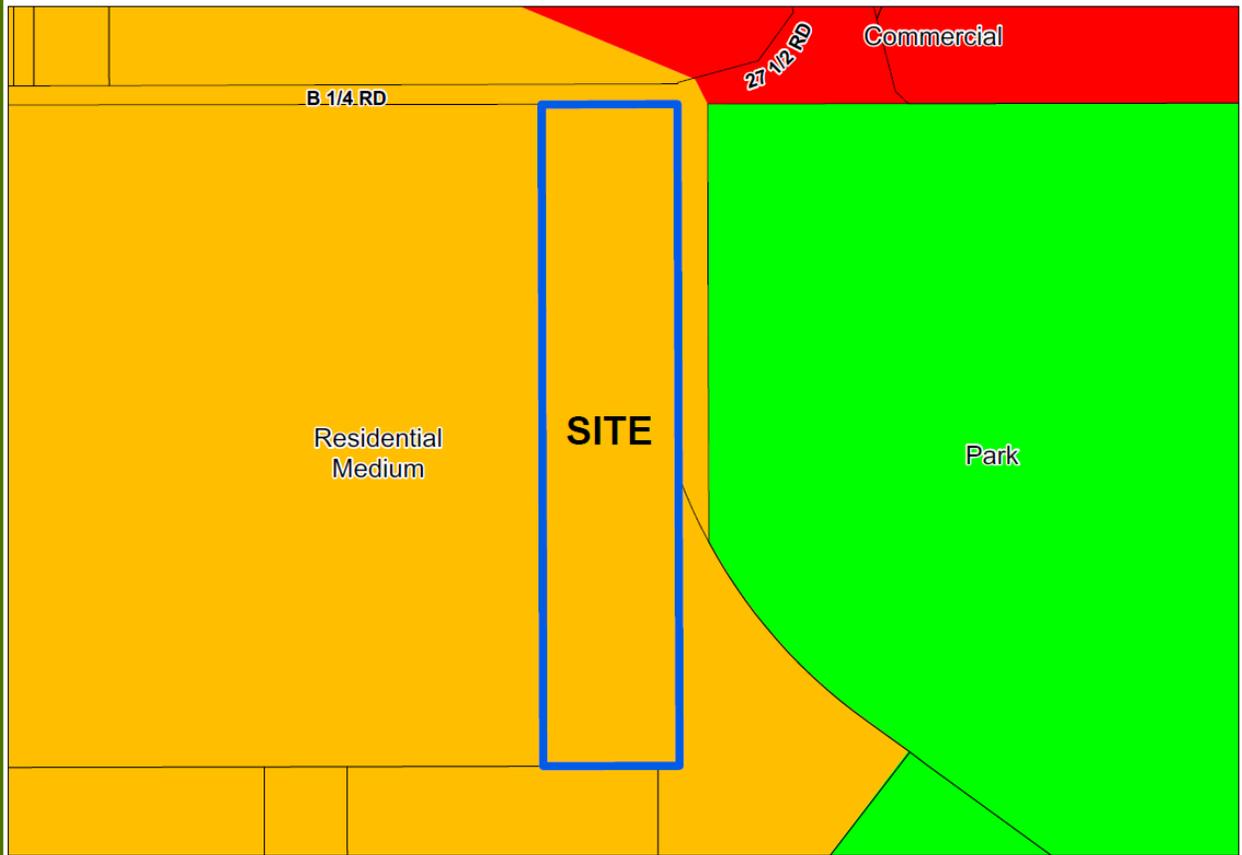
 Annexation Boundary

 City Limits

8/6/2019



Adams II Annexation - Future Land Use



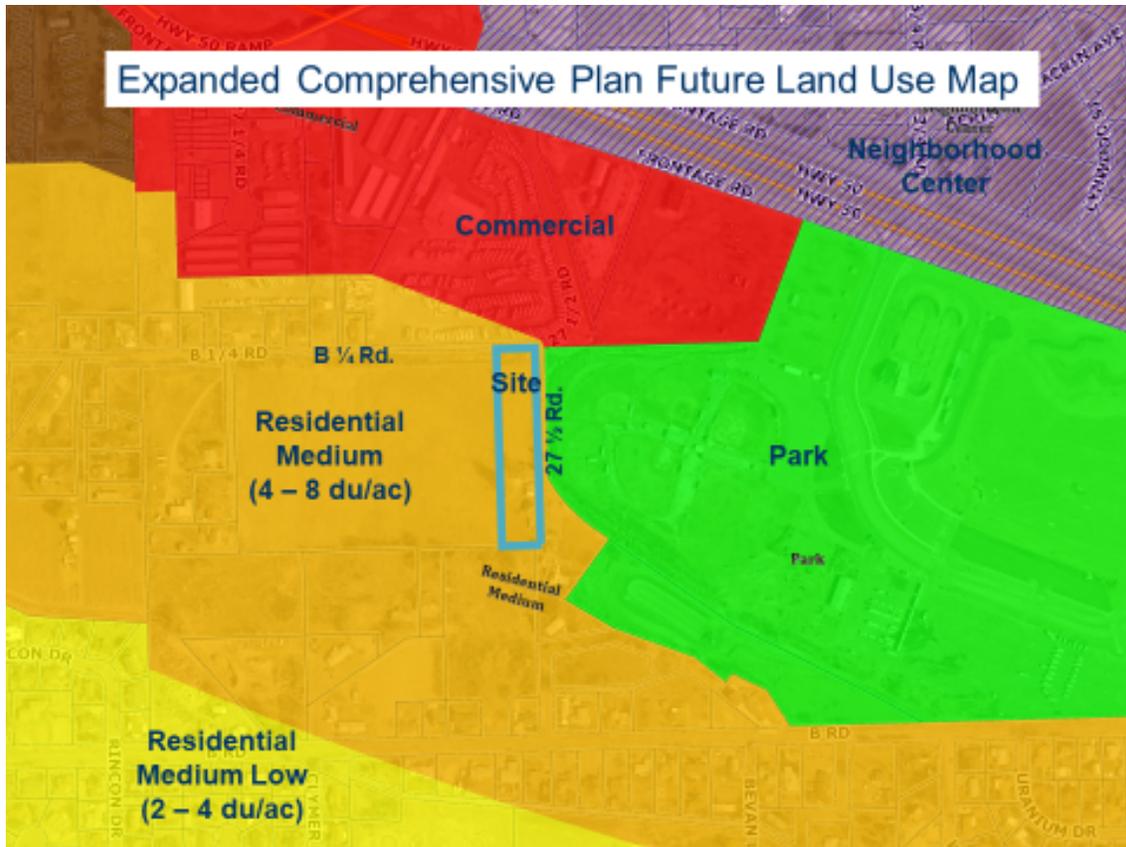
0 25 50 100 Feet

 Annexation Boundary

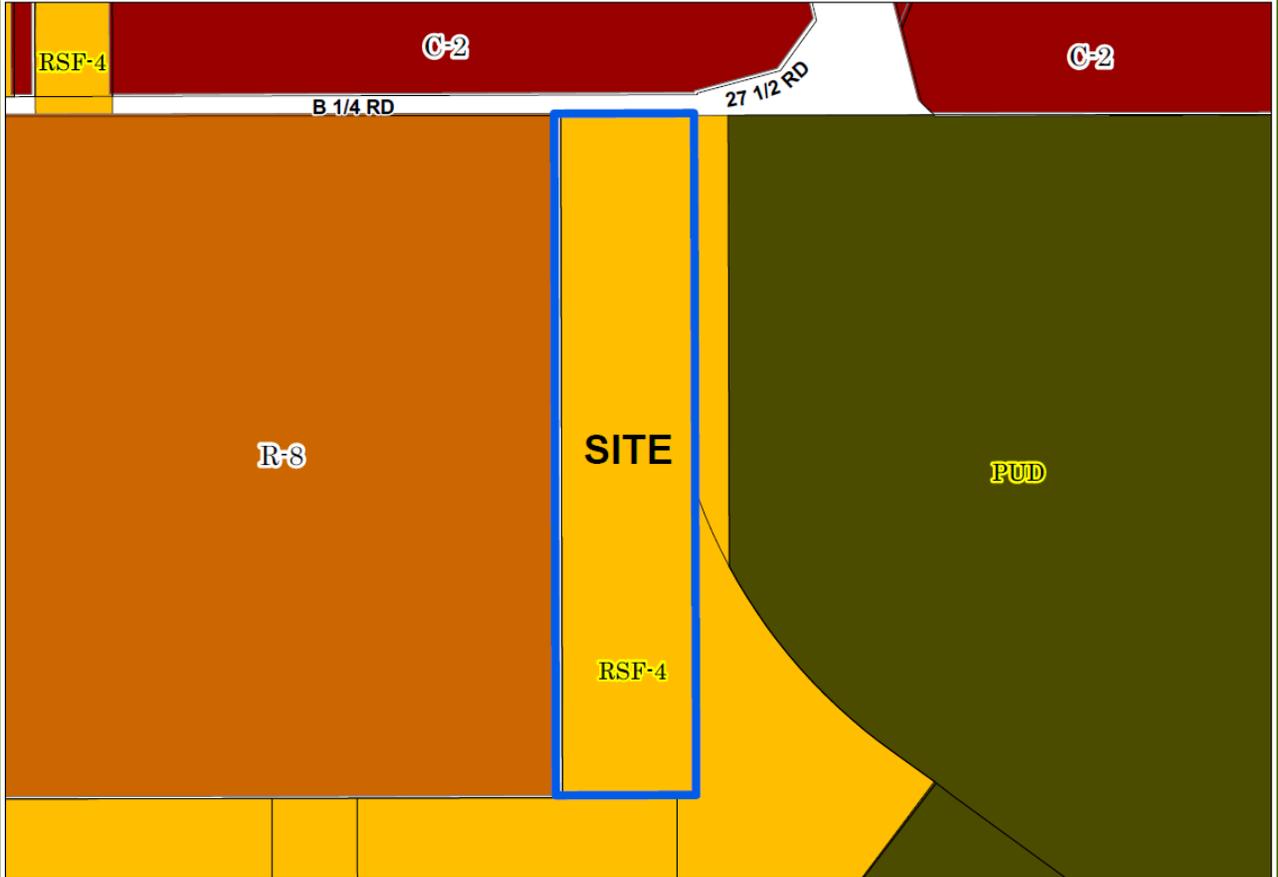
8/6/2019



Expanded Comprehensive Plan Future Land Use Map



Adams II Annexation - Zoning



0 25 50 100 Feet

 Annexation

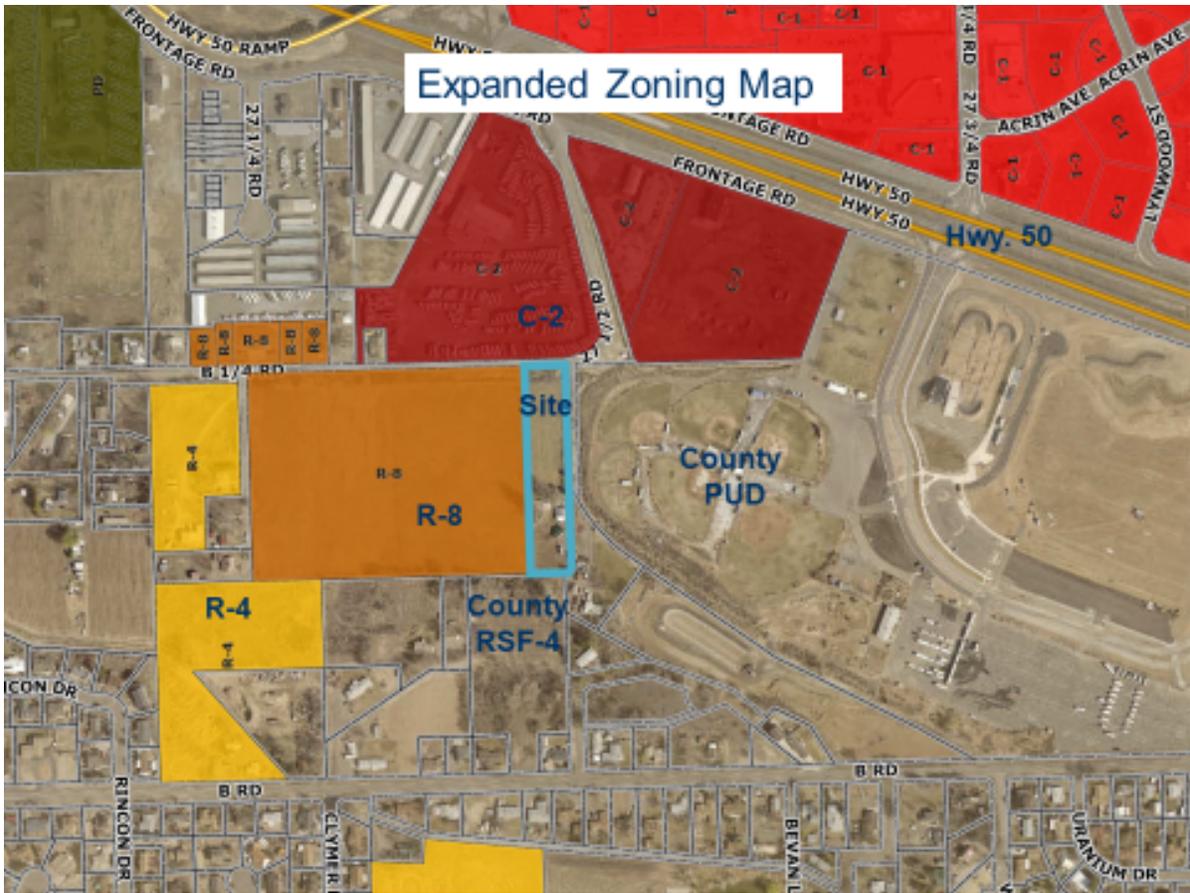
CITY ZONING

COUNTY ZONING

8/6/2019



Expanded Zoning Map





View of property from the intersection of B 1/4 Road & 27 1/2 Road

Development Application

We, the undersigned, being the owner's of the property adjacent to or situated in the City of Grand Junction, Mesa County, State of Colorado, as described herein do petition this:

Petition For: Annexation

Please fill in blanks below **only** for Zone of Annexation, Rezones, and Comprehensive Plan Amendments:

Existing Land Use Designation Ag	Existing Zoning R-4
Proposed Land Use Designation Residential	Proposed Zoning R-8

Property Information

Site Location: 10000 216 20¹/₂ RD	Site Acreage: 20
Site Tax No(s): 29452530048	Site Zoning: R-4, Ag
Project Description: Annexation	

Property Owner Information

Name: Paul Adams

Street Address: 216 20¹/₂ RD

City/State/Zip: G. J 81503

Business Phone #: 970-242-0506

E-Mail: WARBIRDSLOST@AOL.COM

Fax #: NA

Contact Person: Paul

Contact Phone #: 970-242-0506

Applicant Information

Name:

Street Address:

City/State/Zip: NA

Business Phone #: NA

E-Mail:

Fax #:

Contact Person:

Contact Phone #:

Representative Information

Name:

Street Address:

City/State/Zip: NA

Business Phone #: NA

E-Mail:

Fax #:

Contact Person:

Contact Phone #:

NOTE: Legal property owner is owner of record on date of submittal.

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the review comments. We recognize that we or our representative(s) must be present at all required hearings. In the event that the petitioner is not represented, the item may be dropped from the agenda and an additional fee may be charged to cover rescheduling expenses before it can again be placed on the agenda.

Signature of Person Completing the Application Paul Adams	Date 10 June 19
Signature of Legal Property Owner Paul Adams	Date 10 Jun 19

OWNERSHIP STATEMENT - NATURAL PERSON

I, (a) Paul Forrest Adams, am the owner of the following real property:

(b) Parcel No: 2945-253-00-048

A copy of the deed evidencing my interest in the property is attached. All documents, if any, conveying any interest in the property to someone else by the owner, are also attached.

I am the sole owner of the property.

I own the property with other(s). The other owners of the property are (c):

NA

I have reviewed the application for the (d) ANNEXATION pertaining to the property.

I have the following knowledge and evidence concerning possible boundary conflicts between my property and the abutting property(ies): (e) NA

I understand that I have a continuing duty to inform the City planner of any changes in interest, including ownership, easement, right-of-way, encroachment, lienholder and any other interest in the property.

I swear under penalty of perjury that the information contained in this Ownership Statement is true, complete and correct.

Owner signature as it appears on deed: Paul Adams Paul Adams

Printed name of owner: Paul Adams

State of Colorado)

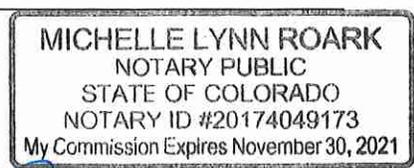
County of Mesa) ss.

Subscribed and sworn to before me on this 10th day of June, 20 19

by Paul Adams

Witness my hand and seal.

My Notary Commission expires on 11-30-21



Michelle Roark
Notary Public Signature



Warranty Deed
(Pursuant to 38-30-113 C.R.S.)

State Documentary Fee
Date: July 26, 2013
\$ 23.00

THIS DEED, made on July 26, 2013 by JASON L. BAILEY Grantor(s), of the County of MESA and State of COLORADO for the consideration of (\$230,000.00) *** Two Hundred Thirty Thousand and 00/100 *** dollars in hand paid, hereby sells and conveys to PAUL ADAMS Grantee(s), as Joint Tenants, whose street address is 216 27 1/2 RD GRAND JUNCTION, CO 81503, County of MESA, and State of COLORADO, the following real property in the County of Mesa, and State of Colorado, to wit:

THE EAST 132 FEET OF THE N¼ OF THE SE¼ OF THE SW¼ OF SECTION 25, TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN, COUNTY OF MESA, STATE OF COLORADO.

also known by street and number as: 216 27 1/2 RD GRAND JUNCTION CO 81503

with all its appurtenances and warrants the title to the same, subject to general taxes for the year 2013 and those specific Exceptions described by reference to recorded documents as reflected in the Title Documents accepted by Grantee(s) in accordance with Record Title Matters (Section 8.1) of the Contract to Buy and Sell Real Estate relating to the above described real property; distribution utility easements, (including cable TV); those specifically described rights of third parties not shown by the public records of which Grantee(s) has actual knowledge and which were accepted by Grantee(s) in accordance with Off-Record Title Matters (Section 8.2) and Current Survey Review (Section 9) of the Contract to Buy and Sell Real Estate relating to the above described real property; inclusions of the Property within any special tax district; and other NONE

JASON L. BAILEY

State of COLORADO)
County of MESA) ss.

The foregoing instrument was acknowledged before me on this day of July 26, 2013 by JASON L. BAILEY

Notary Public
My commission expires 12-5-2013

JESSICA HURLEY
NOTARY PUBLIC
STATE OF COLORADO

My Commission Expires 12/05/2013
County of Mesa

When Recorded Return to: PAUL ADAMS
216 27 1/2 RD GRAND JUNCTION, CO 81503



Tina Peters, Clerk and Recorder of Mesa County certifies this to be a full, true and correct copy of the original recorded document in my custody.
Date: 6-10-2014 By: Cindy Baughman Deputy Clerk



**ADAMS II ANNEXATION
PETITION FOR ANNEXATION**

WE THE UNDERSIGNED do hereby petition the City Council of the City of Grand Junction, State of Colorado, to annex the following described parcels to the said City:

GENERAL LOCATION: 216 27 ½ Road
Tax ID # 2945-253-00-048

THE EAST 132 FEET OF THE N1/2 OF THE SE1/4 OF THE SW1/4 OF SECTION 25,
TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN

County of Mesa, State of Colorado.

Containing 2.000 acres.

This foregoing description describes the parcel; the perimeter boundary description, for purposes of the Annexation Act, is shown on the attached "Perimeter Boundary Legal Description, Adams II Annexation."

As grounds therefore, the petitioner respectfully state that annexation to the City of Grand Junction, Colorado is both necessary and desirable and that the said territory is eligible for annexation in that the provisions of the Municipal Annexation Act of 1965, Sections 31-12-104 and 31-12-105 CRS 1973 have been met.

This petition is accompanied by four copies of a map or plat of the said territory, showing its boundary and its relation to established city limit lines, and said map is prepared upon a material suitable for filing.

Your petitioners further state that they are the owners of more than fifty percent of the area of such territory to be annexed, exclusive of streets and alleys; that the mailing address of the signer and the date of signature are set forth hereafter opposite the name of the signer, and that the legal description of the property owned by the signer of said petition is attached hereto.

WHEREFORE, these petitioners pray that this petition be accepted and that the said annexation be approved and accepted by ordinance. These petitioners by his/her/their signature(s) acknowledge, understand and agree that if any development application concerning the property which is the subject hereof is denied, discontinued or disapproved, in whole or in part, that the annexation of the property to the City of Grand Junction shall proceed.

Paul Adams

Paul Adams
(Print Name)

216 27 ½ Road

Paul Adams

SIGNATURE

5 July 19

DATE

STATE OF COLORADO

SS

AFFIDAVIT

COUNTY OF MESA

Paul Adams, of lawful age, being first duly sworn, upon oath, deposes and says:

That they are the circulator of the forgoing petition:

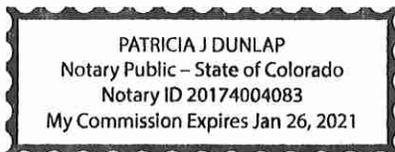
That each signature on the said petition is the signature of the person whose name it purports to be.

Paul Adams

Paul Adams

Subscribed and sworn to before me this 5 day of July, 2019.

Witness my hand and official seal.



Patricia J Dunlap
Notary Public

250 N. 5th St, Grand Junction CO 81501
Address

My commission expires: Jan. 26, 2021

ALTA/NSPS LAND TITLE SURVEY

Lo 14 d 1 SE 14 o 1 S 14 o 1 S 16 2
 To 1 So 1 R 1 U 1 M 1 r 1 d 1
 Co 1 o 1 M 1 S 1 o 1 Co 1 o 1 r 1 d 1

ALTA/NSPS LAND TITLE SURVEYS

TABLE A

1. Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by existing monuments or witnesses in close proximity to the corner. *Shown hereon.*
2. Address(es) of the surveyed property if disclosed in documents provided to or obtained by the surveyor, or observed while conducting the fieldwork. 216 27 1/2 Road, Grand Junction, CO 81503.
3. *Not Applicable to this survey.*
4. Gross land area (and other areas if specified by the client) 15.316 Acres *Shown hereon.*
5. *Not Applicable to this survey.*
6. *Not Applicable to this survey.*
7. *Not Applicable to this survey.*
8. *Not Applicable to this survey.*
9. *Not Applicable to this survey.*
10. *Not Applicable to this survey.*
11. *Not Applicable to this survey.*
12. *Not Applicable to this survey.*
13. *Not Applicable to this survey.*
14. *Not Applicable to this survey.*
15. *Not Applicable to this survey.*
16. *Not Applicable to this survey.*
17. *Not Applicable to this survey.*
18. *Not Applicable to this survey.*
19. *Not Applicable to this survey.*
20. *Not Applicable to this survey.*

PROPERTY ADDRESS:

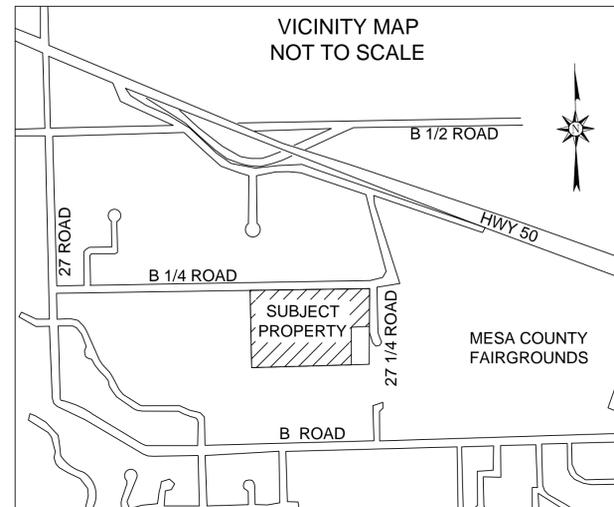
216 27 1/2 Road, Grand Junction, CO 81503
 TBD B 1/4 Road, Grand Junction, CO 81503 vacant land

STEWART TITLE GUARANTY COMPANY

FILE NO: ATC-19-3918
 EFFECTIVE DATE: April 17, 2019 at 12:00 AM

SCHEDULE B – PART II

1. Rights or claims of parties in possession, not shown by the Public Records. *Not a survey issue.*
2. Easements, or claims of easements, not shown by the Public Records. *Not a survey issue.*
3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records. *Shown hereon.*
4. Any lien, or right to a lien for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records. *Not a survey issue.*
5. Defects, liens, encumbrances, adverse claims, or other matters, if any, created, first appearing in the public record or attaching subsequent to the Effective Date hereof but prior to the date the proposed insured acquires of record for the value the estate or interest or mortgage thereon covered by this Commitment. *Not a survey issue.*
6. Unpatented mining claims: reservation or exceptions in Patents or in Acts authorizing the issuance thereof, minerals of whatsoever kind, subsurface or surface substances, in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not the excepted matters are shown by the Public Records or listed in Schedule B. *Not a survey issue.*
7. Water rights, claims or title to water. *Not a survey issue.*
8. Any and all unpaid taxes and assessments and any unredeemed tax sales. *Not a survey issue.*
9. Reservations and exceptions in Patents, or Acts authorizing the issuance thereof, including the reservations of the right of proprietor of a vein or lode to extract and remove his ore therefrom should the same be found to penetrate or intersect the premises as reserved in United States Patent recorded March 10, 1894 at Reception No. 18070, as to Parcels 1 and 2. *Not a survey issue.*
10. Easement and/or Right of Way granted to Grand Valley Rural Power Lines, Inc., recorded December 3, 1938 at Reception No. 344733, as to Parcel 1. *Shown hereon.*
11. Right of way easement granted to The Mountain States Telephone and Telegraph Company as set forth by instrument recorded April 15, 1977 at Reception No. 1130151, as to Parcel 1. *Shown hereon.*
12. Any loss or damage arising from the fact that the fence lines on or near the boundary lines of the subject property do not coincide with the exact courses of the boundary lines, as disclosed by Improvement Survey Plat, Deposit No. 5471-17 of Christopher C. Ransier, a Colorado Registered Land Surveyor, dated November 7, 2017, a copy of which has been secured through the Mesa County Survey Depository, as to Parcel 1. *Shown hereon.*
13. Orchard Mesa Irrigation District ditch as disclosed by Improvement Survey Plat, Deposit No. 5471-17 of Christopher C. Ransier, a Colorado Registered Land Surveyor, dated November 7, 2017, a copy of which has been secured through the Mesa County Survey Depository, as to Parcel 1. *Shown hereon.*
14. Electric utility easement granted to Grand Valley Rural Power Lines, Inc., by instrument recorded October 30, 2008 at Reception No. 2463582, as to Parcel 2. *Shown hereon.*
15. Matters as disclosed by Improvement Survey Plat, Deposit No. 5471-17 of Christopher C. Ransier, a Colorado Registered Land Surveyor, dated November 7, 2017, a copy of which has been secured through the Mesa County Survey Depository: a) apparent easement of overhead electric line and structures. b) apparent easement of drainage ditch for Orchard Mesa Irrigation District. c) fence lines on or near the boundary lines of the subject property do not coincide with the exact courses of the boundary lines. All as to Parcel 2. *Shown hereon.*
16. Right of Way for 27 1/2 Road over the east side of subject property, as to Parcel 1.
17. Right of way for B 1/4 Road over the north side of subject property, as to Parcels 1 and 2. *Shown hereon.*



PARCEL DESCRIPTION:

Parcel 1:
 The North 330 feet of the East 132 feet of the N1/2 of the SE1/4 of the SW1/4 of Section 25, Township 1 South, Range 1 West of the Ute Meridian, County of Mesa, State of Colorado
 Parcel No(s): 2945-253-00-048

Parcel 2:
 The N1/2 of the SE1/4 of the SW1/4 of Section 25, Township 1 South, Range 1 West of the Ute Meridian; EXCEPT the West 310 feet thereof; AND EXCEPT the East 132 feet thereof. County of Mesa, State of Colorado
 Parcel No(s): 2945-253-00-047

BASIS OF BEARINGS:

The bearing between the MCSM #1655 the NE corner of the NE1/4 of the SW1/4 of Section 25, Township 1 South, Range 1 West, of the Ute Meridian and the MCSM #1165-1 the NW Corner of the NE1/4 of the SW1/4 of Section 25, Township 1 South, Range 1 West, of the Ute Meridian is N89°55'07"E, this bearing corresponds with grid north of the Mesa County Local Coordinate System.

SURVEY NOTES:

1. Underground utility marks were provided by a qualified utility locator.
2. A 5/8" rebar with a 2" alloy cap stamped "Christopher C. Ransier PLS 38089" set at all parcel corners.
3. Linear units are in U.S. Survey Feet.
4. The bearings and distances shown hereon represent the results of the Parcel Description rotated to grid north of the Mesa County Local Coordinate System with respect to the physical locations of accepted survey monuments.
5. According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discovered such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

CERTIFICATION:

To Stewart Title Guaranty Company, a Texas Corporation:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1,2 and 4 of Table A thereof. The fieldwork was completed on April 8th, 2019.

Date of Plat or Map: June 25, 2019



Christopher C. Ransier
 Colorado PLS 38089

LAND SURVEY DEPOSITS

Mesa County Survey Depository
 1000 Grand Junction, Colorado 81503
 Phone: (970) 244-8100
 Website: www.mesacounty.org

SHEET 1 OF 2

ALTA/NSPS LAND TITLE SURVEY

Lo 14 d 1 SE 14 o 1 S 14 o 1 S 16 2
 To 1 So 1 R 1 U 1 M 1 r 1 d 1
 Co 1 o 1 M 1 S 1 o 1 Co 1 o 1 r 1 d 1

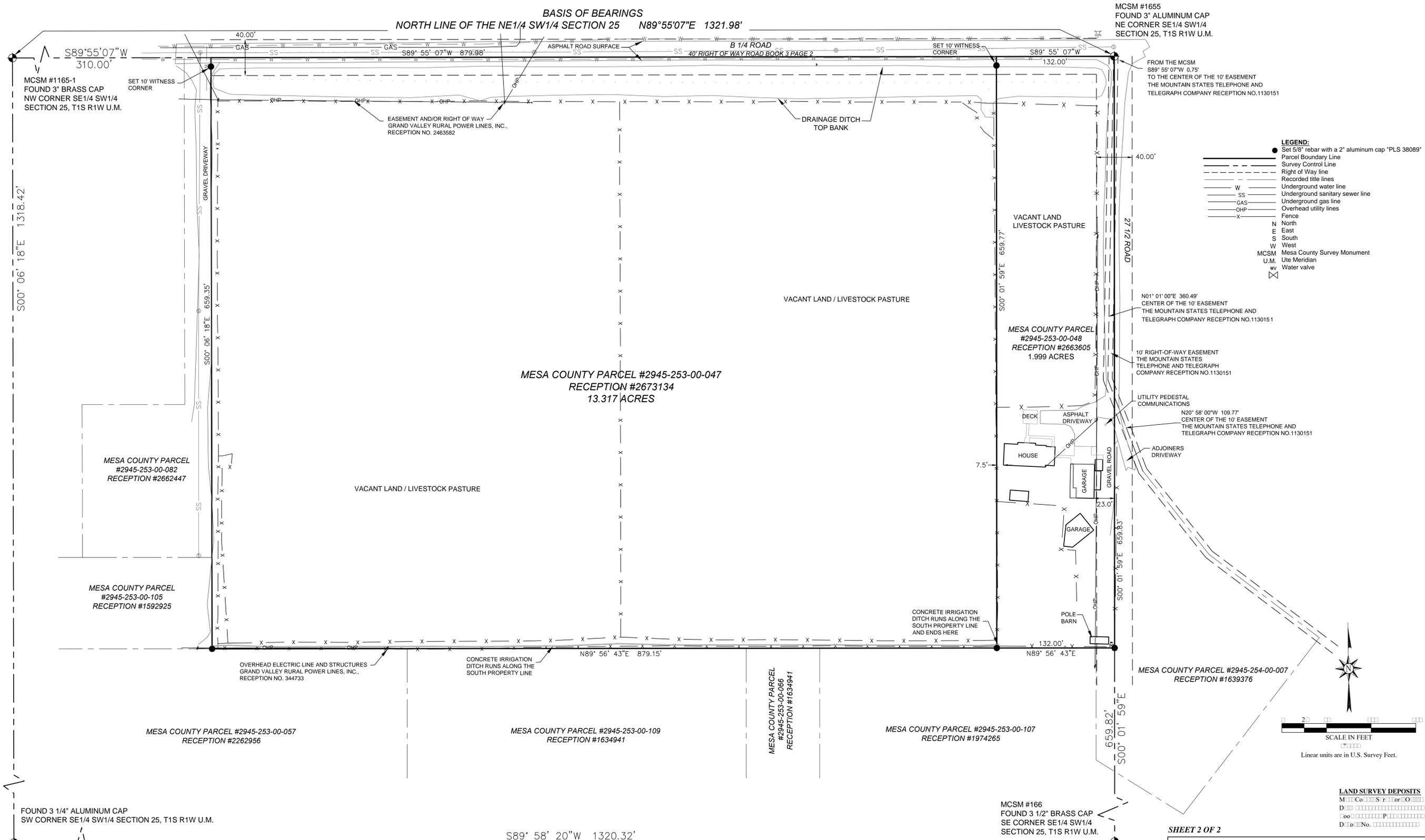


CR SURVEYING LLC
 CENTAURI DRIVE
 GRAND JUNCTION, COLO 81503
 (970) 244-8100

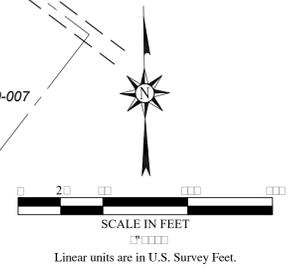
CR SURVEYING LLC
 CENTAURI DRIVE
 GRAND JUNCTION, COLO 81503
 (970) 244-8100

SURVEYED BY: CCR DRAWN BY: CCR JOB NO: 219 DATE: 02/02/19

ALTA/NSPS LAND TITLE SURVEY



- LEGEND:**
- Set 5/8" rebar with a 2" aluminum cap "PLS 38089"
 - Parcel Boundary Line
 - Survey Control Line
 - - - Right of Way line
 - - - Recorded title lines
 - W — Underground water line
 - SS — Underground sanitary sewer line
 - GAS — Underground gas line
 - OHP — Overhead utility lines
 - X — Fence
 - N — North
 - E — East
 - S — South
 - W — West
 - MCSM — Mesa County Survey Monument
 - U.M. — Ute Meridian
 - wv — Water valve



LAND SURVEY DEPOSITS
M Co S F or O
D
Co o M S o Co or do

SHEET 2 OF 2

ALTA/NSPS LAND TITLE SURVEY
Lo d SE 4 o S 4 o S 6 2
To So R U M r d
Co o M S o Co or do



Christopher C. Ransier
Colorado PLS 38089

CR SURVEYING, LLC
CENTAURI DRIVE
GRAND JUNCTION, COLO 81505
(970) 244-8181

SURVEYED BY: CCR DRAWN BY: CCR I.O. 000002 DATE 02/20/19

To: Scott Peterson

6/24/2019

Senior Planner

City of Grand Junction

From: Paul Adams

216 27 ½ Rd.

Grand Junction, Co. 81503

I am requesting the City of Grand Junction to annex my property to the City of Grand Junction. My adjacent 13 acres parcel has already been annexed and is on the market and by annexing this 2 acre parcel, it will help with the sale of the 13 acres. I am requesting a zoning of R-8 . I have no plans for building on this parcel. Requesting zoning and annexation only.

Paul Adams



**Annexation of 216 27 ½ Road
Meeting June 10, 2019
5:30 pm**

Minutes of meeting

Present at the meeting was Paul and Nancy Adams, owners of above property. Plus, Scott Peterson, City Planner. No discussion due to no attendance.

Annexation Meeting for 216 27 $\frac{1}{2}$ Rd., GJ, CO
June 10, 2019

Present at meeting

Scott D Peterson - City Planning 244-1447

Paul Adams

Nancy Adams

OWNER

Paul Adams

Scott D. Peterson

Annexation

Legal Description for 216 27 ½ Rd. Grand
Junction, Co. 81503

THE EAST 132 FEET OF THE N1/2 OF THE
SE1/4 OF THE SW1/4 OF SECTION 25,
TOWNSHIP 1 SOUTH, RANGE 1 WEST OF
THE UTE MERIDIAN, COUNTY OF MESA,
STATE OF COLORADO.

ADAMS II ANNEXATION SCHEDULE

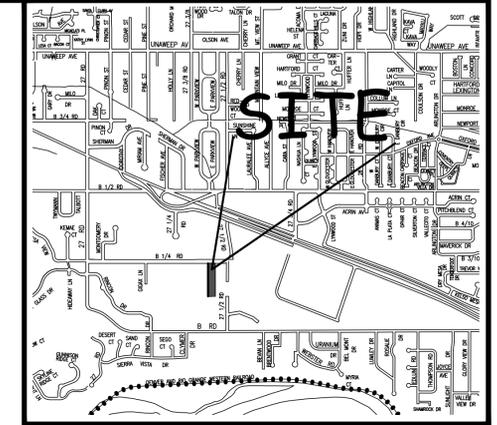
September 18, 2019	Referral of Petition (30 Day Notice), Introduction of a Proposed Ordinance, Exercising Land Use
September 24, 2019	Planning Commission considers Zone of Annexation
October 16, 2019	Introduction of a Proposed Ordinance on Zoning by City Council
November 6, 2019	Acceptance of Petition and Public Hearing on Annexation and Zoning by City Council
December 8, 2019	Effective date of Annexation

ANNEXATION SUMMARY

File Number:	ANX-2019-384	
Location:	216 27 ½ Road	
Tax ID Numbers:	2945-253-00-048	
# of Parcels:	1	
Existing Population:	2	
# of Parcels (owner occupied):	1	
# of Dwelling Units:	1	
Acres land annexed:	1.999	
Developable Acres Remaining:	1.999	
Right-of-way in Annexation:	0	
Previous County Zoning:	RSF-4 (Residential Single Family – 4 du/ac)	
Proposed City Zoning:	R-8 (Residential – 8 du/ac)	
Current Land Use:	Single-family house	
Future Land Use:	Residential Medium (4 – 8 du/ac)	
Values:	Assessed:	\$7,480
	Actual:	\$94,970
Address Ranges:	216 27 ½ Road	
Special Districts:	Water:	Ute Water Conservancy District
	Sewer:	City of Grand Junction
	Fire:	Grand Junction Rural Fire District
	Irrigation/Drainage:	Orchard Mesa Irrigation District
	School:	Grand Junction HS / Orchard Mesa Middle / Dos Rios Elementary
	Pest:	Grand River Mosquito Control District

ADAMS II ANNEXATION

SITUATE IN THE SE 1/4 OF THE SW 1/4 OF SECTION 25, TOWNSHIP 1 SOUTH, RANGE 1 WEST
UTE PRINCIPAL MERIDIAN
COUNTY OF MESA, STATE OF COLORADO



LOCATION MAP: NOT-TO-SCALE



DESCRIPTION

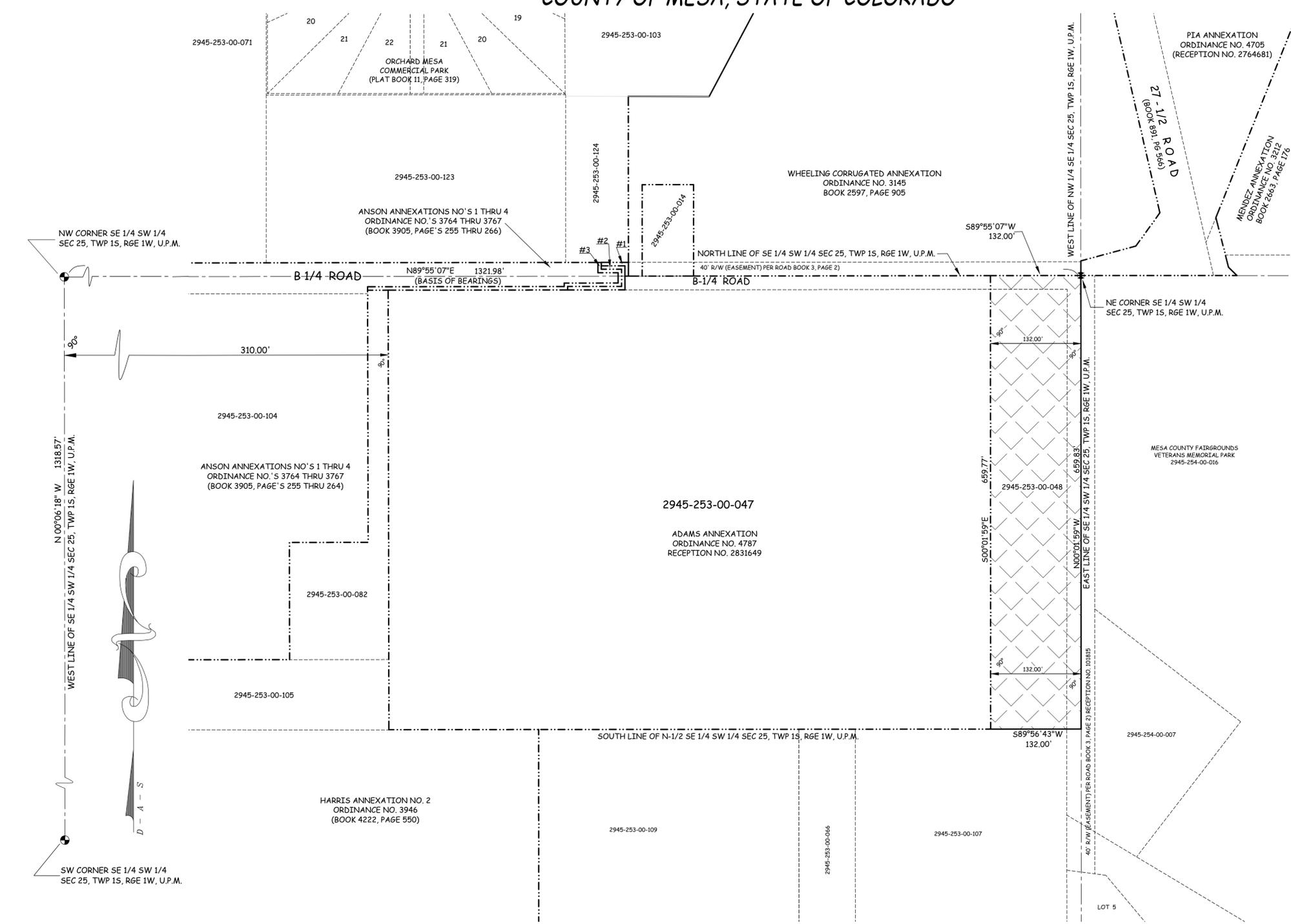
A certain parcel of land lying in the North-Half (N 1/2) of the Southeast Quarter of the Southwest Quarter (SE 1/4 SW 1/4) of Section 25, Township 1 South, Range 1 West of the Ute Principal Meridian, County of Mesa, State of Colorado and being more particularly described as follows:

The East 132.0' of the North one-half of the Southeast Quarter of the Southwest Quarter (SE 1/4 SW 1/4) of Section 25, Township 1 South, Range 1 West of the Ute Principal Meridian.

ABBREVIATIONS

P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
R.O.W.	RIGHT OF WAY
SEC.	SECTION
TWP.	TOWNSHIP
RGE.	RANGE
U.P.M.	UTE PRINCIPAL MERIDIAN
NO.	NUMBER
SQ. FT.	SQUARE FEET
∠	CENTRAL ANGLE
RAD.	RADIUS
AL	ARC LENGTH
CHL	CHORD LENGTH
CHB	CHORD BEARING
BLK	BLOCK
PB	PLAT BOOK
BK	BOOK
PG	PAGE

The Sketch and Description contained herein have been derived from subdivision plats and deed descriptions as they appear in the office of the Mesa County Clerk and Recorder. This plat does not constitute a legal survey, and is not intended to be used as a means for establishing or verifying property boundary lines.



AREA OF ANNEXATION

ANNEXATION PERIMETER	1,583.60 FT.
CONTIGUOUS PERIMETER	791.77 FT.
AREA IN SQUARE FEET	87,094***
AREA IN ACRES	1.999

***[PARCEL INCLUDES NO PUBLIC RIGHT OF WAY]

LEGEND

ANNEXATION BOUNDARY	—————
EXISTING CITY LIMITS	- - - - -

GRAPHIC SCALE



LINEAL UNITS USED HEREIN = U.S. SURVEY FOOT, AS ESTABLISHED

ORDINANCE NO.
????

EFFECTIVE DATE
????

THIS IS NOT A BOUNDARY SURVEY

PROFESSIONAL SURVEYOR

PETER T. KRICK, PLS No. 32824
Professional Land Surveyor for the
City of Grand Junction
DATE: _____



Notice:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown herein.

DRAWN BY	P.T.K.	DATE	07-09-2019
DESIGNED BY	_____	DATE	_____
CHECKED BY	P.T.K.	DATE	_____
APPROVED BY	_____	DATE	_____

SCALE
1" = 80'



PUBLIC WORKS
ENGINEERING DIVISION
SURVEY DEPARTMENT

ADAMS II ANNEXATION

City of Grand Junction Review Comments

Date: August 6, 2019 **Comment Round No.** 1 **Page No.** 1 of 4
Project Name: Adams II Annexation **File No:** ANX-2019-384
Project Location: 216 27 ½ Road

Check appropriate if comments were mailed, emailed, and/or picked up.

Property Owner(s): Paul Adams
 Mailing Address: 216 27 ½ Road, Grand Junction, CO 81503
 Email: warbirdsloft@aol.com **Telephone:** (970) 242-0506
 Date Picked Up: _____ **Signature:** _____

Representative(s):
 Mailing Address:
 Email: _____ **Telephone:** _____
 Date Picked Up: _____ **Signature:** _____

Developer(s):
 Mailing Address:
 Email: _____ **Telephone:** _____
 Date Picked Up: _____ **Signature:** _____

CITY CONTACTS

Project Manager: Scott D. Peterson, Senior Planner
Email: scottp@gjcity.org **Telephone:** (970) 244-1447
Dev. Engineer: Jarrod Whelan
Email: jarrodw@gjcity.org **Telephone:** (970) 244-1443

City of Grand Junction REQUIREMENTS (with appropriate Code citations)

CITY PLANNING

1. Application is for Annexation into the City limits with a proposed zoning designation of R-8 (Residential – 8 du/ac) for the existing 2.00 +/- acre Unplatted property in anticipation of marketing the property for a future residential subdivision development. Comprehensive Plan Future Land Use Map identifies the property as Residential Medium (4 – 8 du/ac). No additional response required.

Applicant's Response:

Document Reference:

2. Planning Commission and City Council Public Hearings:

a. Planning Commission and City Council review and approval required for proposed Annexation and Zoning requests. City Project Manager will **tentatively** schedule application(s) for the following public hearing schedule:

a. City Council Referral of Petition, Land Use Jurisdiction and 1st Reading of Annexation:

September 18, 2019 (Consent Agenda – no need to attend meeting).

b. Planning Commission review of zoning designation to R-8 (Residential – 8 du/ac): **September 24, 2019** (Please plan on attending meeting in case the Planning Commission has any questions).

c. City Council review of zoning designation to R-8 (Residential – 8 du/ac) (1st Reading): **October 16, 2019** (Consent Agenda – no need to attend meeting).

d. City Council review of Annexation and R-8 zoning designation (2nd Reading): **November 6, 2019** (Please plan on attending meeting in case the City Council has any questions).

Please plan on attending the September 24th Planning Commission meeting and the November 6th City Council meeting. The Consent Agenda meetings you do not need to attend as that is only scheduling the hearing date and the item is placed on the Consent Agenda with no public testimony taken. Both the Planning Commission and City Council meetings begin at 6:00 PM at City Hall in the City Council Chambers.

If applicant cannot make the above scheduled public hearing dates, please notify City Project Manager and we can reschedule for later meeting dates.

Code Reference: Sections 21.02.140 and 160 of the Zoning & Development Code.

Applicant's Response:

Document Reference:

3. Public Correspondence Received:

FYI. As of this date, City Project Manager has not received any comments from the public concerning the proposed application.

Applicant's Response:

Document Reference:

CITY DEVELOPMENT ENGINEER

No Exceptions Taken.

Applicant's Response:

Document Reference:

CITY SURVEYOR – Peter Krick – peterk@gjcity.org (970) 256-4003

The annexation map; and description has been prepared and submitted to the City Planner.

Applicant's Response:

Document Reference:

CITY FIRE DEPARTMENT – Mike Gazdak – mikega@gjcity.org (970) 549-5854

The fire department has no objections to the request for annexation.

Applicant's Response:

Document Reference:

No comments.

Applicant's Response:

Document Reference:

OUTSIDE REVIEW AGENCY COMMENTS

(Non-City Agencies)

Review Agency: Mesa County Building Department

Contact Name: Darrell Bay

Email / Telephone Number: Darrell.bay@mesacounty.us (970) 244-1651

No objections.

Applicant's Response:

Review Agency: Xcel Energy

Contact Name: Brenda Boes

Email / Telephone Number: Brenda.k.boes@xcelenergy.com (970) 244-2698

Xcel has no objections. However, owner does need to be aware that Xcel does not have utilities in this area.

Should gas be wanted in future distribution would need to be installed at developer's cost.

Completion of this City/County review approval process does not constitute an application with Xcel Energy for utility installation. Applicant will need to contact Xcel Energy's Builder's Call Line/Engineering Department to request a formal design for the project. A full set of plans, contractor, and legal owner information is required prior to starting any part of the construction. Failure to provide required information prior to construction start will result in delays providing utility services to your project. Acceptable meter and/or equipment locations will be determined by Xcel Energy as a part of the design process. Additional easements may be required depending on final utility design and layout. Engineering and Construction lead times will vary depending on workloads and material availability. Relocation and/or removal of existing facilities will be made at the applicant's expense and are also subject to lead times referred to above. All Current and future Xcel Energy facilities' must be granted easement.

Applicant's Response:

Review Agency: Ute Water Conservancy District

Contact Name: Jim Daugherty

Email / Telephone Number: jdaugherty@utewater.org (970) 242-7491

- No objection to annexation.
- ALL FEES AND POLICIES IN EFFECT AT TIME OF APPLICATION WILL APPLY.
- If you have any questions concerning any of this, please feel free to contact Ute Water.

Applicant's Response:

Review Agency: Grand Valley Power
Contact Name: Perry Rupp
Email / Telephone Number: prupp@gvp.org (970) 242-0040

1. The project is in the Grand Valley Power (GVP) service area.
2. Single-phase power is available for this project on-site.

Applicant's Response:

REVIEW AGENCIES

(Responding with "No Comment" or have not responded as of the due date)

The following Review Agencies have responded with "No Comment."

1. Bureau of Reclamation

The following Review Agencies have not responded as of the comment due date.

1. Mesa County Planning
2. City Transportation Engineer
3. Orchard Mesa Irrigation District
4. Mesa County Engineering

The Petitioner is required to submit electronic responses, labeled as "**Response to Comments**" for the following agencies:

1. **N/A. No further response required. See City Planning review comments for proposed public hearing schedule.**

Date due: **N/A.**

Please provide a written response for each comment and, for any changes made to other plans or documents indicate specifically where the change was made.

I certify that all of the changes noted above have been made to the appropriate documents and plans and there are no other changes other than those noted in the response.

Applicant's Signature

Date



Grand Junction Planning Commission

Regular Session

Item #5.

Meeting Date: September 24, 2019

Presented By: Senta Costello, Planner

Department: Community Development

Submitted By: Senta Costello, Associate Planner

Information

SUBJECT:

Consider a request by Roy and Marilyn Anderson to zone 1.82 acres from County RSF-R (Residential Single Family 5ac/du) to a City C-1 (Light Commercial) for Zona's Annexation located at 408 29 Road.

RECOMMENDATION:

After reviewing Zona's Annexation, ANX-2019-408, for a Zone of Annexation from County RSF-R (Residential Single Family – 5 ac/du) to a City C-1 (Light Commercial), the following findings of fact have been made:

1. In accordance with Section 21.02.140 (a) of the Zoning and Development Code, the request meets one or more of the rezone criteria.
2. In accordance with Section 21.02.160 (f) of the Zoning and Development Code, the request is consistent with the adopted Comprehensive Plan.

Therefore, Staff recommends approval of the requested Zone of Annexation.

EXECUTIVE SUMMARY:

The Applicant, Roy and Marilyn Anderson, are requesting a zone of annexation to C-1 (Light Commercial) for Zona's Annexation. The 1.82-acre property consisting of one parcel is located at the north of the corner of D Road and Roberts Road. The Applicant is requesting annexation into the City limits consistent with the requirements of the Persigo Agreement between Mesa County and the City of Grand Junction to be able to continue to operate an auto repair business with a business residence on the property. This proposed use would require a rezone in the County and thus constitutes "Annexable Development" under the Persigo agreement. The Comprehensive Plan Future Land Use Map designates this property as Village Center and this request conforms with this designation. The request for annexation will be considered separately by the City Council.

BACKGROUND OR DETAILED INFORMATION:

The Applicant, Roy and Marilyn Anderson, have requested annexation of land into the City limits, located at 408 29 Road, to be able to continue to operate an auto repair business with a business residence on the property. The business has grown to a point that it requires licensing with the State. This licensing process requires that the business operate within a commercially designated property which would require a rezone under the Mesa County Zoning and Development standards. Pursuant to the Persigo agreement, properties requesting rezoning are required to annex to the City of Grand Junction as it constitutes "annexable development." The request for an auto repair business and business residence is being reviewed concurrently with the request to annex and zone the property. The property to be zoned consists of one parcel of land and is approximately 1.82 acres in size. The one parcel site currently has a single family house and an auto repair shop. The Applicant is requesting a zone of annexation to C-1 (Light Commercial).

The parcel of land is currently in the County and has a County zoning of RSF-R (Residential Single Family – 5 acres per dwelling unit) and surrounding properties east and north are also zoned County RSF-R and C-1 in the City to the south and PD (Planned Development) across 29 Road. The subject property has a Future Land Use designation of Village Center. The Applicant's proposed zoning designation of R-8 C-1 meets with the intent of the Land Use Map achieving the desired intensity for the property.

IV. NOTIFICATION REQUIREMENTS

A Neighborhood Meeting regarding the proposed Annexation and Zoning was held on July 15, 2019 in accordance with Section 21.02.080 (e) of the Zoning and Development Code. The Applicant's and City staff were in attendance along with one citizens. Comments expressed by the attendees centered on long term use of the property with general approval and positive feedback.

Notice was completed consistent with the provisions in Section 21.02.080 (g) of the City's Zoning and Development Code. The subject property was posted with an application sign on August 8, 2019. Mailed notice of the public hearings before Planning Commission and City Council in the form of notification cards was sent to surrounding property owners within 500 feet of the subject property on September 11, 2019. The notice of this public hearing was published September 17, 2019 in the Grand Junction Daily Sentinel.

V. ANALYSIS

The criteria for review is set forth in Section 21.02.140 (a) and includes that the City may rezone property if the proposed changes are consistent with the vision, goals and policies of the Comprehensive Plan and must meet one or more of the following rezone criteria as identified:

- (1) Subsequent events have invalidated the original premises and findings; and/or

The property owners have petitioned for annexation into the City limits with a requested zoning district of C-1 (Light Commercial). Since the property's current zoning of RSF-R (Residential Single Family – Rural 1 du/5 acres) was established, the area has experienced several changes, significantly the establishment of the Comprehensive Plan. The Comprehensive Plan Future Land Use Map established this area as a Village Center which is intended for commercial, higher density residential and service type uses. The area is also developing in with a level of density/intensity above the RSF-R designation. These events have invalidated the original premise in place when last zoned and a majority of the area was large lot, single family and/or agricultural in nature. Therefore, Staff has found this criterion has been met.

- (2) The character and/or condition of the area has changed such that the amendment is consistent with the Plan; and/or

The adopted Comprehensive Plan designated this property with a Future Land Use designation of Village Center. The character and/or condition of the area was mostly undeveloped agricultural land prior to the adoption of the 2010 Comprehensive Plan, although it has continued to urbanize with the addition of Maverik Convenience Store/Gas Station to the south, elevator manufacturing business to the north and G & G Petroleum Convenience Store/Gas Station to the southwest of the subject property. The subject property is currently an infill site, part of the urbanization going on around it. Therefore, Staff finds that this criterion has been met.

(3) Public and community facilities are adequate to serve the type and scope of land use proposed; and/or

Water and sewer services are available to this property in 29 Road. This property is within the Ute Water Conservancy District service area. A $\frac{3}{4}$ -inch water line services the property. An 8-inch line is located in 29 Road. The property is currently within the Persigo 201 Sewer Service Area and the Persigo wastewater treatment plant and has current sewer service. The property can also be served by Xcel Energy natural gas and electric.

To the south along 29 Road are an existing convenience store and gas islands and one to begin construction shortly. A mile north is North Avenue with access to restaurants, commercial businesses and Walmart.

Grand Junction Fire Department finds the public and community facilities regarding fire and emergency medical services are adequate to serve the type and scope of the commercial land use proposed. This property is currently in the Grand Junction Rural Fire Protection District and fire and emergency medical response is provided from the Station 1 at 625 Ute Avenue; with Annexation, the property will still be served by the Grand Junction Fire Department from Fire Station #1. Evaluation of fire and EMS incident data, shows no incidents at this location and the annexation and proposed development is not predicted to add substantially to the current fire and EMS incident load.

On input provide by a number of utility and service providers, staff has found that public and community facilities are adequate to serve the type of residential land use proposed and therefore, staff finds this criterion has been met.

(4) An inadequate supply of suitably designated land is available in the community, as defined by the presiding body, to accommodate the proposed land use; and/or

The property has a Comprehensive Plan Future Land Use Map designation of Village Center. The site currently has a single family house and an auto repair shop. The proposed zoning designation of C-1 meets with the intent of achieving the desired overall intensity for the property. Citywide, seventeen (17) percent of existing property in the City limits with a C-1 zoning designation is vacant. The area is shown as Village Center on the Future Land Use Map; however, there are only four properties within the Village Center area currently zoned with a designation that implements the Future Land Use designation. Staff finds that there is an inadequate supply of the requested zoning designation in the area and, therefore, has found this criterion to have been met.

(5) The community or area, as defined by the presiding body, will derive benefits from the proposed amendment.

Annexation and zoning of the property will create consistent land use jurisdiction within the City consistent with an Intergovernmental Agreement with the County. The requested zoning will also further implement the Comprehensive Plan Village Center vision for this area. This principle is supported and encouraged by the Comprehensive Plan. Therefore, Staff finds that this criterion has been met.

Section 21.02.160 (f) of the Grand Junction Zoning and Development Code provides that the zoning of an annexation area shall be consistent with the adopted Comprehensive Plan and the criteria set forth. Generally, future development should be at a density/intensity equal to or greater than the allowed density/intensity of the applicable County zoning district. The proposed C-1 zone district is of a greater intensity than the existing RSF-R zone district of Mesa County. Though other zone districts could also be considered, as listed below, this zone district comports with the recommendations of the Plan's Future Land Use Map.

Other zone districts permitted within the Village Center Land Use designation and implement the Comprehensive Plan include:

- R-8
- R-12
- R-16
- R-24
- R-O
- B-1
- MXR-3,5
- MXG-3,5
- MXS-3,5
- MU

Further, the zoning request is consistent with the following goals and policies of the Comprehensive Plan:

Goal 1 / Policy A: Land use decisions will be consistent with Future Land Use Map.

Goal 3: The Comprehensive Plan will create ordered and balanced growth and spread future growth throughout the community.

SUGGESTED MOTION:

Madam Chairman, on the Zone of Annexation for Zona's Annexation to C-1 (Light Commercial) zone district, file number ANX-2019-408, I move that the Planning Commission forward a recommendation of approval to City Council with the findings of fact listed in the staff report.

Attachments

1. Exhibit List Zona's Annexation Zoning
2. Exhibit 1 - Development Application - 408 29 Rd
3. Exhibit 4 - Zoning Ordinance
4. Exhibit 2 - PC Staff Report
5. Exhibit 3 - Maps and Photo

EXHIBIT LIST

**ZONA'S ZONE OF ANNEXATION TO C-1 (Light Commercial)
FILE NO. ANX-2019-408**

Exhibit Item #	Description
1	Development Application dated March 21, 2018
2	Planning Commission Staff Report dated July 23, 2019
3	Townhomes at River Park Annexation Maps and Photos
4	Proposed City Zoning Ordinance
5	Staff Presentation dated July 23, 2019

Development Application

We, the undersigned, being the owner's of the property adjacent to or situated in the City of Grand Junction, Mesa County, State of Colorado, as described herein do petition this:

Petition For: Annexation & REZONE

Please fill in blanks below **only** for Zone of Annexation, Rezones, and Comprehensive Plan Amendments:

Existing Land Use Designation RSF-R	Existing Zoning RSF-R
Proposed Land Use Designation C-1	Proposed Zoning C-1

Property Information

Site Location: 408 29 ROAD	Site Acreage: 1.83 acres
Site Tax No(s): 2943-173-00-147	Site Zoning: RSF-R
Project Description: Annexation to GJ & REZONE to C-1	

Property Owner Information

Name: ROY A. & MARILYN ANDERSON

Street Address: 408 29 ROAD

City/State/Zip: GRAND JUNCTION, ⁸¹⁵⁰⁴

Business Phone #: 520-577-7566

E-Mail: raa@comcast.net

Fax #: 520-577-9888

Contact Person: ROY ANDERSON

Contact Phone #: 520-275-1900

Applicant Information

Name: ROY ^{& MARILYN} ANDERSON

Street Address: 5551 E Paseo Bueno

City/State/Zip: Tucson, AZ 85750

Business Phone #: 520-577-7566

E-Mail: raa@comcast.net

Fax #: 520-577-9888

Contact Person: ROY ANDERSON

Contact Phone #: 520-275-1900

Representative Information

Name:

Street Address:

City/State/Zip:

Business Phone #:

E-Mail:

Fax #:

Contact Person:

Contact Phone #:

NOTE: Legal property owner is owner of record on date of submittal.

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the review comments. We recognize that we or our representative(s) must be present at all required hearings. In the event that the petitioner is not represented, the item may be dropped from the agenda and an additional fee may be charged to cover rescheduling expenses before it can again be placed on the agenda.

Signature of Person Completing the Application

Date 5-30-19

Signature of Legal Property Owner

Date 7-15-19

CITY OF GRAND JUNCTION, COLORADO

ORDINANCE NO. _____

**AN ORDINANCE ZONING ZONA'S ANNEXATION
TO C-1 (LIGHT COMMERCIAL)**

LOCATED AT 408 29 ROAD

Recitals

The property owners have requested annexation of the 1.82-acre property into the City limits in anticipation of commercial use of the property

After public notice and public hearing as required by the Grand Junction Zoning & Development Code, the Grand Junction Planning Commission recommended approval of zoning Zona's Annexation to the C-1 (Light Commercial) zone district respectfully, finding that it conforms with Village Center as shown on the Future Land Use Map of the Comprehensive Plan and the Comprehensive Plan's goals and policies and is generally compatible with land uses located in the surrounding area.

After public notice and public hearing, the Grand Junction City Council finds that the C-1 (Light Commercial) zone district is in conformance with at least one of the stated criteria of Section 21.02.140 of the Grand Junction Zoning and Development Code.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT:

The following land shall be zoned C-1 (Light Commercial):

ZONA'S ANNEXATION

A certain parcel of land lying in the Southwest Quarter of the Southwest Quarter (SW 1/4 SW 1/4) of Section 17, Township 1 South, Range 1 East of the Ute Principal Meridian, County of Mesa, State of Colorado and being more particularly described as follows:

COMMENCING at the Southwest corner of said Section 17 and assuming the West line of the SW 1/4 SW 1/4 of said Section 17 bears N 00°13'10" W with all other bearings contained herein being relative thereto; thence from said Point of Commencement, N 00°13'10" W along the West line of the SW 1/4 SW 1/4 of said Section 17, a distance of 330.00 feet to the POINT OF BEGINNING; thence from said Point of Beginning, continue N 00°13'10" W along the West line of the SW 1/4 SW 1/4 of said Section 17, a distance of 165.20 feet; thence N 89°58'45" E, along the North line of that certain parcel of land described with Reception Number 2790261, Public Records of Mesa County, Colorado,

a distance of 527.36 feet; thence S 00°13'10" E, along the East line of said parcel, a distance of 165.20 feet; thence S 89°58'45" W, along the South line of said certain parcel of land, a distance of 527.36 feet, more or less, to the Point of Beginning.

CONTAINING 87,120 Square Feet or 2.000 Acres, more or less, as described.

INTRODUCED on first reading this ____ day of ____, 2019 and ordered published in pamphlet form.

ADOPTED on second reading this ____ day of _____, 2019 and ordered published in pamphlet form.

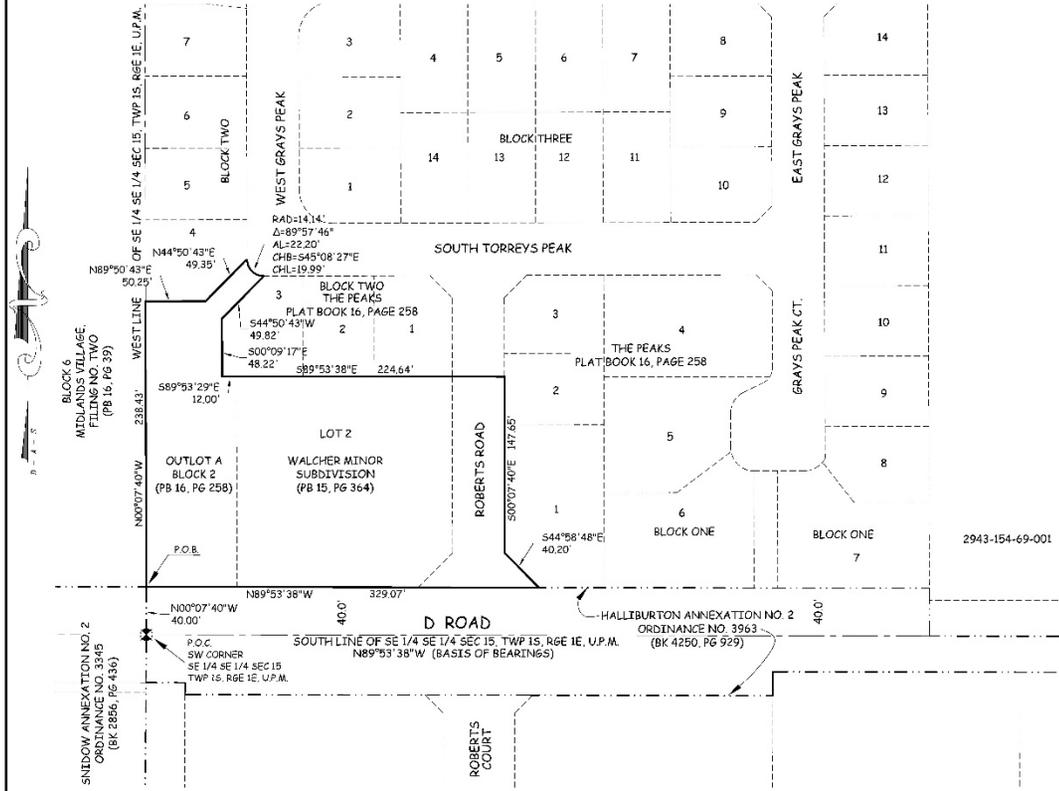
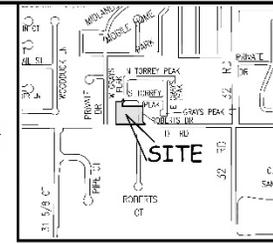
ATTEST:

President of the Council

City Clerk

Exhibit A

TOWNHOMES AT RIVER PARK ANNEXATION LYING IN THE SE 1/4 SE 1/4 OF SECTION 15, TOWNSHIP 1 SOUTH, RANGE 1 EAST UTE PRINCIPAL MERIDIAN COUNTY OF MESA, STATE OF COLORADO



DESCRIPTION

A certain parcel of land lying in the Southeast Quarter of the Southeast Quarter (SE 1/4 SE 1/4) of Section 15, Township 1 South, Range 1 East of the Ute Principal Meridian, County of Mesa, State of Colorado and being more particularly described as follows:

COMMENCING at the Southwest corner of the SE 1/4 SE 1/4 of said Section 15 and assuming the South line of the SE 1/4 SE 1/4 of said Section 15 bears N 89°53'38" W with all other bearings contained herein being relative thereto; thence from said Point of Commencement, N 00°07'40" W, along the West line of the SE 1/4 SE 1/4 of said Section 15, a distance of 40.00 feet to the POINT OF BEGINNING; said point being the Southwest corner of Outlot A, Block Two of the The Peaks, a subdivision recorded in Plat Book 16, Page 258, Public Records of Mesa County, Colorado; thence from said Point of Beginning, continue N 00°07'40" W, along said West line, a distance of 238.43 feet; thence N 89°50'43" E, a distance of 50.25 feet; thence N 44°50'43" E, a distance of 49.35 feet to a point being the beginning of a 14.14 foot radius curve, concave Northeast, whose long chord bears S 45°08'27" E, a long chord length of 19.99 feet; thence Southwesterly along the arc of said curve, thru a central angle of 89°57'46", an arc length of 22.20 feet; thence S 44°50'43" W, a distance of 49.82 feet; thence S 00°09'17" E, along the West line of Lot 3 of The Peaks subdivision, a distance of 48.22 feet; thence S 89°53'38" E, along the South line of said Lot 3, a distance of 12.00 feet; thence S 89°53'38" E, along the South line of Lots 1, 2 and 3, Block Two of The Peaks subdivision and its Eastern prolongation, a distance of 224.64 feet to a point on the East right of way for Roberts Road, per The Peaks subdivision; thence S 00°07'40" E, along said East right of way, a distance of 147.65 feet; thence S 44°58'48" E, along said right of way, a distance of 40.20 feet to a point on the North right of way for D Road; thence N 89°53'38" W along said North right of way, being a line 40.00 feet North of and parallel with, the South line of the SE 1/4 SE 1/4 of said Section 15, a distance of 329.07 feet, more or less, to the Point of Beginning.

- ABBREVIATIONS**
- P.O.B. POINT OF BEGINNING
 - P.O.C. POINT OF COMMENCEMENT
 - P.O.S. POINT OF SURVEY
 - P.O.T. POINT OF TANGENCY
 - P.O.V. POINT OF VIEW
 - SEC. SECTION
 - TWP. TOWNSHIP
 - RANGE RANGE
 - U.T.M. UTE PRINCIPAL MERIDIAN
 - NO. NUMBER
 - ST. FT. STATION FEET
 - SP. SURVEY
 - ANG. ANGLE
 - CH. CHORD
 - ARC ARC LENGTH
 - CL. CURVED LENGTH
 - CR. CURVED RADIUS
 - CL. CHORD
 - PL. PLAT
 - PG. PAGE

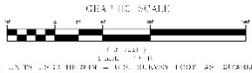
The Sketch and Description contained herein have been derived from subdivision maps and local descriptions as they appear in the office of the Mesa County Clerk and Recorder. We do not make any warranty as to their accuracy, and we are not responsible for any errors or omissions in this report as a result of any such errors or omissions.

AREA OF ANNEXATION

ANNEXATION NUMBER	176,857
SECTION NUMBER	15
TOWNSHIP	1 SOUTH
RANGE	1 EAST
SECTION	15
TOWNSHIP	1 SOUTH
RANGE	1 EAST
SECTION	15

LEGEND

ANNEXATION	---
SECTION	---
TOWNSHIP	---
RANGE	---
SECTION	---



ORDINANCE NO. 3963
EFFECTIVE DATE 05-22-2009

THIS IS NOT A BOUNDARY SURVEY

PRELIMINARY

DATE: 05-22-2009
BY: [Signature]

NOTES:

1. This plat is a preliminary survey and does not constitute a final boundary survey. It is subject to change without notice. The City of Grand Junction is not responsible for any errors or omissions in this report as a result of any such errors or omissions.

DESIGNED BY	P.W.K.	DATE	05-22-2009
CHECKED BY	P.T.K.	DATE	
APPROVED BY		DATE	

SCALE	1" = 40'
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PUBLIC WORKS
ENGINEERING DIVISION
SURVEY DEPARTMENT

TOWNHOMES AT RIVER
PARK ANNEXATION

PLANNING COMMISSION AGENDA ITEM

Project Name: Zona's Zone of Annexation
Applicant: Roy and Marilyn Anderson, Owner
Address: 408 29 Road
Zoning: Proposed C-1 (Light Commercial)
Staff: Senta Costello, Associate Planner
File No. ANX-2019-295
Date: September 24, 2019

I. SUBJECT

Consider a request by Roy and Marilyn Anderson to zone 1.82 acres from County RSF-R (Residential Single Family 5ac/du) to a City C-1 (Light Commercial) for Zona's Annexation located at 408 29 Road.

II. EXECUTIVE SUMMARY

The Applicant, Roy and Marilyn Anderson, are requesting a zone of annexation to C-1 (Light Commercial) for Zona's Annexation. The 1.82-acre property consisting of one parcel is located at the north of the corner of D Road and Roberts Road. The Applicant is requesting annexation into the City limits consistent with the requirements of the Persigo Agreement between Mesa County and the City of Grand Junction to be able to continue to operate an auto repair business with a business residence on the property. This proposed use would require a rezone in the County and thus constitutes "Annexable Development" under the Persigo agreement. The Comprehensive Plan Future Land Use Map designates this property as Village Center and this request conforms with this designation. The request for annexation will be considered separately by the City Council.

III. BACKGROUND

The Applicant, Roy and Marilyn Anderson, have requested annexation of land into the City limits, located at 408 29 Road, to be able to continue to operate an auto repair business with a business residence on the property. The business has grown to a point that it requires licensing with the State. This licensing process requires that the business operate within a commercially designated property which would require a rezone under the Mesa County Zoning and Development standards. Pursuant to the Persigo agreement, properties requesting rezoning are required to annex to the City of Grand Junction as it constitutes "annexable development." The request for an auto repair business and business residence is being reviewed concurrently with the request to annex and zone the property. The property to be zoned consists of one parcel of land and is approximately 1.82 acres in size. The one parcel site currently has a single family house and an auto repair shop. The Applicant is requesting a zone of annexation to C-1 (Light Commercial).

The parcel of land is currently in the County and has a County zoning of RSF-R (Residential Single Family – 5 acres per dwelling unit) and surrounding properties east and north are also zoned County RSF-R and C-1 in the City to the south and PD (Planned Development) across 29 Road. The subject property has a Future Land Use designation of Village Center. The Applicant's proposed zoning designation of R-8 C-1 meets with the intent of the Land Use Map achieving the desired intensity for the property.

IV. NOTIFICATION REQUIREMENTS

A Neighborhood Meeting regarding the proposed Annexation and Zoning was held on July 15, 2019 in accordance with Section 21.02.080 (e) of the Zoning and Development Code. The Applicant's and City staff were in attendance along with one citizens. Comments expressed by the attendees centered on long term use of the property with general approval and positive feedback.

Notice was completed consistent with the provisions in Section 21.02.080 (g) of the City's Zoning and Development Code. The subject property was posted with an application sign on August 8, 2019. Mailed notice of the public hearings before Planning Commission and City Council in the form of notification cards was sent to surrounding property owners within 500 feet of the subject property on September 11, 2019. The notice of this public hearing was published September 17, 2019 in the Grand Junction Daily Sentinel.

V. ANALYSIS

The criteria for review is set forth in Section 21.02.140 (a) and includes that the City may rezone property if the proposed changes are consistent with the vision, goals and policies of the Comprehensive Plan and must meet one or more of the following rezone criteria as identified:

- (1) Subsequent events have invalidated the original premises and findings; and/or

The property owners have petitioned for annexation into the City limits with a requested zoning district of C-1 (Light Commercial). Since the property's current zoning of RSF-R (Residential Single Family – Rural 1 du/5 acres) was established, the area has experienced several changes, significantly the establishment of the Comprehensive Plan. The Comprehensive Plan Future Land Use Map established this area as a Village Center which is intended for commercial, higher density residential and service type uses. The area is also developing in with a level of density/intensity above the RSF-R designation. These events have invalidated the original premise in place when last zoned and a majority of the area was large lot, single family and/or agricultural in nature. Therefore, Staff has found this criterion has been met.

- (2) The character and/or condition of the area has changed such that the amendment is consistent with the Plan; and/or

The adopted Comprehensive Plan designated this property with a Future Land Use designation of Village Center. The character and/or condition of the area was mostly undeveloped agricultural land prior to the adoption of the 2010 Comprehensive Plan, although it has continued to urbanize with the addition of Maverik Convenience Store/Gas Station to the south, elevator manufacturing business to the north and G & G Petroleum Convenience Store/Gas Station to the southwest of the subject property. The subject property is currently an infill site, part of the urbanization going on around it. Therefore, Staff finds that this criterion has been met.

(3) Public and community facilities are adequate to serve the type and scope of land use proposed; and/or

Water and sewer services are available to this property in 29 Road. This property is within the Ute Water Conservancy District service area. A ¾ -inch water line services the property. An 8-inch line is located in 29 Road. The property is currently within the Persigo 201 Sewer Service Area and the Persigo wastewater treatment plant and has current sewer service. The property can also be served by Xcel Energy natural gas and electric.

To the south along 29 Road are an existing convenience store and gas islands and one to begin construction shortly. A mile north is North Avenue with access to restaurants, commercial businesses and Walmart.

Grand Junction Fire Department finds the public and community facilities regarding fire and emergency medical services are adequate to serve the type and scope of the commercial land use proposed. This property is currently in the Grand Junction Rural Fire Protection District and fire and emergency medical response is provided from the Station 1 at 625 Ute Avenue; with Annexation, the property will still be served by the Grand Junction Fire Department from Fire Station #1. Evaluation of fire and EMS incident data, shows no incidents at this location and the annexation and proposed development is not predicted to add substantially to the current fire and EMS incident load.

On input provide by a number of utility and service providers, staff has found that public and community facilities are adequate to serve the type of residential land use proposed and therefore, staff finds this criterion has been met.

(4) An inadequate supply of suitably designated land is available in the community, as defined by the presiding body, to accommodate the proposed land use; and/or

The property has a Comprehensive Plan Future Land Use Map designation of Village Center. The site currently has a single family house and an auto repair

shop. The proposed zoning designation of C-1 meets with the intent of achieving the desired overall intensity for the property. Citywide, seventeen (17) percent of existing property in the City limits with a C-1 zoning designation is vacant. The area is shown as Village Center on the Future Land Use Map; however, there are only four properties within the Village Center area currently zoned with a designation that implements the Future Land Use designation. Staff finds that there is an inadequate supply of the requested zoning designation in the area and, therefore, has found this criterion to have been met.

(5) The community or area, as defined by the presiding body, will derive benefits from the proposed amendment.

Annexation and zoning of the property will create consistent land use jurisdiction within the City consistent with an Intergovernmental Agreement with the County. The requested zoning will also further implement the Comprehensive Plan Village Center vision for this area. This principle is supported and encouraged by the Comprehensive Plan. Therefore, Staff finds that this criterion has been met.

Section 21.02.160 (f) of the Grand Junction Zoning and Development Code provides that the zoning of an annexation area shall be consistent with the adopted Comprehensive Plan and the criteria set forth. Generally, future development should be at a density/intensity equal to or greater than the allowed density/intensity of the applicable County zoning district. The proposed C-1 zone district is of a greater intensity than the existing RSF-R zone district of Mesa County. Though other zone districts could also be considered, as listed below, this zone district comports with the recommendations of the Plan's Future Land Use Map.

Other zone districts permitted within the Village Center Land Use designation and implement the Comprehensive Plan include:

- R-8
- R-12
- R-16
- R-24
- R-O
- B-1
- MXR-3,5
- MXG-3,5
- MXS-3,5
- MU

Further, the zoning request is consistent with the following goals and policies of the Comprehensive Plan:

Goal 1 / Policy A: Land use decisions will be consistent with Future Land Use Map.

Goal 3: The Comprehensive Plan will create ordered and balanced growth and spread future growth throughout the community.

V. STAFF RECOMMENDATION AND FINDINGS OF FACT

After reviewing Zona's Annexation, ANX-2019-408, for a Zone of Annexation from County RSF-R (Residential Single Family – 5 ac/du) to a City C-1 (Light Commercial), the following findings of fact have been made:

1. In accordance with Section 21.02.140 (a) of the Zoning and Development Code, the request meets one or more of the rezone criteria.
2. In accordance with Section 21.02.160 (f) of the Zoning and Development Code, the request is consistent with the adopted Comprehensive Plan.

Therefore, Staff recommends approval of the requested Zone of Annexation.

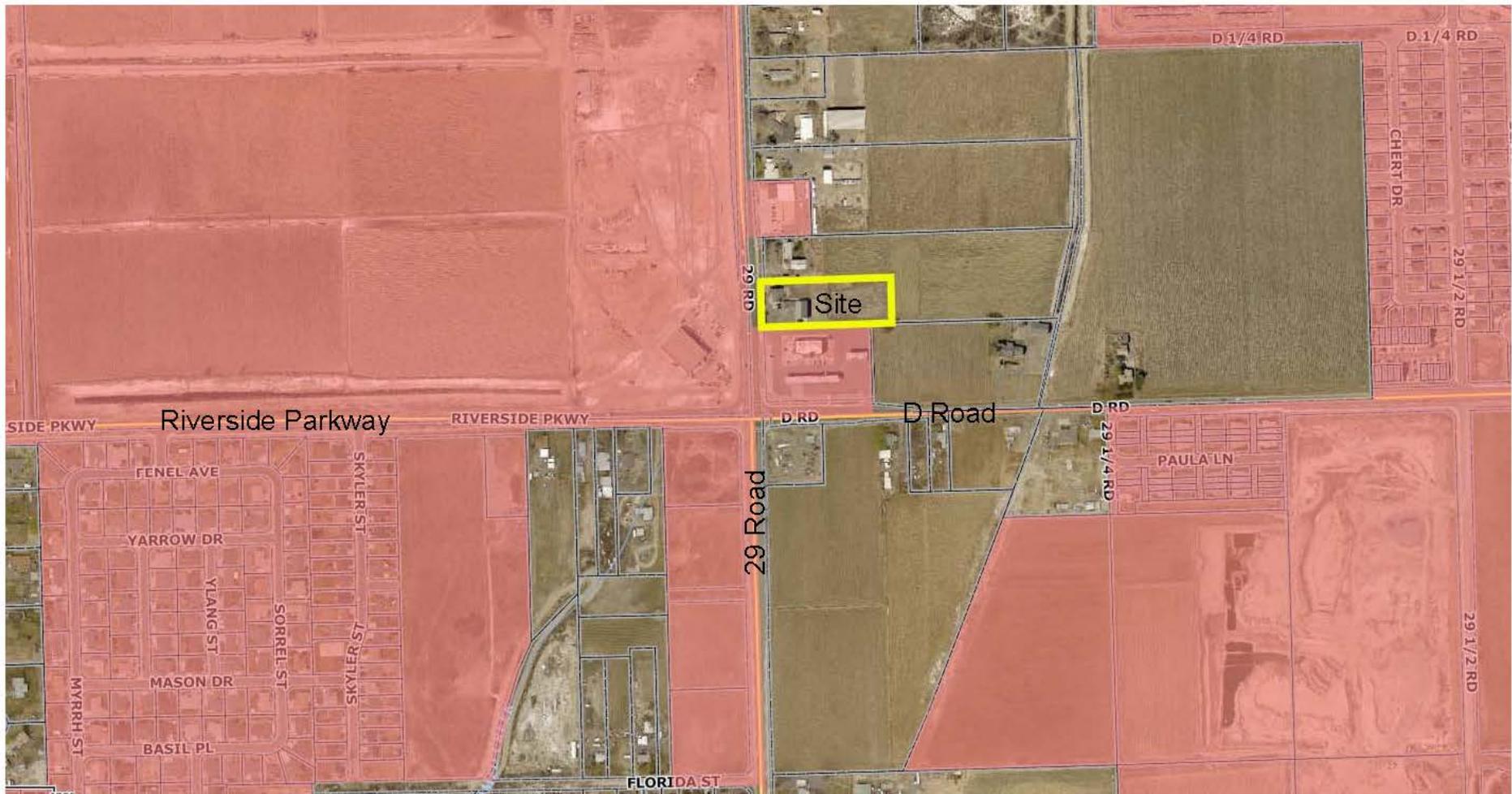
VI. RECOMMENDED MOTION

Madam Chairman, on the Zone of Annexation for Zona's Annexation to C-1 (Light Commercial) zone district, file number ANX-2019-408, I move that the Planning Commission forward a recommendation of approval to City Council with the findings of fact listed in the staff report.

Attachments:

1. City Limits Map
2. Site Location Map
3. Aerial Photo Map
4. Comprehensive Plan Future Land Use Map
5. Zoning Map
6. Annexation Plat
7. Site Photos

Zona's Annexation - Expanded City Limits Location Map



Zona's Annexation



0 50 100 200 Feet

 Annexation Boundary

 City Limits

8/15/2019



Zona's Annexation



0 50 100 200 Feet

 Annexation Boundary

 City Limits

8/15/2019

Zona's Annexation - Future Land Use

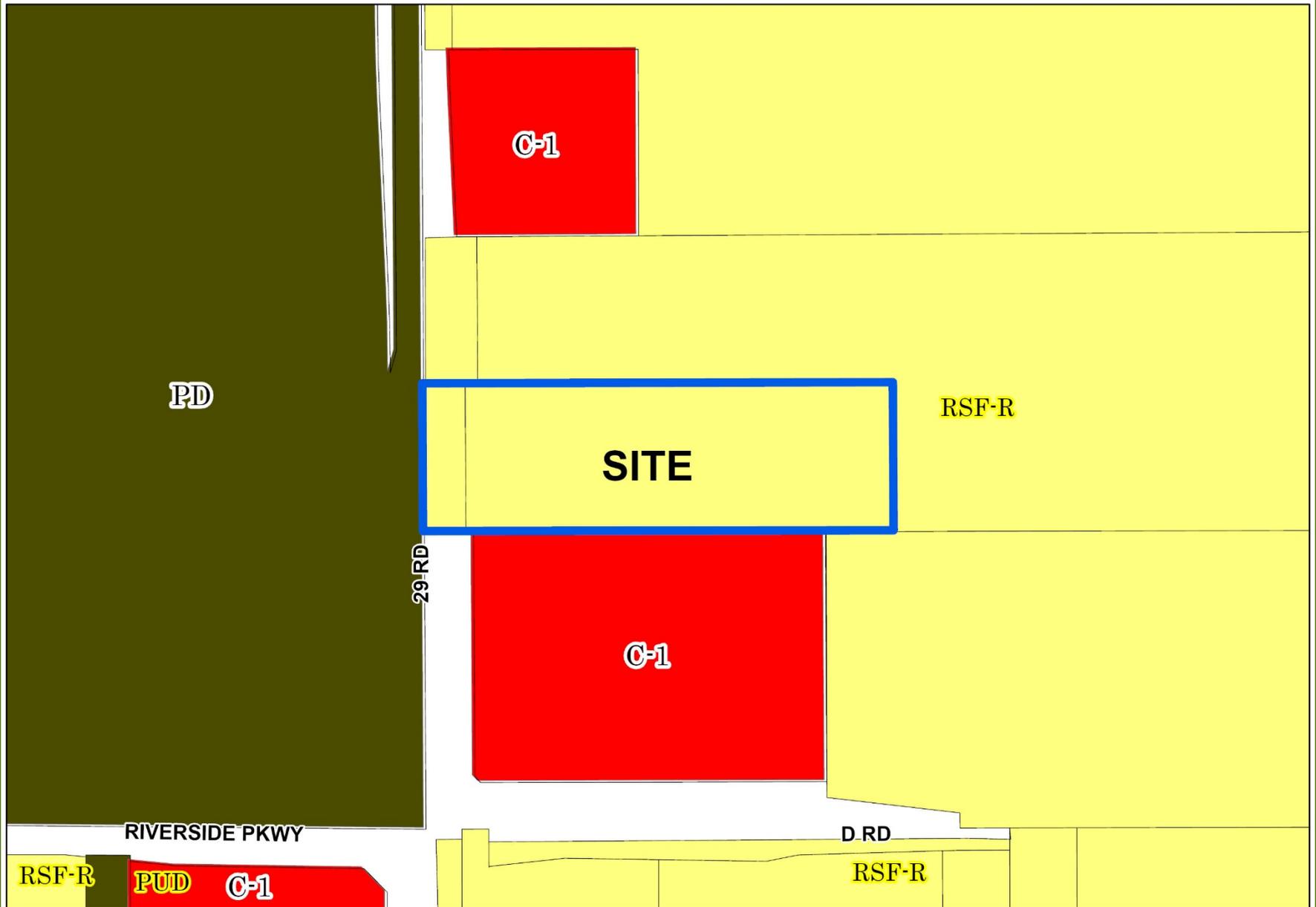


0 50 100 200
Feet

 Annexation Boundary

8/15/2019

Zona's Annexation- Zoning



RSF-R PUD C-1



0 50 100 200 Feet

Annexation

CITY ZONING

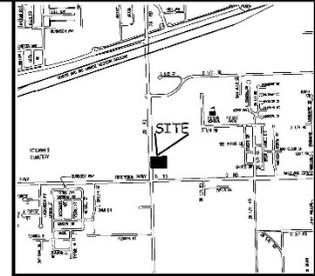
COUNTY ZONING

8/15/2019



ZONA'S ANNEXATION

SITUATE IN THE SW 1/4 OF THE SW 1/4
SECTION 17, TOWNSHIP 1S, RANGE 1E, UTE PRINCIPAL MERIDIAN
COUNTY OF MESA, STATE OF COLORADO
SHEET 1 OF 1

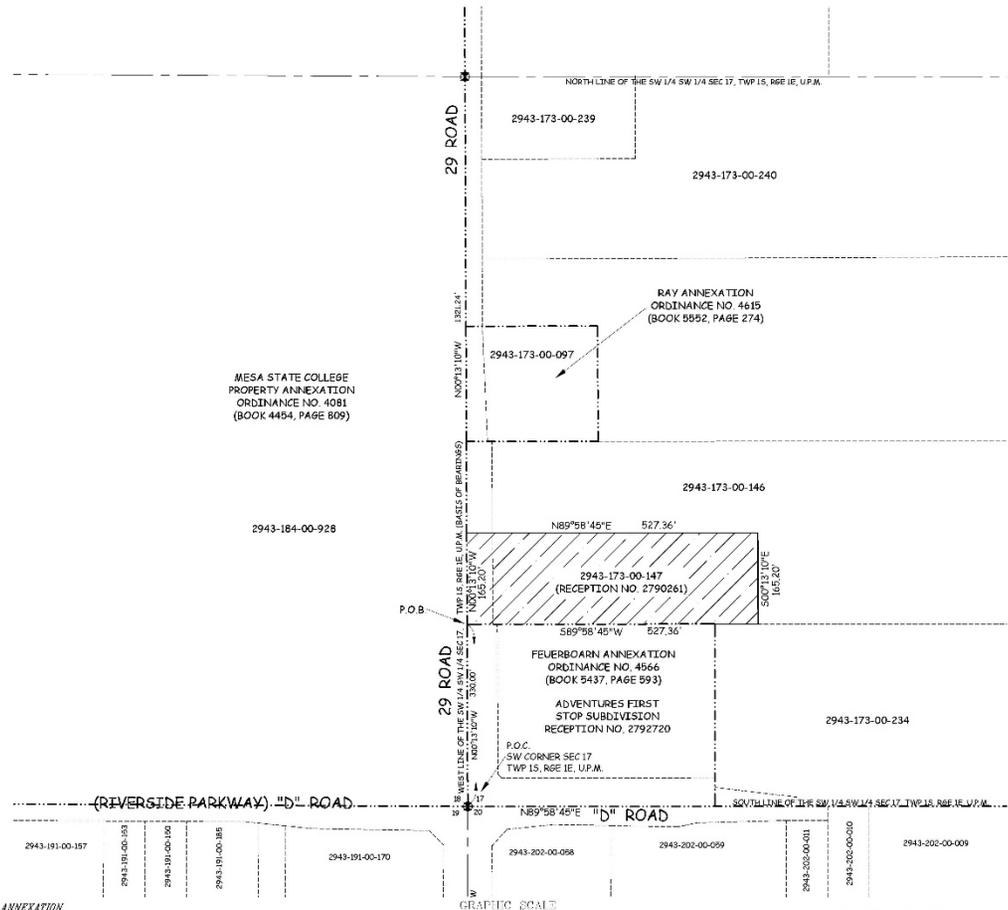


LOCATOR MAP: NOT TO SCALE

DESCRIPTION

A certain parcel of land lying in the Southwest Quarter of the Southwest Quarter (SW 1/4 SW 1/4) of Section 17, Township 1 South, Range 1 East of the Ute Principal Meridian, County of Mesa, State of Colorado and being more particularly described as follows:

COMMENCING at the Southwest corner of said Section 17 and assuming the West line of the SW 1/4 SW 1/4 of said Section 17 bears N 00°13'10" W with all other bearings contained herein being relative thereto; thence from said Point of Commencement, N 00°13'10" W along the West line of the SW 1/4 SW 1/4 of said Section 17, a distance of 330.00 feet to the POINT OF BEGINNING; thence from said Point of Beginning, continue N 00°13'10" W along the West line of the SW 1/4 SW 1/4 of said Section 17, a distance of 165.20 feet; thence N 89°58'45" E, along the North line of that certain parcel of land described with Reception Number 2790261, Public Records of Mesa County, Colorado, a distance of 527.36 feet; thence S 00°13'10" E, along the East line of said parcel, a distance of 165.20 feet; thence S 89°58'45" W, along the South line of said certain parcel of land, a distance of 527.36 feet, more or less, to the Point of Beginning.



ADDITIONAL DATA	
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
S.C.W.	POINT OF BEGINNING
S.C.S.	SECTION
TWP.	TOWNSHIP
RGE.	RANGE
U.P.M.	UTE PRINCIPAL MERIDIAN
ADMSLR	ADJUSTED
30. FT.	30.00 FEET
A.	ADJUSTED
ROAD	ROAD
AL	ADJUSTED
CM	COMMISSIONER
CM	COMMISSIONER
BLK	BLOCK
VB	VEGETATION
AK	ADJUSTED
PC	PLAT

The County Clerk's recorded plat has been obtained from the recorder's office and filed as they appear in the office of the Mesa County Clerk and Recorder. This plat does not constitute a legal survey, and is not intended to be used as a basis for the establishment of property boundary lines.



AREA OF ANNEXATION

SECTIONAL CORNER	1/8" BY 1/8" PL
SECTIONAL CORNER	1/4" BY 1/4" PL
AREA IN ACRES	0.0000
ADJUSTED	ADJUSTED

LEGEND

SECTIONAL CORNER	1/8" BY 1/8" PL
SECTIONAL CORNER	1/4" BY 1/4" PL
ADJUSTED	ADJUSTED



ORDINANCE NO. ????

EFFECTIVE DATE ????

THIS IS NOT A BOUNDARY SURVEY

PRELIMINARY

12/24/11, 11:00 AM, 125 No. 2224
Professional Land Surveyor for the
City of Grand Junction

Drawn by: P.T.K. **Date:** 07-23-2019
Designed by: _____ **Date:** _____
Checked by: P.T.K. **Date:** _____
Approved by: _____ **Date:** _____

Scale: 1" = 100'



PUBLIC WORKS
ENGINEERING DIVISION
SURVEY DEPARTMENT

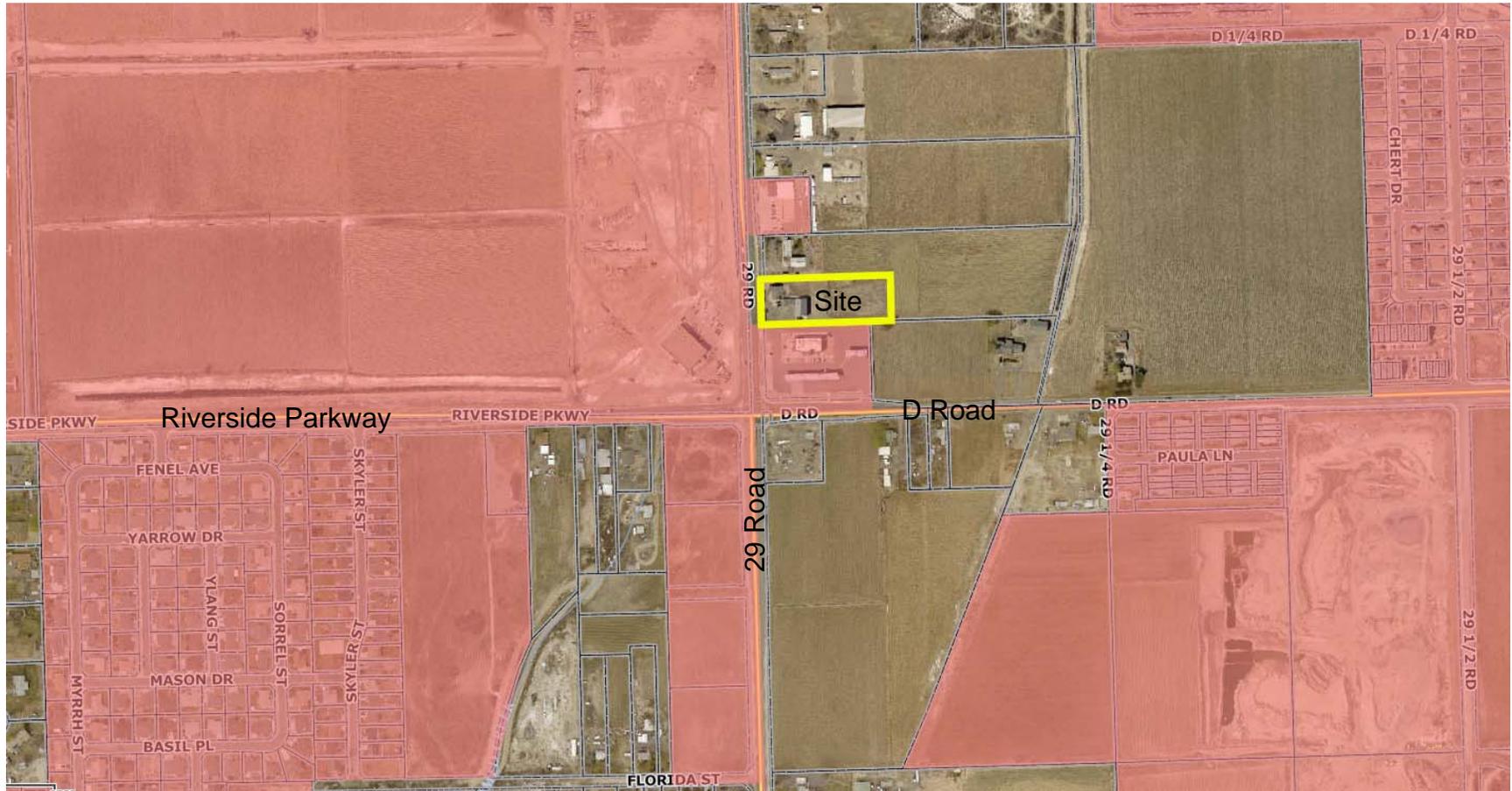
ZONA'S ANNEXATION
SW 1/4 SW 1/4 SECTION 17
TWP 1S, RGE 1E, UPM

Zona's Annexation Photo



View of property from 29 Road looking east

Zona's Annexation - Expanded City Limits Location Map



Zona's Annexation



 Annexation Boundary

 City Limits



0 50 100 200
Feet

8/15/2019

Zona's Annexation



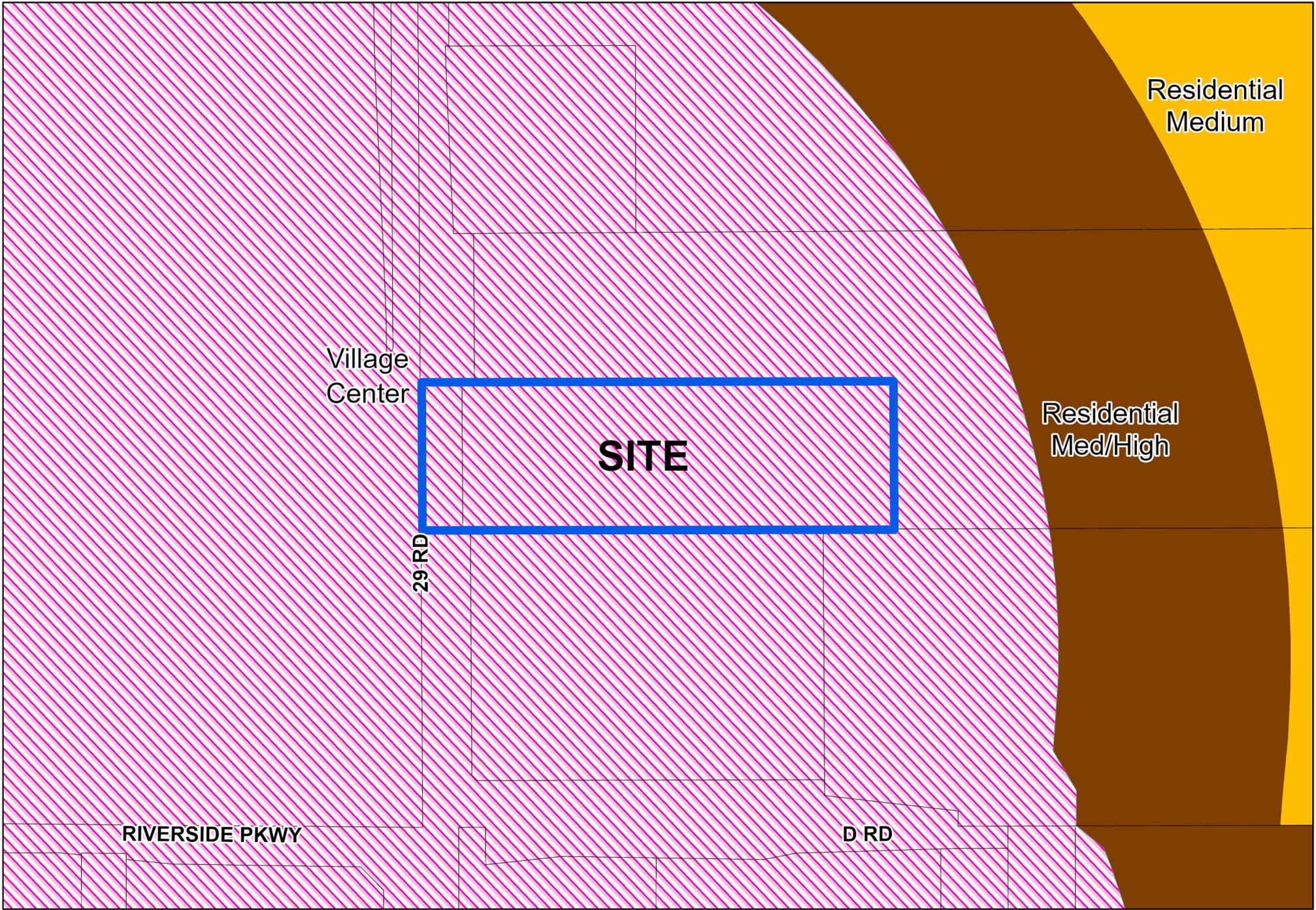
0 50 100 200
Feet

 Annexation Boundary

 City Limits

8/15/2019

Zona's Annexation - Future Land Use



0 50 100 200 Feet

 Annexation Boundary

8/15/2019

Zona's Annexation- Zoning



0 50 100 200 Feet

 Annexation

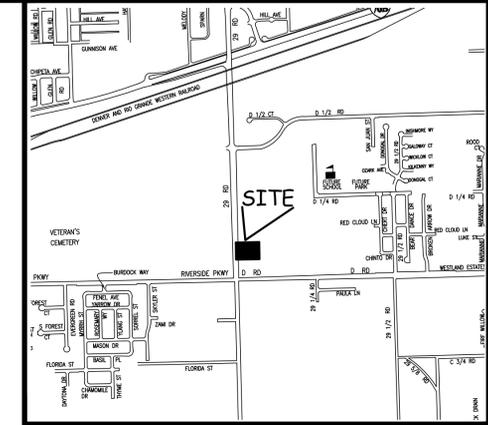
CITY ZONING

COUNTY ZONING

8/15/2019

ZONA'S ANNEXATION

SITUATE IN THE SW 1/4 OF THE SW 1/4
SECTION 17, TOWNSHIP 1S, RANGE 1E, UTE PRINCIPAL MERIDIAN
COUNTY OF MESA, STATE OF COLORADO
SHEET 1 OF 1

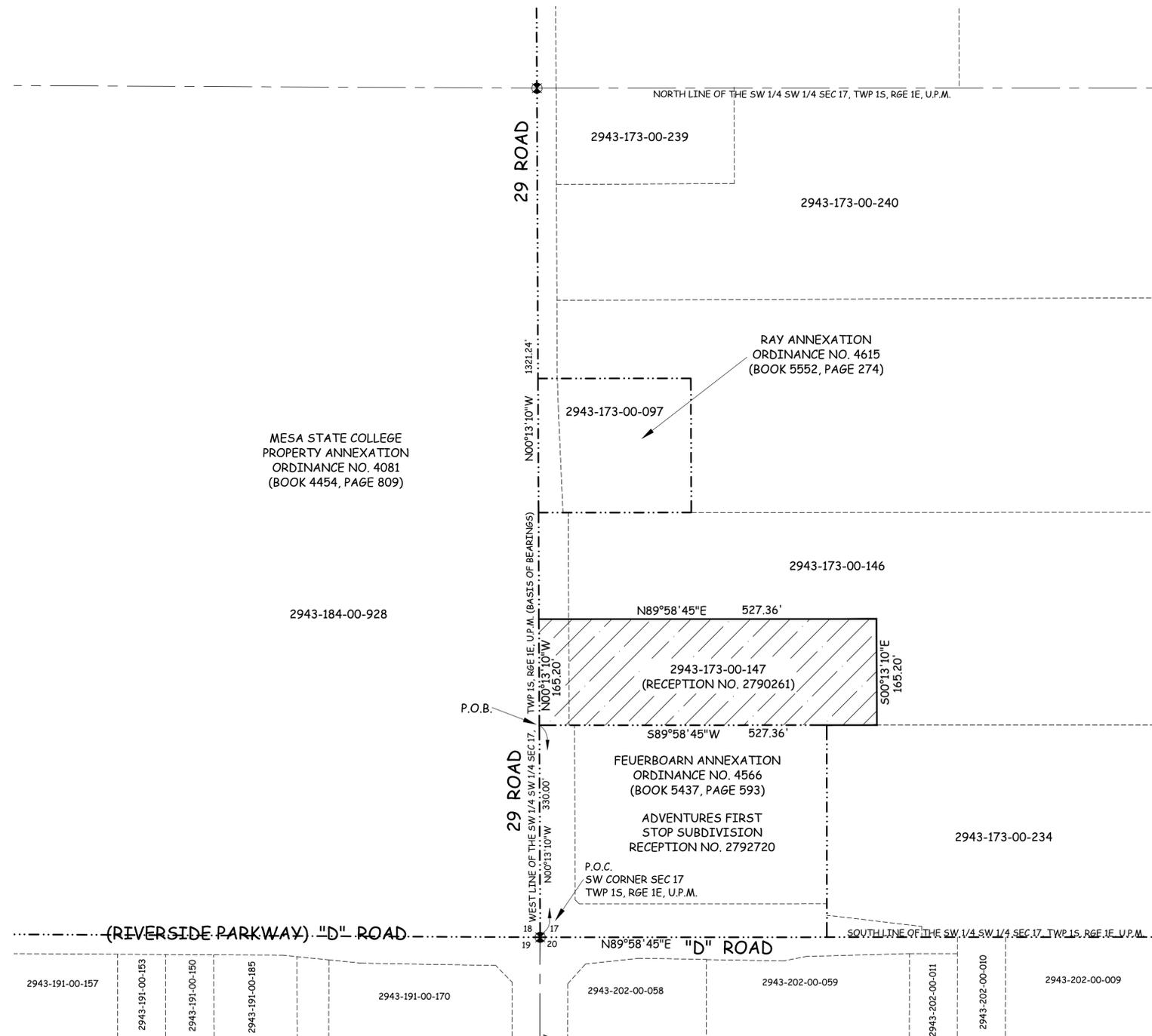


LOCATION MAP: NOT-TO-SCALE

DESCRIPTION

A certain parcel of land lying in the Southwest Quarter of the Southwest Quarter (SW 1/4 SW 1/4) of Section 17, Township 1 South, Range 1 East of the Ute Principal Meridian, County of Mesa, State of Colorado and being more particularly described as follows:

COMMENCING at the Southwest corner of said Section 17 and assuming the West line of the SW 1/4 SW 1/4 of said Section 17 bears N 00°13'10" W with all other bearings contained herein being relative thereto; thence from said Point of Commencement, N 00°13'10" W along the West line of the SW 1/4 SW 1/4 of said Section 17, a distance of 330.00 feet to the POINT OF BEGINNING; thence from said Point of Beginning, continue N 00°13'10" W along the West line of the SW 1/4 SW 1/4 of said Section 17, a distance of 165.20 feet; thence N 89°58'45" E, along the North line of that certain parcel of land described with Reception Number 2790261, Public Records of Mesa County, Colorado, a distance of 527.36 feet; thence S 00°13'10" E, along the East line of said parcel, a distance of 165.20 feet; thence S 89°58'45" W, along the South line of said certain parcel of land, a distance of 527.36 feet, more or less, to the Point of Beginning.



ABBREVIATIONS

P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
R.O.W.	RIGHT OF WAY
SEC.	SECTION
TWP.	TOWNSHIP
RGE.	RANGE
U.P.M.	UTE PRINCIPAL MERIDIAN
NO.	NUMBER
SQ. FT.	SQUARE FEET
Δ	CENTRAL ANGLE
RAD	RADIUS
AL	ARC LENGTH
CHL	CHORD LENGTH
CHB	CHORD BEARING
BLK	BLOCK
PB	PLAT BOOK
BK	BOOK
PG	PAGE

The Description(s) contained herein have been derived from subdivision plats and deed descriptions as they appear in the office of the Mesa County Clerk and Recorder. This plat does not constitute a legal survey, and is not intended to be used as a means for establishing or verifying property boundary lines.



AREA OF ANNEXATION

ANNEXATION PERIMETER	1,385.12 FT.
CONTIGUOUS PERIMETER	614.34 FT.
AREA IN SQUARE FEET	87,120**
AREA IN ACRES	2.000

**CONTAINS 7,682 SQ. FT. WITHIN 29 ROAD RIGHT OF WAY

LEGEND

ANNEXATION BOUNDARY	—————
EXISTING CITY LIMITS	- - - - -



ORDINANCE NO. ????

EFFECTIVE DATE ????

THIS IS NOT A BOUNDARY SURVEY

Notice:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

DRAWN BY	P.T.K.	DATE	07-23-2019
DESIGNED BY		DATE	
CHECKED BY	P.T.K.	DATE	
APPROVED BY		DATE	

SCALE

1" = 100'



PUBLIC WORKS
ENGINEERING DIVISION
SURVEY DEPARTMENT

ZONA'S ANNEXATION
SW 1/4 SW 1/4 SECTION 17
TWP 1S, RGE 1E, UPM

Zona's Annexation Photo



View of property from 29 Road looking east



Grand Junction Planning Commission

Regular Session

Item #6.

Meeting Date: September 24, 2019

Presented By: Kristen Ashbeck, Principal Planner/CDBG Admin

Department: Community Development

Submitted By: Kristen Ashbeck

Information

SUBJECT:

Consider a request by Colorado Mesa University (CMU) on behalf of the property owner, Johnny Jr. and Colleen Martin, to vacate a portion of the East-West Alley right-of-way (2,348 square feet) on the south side of the property located at 845 Orchard Avenue.

RECOMMENDATION:

Staff recommends approval of the vacation request.

EXECUTIVE SUMMARY:

Consider a request by the Applicant, Colorado Mesa University (CMU) on behalf of the property owner, Johnny Jr. and Colleen Martin, to vacate a portion of the East-West Alley right-of-way (2,348 square feet) on the south side of the property located at 845 Orchard Avenue. CMU is currently under contract to purchase the property and the vacated area would become part of the campus.

BACKGROUND OR DETAILED INFORMATION:

Colorado Mesa University (CMU) is in the process of acquiring the property on the north side of the alley that is presently owned by Johnny Jr. and Colleen Martin located at 845 Orchard Avenue. The property currently has three dwelling units on it. The sales contract on the property is conditioned upon the current owner having an opportunity to move the existing structures to a different location. Thus, final purchase of the property by CMU is not scheduled to occur until November 2019.

In the meantime, CMU, is requesting the vacation of a portion of the public right-of-way

(2,348 square feet) in the east-west alley on the south side of the property. CMU already owns the two properties on the south side of the alley that abut this segment proposed to be vacated. The vacation will aid in the continued westward expansion efforts planned for the campus. Consistent with CMU's approved Civic and Institutional Master Plan, this area of the campus is proposed to be a new outdoor track and field facility.

This particular segment of alley lies outside of the CMU Master Plan area boundary subject to Ordinance 4754 which established an agreement between the City and CMU to enable rights-of-way to be vacated through an administrative process. Since it is outside that area, the vacation process for this segment of alley right-of-way is subject to the City's standards processes as defined by the Zoning and Development Code and may only be approved by recommendation of the Planning Commission to City Council for final action.

Presently, the alley contains a City sewer line and Xcel Energy electrical and gas infrastructure. The relocation and/or easement needs for the City utility are subject to the Colorado Mesa University and City of Grand Junction Utility Easement and Maintenance Agreement-CMU Main Campus executed in September 2016. The Agreement was executed with the common understanding that 1) CMU has relied, and will continue to rely, on the City's water, sanitary sewer and other services to other citizens and landowners within the City; and 2) the City desires to support the expansion of the CMU campus and agrees that the City should continue to own, operate and maintain the main or trunk lines providing service to and within the campus as it exists and as it plans to exist. The Agreement outlines the responsibilities of each agency in providing access to and maintenance of utilities within rights-of-way proposed to be vacated and stipulates that the City will agree to vacations of rights-of-way, so long as at least 10 feet of unobstructed access is provided, centered over each wet utility line (e.g. sewer and water). The Agreement does not state that the access needs to be provided via an easement.

The alley does contain Xcel Energy infrastructure (electric and natural gas), however these existing utilities will be moved and relocated by Xcel Energy as part of the construction of the new track and field facility and if necessary, appropriate easements to Xcel Energy will be dedicated at that time.

The Grand Junction Fire Department has no objections to the proposed right-of-way vacation provided remaining existing and all future access roads created with new construction on the CMU campus are compliant with the state and locally adopted International Fire Code. Given the requirement and CMU's intention to develop and construct fire access lanes, it is Staff's assessment that the proposed vacation would not impede traffic, pedestrian movement or access to private property or obstruct emergency access.

NOTIFICATION REQUIREMENTS

A Neighborhood Meeting was held on August 26, 2019. There were 20 people in attendance. The Applicant provided a presentation with an update on various activities going on across campus and information regarding the most recent vacation requests. The discussion concerned alley access to the east, trash service in the alley, how traffic will be addressed to prevent people from driving through driveways that connect to Orchard Avenue, and emergency access to go south from Orchard Avenue on what used to be the Cannell Avenue alignment.

Notice was completed consistent with the provisions in Section 21.02.080 (g) of the Zoning and Development Code. The subject property was posted with an application sign and mailed notice of the public hearings before Planning Commission and City Council in the form of notification cards was sent to surrounding property owners within 500 feet of the subject property on September 13, 2019. The notice of the public hearing for the Planning Commission meeting was published September 17, 2019 in the Grand Junction Daily Sentinel.

ANALYSIS

Pursuant to Section 21.02.100 of the Zoning and Development Code, the vacation of public right-of-way shall conform to the following:

(1) The Comprehensive Plan, Grand Valley Circulation Plan and other adopted plans and policies of the City,

Granting the request to vacate a portion of an existing alley right-of-way meets the following Goal and Policy of the Comprehensive Plan by supporting the University in their facilities and building expansion projects, enhances a healthy, diverse economy and improves the City as a regional center of commerce, culture and tourism.

Goal 12: Being a regional provider of goods and services the City and County will sustain, develop and enhance a healthy, diverse economy.

Policy A: Through the Comprehensive Plan's policies the City and County will improve as a regional center of commerce, culture and tourism.

In addition to the goal and policy above the Grand Junction Comprehensive Plan states: "Due to the inefficiencies of low density sprawl, a significant amount of projected future growth is focused inward on vacant and underutilized land throughout the community. This takes advantage of land that already has roads, utilities and public services. Infill and redevelopment is especially focused in the City Center. Reinvestment and revitalization of the center, and maintaining and expanding a 'strong downtown', is a high priority of the Comprehensive Plan and essential for the area's

regional economy. (Guiding Principle 1: Centers - Downtown)”

The requested vacation also does not conflict with the Grand Valley Circulation Plan and other adopted plans and policies of the City.

Therefore, this criterion has been met.

(2) No parcel shall be landlocked as a result of the vacation.

No private parcels shall be landlocked as a result of the proposed vacations as all remaining private properties west of this requested vacation will continue to have access to street and alley rights-of-way.

Therefore, this criterion has been met.

(3) Access to any parcel shall not be restricted to the point where access is unreasonable, economically prohibitive, or reduces or devalues any property affected by the proposed vacation;

All properties abutting the proposed portion of alley requested for vacation are owned by or soon to be owned by CMU. Therefore, provided CMU follows through with the acquisition of 845 Orchard Avenue prior to recording the vacation ordinance, there are no other properties in the vicinity that will rely on this alley for access to their property.

Therefore, this criterion will be met.

(4) There shall be no adverse impacts on the health, safety, and/or welfare of the general community, and the quality of public facilities and services provided to any parcel of land shall not be reduced (e.g., police/fire protection and utility services);

There are both City and Xcel utilities located within the segment of alley right-of-way requested to be vacation. City utilities will be accommodated via the previously-mentioned agreement which preserves a minimum 10-foot wide access centered on all wet utility lines. Xcel has not requested an easement be retained at this time for the existing utilities. Xcel utilities will be relocated and/or easements provided at the time the future facilities are to be constructed. CMU has provided an emergency access plan for this area of the campus including with the construction of the new track and field facility and the Fire Department has approved the plan. In addition, for City Sanitation, CMU will provide a hammerhead turnaround at the east end of the vacated alley that can still accommodate trash pick-up in the alley. The requested vacation does not adversely impact police/fire protection to the remaining adjacent private properties.

Therefore, the requested vacation has no identified adverse impacts on the health, safety, and/or welfare of the general community, and the quality of public facilities and services provided to any parcel of land shall not be reduced.

Thus, Staff has found this criterion has been met.

(5) The provision of adequate public facilities and services shall not be inhibited to any property as required in Chapter 21.06 of the Grand Junction Zoning and Development Code; and

No adverse comments concerning the proposed right-of-way vacations were received from the utility review agencies during the review process including Xcel Energy. Sanitary sewer is located in the alley but its future relocation and/or need for easement is addressed in the Colorado Mesa University and City of Grand Junction Utility Easement and Maintenance Agreement-CMU Main Campus. Xcel utilities will be relocated if needed and/or easements provided at the time the future facilities are to be constructed.

Therefore, this criterion has been met.

(6) The proposal shall provide benefits to the City such as reduced maintenance requirements, improved traffic circulation, etc.

Maintenance requirements for the City will be reduced as a result of the proposed portion of alley right-of-way to be vacated since the City will not have to maintain the right-of-way. The benefit to the City is the expansion of CMU and its mission to educate and by enhancing and preserving Grand Junction as a regional center. The proposed alley right-of-way vacation is needed by CMU as part of their continued campus expansion to the west.

Therefore, this criterion has been met.

STAFF RECOMMENDATION AND FINDINGS OF FACT

After reviewing the Colorado Mesa University Vacation of Alleyway Right-of-Way, VAC-2019-444, located at 845 Orchard Avenue, the following findings of fact have been made with the recommended conditions of approval:

1. The request conforms with Section 21.02.100 (c) of the Zoning & Development Code.
2. The requested vacation does not conflict with the goals and policies of the Comprehensive Plan.

Condition 1. The applicant shall provide evidence of ownership of the property located

at 845 Orchard Avenue (parcel number 2945-111-08-006) prior to the ordinance being recorded with the Mesa County Clerk and Recorder in order for the vacation to take effect.

Condition 2. The Applicant shall pay all recording/documentary fees for the Vacation Ordinance.

Condition 3. The Applicant shall meet all terms and conditions of the *Colorado Mesa University and City of Grand Junction Utility Easement and Maintenance Agreement-CMU Main Campus* and all requirements of the Grand Junction Fire Department for construction of proposed campus facilities.

Therefore, Staff recommends conditional approval of the requested vacation.

SUGGESTED MOTION:

Madam Chairman, on the Colorado Mesa University Vacation of Alley Right-of-Way located at the east-west alley along the south side of the property at 845 Orchard Avenue, City File VAC-2019-444, I move that the Planning Commission forward a recommendation of conditional approval to City Council with the findings of fact and conditions as listed in the staff report.

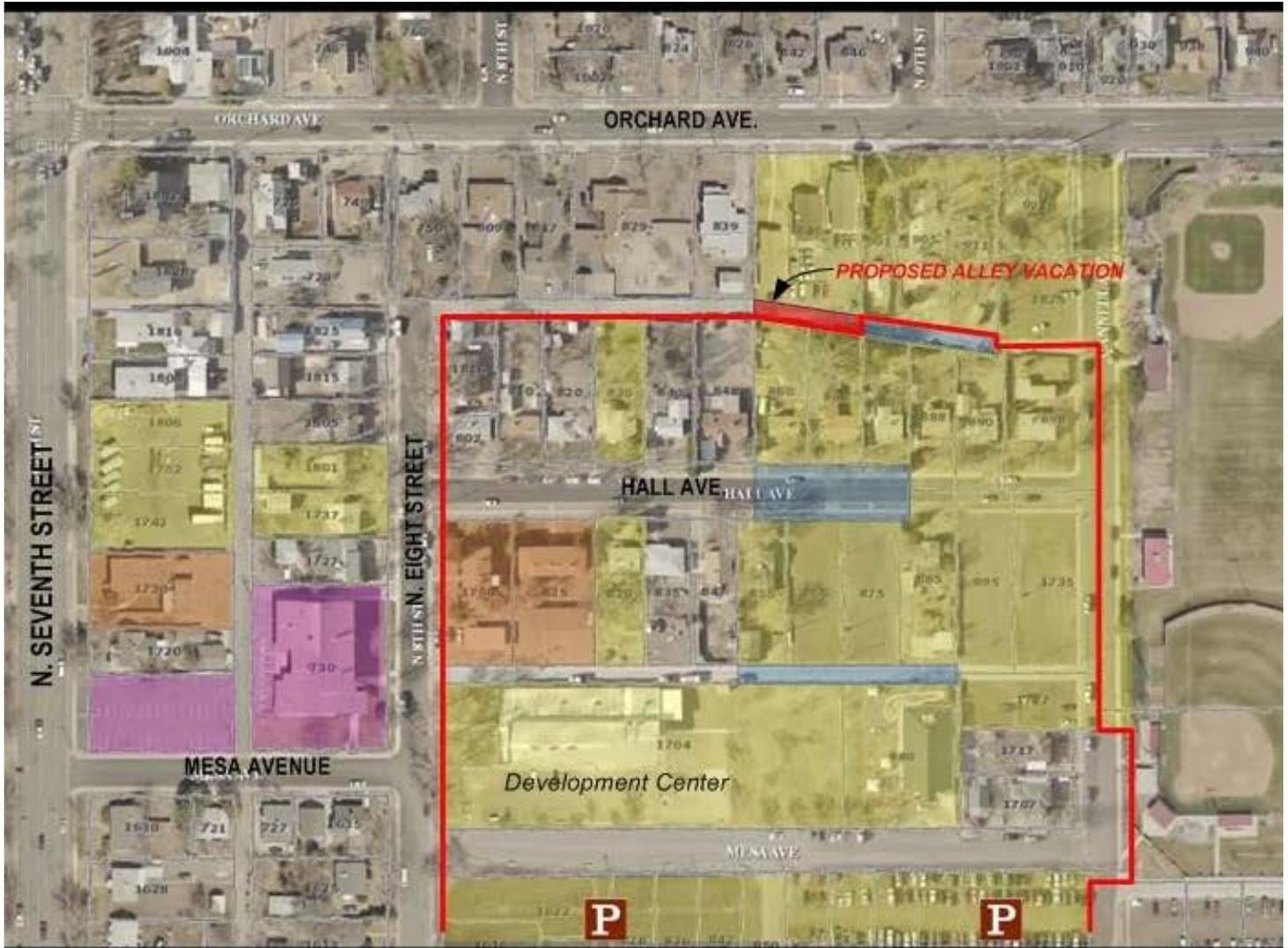
Attachments

1. 845 Orchard Avenue Vacation Location Maps
2. Proposed Track and Field Facility Showing Access
3. CCON 3946 Contract - 2016 - Utility Easement and Maintenance Agreement within Campus - Colorado Mesa University (CMU)
4. CMU Alley Vacation 845 Orchard Ave Ordinance

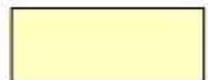
LOCATION MAP



AERIAL PHOTO LOCATION MAP



 2017 Master Plan Boundary

 Property Owned by CMU

COLORADO MESA UNIVERSITY AND CITY OF GRAND JUNCTION UTILITY EASEMENT AND MAINTENANCE
AGREEMENT-CMU MAIN CAMPUS

This Agreement is made by and between the City of Grand Junction, a Colorado home rule city ("City"), and the Board of Trustees of Colorado Mesa University ("CMU"), and is effective as of the date that both parties have signed below.

Recitals.

- A. CMU continues to expand its campus to serve the needs of Western Colorado and of the entire State of Colorado. For this Agreement, "campus" means the area generally bounded by North Avenue, Orchard Avenue, 7th Street and 12th Street, in Grand Junction, Colorado, within which exists the main CMU campus and within which CMU is expected to expand.
- B. CMU has adopted a master plan, the current iteration of which shows that in the years to come the campus can be expected to encompass many existing properties west of the now developed main campus. A copy of the current master plan is attached as Exhibit A. When land use is changed from residential to campus buildings and facilities, the number of service lines will decrease substantially yet the size of the lines and the complexity of the maintenance of the lines may increase and/or some lines may need to be relocated. A 'service line' for purposes of this Agreement is the water and/or the sewer pipe(s) connecting the structures on the campus with the City water or sewer pipe(s) that carry water or sewage, respectively, to and/or away from the campus and other structures served by such service lines.
- C. CMU has relied, and will continue to rely, on the City's water, sanitary sewer and other services provided to other citizens and land owners within the City.
- D. To utility providers and engineers, there is a distinction between 'main' or 'trunk' water, sanitary sewer and storm sewer lines (typically 4" or larger for water, 8" or larger for sanitary sewer and 12" or larger for storm sewer) and 'service' lines that are typically smaller and are owned and maintained by the owner of the served parcel. For purposes of this Agreement, the larger 'main' or 'trunk' lines as described above are the primary concern of the City and CMU under this agreement, not 'service lines (Wet Utilities)

The City desires to support the expansion of the CMU campus, and agrees that the City should continue to own, operate and maintain the main or trunk lines providing service to and within the campus as it exists and is planned to exist.

- E. At the present time, CMU is requesting City approval of a plat and vacation of existing City rights-of-way as shown on said plat, attached as Exhibit B. This Agreement is agreed to in part to facilitate the City's approval of such plat.

NOW THEREFORE, in consideration of the many benefits received by CMU and the City, individually and collectively, as a result of this Agreement, the City of Grand Junction and Colorado Mesa University agree as follows:

1. CMU, as the owner of the property described on Exhibit B, hereby grants to the City as the owner and service provider of the Wet Utilities serving the property shown on Exhibit B, a perpetual and non-exclusive easement to be used by the City to access, operate, maintain, improve, repair and replace as necessary the Wet Utilities serving the property shown on Exhibit B in accordance with City standards.
2. The City agrees that it will continue to own, operate, maintain, improve, repair and replace as needed the main and trunk lines as described in recital C above, that serve the property shown on Exhibit B now and as it is planned to exist in the future except as the deviation procedure in paragraph 4 below applies.
3. While the City standards ordinarily require unobstructed ten-foot-wide access on either side of the centerline of Wet Utilities, the City recognizes that doing so within the campus may unduly limit the ability of CMU to make the most efficient use of its limited area and lands. Thus, the City agrees to accept existing accesses to existing Wet Utilities, so long as at least ten feet of unobstructed access is provided, centered over the Wet Utility in question.
4. CMU shall deliver its construction plans to the City with respect to Wet Utilities so that the City has an opportunity to improve the efficiency and effectiveness of Wet Utility service line that will serve the campus both now and in the future. When, CMU determines that one or more City standard(s) must be deviated from when constructing or locating Wet Utilities, CMU shall consult with the City's Engineers to obtain City approval of such deviation(s). If the City's Engineers do not approve such deviation(s), then CMU may request review of such denials by the City Director of Public Works and if said Director does not approve such deviation(s) then CMU may request the City Manager to review such denial and if said City Manager does not approve such deviation(s), and CMU elects to construct the deviations anyway CMU shall be responsible for maintenance, repair and replacement of such service, trunk or main line(s) for that segment or portion of the Wet Utilities that do not meet the City's specifications. Deviations that are approved shall be described in writing, typically including drawing(s) specifying the deviation(s).
5. For buildings and other improvements within the area described on Exhibit A, and for future easements for the campus as it will exist, CMU agrees to provide ready and safe access to the City for Wet Utilities.
6. In the event the City concludes that it cannot reasonably obtain access to Wet Utilities because the CMU design access is too narrow, short or small, City Engineers will inform the City Director of Public Works who shall consult with the CMU consultant/engineer to determine a practical solution, on a case-by-case basis.
7. In any instance where the wet utilities do not meet city standards and where the Campus surface has been improved (e.g., sidewalks and landscaping) , including within the area described in Exhibit A, if the City cannot reasonably obtain access to or perform its necessary maintenance,

improvement, repairs or replacement to Wet Utilities owned by the City, the City shall inform CMU which shall perform the needed maintenance, improvement, repair or replacement; however, in an emergency, the City may damage or remove such surface improvements without notice to CMU and in such event, the City shall not be obligated to replace the improved surface of the damaged area to its prior condition, but shall return the surface to a substantially equivalent of grade and elevation.

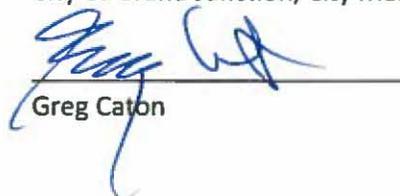
8. CMU shall pay for the costs to repair or replace any improvements damaged by the City as a result of the reasonable exercise of maintenance, repair or replacement of City Wet Utilities in locations where such Wet Utilities do not meet City standards.
9. Notwithstanding any provision of this Agreement to the contrary, CMU shall prohibit the construction of any structures on the Campus as it exists or will exist that are not at least ten feet at the centerline from any Wet Utilities existing as of the date of the Agreement.
10. The parties agree that the existing rights-of-way for Cannell and Elm and any existing multi-purpose easements ("MPE"s) shall be vacated, and title thereto shall vest in CMU, subject to reservation by the City of easements (the "Cannell and Elm Easements") for any such MPEs and for access for utilities. The legal description of the Cannell and Elm Easements that are being vacated shall be identical to the description of the vacated rights-of-way and any adjacent MPEs.
11. The City agrees that CMU shall have the right to install improvements such as fiber optic lines and related facilities within the Cannell and Elm Easements, subject to CMU's duty to abide by the law applicable to easements.
12. To facilitate the logical and efficient expansion of CMU on land presently owned or owned in the future either in the name of the CMU Real Estate Foundation or titled in the name of the State of Colorado for the benefit of CMU, or in the name of any entity controlled by the CMU Board of Trustees, this Agreement shall apply to all Wet Utilities serving the present and future CMU main campus.
13. The term of this Agreement shall be for a five year period and can be renewed for another five year term provided both parties are agree able. The term also provides for a two year review by both parties from the effective date of the agreement. This two year review will be an opportunity for the two parties to meet and assess how the agreement is working and make appropriate changes to the agreement as agreed upon by both parties.

Colorado Mesa University, President



By: Tim Foster

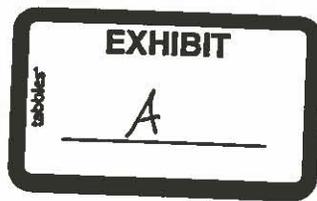
City of Grand Junction, City Manager



Greg Caton

Dated: 2-12-16

Dated: 9/12/2016



MESA STATE COLLEGE

PROGRAM PLAN

WEST EXPANSION PROPERTY ACQUISITION PROJECT

APRIL 8, 2011



C H A M B E R L I N
A R C H I T E C T S

CONTRIBUTORS

Mesa State College Board of Trustees:

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Kathleen Eck
Lena Elliott
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Mesa State College Foundation Officers

Doug May, President
Keith Gilstrap, Vice-President
Travis Perry, Secretary/Treasurer

PREFACE

The project described herein continues the activities associated with the main campus land acquisition project begun in 1999. Since then, the Mesa State College Foundation has been acquiring property and, beginning in 2004 with the approval of the “House Demolition and Ground Recovery Project” program plan, began gifting the properties to the College. Originally the 2004 program plan was expected to take 15 years to complete; however, with only five remaining properties to be acquired, it is approaching its successful completion in half the time. This coupled with the unprecedented enrollment growth that has occurred during this time period places the College in a position where it needs to proceed with phase two its land expansion plan. Approval of this program plan will authorize the Foundation to acquire the additional properties described herein.

Coordinators for this project were Pat Doyle, Vice President, Finance and Administrative Services, Derek Wagner, Director, Strategic Initiatives, Kent Marsh, Director of Facilities Services; and Andy Rodriguez, Director of Purchasing. Program plan documentation was accomplished by Ed Chamberlin, Chamberlin Architects, Campus Architect. This document has been approved by Tim Foster, President of Mesa State College, as well as by the senior administration of the College.

This document responds to the outline requirements of CCHE policy Section III.E, *Guidelines for Facilities Program Planning* last revised April 5, 2001. Some outline sections have been omitted because the project does not deal with new capital construction or building renovation.

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EXECUTIVE SUMMARY

It is the purpose of this project to consolidate activities associated with the main campus land acquisition project begun in 1999. Since then, the Mesa State College Foundation has been acquiring property and giving it to the College through Foundation, Trustee, Colorado Commission on Higher Education, and Legislative actions. The College now needs to be able to accept the gift of additionally acquired properties and to consolidate those and prior associated properties into useful capital construction expansion sites.

This project is necessitated by the continued growth of Mesa State College. In the past ten years, unduplicated fiscal year FTE has increased from 4302 to 6555 or 52.4%. Likewise, unduplicated fiscal year headcount has grown from 5212 to 8131 or 56.0%. These figures indicate a growth rate of almost 4.5% per year.

The specific additional property being considered by the College by its Foundation consists of 214 residential lots, 2 churches, and 21 commercial properties comprising a total of 77.3 acres. Other property that is being given to the College consists of city streets and alleys that will become within the College boundaries.

The land gifts are part of the Land Acquisition Project begun in 1999 with donations from the City of Grand Junction, Mesa County, and numerous community organizations, institutions, leaders, and individuals. The original acquisition project was identified in the 1999 *Mesa State College Facilities Master Plan*. This project will allow for the acceptance of gifted properties within specified boundaries which have yet to be acquired by the College, the Mesa State College Foundation, or through subsequent capital construction projects. The boundaries for the main campus will be North Avenue on the south, Orchard Avenue on the north, Seventh Street on the west, and with the addition of one block east of 12th Street, 12th Street on the east. There are also two other large tracts that, if they become available, will be valuable additions to the campus. These are at the northwest and southeast corners of 12th and Orchard.

Consolidation of the properties into useful sites will consist of demolition of the existing structures and surveying and replatting of the individual lots, streets, and alleys into one parcel that belongs to the College. Existing structures include those being donated to the College under this project as well as those yet to be acquired by the Foundation. The consolidated parcel will then be available for construction of temporary parking lots and green spaces, provide ongoing revenue sources and sites for significant campus expansion projects.

The project will be self-financed over time by the College through the use of cash exempt funds and donations. As those funds become available, parts of the project will be finished. No endowment is included with the gifted properties. It is understood that the College will maintain them within its own budgeted resources.

PROGRAM INFORMATION

DESCRIPTION OF THE PROGRAM

For the past several years, Mesa State College has been increasing its enrollment. In 1996, it was recognized that this enrollment growth would require additional land and facilities, placing its main campus in need of a significant boundary expansion. Since approval of the *Mesa State College Facilities Master Plan* in 1999, the Mesa State College Foundation with the help of the City of Grand Junction, Mesa County, and numerous community organizations, institutions, leaders, and individuals, has acquired several properties to help meet expansion needs. The Foundation has already gifted many of these to the college. The project described herein continues this gifting process that began in 2004. The project gives additional properties to the college in accordance with current and future facilities master plan needs.

HISTORY, ROLE AND MISSION, NEEDS AND TRENDS

Mesa State College's current role and mission:

There is hereby established a college at Grand Junction, to be known as Mesa state college, which shall be a general baccalaureate and specialized graduate institution with moderately selective admission standards. Mesa state college shall offer liberal arts and sciences, professional and technical degree programs and a limited number of graduate programs. Mesa state college shall also maintain a community college role and mission, including career and technical education programs. Mesa state college shall receive resident credit for two-year course offerings in its commission-approved service area. Mesa state college shall also serve as a regional education provider.¹

As regional education provider, Mesa State College serves 14 counties in western Colorado. The region's population continues to grow, providing the College with additional students every year. According to the State's Demographic Office, all of the counties in Mesa State's region have grown and will continue to grow.² (The period in question is from 2000 to 2040 for 15 to 25 year olds. These dates are the period analyzed for the *Mesa State College Facilities Master Plan*.) Historically, well over half of the College's enrollment comes from this region.³ However, recent enrollment growth from outside Mesa County and outside Colorado has been dramatic. Non-resident student FTE has grown from 438 to 614 since 2007 – a 40% increase confirming the College's need for additional land to support its mission.

¹ Colorado Revised Statutes 23-53-101, College Established – Role and Mission.

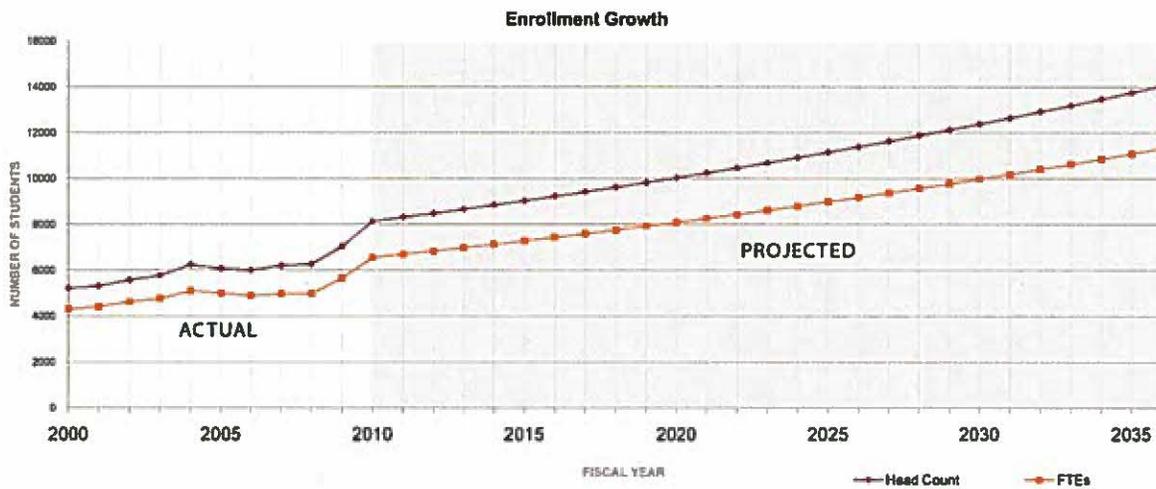
² Rather than reprint the demographic information within this document, the reader is referred to <http://dola.colorado.gov/demog/demog.cfm> for backup information from the Colorado Demography Office on the population trends for each county.

³ See Appendix A of this document for student demographic information.

RELATION TO ACADEMIC/STRATEGIC PLANS

Mesa State College anticipates continued enrollment growth. The *Mesa State College Strategic Plan*⁴ recognizes the need to balance sustainable growth with maintaining the institution's role as a regional education provider for 14 counties in western Colorado. With a focus on enhancing quality in the institution's programs, faculty, students, technology and facilities, sustainable enrollment growth is likely over the life of the plan. As financial support from the State of Colorado continues to dwindle, the institution is focused on strategic growth initiatives that enhance our competitiveness and strengthen our financial position.

The following graph presents enrollment growth, actual and projected, for the thirty-five year period from 2000 to 2035.



Using 2000 as the base year, the graph shows that for fiscal year 2010, the actual FTE of 6555 and actual headcount of 8131 represent a growth rate of over 2.1% and 4.5% respectively. The trend for both FTE and headcount is continued growth especially among out of town students who will need on-campus housing. The projection anticipates a growth rate of 2.125% per year.

The College is reevaluating its strategic planning documents in the light of the current economic climate in its current role and mission. However, it is known that, because of its designation as regional education provider for 14 counties, the College will need to be able to respond to the increasing educational needs of a growing western Colorado

⁴ <http://www.mesastate.edu/president/documents/StrategicPlan01-27-11.PDF>

population. It is anticipated that College growth and the subsequent need for additional land will continue.⁵

RELATION TO OTHER PROGRAMS OR AGENCIES

This program is integral to the college being able to fulfill its role and mission. Without the ability to expand the campus boundaries, the college will be limited in its ability to provide access to students outside of its immediate geographic location i.e. Mesa county. Having the capacity to continue to grow enrollment throughout Colorado and surrounding Western Undergraduate Exchange (WUE) states is key to the long term financial stability of the institution.

PROGRAM ALTERNATIVES

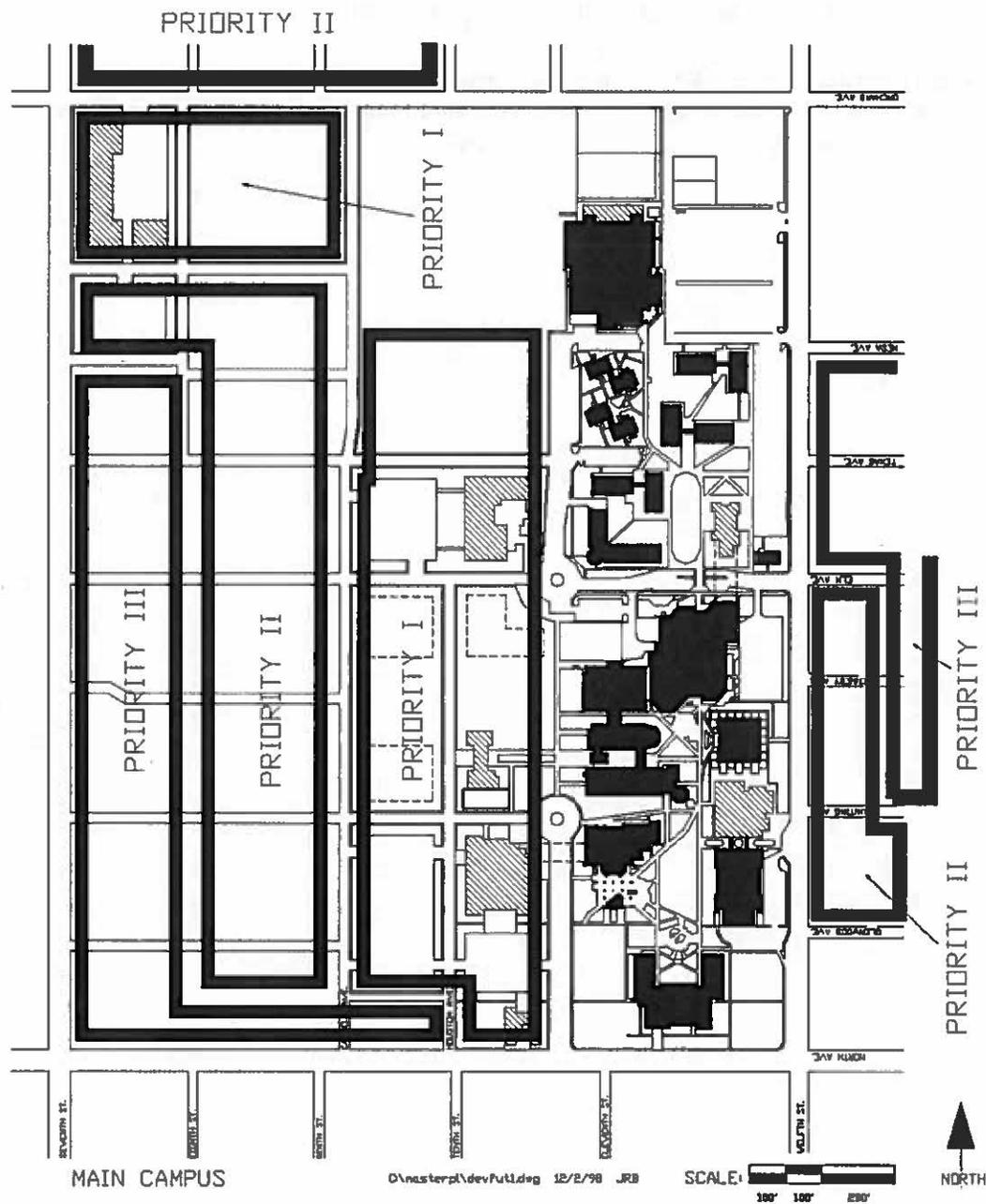
The only alternative to this project is to cap enrollment. This is not acceptable and contrary to the College's role and mission.

⁵ It should be noted that this Program Plan discusses only the needs of the main campus. Enrollment growth with subsequent land and facility needs are also anticipated for the UTEC and Montrose campuses.

FACILITIES NEEDS

TOTAL SPACE AND SITE REQUIREMENTS

Prior to the 2004 acquisition project, the main campus contained approximately 45 acres of land. The 1999 Facilities Master Plan identified several areas of potential expansion in accordance with the map shown below.⁶

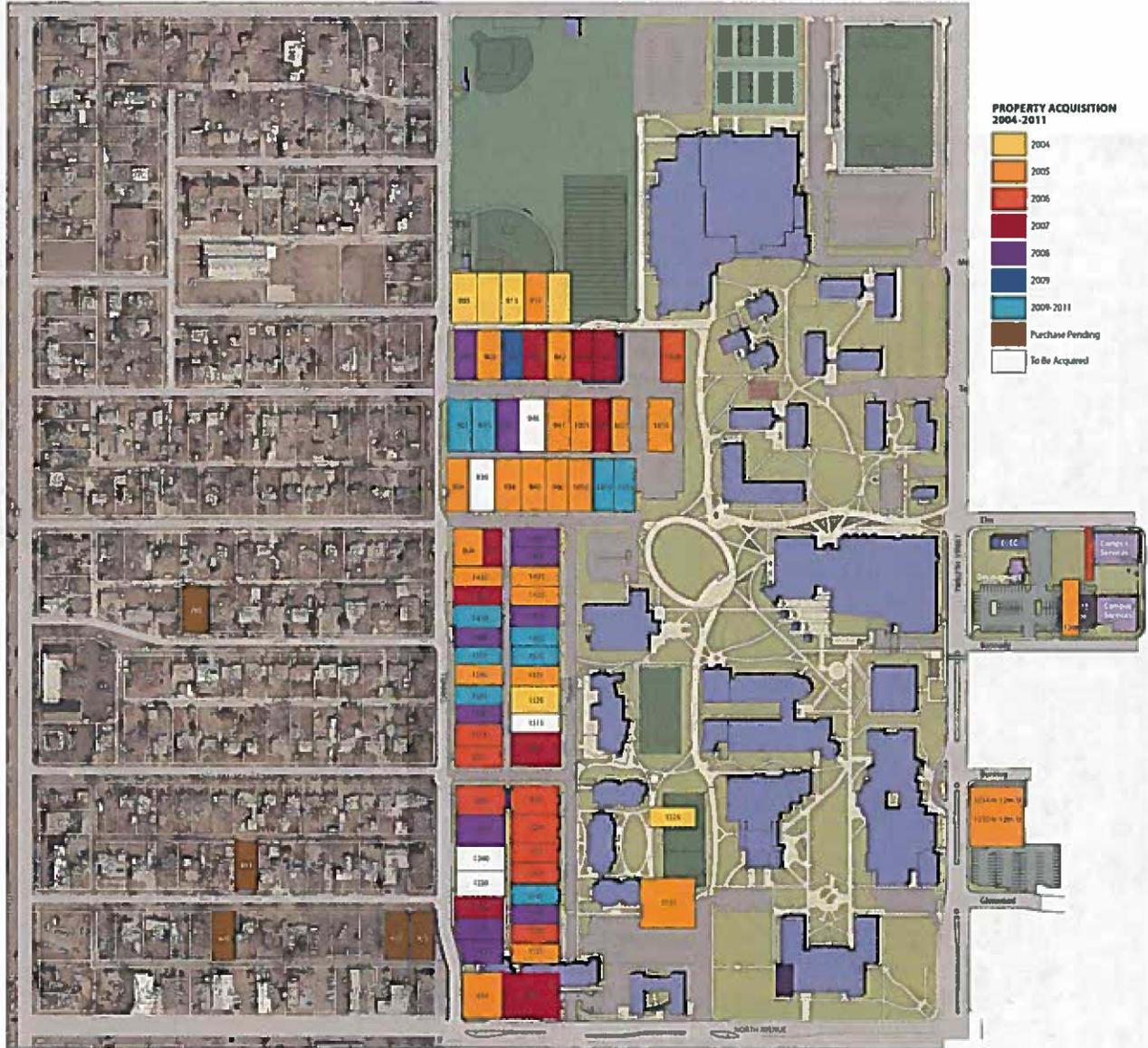


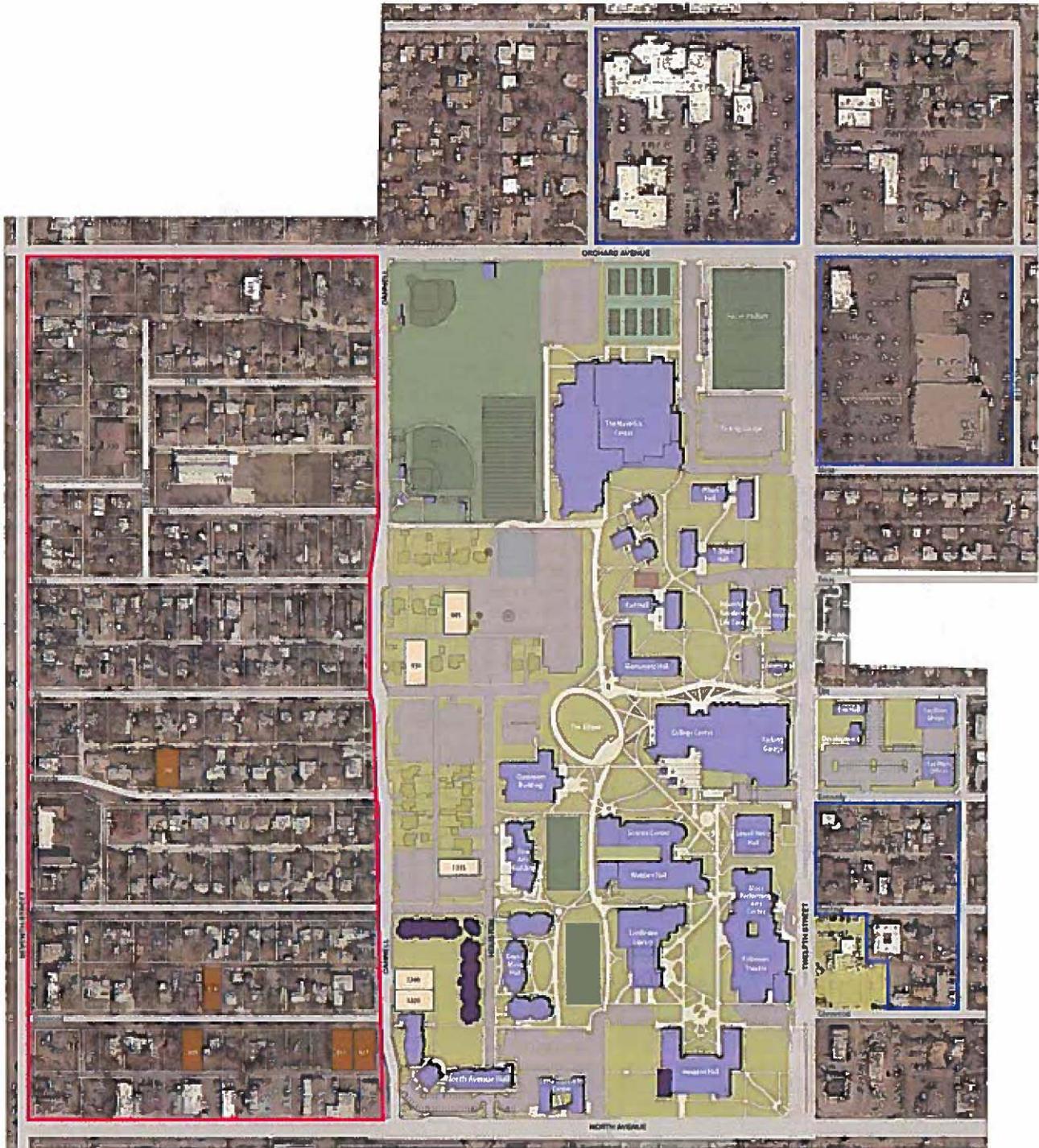
⁶ This map is a reprint of that in the 1999 *Mesa State College Facilities Master Plan*, page 113.

The background of this map shows concepts developed for the 1999 Facilities Master Plan. Several of the capital building projects indicated with diagonal lines on the map have already occurred.

The 2004 House Demolition & Ground Recovery project added most of the property between Cannell and Houston. All but 5 lots within this area have been acquired as shown on the inserted graphic titled Property Acquisitions 2004-2011.

The second inserted graphic titled Acquisition Priorities shows the new priority areas. Priority I areas are those the college is actively trying to purchase. Priority II areas are those the college will pursue if they become available.





- Priority I (59 Acres)
- Priority II (27 Acres)
- Under contract April 12, 2011
- To be acquired w/in campus area

ACQUISITION OF REAL PROPERTY

Appendix B includes a listing of properties under consideration by the College. The list indicates the street address and parcel number.

The property locations are shown by their street address number. Within the Priority I area there are 214 single family houses most of which were constructed in the 1950's and 1960's. Some are vacant while others are rentals. There are also 20 commercial and church properties.

Following discussion with the City of Grand Junction the streets and alleys will be vacated and deeded to the College in sections at different times where property ownership surrounding the various rights-of-way has been completed.

PROJECT DESCRIPTION

Improvements:

As stated, it is the intention of this phase of the land acquisition project to establish complete new boundaries for the main campus of Mesa State College. The western boundary from North Ave. to Orchard Ave. will move from Cannell Ave to Seventh Street. The southern boundary of North Ave. will not change. The eastern boundary of 12th Street will also not change except for the area bounded by Orchard Ave., 13th Street, and Glenwood Ave. The northern boundary may include the Community Hospital property if it becomes available.

Once acquired, it is the intention of the College to replat the land parcels into one parcel belonging to the College, remove structures, and to prepare the ground for construction of College related facilities, parking areas, and green space in accordance with the *Mesa State College Facilities Master Plan*.

The first part of this project will consolidate all properties between Cannell Street, North Avenue, Seventh Street and Orchard Avenue, and within the block shown east of 12th Street. The maps on the next several pages show the campus after completion of incremental consolidation work on a five year basis. Once all structures have been demolished, the lots, streets, and alleys will be surveyed and replatted to identify one parcel belonging to the College.

Initially, the area will become either green space or temporary parking. Green space work will consist of leveling the ground and providing dust and weed control. As more houses are removed and large areas become available, the area will be covered with grass and sprinklered. Lights and appropriate sidewalks will also be provided. Temporary parking work will consist of leveling the ground and providing a gravel surface with dust and weed control, parking bumpers, parking control equipment, and appropriate lighting. Mature trees in good condition will be flagged and protected during construction.

Mesa State College – Program Plan, West Expansion Property Acquisition Project

It will take a period of time to acquire all properties, remove all structures, and convert all areas to either parking or green space. All work under this program plan, whether designated as parking or green space, should be viewed as temporary, as all areas will serve as sites for future capital construction projects.⁷

The building areas, parking and land area requirements are based on projected enrollment by prorating approximate facilities in use today. A spreadsheet showing these projections follows.

Mesa State College													
Campus Expansion Projection											CHAMBERLIN ARCHITECTS		
April 7, 2011													
	2010-11 Factor			Growth	2015-16	Growth	2020-21	Growth	2025-26	Growth	2030-31	Growth	2035-36
Student Enrollment													
Main Campus only													
Headcount													
On Campus	1624	11%	5-year	180	1,804	200	2,004	222	2,226	247	2,473	274	2,747
Off Campus	6486	11%	5-year	719	7,205	799	8,004	887	8,891	986	9,877	1,095	10,972
Total	8,110			899	9,009	999	10,008	1,109	11,117	1,232	12,350	1,369	13,719
Buildings													
Main Campus only													
Academic	688,000	85 sf per Student		76,272	764,272	84,727	848,999	94,120	943,119	104,554	1,047,673	116,145	1,163,818
Residence Halls	402,500	62 sf per Student		44,621	447,121	49,568	496,689	55,063	551,752	61,167	612,919	67,948	680,867
Non-Academic	91,500	11 sf per Student		10,144	101,644	11,268	112,912	12,517	125,429	13,905	139,334	15,447	154,781
Total	1,182,000	158 per Student		131,037	1,313,037	145,563	1,458,600	161,700	1,620,300	179,626	1,799,927	199,540	1,999,466
Parking													
Main Campus only													
Residential	1,056	65%	On Campus	117	1,173	130	1,303	144	1,447	160	1,607	178	1,786
Commuter	1,881	29%	Off Campus	209	2,089	232	2,321	257	2,578	286	2,864	318	3,182
Reserved													
Total				326	3,262	362	3,624	402	4,025	446	4,472	496	4,967
Land Area													
Main Campus only													
Total SF	3,189,330			353,569	3,542,899	389,719	3,932,618	432,588	4,365,206	480,173	4,845,379	532,992	5,378,370
Acres	73			8	81	9	90	10	100	11	111	12	123

⁷ Program Plans for future capital construction projects within the revised boundary areas will be submitted to CCHE for consideration and approval.

RELATION TO THE MASTER PLAN / OTHER PROJECTS

This project is part of “Project A1 – Land Acquisition, Main Campus” as described in the 1999 *Mesa State College Facilities Master Plan*, Volume 1, pages 114 – 116. In coordination with CCHE and the State of Colorado, Mesa State College has already accepted other properties under this project and will quite probably be working to accept additional properties as they become available within the priority areas established in this plan.

**APPENDIX A
STUDENT DEMOGRAPHICS**

Actual Student and FTE Enrollment Data

<u>Year</u>	<u>Count</u>	<u>Head</u> <u>FTEs</u>
1997	4900	4135
1998	5042	4219
1999	4904	4096
2000	5212	4302
2001	5303	4405
2002	5572	4625
2003	5765	4751
2004	6235	5096
2005	6062	4992
2006	5994	4891
2007	6199	4961
2008	6261	4973
2009	7042	5661
2010	8131	6555

<u>Student</u> <u>Origin</u>	<u>Number of</u> <u>Students</u>	<u>Percent</u>
Mesa State's 14 County Region	5488	67.5%
All Other Colorado	1667	20.5%
Out of State	941	11.6%
<u>International</u>	<u>35</u>	<u>0.4%</u>
Total	8131	

**APPENDIX B
PROPERTY LISTING**

Number	PARCEL_NUM	LOCATION
1	2945-114-08-010	1825 CANNELL AVE
2	2945-114-11-008	850 TEXAS AVE
3	2945-114-08-023	1816 N 8TH ST
4	2945-114-10-009	1727 CANNELL AVE
5	2945-114-09-019	725 ORCHARD AVE
6	2945-114-10-012	1717 CANNELL AVE
7	2945-114-08-016	860 HALL AVE
8	2945-114-11-005	828 TEXAS AVE
9	2945-114-08-014	888 HALL AVE
10	2945-114-09-008	1720 N 7TH ST
11	2945-114-08-020	820 HALL AVE
12	2945-114-11-004	816 TEXAS AVE
13	2945-114-10-004	847 HALL AVE
14	2945-114-09-020	749 ORCHARD AVE
15	2945-114-09-006	1742 N 7TH ST
16	2945-114-09-018	1808 N 7TH ST
17	2945-114-09-014	1825 N 8TH ST
18	2945-114-09-007	1730 N 7TH ST
19	2945-114-08-021	810 HALL AVE
20	2945-114-10-011	1735 CANNELL AVE
21	2945-114-08-019	830 HALL AVE
22	2945-114-10-005	855 HALL AVE
23	2945-114-08-012	890 HALL AVE
24	2945-114-08-017	848 HALL AVE
25	2945-114-10-001	1750 N 8TH ST
26	2945-114-09-005	1752 N 7TH ST
27	2945-114-08-013	880 HALL AVE
28	2945-114-09-011	1801 N 8TH ST
29	2945-114-11-009	858 TEXAS AVE
30	2945-114-08-006	845 ORCHARD AVE
31	2945-114-09-010	1737 N 8TH ST
32	2945-114-10-007	875 HALL AVE
33	2945-114-11-010	866 TEXAS AVE
34	2945-114-09-002	1828 N 7TH ST
35	2945-114-09-951	730 MESA AVE
36	2945-114-08-015	868 HALL AVE
37	2945-114-08-018	840 HALL AVE
38	2945-114-09-001	1842 N 7TH ST

Mesa State College – Program Plan, West Expansion Property Acquisition Project

39	2945-114-08-025	905 ORCHARD AVE
40	2945-114-09-013	1815 N 8TH ST
41	2945-114-11-003	804 TEXAS AVE
42	2945-114-08-003	817 ORCHARD AVE
43	2945-114-10-010	895 HALL AVE
44	2945-114-10-002	829 HALL AVE
45	2945-114-08-002	809 ORCHARD AVE
46	2945-114-08-022	802 HALL AVE
47	2945-114-09-004	1806 N 7TH ST
48	2945-114-11-007	842 TEXAS AVE
49	2945-114-08-008	911 ORCHARD AVE
50	2945-114-11-002	1616 N 8TH ST
51	2945-114-08-001	759 ORCHARD AVE
52	2945-114-09-017	1816 N 7TH ST
53	2945-114-11-001	1622 N 8TH ST
54	2945-114-11-006	836 TEXAS AVE
55	2945-114-08-011	898 HALL AVE
56	2945-114-09-021	723 ORCHARD AVE #N
57	2945-114-09-009	1727 N 8TH ST
58	2945-114-10-006	865 HALL AVE
59	2945-114-10-013	1707 CANNELL AVE
60	2945-114-08-009	921 ORCHARD AVE
61	2945-114-10-003	835 HALL AVE
62	2945-114-08-005	841 ORCHARD AVE
63	2945-114-10-008	885 HALL AVE
64	2945-114-08-004	829 ORCHARD AVE
65	2945-114-10-014	825 HALL AVE
66	2945-114-09-012	1805 N 8TH ST
67	2945-114-08-024	901 ORCHARD AVE
68	2945-114-13-021	888 ELM AVE
69	2945-114-14-032	1416 N 7TH ST
70	2945-114-15-013	1343 CANNELL AVE
71	2945-114-13-017	873 TEXAS AVE
72	2945-114-14-006	843 ELM AVE
73	2945-114-12-011	727 MESA AVE
74	2945-114-14-026	830 KENNEDY AVE
75	2945-114-15-003	771 KENNEDY AVE
76	2945-114-13-001	1524 N 7TH ST
77	2945-114-13-024	860 ELM AVE
78	2945-114-12-009	1625 N 8TH ST
79	2945-114-12-003	1628 N 7TH ST
80	2945-114-15-004	775 KENNEDY AVE
81	2945-114-15-012	885 KENNEDY AVE

Mesa State College – Program Plan, West Expansion Property Acquisition Project

82	2945-114-14-010	803 ELM AVE
83	2945-114-13-011	827 TEXAS AVE
84	2945-114-13-028	820 ELM AVE
85	2945-114-14-013	749 ELM AVE
86	2945-114-12-001	1630 N 7TH ST
87	2945-114-14-024	810 KENNEDY AVE
88	2945-114-13-007	755 TEXAS AVE
89	2945-114-14-019	740 KENNEDY AVE
90	2945-114-13-003	1516 N 7TH ST
91	2945-114-13-032	760 ELM AVE
92	2945-114-13-034	740 ELM AVE
93	2945-114-14-027	840 KENNEDY AVE
94	2945-114-13-019	889 TEXAS AVE
95	2945-114-13-031	774 ELM AVE
96	2945-114-13-014	849 TEXAS AVE
97	2945-114-13-016	865 TEXAS AVE
98	2945-114-13-033	748 ELM AVE
99	2945-114-11-014	898 TEXAS AVE
100	2945-114-13-005	743 TEXAS AVE
101	2945-114-15-020	824 BUNTING AVE
102	2945-114-14-007	833 ELM AVE
103	2945-114-15-005	805 KENNEDY AVE
104	2945-114-11-013	890 TEXAS AVE
105	2945-114-13-026	834 ELM AVE
106	2945-114-15-002	755 KENNEDY AVE
107	2945-114-14-011	769 ELM AVE
108	2945-114-13-027	830 ELM AVE
109	2945-114-13-004	735 TEXAS AVE
110	2945-114-15-015	874 BUNTING AVE
111	2945-114-12-008	1613 N 8TH ST
112	2945-114-13-972	704 ELM AVE
113	2945-114-13-009	811 TEXAS AVE
114	2945-114-15-009	845 KENNEDY AVE
115	2945-114-14-030	890 KENNEDY AVE
116	2945-114-14-002	883 ELM AVE
117	2945-114-13-002	1520 N 7TH ST
118	2945-114-15-019	834 BUNTING AVE
119	2945-114-13-035	730 ELM AVE
120	2945-114-15-008	835 KENNEDY AVE
121	2945-114-11-011	874 TEXAS AVE
122	2945-114-11-012	882 TEXAS AVE
123	2945-114-14-031	701 ELM AVE
124	2945-114-13-013	841 TEXAS AVE

Mesa State College – Program Plan, West Expansion Property Acquisition Project

125	2945-114-14-004	863 ELM AVE
126	2945-114-14-012	761 ELM AVE
127	2945-114-13-012	835 TEXAS AVE
128	2945-114-12-012	1604 N 7TH ST
129	2945-114-14-018	1400 N 7TH ST
130	2945-114-13-030	780 ELM AVE
131	2945-114-15-006	815 KENNEDY AVE
132	2945-114-13-010	819 TEXAS AVE
133	2945-114-15-011	865 KENNEDY AVE
134	2945-114-13-029	818 ELM AVE
135	2945-114-15-017	854 BUNTING AVE
136	2945-114-14-005	855 ELM AVE
137	2945-114-14-001	889 ELM AVE
138	2945-114-13-008	803 TEXAS AVE
139	2945-114-14-021	760 KENNEDY AVE
140	2945-114-14-003	875 ELM AVE
141	2945-114-15-007	825 KENNEDY AVE
142	2945-114-12-007	1603 N 8TH ST
143	2945-114-12-010	1635 N 8TH ST
144	2945-114-12-004	1616 N 7TH ST
145	2945-114-13-022	886 ELM AVE
146	2945-114-13-023	880 ELM AVE
147	2945-114-13-025	850 ELM AVE
148	2945-114-14-023	800 KENNEDY AVE
149	2945-114-14-029	860 KENNEDY AVE
150	2945-114-14-028	850 KENNEDY AVE
151	2945-114-12-002	721 MESA AVE
152	2945-114-15-010	855 KENNEDY AVE
153	2945-114-13-036	1510 N 7TH ST
154	2945-114-13-015	859 TEXAS AVE
155	2945-114-13-018	881 TEXAS AVE
156	2945-114-14-017	1410 N 7TH ST
157	2945-114-14-008	817 ELM AVE
158	2945-114-14-025	820 KENNEDY AVE
159	2945-114-14-009	809 ELM AVE
160	2945-114-13-020	895 TEXAS AVE
161	2945-114-13-006	753 TEXAS AVE
162	2945-114-15-018	844 BUNTING AVE
163	2945-114-14-020	750 KENNEDY AVE
164	2945-114-15-016	864 BUNTING AVE
165	2945-114-14-014	745 ELM AVE
166	2945-114-14-022	780 KENNEDY AVE
167	2945-114-17-012	856 GLENWOOD AVE

Mesa State College – Program Plan, West Expansion Property Acquisition Project

168	2945-114-16-014	752 GLENWOOD AVE
169	2945-114-19-006	865 GLENWOOD AVE
170	2945-114-18-001	763 GLENWOOD AVE
171	2945-114-17-013	846 GLENWOOD AVE
172	2945-114-17-014	836 GLENWOOD AVE
173	2945-114-17-017	804 GLENWOOD AVE
174	2945-114-16-006	727 BUNTING AVE
175	2945-114-19-007	875 GLENWOOD AVE
176	2945-114-16-012	730 GLENWOOD AVE #B
177	2945-114-15-023	768 BUNTING AVE
178	2945-114-17-024	888 GLENWOOD AVE
179	2945-114-15-028	710 BUNTING AVE
180	2945-114-16-010	720 GLENWOOD AVE
181	2945-114-16-003	749 BUNTING AVE
182	2945-114-15-025	750 BUNTING AVE
183	2945-114-17-021	866 GLENWOOD AVE
184	2945-114-19-005	845 GLENWOOD AVE
185	2945-114-17-006	853 BUNTING AVE
186	2945-114-19-008	911 GLENWOOD AVE
187	2945-114-16-008	1226 N 7TH ST
188	2945-114-19-003	825 GLENWOOD AVE
189	2945-114-17-018	867 BUNTING AVE
190	2945-114-15-024	762 BUNTING AVE
191	2945-114-15-021	814 BUNTING AVE
192	2945-114-17-009	887 BUNTING AVE
193	2945-114-21-951	1350 N 7TH ST
194	2945-114-19-002	815 GLENWOOD AVE
195	2945-114-16-004	745 BUNTING AVE
196	2945-114-19-001	805 GLENWOOD AVE
197	2945-114-16-016	1204 N 7TH ST
198	2945-114-17-002	815 BUNTING AVE
199	2945-114-18-003	751 GLENWOOD AVE
200	2945-114-17-003	825 BUNTING AVE
201	2945-114-16-005	739 BUNTING AVE
202	2945-114-17-005	843 BUNTING AVE
203	2945-114-19-004	835 GLENWOOD AVE
204	2945-114-16-001	769 BUNTING AVE
205	2945-114-18-005	727 GLENWOOD AVE
206	2945-114-18-002	759 GLENWOOD AVE
207	2945-114-17-015	824 GLENWOOD AVE
208	2945-114-17-016	814 GLENWOOD AVE
209	2945-114-17-004	833 BUNTING AVE
210	2945-114-16-013	740 GLENWOOD AVE

Mesa State College – Program Plan, West Expansion Property Acquisition Project

211	2945-114-16-002	757 BUNTING AVE
212	2945-114-17-007	859 BUNTING AVE
213	2945-114-17-001	805 BUNTING AVE
214	2945-114-18-004	733 GLENWOOD AVE
215	2945-114-15-030	730 BUNTING AVE
216	2945-114-18-006	705 GLENWOOD AVE
217	2945-114-15-026	740 BUNTING AVE
218	2945-114-16-007	1236 N 7TH ST
219	2945-114-16-015	760 GLENWOOD AVE
220	2945-114-15-022	804 BUNTING AVE
221	2945-114-17-950	875 BUNTING AVE
222	2945-114-10-953	1704 N 8TH ST
223	2945-114-10-954	

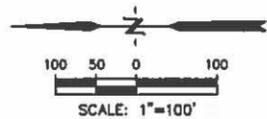
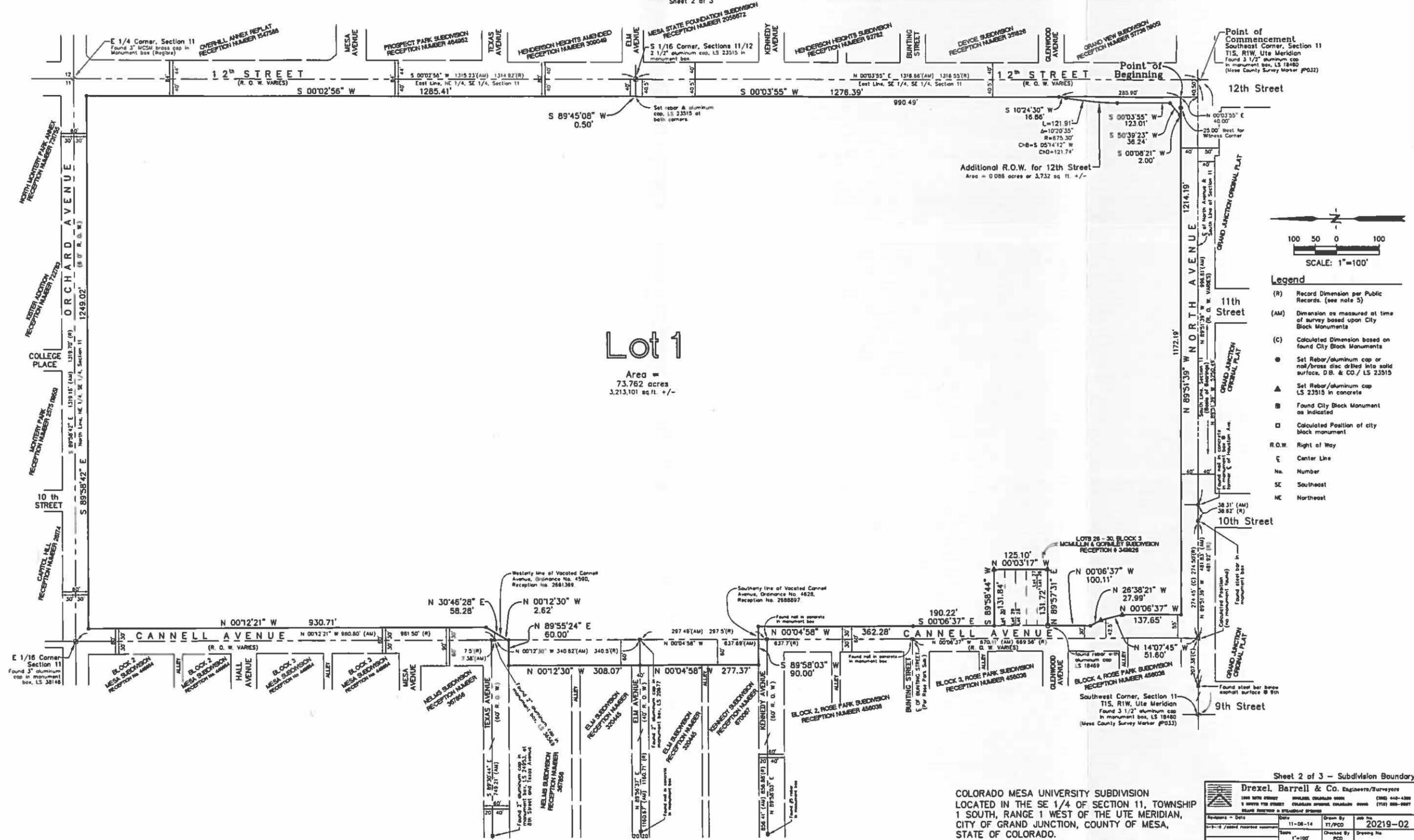
APPENDIX C
THIRD PARTY REVIEW

APPENDIX D
CCHE FORM CC-C

COLORADO MESA UNIVERSITY SUBDIVISION

A TRACT OF LAND ENCOMPASSING ALL THAT REAL PROPERTY PREVIOUSLY SUBDIVIDED AS LOT 1, BLOCK 1 OF ELAM SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 2261431 IN THE RECORDS OF THE OFFICE OF THE MESA COUNTY CLERK AND RECORDER, LOT 1 OF ELAM II SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 2455622, SAID MESA COUNTY RECORDS, BLOCKS 1, 2, 3, 4, 5 AND 6, MCMULLIN & GORMELY SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 349926, SAID MESA COUNTY RECORDS, BLOCKS 1, 2, 3, 4, 5 AND 6, GARFIELD PARK SUBDIVISION, ACCORDING TO THE RE-FILING PLAT THEREOF, A SUBDIVISION RECORDED AS RECEPTION NUMBER 444756, SAID MESA COUNTY RECORDS, LOTS 1 THROUGH 38, INCLUSIVE AND LOT 40, SOUTH GARFIELD PARK SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 539508, SAID MESA COUNTY RECORDS, MESA COLLEGE CAMPUS SUBDIVISION, A SUBDIVISION RECORDED AT RECEPTION NUMBER 459010, SAID MESA COUNTY RECORDS, TOGETHER WITH THOSE RIGHTS-OF-WAY AND ALLEY WAYS DEDICATED BY THE ABOVE REFERENCED SUBDIVISION PLATS AND VACATED BY THOSE CITY OF GRAND JUNCTION ORDINANCES NUMBERED 1120, 1299, 1675, 2913, 3356, 3759, 4106, 4252, 4431, 4590 AND 4628, ALL IN THE SOUTHEAST QUARTER OF SECTION 11, TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO

AREA = 73.848 ACRES +/-
Sheet 2 of 3



- Legend**
- (R) Record Dimension per Public Records. (see note 5)
 - (AM) Dimension as measured at time of survey based upon City Block Monuments
 - (C) Calculated Dimension based on found City Block Monuments
 - Set Rebar/aluminum cap or nail/brass disc drilled into solid surface. D.B. & CO./LS 23515
 - ▲ Set Rebar/aluminum cap LS 23515 in concrete
 - Found City Block Monument as indicated
 - Calculated Position of city block monument
 - R.O.W. Right of Way
 - CL Center Line
 - No. Number
 - SE Southeast
 - NE Northeast

Sheet 2 of 3 - Subdivision Boundary

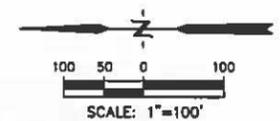
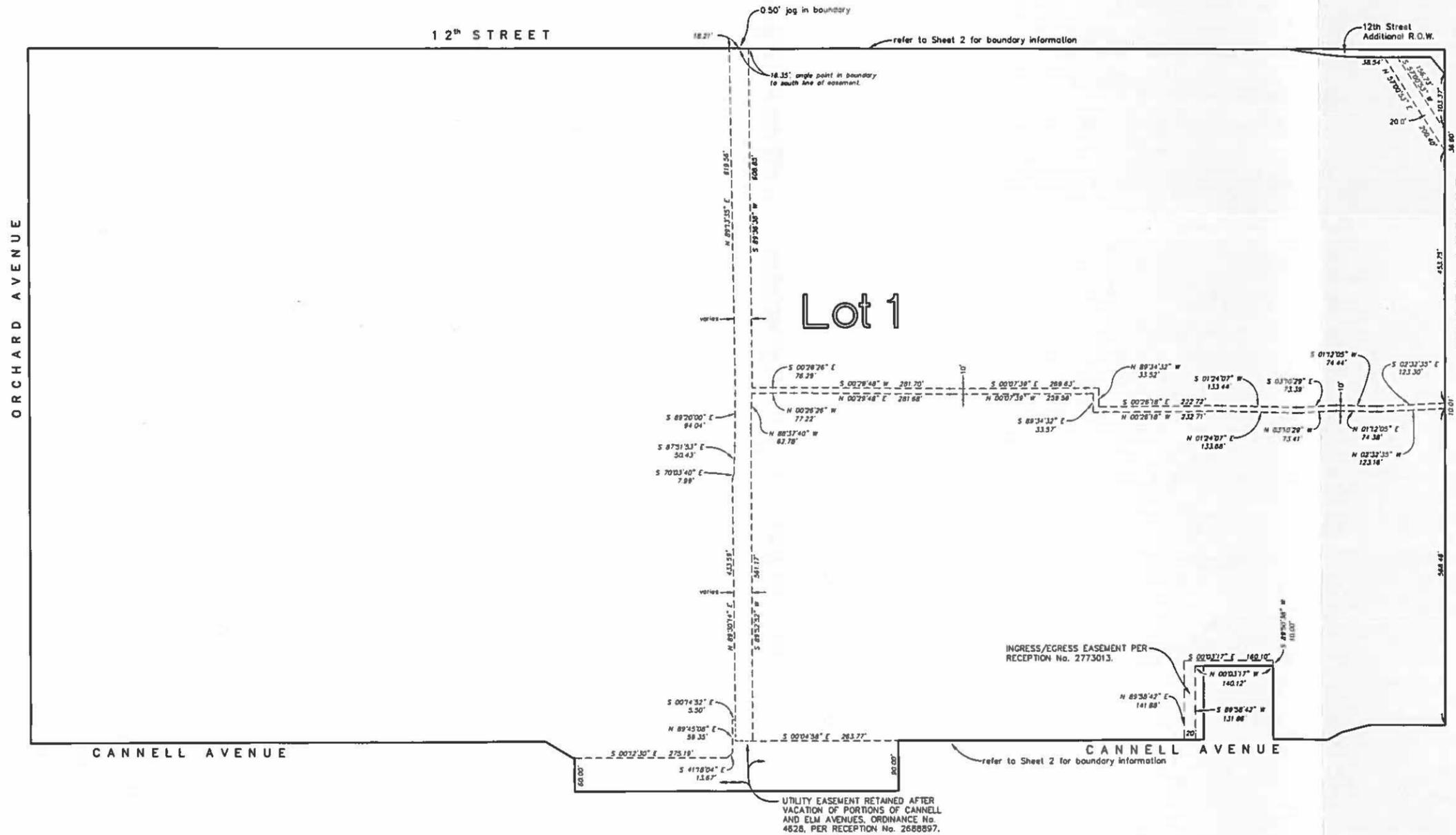
COLORADO MESA UNIVERSITY SUBDIVISION
LOCATED IN THE SE 1/4 OF SECTION 11, TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO.

Drexel, Barrell & Co. Engineers/Surveyors			
1000 10TH STREET GRAND JUNCTION, COLORADO 81501 (970) 243-0000			
Systems - Data	Date	Drawn By	Job No.
11-08-14	TI/PCD	20219-02	
Scale	Checked By	Drawing No.	
1"=100'	PCD		

COLORADO MESA UNIVERSITY SUBDIVISION

A TRACT OF LAND ENCOMPASSING ALL THAT REAL PROPERTY PREVIOUSLY SUBDIVIDED AS LOT 1, BLOCK 1 OF ELAM SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 2261431 IN THE RECORDS OF THE OFFICE OF THE MESA COUNTY CLERK AND RECORDER, LOT 1 OF ELAM II SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 2455622, SAID MESA COUNTY RECORDS, BLOCKS 1, 2, 3, 4, 5 AND 6, MCMULLIN & GORMELY SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 349926, SAID MESA COUNTY RECORDS, BLOCKS 1, 2, 3, 4, 5 AND 6, GARFIELD PARK SUBDIVISION, ACCORDING TO THE RE-FILING PLAT THEREOF, A SUBDIVISION RECORDED AS RECEPTION NUMBER 444756, SAID MESA COUNTY RECORDS, LOTS 1 THROUGH 38, INCLUSIVE AND LOT 40, SOUTH GARFIELD PARK SUBDIVISION, A SUBDIVISION RECORDED AS RECEPTION NUMBER 539508, SAID MESA COUNTY RECORDS, MESA COLLEGE CAMPUS SUBDIVISION, A SUBDIVISION RECORDED AT RECEPTION NUMBER 459010, SAID MESA COUNTY RECORDS, TOGETHER WITH THOSE RIGHTS-OF-WAY AND ALLEY WAYS DEDICATED BY THE ABOVE REFERENCED SUBDIVISION PLATS AND VACATED BY THOSE CITY OF GRAND JUNCTION ORDINANCES NUMBERED 1120, 1299, 1675, 2913, 3356, 3759, 4106, 4252, 4431, 4590 AND 4628, ALL IN THE SOUTHEAST QUARTER OF SECTION 11, TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO

AREA = 73.848 ACRES +/-
Sheet 3 of 3



Easement Dedications

1) Unless indicated otherwise, all easements shown are Utility Easements to the City of Grand Junction for City approved utilities.

COLORADO MESA UNIVERSITY SUBDIVISION
LOCATED IN THE SE 1/4 OF SECTION 11, TOWNSHIP 1 SOUTH, RANGE 1 WEST OF THE UTE MERIDIAN, CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO.

Sheet 3 of 3 - Easement Dedications			
Drexel, Barrell & Co. Engineers/Surveyors			
3000 SOUTH FRONT STREET, GRAND JUNCTION, COLORADO 81501 (970) 442-4338 3 SOUTH 7TH STREET, GRAND JUNCTION, COLORADO 81501 (970) 266-1887 GRAND JUNCTION & STRASBURG AVENUES			
Revision - Date	Date	Drawn By	Job No.
	11-08-14	TJ/PCD	20219-02
As-Plat / unless recorded otherwise	Date	Checked By	Drawing No.
	11-10-14	PCD	

CITY OF GRAND JUNCTION, COLORADO

ORDINANCE NO. _____

AN ORDINANCE VACATING A PORTION OF ALLEY RIGHT-OF-WAY LOCATED BETWEEN ORCHARD AVENUE AND HALL AVENUE ON THE SOUTH SIDE OF THE PROPERTY LOCATED AT 845 ORCHARD AVENUE

RECITALS:

Colorado Mesa University has requested to vacate a portion of alley right-of-way located between Orchard Avenue and Hall Avenue on the south side of the property located at 845 Orchard Avenue in order to enable the continued westward expansion efforts planned for the campus, specifically in the future to develop a new track and field sports venue.

Colorado Mesa University is under contract to acquire the 845 Orchard Avenue property. City staff does not expect that the proposed right-of-way vacations would impede traffic, pedestrian movement or access to private property. As conditions of approval, CMU will need to demonstrate ownership of the property at 845 Orchard Avenue prior to recording the vacation ordinance and meet all Grand Junction Fire Department requirements for construction of the proposed campus facilities.

Presently, the segment of alley right-of-way requested to be vacated contains a City public sewer line as well as Xcel electric and gas infrastructure. The existing electric utilities will be moved and relocated by Xcel Energy as part of the construction of the new track and field sports venue and an appropriate easement to Xcel Energy will be dedicated at that time, if necessary. Applicant is also required to meet all terms and conditions of the *Colorado Mesa University and City of Grand Junction Utility Easement and Maintenance Agreement-CMU Main Campus* and any requirements of the Grand Junction Fire Department.

The City Council finds that the request is consistent with the Comprehensive Plan, the Grand Valley Circulation Plan and Section 21.02.100 of the Grand Junction Zoning and Development Code.

The Planning Commission, having heard and considered the requests, found the criteria of the Code to have been met, and recommended that the portion of east-west alley right-of-way adjacent to the south side of the property located at 845 Orchard Avenue be approved.

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT:

The following described dedicated alley right-of-way is hereby vacated subject to the listed conditions:

A Portion of Alley Right-of-Way as dedicated on the plat Mesa Subdivision as recorded at Reception Number 449854 of the Mesa County Records, situated in the Southeast Quarter of Section 11, Township 1 South, Range 1 West of Ute Meridian, County of Mesa, State of Colorado; being more particularly described as follows:

All of the Alley Right-of-Way lying West of the Southerly projection of the East line of Lot 8, Block 2 of said Mesa Subdivision and East of the of the Southerly projection of the East line of Lot 6, Block 2 of said Mesa Subdivision.

Containing an area of 2,348 square feet (0.054 acres) more or less, as described herein and on Exhibit A.

Conditions of Approval:

1. Applicant shall provide evidence of ownership of the property located at 845 Orchard Avenue (parcel number 2945-114-08-006) prior to this Ordinance being recorded with the Mesa County Clerk and Recorder in order for the vacation to take effect.
2. Applicant shall pay all recording/documentary fees for the Vacation Ordinance.
3. Applicant shall meet all terms and conditions of the *Colorado Mesa University and City of Grand Junction Utility Easement and Maintenance Agreement-CMU Main Campus* and all requirements of the Grand Junction Fire Department for construction of proposed campus facilities.

Introduced for first reading on this _____ day of _____, 2019 and ordered published in pamphlet form.

PASSED and ADOPTED this _____ day of _____, 2019 and ordered published in pamphlet form.

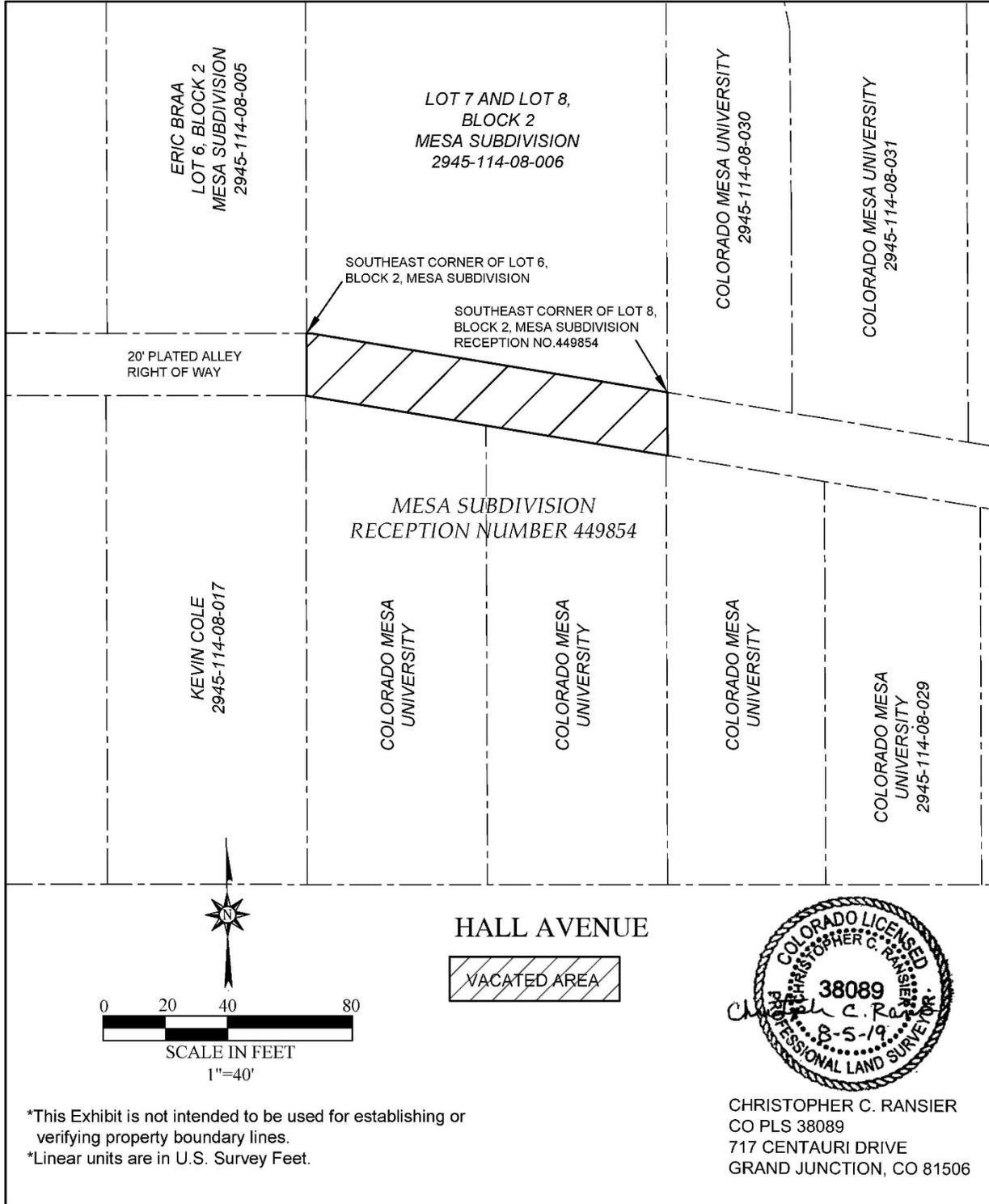
ATTEST:

President of City Council

City Clerk

EXHIBIT A

SOUTHEAST 1/4 OF SECTION 11,
TOWNSHIP 1 SOUTH, RANGE 1 WEST, UTE MERIDIAN,
CITY OF GRAND JUNCTION, COUNTY OF MESA, STATE OF COLORADO



*This Exhibit is not intended to be used for establishing or verifying property boundary lines.
*Linear units are in U.S. Survey Feet.



Grand Junction Planning Commission

Regular Session

Item #7.

Meeting Date: September 24, 2019

Presented By: David Thornton, Principal Planner

Department: Community Development

Submitted By: David Thornton, AICP, Principal Planner

Information

SUBJECT:

Consider a request by SSC representing Verizon Wireless, for a Conditional Use Permit (CUP) for a Concealed Telecommunication Facility (Cell Tower) in a Residential – 4 du/ac (R-4) zone district on 2.69862 acres at 2884 B ½ Road.

RECOMMENDATION:

Staff recommends approval.

EXECUTIVE SUMMARY:

The applicant, Site Selection Consultants (SSC), requests approval of a Conditional Use Permit (CUP) to install an 82' tall concealed tower for telecommunications use in accordance with Section 21.02.110 and Section 21.04.030(q) of the Zoning and Development Code. The proposed tower will be co-locatable, able to house at least two carriers.

BACKGROUND OR DETAILED INFORMATION:

BACKGROUND

The applicant, SSC is a consulting firm that secures telecommunication sites for Verizon Wireless. Verizon Wireless has entered into an agreement with the City of Grand Junction to construct a telecommunication facility on Grand Junction Fire Station No. 4 property owned by the City, but must meet all zoning requirements including obtaining a CUP.

The property located at 2884 B ½ Road and as an existing fire station. The applicant is

requesting a Conditional Use Permit (CUP) to construct an 82' tall mono-pine concealed tower to provide wireless services to the Orchard Mesa community. The new tower will have the ability for colocation of at least two service providers.

In 2016, the City of Grand Junction adopted a Telecommunications Ordinance to meet the current and future wireless communication needs of the community which modified Section 21.04.030 (q) of the Zoning and Development Code. This application is being applied for under a "Tower, "Concealed" which triggers a Conditional Use Permit within the R-4 residential zone district, but is not allowed on any site or lot where the principal use is single or two-family residential. The principal use on the proposed site is a fire station.

Conditional Use Permit:

Conditional Uses are not uses by right, it is one that is otherwise prohibited within a given zone district without approval of a Conditional Use Permit. A Conditional Use Permit, once the use is established, runs with the land and remains valid until the property changes use or the use is abandoned and/or non-operational for a period of twelve (12) consecutive months. Failure to develop or establish such use accordingly is sufficient grounds to revoke the permit.

As a condition of the CUP, the applicant is requesting a development approval deadline or phasing schedule of 10 years to provide full opportunity to secure a second cellular service provider on the proposed cell tower and to expand the tower to the proposed 82 feet of height Co-location satisfies the 2016 City Wireless Master Plan of making the new telecommunication towers co-locatable, a high priority of the Plan to minimize the proliferation of towers across the City. A letter was sent from SSC, representing Verizon Wireless requesting this and is included at the end of the Development Application.

NOTIFICATION REQUIREMENTS

As required by § 21.02.080 (e) of the Zoning and Development Code, a Neighborhood Meeting was held on February 27, 2019. No one, except City staff and the consultant team attended the meeting.

As required by § 21.04.030 (q)(12)(iii)(H)c.2., a balloon test was conducted to provide the public a visual demonstration of the height of the proposed cell tower at the proposed location of the facility and to provide documentation for the photo simulations submitted with the CUP application. The balloon test occurred December 12, 2018.

Notice was provided in accordance with §21.02.080 (g) of the Zoning and Development Code. On September 13, 2019 notice of the application was mailed to property owners

within 500 feet of the subject property. An application sign was posted on the property on or before July 9, 2019 and notice of the public hearing was published September 17, 2019 in the Daily Sentinel.

ANALYSIS

The site is currently zoned R-4 (Residential – 4 du/ac) with the Comprehensive Plan Future Land Use Map identifying this area as Residential Medium Low. The site is located on property owned by the City of Grand Junction and currently has Fire Station No. 4 located on the property. Surrounding the proposed tower site is the fire station to the south as well as a church to the site. To the east is Lincoln OM Elementary School and residential uses located to the north. To the west are residential uses as well. The proposed location of the tower on the site has been sited within an existing grove of mature trees which will help provide mitigation to visual impacts of the new tower. Verizon is proposing to construct the tower initially at 60 feet for their facility with the ability to extend the tower to 82 ft. for a second service provider. The CUP application is for a tower up to 82 ft. in height with colocation for at least two service providers. The applicant provided photo simulations (attached) showing the 60 and 80 feet heights and their visual effect in the neighborhood.

The proposed Telecommunication Tower Conditional Use Permit application meets the Comprehensive Plan by meeting Goal 12: Being a regional provider of goods and services the City and County will sustain, develop and enhance a healthy, diverse economy.

Policy B. The City and County will provide appropriate commercial and industrial development opportunities.

It also meets the 2016 Wireless Master Plan, an element of the 2010 Comprehensive Plan by being located on a publicly owned property, providing capability of colocation of service providers and being a concealed telecommunication facility, being proposed as a “Faux Tree” as defined in the Plan.

Evidence of Need:

The primary purpose of this communications tower is to provide personal wireless services to the Orchard Mesa area of Grand Junction. As the demand for higher phone and internet service and speeds increases drastically, it become very important for the service locations to get closer to the end customer. For Wireless Services it requires a very strong signal strength between the tower and customer service location. Shorter distances from the tower to the customer is the best way to achieve the necessary signal strength necessary to ensure the high data encryption rates necessary to achieve the higher internet speeds. The applicant shows there is evidence of need in

the engineered study they submitted with this application demonstrating the need for wireless services for Verizon in this part of Grand Junction. That Study list existing Verizon sites closest to this proposed site at 2884 B ½ Road include 3045 Hwy 50 (Whitewater) 2.25 miles away, 2773 B ½ Road on a building roof 36 ft. above the ground (Orchard Mesa) 1.1 miles away, 3227 D Road 100 ft. tower (Clifton) 3.75 miles away and 2816 C ½ Road 260 ft. tower (Pear Park) 1.1 miles away and identifies through mapping the lack of signal for this area of the community. The applicant further justifies this site location in the General Project report under the siting preferences for new telecommunication facilities.

A need for a new tower at this location is warranted.

21.02.080(d) General Approval Criteria (Permits requiring a Public Hearing). No permit may be approved unless all of the following criteria are satisfied:

- (i) Compliance with the Comprehensive Plan and any applicable adopted plan.
- (ii) Compliance with this zoning and development code.
- (iii) Conditions of any prior approvals.
- (iv) Public facilities and utilities shall be available concurrent with the development.
- (v) Received all applicable local, State and federal permits.

This request for a Conditional Use Permit for a concealed telecommunication tower is in compliance with the Comprehensive Plan and the Zoning and Development Code as further noted in this staff report. Public facilities and utilities are available concurrent with the development and all applicable federal, state and local permits will be obtained before construction.

Section 21.02.110 of the Grand Junction Zoning and Development Code:

To obtain a Conditional Use Permit, the Applicant must demonstrate compliance with the following criteria (21.02.110(c)):

(1) District Standards. The underlying zoning districts standards established in Chapter 21.03 Zoning and Development Code, except density when the application is pursuant to 21.08.020(c) ;

“Tower, concealed” requires a CUP within the R-4 zone district and only on a site or lot that does not have a single family or two family residential principal land use. The proposal is in compliance with the underlying zone district’s performance standards established in Section 21.03.040 (e) of the Zoning and Development Code. Radio/communication towers are exempt from the maximum zone district height limitation of 40’ within the R-4 zone district (Section 21.03.030 (f) (2) of the Zoning and Development Code). Under the new Telecommunications Ordinance, new towers are

subject to the principle building setbacks of the underlying zone district and a maximum of 200 ft in height for concealed towers. Per the Ordinance, if the property is not adjacent to any residential structures, setbacks are equal to the setbacks for the zone district in which that the property is located which is a 20 ft. front setback, 25 ft. rear setback and a 7 ft. side setback. The proposed location is adjacent to a school on the east and a church on the west. The property to the north is residential.

For the adjacent residential property to the north, the Zoning Code requires under Section 21.04.030(q)(12)(iii)(B) that the distance from any residential structure shall be equal to the height of the proposed tower which is 82 ft. The closest residential structure to the proposed tower site is 165 feet away. This criterion is being met.

(2) Specific Standards. The use-specific standards established in Chapter 21.04 GJMC;

Under the adopted Telecommunications Ordinance “Tower, concealed” requires a CUP within the R-4 zone district. Use-specific requirements for this request as stated in Chapter 21.04 of the Zoning and Development Code are in compliance with this application. As discussed below, the following Code language from Section 21.04 is included here with written response to each requirement below.

Compliance with the Telecommunications Ordinance - Concealed and Nonconcealed Telecommunications Towers (Not Including DAS or Broadcast Tower).

(i) A pre-application conference is required for a new telecommunications tower. A permit and a major site plan review shall be required for a new telecommunications tower. The permit required may be an administrative permit or a CUP, depending upon the zone district (See GJMC 21.04.010, Use table) and/or whether or not the site is a priority site on the wireless master plan.

This site requires a CUP. Staff met with the applicant in a general meeting, with additional email follow up to discuss requirements prior to application.

(ii) No new tower shall be permitted unless the applicant demonstrates that no existing tower or qualified alternative support structure can accommodate the applicant’s proposed use, or that co-location on such existing facilities would have the effect of prohibiting personal wireless services in the geographic search area to be served by the proposed tower.

Per the application, the Applicant addressed this in their application as follows.

(iii) Development Standards.

(A) Height.

a. New concealed towers shall be limited to 200 feet in height. Height calculations shall be made in accordance with FAA standards, and shall include all appurtenances.

The proposed tower is concealed and at 82 ft. is well within FAA standards and within the maximum of 200' allowed by the Zoning Code.

b. New nonconcealed (nonbroadcast) towers shall be limited to 150 feet in height. An applicant desiring a new nonconcealed tower taller than 150 feet must request a variance in accordance with subsection (q)(14) of this section. However, under no circumstance shall any nonconcealed tower exceed 199 feet.

Not Applicable, the proposed tower is a Concealed Tower.

(B) Setbacks and Spacing from Residential Structures. A new tower shall be subject to the principal structure setbacks of the underlying zone district, and, with respect to any residential structure on adjacent property:

a. If the tower has been constructed using breakpoint design technology (see "Definitions"), the minimum distance from any residential structure shall be equal to 110 percent of the distance from the top of the structure to the breakpoint level of the structure, or the minimum principle structure setbacks, whichever is greater. Certification by a registered professional engineer licensed by the State of Colorado of the breakpoint design and the design's fall radius must be provided together with the other information required herein from an applicant. (For example, on a 100-foot-tall monopole with a breakpoint at 80 feet, the minimum distance from the residential structure would be 22 feet (110 percent of 20 feet, the distance from the top of the monopole to the breakpoint) plus the minimum principle structure setback requirements for that zoning district.)

Not Applicable.

b. If the tower is not constructed using breakpoint design technology, the minimum distance from any residential structure shall be equal to the height of the proposed tower.

The height of the proposed tower is 82 feet and the distance from the tower to the closest residential structure is approximately 165 feet. The requirement to be equal to the height of the proposed tower which is 82 ft. is being met.

(C) Equipment Cabinets and Equipment Shelters. Electronic equipment shall be contained in either (a) equipment cabinets or (b) equipment shelters. Equipment

cabinets shall not be visible from pedestrian and right-of-way views. Equipment cabinets may be provided within the principal building on the lot, behind a screen on a rooftop, or on the ground within the fenced-in and screened equipment compound.

The Applicant is proposing a screened equipment compound with a 6-foot-high wood fence installed on all four side of the 44 ft. by 44 ft. compound area of the proposed tower site. It is also located in the backyard of the Fire Station further removing it from public view. All equipment cabinets will not be visible from pedestrian and right-of-way view meeting the intent of this Code section

(D) Fencing. All equipment compounds shall be enclosed with an opaque fence or masonry wall in residential zoning districts and in any zoning district when the equipment compound adjoins a public right-of-way. Alternative equivalent screening may be approved through the site plan approval process described in subsection (q)(12)(iii)(E) of this section.

The proposed Equipment Compound will contain electronic equipment and will be enclosed with an opaque fence. Proposed to be constructed is a 6 ft. tall perimeter solid wood fence for screening purposes and securing the base area of the tower from unauthorized entry. Proposed fencing meets the intent of this Code section.

(E) Buffers. The equipment compound shall be landscaped with a minimum 10-foot-wide perimeter buffer or be approved with an Alternative Landscaping Plan which provides for the same average canopy and understory trees but propose alternative locating on the entire subject property may be considered and approved by the Director.

The Applicant is proposing to locate the tower in an existing wooded area of the site removing only those trees required to construct and locate the tower and ground equipment. Preserving the wooded area was very important to adjacent property owners as well as the City's desire to minimize the visual impacts of the proposed tower. From the photo simulation, attached, it can be seen that the wooded area performs well in minimizing visual impacts of the tower from all sides. The existing landscaping will hide the equipment compound. The wooded area with its existing mature landscaping is being proposed as an Alternative Landscaping Plan for the proposed tower site.

The proposed alternative landscaping plan meets the intent of this Code section.

(F) Equipment Compound. The fenced-in compounds shall not be used for the storage of any excess equipment or hazardous materials. No outdoor storage yards shall be allowed in a tower equipment compound. The compound shall not be used as habitable space.

The proposed equipment compound is meeting these requirements. The proposed leased area for the entire tower and compound area is 50 ft by 50 ft., 2,500 sq. ft in size. The fenced in area will be 44 ft. by 44 ft., 1,936 sq. ft. in size.

(G) Structural Standards. All new concealed or nonconcealed PWSF towers shall be constructed and maintained to meet ANSI/EIA/TIA-G (as amended) Series III, Exposure C structural standards.

The Applicant has stated that the proposed tower meets these standards. To secure the structural loading review of a tower, the tower must be ordered by Verizon. The normal process of ordering the tower is initiated once a Building Permit has been approved by the jurisdiction. At the time of building permit, Verizon will submit the required structural letter and prior to the construction beginning on the tower.

(H) Visibility.

a. Concealed.

1. New concealed towers shall be designed to match adjacent structures and landscapes with specific design considerations such as architectural designs, height, scale, color, and texture.

The proposal is for a mono-pine cell tower that will look like a tall pine tree. It is being located within an existing wooded area with tall mature trees.

2. New antenna mounts shall be concealed and match the concealed tower.

Antenna mounds are concealed within the mono-pine structure.

3. In residential zoning districts and in mixed use zoning districts that include residential uses, new concealed towers shall not be permitted on lots where the primary use or principal structure is single-family or two-family residential, group living, day care, or a multifamily structure of fewer than three stories. Examples of land uses/structure types in residential areas where the site may include a concealed tower are: school, religious assembly, fire station, stadium tower or stand, or other similar institutional/civic uses/structures.

The proposed Concealed Tower is proposed to be a mono-pine resembling a pine tree to be located within a wooded area located in the rear yard of an existing fire station site.

b. Nonconcealed. New antenna mounts shall be flush-mounted unless the applicant can demonstrate that flush-mounted antennas will not reasonably meet the network objectives of the desired coverage area or that more co-locations will be available on the tower if flush-mounting is not required.

Not applicable.

c. Concealed and Nonconcealed.

1. New concealed and nonconcealed towers shall be configured and located in a manner that shall minimize adverse effects including visual impacts on the landscape and adjacent properties.

The proposed tower is concealed and located within a mature wooded area with many trees, see photo simulations of proposed tower, minimizing the visual impact of the proposed tower. The structure height of 82 feet is much less than the maximum of 200 feet the code allows further minimizing the visual impact of the tower in this residential area of town.

2. A balloon test shall be required subsequent to the receipt of the photo simulations in order to demonstrate the proposed height and concealment solution of the PWSF. The applicant shall arrange to raise a red or orange colored balloon no less than three feet in diameter at the maximum height of the proposed tower, and within 25 horizontal feet of the center of the proposed tower. The applicant shall meet the following for the balloon test:

i. Applicant must inform the Planning Department and abutting property owners in writing of the date and times, including alternative date and times, of the test at least 14 days in advance.

ii. A three-foot-by-five-foot sign with lettering no less than three inches high stating the purpose of the balloon test shall be placed at closest major intersection of proposed site.

iii. The date, time, and location, including alternative date, time and location, of the balloon test shall be advertised in a locally distributed paper by the applicant at least seven but no more than 14 days in advance of the test date.

iv. The balloon shall be flown for at least four consecutive hours during daylight hours on the date chosen. The applicant shall record the weather, including wind speed, during the balloon test.

v. Re-advertisement will not be required if inclement weather occurs.

A balloon test was conducted on December 12, 2018 from 8 am to noon. Public notice to adjacent land owners, general advertising in the newspaper and a sign advertising the test at the corner of the nearest intersections occurred as required. This requirement has been met.

3. Towers shall be constructed to accommodate antenna arrays as follows:

i. Up to 120 feet in height shall be engineered and constructed to accommodate no fewer than four antenna arrays.

The proposed structure at 82 feet is designed for a service provider at 60 feet in height and one at 80 feet in height.

ii. All towers between 121 feet and 150 feet shall be engineered and constructed to accommodate no fewer than five antenna arrays.

Not Applicable

4. Existing grading shall be minimized and limited only to the area necessary for the new tower and equipment compound.

Existing grading of the site is level and will remain such with the installation of the tower. The only ground penetration required for the project will occur within the 2500 sq. ft. leased area where the tower is constructed and the equipment compound is sited.

5. Sounds. No unusual sound emissions such as alarms, bells, buzzers, or the like are permitted. Emergency generators are allowed. Sound levels shall not exceed 65 decibels as measured at the property boundaries.

Per the applicant, the proposed tower will have a backup generator. There will be no unusual sound emissions. The only sound to be emitted from the tower is the monthly preventative maintenance running of the generator. It's below the maximum 65 decibels sound level at 62 decibels. This process will occur during the night when the towers usage is in less demand. The process only takes a few minutes to complete.

This criterion has been met.

(3) Availability of Complementary Uses. Other uses complementary to, and supportive of, the proposed project shall be available including, but not limited to: schools, parks, hospitals, business and commercial facilities, and transportation facilities.

The proposed installation of a new telecommunications tower does have a need for support services.

Therefore, this criterion has been met.

(4) Compatibility with Adjoining Properties. Compatibility with and protection of neighboring properties through measures such as:

(i) Protection of Privacy. The proposed plan shall provide reasonable visual and auditory privacy for all dwelling units located within and adjacent to the site. Fences, walls, barriers and/or vegetation shall be arranged to protect and enhance the property and to enhance the privacy of on-site and neighboring occupants;

All adjacent properties are zoned R-4, but only the properties to the north are developed as residential single family uses. Impacts are being mitigated through screening and buffering locating the tower approximately 165 feet from the closest

residence, preserving a strand of mature trees, concealing the tower with the construction materials of making it look like a mature pine tree. Existing fencing between the residences and the proposed tower further screens and buffers these uses from the proposed cell tower.

Therefore, this criterion has been met.

(ii) Protection of Use and Enjoyment. All elements of the proposed plan shall be designed and arranged to have a minimal negative impact on the use and enjoyment of adjoining property;

The site, located in the backyard of an existing fire station, is designed to have a minimal impact on surrounding uses. The proposed 82 ft. tall tower is a concealed tower and all associated equipment within a screened area, thereby having minimum negative impact on the use and enjoyment of adjoining property.

Therefore, this criterion has been met.

(iii) Compatible Design and Integration. All elements of a plan shall coexist in a harmonious manner with nearby existing and anticipated development. Elements to consider include; buildings, outdoor storage areas and equipment, utility structures, building and paving coverage, landscaping, lighting, glare, dust, signage, views, noise, and odors. The plan must ensure that noxious emissions and conditions not typical of land uses in the same zoning district will be effectively confined so as not to be injurious or detrimental to nearby properties.

The proposed development will not adversely impact the adjacent fire station, elementary school, church and residences as all required International Fire and Building Codes will be met for the project. It will coexist in a harmonious manner with nearby existing development providing important cellular service to customers in the area.

Regarding noise, this proposed tower will have a generator and a backup generator for emergencies. Sounds from the equipment inside the equipment cabinet will be negligible.

Therefore, this criterion has been met.

Approval Deadline/Development Phasing Schedule:

In the Zoning and Development Code under Section 21.02.080 Permits requiring a public hearing, in subsection (n) Validity, there is allowed under subsection (2) extension procedures. Subsection (i) of that subsection states, "Considerations.

Development approval deadline or a development phasing schedule may be set for greater than one year, but not more than 10 years, by the decision-making body. The decision-making body may extend any deadline if the applicant demonstrates why the original effective period or development phasing schedule was not sufficient and cannot be met.”

The applicant has requested and staff supports a 10-year deadline to establish the full 82 ft. tall cell tower request. Verizon Wireless plans to construct the tower to 60 feet with their equipment and has designed the tower to be extended an additional 22 feet for co-location space for another cellular service provider. Since the ultimate height of the tower of 82 ft. is not being established in the first phase of development, this request for a development schedule of extension of deadline is necessary.

The 2016 Wireless Master Plan was developed and adopted by City Council and included in the Ordinance to:

- Encourage the location and co-location of equipment on existing structures in order to reduce the need for new towers, thereby minimizing visual clutter, public safety impacts, and effects upon the natural environment and wildlife;
- Accommodate the growing need and demand for telecommunications services while protecting the character of the City and its neighborhoods;
- Encourage the availability of affordable, high-speed internet and cellular telephone access for business and residents, acknowledging that a growing number of businesses are conducted in whole or in part from homes and/or on-the-go, that increasingly education incorporates on-line learning necessitating good home internet connections for students and faculty, and that government participation and emergency services to the general public are enhanced by fast and reliable cellular and home internet connectivity;
- Encourage coordination between suppliers and providers of telecommunication services to maximize use of existing Facilities and structures.

STAFF RECOMMENDATION AND FINDINGS OF FACT

After reviewing the SSC for Verizon Wireless Telecommunications Tower CUP application, CUP-2019-244, request for a Conditional Use Permit, Staff recommends that the Conditional Use Permit be approved with a Development Schedule of 10 years and the following findings of fact, conclusions and conditions have been determined:

1. The requested Conditional Use Permit is consistent with the Comprehensive Plan and with the goal and policies of the Comprehensive Plan, specifically, Goal 12 and meets the General Approval Criteria for permits requiring a Public Hearing.
2. The review criteria, items 1 through 4 in Section 21.02.110 of the Grand Junction

Zoning and Development Code have all been met or addressed.

3. Applicant shall be responsible for meeting all conditions as required by the City Fire Department and Mesa County Building Department as applicable from the International Fire and Building Codes for the installation and engineering for wind loads etc., for the installation of an 82 ft. tall mono-pine telecommunications tower.

4. The proposed development schedule of 10 years is meeting Section 21.02.080(n) of the Zoning and Development Code.

SUGGESTED MOTION:

The Planning Commission may approve, approve with conditions, deny or continue this request.

Madam Chairman, on the request to approve a Conditional Use Permit (CUP) for an 82 ft. tall concealed telecommunication tower facility on 2.7 acres as presented in file CUP-2019-224, I move that the Planning Commission approve the Conditional Use Permit with the findings of fact, conclusions and conditions listed in the staff report.

Attachments

1. Exhibit 1 - Development Application
2. Exhibit 3 - Maps-Plans-Drawings-Elevations
3. Exhibit 4 - Photo Simulations of 60 ft and 80 ft heights of proposed tower

Development Application

We, the undersigned, being the owner's of the property adjacent to or situated in the City of Grand Junction, Mesa County, State of Colorado, as described herein do petition this:

Petition For:

Please fill in blanks below only for Zone of Annexation, Rezones, and Comprehensive Plan Amendments:

Existing Land Use Designation <input style="width: 90%;" type="text"/>	Existing Zoning <input style="width: 90%;" type="text"/>
Proposed Land Use Designation <input style="width: 90%;" type="text"/>	Proposed Zoning <input style="width: 90%;" type="text"/>

Property Information

Site Location: <input style="width: 90%;" type="text" value="2884 B 1/2 Road (Fire Station No. 4)"/>	Site Acreage: <input style="width: 90%;" type="text" value="2.68"/>
Site Tax No(s): <input style="width: 90%;" type="text" value="Exempt"/>	Site Zoning: <input style="width: 90%;" type="text" value="R-4"/>
Project Description: <input style="width: 95%;" type="text" value="Verizon Wireless is proposing a 60' monopine tower, which is a telecommunications tower that is disguised to resemble a pine tree. The proposed tower would be in a heavily treed area just North of the"/>	

Property Owner Information

Name:

Street Address:

City/State/Zip:

Business Phone #:

E-Mail:

Fax #:

Contact Person:

Contact Phone #:

Applicant Information

Name:

Street Address:

City/State/Zip:

Business Phone #:

E-Mail:

Fax #:

Contact Person:

Contact Phone #:

Representative Information

Name:

Street Address:

City/State/Zip:

Business Phone #:

E-Mail:

Fax #:

Contact Person:

Contact Phone #:

NOTE: Legal property owner is owner of record on date of submittal.

We hereby acknowledge that we have familiarized ourselves with the rules and regulations with respect to the preparation of this submittal, that the foregoing information is true and complete to the best of our knowledge, and that we assume the responsibility to monitor the status of the application and the review comments. We recognize that we or our representative(s) must be present at all required hearings. In the event that the petitioner is not represented, the item may be dropped from the agenda and an additional fee may be charged to cover rescheduling expenses before it can again be placed on the agenda.

Signature of Person Completing the Application <input style="width: 90%;" type="text" value="Aaron Gross"/>	Digitally signed by Aaron Gross Date: 2019.03.27 11:46:41 -06'00'	Date <input style="width: 90%;" type="text" value="March 27, 2019"/>
Signature of Legal Property Owner <input style="width: 90%;" type="text"/>		Date <input style="width: 90%;" type="text"/>



November 26, 2018, 2018

Selective Site Consultants
4155 East Jewell Avenue
Suite 420
Denver, CO 80134

NOTICE: Balloon Test for Verizon Wireless

To whom it may concern:

Selective Site Consultants, on behalf of Verizon Wireless will be conducting a balloon test as required by the City of Grand Junction, for a proposed telecommunications tower to be located at the Grand Junction Fire Station #4 at 2884 B 1/2 Rd, Grand Junction, CO 81503.

This notice is to inform you of a scheduled balloon test, in which we will raise a balloon to the same height as the proposed tower. The purpose of this test is for the public to be able to visualize the height of the proposed tower. This test is scheduled to be completed on Wednesday, December 12th at approximately 8:00am and will continue for four (4) consecutive hours. In the event of inclement weather, the test will be held on Thursday, December 13th at approximately 8:00am and will continue for four (4) consecutive hours.

****Please note that the original date of November 28th was changed due to a scheduling conflict.***

Thank you.

State PROOF OF PUBLICATION

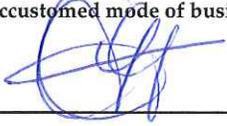
STATE OF COLORADO

County of (Mesa)

Terry Flanagan

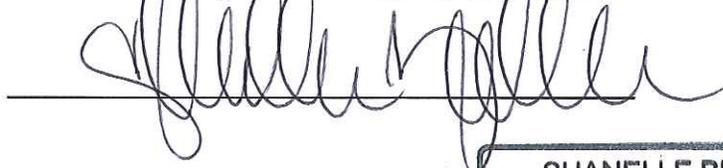
Being duly sworn, says that I am Legal Secretary of The Daily Sentinel, a daily newspaper, published and duly printed in The County of Mesa, State of Colorado; that said newspaper has a general circulation in said County and has been continuously and uninterruptedly published therein, during a period of at least fifty-two consecutive weeks next prior to the first publication of the annexed notice; that said newspaper is a newspaper within the meaning of the act of the general Assembly of the State of Colorado, entitled "An Act to regulate the printing of legal notices and advertisements," and amendments thereto; that the notice of which the annexed is a printed copy taken from said newspaper, was published in said newspaper, and in the regular and entire issue of every number thereof once a week for 1 successive week; that said notice was so published in said newspaper proper and not in any supplement thereof, and that first publication of said notice as aforesaid, was on the 5th day of December, 2018, and the last, on the 5th day of December, 2018. Copies of each number of said paper in which said notice and/or list was published were delivered by carriers or transmitted by mail to each of the subscribers of said newspaper, The Daily Sentinel, according to the accustomed mode of business in this office.

NOTICE: As required by the City of Grand Junction, there will be a balloon test for a proposed Verizon Wireless telecommunication tower at 2884 B 1/2 Road (Grand Junction Fire Station No. 4) conducted on Wednesday, December 12th, beginning at approximately 8:00am and continuing for four (4) consecutive hours. In case of inclement weather, the test will be rescheduled for Thursday, December 13th, beginning at approximately 8:00am and continuing for four (4) consecutive hours. The purpose of this test is for the public to visualize the proposed height of this potential telecommunication tower. Published: December 5, 2018.



Subscribed and sworn to before me, this

5 day of December, 2018



SHANELLE BULLEN
 NOTARY PUBLIC
 STATE OF COLORADO
 NOTARY ID #20184016035
 My Commission Expires April 12, 2022

State PROOF OF PUBLICATION

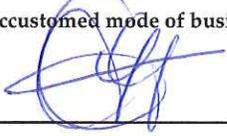
STATE OF COLORADO

County of (Mesa)

Terry Flanagan

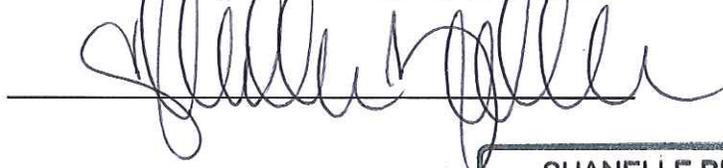
Being duly sworn, says that I am Legal Secretary of The Daily Sentinel, a daily newspaper, published and duly printed in The County of Mesa, State of Colorado; that said newspaper has a general circulation in said County and has been continuously and uninterruptedly published therein, during a period of at least fifty-two consecutive weeks next prior to the first publication of the annexed notice; that said newspaper is a newspaper within the meaning of the act of the general Assembly of the State of Colorado, entitled "An Act to regulate the printing of legal notices and advertisements," and amendments thereto; that the notice of which the annexed is a printed copy taken from said newspaper, was published in said newspaper, and in the regular and entire issue of every number thereof once a week for 1 successive week; that said notice was so published in said newspaper proper and not in any supplement thereof, and that first publication of said notice as aforesaid, was on the 5th day of December, 2018, and the last, on the 5th day of December, 2018. Copies of each number of said paper in which said notice and/or list was published were delivered by carriers or transmitted by mail to each of the subscribers of said newspaper, The Daily Sentinel, according to the accustomed mode of business in this office.

NOTICE: As required by the City of Grand Junction, there will be a balloon test for a proposed Verizon Wireless telecommunication tower at 2884 B 1/2 Road (Grand Junction Fire Station No. 4) conducted on Wednesday, December 12th, beginning at approximately 8:00am and continuing for four (4) consecutive hours. In case of inclement weather, the test will be rescheduled for Thursday, December 13th, beginning at approximately 8:00am and continuing for four (4) consecutive hours. The purpose of this test is for the public to visualize the proposed height of this potential telecommunication tower. Published: December 5, 2018.



Subscribed and sworn to before me, this

5 day of December, 2018



SHANELLE BULLEN
 NOTARY PUBLIC
 STATE OF COLORADO
 NOTARY ID #20184016035
 My Commission Expires April 12, 2022



November 26, 2018, 2018

Selective Site Consultants
4155 East Jewell Avenue
Suite 420
Denver, CO 80134

NOTICE: Balloon Test for Verizon Wireless

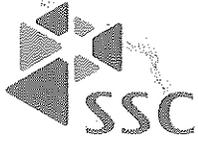
To whom it may concern:

Selective Site Consultants, on behalf of Verizon Wireless will be conducting a balloon test as required by the City of Grand Junction, for a proposed telecommunications tower to be located at the Grand Junction Fire Station #4 at 2884 B 1/2 Rd, Grand Junction, CO 81503.

This notice is to inform you of a scheduled balloon test, in which we will raise a balloon to the same height as the proposed tower. The purpose of this test is for the public to be able to visualize the height of the proposed tower. This test is scheduled to be completed on Wednesday, December 12th at approximately 8:00am and will continue for four (4) consecutive hours. In the event of inclement weather, the test will be held on Thursday, December 13th at approximately 8:00am and will continue for four (4) consecutive hours.

****Please note that the original date of November 28th was changed due to a scheduling conflict.***

Thank you.



Neighborhood Meeting Sign in Sheet

Name

Street Address

Email

DAVID THORNTON

250 N. 5th ST

davidt@jcity.org

AARON GROSS

4155 E. Jewell Ave.

agross@SSC.US.com

RYAN HONG

4155 E Jewell

RHong@SSC.US.com



Proposed Verizon Site Plan
Neighborhood Meeting
Wednesday, February 27th, 2019

Site Information

Location: Grand Junction Fire Department Station # 4

Address: 2884 B ½ Road, Grand Junction CO, 81503

Proposed Site: Verizon Wireless is proposing a 60' telecommunication tower to be installed North of the fire station. This is a heavily wooded area which we will feel will help disguise the proposed tower. Verizon has designed a stealth tower, called a monopine which is intended to resemble a pine tree, which when installed will blend with the surrounding area. Please see the attached photo simulations which shows the site, both in its current state, and with a simulation of the proposed tower.

Meeting Information

Location: Lincoln Orchard Mesa Elementary School

Address: 2888 B 1/2 Rd, Grand Junction, CO 81501

Meeting Summary: The meeting room was set up and attended by 2 representatives of Selective Site Consultants, on behalf of Verizon Wireless. Additionally, Matt Carson from the Grand Junction Fire Department and David Thorton from the Grand Junction Planning Department were in attendance.

The meeting started promptly at 6:30, however no one from surrounding neighborhood, which whom we sent notification letters to attended.



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REPORT CHECKLIST AND OUTLINE

GENERAL PROJECT REPORT

CHECKLIST

Typed text **Verizon Project CO3 Casterly Rock - 313884**

Name of report on a title page or on the first page of text

Grand Junction Fire Station #4

OUTLINE

A. Project Description

1. Location 2884 B 1/2 Road Grand Junction CO, 81503
2. Acreage 2.68
3. Proposed use New Cell Tower – Concealed – Telecommunication Facility

B. Public Benefit Improved Verizon Coverage for the area, including the Firestation which uses Verizon service.

C. If a "Neighborhood Meeting" has been held, proof of those who attended, along with the date, time and place shall be provided. See the Zoning and Development Code for details on Neighborhood Meetings. **Attached**

D. Project Compliance, Compatibility, and Impact

1. Adopted plans and/or policies (for rezones, variances, conditional and special use, revocable permits, and vacations, discuss the circumstances that justify the request, as required by the Zoning and Development Code) N/A
2. Land use in the surrounding area R-4
3. Site access and traffic patterns N/A
4. Availability of utilities, including proximity of fire hydrants See Site Plan
5. Special or unusual demands on utilities (high water or sewage quantities, grease, or sediment contribution, pre-treatment needs, etc.) N/A
6. Effects on public facilities (fire, police, sanitation, roads, parks, schools, irrigation, etc.) Improved Service for Firestation
7. Hours of operation 24/7
8. Number of employees N/A
9. Signage plans (required with Conditional Use Permits and Planned Development) N/A
10. Site soils and geology (such as Soils Conservation Service (SCS) soils mapping) N/A
11. Impact of project on site geology and geological hazards, if any N/A

E. Must address the review criteria contained in the Zoning and Development Code for the type of application being submitted. Required Information Attached.

F. Development Schedule and Phasing TBD

COMMENTS Please let me know if there is any additional information needed for this application.

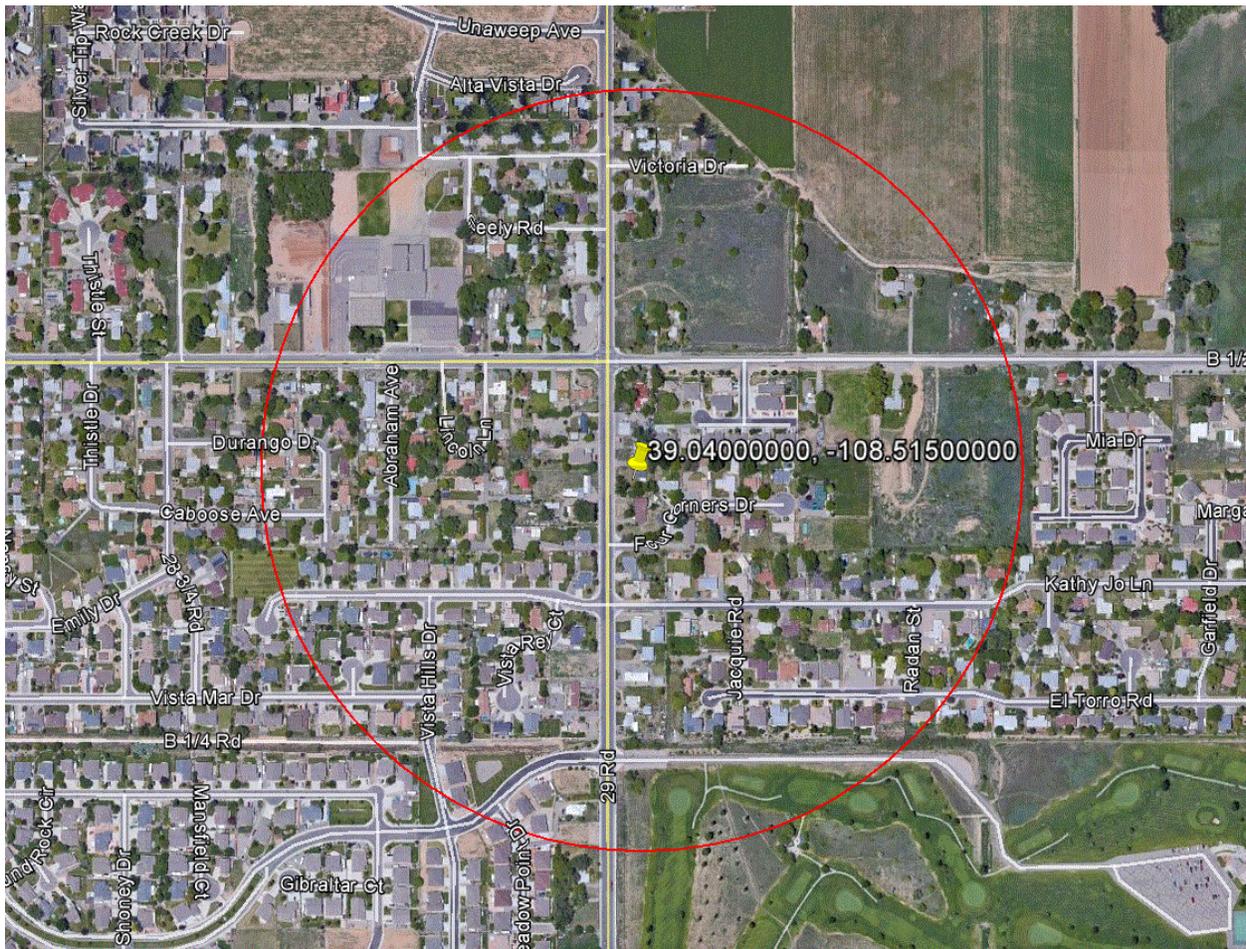
(5) Siting Preferences for New Telecommunications Facilities. (pgs. 16-17)

Siting of new PWSF of any type shall be in accordance with the Siting Preferences below and with the Use Table in Section 21.04.030. Where a lower ranked alternative is proposed, the applicant must demonstrate through relevant information including, but not limited to, an affidavit by a radio frequency engineer demonstrating that despite diligent efforts to adhere to the established hierarchy within the geographic search area, higher ranked options are not technically feasible, practical or justified given the location of the proposed facilities, by clear and convincing evidence. The applicant must provide such evidence in its application in order for the application to be considered complete.

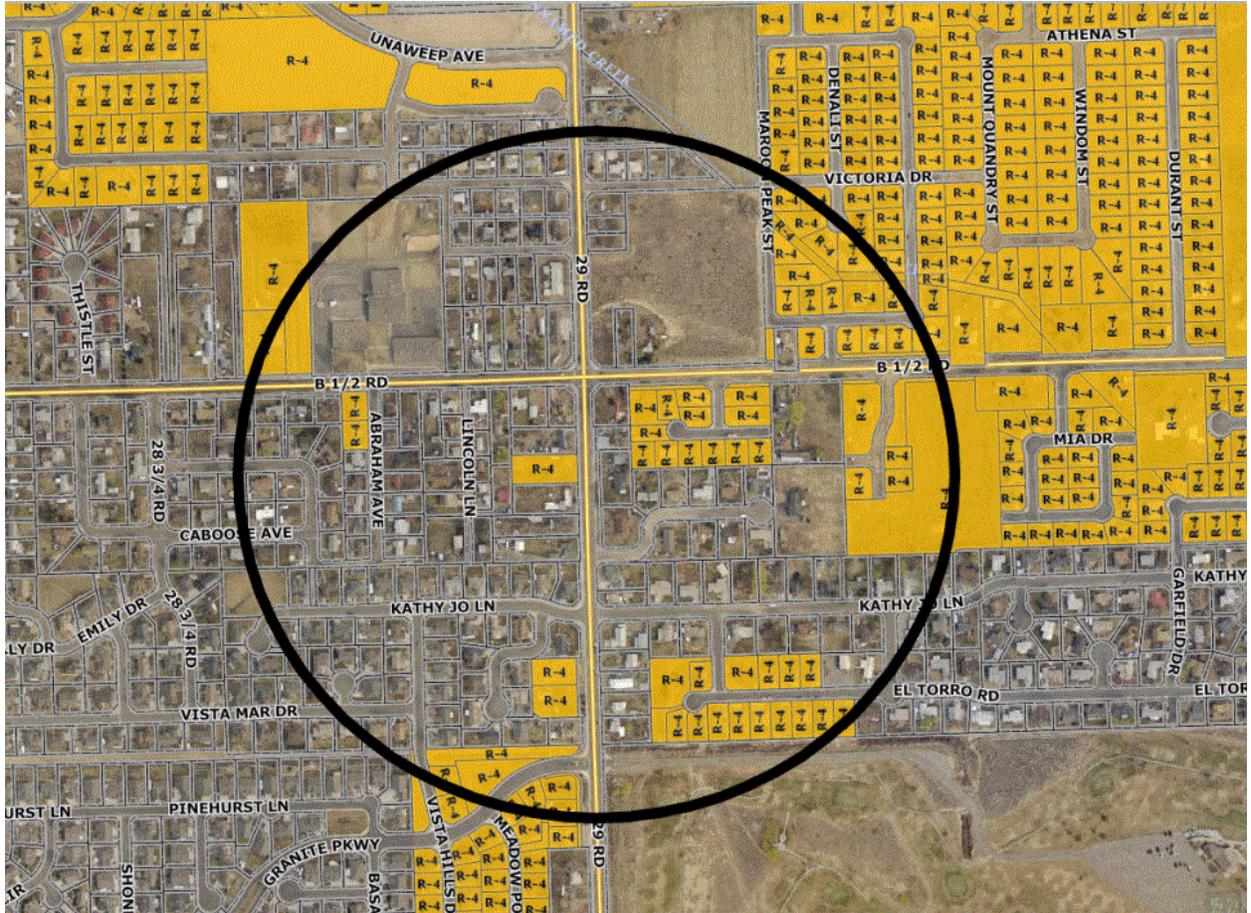
The above Telecommunications Ordinance states that that we must justify this site location. The following explanation and attached maps will detail this.

The attached maps are as follows:

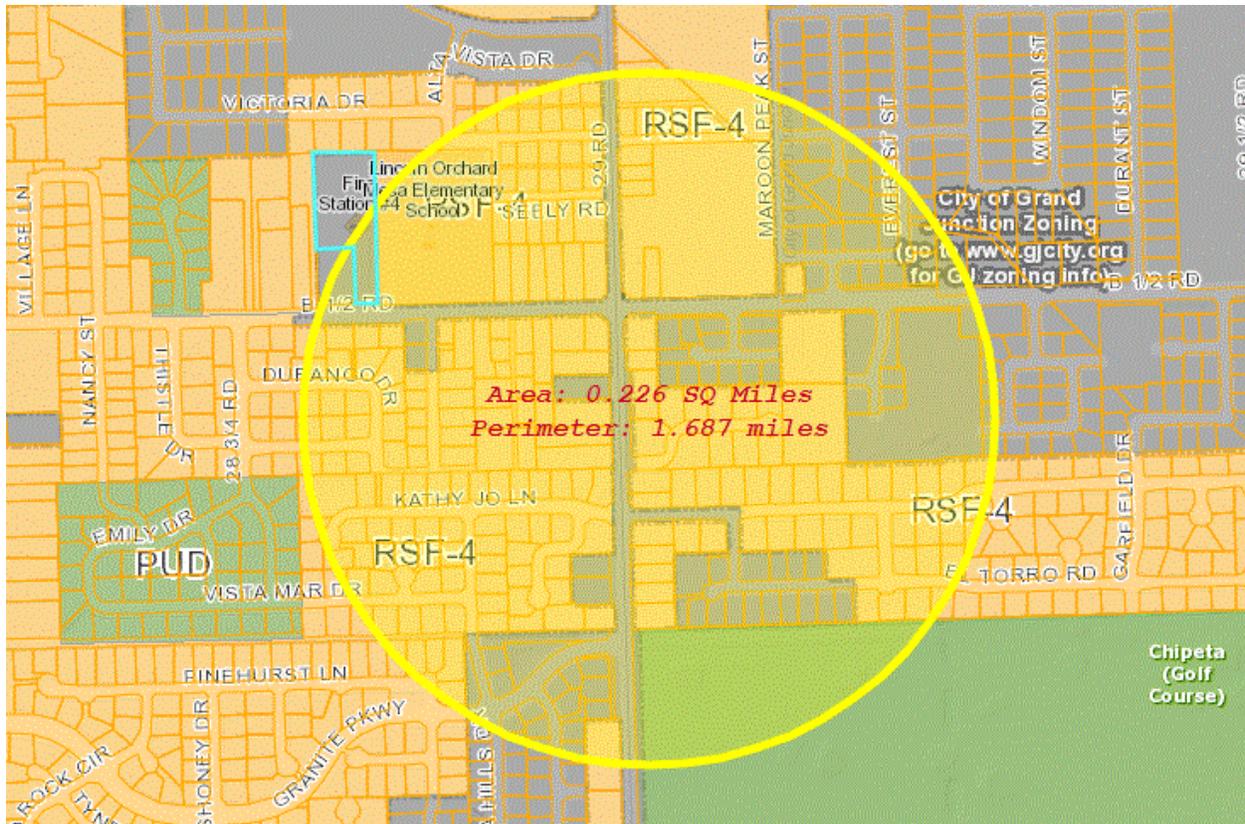
(a) This is a map which shows the original search ring provided to us by Verizon, which indicates by coordinates, the center of the search ring. We then show a 0.25-mile radius around this center point which indicates the area which Verizon needs to locate a tower based on consumer needs.



(b) This is a zoning map for the City of Grand Junction that shows the search area, which we were provided by Verizon, it also indicates that all property within this search ring has a zoning classification of R-4, which is residential.



(c) This is a zoning map for Mesa County that shows the search area, which we were provided by Verizon, it also indicates that all property within this search ring has a zoning classification of R-4, which is residential, with the exception of the corner of the Chipeta Golf Course which is classified as a PUD.



Based on our research of this residential area, we found no existing towers that we could co-locate on. We also found no buildings that would achieve the height required by Verizon for this project. A right-of-way or small cell option would not work in this case either, as this Verizon site is requiring a full array. As we work down the Siting Preferences in order, we find ourselves at section (ix) Concealed Freestanding Towers (d) Other zone districts, in accordance with the Use Table in Section 21.04.010. This site is zoned R-4, but has a nonresidential use, as it is the site of the Grand Junction Fire Station #4. In addition to this being property being owned by The City of Grand Junction, the fire station has given its' support of this facility as they use Verizon wireless and feel it will allow them to better communicate in both emergency and non-emergency situations.

Regarding the Preferred concealment type of structure, we are proposing the most preferred option, which is a tree of naturally occurring or normally found in the geographic area. We are proposing a stealth mono-pine tree which is a mono-pole towers designed to resemble a pine tree.

We are proposing a stealth tower that would be co-locatable. Verizon is proposing a centerline (center of the antennas) of 56 feet, which would allow for another carrier to co-locate with a centerline of 46 feet. Additionally, this tower can be expanded 20 feet to allow a third carrier to co-locate.

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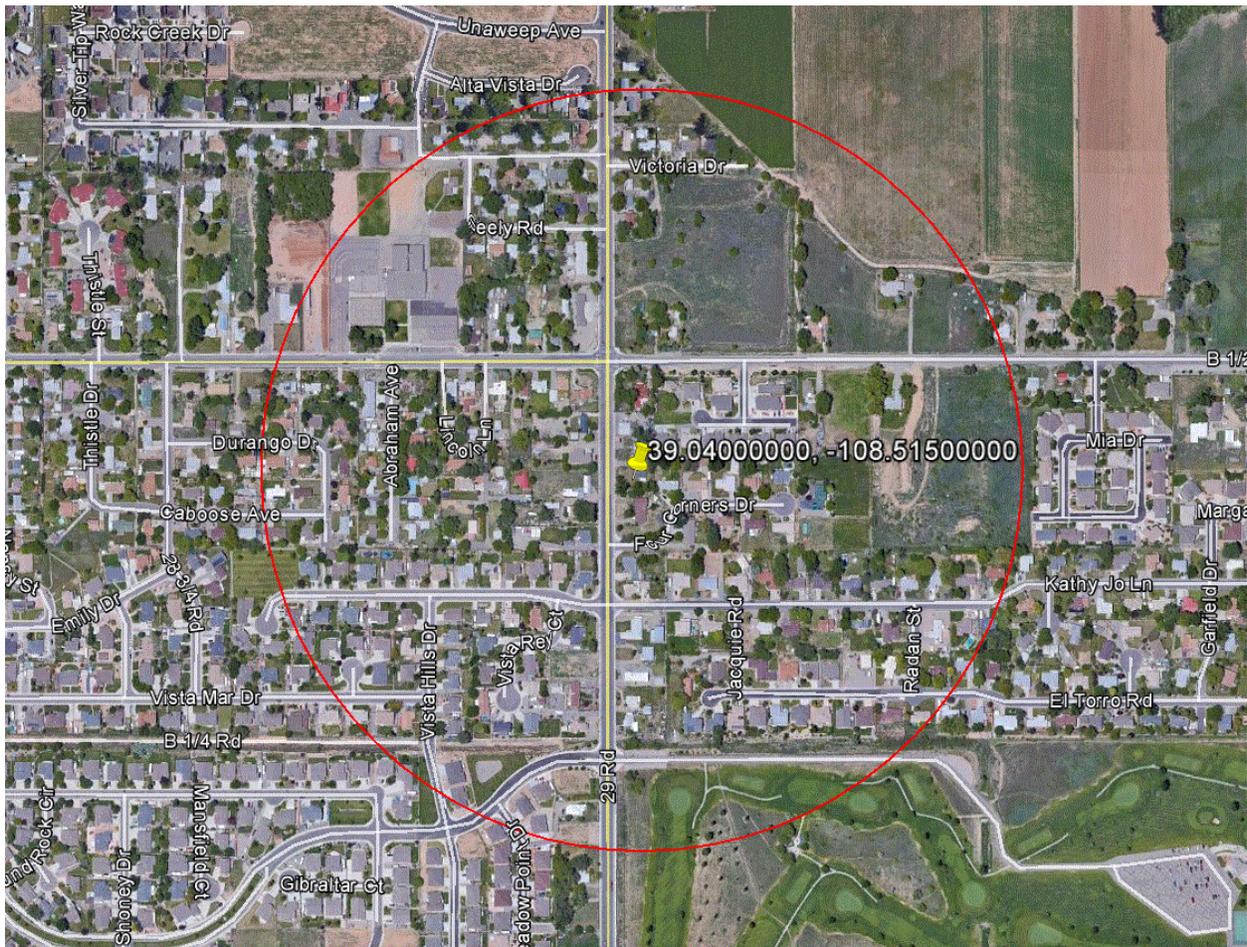
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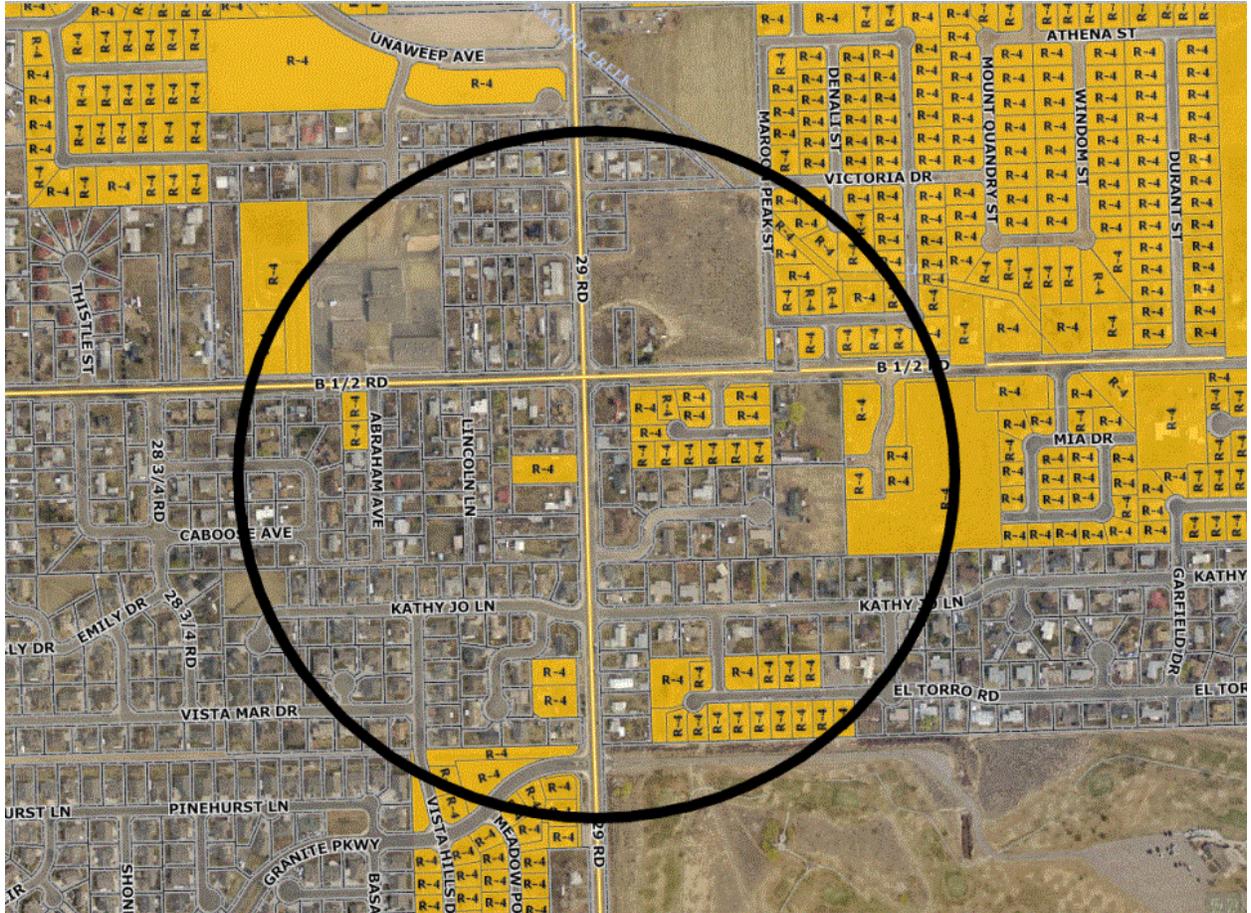
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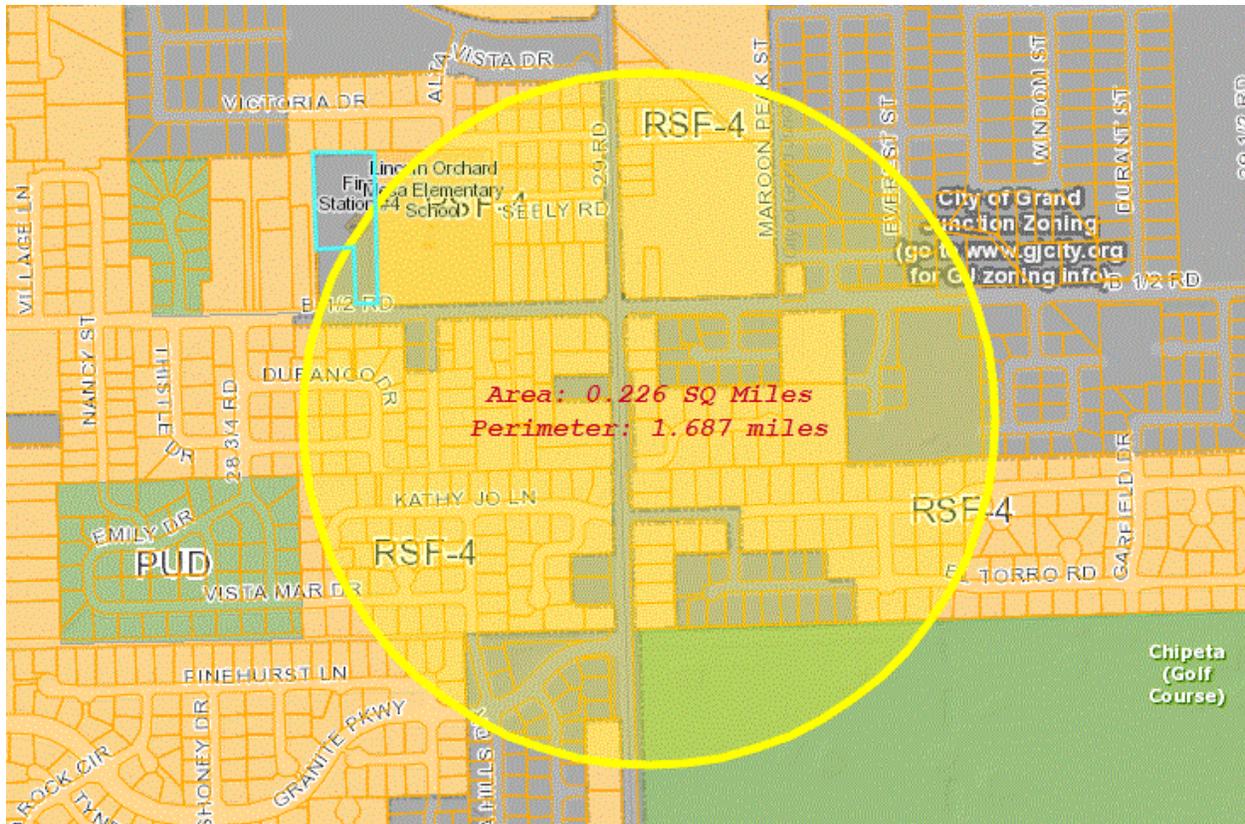
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Verizon Wireless Communications Facility

Engineering Necessity Case – Casterly Rock



Prepared by: **Bryan Eicens**

April 12, 2019



Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.



Project Need Overview:

This project's primary objective is to improve service quality in the southern portions of Grand Junction. A large area near the intersection of B5/100 and 29th Road does not have sufficient signal for the newer technologies to work properly. The site also provides capacity offload of the Orchard Mesa site which is significantly overloaded. Detail is provided supporting these issues on slides 8-10.

Our engineering data shows that this area is experiencing 4G data overloads (See page 10). The existing Orchard Mesa site with its coverage area shown in red on the page 9 map (left) needs to have some of the area it covers moved onto another site to allow it to keep performing well. This site does a good job of moving commercial traffic onto a more localized site, better able to serve this area.

Additional details and explanations follow in this presentation.





Introduction:

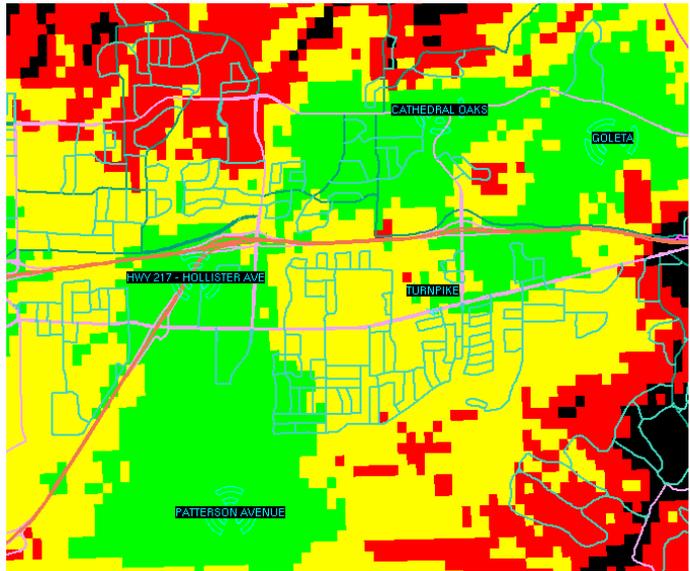
There are two main drivers that prompt the need for a new cell site, coverage and/or capacity. Most sites provide a mixture of both, but increasingly some sites are pure capacity in areas of good coverage.

Coverage is the need for expanded wireless service in an area that has either no service or poor service. The request for improved service often comes from our customers or emergency services personnel. While this once meant providing coverage in vehicles, as usage patterns have shifted this now means improving coverage inside of buildings and in residential areas as well. With older technologies, coverage was the primary means to measure the network in a given area.

Capacity is the need for more wireless resources. This metric is now the primary means to measure how communities' wireless needs are being addressed. Five bars no longer means guaranteed coverage and capacity. It is the network's ability to have the capacity to meet those five bars that is now critical. Cell sites have a limited amount of resources to handle voice calls, data connections, and data volume. When these limits are reached, the user experience quickly degrades. This could mean that customers cannot make/receive calls or could have trouble getting applications to run. A site short on capacity could also make internet connections time out or delay information to emergency response personnel.



Explanation of Wireless Coverage



Coverage is best shown in coverage maps. We use tools that take into account terrain, vegetation, building types, and cell site specifics to model predictions of the existing coverage and what we expect to see with a proposed cell site.

Coverage also changes with the frequencies used. While most phones today use 3G at 800 MHz or 4G at 700 MHz these are low frequencies that have better coverage than the higher 1900 MHz and 2100 MHz that are now coming into use due to increased capacity demands. These higher frequencies require about 3 times the number of sites to achieve the same coverage as the lower frequencies.



Explanation of Wireless Capacity



Capacity is the amount of resources that a cell has to handle customer demand. Verizon utilizes sophisticated programs and customer feedback to monitor current usage trends and to forecast future needs. Since it takes an average of 2-3 years to complete a cell site project, we have to start the process of adding a new cell several years in advance of when the cell will be needed.

Location, Location, Location. A good capacity cell site needs to be in the center of a user population which insures that traffic is evenly distributed around the cell. A typical cell site is configured as a 3 slice pie shape. With each slice (aka. Sector) having 33% of the cells resources. If one sector is under used it's resources can not necessarily be used in a higher use sector. Optimal performance is only obtained when all three sectors have an even traffic distribution.





Explanation of Wireless Data Growth

Wireless Data Growth

Each year we see large increases in how much data our users need. As the resolution of the pictures we send increases, the quality of the video we watch improves, and the complexity of the applications grow we commonly see data growth rates of 60% per year. According to Cisco, wireless data traffic will increase by a factor of 220 times in the period from 2009 to 2019.

Machine to Machine communications will also increase the loads on wireless networks. Over the next 5 years more and more services will be offered over the wireless infrastructure that improve our safety and make our lives easier.

A few are listed below.

- Cars that notify 911 when an airbag deploys.
- Driverless cars needing traffic data and maps to reach your destination as quickly as possible.
- Medical monitors that will alert us should a loved one neglect taking their prescription drugs.
- Home alarms that notify you when your child arrives home from school.
- Smart street lights that notify the city when they are not working.
- City garbage cans that let people know when they need to be emptied.
- Tracking watches will aid in finding lost Alzheimer patients.





Radio Emission Safety...

A common question we hear on our wireless site projects is “Are the radio emissions safe?”

We go to great effort to ensure that all our projects meet the regulations set by the FCC to ensure safety of the public and our employees. *How this site measures in comparison with this standard is detailed in a report included with the zoning application for this site (Include if legally approved).* There are a number of questionable sources of information available on this subject that are not supported by science. Below are links to three organizations that have performed extensive reviews of the science available on this subject and have good educational articles on the results of their research.

World Health Organization

<http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html>

America Cancer Society

<http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/cellular-phone-towers>

FCC Radio Frequency Safety

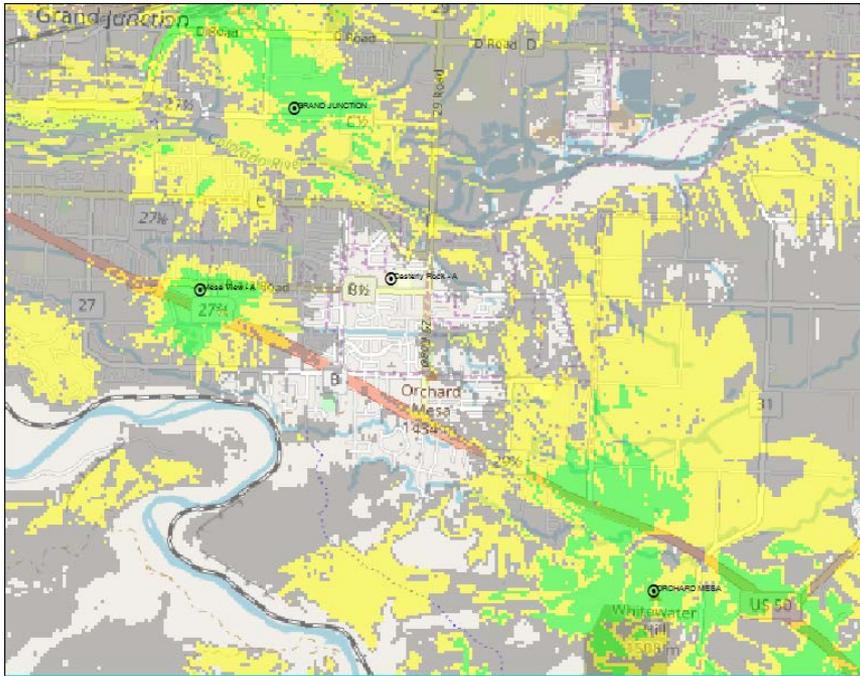
<https://www.fcc.gov/general/radio-frequency-safety-0>



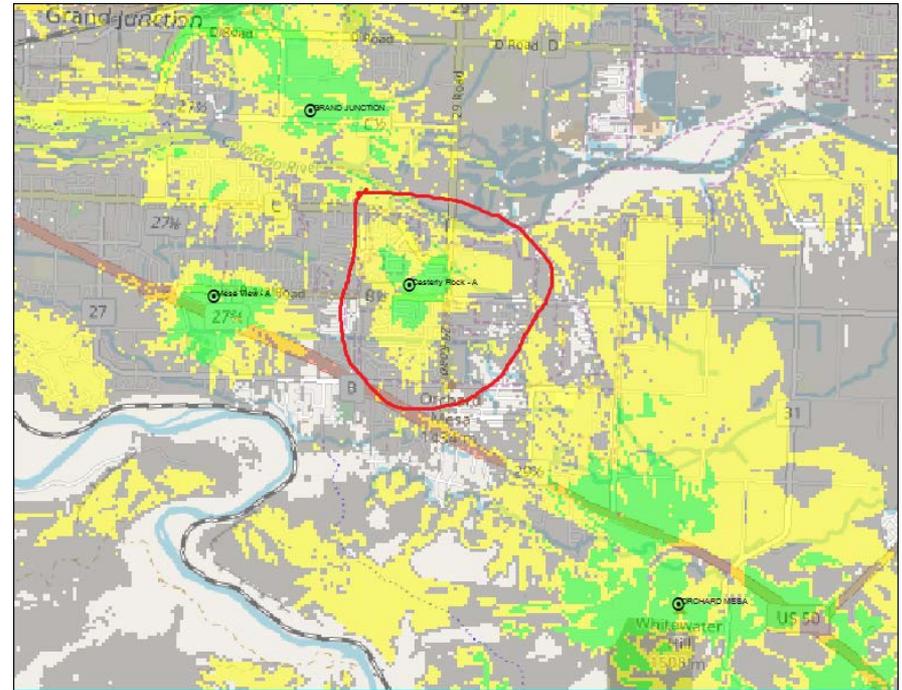


Coverage:

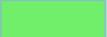
Existing AWS MHz VoLTE Coverage Map



Proposed AWS MHz VoLTE Coverage Map



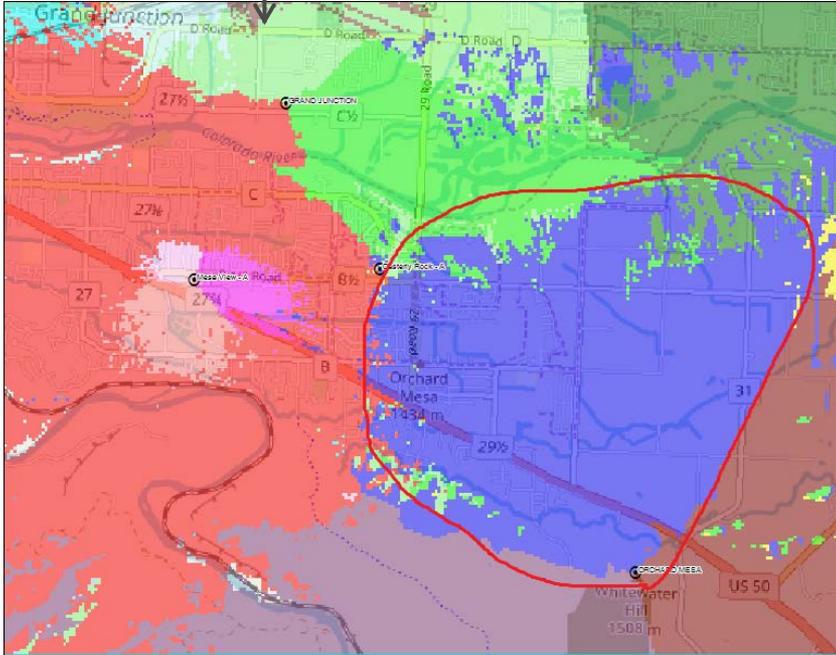
The above maps shows the existing coverage quality for the area with the existing coverage on the left and the coverage with the proposed cell on the right. Good coverage is shown in green, marginal coverage is shown in yellow, and poor coverage is shown in gray. This level of coverage is based on the new 4G voice service used in the latest phones which requires stronger signal than the older 3G technology. As can be seen by the increase in green and yellow on the map to the right, this cell improves in building and vehicle coverage in the area surrounding the site.

 = Good In-Building,  = Good In-Vehicle,  = Good on-Street.

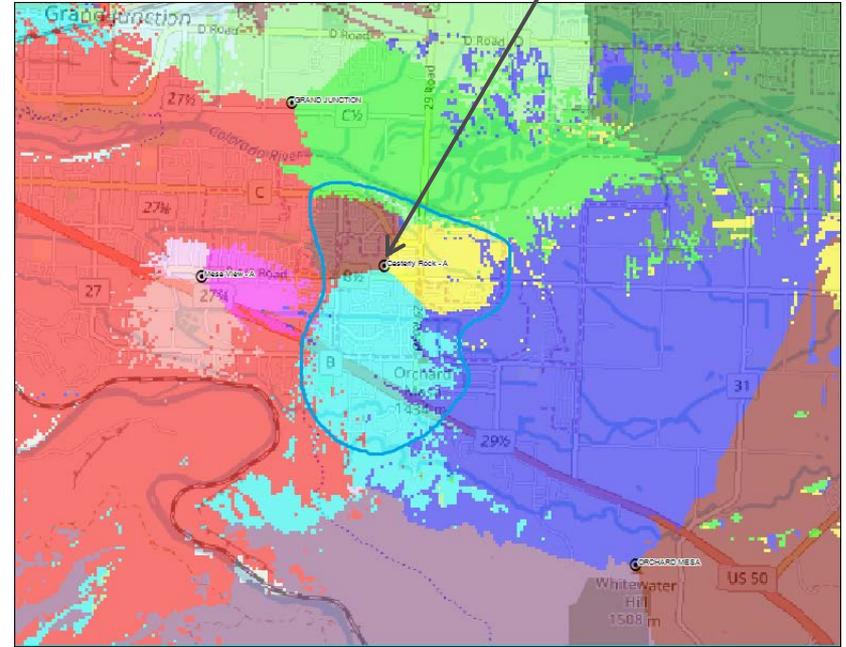


Serving Sector Maps:

Current server
Best Server without Casterly Rock



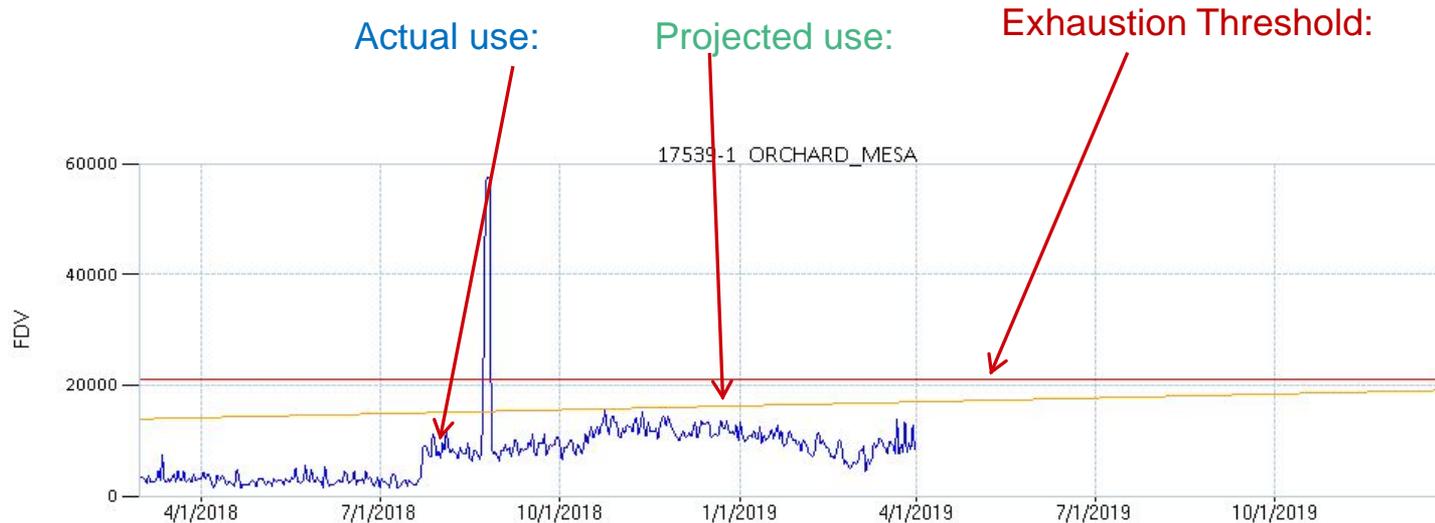
Proposed Site
Best Server with Casterly Rock



The plots above show the best servers or sectors that cover this area with each sector shown in a different color. The left map shows what sectors currently cover this area with the overloaded sector showing in red. The right map shows the area this new site will cover in blue. This project will improve service by providing necessary capacity to support the growth we are seeing in 4G data traffic. The blue area around the proposed site will see much better service. If the site is not built the area in red on the left map will see data speeds and new 4G voice service start to quickly degrade as the site overloads.



Capacity Projection:



Summary: The existing Orchard Mesa sector 1 communications site cannot support the data traffic in the large area it covers and is already frequently overloaded as shown above by the blue use line rising above the red exhaustion threshold. When this occurs 4G data speeds slow to un acceptable levels.

Detail below:

The graph above shows FDV (**F**orward **D**ata **V**olume) which is a measurement of the customer data usage that this sector currently serves. The blue line shows the daily data use on this sector of the cell site. The yellow line is a projection based on the last years usage to show when we expect to see our customers begin to see their data speeds begin to slow down. The red line is the limit where the sector becomes exhausted and service starts to degrade. The point in time where we see the yellow line go above the red line is when we will start seeing service begin to degrade. Service will quickly degrade after that point as usage continues to grow.

To aid in resolving this, we ask to add a 3 sector communications facility as proposed to improve wireless service in this area by offloading commercial traffic from this overloaded sector with the proposed site.





Existing Sites in Grand Junction:

Site Name	Street Address	State	City	County	Overall Structure Height (ft)	GeoPlan Structure Type (Info Only)
BROKEN SPOKE	688 1/2 29 1/2 Road	CO	Grand Junction	Mesa	145	Monopole
ORCHARD MESA	3045 Highway 50	CO	Whitewater	Mesa	173	Self-support Structure
SANFORD	22 3/4 Road and River Road	CO	Grand Junction	Mesa	150	Monopole
CLIFTON	33 Road Overpass	CO	Clifton	Mesa	80	Water Tank
Mesa View	2773 B1/2 Road	CO	Grand Junction	Mesa	36	Rooftop
STARK	550 Warrior Way	CO	Grand Junction	Mesa	59.1	Building With a Side Mounted Antenna
RIMROCK	1450 Independent Ave	CO	Grand Junction	Mesa	110.03	Building With a Side Mounted Antenna
REDLANDS	486 23 Road	CO	Grand Junction	Mesa	60	Rooftop
MESA MALL	2436 F Road	CO	Grand Junction	Mesa	140	Canister
FORESIGHT PARK	585 N Commercial Drive	CO	Grand Junction	Mesa	138	Monopole
R2D2	2115 Grand Ave	CO	Grand Junction	Mesa	60	Building With a Side Mounted Antenna
EL CAMINO	2702 Patterson Road	CO	Grand Junction	Mesa	50	Antenna Tower Array
RAVENWOOD	EAST OF SOUTH CAMP ROAD	CO	Grand Junction	Mesa	110	Monopole
HORIZON	2768 Crossroads Court	CO	Grand Junction	Mesa	105	Monopole
PALOMINO	3227 D Road	CO	Clifton	Mesa	100	Self-support Structure
PINYON	1316 College Place	CO	Grand Junction	Mesa	71	Building With Antenna on Top
BISCAYNE	205 N 4th Street	CO	Grand Junction	Mesa	62.7	Building With Antenna on Top
NOVA	2982 Gunnison Avenue	CO	Grand Junction	Mesa	107	Monopole
GRAND JUNCTION	2816 C-1/2 Road	CO	Grand Junction	Mesa	260	Guyed Structures





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We believe technology can help solve
our biggest social problems.

We're working with innovators,
community leaders, non-profits,
universities and our peers to
address some of the unmet
challenges in education, healthcare
and energy management.

Learn more about our corporate social
responsibility at www.verizon.com.

verizon[✓]





APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

DRAWING DESCRIPTION:
PRELIMINARY ZD

DRAWING INDEX			
SHEET NO.	SHEET TITLE	REV	DISC.
T-1.0	TITLE SHEET	B	C
	SURVEY (BY OTHERS)		
C-1.0	OVERALL SITE PLAN	B	C
C-1.1	ENLARGED SITE PLAN	B	C
ANT-1.0	TOWER ELEVATION & ANTENNA INFORMATION	B	C

PLANS PREPARED FOR:

PLANS PREPARED BY:

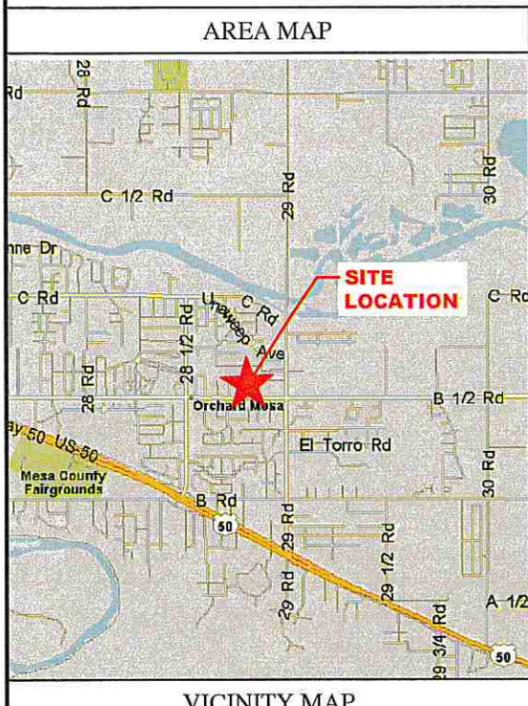
ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION # 20041302439

ENGINEER:	PE#:	DISCIPLINE:
KMV KEVIN M. VANMAELE	53946	CIVIL
REJ ROBERT E. JENSEN	54720	CIVIL
TMS TERRANCE M. SUPER	36490	ELECTRICAL
SDK SHELTON D. KEISLING	49643	ELECTRICAL

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	10/18/18	HEE	A
REISSUED PER CLIENT COMMENTS	11/02/18	HEE	B



CONTRACTOR INFORMATION

POWER PROVIDER: XCEL
AAV PROVIDER: TBD

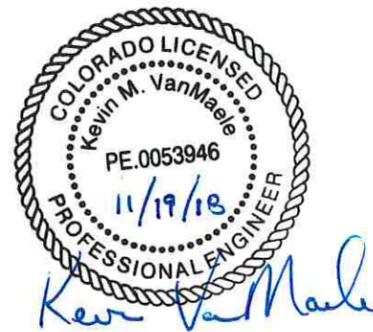
SITE INFORMATION

PROJECT: RAWLAND
CELL SITE NAME: CO3 CASTERLY ROCK
CELL SITE ADDRESS: 2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81501
LESSOR: CITY OF GRAND JUNCTION

CONTACT: BILL ROSS
PHONE: (970) 549-5803

TOWER INFORMATION:
LATITUDE: 39° 02' 33.49" N (NAD 83)
LONGITUDE: 108° 31' 9.53" W (NAD 83)
GROUND ELEV: 4,667' AMSL
OVERALL STRUCTURE HT: 62'-0" AGL
TOWER HEIGHT: 60'-0" AGL
TOWER TYPE: MONOPINE
APPLICANT CL: 74'-0" AGL

CONTACT: BRANDON KISER
PHONE: (801) 260-8712 (VERIZON WIRELESS)



VERIZON WIRELESS DEPARTMENTAL APPROVALS

SIGNER	SIGNATURE	DATE
RF ENGINEER		
SITE ACQ		
OPERATIONS MANAGER		
CONSTRUCTION ENGINEER		
CONSTRUCTION MANAGER		
REAL ESTATE SPECIALIST		

LESSOR/LICENSOR APPROVAL

LESSOR/LICENSOR _____ INITIALS _____ DATE _____

LESSOR/LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW

NO CHANGES CHANGES NEEDED
SEE COMMENTS ON PLANS

VERIZON WIRELESS PROJECT #: TBD

PROJECT INFORMATION:
INSTALL COMMUNICATIONS EQUIPMENT & TOWER FOR A COMMUNICATIONS SITE.

CONSULTING TEAM

ENGINEERING: SSC, INC.
7171 WEST 95TH STREET, SUITE 600
OVERLAND PARK, KANSAS 66212
PHONE: (913) 438-7700
FAX: (913) 438-7777

R. GAITO - PROJECT MANAGER
K.M. VANMAELE - LEAD ENGINEER
S.D. KEISLING - LEAD ELECTRICAL
H.E. ERICACAE - LEAD DESIGNER

APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81501

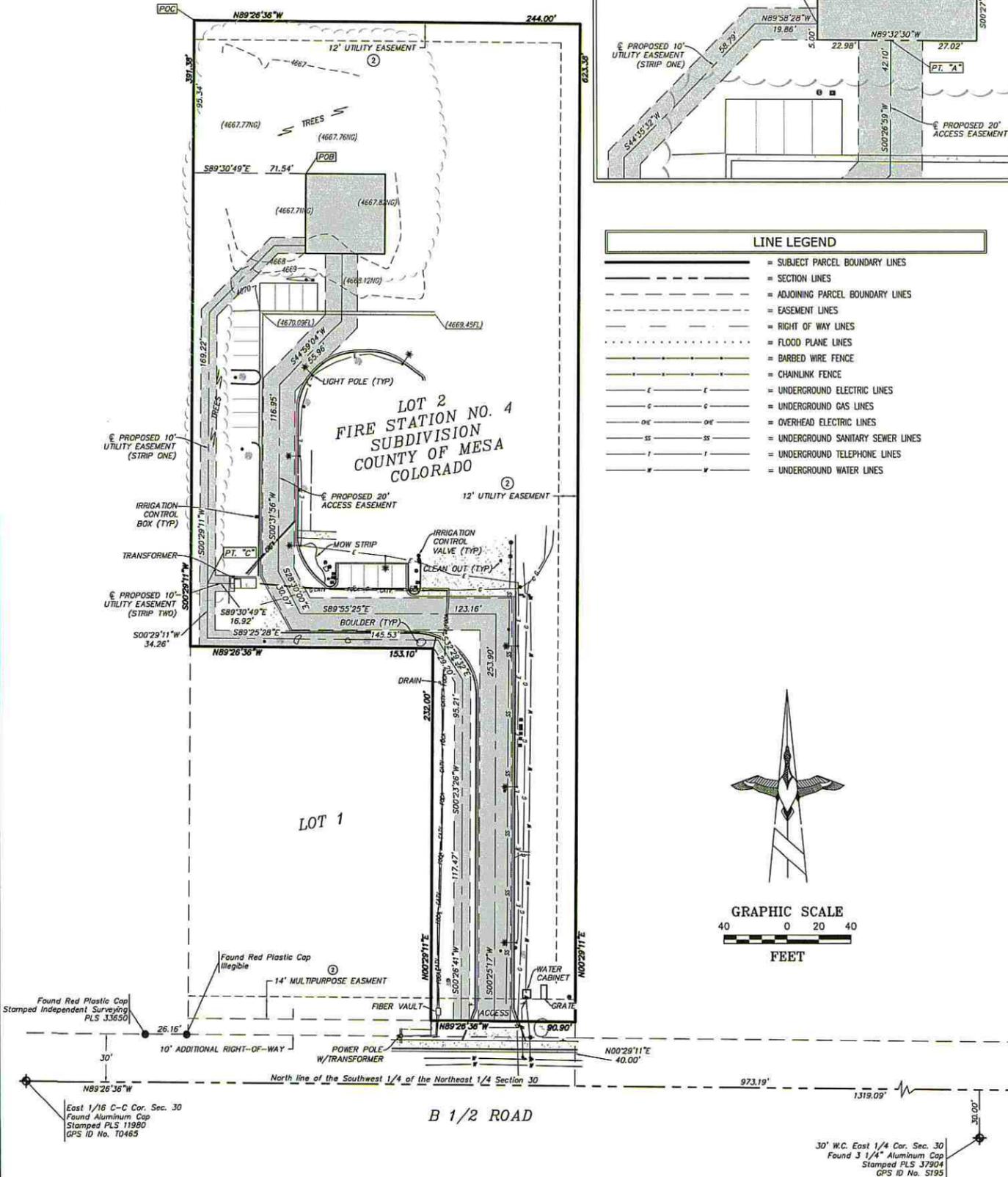
SHEET DESCRIPTION:
TITLE SHEET

DWG INFORMATION: DRAWN BY: HEH
CHECKED BY: DCP

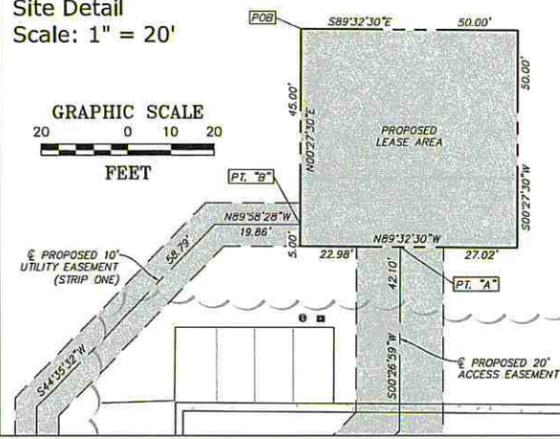
SHEET NUMBER:
T-1.0

NEW VZW UTILITY EASEMENT
ACCESS/UTILITY EASEMENT
VZW LANDSPACE
PENETRATIONS
RR/HBBU
ANTENNAS
FIBER
POWERY/ GROUNDING
HYBRID & COAX CABLES

Boundary Detail
Scale: 1" = 40'



Site Detail
Scale: 1" = 20'



LINE LEGEND

	= SUBJECT PARCEL BOUNDARY LINES
	= SECTION LINES
	= ADJOINING PARCEL BOUNDARY LINES
	= EASEMENT LINES
	= RIGHT OF WAY LINES
	= FLOOD PLANE LINES
	= BARBED WIRE FENCE
	= CHAINLINK FENCE
	= UNDERGROUND ELECTRIC LINES
	= UNDERGROUND GAS LINES
	= OVERHEAD ELECTRIC LINES
	= UNDERGROUND SANITARY SEWER LINES
	= UNDERGROUND TELEPHONE LINES
	= UNDERGROUND WATER LINES



Title Report

PREPARED BY: OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
ORDER NO.: 01-18025138-01T
EFFECTIVE DATE: MAY 10, 2018

Legal Description

LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO.

Assessor's Parcel No.

2943-301-42-002

Title Schedule B Exceptions

- ORDINANCE ANNEXING TERRITORY TO THE CITY OF GRAND JUNCTION, COLORADO, RECORDED 11/08/2014, IN BOOK 5662, PAGE 414 OF THE MESA COUNTY RECORDS. (BLANKET IN NATURE).
- SUBJECT TO COVENANTS, RESTRICTIONS, RESERVATIONS, EASEMENTS, AND RIGHTS OF WAY AND BUILDING SETBACKS AS SHOWN ON THE PLAT OF FIRE STATION NO. 4 SUBDIVISION, AS RECORDED IN PLAT BOOK 5647, PAGE 135 OF MESA COUNTY RECORDS. (PLOTTED HEREON).

Lease Area/Access & Utility Easements

LEASE AREA
BEING A TELECOMMUNICATIONS LEASE PARCEL LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE ALONG THE WEST LINE OF SAID LOT, S00°29'11"W, 95.34 FEET; THENCE S89°30'49"E, 71.54 FEET TO THE POINT OF BEGINNING; THENCE S89°32'30"E, 50.00 FEET; THENCE S00°27'30"W, 50.00 FEET; THENCE N89°32'30"W, 27.02 FEET TO A POINT HEREAFTER REFERRED TO AS POINT "A"; THENCE CONTINUING N89°32'30"W, 22.98 FEET; THENCE N00°27'30"E, 5.00 FEET TO A POINT HEREAFTER REFERRED TO AS POINT "B"; THENCE CONTINUING N00°27'30"E, 45.00 FEET TO THE POINT OF BEGINNING.
CONTAINING 2,500 SQ. FT. OR 0.057 ACRES MORE OR LESS.

ACCESS EASEMENT
BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT POINT "A" AS DESCRIBED ABOVE; THENCE S00°26'59"W, 42.10 FEET; THENCE S44°59'04"W, 55.96 FEET; THENCE S00°31'56"W, 116.95 FEET; THENCE S26°30'00"E, 30.07 FEET; THENCE S89°55'25"E, 123.16 FEET; THENCE S00°25'17"W, 253.90 FEET TO THE RIGHT-OF-WAY OF B 1/2 ROAD AND THE END OF SAID STRIP OF LAND.
EXCEPT ANY PORTION LYING WITHIN THE RIGHT-OF-WAY OF B 1/2 ROAD.

UTILITY EASEMENT
BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT POINT "B" AS DESCRIBED ABOVE; THENCE N89°58'28"W, 19.86 FEET; THENCE S44°35'32"W, 58.79 FEET; THENCE S00°29'11"W, 169.22 FEET TO A POINT HEREAFTER REFERRED TO AS POINT "C"; THENCE CONTINUING S00°29'11"W, 34.26 FEET; THENCE S89°25'28"E, 145.53 FEET; THENCE S32°29'32"E, 29.20 FEET; THENCE S00°23'26"W, 95.21 FEET; THENCE S00°26'41"W, 117.47 FEET TO THE END OF SAID STRIP OF LAND.
SIDELINES OF SAID STRIPS OF LAND ARE TO BE LENGTHENED AND/OR SHORTENED TO PREVENT GAPS AND/OR OVERLAPS.

Date of Survey

SEPTEMBER 7, 2018

Basis of Bearings

THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD83).
CLASSIFICATION: THIRD
MINIMUM GEOMETRIC ACCURACY STANDARD: 5.0 cm ± 1: 10,000

Bench Mark

MESA COUNTY CONTROL POINT "T0465", ELEVATION = 4667.83 FEET (NAVD 88)

Legend

	CONCRETE PAVEMENT		NATURAL GROUND
	CONIFEROUS TREE		PARKING BOLLARD
	DIAMETER		POINT OF BEGINNING
	DECIDUOUS TREE		POINT OF COMMENCEMENT
	EDGE OF ASPHALT		OVERHEAD ELECTRIC LINE
	FINISHED FLOOR		POWER POLE
	FINISH SURFACE		PROPERTY LINE
	FIRE HYDRANT		RIGHT OF WAY
	FLOW LINE		SEWER MANHOLE
	FOUND MONUMENT AS NOTED		SIGN POST
	FOUND SECTION MONUMENT		STREET LIGHT STANDARD
	GEOGRAPHIC LOCATION		TELEPHONE PEDESTAL
	GAS METER		TYPICAL
	IRRIGATION CONTROL VALVE		WATER METER
			WATER VALVE

Certificate of Survey

THIS IS TO CERTIFY THAT THIS TOPOGRAPHIC MAP AND IMPROVEMENTS SHOWN ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

JESUS A. LUGO, PLS 38081

Underground Utility Note:

BURIED UTILITIES AND/OR PIPELINES SHOWN HEREON ARE PER VISIBLE AND APPARENT SURFACE EVIDENCE, RECORD DRAWINGS OF THE CONSTRUCTED UTILITIES OBTAINED FROM RELIABLE AND RESPONSIBLE SOURCES NOT CONNECTED WITH ALTURA LAND CONSULTANTS, LLC. OR MARKINGS PROVIDED BY AN INDEPENDENT LOCATING CONTRACTOR. NO GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF SUCH INFORMATION. IF MORE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES OR PIPE LINES ARE REQUIRED, THE UTILITY OR PIPELINE WILL HAVE TO BE VERIFIED BY FIELD POTHOLING. ALTURA LAND CONSULTANTS, LLC AND THE SURVEYOR OF RECORD SHALL NOT BE HELD LIABLE FOR THE LOCATION OF OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES OR PIPELINES.



PROJECT INFORMATION:

CO3 CASTERLY ROCK
2884 B 1/2 RD.
GRAND JUNCTION, CO. 81501
COUNTY OF MESA

CURRENT ISSUE DATE:

11/2/18

ISSUED FOR:

DESIGN

REV. DATE: ISSUED FOR: BY:

0	10/1/18	SUBMITTAL	JT
1	11/2/18	ADDED LEASE AREA	JT

PLANS PREPARED FOR:



CONSULTANT:



6950 S. Tucson Way, Unit C
Colorado, CO 80112
Phone: (720) 488-1303
Fax: (720) 488-1306

DRAWN BY: CHK.: APV.:

JT JAL JT

LICENSURE:

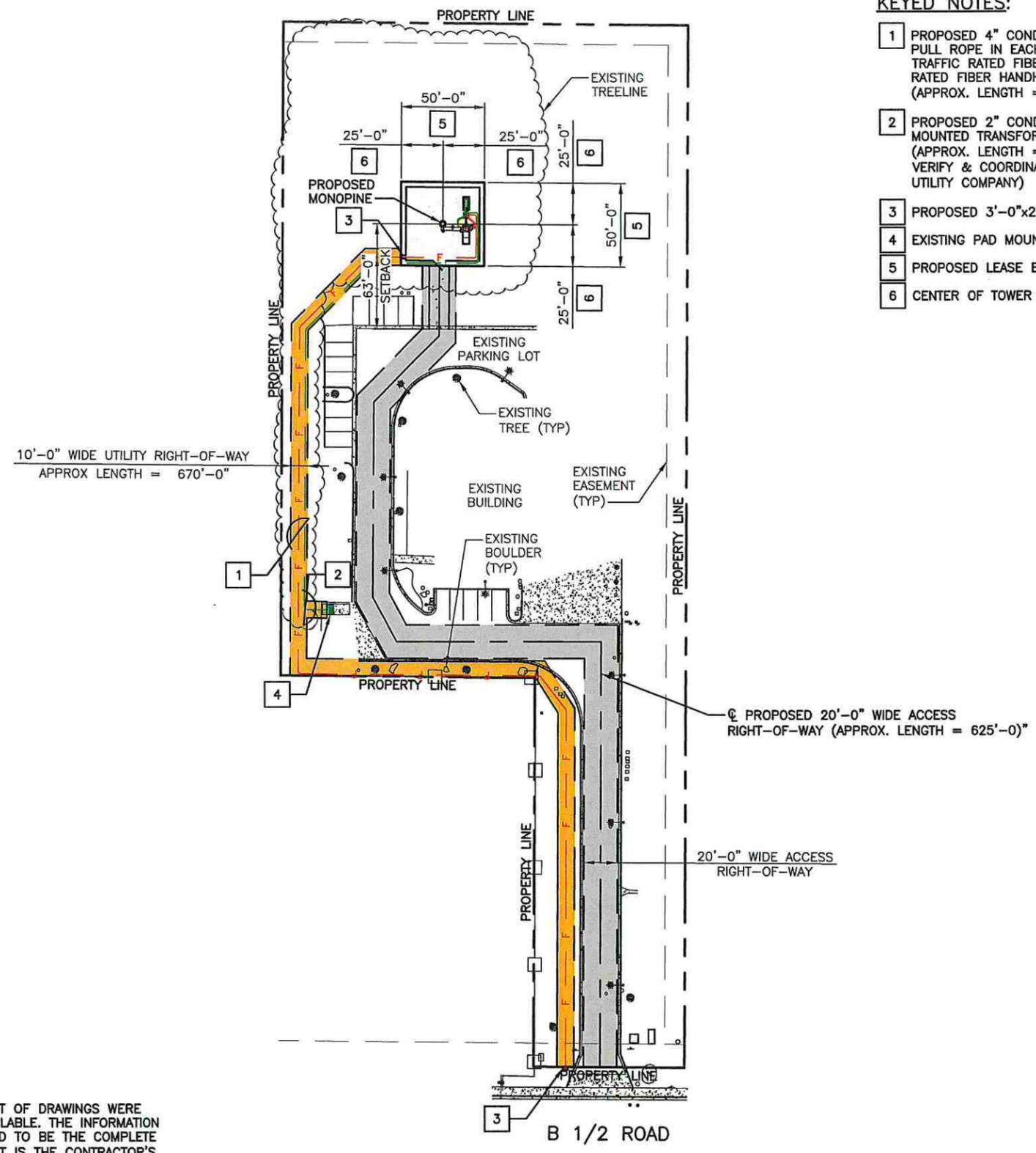
SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NUMBER: REVISION:

LS1 1
SHEET 1 OF 1 SHEETS 18218

NEW VZW UTILITY EASEMENT
 ACCESS UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/HIBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES



KEYED NOTES:

- 1 PROPOSED 4" CONDUIT W/ (3) 1" INNERDUCTS W/ PULL ROPE IN EACH INNERDUCT FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE R.O.W TO TRAFFIC RATED FIBER HANDHOLE AT COMPOUND. (APPROX. LENGTH = 670'-0")
- 2 PROPOSED 2" CONDUIT FOR POWER FROM EXISTING PAD MOUNTED TRANSFORMER TO PROPOSED METER SOCKET (APPROX. LENGTH = 340'-0") (CONTRACTOR SHALL VERIFY & COORDINATE CONNECTION POINT W/ LOCAL UTILITY COMPANY)
- 3 PROPOSED 3'-0"x2'-0"x2'-0" TRAFFIC RATED FIBER HANDHOLE
- 4 EXISTING PAD MOUNTED TRANSFORMER
- 5 PROPOSED LEASE BOUNDARY
- 6 CENTER OF TOWER



Kevin M. VanMaale

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO			
STATE CERTIFICATE OF AUTHORIZATION # 20041302439			
ENGINEER:	PE#:	DISCIPLINE:	
KMV KEVIN M. VANMAALE	53946	CIVIL	CC
REJ ROBERT E. JENSEN	54720	CIVIL	
TMS TERRANCE M. SUPER	36490	ELECTRICAL	ME
SDK SHELTON D. KEISLING	49643	ELECTRICAL	

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	10/18/18	HEE	A
REISSUED PER CLIENT COMMENTS	11/02/18	HEE	B

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81501

SHEET DESCRIPTION:

OVERALL
 SITE PLAN

DWG INFORMATION: SHEET NUMBER:

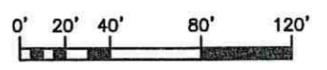
DRAWN BY:	HEE	C-1.0
CHECKED BY:	DJP	



Know what's below.
 Call before you dig.
 www.call811.com

THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED NOR INTENDED TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES.

OVERALL SITE PLAN

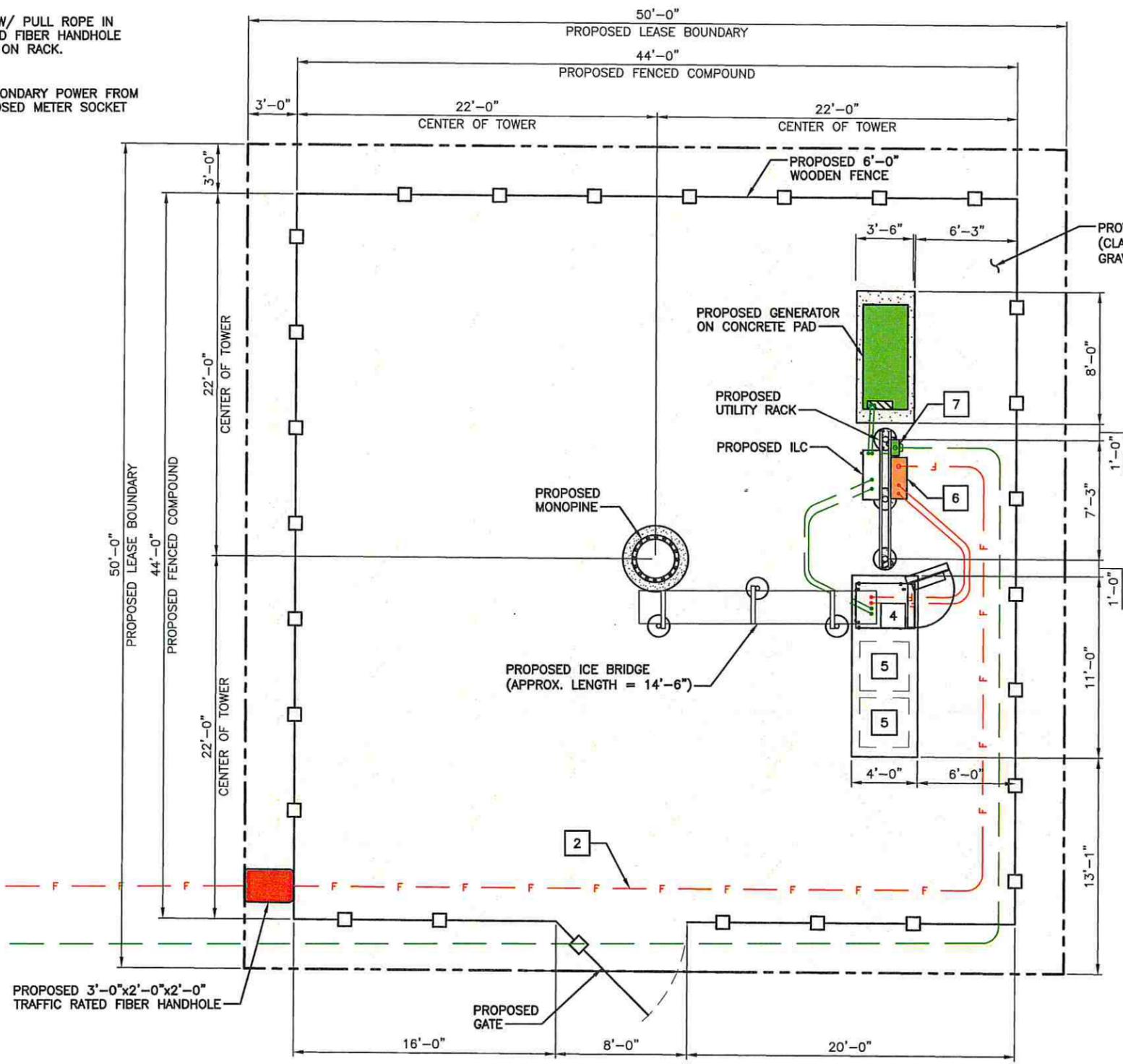
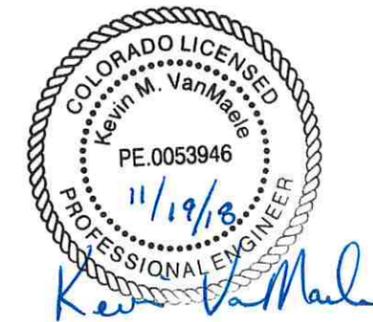


SCALE: 1:40 (22"x34")
 SCALE: 1:80 (11"x17")

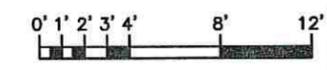
NEW VZW UTILITY EASEMENT
 ACCESS UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/HBBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

KEYED NOTES:

- 1 SEE SHEET C-1.0 FOR SIZES, LENGTHS & CONTINUATION OF UTILITIES.
- 2 PROPOSED 4" CONDUIT W/ (3) 1" INNERDUCTS W/ PULL ROPE IN EACH INNERDUCT FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE AT COMPOUND TO PROPOSED FIBER ENCLOSURE ON RACK. (APPROX. LENGTH = 340'-0")
- 3 PROPOSED 2" CONDUIT W/ PULL ROPE FOR SECONDARY POWER FROM EXISTING PAD MOUNTED TRANSFORMER TO PROPOSED METER SOCKET ON RACK (APPROX. LENGTH = 80'-0")
- 4 PROPOSED EQUIPMENT CABINET
- 5 FUTURE CABINET
- 6 PROPOSED FIBER ENCLOSURE
- 7 PROPOSED METER SOCKET



PROVIDE 6" COMPACTED AGGREGATE CDOT ABC (CLASS 6) OVER GEOTEXTILE FABRIC. EXTEND GRAVEL 1'-0" OUTSIDE THE NEW FENCE



ENLARGED SITE PLAN

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION # 20041302439

ENGINEER:	PE#:	DISCIPLINE:
KMV KEVIN M. VANMAELE	53946	CIVIL
REJ ROBERT E. JENSEN	54720	CIVIL
TMS TERRANCE M. SUPER	36490	ELECTRICAL
SDK SHELTON D. KEISLING	49643	ELECTRICAL

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SUBMITTALS:

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ISSUED FOR REVIEW	10/18/18	HEE	A
REISSUED PER CLIENT COMMENTS	11/02/18	HEE	B

APPLICANT SITE NAME:
 CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81501

SHEET DESCRIPTION:
 ENLARGED
 SITE PLAN

DWG INFORMATION:

DRAWN BY:	HEE
CHECKED BY:	DGP

SHEET NUMBER:
 C-1.1

1/4" = 1'-0" (22"x34")
 1/8" = 1'-0" (11"x17")

MOUNT NOTE:

TOWER MANUFACTURER SHALL SUPPLY RING MOUNT THAT MEETS VERIZON WIRELESS' NSTD-445. IF THE SITE SPECIFIC REQUIRED MOUNT CLASSIFICATION IS GREATER THAN THE MINIMUM REQUIRED MOUNT CLASSIFICATION (M1000R(I)-4[6]), THEN THE REQUIRED SITE SPECIFIC MOUNT CLASSIFICATION SHALL BE USED.

NOTE:

GC TO REFER TO THE "FINAL RFDS" FOR RF CONFIGURATION DETAIL.

GENERAL NOTES:

1. ANTENNAS SHALL BE DESIGNATED FROM RIGHT TO LEFT, FACING THE ASSEMBLY FROM THE GROUND. LEFT TO RIGHT FACING THE BACK OF THE ANTENNA.
2. THE OUTER MOST ANTENNAS ON EACH FACE SHALL BE DESIGNATED AS THE RECEIVER ANTENNAS. THE INNER ANTENNAS SHALL BE DESIGNATED AS THE TRANSMIT ANTENNAS.
3. EACH TRANSMISSION LINE SHALL BE LABELED WITH BRASS "TOE TAGS" (GRAINGER PART# 1F035-8) STAMPED WITH 1/4" LETTERS/NUMBERS STAMPS (GRAINGER PART# 3W639). THE LABELS SHALL BE ATTACHED WITH A SEMIPERMANENT METHOD (I.E. BLACK UV RESISTANT CABLE TIES). THE TAGS SHALL BE PLACED SO AS NOT TO COME IN CONTACT WITH THE CONNECTOR ON THE LINE AND THE METAL OF THE TOWER. LINES SHALL BE LABELED AT THE TOP, BOTTOM AT ENTRY PORT.
4. EACH LINE SHALL ALSO BE LABELED AT THE LIGHTING/SURGE PROTECTOR MOUNTING PLATE WITH A PRINTABLE LABEL MAKER TO INDICATE LINE NUMBER AND FUNCTION, THE SAME AS THE TOE TAG.
5. THE TAG LABELING SHALL BE DESIGNATED IN THE ANTENNA KEY. FOR LUCENT USE A-ALPHA, B-BETA, AND G-GAMMA. FOR MOTOROLA USE X-ALPHA, Y-BETA, AND Z-GAMMA.
6. IN TWO-ANTENNA CONFIGURATION WHERE ONE ANTENNA WILL BE DUPLEXED, THE DUPLEXED ANTENNA SHALL BE LABELED AS RECEIVE.
7. CONTRACTOR SHALL FIELD VERIFY THE EXACT TMA'S (IF THEY ARE REQUIRED) PER THE OPERATIONS MANAGER.
8. FEEDLINE LENGTHS INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LENGTH BEFORE ORDERING.
9. CONTRACTOR SHALL INSTALL PLATFORM OR MOUNTING BRACKETS AND HARDWARE FOR ALL ANTENNAS AND SHALL BE PER THE TOWER MANUFACTURERS STANDARD DETAILS OR APPROVED EQUAL.
10. ALL ANTENNAS AND CABLES TO BE TAGGED WITH CARRIER ID.

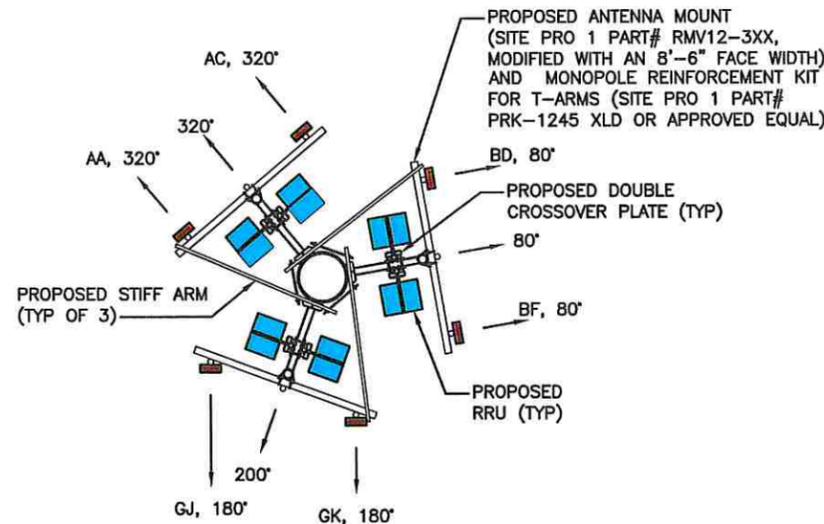
EQUIPMENT FURNISHED AND/OR INSTALLED BY:

DESCRIPTION	FURNISHED	INSTALLED
ANCHOR BOLTS FOR TOWER	TOWER VENDOR	CONTRACTOR
ANTENNA MOUNTS	TOWER VENDOR	CONTRACTOR
ANTENNAS	VERIZON WIRELESS	CONTRACTOR
CABLE LADDER	TOWER VENDOR	CONTRACTOR
FEEDLINE CABLES	VERIZON WIRELESS	CONTRACTOR
CONNECTORS	CONTRACTOR	CONTRACTOR
ENTRY PORT BOOTS	CONTRACTOR	CONTRACTOR
GPS ANTENNA	VERIZON WIRELESS	CONTRACTOR
GROUND KITS	CONTRACTOR	CONTRACTOR
HANGAR KITS	CONTRACTOR	CONTRACTOR
ICE BRIDGE MATERIAL	CONTRACTOR	CONTRACTOR
RF JUMPRS (TOP)	CONTRACTOR	CONTRACTOR
EQUIPMENT	VERIZON WIRELESS	CONTRACTOR
EQUIPMENT PLATFORM/CANOPY	VERIZON WIRELESS	CONTRACTOR
TOWER	VERIZON WIRELESS	CONTRACTOR
TOWER BUS BARS	TOWER VENDOR	CONTRACTOR
OVP'S	VERIZON WIRELESS	CONTRACTOR
RRU'S	VERIZON WIRELESS	CONTRACTOR

NOTE:

LOCATIONS OF ANTENNAS AS SHOWN HAVE BEEN APPROVED BY CLIENT AND/OR CLIENT'S RADIO FREQUENCY ENGINEERS. SSC ASSUMES NO RESPONSIBILITY FOR, NOR HAS SSC PERFORMED ANY INVESTIGATIONS OR STUDIES CONCERNING, THE COMPLIANCE OR NONCOMPLIANCE OF SAID ANTENNA LOCATIONS WITH ANY FCC RADIO FREQUENCY EXPOSURE REGULATIONS.

STRUCTURE INFORMATION IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. STRUCTURAL INTEGRITY OF SUPPORTING STRUCTURE, ANTENNA MOUNTS, AND FOUNDATION SHALL BE VERIFIED AS ACCEPTABLE BY ENGINEER CERTIFIED STRUCTURAL ANALYSIS, UTILIZING THE LOADING REPRESENTED WITHIN THESE DRAWINGS PRIOR TO THE EXECUTION OF EQUIPMENT CHANGES CONTAINED IN THESE DRAWINGS. CONTRACTOR SHALL OBTAIN ALL STRUCTURAL REPORTS AND FOLLOW ALL RECOMMENDATIONS.



NOTE:

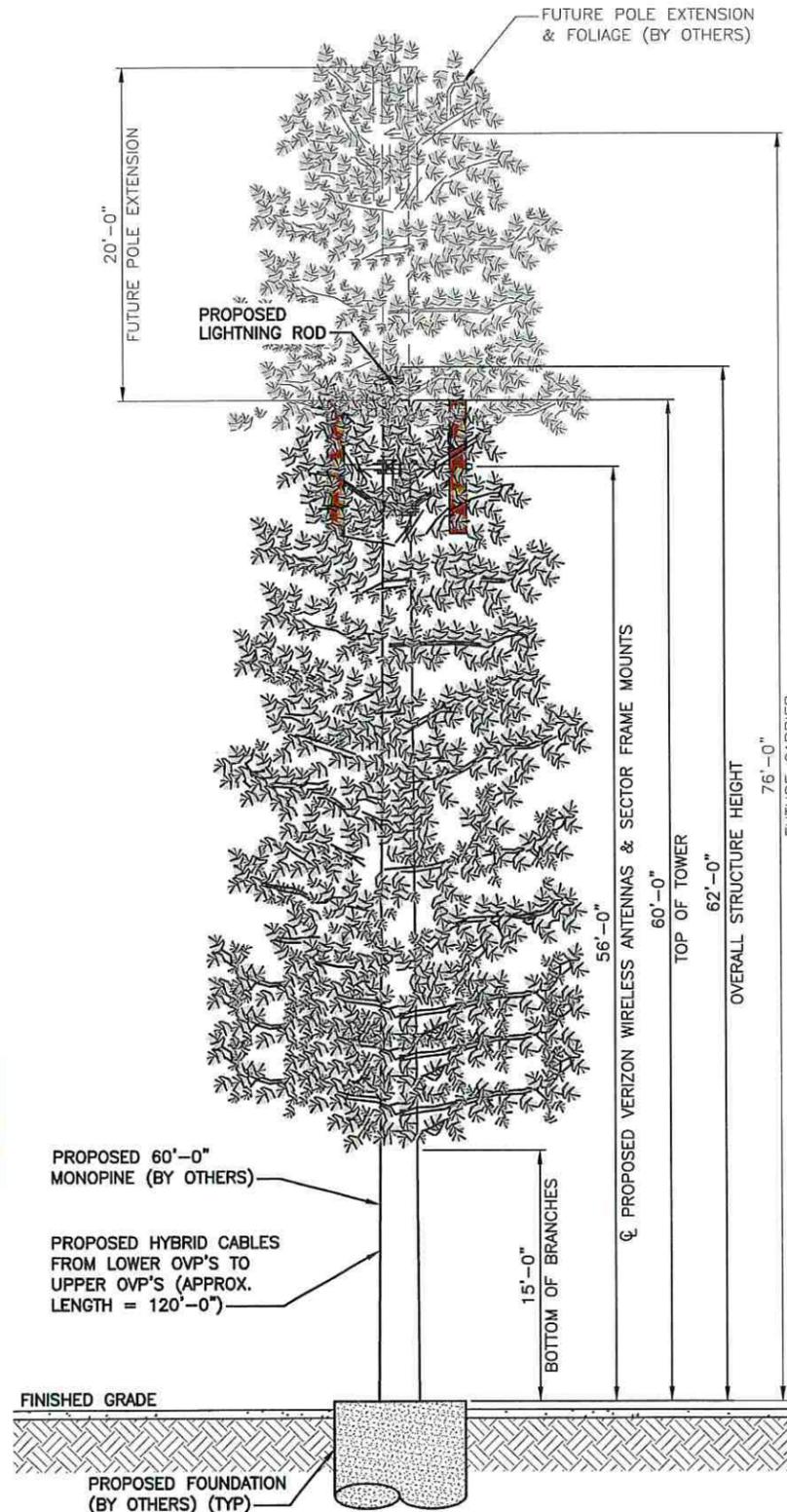
1. THE ANTENNA LAYOUT IS FOR ANTENNA ORIENTATION ONLY. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE PER TOWER MANUFACTURER'S STANDARD DETAILS.



0° = TRUE NORTH



Kevin M. VanMaele



TOWER ELEVATION

ANTENNA LAYOUT
NOT TO SCALE

ANTENNA PLAN & GENERAL NOTES

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION # 20041302439

ENGINEER:	PE#:	DISCIPLINE:
KMV KEVIN M. VANMAELE	53946	CIVIL
REJ ROBERT E. JENSEN	54720	CIVIL
TMS TERRANCE M. SUPER	36490	ELECTRICAL
SDK SHELTON D. KEISLING	49843	ELECTRICAL

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APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

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SITE ADDRESS:

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81501

SHEET DESCRIPTION:

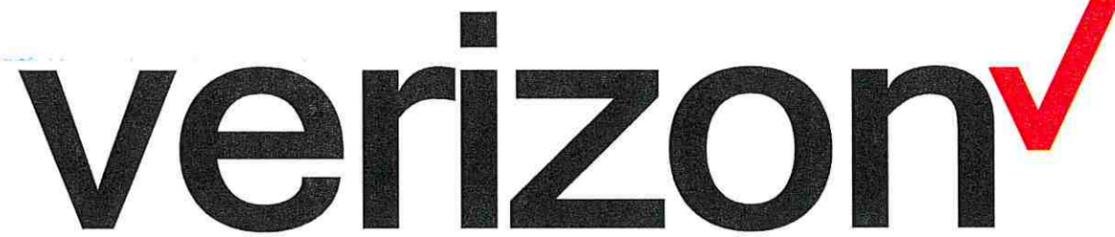
TOWER ELEVATION &
ANTENNA INFORMATION

DWG INFORMATION:

DRAWN BY: HEE
CHECKED BY: DCP

SHEET NUMBER:

ANT-1.0

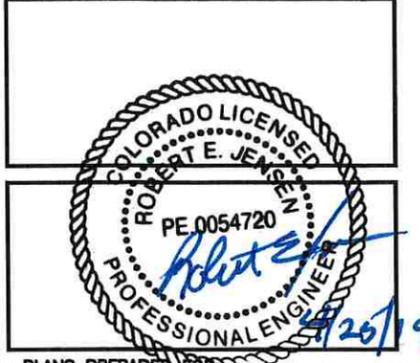


APPLICANT SITE NAME: **CO3 CASTERLY ROCK** APPLICANT LOCATION NUMBER: **313884**

DRAWING DESCRIPTION:
PRELIMINARY ZD

DRAWING INDEX

SHEET NO.	SHEET TITLE	REV	DISC.
T-1.0	TITLE SHEET	C	C
	SURVEY (BY OTHERS)		
C-1.0	OVERALL SITE PLAN	C	C
C-1.1	ENLARGED SITE PLAN	C	C
ANT-1.0	TOWER ELEVATION & ANTENNA INFORMATION	C	C



ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION # 20041302439

ENGINEER:	PE#	DISCIPLINE:
KMV KEVIN M VANMAELE	53946	CIVIL
REJ ROBERT E. JENSEN	54720	CIVIL
TMS TERRANCE M. SUPER	36490	ELECTRICAL
SDK SHELTON D. KEISLING	49643	ELECTRICAL

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SUBMITTALS:

ISSUED FOR REVIEW	DESCRIPTION	DATE	BY	REV
		10/18/18	HEE	A
	REISSUED PER CLIENT COMMENTS	11/02/18	HEE	B
	REISSUED FOR REVIEW	04/25/19	HLH	C

APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

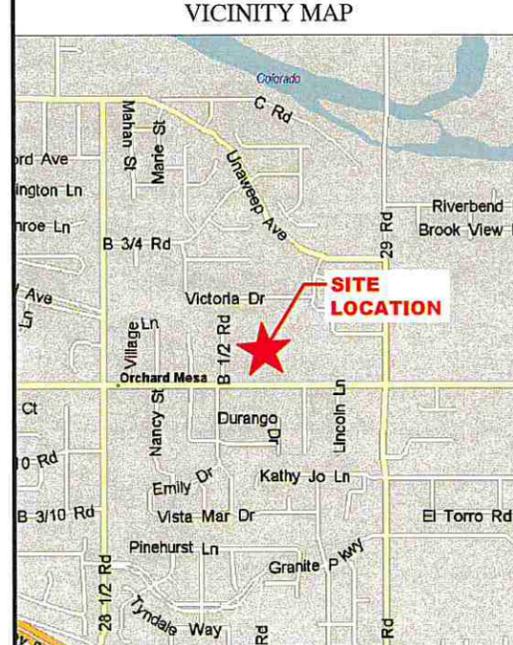
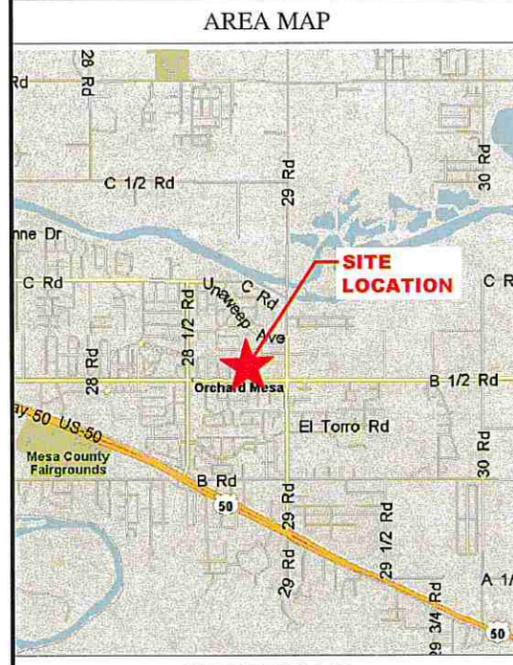
SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81501

SHEET DESCRIPTION:
TITLE SHEET

DWG INFORMATION:
DRAWN BY: HEE
CHECKED BY: DCP

SHEET NUMBER:
T-1.0

- NEW VZW UTILITY EASEMENT
- ACCESS UTILITY EASEMENT
- VZW LANDSPACE
- PENETRATIONS
- RR/HBUB
- ANTENNAS
- FIBER
- POWER/ GROUNDING
- HYBRID & COAX CABLES



CONTRACTOR INFORMATION

POWER PROVIDER: XCEL
AAV PROVIDER: TBD

SITE INFORMATION

PROJECT: RAWLAND
CELL SITE NAME: CO3 CASTERLY ROCK
CELL SITE ADDRESS: 2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81501
LESSOR: CITY OF GRAND JUNCTION

CONTACT: BILL ROSS
PHONE: (970) 549-5803

TOWER INFORMATION:
LATITUDE: 39° 02' 33.49" N (NAD 83)
LONGITUDE: 108° 31' 9.53" W (NAD 83)
GROUND ELEV: 4,667' AMSL
OVERALL STRUCTURE HT: 62'-0" AGL
TOWER HEIGHT: 60'-0" AGL
TOWER TYPE: MONOPINE
APPLICANT CL: 74'-0" AGL

CONTACT: BRANDON KISER
PHONE: (801) 260-8712 (VERIZON WIRELESS)

VERIZON WIRELESS DEPARTMENTAL APPROVALS

SIGNER	SIGNATURE	DATE
RF ENGINEER		
SITE ACQ		
OPERATIONS MANAGER		
CONSTRUCTION ENGINEER		
CONSTRUCTION MANAGER		
REAL ESTATE SPECIALIST		

LESSOR/LICENSOR APPROVAL

LESSOR/LICENSOR	INITIALS	DATE

LESSOR/LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW

NO CHANGES CHANGES NEEDED
SEE COMMENTS ON PLANS

VERIZON WIRELESS PROJECT #: TBD

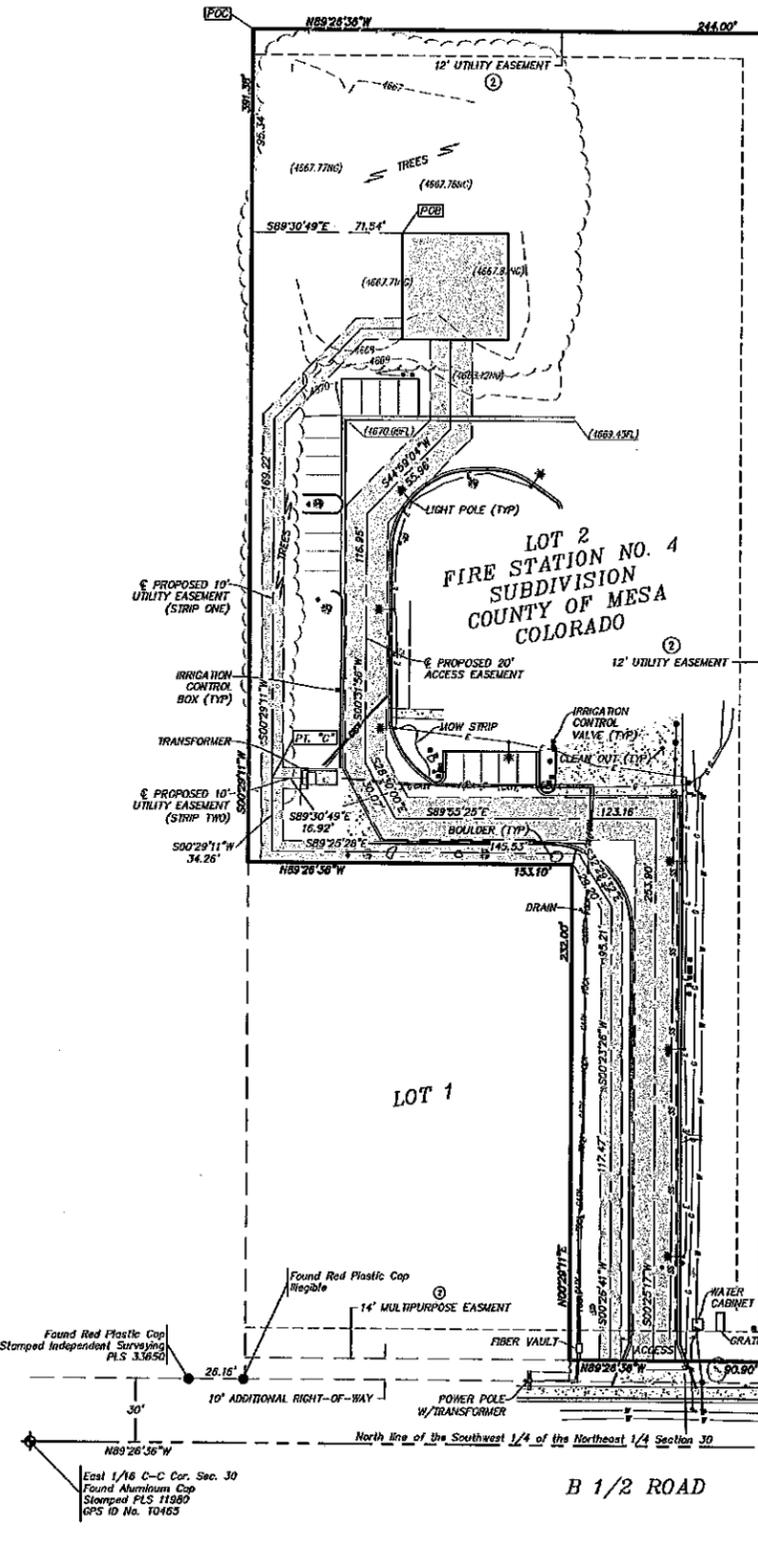
PROJECT INFORMATION:
INSTALL COMMUNICATIONS EQUIPMENT & TOWER FOR A COMMUNICATIONS SITE.

CONSULTING TEAM

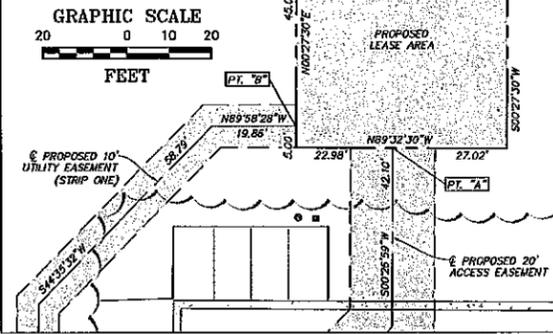
ENGINEERING: SSC, INC.
7171 WEST 95TH STREET, SUITE 600
OVERLAND PARK, KANSAS 66212
PHONE: (913) 438-7700
FAX: (913) 438-7777

R. GAITO - PROJECT MANAGER
K.M. VANMAELE - LEAD ENGINEER
S.D. KEISLING - LEAD ELECTRICAL
H.E. ERICACAE - LEAD DESIGNER

Boundary Detail
Scale: 1" = 40'



Site Detail
Scale: 1" = 20'



LINE LEGEND	
	= SUBJECT PARCEL BOUNDARY LINES
	= SECTION LINES
	= ADJOINING PARCEL BOUNDARY LINES
	= EASEMENT LINES
	= RIGHT OF WAY LINES
	= FLOOD PLANE LINES
	= BARBED WIRE FENCE
	= CHAINLINK FENCE
	= UNDERGROUND ELECTRIC LINES
	= UNDERGROUND GAS LINES
	= OVERHEAD ELECTRIC LINES
	= UNDERGROUND SANITARY SEWER LINES
	= UNDERGROUND TELEPHONE LINES
	= UNDERGROUND WATER LINES

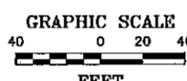
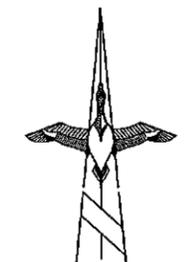
Lease Area/Access & Utility Easements

LEASE AREA
BEING A TELECOMMUNICATIONS LEASE PARCEL LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE ALONG THE WEST LINE OF SAID LOT, S00°29'11"W, 95.34 FEET; THENCE S89°30'49"E, 71.54 FEET TO THE POINT OF BEGINNING; THENCE S89°32'30"E, 50.00 FEET; THENCE S00°27'30"W, 50.00 FEET; THENCE N89°32'30"W, 27.02 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "A"; THENCE CONTINUING N89°32'30"W, 22.98 FEET; THENCE N00°27'30"E, 5.00 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "B" THENCE CONTINUING N00°27'30"E, 45.00 FEET TO THE POINT OF BEGINNING.

ACCESS EASEMENT
BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT POINT "A" AS DESCRIBED ABOVE; THENCE S00°26'59"W, 42.10 FEET; THENCE S44°59'04"W, 55.96 FEET; THENCE S00°31'56"W, 116.95 FEET; THENCE S28°30'00"E, 30.07 FEET; THENCE S89°55'25"E, 123.16 FEET; THENCE S00°25'17"W, 253.90 FEET TO THE RIGHT-OF-WAY OF B 1/2 ROAD AND THE END OF SAID STRIP OF LAND.
EXCEPT ANY PORTION LYING WITHIN THE RIGHT-OF-WAY OF B 1/2 ROAD.

UTILITY EASEMENT
BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT POINT "B" AS DESCRIBED ABOVE; THENCE N89°55'28"W, 19.86 FEET; THENCE S44°35'32"W, 58.79 FEET; THENCE S00°28'11"W, 189.22 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "C"; THENCE CONTINUING S00°28'11"W, 34.26 FEET; THENCE S89°25'28"E, 145.53 FEET; THENCE S32°29'32"E, 29.20 FEET; THENCE S00°23'26"W, 95.21 FEET; THENCE S00°26'41"W, 117.47 FEET TO THE END OF SAID STRIP OF LAND.

SIDE LINES OF SAID STRIPS OF LAND ARE TO BE LENGTHENED AND/OR SHORTENED TO PREVENT GAPS AND/OR OVERLAPS.



Underground Utility Note:
BURIED UTILITIES AND/OR PIPELINES SHOWN HEREON ARE PER VISIBLE AND APPARENT SURFACE EVIDENCE, RECORD DRAWINGS OF THE CONSTRUCTED UTILITY LINES OBTAINED FROM RELIABLE AND RESPONSIBLE SOURCES NOT CONNECTED WITH ALTURA LAND CONSULTANTS, LLC, OR MARKINGS PROVIDED BY AN INDEPENDENT LOCATING CONTRACTOR. NO GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF SUCH INFORMATION. IF MORE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES OR PIPE LINES ARE REQUIRED, THE UTILITY OR PIPELINE WILL HAVE TO BE VERIFIED BY FIELD POT-HOLING. ALTURA LAND CONSULTANTS, LLC AND THE SURVEYOR OF RECORD SHALL NOT BE HELD LIABLE FOR THE LOCATION OF OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES OR PIPELINES.

Title Report

PREPARED BY: OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
ORDER NO.: 01-18025138-01T
EFFECTIVE DATE: MAY 10, 2018

Legal Description

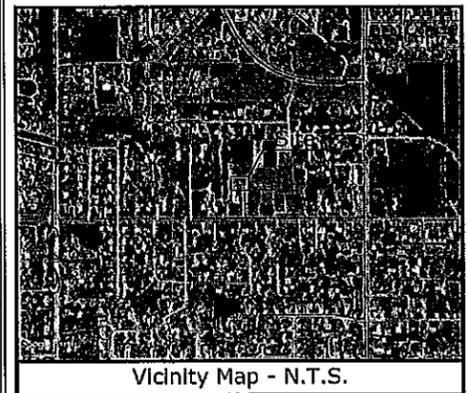
LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO.

Assessor's Parcel No.

2943-301-42-002

Title Schedule B Exceptions

- ORDINANCE ANNEXING TERRITORY TO THE CITY OF GRAND JUNCTION, COLORADO, RECORDED 11/08/2014, IN BOOK 5662, PAGE 414 OF THE MESA COUNTY RECORDS. (BLANKET IN NATURE).
- SUBJECT TO COVENANTS, RESTRICTIONS, RESERVATIONS, EASEMENTS, AND RIGHTS OF WAY AND BUILDING SETBACKS AS SHOWN ON THE PLAT OF FIRE STATION NO. 4 SUBDIVISION, AS RECORDED IN PLAT BOOK 5647, PAGE 135 OF MESA COUNTY RECORDS. (PLOTTED HEREON).



Date of Survey

SEPTEMBER 7, 2018

Basis of Bearings

THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD83).
CLASSIFICATION: THIRD
MINIMUM GEOMETRIC ACCURACY STANDARD: 5.0 cm ± 1: 10,000

Bench Mark

MESA COUNTY CONTROL POINT "T0465", ELEVATION = 4667.83 FEET (NAD 88)

Legend

	CONCRETE PAVEMENT		NATURAL GROUND
	CONIFEROUS TREE		PARKING BOLLARD
	DIAMETER		POINT OF BEGINNING
	DECIDUOUS TREE		POINT OF COMMENCEMENT
	EDGE OF ASPHALT		OVERHEAD ELECTRIC LINE
	FINISHED FLOOR		POWER POLE
	FINISH SURFACE		PROPERTY LINE
	FIRE HYDRANT		RIGHT OF WAY
	FLOW LINE		SEWER MANHOLE
	FOUND MONUMENT AS NOTED		SIGN POST
	FOUND SECTION MONUMENT		STREET LIGHT STANDARD
	GEOGRAPHIC LOCATION		TELEPHONE PEDESTAL
	GAS METER		TYPICAL
	IRRIGATION CONTROL VALVE		WATER METER
			WATER VALVE

Certificate of Survey

THIS IS TO CERTIFY THAT THIS TOPOGRAPHIC MAP AND IMPROVEMENTS SHOWN ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

JESUS A. LUGO, PLS 38081

THIS DOES NOT REPRESENT A MONUMENTED SURVEY. REFERENCE IS MADE TO A COMMITMENT FOR TITLE INSURANCE, NUMBER 01-18025138-01T, ISSUED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, AND HAVING AN EFFECTIVE DATE OF MAY 10, 2018. THIS SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. THE LESSOR'S LEGAL DESCRIPTION AND RECORD BOUNDARY ARE SHOWN HEREON FOR REFERENCE ONLY. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE LESSOR'S PROPERTY.



PROJECT INFORMATION:

CO3 CASTERLY ROCK

2884 B 1/2 RD.
GRAND JUNCTION, CO. 81501
COUNTY OF MESA

CURRENT ISSUE DATE:

11/2/18

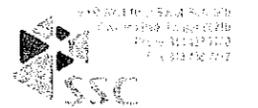
ISSUED FOR:

DESIGN

REV.: DATE: ISSUED FOR: BY:

0	10/1/18	SUBMITTAL	JT
1	11/2/18	ADDED LEASE AREA	JT

PLANS PREPARED FOR:



CONSULTANT:



JOB NO. 18218

DRAWN BY: CHK.: APV.:

JT JAL JT

LICENSURE:

SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NUMBER: REVISION:

LS1 1

SHEET 1 OF 1 SHEETS 18218

NEW VZW UTILITY EASEMENT

ACCESS/UTILITY EASEMENT

VZW LANDSPACE

PENETRATIONS

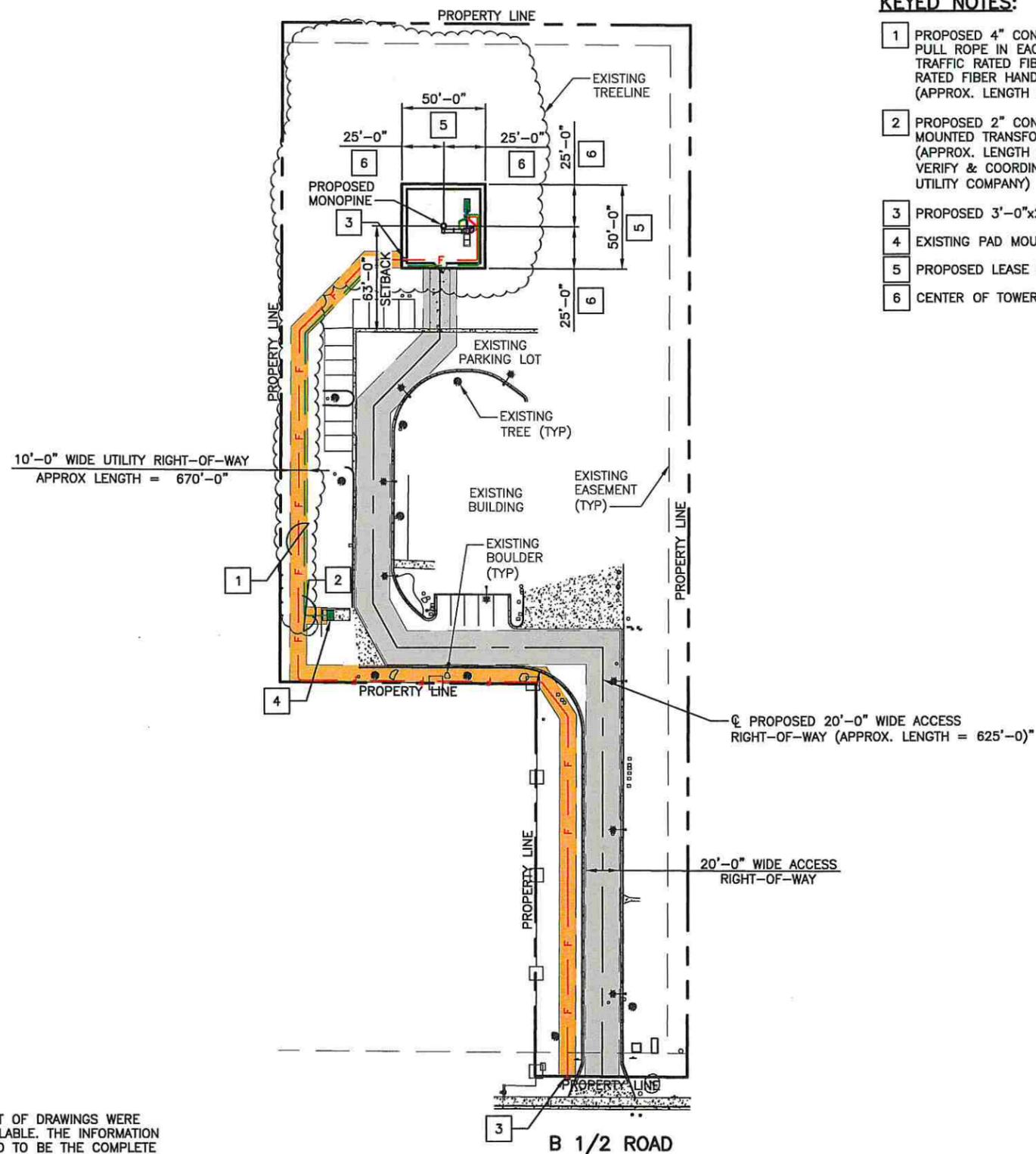
RR/BISSU

ANTENNAS

FIBER

POWER/ GROUNDING

HYBRID & COAX CABLES



KEYED NOTES:

- 1 PROPOSED 4" CONDUIT W/ (3) 1" INNERDUCTS W/ PULL ROPE IN EACH INNERDUCT FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE R.O.W TO TRAFFIC RATED FIBER HANDHOLE AT COMPOUND. (APPROX. LENGTH = 670'-0")
- 2 PROPOSED 2" CONDUIT FOR POWER FROM EXISTING PAD MOUNTED TRANSFORMER TO PROPOSED METER SOCKET (APPROX. LENGTH = 340'-0") (CONTRACTOR SHALL FIELD VERIFY & COORDINATE CONNECTION POINT W/ LOCAL UTILITY COMPANY)
- 3 PROPOSED 3'-0"x2'-0"x2'-0" TRAFFIC RATED FIBER HANDHOLE
- 4 EXISTING PAD MOUNTED TRANSFORMER
- 5 PROPOSED LEASE BOUNDARY
- 6 CENTER OF TOWER



PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO			
STATE CERTIFICATE OF AUTHORIZATION # 20041302439			
ENGINEER:	PER:	DISCIPLINE:	
KMV KEVIN M. VANMAELE 53946	REJ ROBERT E. JENSEN 54720	CIVIL	DC
TMS TERRANCE M. SUPER 36490	SDK SHELTON D. KEISLING 49643	ELECTRICAL	EM

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	10/18/18	HEE	A
REISSUED PER CLIENT COMMENTS	11/02/18	HEE	B
REISSUED FOR REVIEW	04/25/19	HLH	C

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81501

SHEET DESCRIPTION:

OVERALL
SITE PLAN

DWG INFORMATION:

DRAWN BY:	HEE
CHECKED BY:	DCP

SHEET NUMBER:

C-1.0



Know what's below.
Call before you dig.
www.call811.com

THE UTILITIES AS SHOWN ON THIS SET OF DRAWINGS WERE DEVELOPED FROM THE INFORMATION AVAILABLE. THE INFORMATION PROVIDED IS NOT IMPLIED NOR INTENDED TO BE THE COMPLETE INVENTORY OF UTILITIES IN THIS AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE CAUSED BY CONTRACTOR'S ACTIVITIES.

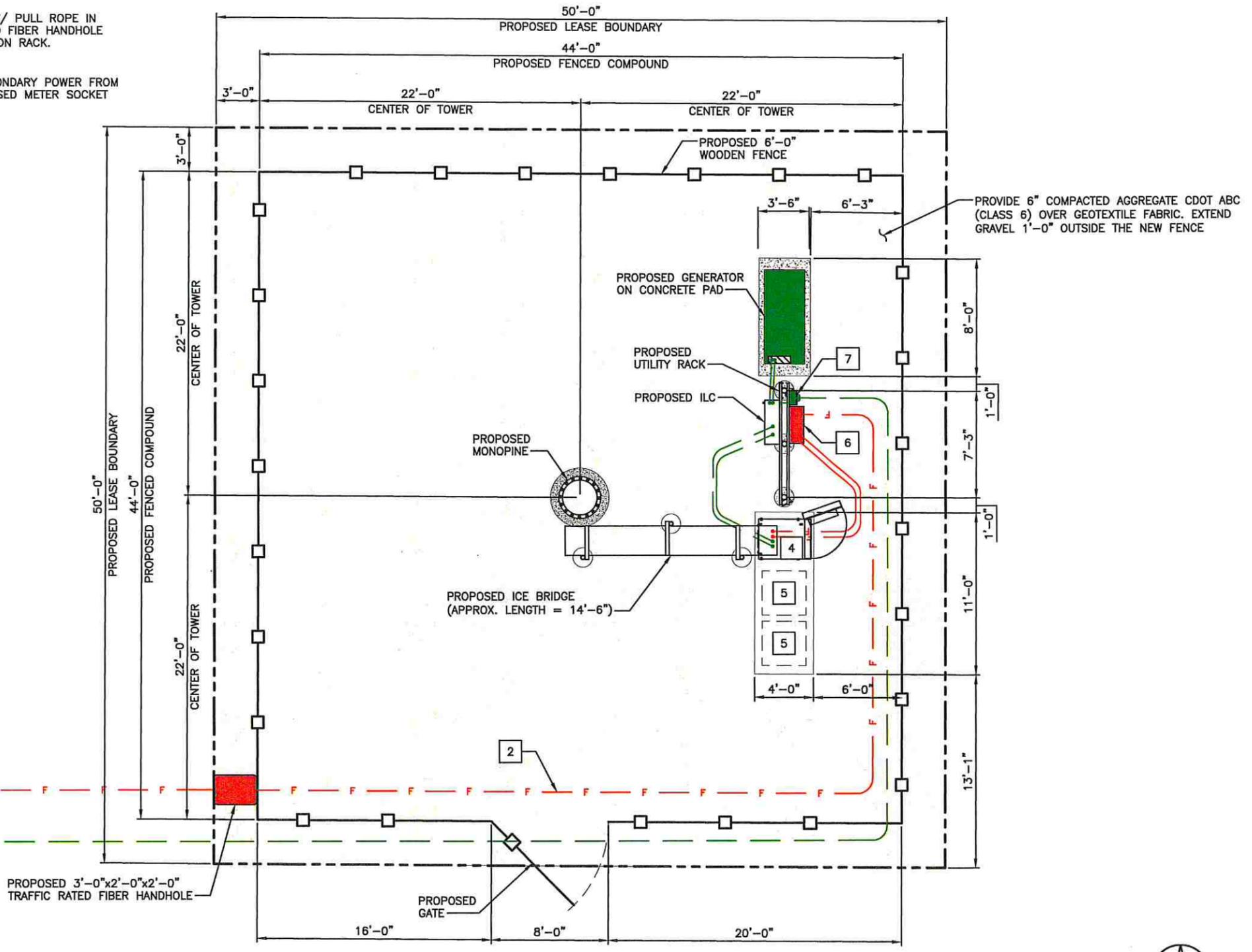
OVERALL SITE PLAN

SCALE: 1:40 (22"x34")
SCALE: 1:80 (11"x17")

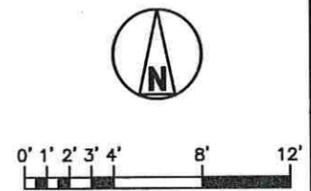
NEW VZW UTILITY EASEMENT
 ACCESS/UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/HIBU
 ANTENNAS
 FIBER
 POWER/GROUNDING
 HYBRID & COAX CABLES

KEYED NOTES:

- 1 SEE SHEET C-1.0 FOR SIZES, LENGTHS & CONTINUATION OF UTILITIES.
- 2 PROPOSED 4" CONDUIT W/ (3) 1" INNERDUCTS W/ PULL ROPE IN EACH INNERDUCT FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE AT COMPOUND TO PROPOSED FIBER ENCLOSURE ON RACK. (APPROX. LENGTH = 340'-0")
- 3 PROPOSED 2" CONDUIT W/ PULL ROPE FOR SECONDARY POWER FROM EXISTING PAD MOUNTED TRANSFORMER TO PROPOSED METER SOCKET ON RACK (APPROX. LENGTH = 80'-0")
- 4 PROPOSED EQUIPMENT CABINET
- 5 FUTURE CABINET
- 6 PROPOSED FIBER ENCLOSURE
- 7 PROPOSED METER SOCKET



PROVIDE 6" COMPACTED AGGREGATE CDOT ABC (CLASS 6) OVER GEOTEXTILE FABRIC. EXTEND GRAVEL 1'-0" OUTSIDE THE NEW FENCE



ENLARGED SITE PLAN



PLANS PREPARED FOR:
verizon
 PROFESSIONAL ENGINEER

PLANS PREPARED BY:

SSC

ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION # 20041302439

ENGINEER	PE#	DISCIPLINE	CC
KMV KEVIN M. VANMAELE	53846	CIVIL	CC
REJ ROBERT E. JENSEN	54720	CIVIL	CC
TMS TERRANCE M. SUPER	36490	ELECTRICAL	MT
SDK SHELTON D. KEISLING	49543	ELECTRICAL	MT

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APPLICANT SITE NAME:
 CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81501

SHEET DESCRIPTION:
 ENLARGED
 SITE PLAN

DWG INFORMATION:

DRAWN BY:	HEE	SHEET NUMBER: C-1.1
CHECKED BY:	DCP	

1/4" = 1'-0" (22"x34")
 1/8" = 1'-0" (11"x17")

MOUNT NOTE:

TOWER MANUFACTURER SHALL SUPPLY RING MOUNT THAT MEETS VERIZON WIRELESS' NSTD-445. IF THE SITE SPECIFIC REQUIRED MOUNT CLASSIFICATION IS GREATER THAN THE MINIMUM REQUIRED MOUNT CLASSIFICATION (M1000R(1)-4[6]), THEN THE REQUIRED SITE SPECIFIC MOUNT CLASSIFICATION SHALL BE USED.

NOTE:

GC TO REFER TO THE "FINAL RFDS" FOR RF CONFIGURATION DETAIL

GENERAL NOTES:

1. ANTENNAS SHALL BE DESIGNATED FROM RIGHT TO LEFT, FACING THE ASSEMBLY FROM THE GROUND. LEFT TO RIGHT FACING THE BACK OF THE ANTENNA.
2. THE OUTER MOST ANTENNAS ON EACH FACE SHALL BE DESIGNATED AS THE RECEIVER ANTENNAS. THE INNER ANTENNAS SHALL BE DESIGNATED AS THE TRANSMIT ANTENNAS.
3. EACH TRANSMISSION LINE SHALL BE LABELED WITH BRASS "TOE TAGS" (GRAINGER PART# 1F035-8) STAMPED WITH 1/4" LETTERS/NUMBERS STAMPS (GRAINGER PART# 3W639). THE LABELS SHALL BE ATTACHED WITH A SEMIPERMANENT METHOD (I.E. BLACK UV RESISTANT CABLE TIES). THE TAGS SHALL BE PLACED SO AS NOT TO COME IN CONTACT WITH THE CONNECTOR ON THE LINE AND THE METAL OF THE TOWER. LINES SHALL BE LABELED AT THE TOP, BOTTOM AT ENTRY PORT.
4. EACH LINE SHALL ALSO BE LABELED AT THE LIGHTING/SURGE PROTECTOR MOUNTING PLATE WITH A PRINTABLE LABEL MAKER TO INDICATE LINE NUMBER AND FUNCTION, THE SAME AS THE TOE TAG.
5. THE TAG LABELING SHALL BE DESIGNATED IN THE ANTENNA KEY. FOR LUCENT USE A--ALPHA, B--BETA, AND G--GAMMA. FOR MOTOROLA USE X--ALPHA, Y--BETA, AND Z--GAMMA.
6. IN TWO-ANTENNA CONFIGURATION WHERE ONE ANTENNA WILL BE DUPLEXED, THE DUPLEXED ANTENNA SHALL BE LABELED AS RECEIVE.
7. CONTRACTOR SHALL FIELD VERIFY THE EXACT TMA'S (IF THEY ARE REQUIRED) PER THE OPERATIONS MANAGER.
8. FEEDLINE LENGTHS INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LENGTH BEFORE ORDERING.
9. CONTRACTOR SHALL INSTALL PLATFORM OR MOUNTING BRACKETS AND HARDWARE FOR ALL ANTENNAS AND SHALL BE PER THE TOWER MANUFACTURERS STANDARD DETAILS OR APPROVED EQUAL.
10. ALL ANTENNAS AND CABLES TO BE TAGGED WITH CARRIER ID.

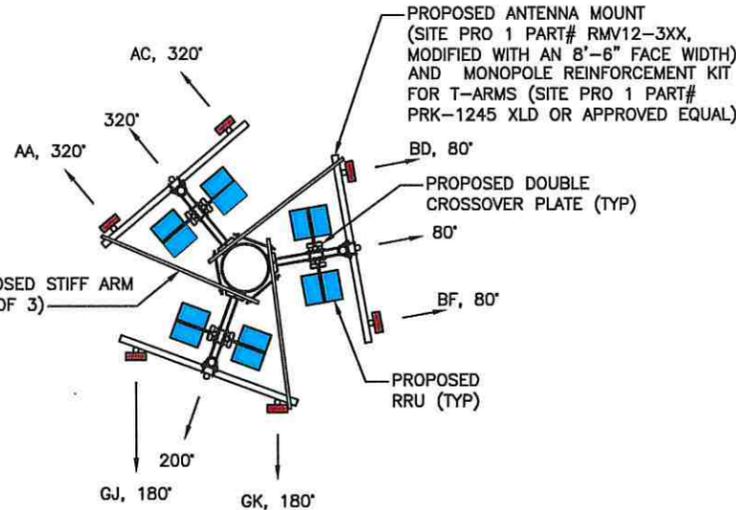
EQUIPMENT FURNISHED AND/OR INSTALLED BY:

DESCRIPTION	FURNISHED	INSTALLED
ANCHOR BOLTS FOR TOWER	TOWER VENDOR	CONTRACTOR
ANTENNA MOUNTS	TOWER VENDOR	CONTRACTOR
ANTENNAS	VERIZON WIRELESS	CONTRACTOR
CABLE LADDER	TOWER VENDOR	CONTRACTOR
FEEDLINE CABLES	VERIZON WIRELESS	CONTRACTOR
CONNECTORS	CONTRACTOR	CONTRACTOR
ENTRY PORT BOOTS	CONTRACTOR	CONTRACTOR
GPS ANTENNA	VERIZON WIRELESS	CONTRACTOR
GROUND KITS	CONTRACTOR	CONTRACTOR
HANGAR KITS	CONTRACTOR	CONTRACTOR
ICE BRIDGE MATERIAL	CONTRACTOR	CONTRACTOR
RF JUMPRS (TOP)	CONTRACTOR	CONTRACTOR
EQUIPMENT	VERIZON WIRELESS	CONTRACTOR
EQUIPMENT PLATFORM/CANOPY	VERIZON WIRELESS	CONTRACTOR
TOWER	VERIZON WIRELESS	CONTRACTOR
TOWER BUS BARS	TOWER VENDOR	CONTRACTOR
OVP'S	VERIZON WIRELESS	CONTRACTOR
RRU'S	VERIZON WIRELESS	CONTRACTOR

NOTE:

LOCATIONS OF ANTENNAS AS SHOWN HAVE BEEN APPROVED BY CLIENT AND/OR CLIENT'S RADIO FREQUENCY ENGINEERS. SSC ASSUMES NO RESPONSIBILITY FOR, NOR HAS SSC PERFORMED ANY INVESTIGATIONS OR STUDIES CONCERNING, THE COMPLIANCE OR NONCOMPLIANCE OF SAID ANTENNA LOCATIONS WITH ANY FCC RADIO FREQUENCY EXPOSURE REGULATIONS.

STRUCTURE INFORMATION IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. STRUCTURAL INTEGRITY OF SUPPORTING STRUCTURE, ANTENNA MOUNTS, AND FOUNDATION SHALL BE VERIFIED AS ACCEPTABLE BY ENGINEER CERTIFIED STRUCTURAL ANALYSIS, UTILIZING THE LOADING REPRESENTED WITHIN THESE DRAWINGS PRIOR TO THE EXECUTION OF EQUIPMENT CHANGES CONTAINED IN THESE DRAWINGS. CONTRACTOR SHALL OBTAIN ALL STRUCTURAL REPORTS AND FOLLOW ALL RECOMMENDATIONS.



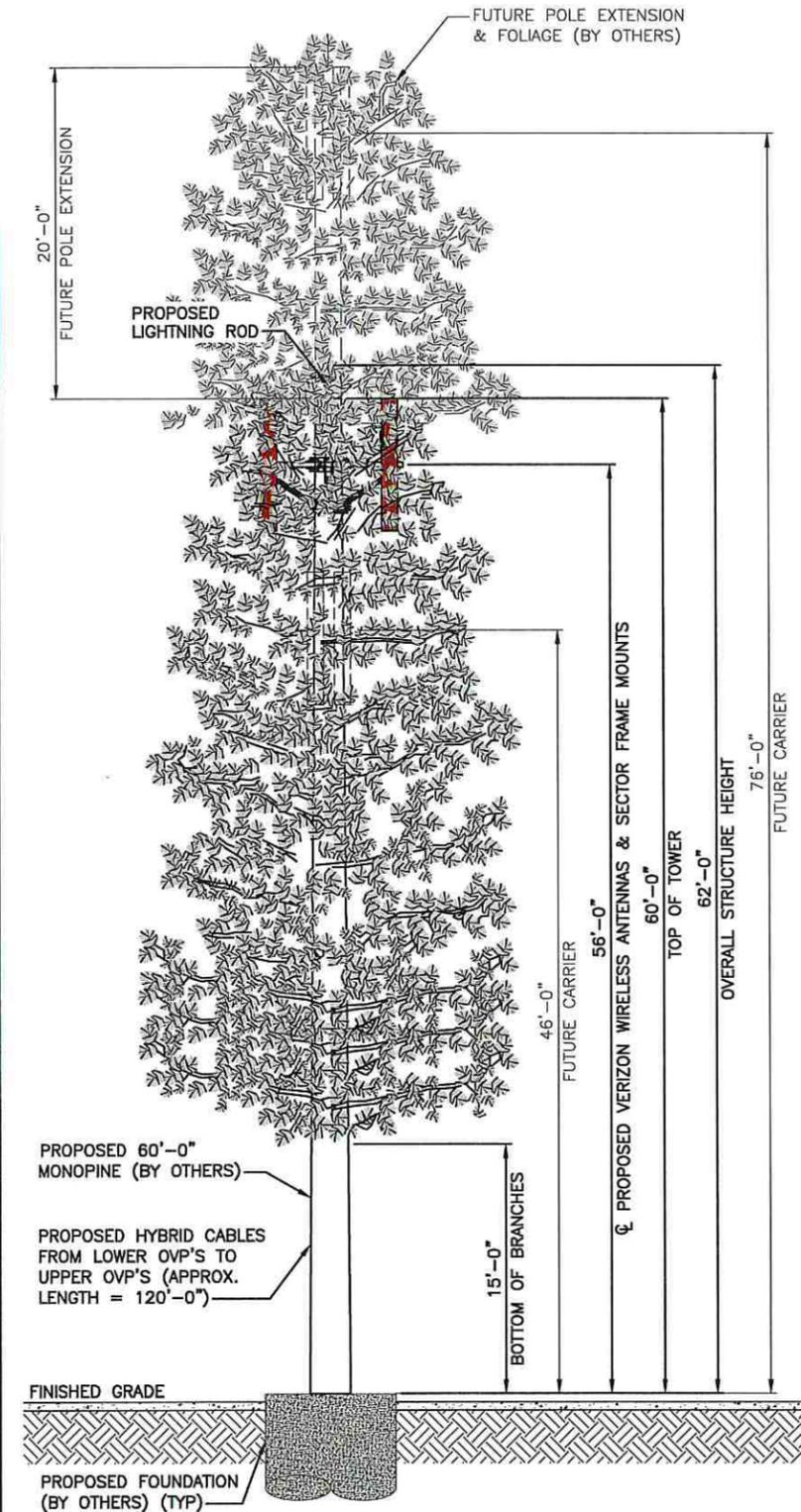
NOTE:

1. THE ANTENNA LAYOUT IS FOR ANTENNA ORIENTATION ONLY. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE PER TOWER MANUFACTURER'S STANDARD DETAILS.



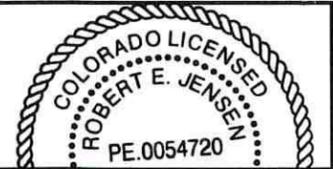
0° = TRUE NORTH

ANTENNA LAYOUT
NOT TO SCALE



TOWER ELEVATION

ANTENNA PLAN & GENERAL NOTES



PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO			
STATE CERTIFICATE OF AUTHORIZATION #	PE#	DISCIPLINE:	
20041302439	54720	CIVIL	C
ENGINEER: REJ ROBERT E. JENSEN	53946	CIVIL	C
TMS TERRANCE M. SUPER	36490	ELECTRICAL	E
SDK SHELTON D. KEISLING	49643	ELECTRICAL	E

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SUBMITTALS:

ISSUED FOR REVIEW	DESCRIPTION	DATE	BY	REV
		10/18/18	HEE	A
	REISSUED PER CLIENT COMMENTS	11/02/18	HEE	B
	REISSUED FOR REVIEW	04/25/19	HLH	C

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81501

SHEET DESCRIPTION:

TOWER ELEVATION &
ANTENNA INFORMATION

DWG INFORMATION:

DRAWN BY: HEE
CHECKED BY: DCP

SHEET NUMBER:

ANT-1.0



APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

DRAWING DESCRIPTION:
PRELIMINARY CD

DRAWING INDEX			
SHEET NO.	SHEET TITLE	REV	DISC.
T-1.0	TITLE SHEET	A	C/E
	SURVEY (BY OTHERS)		
C-0.0	GRADING PLAN	A	C
C-1.0	OVERALL SITE PLAN	A	C
C-1.1	ENLARGED SITE PLAN	A	C
C-2.0	EQUIPMENT LAYOUT	A	C/E
C-3.0	UTILITY H-FRAME DETAILS	A	C
C-3.1	UTILITY H-FRAME EQUIPMENT PLACEMENT	A	C/E
C-4.0	EQUIPMENT PAD DETAILS	A	C/E
C-4.1	GENERATOR PAD DETAILS	A	C/E
C-5.0	DETAILS	A	C/E
C-6.0	COMPOUND FENCE DETAILS	A	C
C-7.0	SIGNAGE DETAILS	A	C
EQ-1.0	EQUIPMENT CABINET DETAILS	A	C
EQ-1.1	POWER CABINET DETAILS	A	C
ANT-1.0	TOWER ELEVATION & ANTENNA INFORMATION	A	C
ANT-2.0	RF DIAGRAM	A	C
ANT-3.0	EQUIPMENT DETAILS (1 OF 2)	A	C
ANT-3.1	EQUIPMENT DETAILS (2 OF 2)	A	C
E-1.0	OVERALL UTILITY PLAN	A	E
E-1.1	ENLARGED UTILITY PLAN	A	E
E-2.0	UTILITY RISER DIAGRAM	A	E
E-2.1	ELECTRICAL ONE-LINE DIAGRAM	A	E
E-2.2	FIBER ONE-LINE DIAGRAM & UTILITY DETAILS	A	E
G-1.0	COMPOUND GROUNDING PLAN	A	E
G-2.0	GROUNDING RISER DIAGRAM	A	E
G-3.0	GROUNDING DETAILS (1 OF 2)	A	E
G-3.1	GROUNDING DETAILS (2 OF 2)	A	E
GN-1.0	GENERAL NOTES	A	C/E
SP-1.0	SPECIFICATIONS (1 OF 7)	A	C
SP-1.1	SPECIFICATIONS (2 OF 7)	A	C
SP-1.2	SPECIFICATIONS (3 OF 7)	A	C
SP-1.3	SPECIFICATIONS (4 OF 7)	A	C
SP-1.4	SPECIFICATIONS (5 OF 7)	A	C
SP-2.0	SPECIFICATIONS (6 OF 7)	A	E
SP-2.1	SPECIFICATIONS (7 OF 7)	A	E

PLANS PREPARED FOR:
verizon

PLANS PREPARED BY:

ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELE CIVIL
REJ ROBERT E. JENSEN CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE D. KING 49643 ELECTRICAL

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SUBMITTALS:			
DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:
TITLE SHEET

DWG INFORMATION:
DRAWN BY: DML
CHECKED BY: TKW
SHEET NUMBER:
T-1.0



CONTRACTOR INFORMATION
POWER PROVIDER: XCEL/WEST TBD
AAV PROVIDED: AAV COMPANY TBD

SITE INFORMATION
PROJECT: RAWLAND
CELL SITE NAME: CO3 CASTERLY ROCK
CELL SITE ADDRESS: 2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503
LESSOR: CITY OF GRAND JUNCTION
555 UTE AVE
GRAND JUNCTION, CO
81501
CONTACT: BILL ROSS
PHONE: (970) 549-5803
TOWER INFORMATION:
LATITUDE: 39° 02' 33.49" N (NAD 83)
LONGITUDE: 108° 31' 9.53" W (NAD 83)
GROUND ELEV: 4,667' AMSL
OVERALL STRUCTURE HT: 62'-0" AGL
TOWER HEIGHT: 60'-0" AGL
TOWER TYPE: MONOPINE
APPLICANT CL: 56'-0" AGL
CONTACT: NETWORK REAL ESTATE MANAGER
PHONE: (913) 344-2896 (VERIZON WIRELESS)

VERIZON WIRELESS DEPARTMENTAL APPROVALS

SIGNER	SIGNATURE	DATE
RF ENGINEER		
SITE ACQ		
OPERATIONS MANAGER		
CONSTRUCTION ENGINEER		
CONSTRUCTION MANAGER		
REAL ESTATE SPECIALIST		

LESSOR/LICENSOR APPROVAL

LESSOR/LICENSOR _____ INITIALS _____ DATE _____

LESSOR/LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW
 NO CHANGES CHANGES NEEDED
 SEE COMMENTS ON PLANS

VERIZON WIRELESS PROJECT #: TBD

PROJECT INFORMATION:
INSTALL COMMUNICATIONS EQUIPMENT & TOWER FOR A COMMUNICATIONS SITE.

CONSULTING TEAM

ENGINEERING: SSC, INC.
7171 WEST 95TH STREET, SUITE 600
OVERLAND PARK, KANSAS 66212
PHONE: (913) 438-7700
FAX: (913) 438-7777

CLIENT MANAGER:
J.M. KONKEL

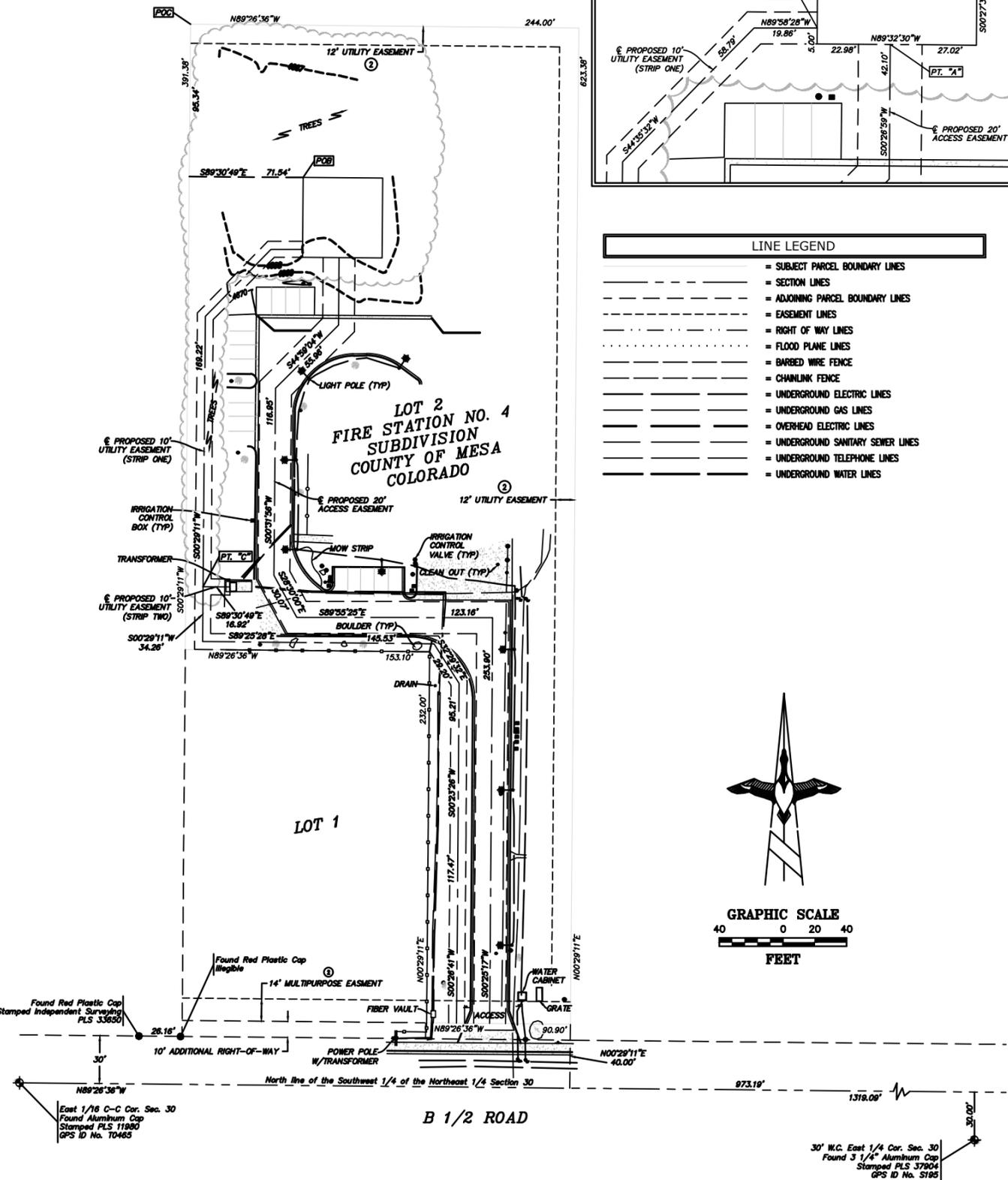
A&E PROJECT MANAGER:
T.K. WEISHAAR

LEAD ENGINEER:
K.M. VANMAELE

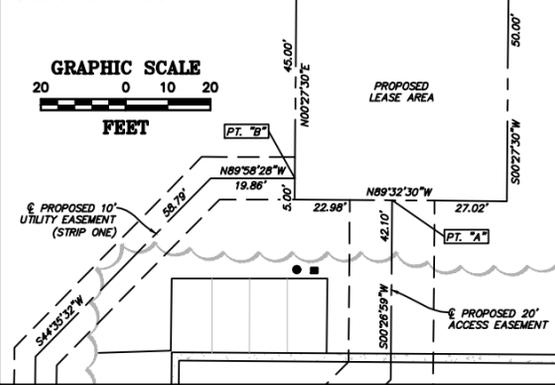
LEAD ELECTRICAL:
S.D. KEISLING

NEW/VZW PERMITTING EASEMENT
ACCESS/UTILITY EASEMENT
VZW LANDSPACE
PENETRATIONS
RR/IBBU
ANTENNAS
FIBER
POWER/ GROUNDING
HYBRID & COAX CABLES

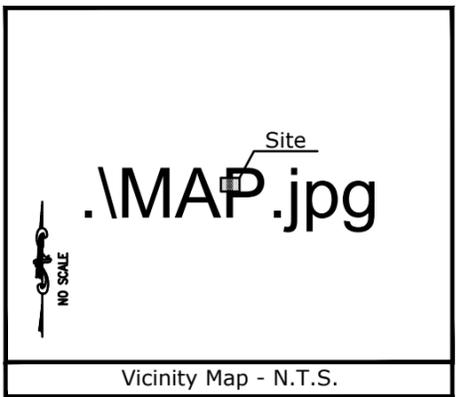
Boundary Detail
Scale: 1" = 40'



Site Detail
Scale: 1" = 20'



LINE LEGEND	
	= SUBJECT PARCEL BOUNDARY LINES
	= SECTION LINES
	= ADJOINING PARCEL BOUNDARY LINES
	= EASEMENT LINES
	= RIGHT OF WAY LINES
	= FLOOD PLANE LINES
	= BARBED WIRE FENCE
	= CHAINLINK FENCE
	= UNDERGROUND ELECTRIC LINES
	= UNDERGROUND GAS LINES
	= OVERHEAD ELECTRIC LINES
	= UNDERGROUND SANITARY SEWER LINES
	= UNDERGROUND TELEPHONE LINES
	= UNDERGROUND WATER LINES



Lease Area/Access & Utility Easements

LEASE AREA
BEING A TELECOMMUNICATIONS LEASE PARCEL LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID LOT 2; THENCE ALONG THE WEST LINE OF SAID LOT, S00°29'11"W, 95.34 FEET; THENCE S89°30'49"E, 71.54 FEET TO THE POINT OF BEGINNING; THENCE S89°32'30"E, 50.00 FEET; THENCE S00°27'30"W, 50.00 FEET; THENCE N89°32'30"W, 27.02 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "A"; THENCE CONTINUING N89°32'30"W, 22.98 FEET; THENCE N00°27'30"E, 5.00 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "B" THENCE CONTINUING N00°27'30"E, 45.00 FEET TO THE POINT OF BEGINNING.
CONTAINING 2,500 SQ. FT. OR 0.057 ACRES MORE OR LESS.

ACCESS EASEMENT
BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT POINT "A" AS DESCRIBED ABOVE; THENCE S00°26'59"W, 42.10 FEET; THENCE S44°59'04"W, 55.96 FEET; THENCE S00°31'56"W, 116.95 FEET; THENCE S28°30'00"E, 30.07 FEET; THENCE S89°55'25"E, 123.16 FEET; THENCE S00°25'17"W, 253.90 FEET TO THE RIGHT-OF-WAY OF B 1/2 ROAD AND THE END OF SAID STRIP OF LAND.
EXCEPT ANY PORTION LYING WITHIN THE RIGHT-OF-WAY OF B 1/2 ROAD.

UTILITY EASEMENT
BEING A STRIP OF LAND 20.00 FEET IN WIDTH LYING WITHIN A PORTION OF LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO, LYING 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:
BEGINNING AT POINT "B" AS DESCRIBED ABOVE; THENCE N89°58'28"W, 19.86 FEET; THENCE S44°35'32"W, 58.79 FEET; THENCE S00°29'11"W, 169.22 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT "C"; THENCE CONTAINING S00°29'11"W, 34.26 FEET; THENCE S89°25'28"E, 145.53 FEET; THENCE S32°29'32"E, 29.20 FEET; THENCE S00°23'26"W, 95.21 FEET; THENCE S00°26'41"W, 117.47 FEET TO THE END OF SAID STRIP OF LAND.
SIDELINES OF SAID STRIPS OF LAND ARE TO BE LENGTHENED AND/OR SHORTENED TO PREVENT GAPS AND/OR OVERLAPS.



Title Report
PREPARED BY: OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
ORDER NO.: 01-18025138-01T
EFFECTIVE DATE: MAY 10, 2018

Legal Description
LOT 2, FIRE STATION NO. 4 SUBDIVISION, PUBLIC RECORDS OF MESA COUNTY, COLORADO.

Assessor's Parcel No.
2943-301-42-002

Title Schedule B Exceptions
1. ORDINANCE ANNEXING TERRITORY TO THE CITY OF GRAND JUNCTION, COLORADO, RECORDED 11/08/2014, IN BOOK 5662, PAGE 414 OF THE MESA COUNTY RECORDS. (BLANKET IN NATURE).
2. SUBJECT TO COVENANTS, RESTRICTIONS, RESERVATIONS, EASEMENTS, AND RIGHTS OF WAY AND BUILDING SETBACKS AS SHOWN ON THE PLAT OF FIRE STATION NO. 4 SUBDIVISION, AS RECORDED IN PLAT BOOK 5847, PAGE 135 OF MESA COUNTY RECORDS. (PLOTTED HEREON).

Date of Survey
SEPTEMBER 7, 2018

Basis of Bearings
THE COLORADO STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD83).
CLASSIFICATION: MINIMUM GEOMETRIC ACCURACY STANDARD
THIRD 5.0 cm + 1: 10,000

Bench Mark
MESA COUNTY CONTROL POINT "T0465", ELEVATION = 4667.83 FEET (NAVD 88)

Legend

	CONCRETE PAVEMENT		NATURAL GROUND
	CONFEROUS TREE		PARKING BOLLARD
	DIAMETER		POINT OF BEGINNING
	DECIDUOUS TREE		POINT OF COMMENCEMENT
	EDGE OF ASPHALT		OVERHEAD ELECTRIC LINE
	FINISHED FLOOR		POWER POLE
	FINISH SURFACE		PROPERTY LINE
	FIRE HYDRANT		RIGHT OF WAY
	FLOW LINE		SEWER MANHOLE
	FOUND MONUMENT AS NOTED		SIGN POST
	FOUND SECTION MONUMENT		STREET LIGHT STANDARD
	GEOGRAPHIC LOCATION		TELEPHONE PEDESTAL
	GAS METER		TYPICAL
	IRRIGATION CONTROL VALVE		WATER METER
			WATER VALVE

Certificate of Survey
THIS IS TO CERTIFY THAT THIS TOPOGRAPHIC MAP AND IMPROVEMENTS SHOWN ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

JESUS A. LUGO, PLS 38081

Underground Utility Note:
BURIED UTILITIES AND/OR PIPELINES SHOWN HEREON ARE PER VISIBLE AND APPARENT SURFACE EVIDENCE, RECORD DRAWINGS OF THE CONSTRUCTED UTILITY LINES OBTAINED FROM RELIABLE AND RESPONSIBLE SOURCES NOT CONNECTED WITH ALTURA LAND CONSULTANTS, LLC, OR WORKINGS PROVIDED BY AN INDEPENDENT LOCATING CONTRACTOR. NO GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY OR THOROUGHNESS OF SUCH INFORMATION. IF MORE ACCURATE LOCATIONS OF UNDERGROUND UTILITIES OR PIPE LINES ARE REQUIRED, THE UTILITY OR PIPELINE WILL HAVE TO BE VERIFIED BY FIELD POT-HOLING. ALTURA LAND CONSULTANTS, LLC AND THE SURVEYOR OF RECORD SHALL NOT BE HELD LIABLE FOR THE LOCATION OF OR THE FAILURE TO NOTE THE LOCATION OF NON-VISIBLE UTILITIES OR PIPELINES.

THIS DOES NOT REPRESENT A MONUMENTED SURVEY.
REFERENCE IS MADE TO A COMMITMENT FOR TITLE INSURANCE, NUMBER 01-18025138-01T, ISSUED BY OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, AND HAVING AN EFFECTIVE DATE OF MAY 10, 2018. THIS SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. THE LESSOR'S LEGAL DESCRIPTION AND RECORD BOUNDARY ARE SHOWN HEREON FOR REFERENCE ONLY.
THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE LESSOR'S PROPERTY.

PROJECT INFORMATION:

CO3 CASTERLY ROCK

2884 B 1/2 RD.
GRAND JUNCTION, CO. 81501
COUNTY OF MESA

CURRENT ISSUE DATE:
11/2/18

ISSUED FOR:
DESIGN

REV.:	DATE:	ISSUED FOR:	BY:
0	10/1/18	SUBMITTAL	JT
1	11/2/18	ADDED LEASE AREA	JT

PLANS PREPARED FOR:

CONSULTANT:

JOB NO. 18218

DRAWN BY: JT CHK.: JAL APV.: JT

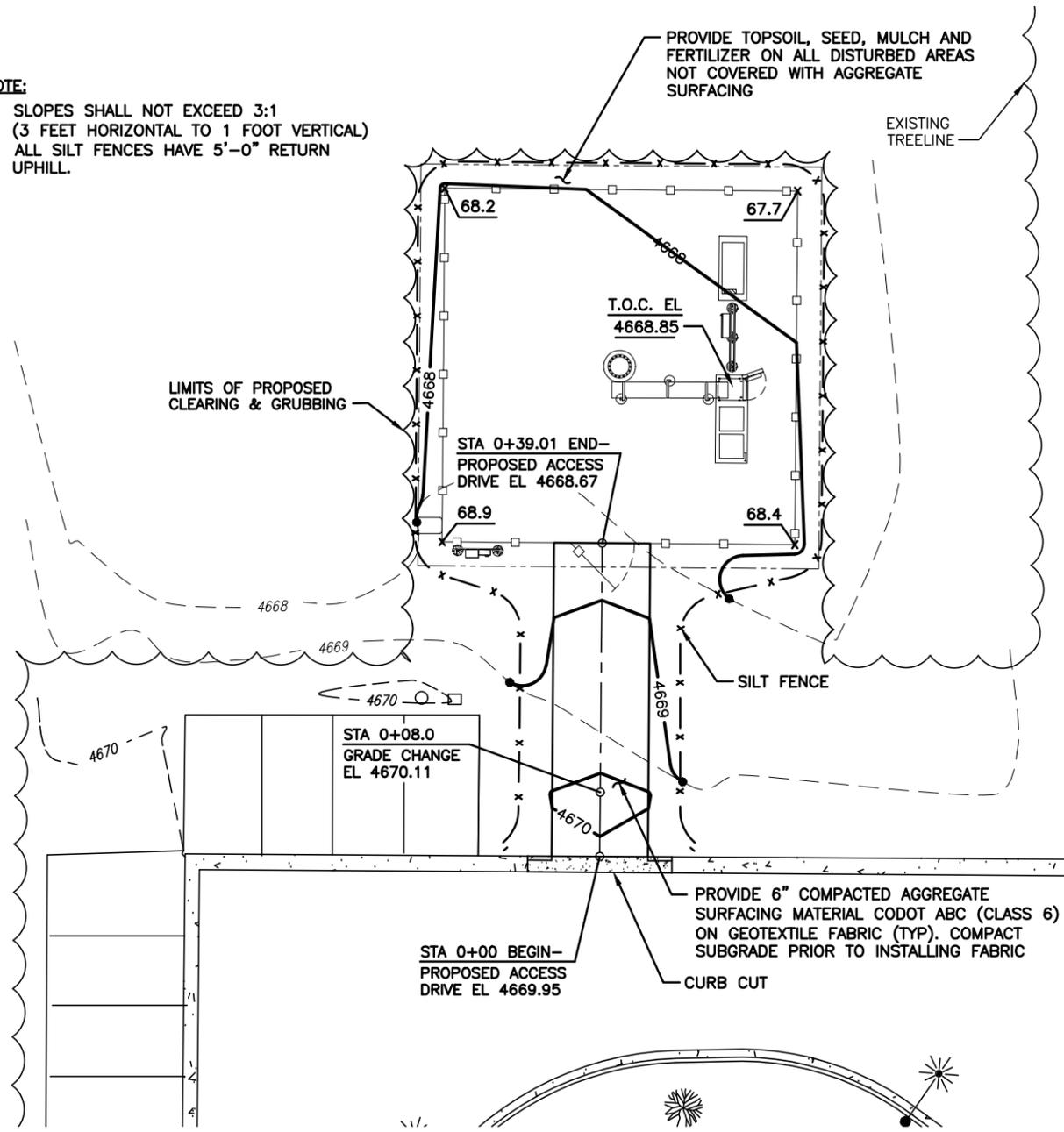
LICENSURE:

SHEET TITLE:
TOPOGRAPHIC SURVEY

SHEET NUMBER: **LS1** REVISION: **1**
SHEET 1 OF 1 SHEETS 18218

NEW VZW PERMITTING EASEMENT
 ACCESS/UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/BBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

- NOTE:**
- SLOPES SHALL NOT EXCEED 3:1 (3 FEET HORIZONTAL TO 1 FOOT VERTICAL)
 - ALL SILT FENCES HAVE 5'-0" RETURN UPHILL.



PROVIDE TOPSOIL, SEED, MULCH AND FERTILIZER ON ALL DISTURBED AREAS NOT COVERED WITH AGGREGATE SURFACING

LIMITS OF PROPOSED CLEARING & GRUBBING

EXISTING TREELINE

T.O.C. EL 4668.85

STA 0+39.01 END- PROPOSED ACCESS DRIVE EL 4668.67

SILT FENCE

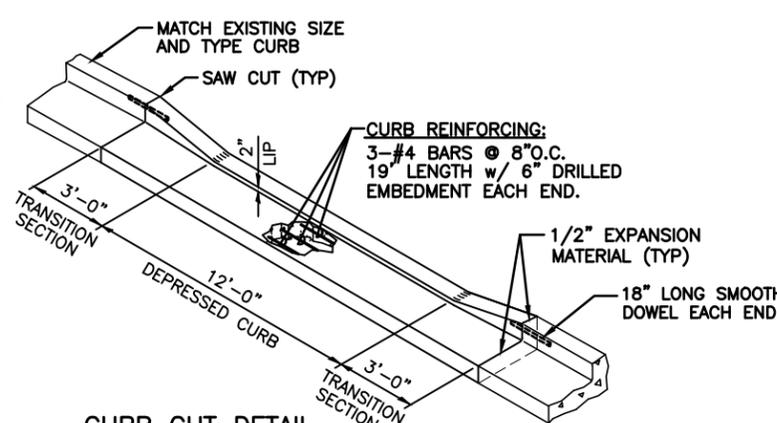
STA 0+08.0 GRADE CHANGE EL 4670.11

PROVIDE 6" COMPACTED AGGREGATE SURFACING MATERIAL CODOT ABC (CLASS 6) ON GEOTEXTILE FABRIC (TYP). COMPACT SUBGRADE PRIOR TO INSTALLING FABRIC

STA 0+00 BEGIN- PROPOSED ACCESS DRIVE EL 4669.95

CURB CUT

CONSTRUCTION NOTE:
 SAWCUT AND REMOVE EXISTING PAVEMENT AS REQUIRED FOR NEW CONSTRUCTION. ISOLATION JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE



CURB CUT DETAIL
 NO SCALE

GRADING PLAN

GRADING NOTES:

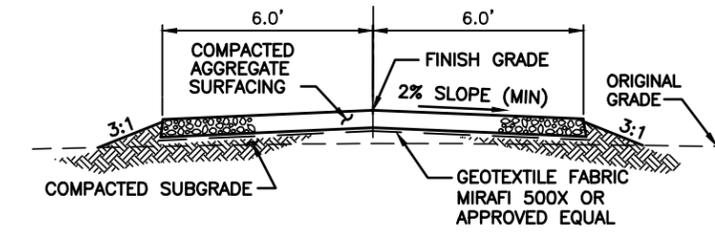
- STRIP THE GROUND OF ALL VEGETATION AND DEBRIS.
- PROOF ROLL WITH LOADED TANDEM TO IDENTIFY SOFT SPOTS.
- REMOVE SOFT SPOT MATERIAL AND COMPACT TO 95% AT STRUCTURE, 90% ELSEWHERE.
- INSTALL GEOTEXTILE FABRIC ON PREPARED SUBGRADE.
- PLACE AND COMPACT 6" AGGREGATE SURFACING.
- SEE SPECIFICATIONS DRAWINGS FOR REQUIREMENTS OF BACKFILL MATERIAL.
- MAINTAIN REASONABLE DUST CONTROL METHODS DURING CONSTRUCTION.
- ENTIRE DRIVE LENGTH SHALL BE POSITIVE DRAINING DURING, AND AT COMPLETION OF CONSTRUCTION.
- CONTRACTOR SHALL OBTAIN ANY SITE SPECIFIC SOILS REPORTS AND FOLLOW ALL RECOMMENDATIONS. A DISCREPANCY BETWEEN CONSTRUCTION DRAWINGS AND SOILS REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN. SSC TO BE NOTIFIED OF DISCREPANCY.

SILTATION NOTES:

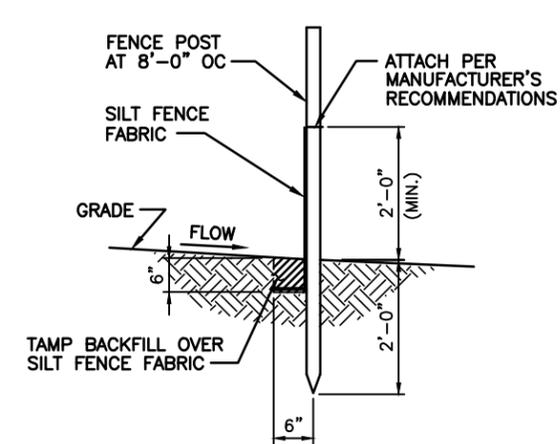
- SILTATION CONTROL DEVICES TO REMAIN IN PLACE UNTIL ADEQUATE VEGETATION GROWTH INSURES NO FURTHER EROSION.
- SILTATION FENCES SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND FOR THE AMOUNT OF SEDIMENTATION WHICH HAS ACCUMULATED. REMOVAL OF SEDIMENT WILL BE REQUIRED WHEN IT REACHES 1/2 FENCE HEIGHT.
- ATTACHMENT OF GEOTEXTILE FABRIC TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- SILT FENCING TO BE USED AT ALL AREAS OF EXCAVATION.

CLEAR AND GRUB NOTES:

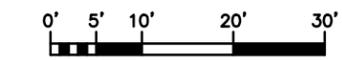
- CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE AND EASEMENTS. REMOVE TREES AND STUMPS NO LESS THAN 12 INCHES BELOW GRADE. RAKE, DISK OR PLOW THE AREA TO A DEPTH NO LESS THAN 6 INCHES.
- ADDITIONAL CLEAR AND GRUB MAY BE REQUIRED IN AREAS OF PROPOSED OVERHEAD POWER AND TELEPHONE.
- REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING IS NOT PERMITTED.



TYPICAL DRIVE SECTION
 NO SCALE



SILT FENCE DETAIL
 NO SCALE



PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL
 REJ ROBERT E. JENSEN CIVIL
 TMS TERRA CONSULTING 36490 ELECTRICAL
 SDK SHANE R. KING 49643 ELECTRICAL
PRELIMINARY ISSUE

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:

GRTADING PLAN

DWG INFORMATION:

DRAWN BY: KLL
 CHECKED BY: TKW

SHEET NUMBER:

C-0.0

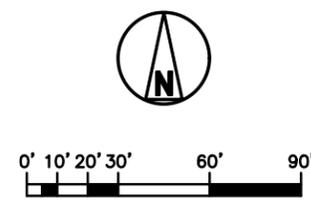
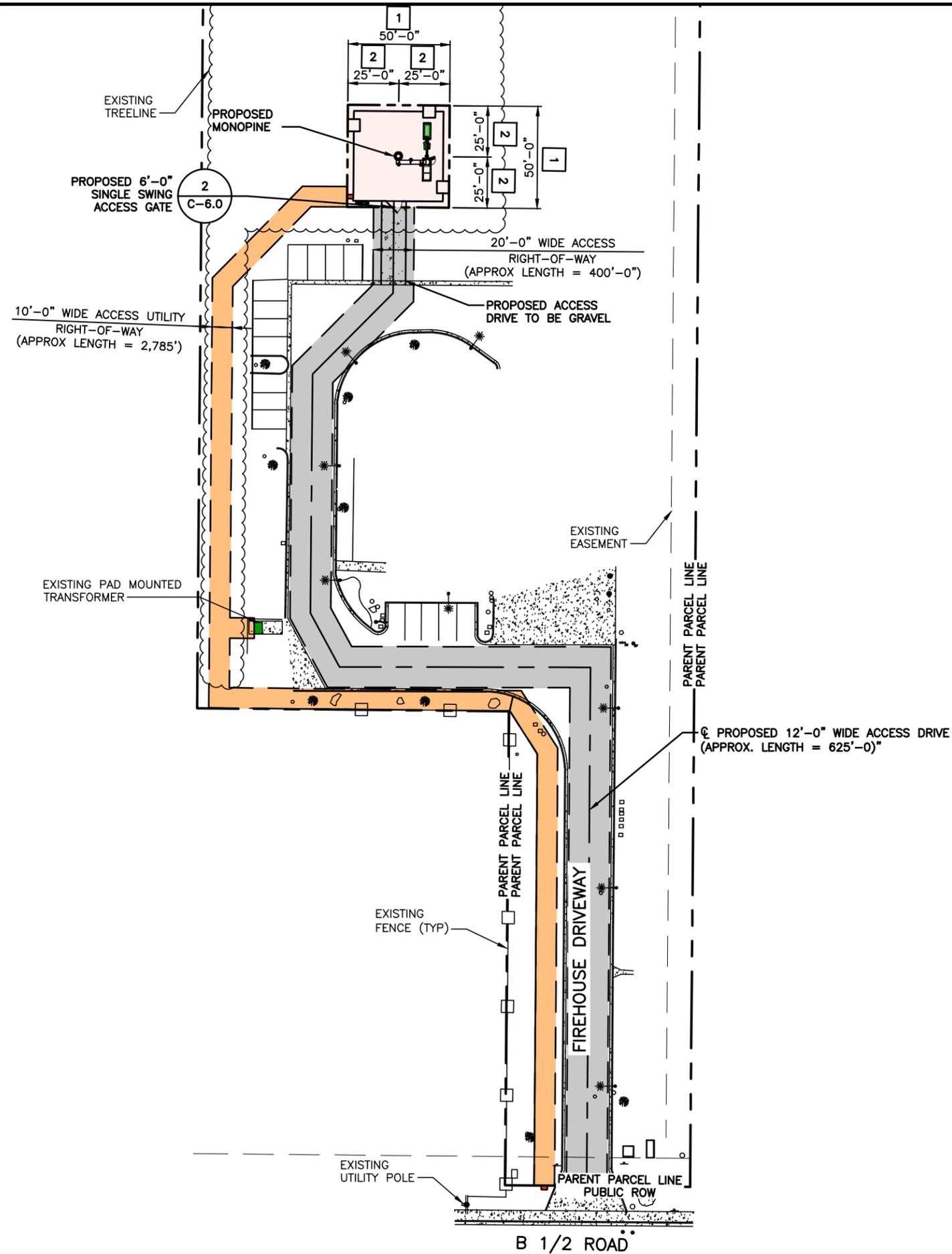
SCALE: 1:10 (22"x34")
 SCALE: 1:20 (11"x17")

KEYED NOTES:

- 1 PROPOSED LEASE BOUNDARY
- 2 CENTER OF TOWER

NOTE:

SEE OVERALL UTILITY PLAN (SHEET E-1.0) FOR SIZES, LENGTHS & ROUTING OF UTILITIES.



OVERALL SITE PLAN

SCALE: 1:30 (22"x34")
SCALE: 1:60 (11"x17")

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL CO
REJ ROBERT E. JENNER CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE K. KING 49643 ELECTRICAL

DRAWING NOTICE:
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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

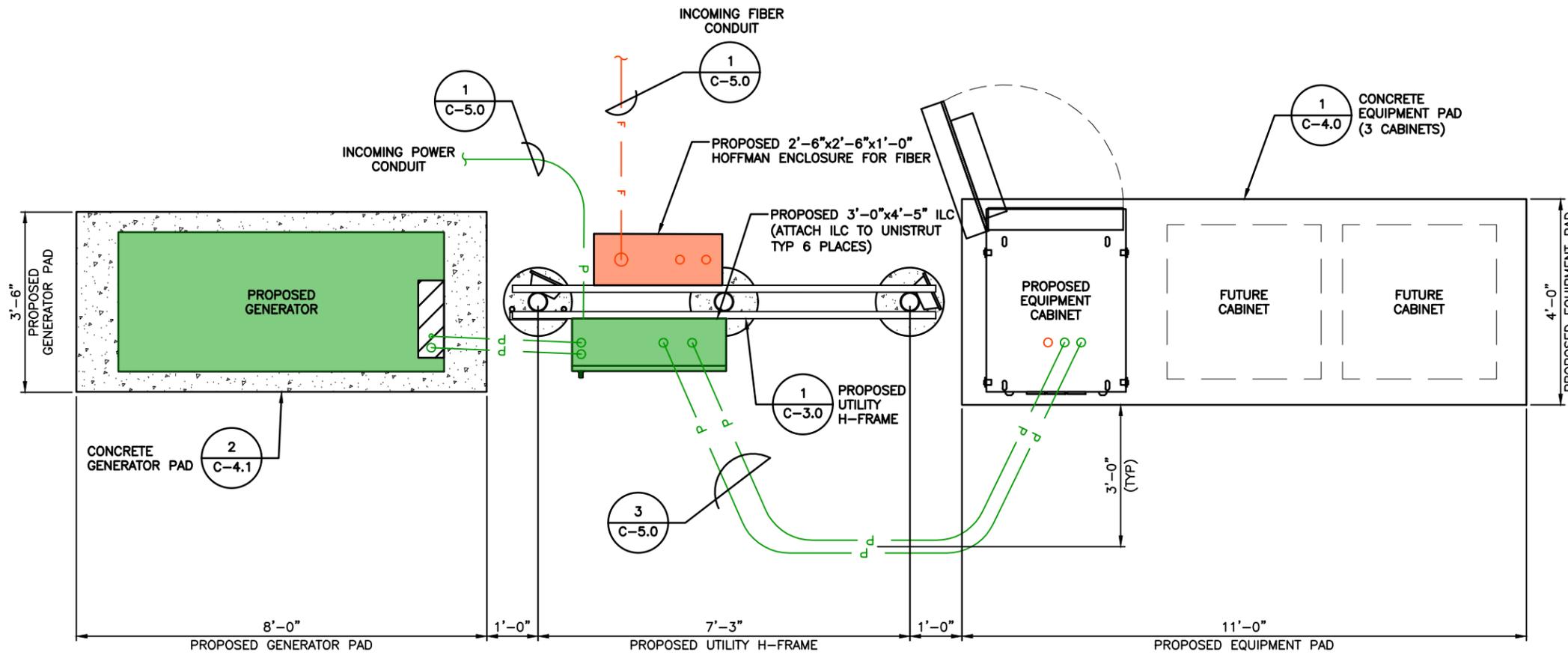
SHEET DESCRIPTION:
OVERALL
SITE PLAN

DWG INFORMATION:
DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:
C-1.0

NOTES:

1. SEE OVERALL UTILITY PLAN (SHEET E-1.0) FOR ORIENTATION & CONTINUATION OF CONDUITS.
2. EQUIPMENT LAYOUT MAY BE ROTATED AS REQUIRED.
3. INSTALL ICE BRIDGE PER ENLARGED SITE PLAN (SHEET C-1.1).



EQUIPMENT LAYOUT



3/4" = 1'-0" (22"x34")
3/8" = 1'-0" (11"x17")

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELEN CIVIL C.C.
REJ ROBERT E. JENSEN CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE R. KING 49643 ELECTRICAL

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2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

EQUIPMENT LAYOUT

DWG INFORMATION:

DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:

C-2.0

NEW VZW
NEW UTIL
EASEMENT

ACCESS/UTILITY
EASEMENT

VZW LANDSPACE

PENETRATIONS

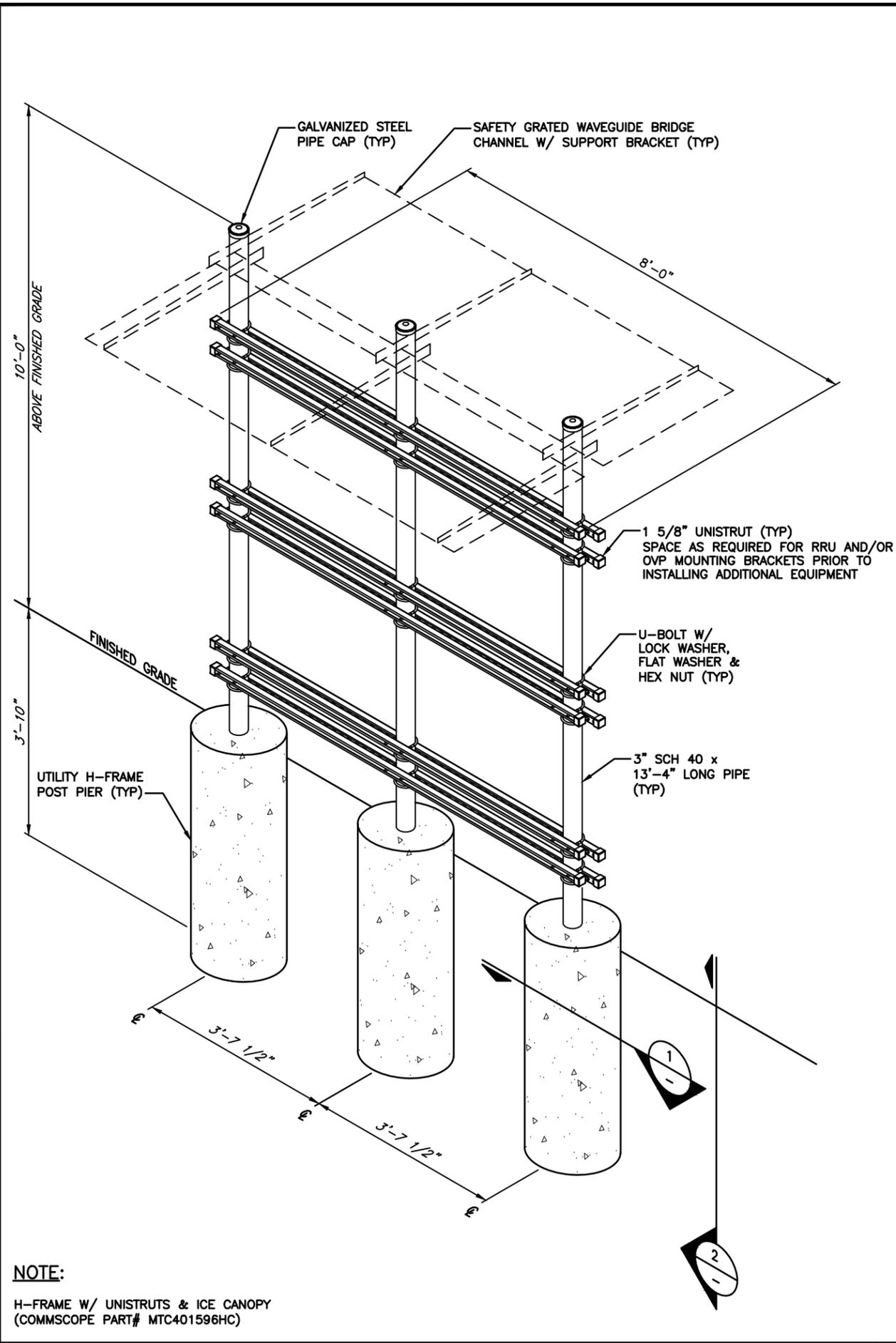
RR/HBBU

ANTENNAS

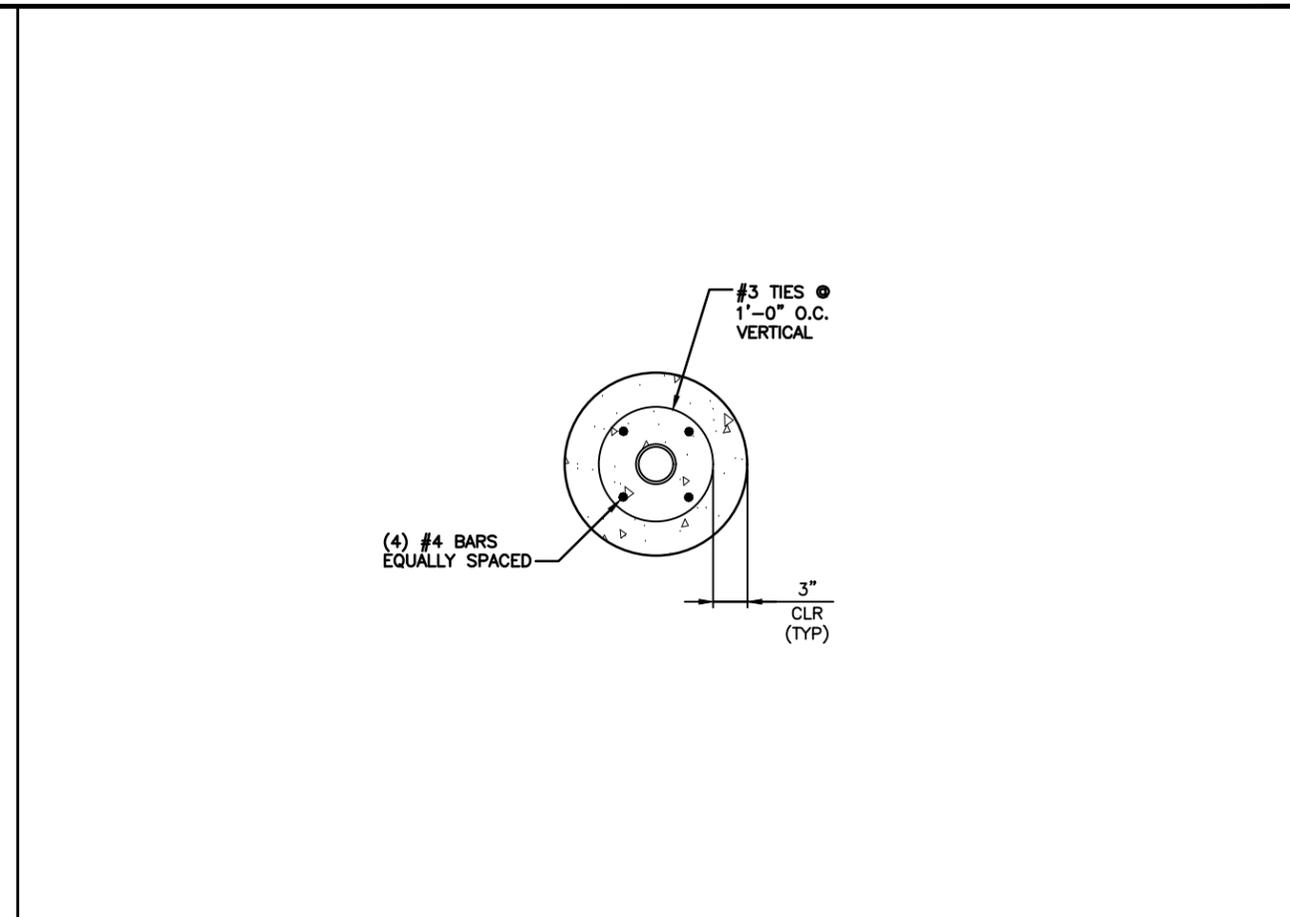
FIBER

POWER/
GROUNDING

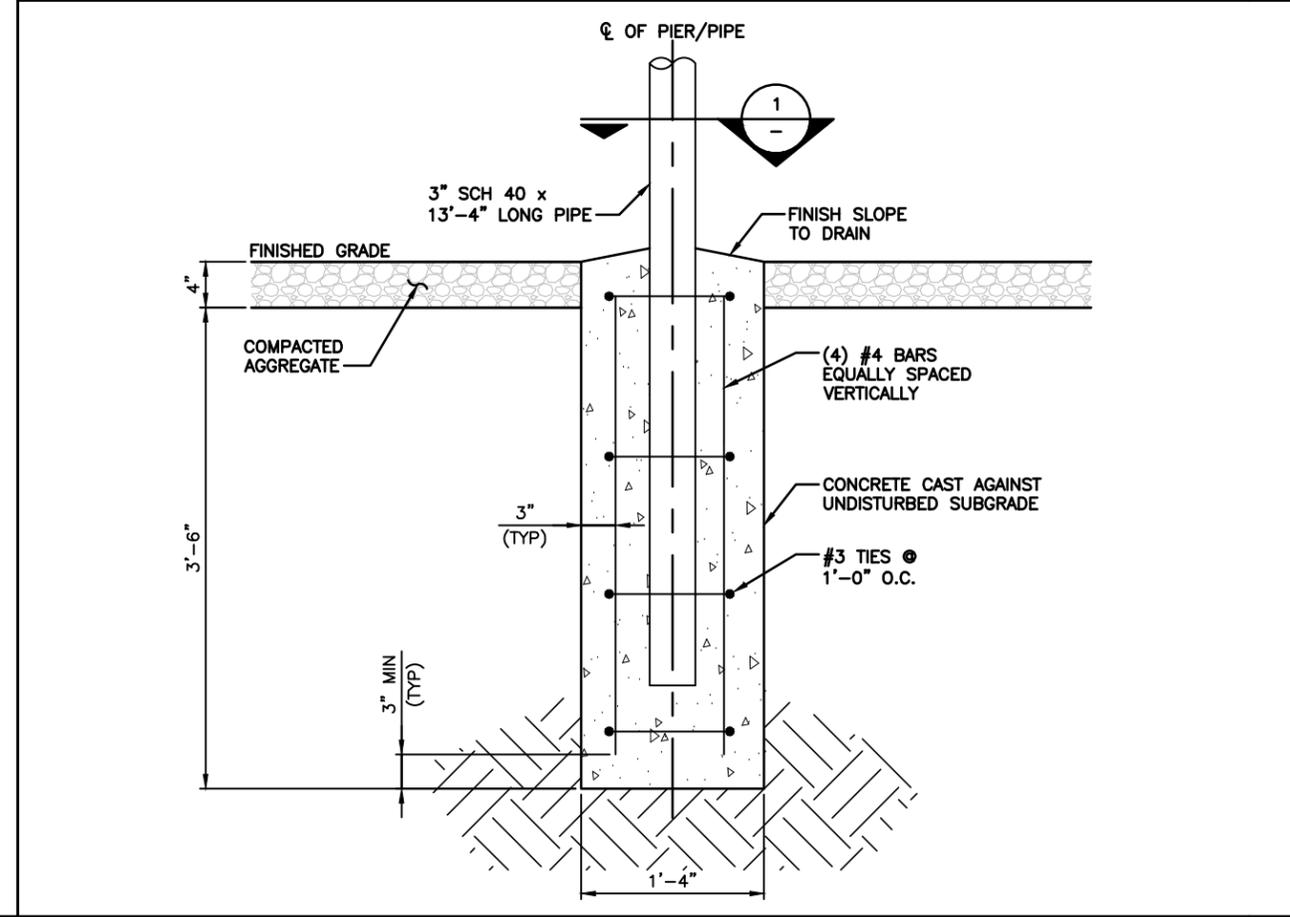
HYBRID &
COAX CABLES



UTILITY H-FRAME DETAIL 3



CONCRETE PIER REINFORCEMENT PLAN 1



CONCRETE PIER REINFORCEMENT ELEVATION 2

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL CO
REJ ROBERT E. JENKINS CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE D. KING 49643 ELECTRICAL

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81503

SHEET DESCRIPTION:
UTILITY H-FRAME
DETAILS

DWG INFORMATION: SHEET NUMBER:
DRAWN BY: DML
CHECKED BY: TKW
C-3.0

NEW VZW
UTILILITY
EASEMENT

ACCESS/UTILITY
EASEMENT

VZW LANDSPACE

PENETRATIONS

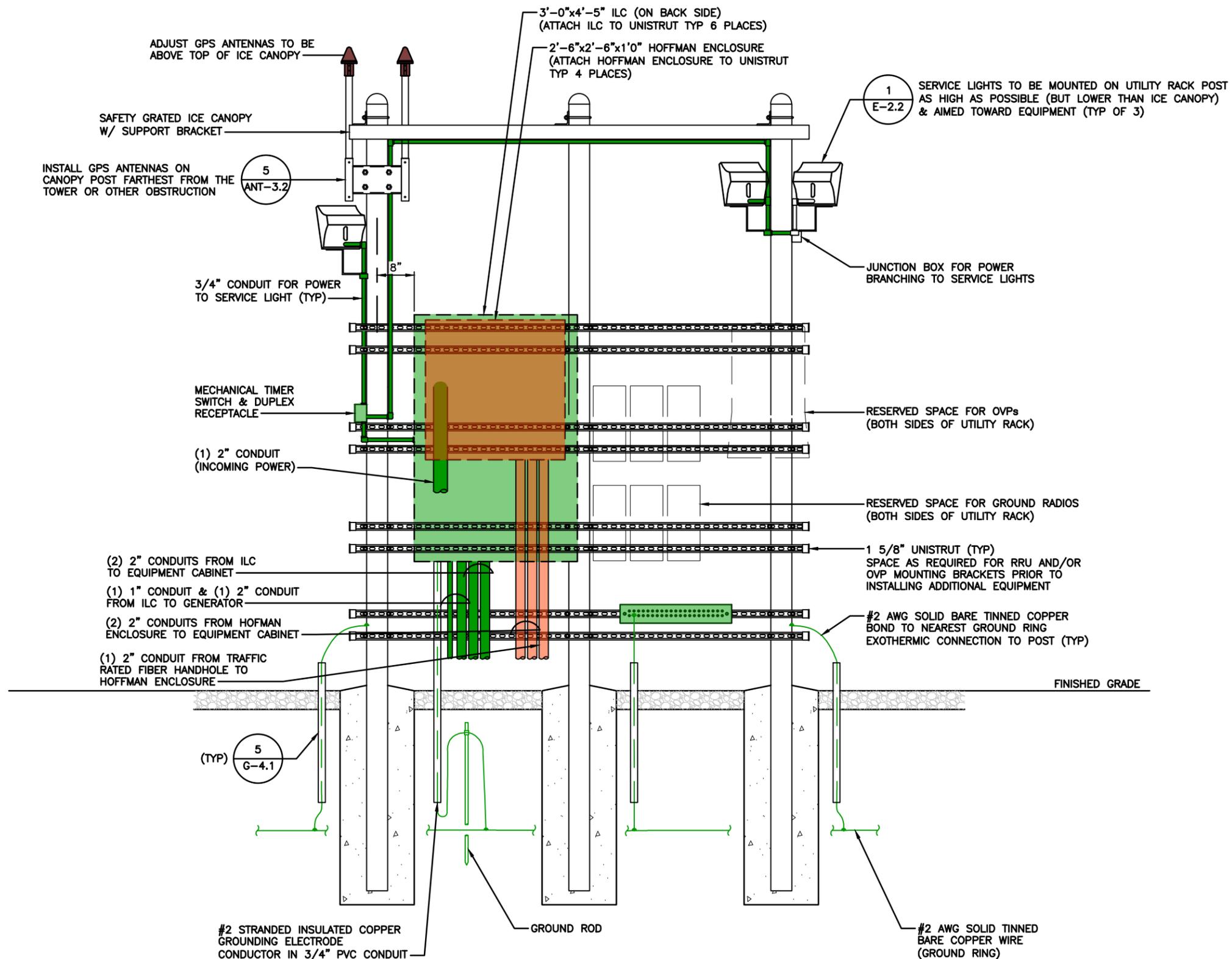
RR/HBBU

ANTENNAS

FIBER

POWER/
GROUNDING

HYBRID &
COAX CABLES



ELECTRICAL NOTES:

1. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE AND THE LOCAL BUILDING CODES. ALL COMPONENTS SHALL BE U.L. LISTED.
2. ALL COMPONENTS SHALL BE AS SPECIFIED OR EQUIVALENT AS APPROVED BY VERIZON WIRELESS.
3. BELOW GRADE EXOTHERMIC CONNECTIONS ARE TYPE-TA.
4. CONTRACTOR SHALL INSTALL SLIP JOINTS ON ALL CONDUITS (SEE SHEET E-2.2, DETAIL 3).

UTILITY H-FRAME NOTE:

H-FRAME W/ UNISTRUTS & ICE CANOPY (COMMSCOPE PART# MTC401596HC).

UTILITY H-FRAME EQUIPMENT PLACEMENT

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL
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TMS TERRA ENGINEERING 36490 ELECTRICAL
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SHEET DESCRIPTION:
UTILITY H-FRAME
EQUIPMENT PLACEMENT

DWG INFORMATION:
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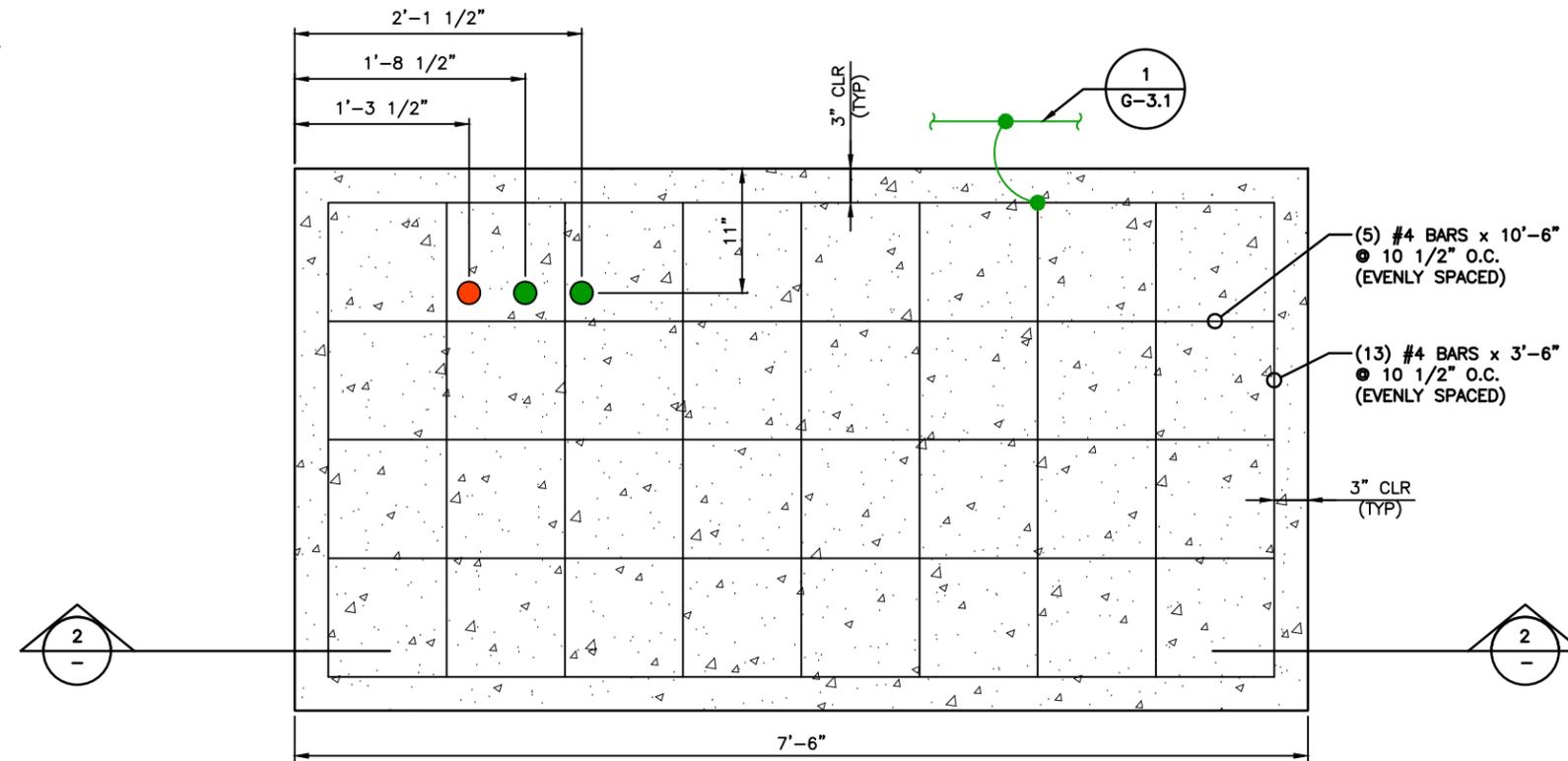
SHEET NUMBER:
C-3.1

NOTES:

- SEE ENLARGED UTILITY PLAN, SHEET E-1.1 FOR ORIENTATION & CONTINUATION OF CONDUITS.
- PLACE FORMS & CONCRETE REINFORCEMENT. PLACE & FINISH CONCRETE.
- REFERENCE FOUNDATION AND CONCRETE NOTES. (SEE SHEET C-5.0, DETAIL 5)

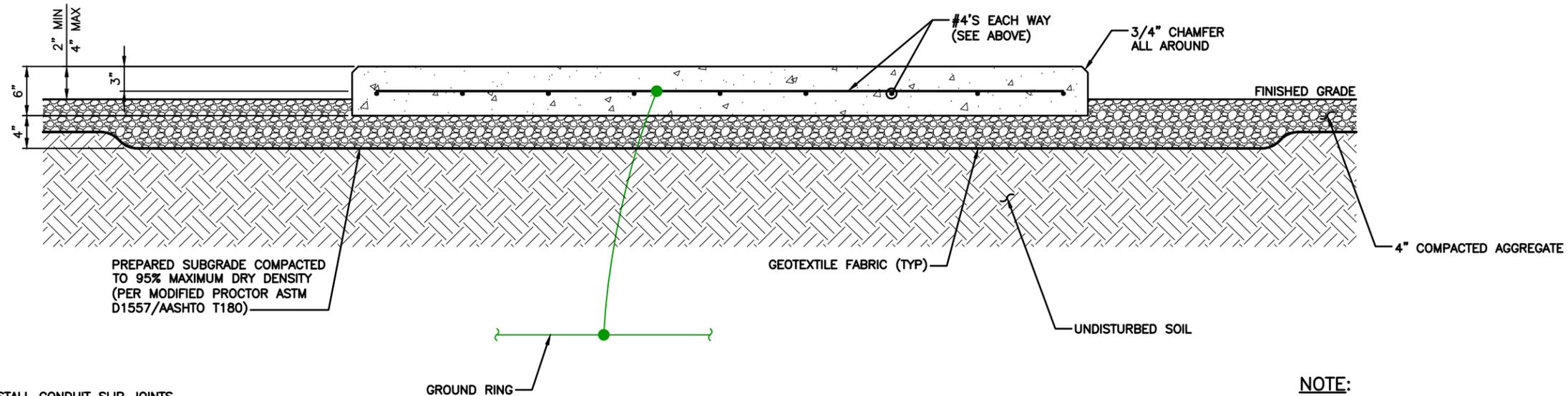
NOTE:

4" MINIMUM DISTANCE NEEDED FROM CONCRETE EDGES BEFORE DRILLING ANCHORS TO SUPPORT CABINETS.



CONCRETE EQUIPMENT PAD (3 CABINETS) – PLAN VIEW

1



CONCRETE EQUIPMENT PAD (3 CABINETS) – ELEVATION VIEW

2

SLIP JOINT NOTE:

CONTRACTOR SHALL ALWAYS INSTALL CONDUIT SLIP JOINTS WHEN USING THIS FOUNDATION (SEE SHEET E-2.2, DETAIL 3).

NOTE:

CONCRETE FINISH TO BE CLASS A TOLERANCE.

PLANS PREPARED FOR:



PLANS PREPARED BY:



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PRELIMINARY ISSUE

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 81503

SHEET DESCRIPTION:

EQUIPMENT PAD
 DETAILS

DWG INFORMATION:

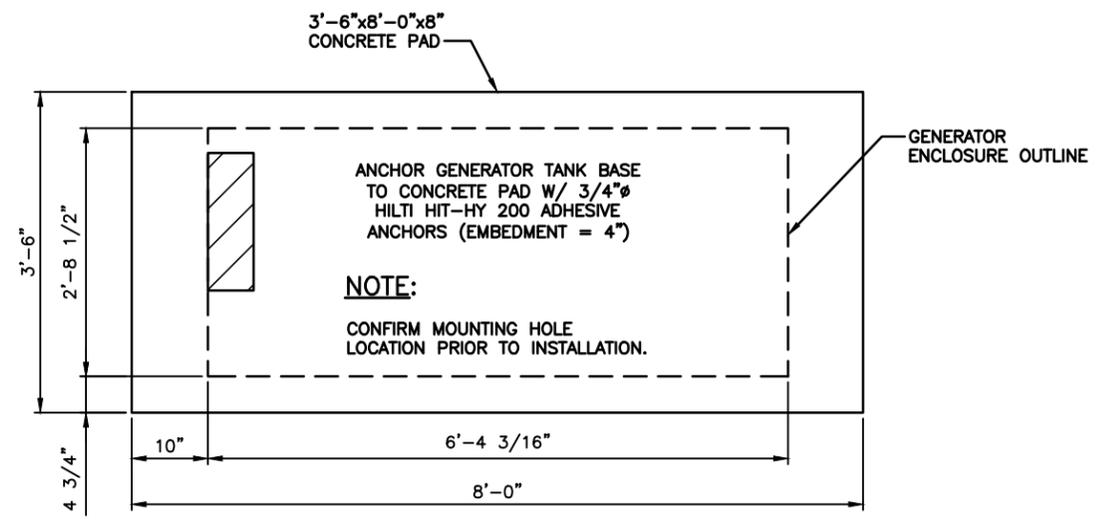
DRAWN BY: DML
 CHECKED BY: TKW

SHEET NUMBER:

C-4.0

NEW VZW
 UTILITY
 EASEMENT
 ACCESS/UTILITY
 EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/BBU
 ANTENNAS
 FIBER
 POWER/
 GROUNDING
 HYBRID &
 COAX CABLES

NEW VZW UTILILITY EASEMENT
 ACCESS/UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/IBBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

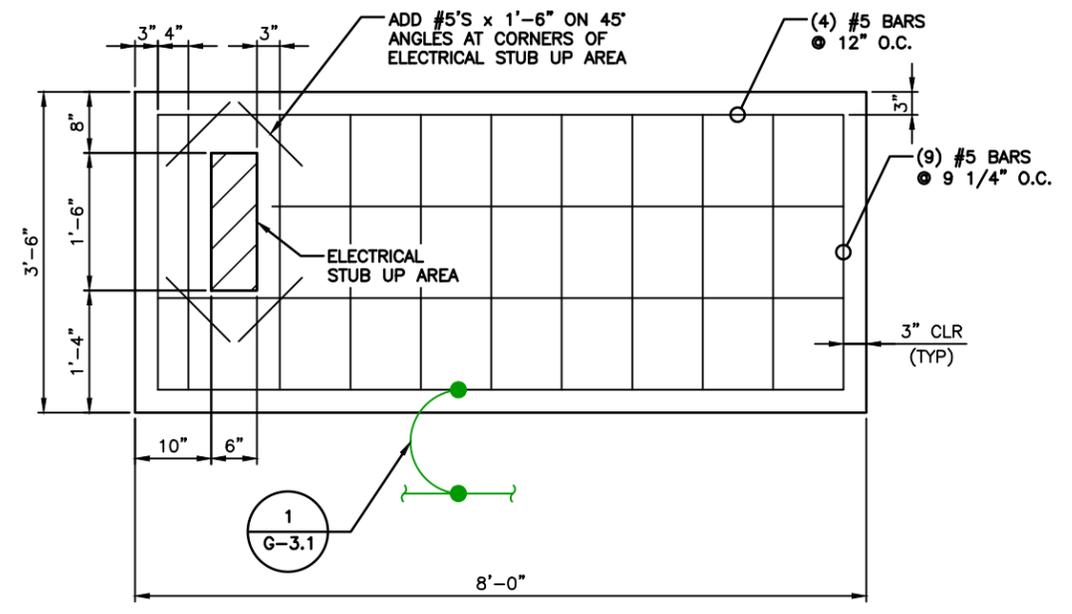


GENERATOR PAD PLAN

3

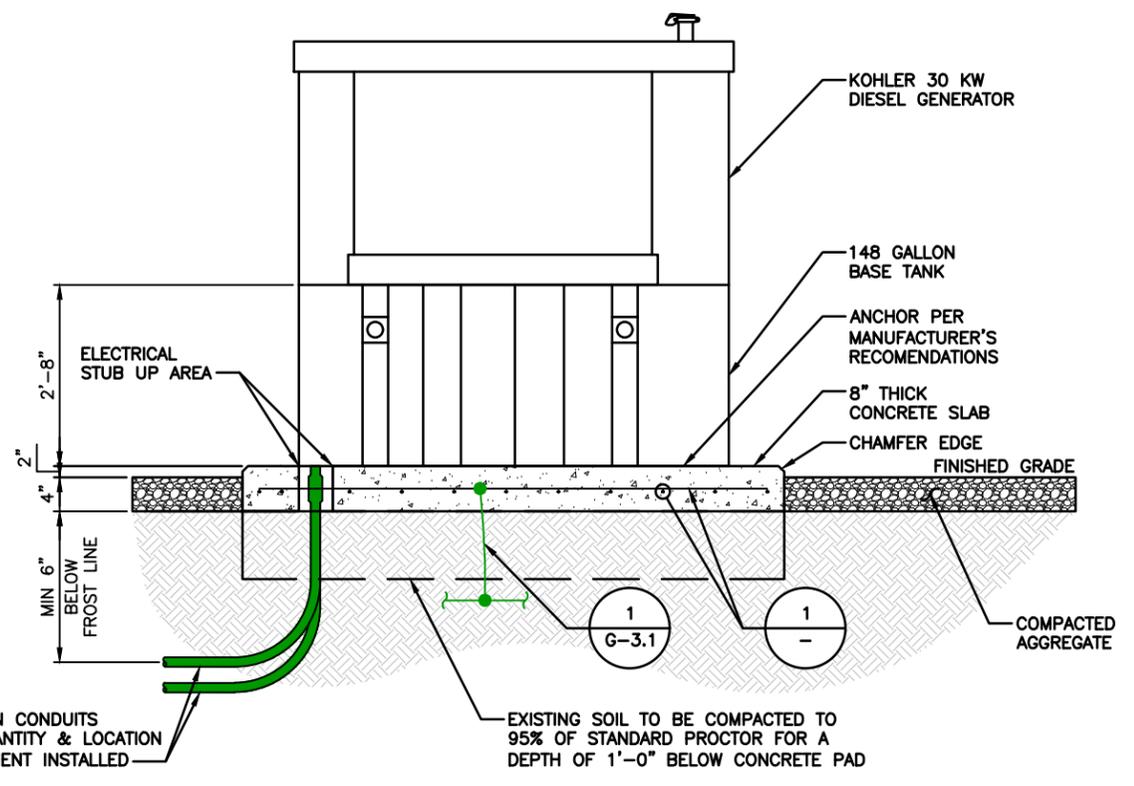
NOTE:

CONTRACTOR TO PURCHASE AND INSTALL PRECAST CONCRETE PAD OR CONSTRUCT ON SITE TO THESE SPECIFICATIONS.



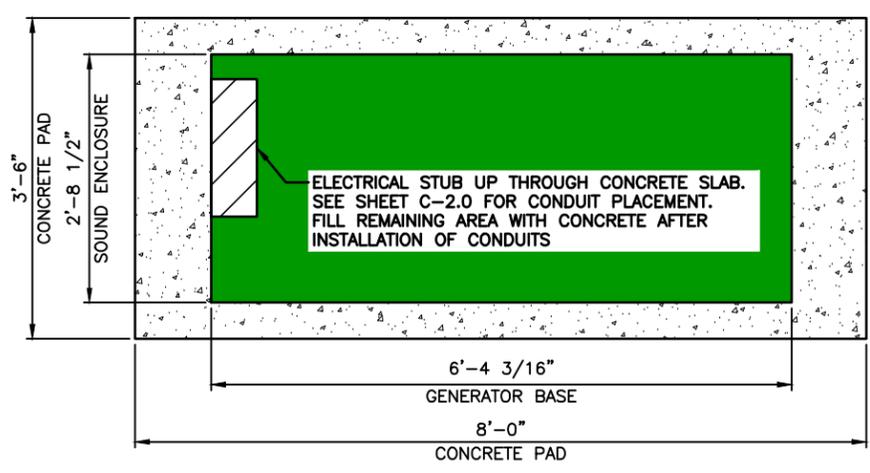
GENERATOR PAD REINFORCEMENT PLAN

1



GENERATOR PAD ELEVATION

4



GENERATOR PLAN & NOTES

2

NOTES:

1. THIS FOUNDATION IS BASED ON A KOHLER 30 KW DIESEL GENERATOR WITH ENCLOSURE AND 148 GAL BASE TANK. (AVDV 8855)
2. SEE GENERATOR MANUFACTURER'S DRAWINGS FOR PHYSICAL LOCATION OF FUEL LINES, CONTROL AND POWER INTERCONNECTIONS AND OTHER INTERFACES THAT ARE CAST INTO THE CONCRETE. THE PREFERRED METHOD IS TO BRING THE CONDUIT THROUGH THE PAD TO THE UNDERSIDE OF THE GENERATOR (MINIMIZES RODENT DAMAGE). FINISH CONNECTIONS WITH FLEXIBLE CONDUIT PER GENERATOR MANUFACTURER'S SPECIFICATIONS. RIGID CONDUITS SHALL BE SECURED TO THE EXISTING SLAB, THEN BE BURIED BETWEEN SLAB AND EQUIPMENT.
3. CONTRACTOR TO ENSURE GENERATOR IS RODENT PROOF.
4. CONSTRUCT GENERATOR PAD PER STRUCTURAL NOTES ON SHEET C-5, DETAIL 2.

PLANS PREPARED FOR:

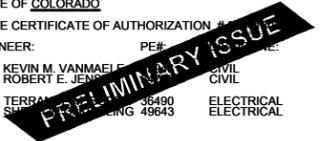


PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL C.C.
 REJ ROBERT E. JENNER CIVIL
 TMS TERRA ENGINEERING 36490 ELECTRICAL E.I.E.
 SDK SHANE R. KING 49643 ELECTRICAL



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APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:

GENERATOR PAD
 DETAILS

DWG INFORMATION: SHEET NUMBER:

DRAWN BY: DML
 CHECKED BY: TKW
 C-4.1

FOUNDATION GENERAL NOTES:

1. THE SITE SHALL BE STRIPPED OF ALL VEGETATION PRIOR TO FILL OR CONSTRUCTION OF THE FOUNDATION PAD.
2. ALL FILL SAND SHALL BE 0-15 P.I. WITH A COMPACTION TEST RUN ON EACH 6" LIFT - COMPACTED TO 90% MODIFIED PROCTOR.
3. ANY SOFT AREAS (TREE STUMP HOLES, ETC.) SHALL BE CUT OUT AND RECOMPACTED TO SAID PROCTOR.
4. ALL FOOTINGS TO BEAR ON A MINIMUM NET ALLOWABLE SOIL BEARING CAPACITY OF 1,500 PSF TO BE VERIFIED IN FIELD.
5. THE CONTRACTOR SHALL KEEP THE SITE SO IT WILL HAVE POSITIVE DRAINAGE AT ALL TIMES.
6. ALL EXCAVATIONS SHALL BE FREE OF WATER BEFORE POURING CONCRETE.

NOTE:

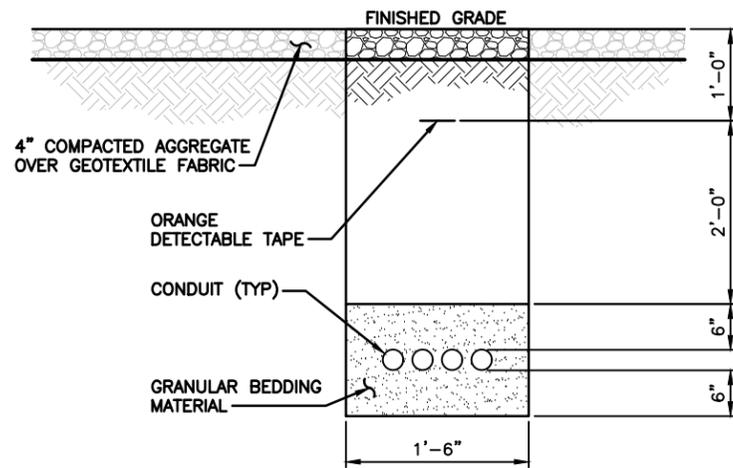
LOCALIZED AREAS OF SOFT OR LOOSE MATERIALS MAY BE ENCOUNTERED AT THE PROPOSED BEARING ELEVATION. THE SOILS MAY REQUIRE COMPACTION USING A PLATE COMPACTOR IN THE FOOTING TRENCH IF FIELD CONDITIONS INDICATE LOOSE GRANULAR SOILS. THE SOILS MAY REQUIRE REMOVAL AND REPLACEMENT WITH AN APPROVED ENGINEERED FILL FOUNDATION DEPTH AND OVER DIG REQUIREMENTS SHALL BE VERIFIED WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND INCLUDED IN THE BID BEFORE CONSTRUCTION. THE EVALUATION OF THE SUB GRADE AND SELECTION OF FILL MATERIALS SHALL BE MONITORED AND TESTED BY A QUALIFIED REPRESENTATIVE OF THE SOILS ENGINEER.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 AND ACI 301, LATEST EDITION. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.
2. EXCEPT WHERE OTHERWISE INDICATED, CONCRETE SHALL BE NORMAL WEIGHT AND WITH MINIMUM 28-DAY COMPRESSIVE STRENGTHS OF $f'_c=4000$ PSI. ALL EXTERIOR EXPOSED CONCRETE SHALL BE AIR ENTRAINED WITH 6% AIR CONTENT.
3. MAXIMUM SLUMP SHALL BE 4".
4. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
5. ALL WIRE AND BARS SHALL BE SECURED PROPERLY BEFORE POURING CONCRETE.
6. EDGE TROWEL ALL EXPOSED CONCRETE EDGES.

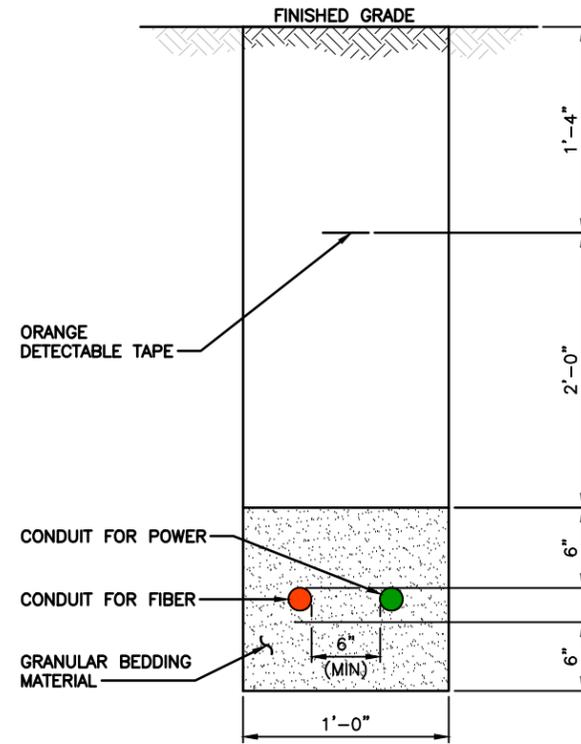
NOTES:

1. SEE SHEET E-1.1 FOR ORIENTATION & CONTINUATION OF CONDUITS.
2. TRENCH, INSTALL CONDUITS & COMPACT SOIL PRIOR TO CONSTRUCTING CONCRETE EQUIPMENT PAD.
3. DO NOT OVER EXCAVATE TRENCHES. KEEP WIDTH TO A MINIMUM.
4. BACKFILL BY PLACING, AND COMPACTING, SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL. THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4" IN LOOSE DEPTH, & COMPACTED WITH HAND OPERATED COMPACTORS.
5. COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.
6. ALL CONDUITS ARE 2" PVC, UNLESS NOTED OTHERWISE.
7. CONTRACTOR SHALL INSTALL SLIP JOINTS ON ALL CONDUITS AS REQUIRE. (SEE SHEET E-2.2, DETAIL 3).



NOTES:

1. SEE SHEET E-1.0 FOR SIZES, LENGTHS & QUANTITY OF UTILITIES.
2. COMMUNICATION AND POWER CONDUITS MAY BE RUN IN SEPARATE TRENCHES. CONDUITS SHALL MAINTAIN 6" MINIMUM SEPARATION.



GENERAL FOUNDATION & CONCRETE NOTES

5

TRENCH DETAIL (SITE)

3

TRENCH DETAIL (INCOMING)

1

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL C.C.
REJ ROBERT E. JENSEN CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE K. SENG 49643 ELECTRICAL

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SHEET DESCRIPTION:

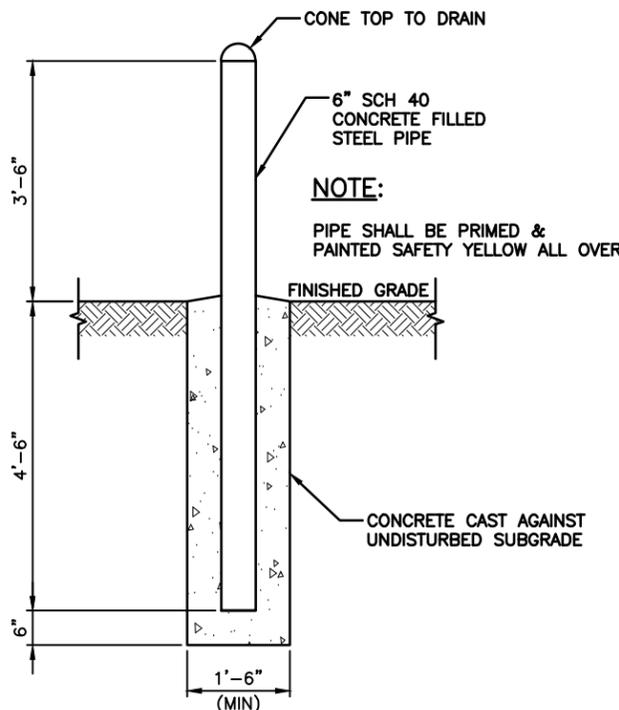
DETAILS

DWG INFORMATION:

DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:

C-5.0



CONCRETE FILLED BOLLARD DETAIL

6

DETAIL NOT USED

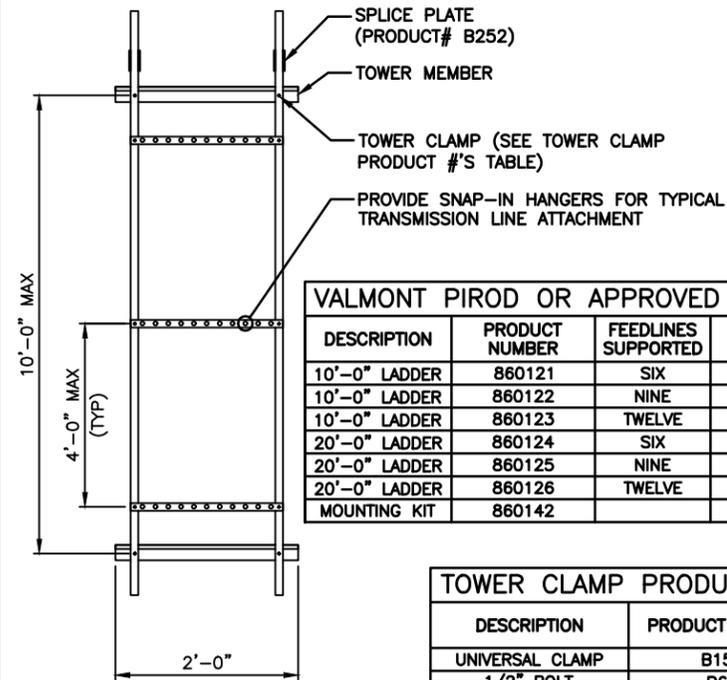
4

CABLE LADDER SUPPORT DETAIL

2

NOTE:

CONTRACTOR TO COORDINATE INSTALLATION W/ VERIZON WIRELESS CONSTRUCTION MANAGER.



VALMONT PIROD OR APPROVED EQUAL

DESCRIPTION	PRODUCT NUMBER	FEEDLINES SUPPORTED	WIDTH
10'-0" LADDER	860121	SIX	20 1/2"
10'-0" LADDER	860122	NINE	28"
10'-0" LADDER	860123	TWELVE	35 1/2"
20'-0" LADDER	860124	SIX	20 1/2"
20'-0" LADDER	860125	NINE	28"
20'-0" LADDER	860126	TWELVE	35 1/2"
MOUNTING KIT	860142		

TOWER CLAMP PRODUCT #'S

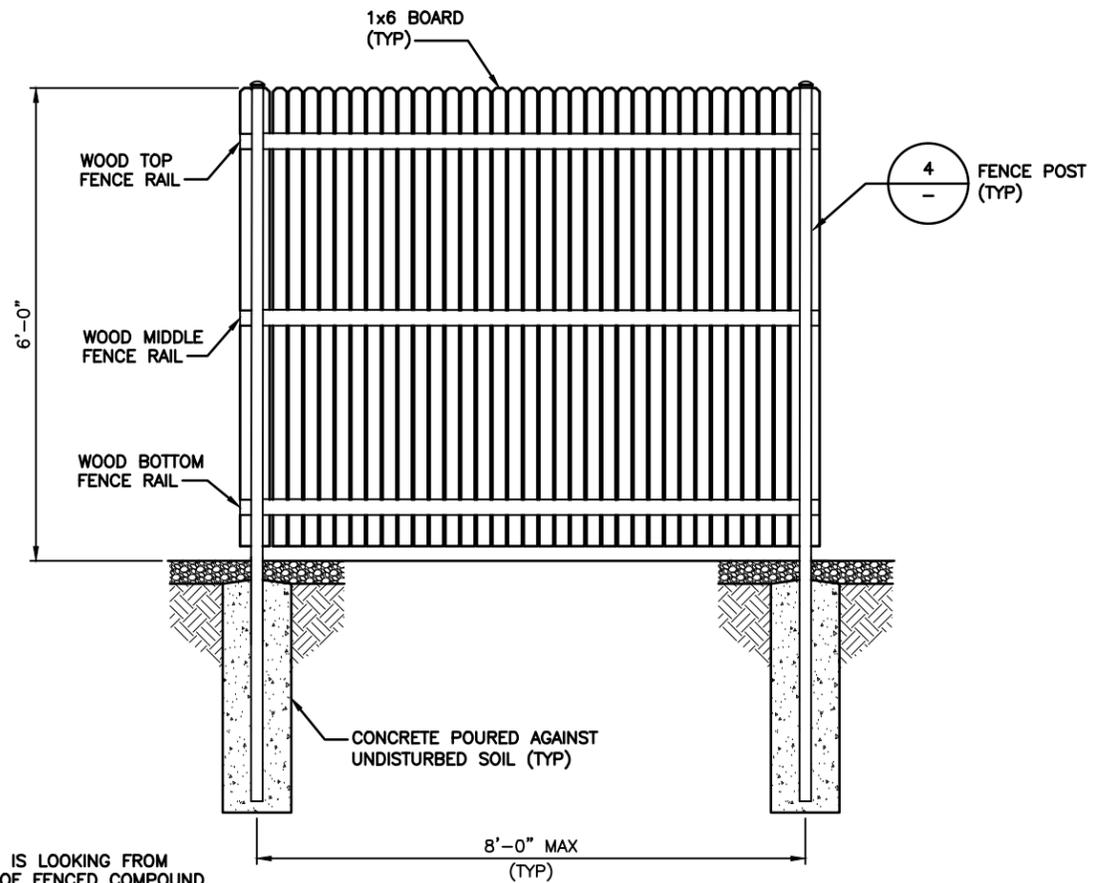
DESCRIPTION	PRODUCT NUMBER
UNIVERSAL CLAMP	B1577
1/2" BOLT	B682
CLIP	B297
SPRINT NUT	B262

FENCE SPECIFICATIONS:

TYPE: WOOD FENCE
 HEIGHT: AS SPECIFIED ON PLAN
 PROTECTION: N/A
 HORIZONTAL SPACING: POSTS AT 8'-0" O.C. (MAX)
 VERTICAL SPACING: MINIMUM (3) HORIZONTAL SUPPORTS (TOP, CENTER, BOTTOM)

GENERAL FENCE NOTES:

- FENCE AND FOUNDATION DESIGN TO BE COMPLETED BY LOCAL FENCING CONTRACTOR.
- POSTS TO BE SPACED 8'-0" O.C. MAX SET IN CONCRETE HAVING A MIN. COMPRESSION STRENGTH OF 2500 P.S.I. @ 28 DAYS. CROWN TO SHED WATER. FOOTING SIZE TO BE 1'-6" x 3'-0" MIN. OR AS REQUIRED BY LOCAL CODE AND DESIGN CONSIDERATIONS.
- BRACE AND TRUSS ASSEMBLY AT EACH CORNER, TERMINAL AND GATE POST.
- ALL GALVANIZED PIPE TO CONFORM TO ASTM-A120 & ASTM-A123.
- ALL GALVANIZED CHAIN-LINK TO CONFORM TO ASTM-A392.
- ALL GALVANIZED FITTINGS TO CONFORM TO ASTM-A153.
- ALL GATES SHALL HAVE DUCK BILL HOLD-OPENS AT FULL OPEN.
- ALL GATES SHALL HAVE AN IN GROUND PLUNGER ROD RECEIVER THAT ACCOMPANIES THE LATCH (1-1/2" GALVANIZED PIPE TYP)
- GATE SHALL HAVE A "STYMILOCK" LOCKING MECHANISM INSTALLED. REQUIRED COMBINATION LOCKS SUPPLIED BY VERIZON CONTRACTOR.



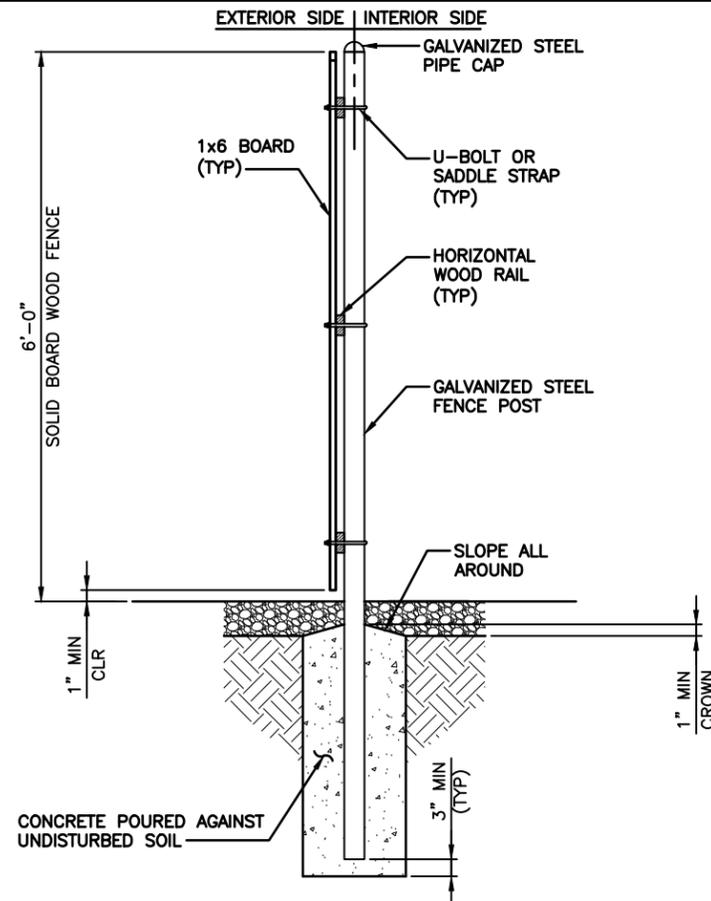
NOTE:
 ELEVATION IS LOOKING FROM INTERIOR OF FENCED COMPOUND.

FENCE NOTES

3

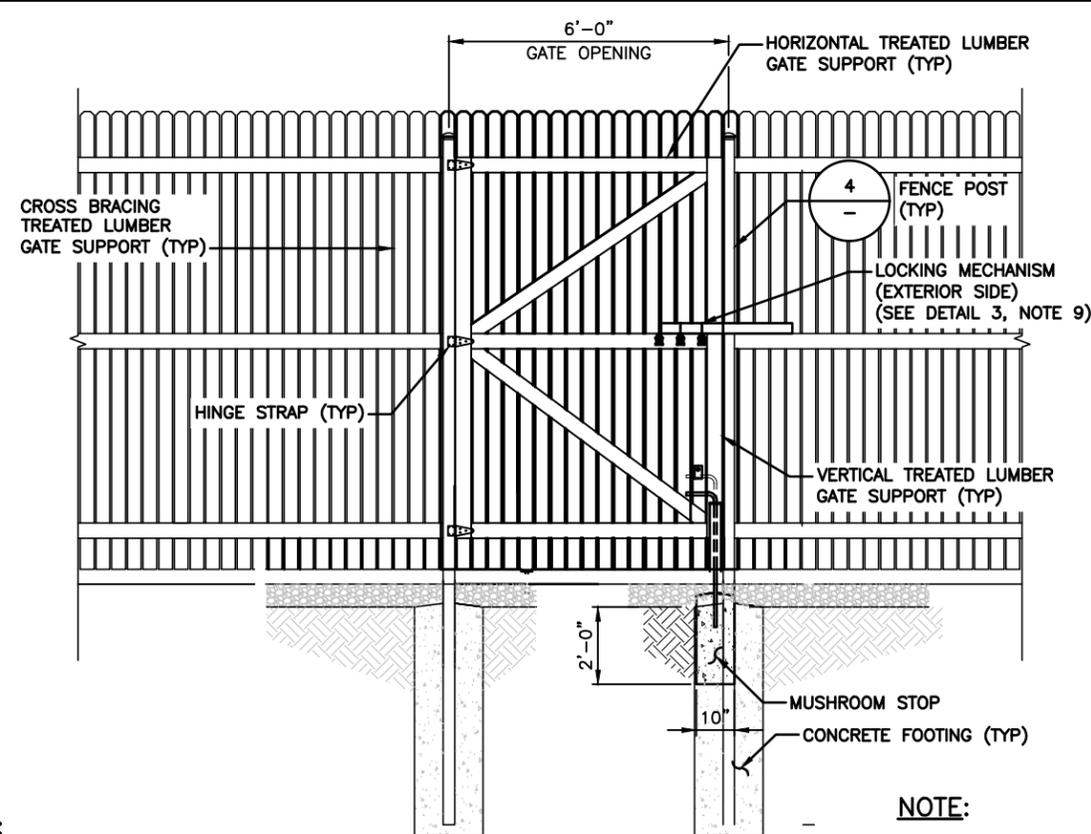
FENCE DETAIL

1



FENCE POST DETAIL

4



NOTE:
 ELEVATION IS LOOKING FROM INTERIOR OF FENCED COMPOUND.

NOTE:
 FENCE & FOUNDATION DESIGN TO BE COMPLETED BY LOCAL FENCING CONTRACTOR.

SINGLE GATE DETAIL

2

PLANS PREPARED FOR:



PLANS PREPARED BY:



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 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL
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 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:

COMPOUND
 FENCE DETAILS

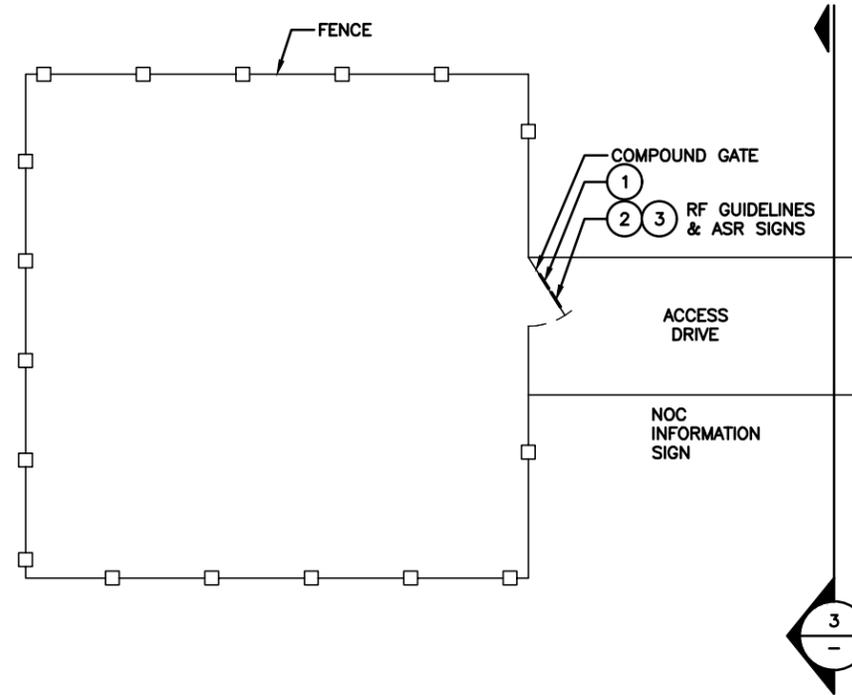
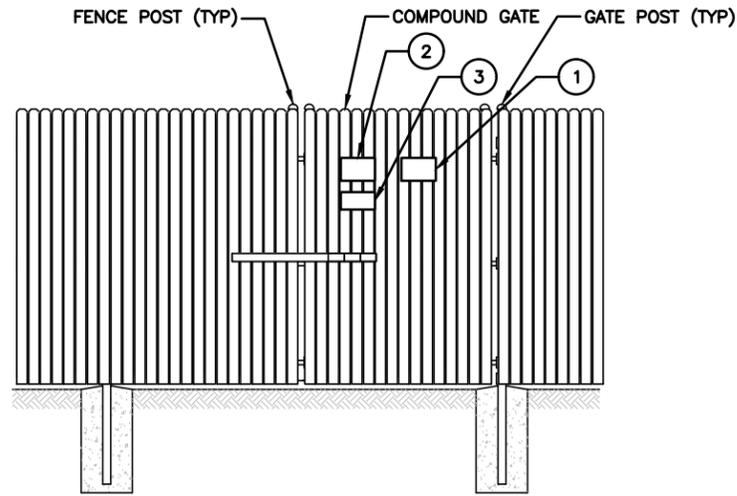
DWG INFORMATION:

DRAWN BY: DML
 CHECKED BY: TKW

SHEET NUMBER:

C-6.0

NEW/ VZW UTILILITY EASEMENT
 ACCESS/ UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/ HIBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES



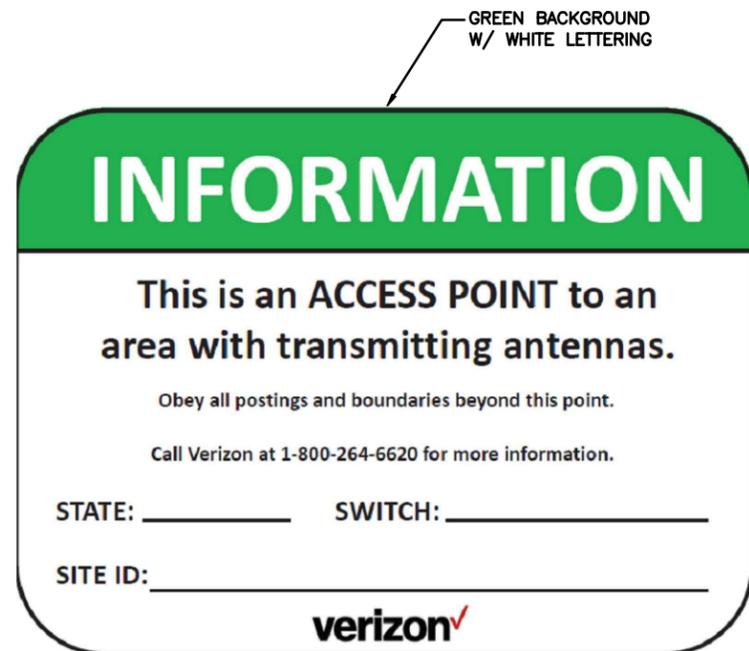
NOTE:
ELEVATION IS LOOKING FROM
EXTERIOR OF FENCED COMPOUND.

FENCE SIGNAGE PLACEMENT

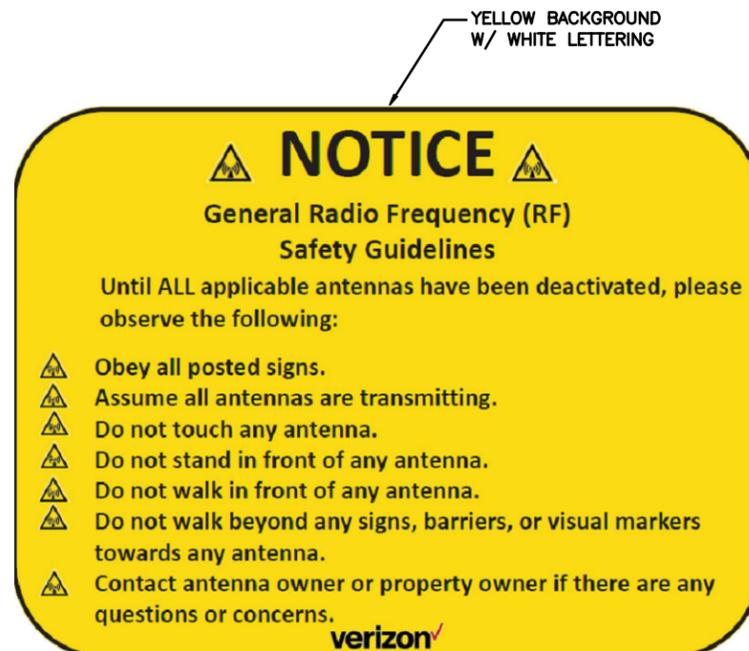
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FENCE SIGNAGE PLAN

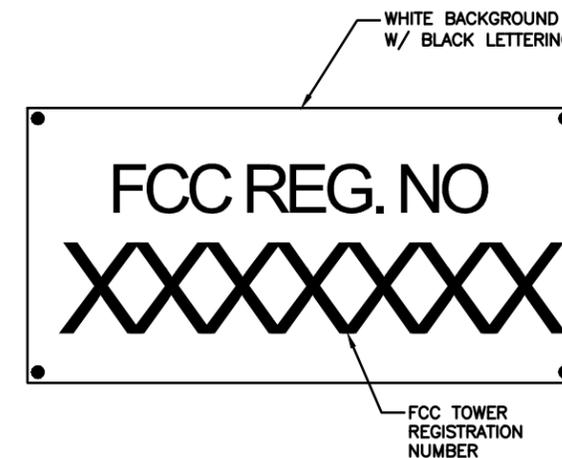
1



NOC INFORMATION SIGN
1'-0" WIDE x 8" HIGH ①



RF GUIDELINES SIGN
1'-0" WIDE x 8" HIGH ②



ASR SIGN
1'-0" WIDE x 6" HIGH ③

FENCE SIGNAGE

2

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL
REJ ROBERT E. JENNER CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANGHAI ENGINEERING 49643 ELECTRICAL

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SIGNAGE DETAILS

DWG INFORMATION:

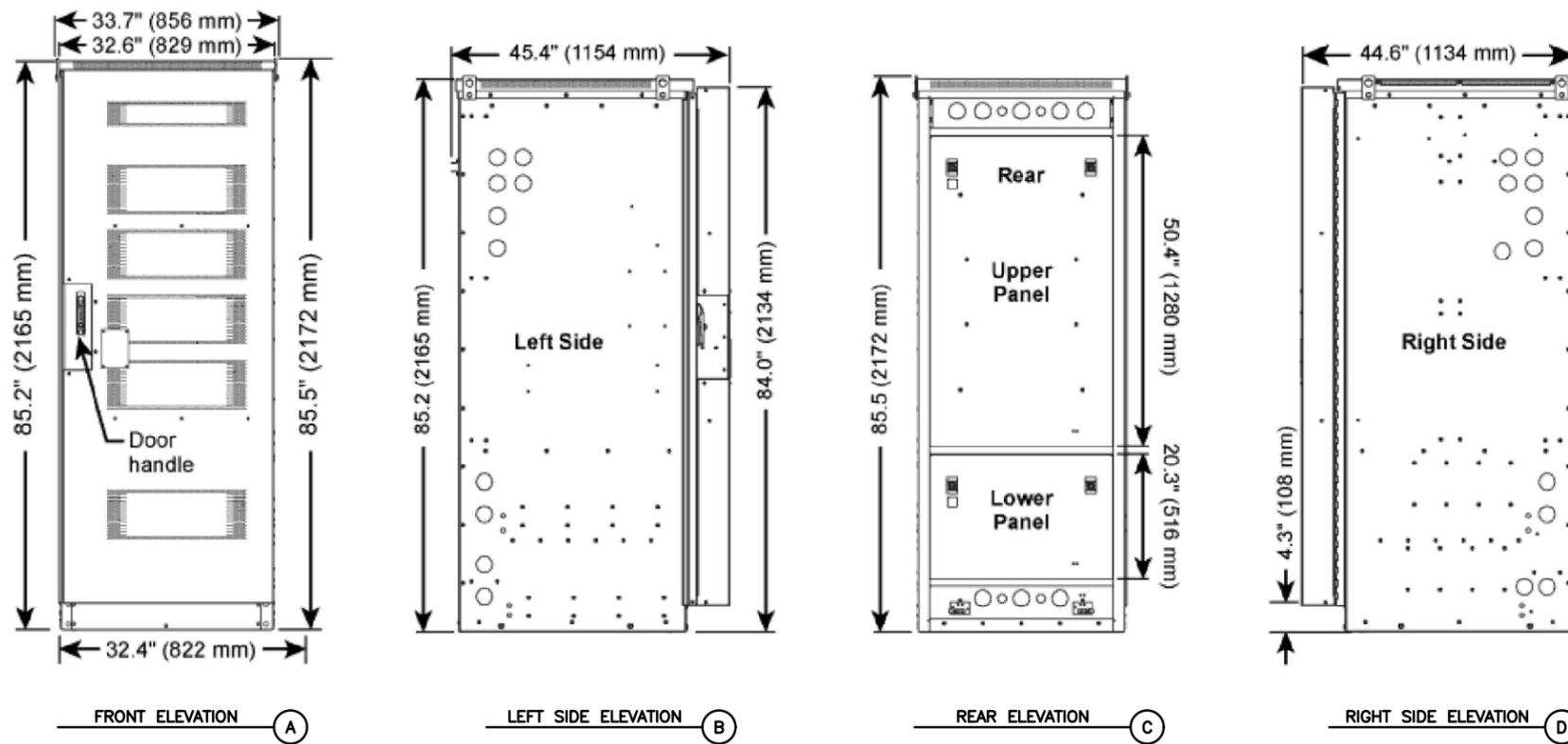
DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:

C-7.0

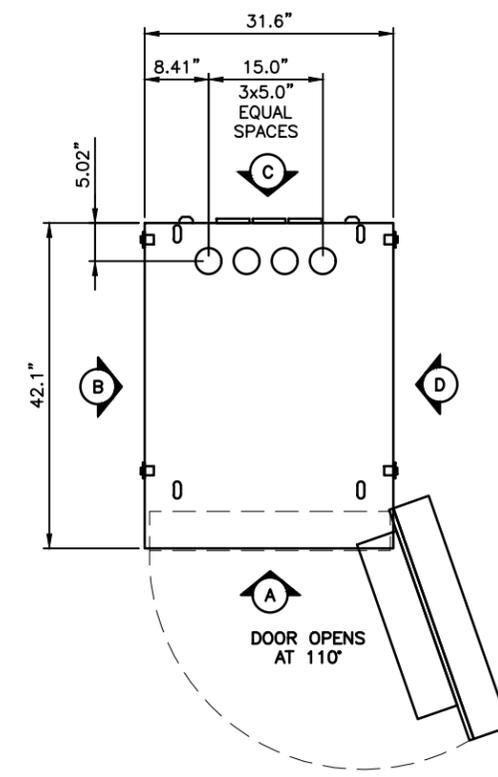
PRELIMINARY ISSUE

NEW VZW PERMITTING EASEMENT
ACCESS/UTILITY EASEMENT
VZW LANDSPACE
PENETRATIONS
RR/HIBU
ANTENNAS
FIBER
POWER/GROUNDING
HYBRID & COAX CABLES



EQUIPMENT CABINET DIMENSIONS – ELEVATION

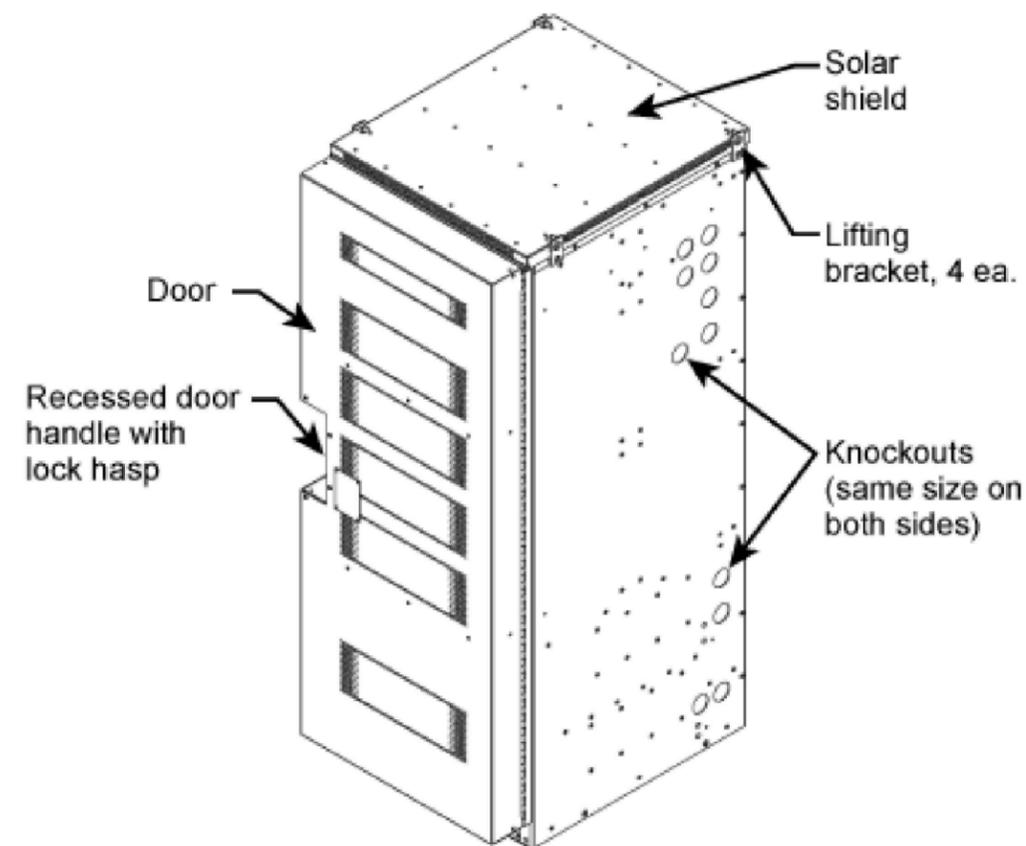
3



EQUIPMENT CABINET DIMENSIONS – PLAN

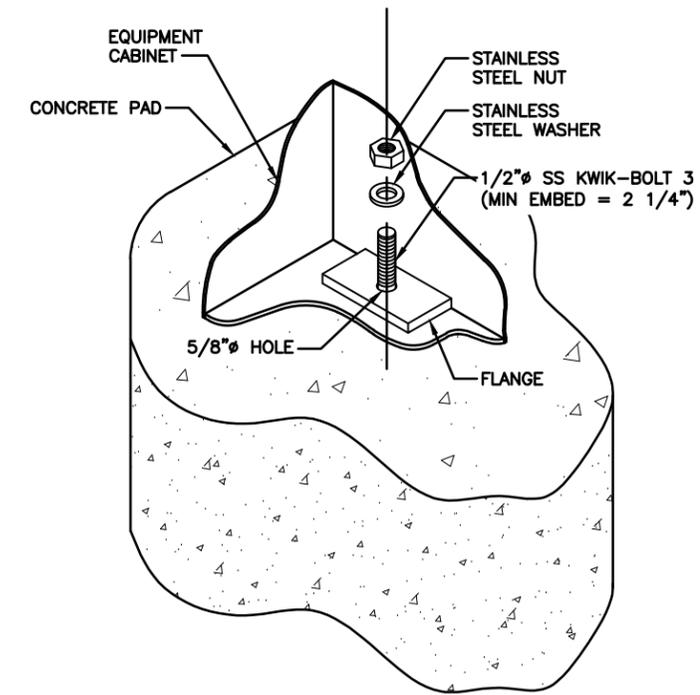
1

SPECIFICATIONS	
CATEGORY	DESCRIPTION
VENDOR	COMMSCOPE
MODEL #	RBAB4
DIMENSIONS	85.5"H x 33.7"W x 45.4"D
WEIGHT	1,955 LBS. AS SHIPPED
FINISH	MULTI-STAGE DRY POWDER POLYESTER PAINT
FINISH COLOR	B262
CABLE ENTRANCE	REFER TO RIGHT
COOLING/HEATING SYSTEM	10K BTU A/C AIR CONDITIONER OR HEAT EXCHANGER



EQUIPMENT CABINET DETAILS

4



NOTES:

1. VERIFY LOCATION & QUANTITY OF ANCHORS WITH EQUIPMENT CABINET INSTALLATION MANUAL.
2. PLACE CABINET GASKET & RUBBER WASHERS AS REQUIRED BY CABINET MANUFACTURER.

CABINET ANCHORING DETAIL

2

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL
REJ ROBERT E. JENSEN CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE D. KING 49643 ELECTRICAL

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CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

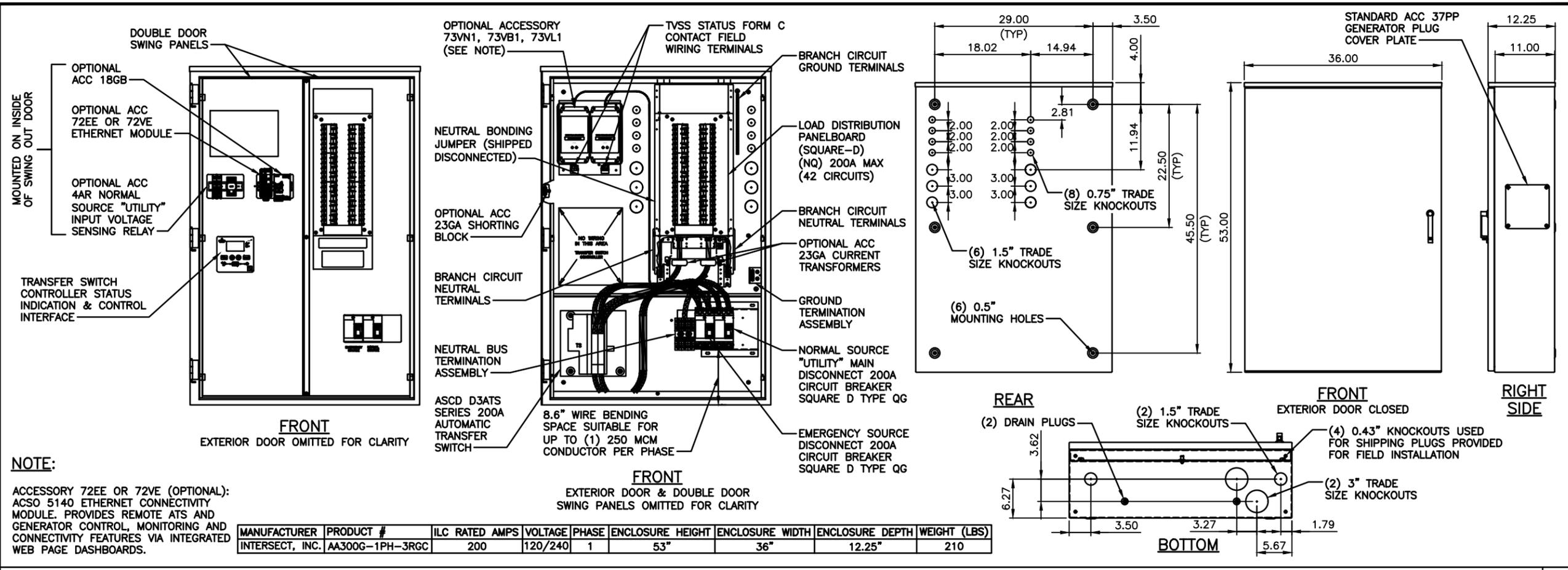
SHEET DESCRIPTION:
EQUIPMENT CABINET
DETAILS

DWG INFORMATION:
DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:
EQ-1.0

NEW/VZW
IMPROVEMENT
EASEMENT
ACCESS/UTILITY
EASEMENT
VZW LANDSPACE
PENETRATIONS
RR/RIBBU
ANTENNAS
FIBER
POWER/
GROUNDING
HYBRID &
COAX CABLES

NEW/VZW EASEMENT
ACCESS/UTILITY EASEMENT
VZW LANDSPACE
PENETRATIONS
RR/BBU
ANTENNAS
FIBER
POWER/ GROUNDING
HYBRID & COAX CABLES



ILC DETAILS

1



2

PLANS PREPARED FOR:

verizon

PLANS PREPARED BY:

SSC

ENGINEERING LICENSE:
STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAEL
REJ ROBERT E. JENSEN
TMS TERRA
SDK SHANE K. SHAW
CIVIL
CIVIL
ELECTRICAL
ELECTRICAL

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APPLICANT LOCATION NUMBER:
313884

SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:
POWER CABINET
DETAILS

DWG INFORMATION: DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:
EQ-1.1

MOUNT NOTE:

TOWER MANUFACTURER SHALL SUPPLY SECTOR FRAME MOUNTS THAT MEET VERIZON WIRELESS' NSTD-445. IF THE SITE SPECIFIC REQUIRED MOUNT CLASSIFICATION IS GREATER THAN THE MINIMUM REQUIRED MOUNT CLASSIFICATION (M750R(F₂)-4[6]), THEN THE REQUIRED SITE SPECIFIC MOUNT CLASSIFICATION SHALL BE USED.

NOTE:

GC TO REFER TO THE "FINAL RFDS" FOR RF CONFIGURATION DETAIL

GENERAL NOTES:

1. ANTENNAS SHALL BE DESIGNATED FROM RIGHT TO LEFT, FACING THE ASSEMBLY FROM THE GROUND. LEFT TO RIGHT FACING THE BACK OF THE ANTENNA.
2. THE OUTER MOST ANTENNAS ON EACH FACE SHALL BE DESIGNATED AS THE RECEIVER ANTENNAS. THE INNER ANTENNAS SHALL BE DESIGNATED AS THE TRANSMIT ANTENNAS.
3. EACH TRANSMISSION LINE SHALL BE LABELED WITH BRASS "TOE TAGS" (GRAINGER PART# 1F035-8) STAMPED WITH 1/4" LETTERS/NUMBERS STAMPS (GRAINGER PART# 3W639). THE LABELS SHALL BE ATTACHED WITH A SEMIPERMANENT METHOD (I.E. BLACK UV RESISTANT CABLE TIES). THE TAGS SHALL BE PLACED SO AS NOT TO COME IN CONTACT WITH THE CONNECTOR ON THE LINE AND THE METAL OF THE TOWER. LINES SHALL BE LABELED AT THE TOP, BOTTOM AT ENTRY PORT.
4. EACH LINE SHALL ALSO BE LABELED AT THE LIGHTING/SURGE PROTECTOR MOUNTING PLATE WITH A PRINTABLE LABEL MAKER TO INDICATE LINE NUMBER AND FUNCTION, THE SAME AS THE TOE TAG.
5. THE TAG LABELING SHALL BE DESIGNATED IN THE ANTENNA KEY. FOR LUCENT USE A-ALPHA, B-BETA, AND G-GAMMA. FOR MOTOROLA USE X-ALPHA, Y-BETA, AND Z-GAMMA.
6. IN TWO-ANTENNA CONFIGURATION WHERE ONE ANTENNA WILL BE DUPLEXED, THE DUPLEXED ANTENNA SHALL BE LABELED AS RECEIVE.
7. CONTRACTOR SHALL FIELD VERIFY THE EXACT TMA'S (IF THEY ARE REQUIRED) PER THE OPERATIONS MANAGER.
8. FEEDLINE LENGTHS INDICATED ARE APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL LENGTH BEFORE ORDERING.
9. CONTRACTOR SHALL INSTALL PLATFORM OR MOUNTING BRACKETS AND HARDWARE FOR ALL ANTENNAS AND SHALL BE PER THE TOWER MANUFACTURERS STANDARD DETAILS OR APPROVED EQUAL.
10. ALL ANTENNAS AND CABLES TO BE TAGGED WITH CARRIER ID.

EQUIPMENT FURNISHED AND/OR INSTALLED BY:

DESCRIPTION	FURNISHED	INSTALLED
ANCHOR BOLTS FOR TOWER	TOWER VENDOR	CONTRACTOR
ANTENNA MOUNTS	TOWER VENDOR	CONTRACTOR
ANTENNAS	VERIZON WIRELESS	CONTRACTOR
CABLE LADDER	TOWER VENDOR	CONTRACTOR
FEEDLINE CABLES	VERIZON WIRELESS	CONTRACTOR
CONNECTORS	CONTRACTOR	CONTRACTOR
ENTRY PORT BOOTS	CONTRACTOR	CONTRACTOR
GPS ANTENNA	VERIZON WIRELESS	CONTRACTOR
GROUND KITS	CONTRACTOR	CONTRACTOR
HANGAR KITS	CONTRACTOR	CONTRACTOR
ICE BRIDGE MATERIAL	CONTRACTOR	CONTRACTOR
RF JUMPR'S (TOP)	CONTRACTOR	CONTRACTOR
EQUIPMENT PLATFORM/CANOPY	VERIZON WIRELESS	CONTRACTOR
TOWER	VERIZON WIRELESS	CONTRACTOR
TOWER BUS BARS	TOWER VENDOR	CONTRACTOR
OVP'S	VERIZON WIRELESS	CONTRACTOR
RRU'S	VERIZON WIRELESS	CONTRACTOR

NOTE:

LOCATIONS OF ANTENNAS AS SHOWN HAVE BEEN APPROVED BY CLIENT AND/OR CLIENT'S RADIO FREQUENCY ENGINEERS. SSC ASSUMES NO RESPONSIBILITY FOR, NOR HAS SSC PERFORMED ANY INVESTIGATIONS OR STUDIES CONCERNING, THE COMPLIANCE OR NONCOMPLIANCE OF SAID ANTENNA LOCATIONS WITH ANY FCC RADIO FREQUENCY EXPOSURE REGULATIONS.

STRUCTURE INFORMATION IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. STRUCTURAL INTEGRITY OF SUPPORTING STRUCTURE, ANTENNA MOUNTS, AND FOUNDATION SHALL BE VERIFIED AS ACCEPTABLE BY ENGINEER CERTIFIED STRUCTURAL ANALYSIS, UTILIZING THE LOADING REPRESENTED WITHIN THESE DRAWINGS PRIOR TO THE EXECUTION OF EQUIPMENT CHANGES CONTAINED IN THESE DRAWINGS. CONTRACTOR SHALL OBTAIN ALL STRUCTURAL REPORTS AND FOLLOW ALL RECOMMENDATIONS.

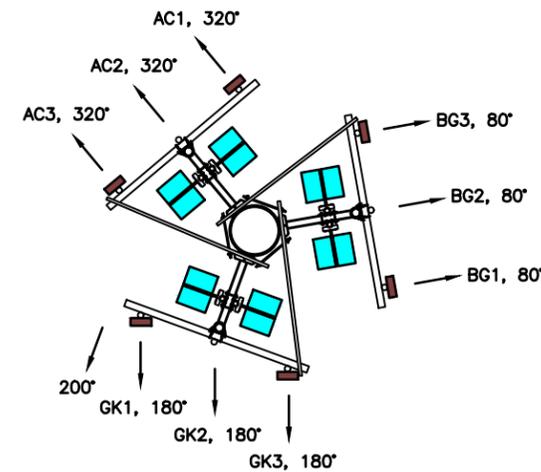
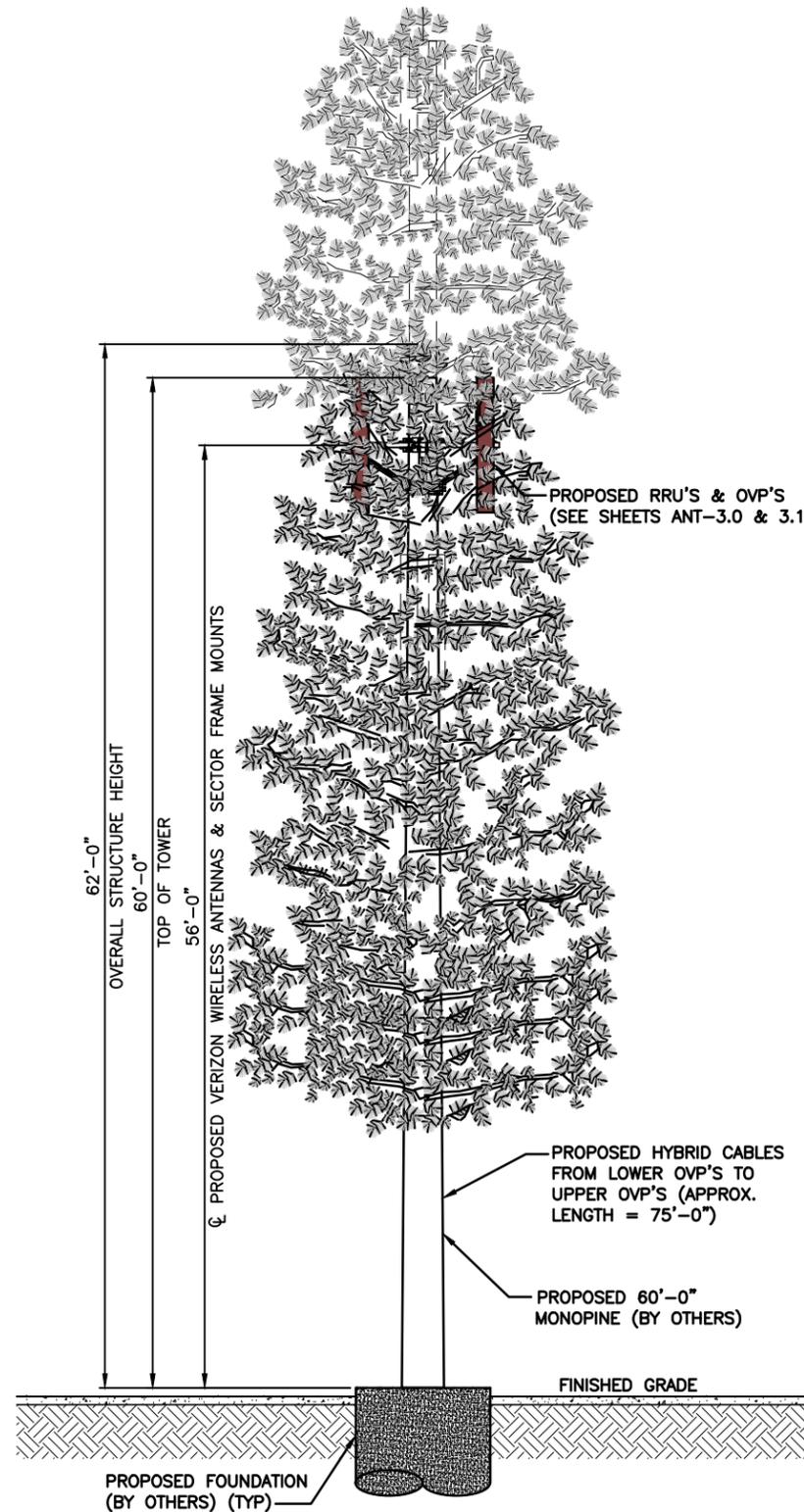
NOTES:

1. ANTENNAS MUST BE SPACED WITHIN 13.5" CENTER-TO-CENTER
2. THE ANTENNA LAYOUT IS FOR ANTENNA ORIENTATION ONLY. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE PER TOWER MANUFACTURER'S STANDARD DETAILS.



0° = TRUE NORTH

ANTENNA LAYOUT
NOT TO SCALE



PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAEL
REJ ROBERT E. JENSEN
TMS TERRA
SDK S...
CIVIL
CIVIL
ELECTRICAL
ELECTRICAL
C.C.
E.I.E.

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CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

TOWER ELEVATION &
ANTENNA INFORMATION

DWG INFORMATION:

DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:

ANT-1.0

NEW/VZW
UTILITIES
EASEMENT

ACCESS/UTILITY
EASEMENT

VZW LANDSPACE

PENETRATIONS

RR/HIBU

ANTENNAS

FIBER

POWER/
GROUNDING

HYBRID &
COAX CABLES

NOTE:
GC TO REFER TO THE "FINAL RFDS"
FOR RF CONFIGURATION DETAIL

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL CO
REJ ROBERT E. JENNER CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL EIE
SDK SHANGHAI ENGINEERING 49643 ELECTRICAL

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313884

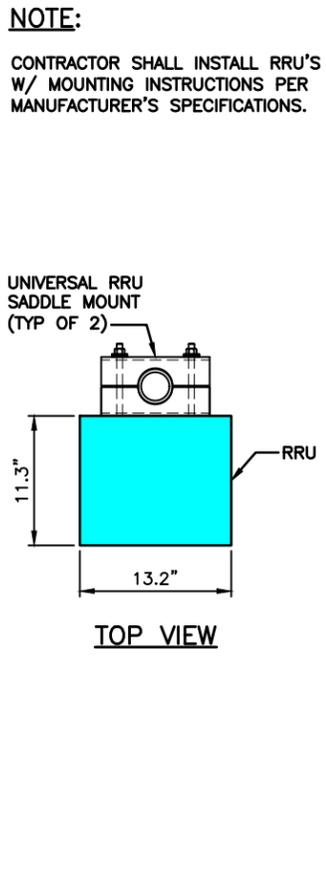
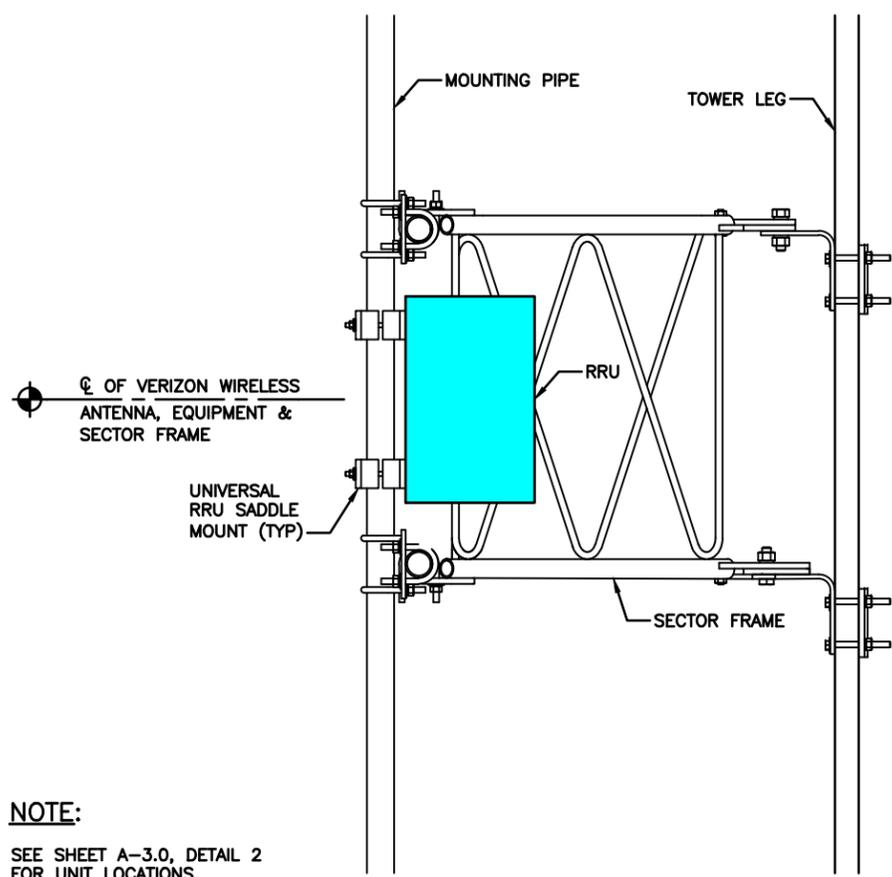
SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:
RF DIAGRAM

DWG INFORMATION: DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:
ANT-2.0

NEW/REV
 ACCESS/UTILITY
 EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RRR/BBU
 ANTENNAS
 FIBER
 POWER/
 GROUNDING
 HYBRID &
 COAX CABLES



NOTE:
 SEE SHEET A-3.0, DETAIL 2 FOR UNIT LOCATIONS.

RRU SECTOR FRAME MOUNTING DETAILS

4

DETAIL NOT USED

1

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL
 REJ ROBERT E. JENSEN CIVIL
 TMS TERRA ENGINEERING 36490 ELECTRICAL
 SDK SHANGHAI ENGINEERING 49643 ELECTRICAL

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APPLICANT SITE NAME:
 CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:
 EQUIPMENT DETAILS
 (1 OF 2)

DWG INFORMATION:
 DRAWN BY: DML
 CHECKED BY: TKW

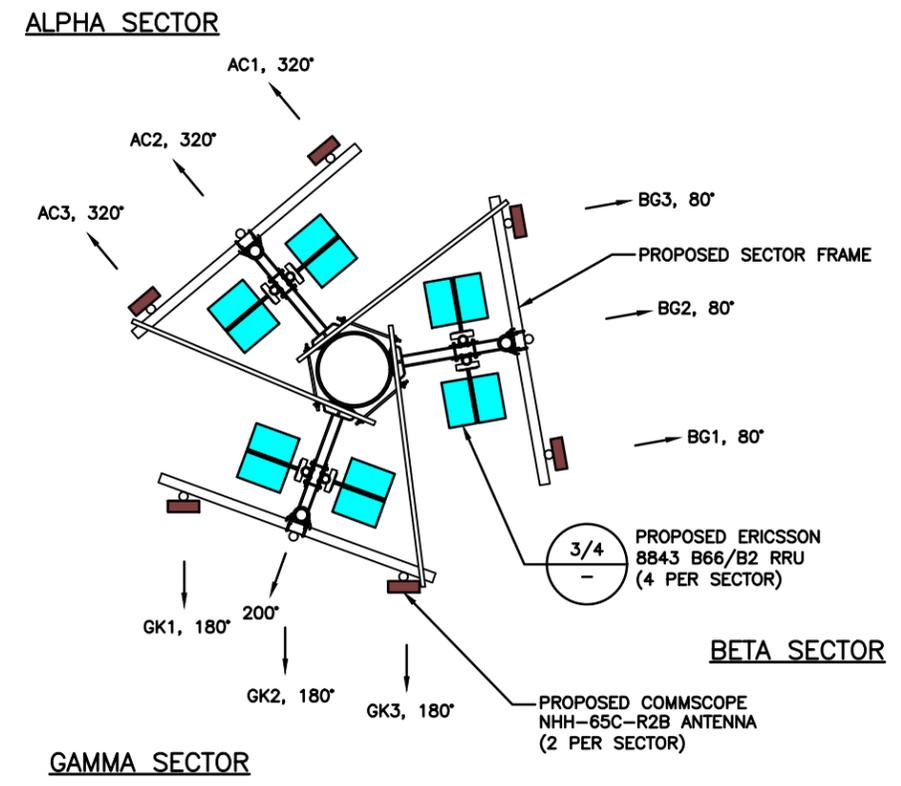
SHEET NUMBER:
 ANT-3.0



SPECIFICATIONS:
 VENDOR: ERICSSON
 MODEL#: 4449 B13/B5 OR 8843 B66/B2
 DIMENSIONS (HxWxD): 18" x 13.2" x 11.3"
 WEIGHT: 75 LBS

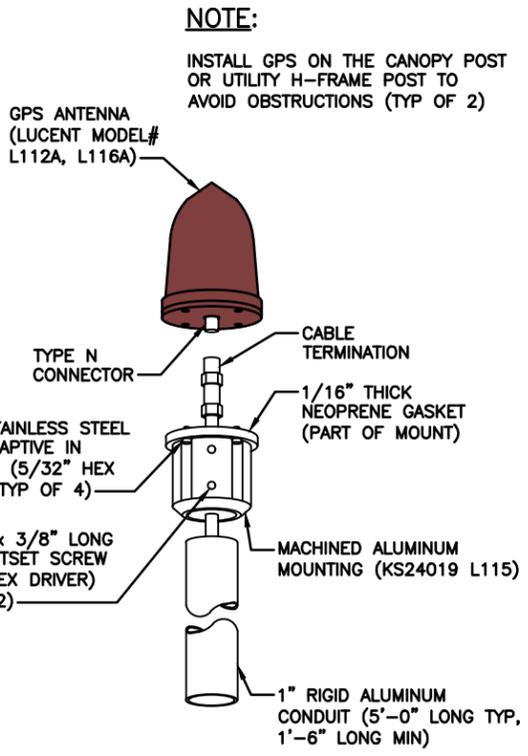
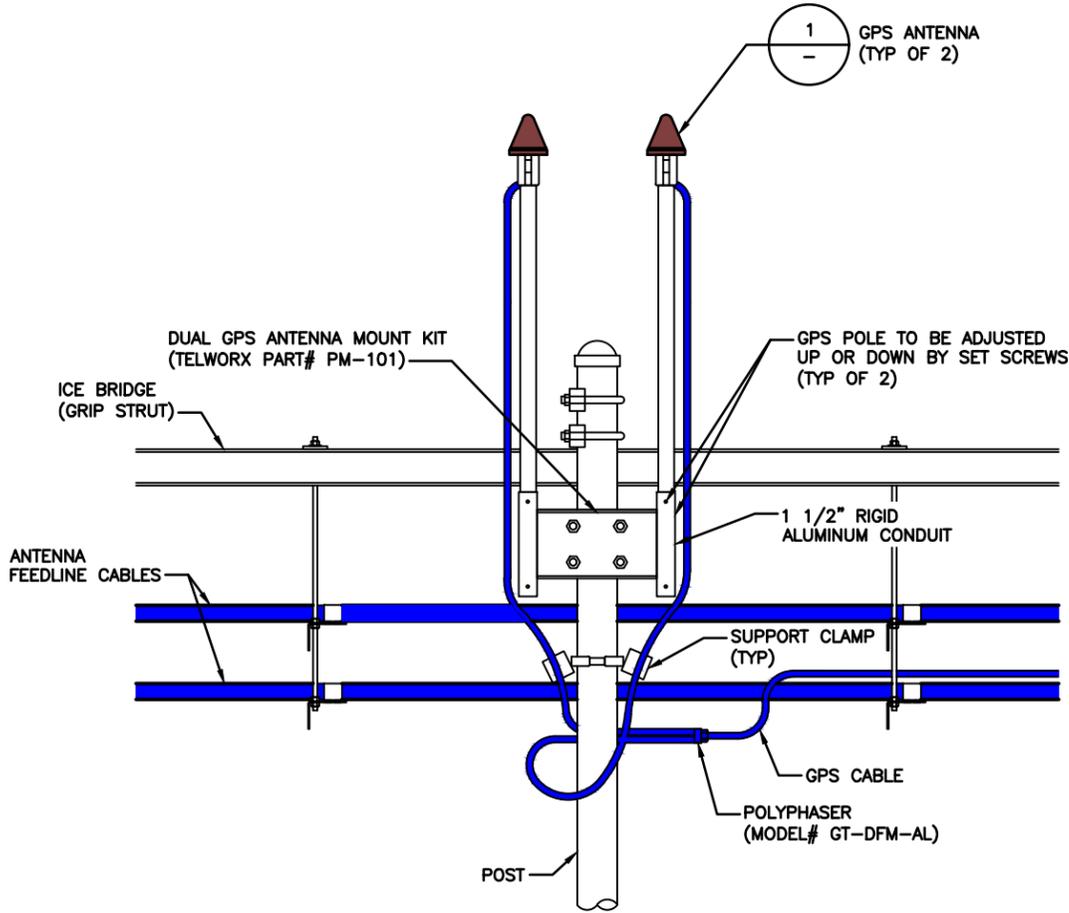
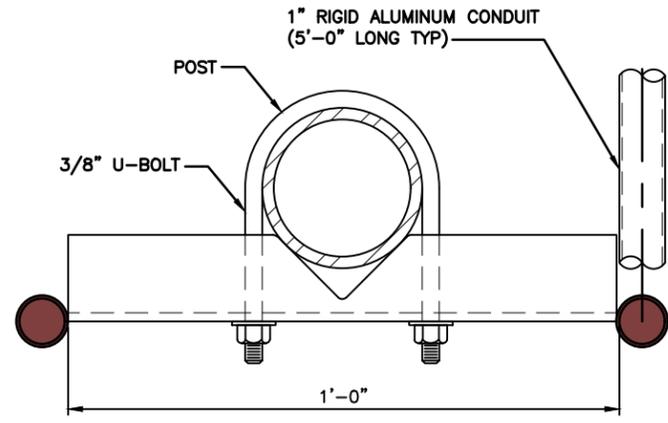
RRU DETAIL

3



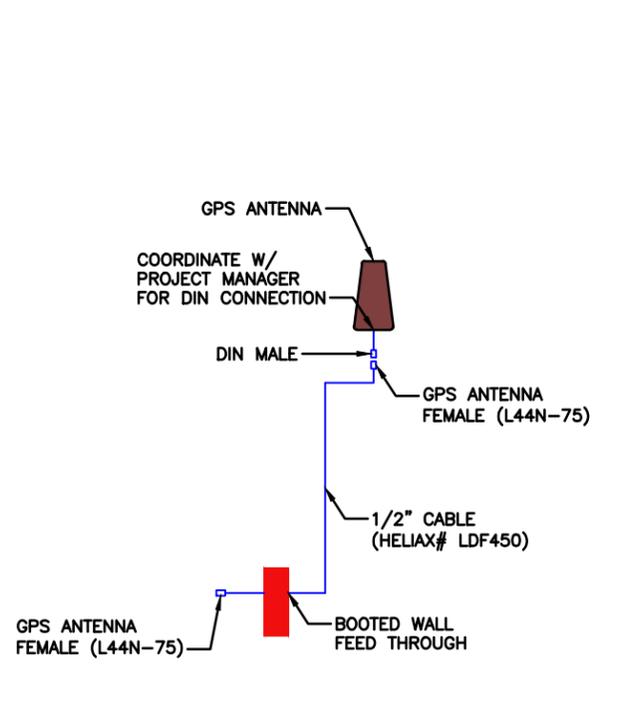
SECTOR EQUIPMENT LAYOUT

2



GPS ANTENNA DETAIL 3

DETAIL NOT USED 1



GPS ANTENNA CABLE RUN DIAGRAM 4

MOUNT GPS ANTENNA TO POST

- ICE BRIDGE POST – IF THERE ARE NO TREES OR OBSTRUCTIONS BLOCKING THE SOUTHERN HEMISPHERE USE BACK TO BACK CLAMPS ON TO ICE BRIDGE POST OR UTILITY RACK POST.
 - USING DUAL MOUNT GPS ANTENNA KIT (TELWORX# PM-101 KIT OR APPROVED EQUAL) THE KIT INCLUDES (2) PC TELWORX GPS ANTENNAS, THE DUAL MOUNT, 2 SURGE ARRESTORS, AND COAX PORT BOOT THAT CAN HOLD 4 1/2" COAX.
 - MOUNT GPS ANTENNA MOUNT (BOTTOM) 7'-0" OFF GROUND, THE GPS POLES CAN BE ADJUSTED UP/DOWN BY SET SCREW ON BASE THAT HOLDS POLES, WHEN EXTENDED UP THE GPS ANTENNAS SHOULD BE JUST ABOVE THE CANOPY LINE. WHEN LOWERED THEY SHOULD BE APPROXIMATELY 8'-6" OFF THE GROUND AND REACHABLE FROM A 6'-0" LADDER.

MOUNT GPS ANTENNAS TO WALL OR TOWER

- BUILDING – IF THERE ARE NO TREES OR OBSTRUCTIONS BLOCKING THE SOUTHERN HEMISPHERE AND IF THERE ARE NO EQUIPMENT RACK PIPES:
 - USING DUAL MOUNT GPS ANTENNA KIT (TELWORX# PM-101 KIT OR APPROVED EQUAL) WALL MOUNTED APPLICATION SHALL USE OFFSET BRACKETS.
- TOWER – IF THERE ARE NEARBY TREES, BUILDINGS OR OTHER OBSTRUCTIONS, (2) ANTENNAS, COAX, AND MOUNTS WILL BE NEEDED (1) INSTALLED FOR REDUNDANCY, (1) WILL BE ATTACHED AT SAME LEVEL AS CELLULAR ANTENNAS USING EXISTING MOUNTS IF POSSIBLE WITH BACK TO BACK CLAMPS.

CONTRACTORS SHALL ORDER DUAL TELWORX GPS ANTENNAS FROM THE FOLLOWING CONTACT PERSON:

EARL J. OSTERTAG
SR. EQUIPMENT ENGINEER –
KSMO (816) 868-0009

TELWORX COMMUNICATIONS, LLC
BUSINESS DEVELOPMENT DIRECTOR
CENTRAL REGION
239 WELCOME CENTER BLVD
LEXINGTON, N.C. 27295
P.O.C. ANDREW TRIPP
WORK: (773) 706-0107
WWW.TELWORX.NET
WWW.TOWERWORX.NET

GPS MOUNTING INSTRUCTIONS 2

GPS ANTENNA MOUNTING DETAIL 5

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL
REJ ROBERT E. JENKINS CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANGHAI ENGINEERING 49643 ELECTRICAL

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SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

EQUIPMENT DETAILS
(2 OF 2)

DWG INFORMATION: SHEET NUMBER:

DRAWN BY: DML
CHECKED BY: TKW
ANT-3.1

NEW VZW UTILITIES EASEMENT
ACCESS/UTILITY EASEMENT
VZW LANDSPACE
PENETRATIONS
RR/HIBU
ANTENNAS
FIBER
POWER/GROUNDING
HYBRID & COAX CABLES

NEW VZW UTILILITY EASEMENT
 ACCESS/UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/HIBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

PROVIDE 6" COMPACTED AGGREGATE (CDOT ABC CLASS 6) OVER GEOTEXTILE FABRIC. EXTEND GRAVEL 1'-0" OUTSIDE THE NEW FENCE

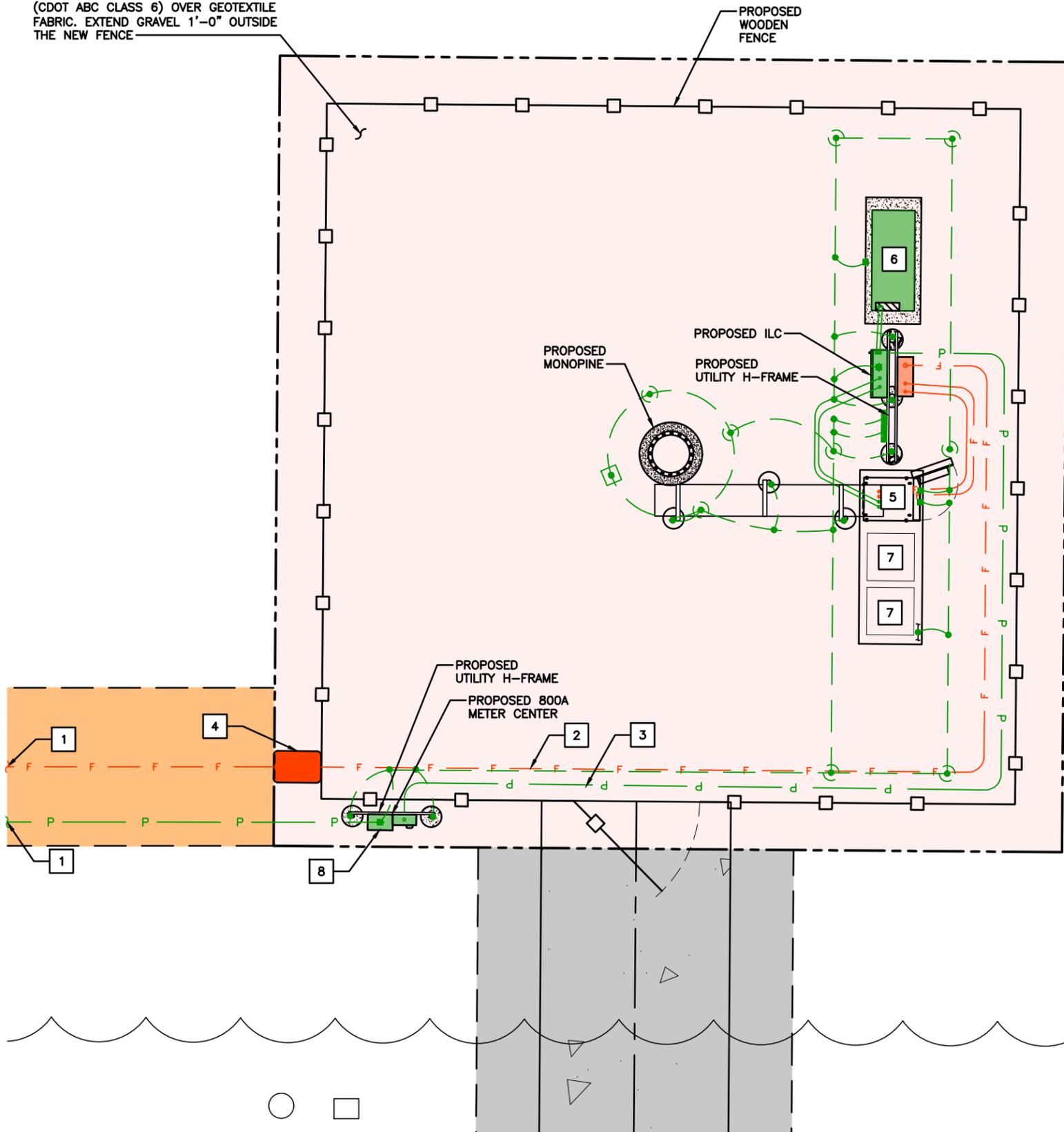
PROPOSED WOODEN FENCE

PROPOSED MONOPINE

PROPOSED ILC

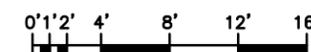
PROPOSED UTILITY H-FRAME

PROPOSED UTILITY H-FRAME
 PROPOSED 800A METER CENTER



KEYED NOTES:

- 1 SEE OVERALL UTILITY PLAN (SHEET E-1.0) FOR SIZES, LENGTHS & CONTINUATION OF UTILITIES.
- 2 PROPOSED 2" CONDUIT W/ A 3-CELL FABRIC INNERDUCT FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE AT COMPOUND TO EQUIPMENT CABINET. (APPROX. LENGTH = 75'-0")
- 3 PROPOSED 2" CONDUIT FOR SECONDARY POWER FROM METER CENTER TO ILC ON UTILITY H-FRAME (APPROX. LENGTH = 80'-0")
- 4 PROPOSED 3'-0"x2'-0"x2'-0" TRAFFIC RATED FIBER HANDHOLE
- 5 PROPOSED EQUIPMENT CABINET
- 6 PROPOSED GENERATOR
- 7 FUTURE CABINET
- 8 PROPOSED METER SOCKET



ENLARGED UTILITY PLAN

3/16" = 1'-0" (22"x34")
 3/32" = 1'-0" (11"x17")

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL COO
 REJ ROBERT E. JENNER CIVIL
 TMS TERRA ENGINEERING 36490 ELECTRICAL
 SDK SHAWN R. KING 49643 ELECTRICAL
 PRELIMINARY ISSUE

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:
 CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

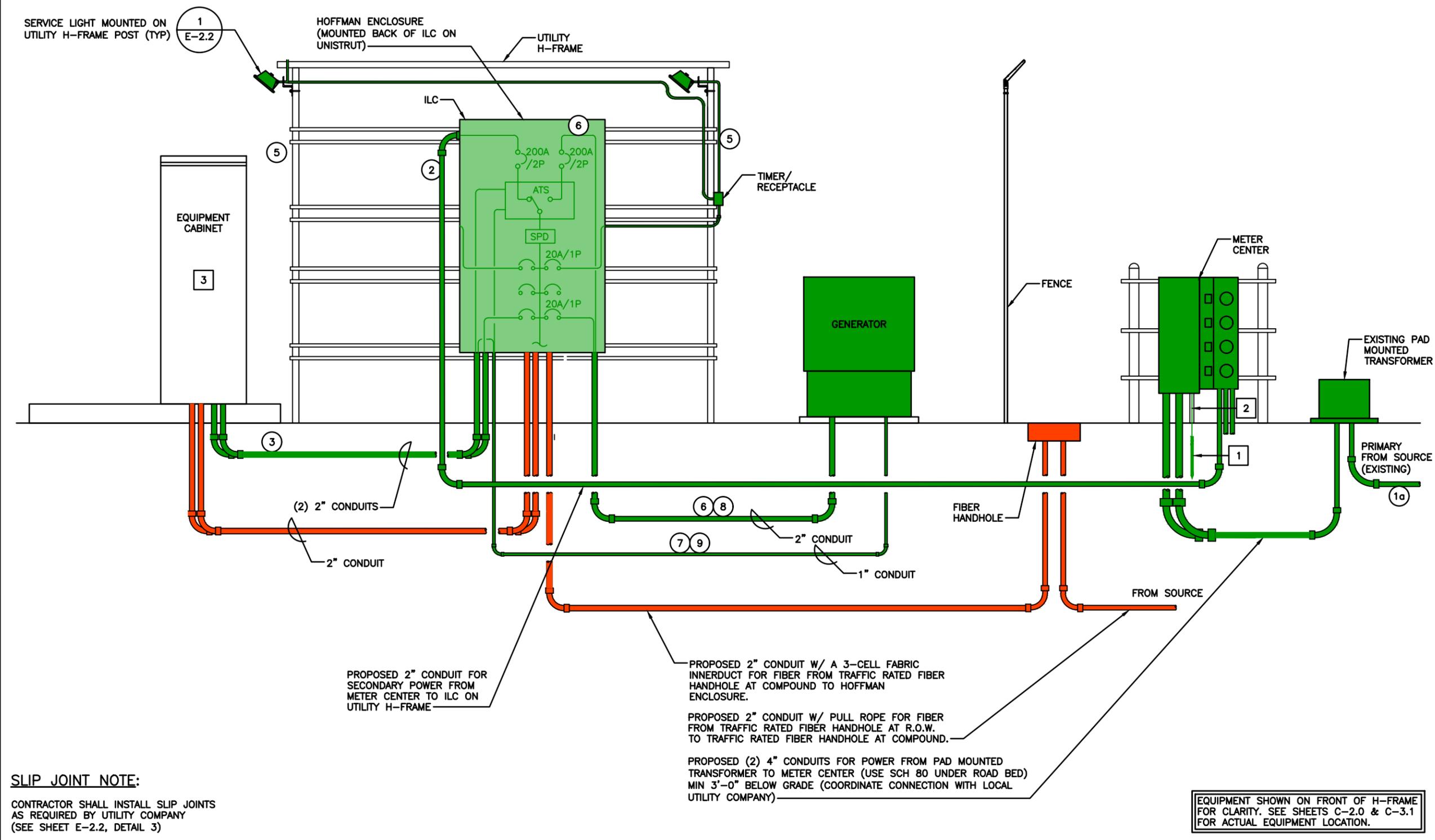
SHEET DESCRIPTION:
 ENLARGED
 UTILITY PLAN

DWG INFORMATION:
 DRAWN BY: DML
 CHECKED BY: TKW

SHEET NUMBER:
 E-1.1

KEYED NOTES:

- 1 3/4"Ø x 10'-0" LONG COPPER CLAD STEEL GROUND ROD. (SEE SHEET G-4.0, DETAIL 3)
- 2 #2/0 STRANDED INSULATED COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" PVC CONDUIT ABOVE GRADE.
- 3 CONTRACTOR TO PROVIDE AN AC POWER SMOKE DETECTOR (GENTEXT PART# 7100F OR EQUIVALENT) FOR EACH CABINET & (1) HIGH TEMPERATURE ALARM (GRAINGER PART# 1UHH2) FOR THE EQUIPMENT CABINET.
- # SEE SHEET E-2.1 FOR CIRCUIT SCHEDULE



SLIP JOINT NOTE:

CONTRACTOR SHALL INSTALL SLIP JOINTS AS REQUIRED BY UTILITY COMPANY (SEE SHEET E-2.2, DETAIL 3)

PROPOSED 2" CONDUIT FOR SECONDARY POWER FROM METER CENTER TO ILC ON UTILITY H-FRAME

PROPOSED 2" CONDUIT W/ A 3-CELL FABRIC INNERDUCT FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE AT COMPOUND TO HOFFMAN ENCLOSURE.

PROPOSED 2" CONDUIT W/ PULL ROPE FOR FIBER FROM TRAFFIC RATED FIBER HANDHOLE AT R.O.W. TO TRAFFIC RATED FIBER HANDHOLE AT COMPOUND.

PROPOSED (2) 4" CONDUITS FOR POWER FROM PAD MOUNTED TRANSFORMER TO METER CENTER (USE SCH 80 UNDER ROAD BED) MIN 3'-0" BELOW GRADE (COORDINATE CONNECTION WITH LOCAL UTILITY COMPANY)

EQUIPMENT SHOWN ON FRONT OF H-FRAME FOR CLARITY. SEE SHEETS C-2.0 & C-3.1 FOR ACTUAL EQUIPMENT LOCATION.

UTILITY RISER DIAGRAM

PLANS PREPARED FOR:

PLANS PREPARED BY:

ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL
REJ ROBERT E. JENSEN CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE K. SHAW 49643 ELECTRICAL

PRELIMINARY ISSUE

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ISSUED FOR REVIEW		08/19/19	DML	A

APPLICANT SITE NAME:
CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
313884

SITE ADDRESS:
2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:
UTILITY
RISER DIAGRAM

DWG INFORMATION: DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:
E-2.0

NEW/VZW
NEW/UTILITY
EASEMENT

ACCESS/UTILITY
EASEMENT

VZW LANDSPACE

PENETRATIONS

RR/RIBBU

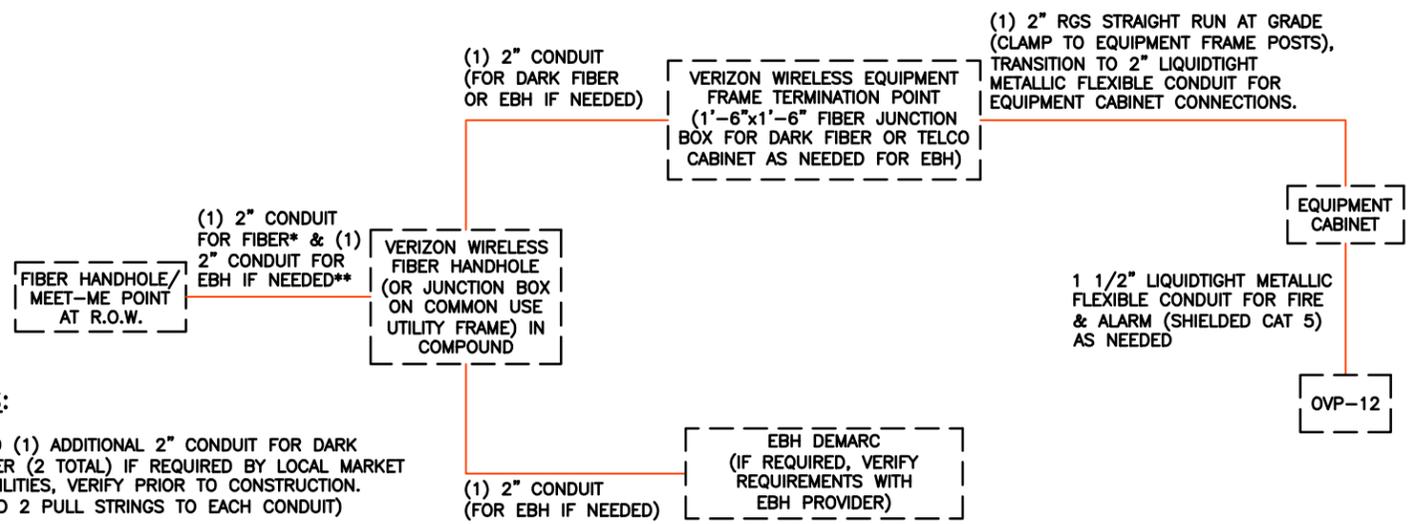
ANTENNAS

FIBER

POWER/
GROUNDING

HYBRID &
COAX CABLES

NEW/VZW EASEMENT
 ACCESS/UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/BBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

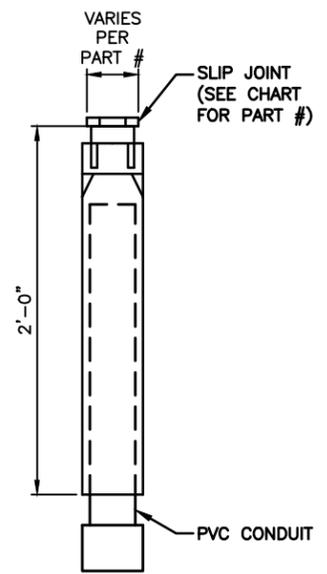


NOTES:

** ADD (1) ADDITIONAL 2" CONDUIT FOR DARK FIBER (2 TOTAL) IF REQUIRED BY LOCAL MARKET FACILITIES, VERIFY PRIOR TO CONSTRUCTION. (ADD 2 PULL STRINGS TO EACH CONDUIT)

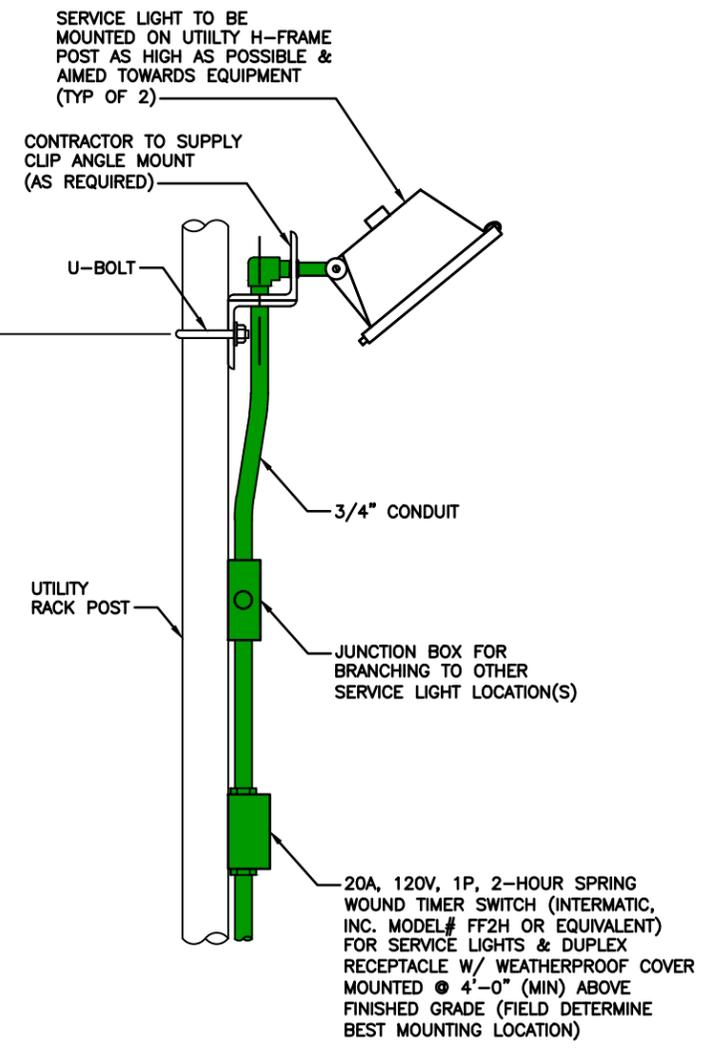
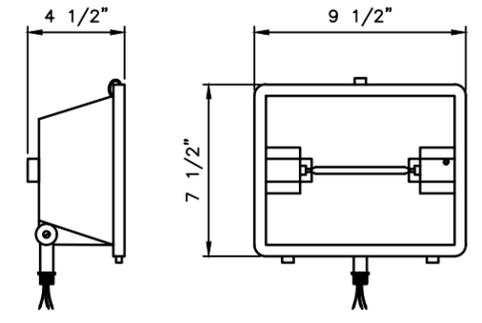
* VERIFY EBH REQUIREMENTS WITH TELCO PROVIDER PRIOR TO CONSTRUCTION. (ADD 2 PULL STRINGS TO EACH CONDUIT)

FIBER ONE-LINE DIAGRAM 2



CARLON EXPANSION FITTINGS				
COUPLING END PART #	MALE TERMINAL ADAPTER END PART #	SIZE	STD. CTN. QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N	E945NX	4"	5	8"
E945P	E945PX	5"	1	8"
E945R	E945RX	6"	1	8"

DETAIL NOT USED 4 SLIP JOINT DETAIL 3



NOTES:

- LIGHT TO BE MOUNTED PER LOCATION REGULATIONS & SHALL NOT SHINE DIRECTLY OUTSIDE OF COMPOUND.
- CONTRACTOR TO INSTALL EACH PIECE OF EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS.

SERVICE LIGHT DETAIL 1

PLANS PREPARED FOR:



PLANS PREPARED BY:

ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL
 REJ ROBERT E. JENSEN CIVIL
 TMS TERRA ENGINEERING 36490 ELECTRICAL
 SDK SHANE R. KING 49643 ELECTRICAL

PRELIMINARY ISSUE

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ISSUED FOR REVIEW	08/19/19	DML	A

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 CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:
 FIBER ONE-LINE DIAGRAM & UTILITY DETAILS

DWG INFORMATION: DRAWN BY: DML
 CHECKED BY: TKW

SHEET NUMBER:
 E-2.2

NEW VZW
 UTILITIES
 EASEMENT

ACCESS/UTILITY
 EASEMENT

VZW LANDSPACE

PENETRATIONS

RR/HIBU

ANTENNAS

FIBER

POWER/
 GROUNDING

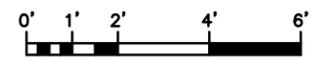
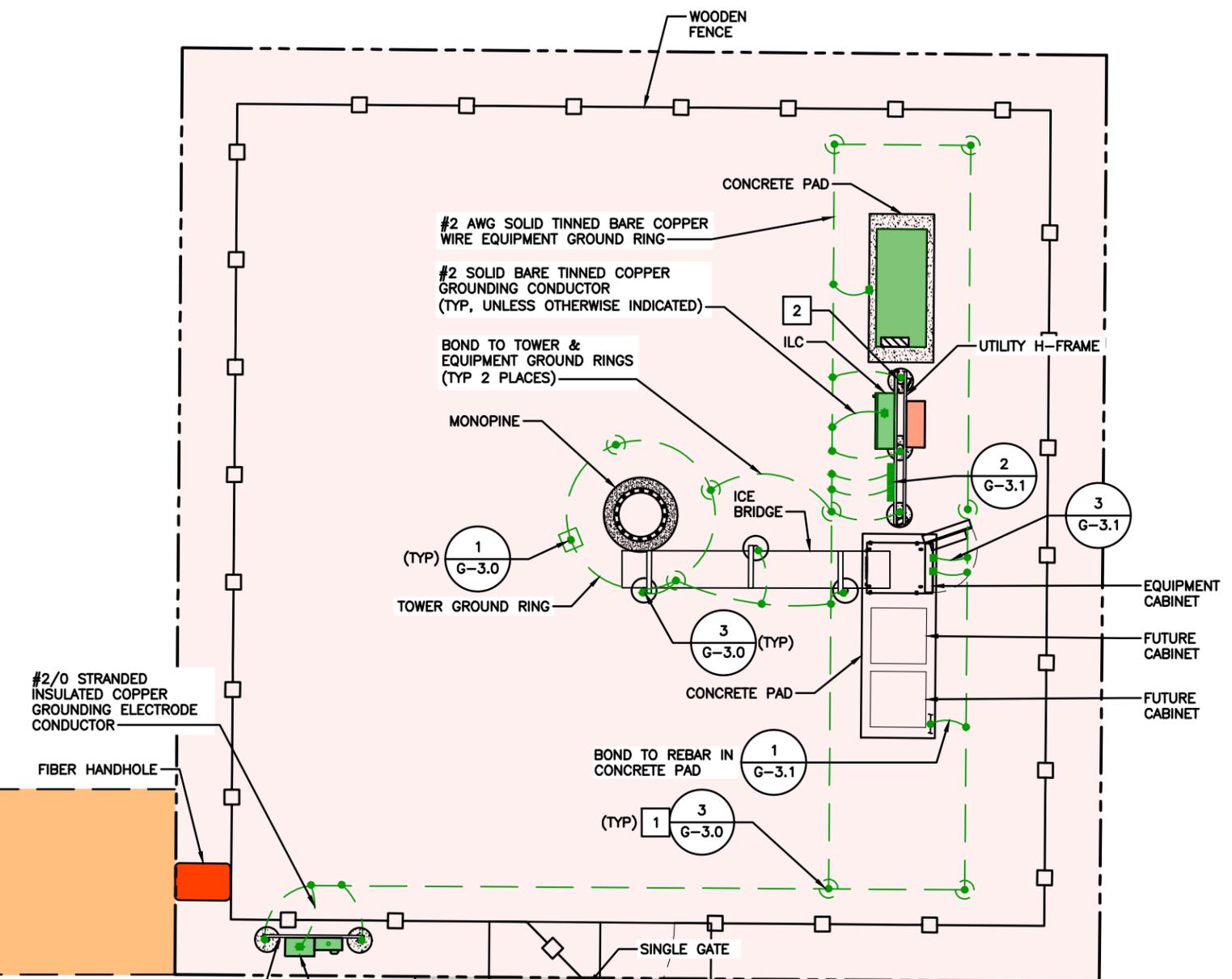
HYBRID &
 COAX CABLES

KEYED NOTES:

- 1 ALL GROUND RODS SHALL BE SPACED AT 8'-0" (MIN) TO 15'-0" (MAX) AROUND PERIMETER OF EQUIPMENT.
- 2 MOUNT AND BOND GPS ANTENNAS TO UTILITY H-FRAME POST.

NOTE:

GEE GN-1.0 FOR LEGEND.



COMPOUND GROUNDING PLAN

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL
 REJ ROBERT E. JENKINS CIVIL
 TMS TERRA ENGINEERING 36490 ELECTRICAL
 SDK SHANE R. KING 49643 ELECTRICAL

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 81503

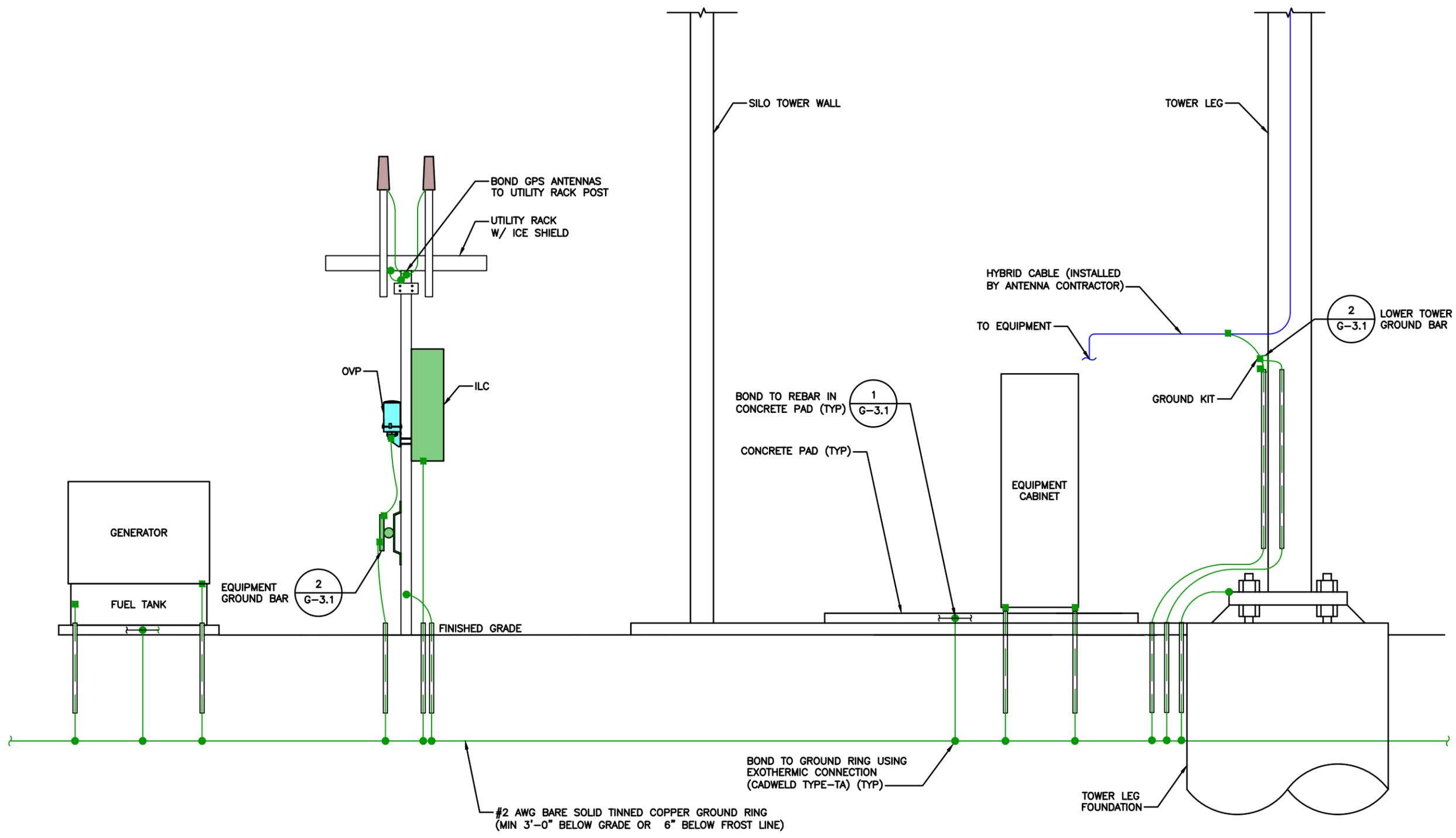
SHEET DESCRIPTION:
 COMPOUND
 GROUNDING PLAN

DWG INFORMATION:
 DRAWN BY: DML
 CHECKED BY: TKW

SHEET NUMBER:
 G-1.0

1/2" = 1'-0" (22"x34")
 1/4" = 1'-0" (11"x17")

NEW/VZW
 ACCESS/UTILITY
 EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/HIBU
 ANTENNAS
 FIBER
 POWER/
 GROUNDING
 HYBRID &
 COAX CABLES



GROUNDING RISER DIAGRAM

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELE CIVIL
 REJ ROBERT E. JENNER CIVIL
 TMS TERRA ENGINEERING 36490 ELECTRICAL
 SDK SHANGHAI ENGINEERING 49643 ELECTRICAL

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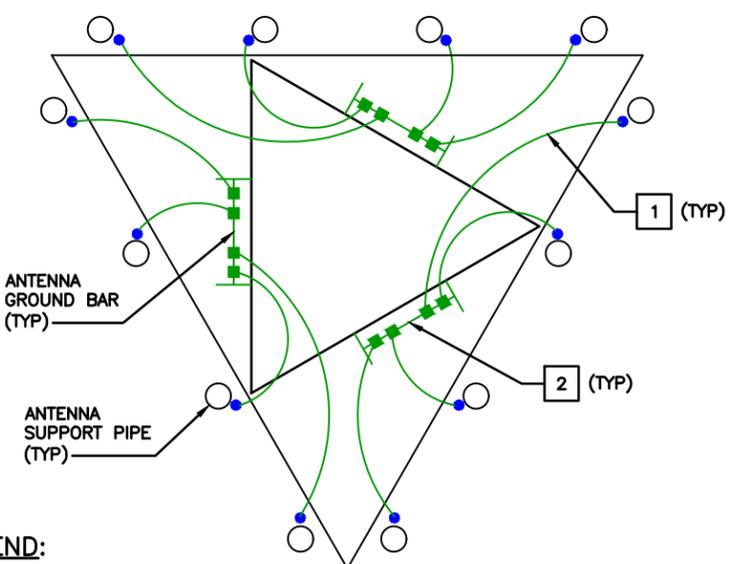
APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:
 GROUNDING
 RISER DIAGRAM

DWG INFORMATION: SHEET NUMBER:
 DRAWN BY: DML
 CHECKED BY: TKW
 G-2.0

NEW/VZW EASEMENT
 ACCESS/UTILITY EASEMENT
 VZW LANDSPACE
 PENETRATIONS
 RR/BBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

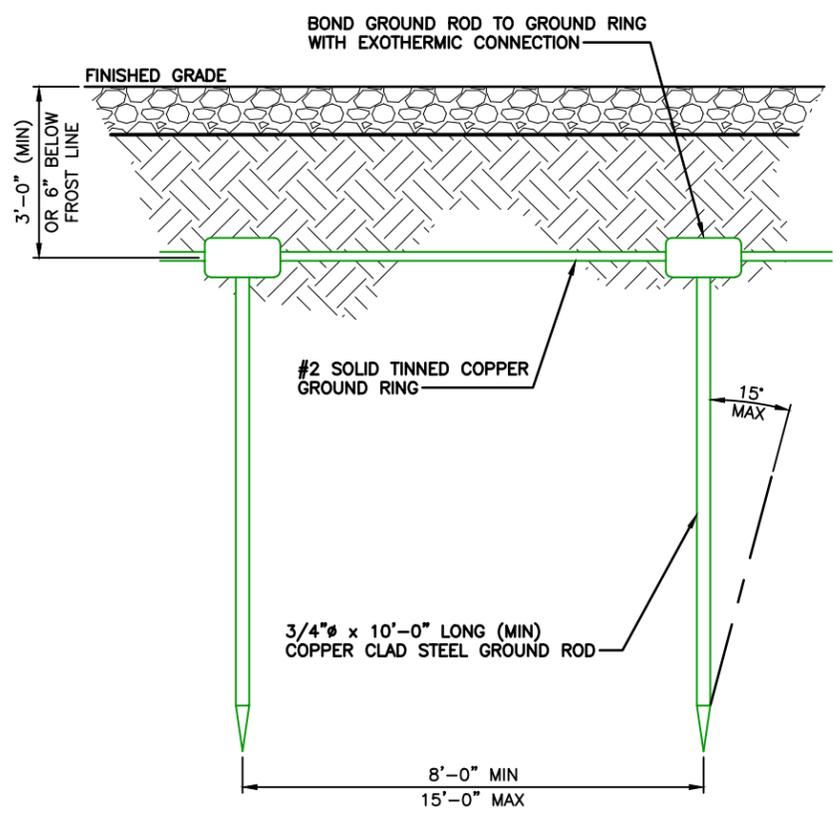


- LEGEND:**
- COAX JUMPER
 - MECHANICAL COMPRESSION CONNECTION

- KEYED NOTES:**
- COAX CABLE GROUND KIT WIRES.
 - MOUNT TOWER GROUND BAR DIRECTLY TO TOWER WITHOUT ISOLATION BUSHINGS. CONTRACTOR TO REMOVE TOWER GALVANIZED COATING WHERE GROUND BAR COMES INTO CONTACT WITH TOWER. FURNISH AND INSTALL COLD GALVANIZING TO TOWER AND GROUND BAR CLAMPS AFTER INSTALLATION.

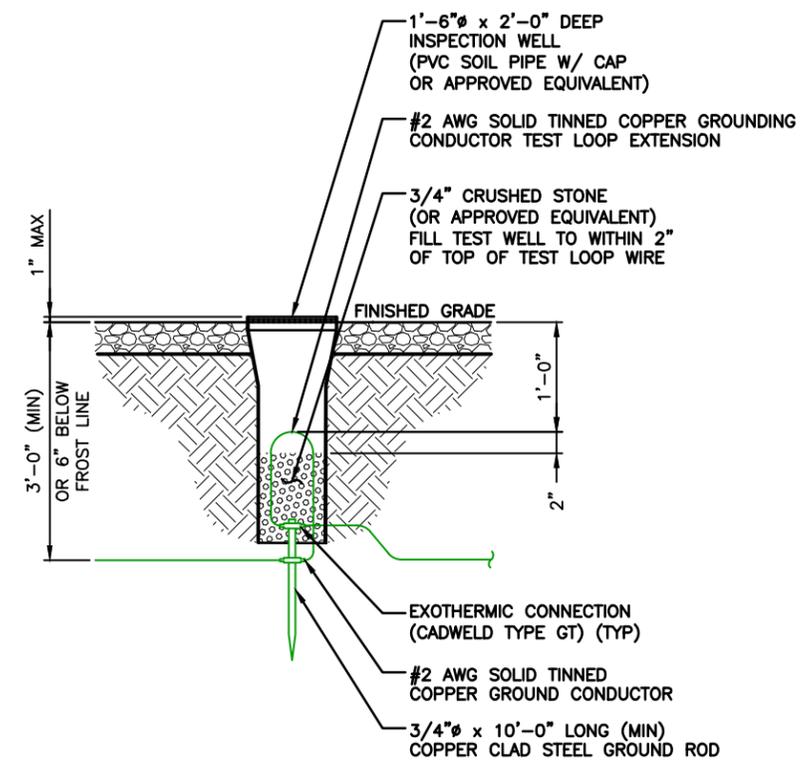
ANTENNA GROUNDING DIAGRAM

5



GROUND RING DETAIL

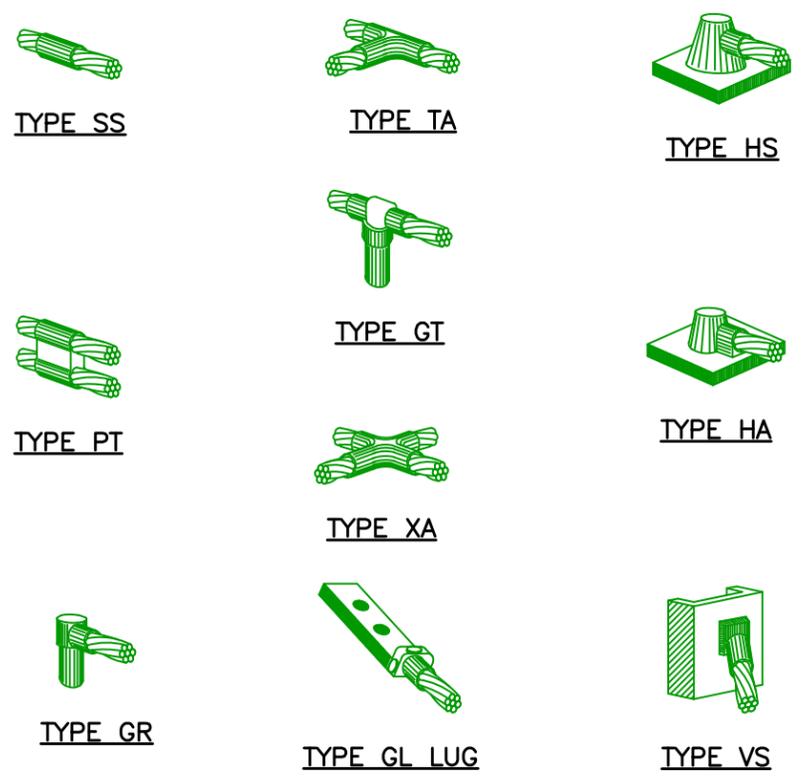
3



INSPECTION/TEST WELL DETAIL

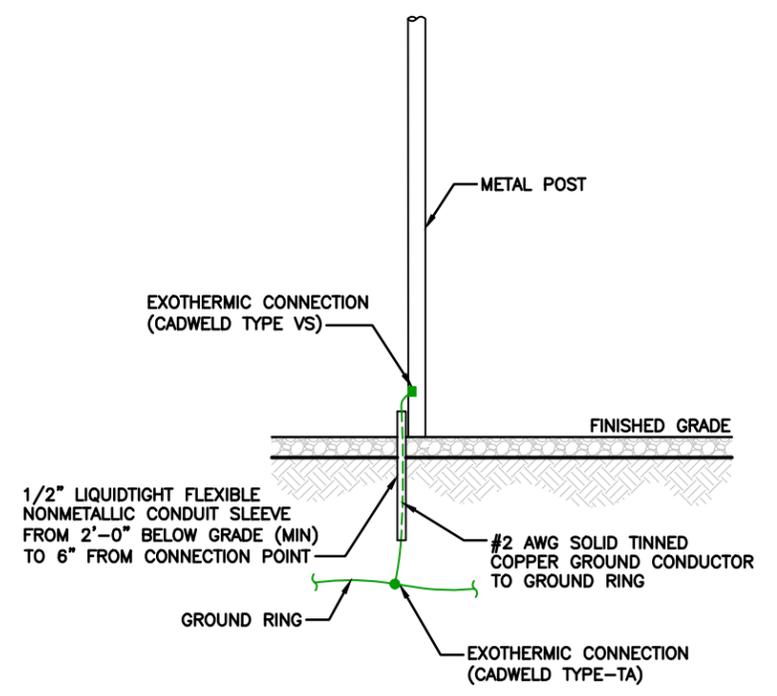
1

NOTE:
 ALL TYPE CLASSIFICATIONS ARE CADWELD.



EXOTHERMIC CONNECTION DETAILS

6



POST GROUNDING DETAIL

4

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APPLICANT LOCATION NUMBER:
 313884

SITE ADDRESS:
 2884 B 1/2 ROAD
 GRAND JUNCTION, COLORADO
 81503

SHEET DESCRIPTION:
 GROUNDING DETAILS
 (1 OF 2)

DWG INFORMATION:
 DRAWN BY: DML
 CHECKED BY: TKW

SHEET NUMBER:
 G-3.0

DETAIL NOT USED

2

PLANS PREPARED FOR:

PLANS PREPARED BY:

ENGINEERING LICENSE:
 STATE OF COLORADO
 STATE CERTIFICATE OF AUTHORIZATION #
 ENGINEER: PE#
 KMY KEVIN M. VANMAELER CIVIL
 REJ ROBERT E. JENSEN CIVIL
 TMS TERRA CONSULTING 36490 ELECTRICAL
 SDK SHANE R. KING 49643 ELECTRICAL

PRELIMINARY ISSUE

NEW/2W
NEW/1W
EASEMENT

ACCESS/UTILITY
EASEMENT

VZM LANDSPACE

PENETRATIONS

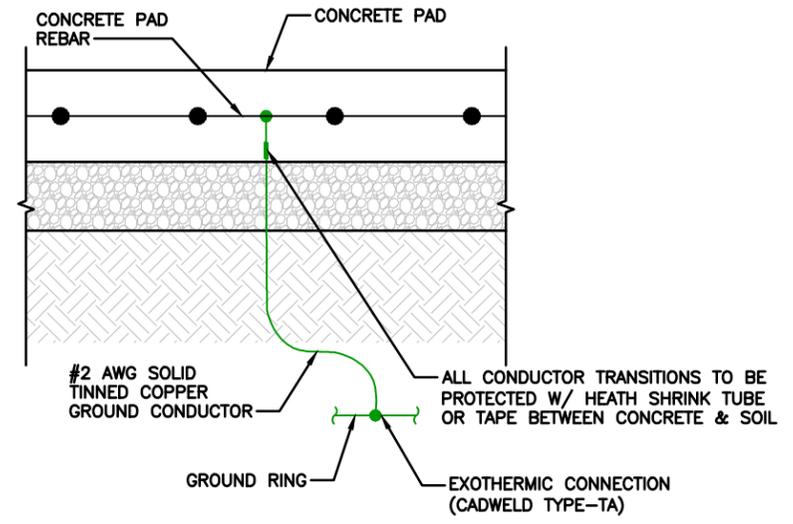
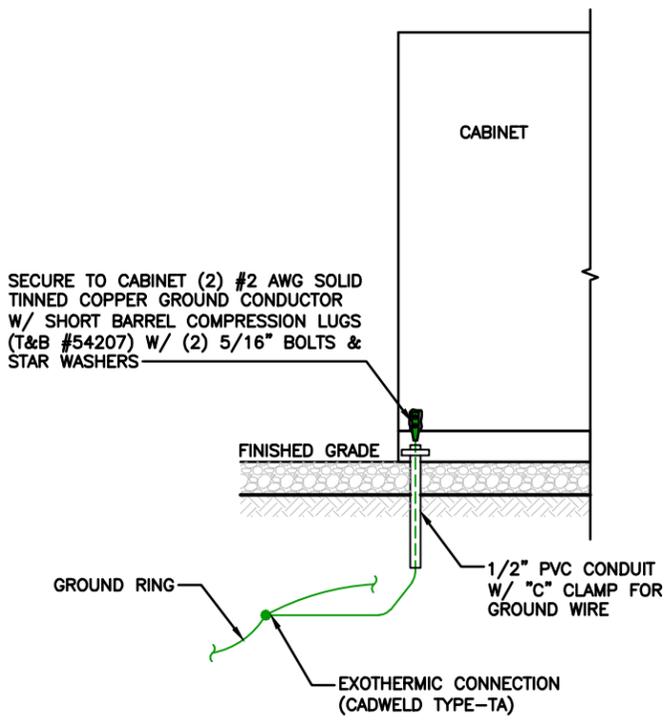
RR/BBU

ANTENNAS

FIBER

POWER/
GROUNDING

HYBRID &
COAX CABLES



DETAIL NOT USED

5

CABINET GROUNDING DETAIL

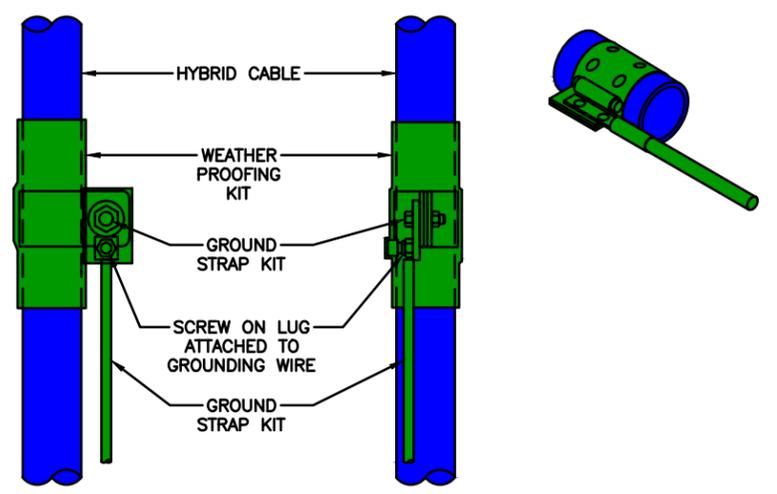
3

CONCRETE PAD GROUNDING DETAIL

1

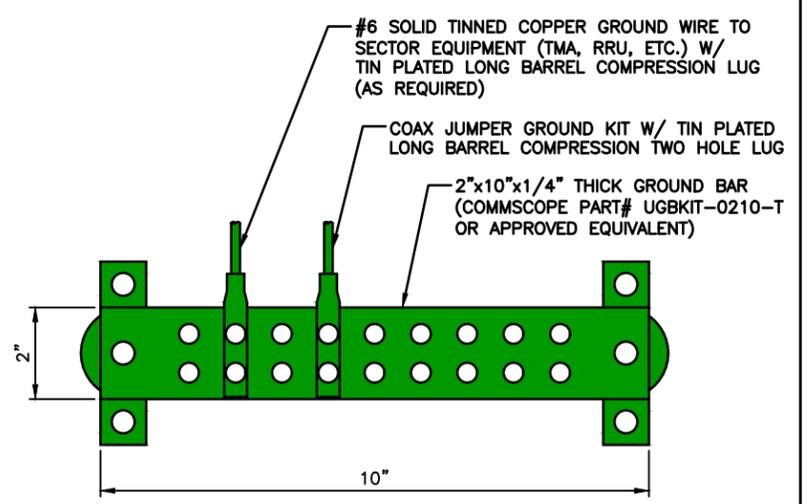
NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- THIS DETAIL IS TYPICAL FOR EACH CABLE WHERE IT IS SPECIFIED TO BE GROUNDED.
- CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING EQUIPMENT CABINET.
- CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE.
- USE ONLY TIN PLATED GROUNDING LUGS.



COAX/HYBRID CABLE GROUND KIT DETAIL

6

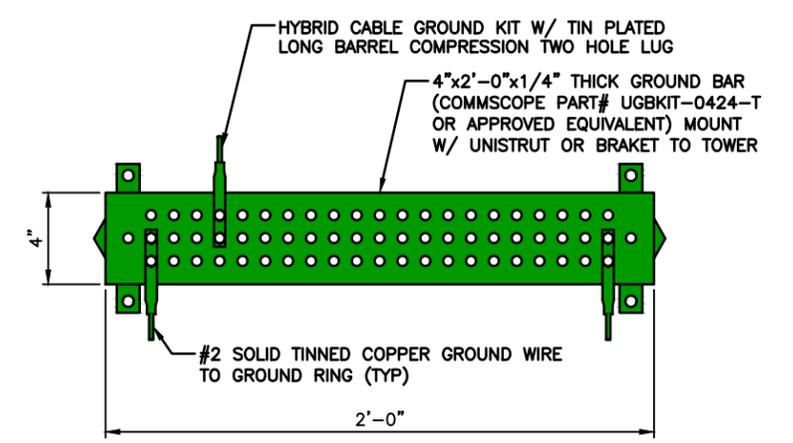


NOTES:

- ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL INCLUDING BELLEVILLE WASHERS, COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
- STEEL BONDING ONLY ONLY: INSERT A TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
- USE A THIN COAT OF ANTI-CORROSION GREASE AT THESE CONNECTIONS.
- INSTALL WITHIN 12" OF END OF COAX TO COAX JUMPER CONNECTION.
- DIMPLE OR MECHANICAL CRIMP LUGS WILL NOT BE PERMITTED.

ANTENNA GROUND BAR DETAIL

4



NOTES:

- ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL INCLUDING BELLEVILLE WASHERS, COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
- STEEL BONDING ONLY: INSERT A TOOTH WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH KOPR-SHIELD.
- USE A THIN COAT OF ANTI-CORROSION GREASE AT THESE CONNECTIONS.
- INSTALL WITHIN 12" OF END OF COAX TO COAX JUMPER CONNECTION.
- DIMPLE OR MECHANICAL CRIMP LUGS WILL NOT BE PERMITTED.

TOWER/TYPICAL GROUND BAR DETAIL

2

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
KMY KEVIN M. VANMAELER CIVIL
REJ ROBERT E. JENKINS CIVIL
TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE D. KING 49643 ELECTRICAL

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CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

GROUNDING DETAILS
(2 OF 2)

DWG INFORMATION:

DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:

G-3.1

GENERAL REQUIREMENTS SECTION 01 10 00

PART 1: GENERAL

1.1 INTENT:

- A. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS DESCRIBE THE WORK TO BE DONE AND THE MATERIALS TO BE FURNISHED FOR CONSTRUCTION. PLANS ARE NOT TO BE SCALED.
- B. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND SUPPLEMENTARY, HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE DONE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED IN BOTH.
- C. THE INTENTION OF DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT.
- D. CONFLICTS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING MATERIALS OR DOING ANY WORK. NO COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND THOSE ON THE DOCUMENTS. ANY DISCREPANCY SHALL BE REPORTED TO THE OWNER OR THEIR AGENT FOR CONSIDERATION.

1.2 LICENSING REQUIREMENTS:

- A. THE CONTRACTOR IS RESPONSIBLE FOR PROCUREMENT AND MAINTAINING ALL APPLICABLE LICENSES AND BONDS.

1.3 STORAGE:

- A. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY FASHION THAT DOES NOT OBSTRUCT THE FLOW OF OTHER WORK. ANY STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE ASSOCIATED MANUFACTURER.

1.4 CLEAN UP:

- A. THE CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH AT ALL TIMES.

1.5 QUALITY ASSURANCE:

- A. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

PART 2: PRODUCTS – NOT APPLICABLE TO THIS SECTION

PART 3: EXECUTION – NOT APPLICABLE TO THIS SECTION

END OF SECTION

CAST-IN-PLACE-CONCRETE SECTION 03 30 00

PART 1: GENERAL

1.1 SUMMARY:

- A. FURNISH AND INSTALL ALL CAST-IN-PLACE CONCRETE, REINFORCING AND ACCESSORIES, AS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.

1.2 SUBMITTALS:

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.
- B. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS INDICATING MATERIAL CHARACTERISTICS, DETAILS OF CONSTRUCTION, CONNECTIONS, AND RELATIONSHIP WITH ADJACENT CONSTRUCTION.

- 1. SHOP DRAWINGS SHALL BE PREPARED AND STAMPED BY A QUALIFIED ENGINEER LICENSED IN THE JURISDICTION OF THE PROJECT.

- C. MIX DESIGN: SUBMIT FOR APPROVAL MIX DESIGN PROPOSED FOR USE.

1.3 QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR A MINIMUM OF THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. TESTING: EMPLOY AN INDEPENDENT TESTING AGENCY ACCEPTABLE TO OWNER TO DESIGN CONCRETE MIXES AND TO PERFORM MATERIAL EVALUATION TESTS. PROVIDE 4 AND 28 DAY CYLINDER TESTS. COMPLY WITH ASTM C 143, C 173, C 31 AND C 39.
- C. STANDARDS
 - 1. ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS.
 - 2. ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, AND CRSI MANUAL OF STANDARD PRACTICE.

PART 2: PRODUCTS

2.1 MATERIALS:

- A. MATERIALS SHALL CONFORM TO THE RESPECTIVE PUBLICATIONS AND OTHER REQUIREMENTS SPECIFIED HEREIN.

- B. CEMENT: CEMENT SHALL CONFORM TO ASTM C150, TYPE 1. CEMENT MAY BE BAGGED OR BULK. CEMENT SHALL BE USED FROM ONLY ONE MILL THROUGHOUT PROJECT.
- C. FINE AGGREGATE: FINE AGGREGATE SHALL CONFORM TO ASTM C33-08 AND SHALL BE UNIFORMLY GRADED, CLEAN, SHARP, WASHED MATERIAL OR CRUSHED SAND, FREE FROM ORGANIC IMPURITIES.
- D. COURSE AGGREGATE: COURSE AGGREGATE SHALL CONFORM TO ASTM C33-08 AND SHALL BE NATURAL WASHED GRAVEL OR WASHED CRUSHED ROCK HAVING HARD, STRONG, DURABLE PIECES, FREE FORM ADHERENT COATINGS, THE MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE 3/4" IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C33-08; GRADATION SIZE NO. 67.
- E. WATER: WATER USED IN THE CONCRETE MIX SHALL BE POTABLE, CLEAN, AND FREE FROM OILS, ACIDS, SALTS, CHLORIDES, ALKALI, SUGAR, VEGETABLE, OR OTHER INJURIOUS SUBSTANCES.
- F. REINFORCING STEEL: ALL BARS ARE TO BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. BENDING DETAILS ARE TO CONFORM TO THE STANDARDS OF ACI 318.
- G. FORMS: THE FORMS SHALL BE TRUE AND RIGID AND CONFORM TO SHAPE, LINE AND DIMENSIONS AS SHOWN ON THE DRAWINGS. ALL FORMS SHALL BE RIGIDLY CONSTRUCTED, BRACED AND TIED TO PREVENT ANY DEFLECTION OR DISPLACEMENT DURING PLACING OF CONCRETE. ALL EXPOSED CORNERS AND EDGES SHALL HAVE 3/4" FILLETS. ALL JOINTS SHALL BE MORTAR TIGHT; OPEN JOINTS SHALL BE SEALED AS REQUIRED.
- H. CONCRETE:

1. PROPORTIONING: CONCRETE SHALL CONFORM TO THE FOLLOWING:

- a. CEMENT—6 SACKS PER CUBIC YARD, MINIMUM
- b. WATER SHALL BE KEPT TO AN ABSOLUTE MINIMUM TO MAINTAIN SLUMP AS SPECIFIED
- c. AGGREGATE; SAND FACTOR SHALL BE AS REQUIRED TO GIVE THE BEST WORKABLE MIX WITHIN THE RANGE OF 46% TO 52% OF TOTAL AGGREGATE.
- d. STRENGTH—4,000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE
- e. ALL CONCRETE SHALL CONTAIN A WATER-REDUCING AGENT AND SHALL HAVE THREE (3) TO FIVE (5) PERCENT ENTRAINED AIR.

2.2 SLUMP:

- A. THE MAXIMUM SLUMP SHALL NOT EXCEED 3" EXCEPT FOR CONCRETE TO BE PLACED IN FORMS 8" WIDE OR LESS, WHERE THE MAXIMUM SLUMP SHALL BE 4".
- B. THE DETERMINATION OF SLUMP SHALL CONFORM TO ASTM C143.

2.3 MIXING:

- A. THE CONTRACTOR SHALL USE READY-MIXED CONCRETE, MIXED AND DELIVERED IN CONFORMANCE WITH ASTM C94.

2.4 MIXTURES:

- A. THE CONCRETE SHALL CONTAIN AN AIR-ENTRAINING ADMIXTURE COMPLYING WITH THE REQUIREMENTS OF ASTM C-260 AND ACI 212.1R AND A WATER-REDUCING ADMIXTURE COMPLYING WITH THE REQUIREMENTS OF ASTM C-494 AND ACI 212.1R. ADMIXTURES SHALL BE PURCHASE AND BATCHED IN LIQUID SOLUTION. THE USE OF CALCIUM CHLORIDE OR AN ADMIXTURE CONTAINING CALCIUM CHLORIDE IS PROHIBITED.
- B. ADMIXTURES SHALL BE OF THE SAME MANUFACTURER TO ASSURE COMPATIBILITY.
- C. ACCEPTABLE MANUFACTURERS ARE:

- 1. W.R. GRACE 3. MASTER BUILDERS
- 2. SIKA GROUP 4. EUCLID CHEMICAL CO

2.5 CURING COMPOUNDS:

- A. CURING COMPOUNDS SHALL CONFORM TO ASTM C309, TYPE 1, ID, CLASS A AND B AND ASTM C171 AS APPLICABLE

PART 3: EXECUTION

3.1 GENERAL:

- A. CONSTRUCT AND ERECT FORMWORK IN ACCORDANCE WITH ACI 301 ACI 347.
- B. COLD-WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306.
- C. HOT-WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305.

3.2 INSERTS, EMBEDDED COMPONENTS AND OPENINGS:

- A. CONTRACTOR SHALL CHECK ALL CIVIL, ARCHITECTURAL, STRUCTURAL, AND ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHOR BOLTS, INSERTS AND OTHER ITEMS TO BE BUILT INTO THE CONCRETE WORK.
- B. COORDINATE THE WORK OF OTHER SECTIONS IN FORMING AND SETTING OPENINGS, RECESSES, SLOTS, CHASES, ANCHORS, INSERTS AND OTHER ITEMS TO BE EMBEDDED.
- C. EMBEDDED ITEMS SHALL BE SET ACCURATELY IN LOCATION, ALIGNMENT, ELEVATION, AND PLUMBNESS. LOCATE AND MEASURE FROM ESTABLISHED SURVEYED REFERENCE BENCHMARKS.
- D. EMBEDDED ITEMS SHALL BE ANCHORED INTO PLACE AS REQUIRED TO PREVENT MOVEMENT DURING CONCRETE PLACEMENT AND CONSOLIDATION. COMPONENTS FORMING A PART OF A COMPLETE ASSEMBLY SHALL BE ALIGNED BEFORE ANCHORING. PROVIDE TEMPORARY BRACING, ANCHORAGE, AND TEMPLATES AS REQUIRED TO MAINTAIN THE SETTING AND ALIGNMENT.

3.3 REINFORCEMENT PLACEMENT:

- A. REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH CHECKED AND RELEASED DRAWINGS AND ACI 301 AND ACI 315; SECURELY WIRE-TIE REINFORCEMENT AT ALL INTERSECTIONS.

- B. ACCURATELY POSITION, SUPPORT AND SECURE REINFORCEMENT AGAINST DISPLACEMENT FROM FORMWORK CONSTRUCTION OR CONCRETE PLACEMENT AND CONSOLIDATION. REINFORCING SHALL BE SUPPORTED ON METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS.
- C. SPLICES OF REINFORCING BARS SHALL BE CLASS B UNLESS SHOWN OTHERWISE. SPLICES SHALL BE STAGGERED. FULL DEVELOPMENT LENGTH SHALL BE PROVIDED ACROSS JOINTS.
- D. LOCATE REINFORCING TO PROVIDE CONCRETE COVER AND SPACING SHOWN ON THE DRAWINGS. MINIMUM COVER SHALL BE AS REQUIRED BY ACI 318.
- E. WELDING OF AND TO ANY REINFORCING MATERIALS INCLUDING TACK WELDING OF CROSSING BARS IS STRICTLY PROHIBITED. BARS SHALL BE FREE OF FLAKY OR SCALY RUST AT THE TIME THE CONCRETE IS PLACED.

3.4 CONCRETE PLACEMENT:

- A. PRIOR TO PLACING CONCRETE, FORMS AND REINFORCEMENT SHALL BE THOROUGHLY INSPECTED. ALL WOOD CHIPS, DIRT, ETC., AS WELL AS ALL TEMPORARY BRACING, TIES, AND CLEATS REMOVED, AND ALL OPENINGS FOR UTILITIES PROPERLY BOXED, ALL FORMS SHALL BE PROPERLY SECURED IN THEIR CORRECT POSITION AND MADE TIGHT. ALL REINFORCING AND EMBEDDED ITEMS SHALL BE SECURED IN THEIR PROPER LOCATIONS.. ALL OLD AND DRY CONCRETE AND DIRT SHALL BE CLEANED AND ALL STANDING WATER AND OTHER FOREIGN MATTER REMOVED.
- B. PLACING CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301 AND ACI 304 AND SHALL BE CARRIED OUT AT SUCH A RATE THAT THE CONCRETE PREVIOUSLY PLACED IS STILL PLASTIC AND INTEGRATED WITH THE FRESHLY PLACE CONCRETE. CONCRETING, ONCE STARTED, SHALL BE CARRIED ON AS A CONTINUOUS OPERATION UNTIL THE SECTION IS COMPLETED. NO COLD JOINTS SHALL BE ALLOWED.
- C. CONSTRUCTION JOINTS: USE KEYWAYS, CONTINUE REINFORCEMENT THROUGH JOINT.
- D. EXPANSION JOINTS: FOR EXTERIOR WORK, LOCATE AT 30'-0" O.C. MAXIMUM, AT APPROVED LOCATIONS. PROVIDE SMOOTH DOWELS ACROSS JOINT WHICH PERMIT 1" HORIZONTAL MOVEMENT AND NO VERTICAL SHEAR MOVEMENT.
- E. ISOLATION JOINTS: PROVIDE BETWEEN SLABS AND VERTICAL ELEMENTS SUCH AS COLUMNS AND STRUCTURAL WALLS.
- F. CONTROL JOINTS: PROVIDE SAWN OR TOOLED JOINTS OR REMOVABLE INSERT STRIPS; DEPTH EQUAL TO 1/4" SLAB THICKNESS. SPACING SHALL BE AS REQUIRED AND APPROVED.
- G. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED AND COMPACTED BY VIBRATION, SPADING, RODDING, OR FORKING DURING THE OPERATION OF PLACING AND DEPOSITING IN ACCORDANCE WITH ACI 309. THE CONCRETE SHALL BE WORKED AROUND REINFORCEMENT, EMBEDDED ITEMS, AND INTO THE CORNERS OF THE FORMS SO AS TO ELIMINATE ALL AIR AND STONE POCKETS.

3.5 FINISHING:

- A. FINISHING OF ALL SLABS SHALL BE IN ACCORDANCE WITH ACI 302.1; SECTION 7.2 WITH A MINIMUM OF THREE TROWELINGS.
 - 1. INTERIOR SLAB FINISH TOLERANCE AS MEASURED IN ACCORDANCE WITH ASTM E 1155, SHALL HAVE AN OVERALL TEST F NUMBER FOR FLATNESS, FF=20 AND FOR LEVEL, FL=15. THE MINIMUM LOCAL NUMBER FOR FLATNESS, FF=15 AND FOR LEVEL, FL=10.
 - 2. EXTERIOR SLAB FINISH SHALL BE FLAT (FF=20) AND SHALL BE SLOPED A MINIMUM OF 1/8" PER FOOT TO A MAXIMUM OF 1/4" PER FOOT TO PREVENT PONDING WATER.
- B. SURFACES OF SLABS SHALL RECEIVE TWO COATS OF CLEAR SEALER/HARDNER.
- C. ABOVE GRADE WALL SURFACES SHALL HAVE A SMOOTH FORM FINISH AS DEFINED IN CHAPTER 10 OF ACI 301.

3.6 CURING:

- A. FRESHLY DEPOSITED CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING AND EXCESSIVELY HOT OR COLD TEMPERATURES AND SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT A RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD OF TIME NECESSARY FOR THE HYDRATION OF THE CEMENT AND PROPER HARDENING OF THE CONCRETE.
- B. CURING SHALL IMMEDIATELY FOLLOW THE FINISH OPERATION. CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST AT LEAST OVERNIGHT, IMMEDIATELY FOLLOWING THE INITIAL CURING. BEFORE THE CONCRETE HAS DRIED, ADDITIONAL CURING SHALL BE ACCOMPLISHED BY ONE OF THE FOLLOWING MATERIALS OR METHODS:
 - 1. PONDING OR CONTINUOUS SPRINKLING
 - 2. ABSORPTIVE MAT OR FABRIC KEPT CONTINUOUSLY WET
 - 3. NON-ABSORPTIVE FILM (POLYETHYLENE) OVER A PREVIOUSLY SPRINKLED SURFACE
 - 4. SAND OR OTHER COVERING KEPT CONTINUOUSLY WET
 - 5. CONTINUOUS STEAM (NOT EXCEEDING 150 DEGREES F) OR VAPOR MIST BATH.
 - 6. SPRAYED-ON CURING COMPOUND APPLIED IN TWO COATES, SPRAYED IN PERPENDICULAR DIRECTIONS.
- C. THE FINAL CURING SHALL CONTINUE UNTIL THE CUMULATIVE NUMBER OF DAYS OR FRACTION THEREOF, NOT NECESSARILY CONSECUTIVE, DURING WHICH TEMPERATURE OF THE AIR IN CONTACT WITH CONCRETE IS ABOVE 50 DEGREES F HAS TOTALED SEVEN (7) DAYS. CONCRETE SHALL NOT BE PERMITTED TO FREEZE DURING THE CURING PERIOD. RAPID DRYING AT THE END OF THE CURING PERIOD SHALL BE PREVENTED.

END OF SECTION

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO	PE#	
STATE CERTIFICATE OF AUTHORIZATION #		
ENGINEER:	PE#	
KMV KEVIN M. VANMAEL		CIVIL
REJ ROBERT E. JENSEN		CIVIL
TMS TERRA	36490	ELECTRICAL
SDK SHERIDAN	49643	ELECTRICAL

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SPECIFICATIONS
(1 OF 7)

DWG INFORMATION:

DRAWN BY:	DML
CHECKED BY:	TKW

SHEET NUMBER:

SP-1.0

NEW/AVZV UTILITIES EASEMENT
ACCESS/UTILITY EASEMENT
VZM LANDSPACE
PENETRATIONS
RR/RIBBU
ANTENNAS
FIBER
POWER/ GROUNDING
HYBRID & COAX CABLES

UNIT MASONRY SECTION 04 20 00

PART 1: GENERAL

1.1 SUMMARY:

- A. PROVIDE UNIT MASONRY CONSTRUCTION AS INDICATED ON THE DRAWINGS.

PART 2: PRODUCTS

2.1 MATERIALS:

A. CLAY MASONRY UNITS:

1. APPLICATION: BRICK AND CONCRETE BLOCK CAVITY WALLS.
2. SIZE: STANDARD MODULAR, 3-5/8" THICK BY 2-1/4" HIGH BY 7-5/8" LONG OR AS INDICATED ON DRAWINGS.
3. TYPE: ASTM C 216, TYPE FBS, FOR GENERAL EXPOSED USE, OR AS INDICATED ON DRAWINGS. GRADE SHALL BE SW, UNLESS NOTED OTHERWISE ON DRAWINGS.
4. SPECIAL SHAPES: AS REQUIRED BY BUILDING CONFIGURATION. OR AS INDICATED ON DRAWINGS
5. BOND PATTERN: RUNNING BOND

B. CONCRETE MASONRY UNITS:

1. CONCRETE MASONRY UNITS: HOLLOW, LOAD-BEARING, NORMAL WEIGHT, ASTM C 90, GRADE N, TYPE 1, 1500 F'M COMPRESSIVE STRENGTH:
 - a. MEDIUM WEIGHT
2. SIZE: 7-5/8" HIGH BY 15-5/8" LONG BY EITHER 7-5/8" OR 11-5/8" THICK OR AS INDICATED ON DRAWINGS.
3. SPECIAL SHAPES: AS REQUIRED BY BUILDING CONFIGURATION.
4. BOND PATTERN: RUNNING BOND UNLESS NOTED OR SHOWN DIFFERENTLY ON DRAWINGS.

C. LIMESTONE/PRECAST TRIM UNITS:

1. GRADE AND COLOR: AS SHOWN ON DRAWINGS
2. FINISH: AS IDENTIFIED ON DRAWINGS

D. MORTAR AND GROUT FOR BRICK AND CONCRETE MASONRY UNIT ASSEMBLIES:

1. MORTAR MIX: ASTM C 270, TYPE S, FOR REINFORCED MASONRY, MASONRY BELOW GRADE AND MASONRY IN CONTACT WITH EARTH AND ASTM C 270, TYPE N, FOR ABOVE-GRADE LOADBEARING AND NONLOADBEARING WALLS. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE 1. MASONRY CEMENT SHALL CONFORM TO ASTM C91. FINE AGGREGATE SHALL CONFORM TO ASTM C144.
2. MORTAR COLOR: NATURAL COLOR UNLESS NOTED OTHERWISE ON DRAWINGS.
3. GROUT: ALL GROUT FOR FILLING BOND BEAMS AND REINFORCED CELLS SHALL CONFORM TO NON-AIR ENTRAINED GROUT PER ASTM C476 WITH PORTLAND CEMENT PER ASTM C150, TYPE 1, AND FINE AND COARSE AGGREGATE PER ASTM C404.

E. REINFORCING STEEL:

1. REINFORCING BARS: ASTM A 615, GRADE 60.
2. WELDED WIRE FABRIC: ASTM A 185, PLAIN.

F. REINFORCING: WELDED WIRE WITH DEFORMED SIDE RODS.

1. STEEL WIRE: 9 GAUGE (.1875 INCH) GALVANIZED STEEL.
2. TRUSS TYPE

G. TIES AND ANCHORS:

1. BENT WIRE TIES: GALVANIZED STEEL.
2. RIGID ANCHORS: GALVANIZED STEEL STRAPS.

PART 3: EXECUTION

3.1 INSTALLATION:

A. INSTALLATION OF MASONRY ASSEMBLIES:

1. COMPLY WITH PCA RECOMMENDED PRACTICES FOR LAYING CONCRETE BLOCK, BRICK INSTITUTE OF AMERICA BIA TECH NOTES, AND NCMA TEK BULLETINS.
2. COMPLY WITH COLD WEATHER AND WARM WEATHER PROTECTION PROCEDURES AS RECOMMENDED IN BIA TECH NOTES.

END OF SECTION

STRUCTURAL STEEL FRAMING SECTION 05 12 00

PART 1: GENERAL

1.1 SUMMARY:

- A. PROVIDE STRUCTURAL STEEL ASSEMBLIES, FABRICATIONS, AND ERECTION OF STEEL AND OTHER ITEMS AS SHOWN ON THE DRAWINGS OR REQUIRED FOR A COMPLETE INSTALLATION.

1.2 QUALITY ASSURANCE:

- A. COMPLY WITH ALL APPLICABLE GOVERNING CODES AND REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- B. STANDARDS: AISC, CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, AND APPLICABLE REGULATIONS.
- C. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL: COMPLY WITH FABRICATION REQUIREMENTS, INCLUDING TOLERANCE LIMITS, AND INSTALLATION TOLERANCES OF AISC'S "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" FOR STRUCTURAL STEEL.
- D. ERECTION TOLERANCES: AISC STANDARDS.

1.3 SUBMITTALS:

- A. SUBMIT FABRICATION AND ERECTION DRAWINGS SHOWING ALL DETAILS, CONNECTIONS, MATERIAL DESIGNATIONS, AND ALL TOP OF STEEL ELEVATIONS TO ENGINEER FOR APPROVAL.
- B. WELDERS SHALL BE QUALIFIED AS PRESCRIBED IN AWS D1.1.

PART 2: PRODUCTS

2.1 MATERIALS:

A. STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHAPES, PLATES, AND BARS: ASTM A 572, ASTM A-36.
2. COLD-FORMED STEEL TUBING: ASTM A 500, GRADE B.
3. STEEL PIPE: ASTM A 53, TYPE E OR S, GRADE B; OR ASTM A 501.
4. ANCHOR BOLTS: ASTM A 307, NON-HEADED TYPE
5. COMMON (MACHINE) BOLTS SHALL CONFORM TO ASTM A307 GRADE A AND NUTS TO ASTM A563. ONE COMMON BOLT ASSEMBLY SHALL CONSIST OF A BOLT, A HEAVY HEX NUT, AND A HARDENED WASHER. BOLTS AND NUTS TO BE HOT DIPPED GALVANIZED PER ASTM A153 IF EXPOSED.
6. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325 OR A490, AS APPLICABLE. ONE HIGH STRENGTH BOLT ASSEMBLY SHALL CONSIST OF A HEAVY HEX STRUCTURAL BOLT, A HEAVY HEX NUT, AND A HARDENED WASHER CONFORMING TO ASTM F436. THE HARDENED WASHER SHALL BE INSTALLED AGAINST THE ELEMENT TURNED IN TIGHTENING. BOLTS AND NUTS TO BE HOT-DIP GALVANIZED PER ASTM A153 IF EXPOSED.

7. AUXILIARY MATERIALS:

- a. DIRECT TENSION INDICATORS: ASTM A 959
- b. ELECTRODES FOR WELDING: AWS CODE; E70XX

8. GROUTS:

- a. CEMENT GROUT: PORTLAND CEMENT, SAND.
- b. METALLIC SHRINKAGE-RESISTANT GROUT: PREMIXED FERROUS AGGREGATE GROUTING COMPOUND ASTM C 1107.
- c. NONMETALLIC SHRINKAGE-RESISTANT GROUT: PREMIXED NONMETALLIC GROUTING COMPOUND, ASTM C 1107.

B. SHOP PAINTING

1. GENERAL: ALL STRUCTURAL STEEL MATERIALS EXPOSED TO THE ELEMENTS SHALL BE HOT DIPPED GALVANIZED PER ASTM 123. ALL OTHER STRUCTURAL STEEL SHALL BE SHOP PRIMED.
 - a. DO NOT PAINT SURFACES TO BE WELDED OR HIGH-STRENGTH BOLTED WITH FRICTION-TYPE CONNECTIONS.
 - b. DO NOT PAINT SURFACES SCHEDULED TO RECEIVE SPRAYED-ON FIREPROOFING.
2. STRUCTURAL STEEL FACTORY APPLIED PRIMER PAINT (FOR NON-GALVANIZED MATERIALS): STANDARD RED OXIDE, LEAD AND CHROMATE-FREE, NON-ASHPHALTIC, RUST-INHIBITING PRIMER COMPLYING WITH FS TT-P-664

3. ZINC COATED (HOT DIP GALVANIZED) PER ASTM A123 (AFTER FABRICATION): TOUCH-UP AFTER ERECTION: CLEAN AND WIRE BRUSH ANY ABRADED AND OTHER SPOTS WORN THROUGH ZINC COATING, INCLUDING THREADED PORTIONS OF BOLTS AND WELDS AND TOUCH-UP WITH GALVANIZING REPAIR PAINT.

C. FIELD PAINTING: REPAIR / TOUCH-UP OF DAMAGED GALVANIZED OR PRIMED SURFACES:

- a. FOR GALVANIZED SURFACES, USE ORGANIC ZINC-RICH COATING MATCHING THE APPEARANCE OF HOT-DIP GALVANIZING CONTAINING AT LEAST 65% - 69% OR ABOVE 92% METALLIC ZINC. BY WEIGHT IN THE DRY FILM, MEETING THE PERFORMANCE REQUIREMENTS OF THE FOLLOWING: ASTM A 780-01, DOD-P-21035B, MIL-P-46105, AND SSPC PS-12, PS-12.01, PS-20, PS-22, PS-29 AND PS-30
- b. FOR PRIMED SURFACES, CLEAN ALL SURFACES AND RE-PRIME PER RECOMMENDATIONS OF ORIGINAL PRIME MATERIALS.

PART 3: EXECUTION

3.1 FABRICATION:

A. SHOP FABRICATE AND ASSEMBLE MATERIALS AS SPECIFIED HEREIN:

1. FABRICATE ITEMS IN ACCORDANCE WITH THE AISC-ASD SPECIFICATIONS
2. ALL EXPOSED STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED PER ASTM A123
3. PROPERLY MARK AND MATCH-MARK MATERIALS FOR FIELD ASSEMBLY AND FOR IDENTIFICATION AS TO LOCATION FOR WHICH INTENDED
4. FABRICATE AND DELIVER IN A SEQUENCE WHICH WILL EXPEDITE ERECTION AND MINIMIZE FIELD HANDLING OF MATERIALS.
5. PROVIDE FINISH SURFACE OF MEMBERS EXPOSED IN THE FINAL STRUCTURE FREE FROM MARKINGS, BURRS, AND OTHER DEFECTS.

B. CONNECTIONS

1. PROVIDE BOLTS AND WASHERS OF TYPES AND SIZE REQUIRED FOR COMPLETION OF FIELD ERECTION. USE 3/4" DIAMETER A325 N BOLTS UNLESS NOTED OTHERWISE.
2. INSTALL HIGH STRENGTH THREADED FASTENERS IN ACCORDANCE WITH RCSC "SPECIFICATIONS FOR STRUCTURAL JOINTS" USING ASTM A325 N OR ASTM A490 BOLTS.
3. WELDED CONSTRUCTION SHALL COMPLY WITH AWS D1.1 FOR PROCEDURES, APPEARANCE, QUALITY OF WELDS, AND METHODS USED IN CORRECTING WELDED WORK.
4. THE FABRICATOR SHALL FURNISH AND INSTALL ERECTION CLIPS FOR FIT-UP OF WELDED CONNECTIONS.
5. DOUBLE ANGLE MEMBERS SHALL HAVE WELDED FILLERS SPACED IN ACCORDANCE WITH CHAPTER E4 OF THE AISC-ASD SPECIFICATION.
6. GUSSET AND STIFFENER PLATES SHALL BE 3/8" THICK MINIMUM.

3.2 INSTALLATION:

- A. INSTALLATION OF STRUCTURAL STEEL SHALL COMPLY WITH AISC "CODE OF STANDARD PRACTICE".
- B. STRUCTURAL FIELD WELDING SHALL BE DONE BY THE ELECTRIC SUBMERGED OR SHIELDED METAL ARC PROCESS. WELDED CONSTRUCTION SHALL COMPLY WITH AWS D1.1
- C. PROVIDE TEMPORARY SHORING AND BRACING WITH CONNECTIONS OF SUFFICIENT STRENGTH TO BEAR IMPOSED LOADS. REMOVE WHEN FINAL CONNECTIONS HAVE BEEN MADE.
- D. ALIGN AND ADJUST MEMBERS AS REQUIRED PRIOR TO FINAL INSPECTION.
- E. INSTALL AND FULLY TENSION HIGH STRENGTH THREADED FASTENERS IN ACCORDANCE WITH RCSC, "SPECIFICATIONS FOR STRUCTURAL JOINTS" USING ASTM A 325 N OR ASTM A 490 BOLTS.

3.3 FINAL INSPECTION:

- A. CLEAN ALL SURFACES UPON COMPLETION OF WORK
- B. COMPLY WITH AISC CODES AND SPECIFICATIONS, AND WITH AWS "STRUCTURAL WELDING CODE".
- C. TOUCH-UP FIELD WELDS AND ABRADED AREAS AS REQUIRED.

END OF SECTION

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO	STATE CERTIFICATE OF AUTHORIZATION #	PE#	
ENGINEER:	PE#		
KMV KEVIN M. VANMAEL			
REJ ROBERT E. JENKINS			
TMS TERRA	36490	ELECTRICAL	E
SDK SHANE	49643	ELECTRICAL	E

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SUBMITTALS:

	DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW		08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SPECIFICATIONS
(2 OF 7)

DWG INFORMATION:

DRAWN BY:	DML
CHECKED BY:	TKW

SHEET NUMBER:

SP-1.1

COMMUNICATIONS/ANTENNA'S SECTION 27 00 00

PART 1: GENERAL

1.1 WORK INCLUDED:

- A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY OWNER UNDER SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND PROPERTY FROM HAZARDOUS EXPOSURE TO OVERHEAD DANGER.
- B. INSTALL ANTENNAS AS INDICATED ON DRAWINGS AND OWNER SPECIFICATIONS.
- C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS.
- D. INSTALL FURNISHED GALVANIZED STEEL WAVEGUIDE LADDER AS INDICATED ON DRAWINGS.
- E. THE CONTRACTOR SHALL PROVIDE FREQUENCY DOMAIN REFLECTOMETER (FDR) TEST RESULTS TO THE CONSTRUCTION MANAGER AND OWNER WITHIN ONE WEEK OF COMPLETION.
- F. INSTALL COAXIAL CABLES AND TERMINATORS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
- G. ANTENNA AND COAXIAL CABLE GROUNDING:
 - 1. ALL COAXIAL CABLE GROUNDING CONNECTIONS ARE TO BE WEATHER SEALED WITH ANDREW CONNECTOR/SPLICE WEATHERPROOFING KITS OR APPROVED EQUAL.
 - 2. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

1.2 RELATED WORK:

- A. FURNISH THE FOLLOWING WORK AS SPECIFIED UNDER CONSTRUCTION DOCUMENTS, BUT COORDINATE WITH OTHER TRADES PRIOR TO BID:
 - 1. FLASHING OF OPENING INTO OUTSIDE WALLS.
 - 2. SEAL AND CAULK ALL OPENINGS.
 - 3. PAINTING.
 - 4. CUTTING AND PATCHING.

1.3 REQUIREMENTS OF REGULATOR AGENCIES:

- A. FURNISH UL LISTED EQUIPMENT WHERE SUCH LABEL IS AVAILABLE, INSTALL IN CONFORMANCE WITH UL STANDARDS WHERE APPLICABLE.
- B. INSTALL ANTENNA, ANTENNA CABLES, AND GROUNDING SYSTEM IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS IN EFFECT AT PROJECT LOCATION AND RECOMMENDATIONS OF STATE AND LOCAL BUILDING CODES, AND ANY SPECIAL CODES HAVING JURISDICTION OVER SPECIFIC PORTIONS OF WORK. THIS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
 - 1. TIA-222 (TELECOMMUNICATIONS INDUSTRY ASSOCIATION) – STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
 - 2. FAA (FEDERAL AVIATION ADMINISTRATION ADVISORY) – CIRCULAR AC 70/7460-1K, OBSTRUCTION MARKING AND LIGHTING.
 - 3. FCC (FEDERAL COMMUNICATIONS COMMISSION) – RULES AND REGULATIONS OBSTRUCTION MARKING AND LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES AND HIGH INTENSITY OBSTRUCTION LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES.
 - 4. AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) – SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
 - 5. NEC (NATIONAL ELECTRICAL CODE) – FOR TOWER LIGHTING KITS.
 - 6. UL (UNDERWRITERS LABORATORIES) – APPROVED ELECTRICAL PRODUCTS.
 - 7. IN ALL CASES, THE FAA RULES AND THE FCC RULES ARE APPLICABLE AND IN THE EVENT OF CONFLICT, SUPERSEDE ANY OTHER STANDARDS OR SPECIFICATIONS.
 - 8. LIFE SAFETY CODE NFPA, LATEST EDITION.

PART 2: PRODUCTS – NOT APPLICABLE TO THIS SECTION

PART 3: EXECUTION – NOT APPLICABLE TO THIS SECTION

END OF SECTION

SITE CLEARING/EROSION CONTROL SECTION 31 00 00

PART 1: GENERAL

1.1 SUMMARY:

- A. PROVIDE SITE-CLEARING AS REQUIRED TO COMPLETE WORK AS SHOWN ON CONTRACT DOCUMENTS INCLUDING CLEARING, GRUBBING, STRIPPING, EROSION AND SILTATION CONTROL, AND PROTECTION OF LANDSCAPE MATERIALS DESIGNATED TO BE PROTECTED DURING CONSTRUCTION.

1.2 QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS.
- B. SITE PROTECTION: PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE SUBCONTRACT
- C. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.

PART 2: PRODUCTS

2.1 MATERIALS:

- A. TREE PROTECTION, EROSION CONTROL, SILTATION CONTROL, AND DUST CONTROL MATERIALS SUITABLE FOR SITE CONDITIONS.

PART 3: EXECUTION

3.1 SITE CLEARING OPERATIONS:

- A. PROTECTION OF EXISTING TREES, VEGETATION, LANDSCAPING, AND SITE IMPROVEMENTS NOT SCHEDULED FOR CLEARING WHICH MIGHT BE DAMAGED BY CONSTRUCTION ACTIVITIES.
- B. TRIMMING OF EXISTING TREES AND VEGETATION AS RECOMMENDED BY ARBORIST FOR PROTECTION DURING CONSTRUCTION ACTIVITIES.
- C. CLEARING AND GRUBBING OF STUMPS AND VEGETATION, AND REMOVAL AND DISPOSAL OF DEBRIS, RUBBISH, DESIGNATED TREES, AND SITE IMPROVEMENTS.
- D. TOPSOIL STRIPPING AND STOCKPILING.
- E. TEMPORARY EROSION CONTROL, SILTATION CONTROL, AND DUST CONTROL.
- F. TEMPORARY PROTECTION OF ADJACENT PROPERTY, STRUCTURES, BENCHMARKS, AND MONUMENTS.
- G. WATERING OF TREES AND VEGETATION DURING CONSTRUCTION ACTIVITIES.
- H. REMOVAL AND LEGAL DISPOSAL OF CLEARED MATERIALS.
- I. MAINTAIN ALL EXISTING FENCING AND GATES TO MAINTAIN A SECURE SITE AT ALL TIMES.
- J. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT LIFE AND PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.

3.2 CLEARING:

- A. PREVENT DAMAGE TO EXISTING IMPROVEMENTS INDICATED TO REMAIN, INCLUDING ON AND OFF SITE. PROTECT EXISTING TREES AND VEGETATION INDICATED TO REMAIN. DO NOT STOCKPILE MATERIALS AND RESTRICT TRAFFIC WITHIN DRIP LINE OF EXISTING TREES TO REMAIN OR THAT INTERFERE WITH ACCESS TO SITE. PROVIDE AND MAINTAIN TEMPORARY GUARDS TO ENCIRCLE TREES OR GROUPS OF TREES TO REMAIN; OBTAIN APPROVAL BEFORE BEGINNING WORK.
- B. WATER VEGETATION AS REQUIRED TO MAINTAIN HEALTH. COVER TEMPORARILY EXPOSED ROOTS WITH WET BURLAP AND BACKFILL AS SOON AS POSSIBLE. COAT CUT PLANT SURFACES WITH APPROVED EMULSIFIED ASPHALT PLANT COATING.
- C. REPAIR OR REPLACE VEGETATION DESIGNATED FOR REUSE, WHICH HAS BEEN DAMAGED. REMOVE HEAVY GROWTHS OF GRASS BEFORE STRIPPING. STOCKPILE SATISFACTORY TOPSOIL CONTAINING NO LARGE STONES, FOREIGN MATTER AND WEEDS ON SITE FOR REUSE.
- D. COMPLETELY REMOVE ALL IMPROVEMENTS, STUMPS AND DEBRIS EXCEPT FOR THOSE INDICATED TO REMAIN. REMOVE BELOW GRADE IMPROVEMENTS AT LEAST 12" BELOW FINISH GRADE SO AS NOT TO INTERFERE WITH NEW CONSTRUCTION. REMOVE ABANDONED MECHANICAL AND ELECTRICAL WORK AS REQUIRED.
- E. PREVENT EROSION AND SILTATION OF STREETS, CATCH BASINS AND PIPING. CONTROL WINDBLOWN DUST. REMOVE WASTE MATERIALS AND UNSUITABLE SOIL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
- F. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL AND COMPACT AS REQUIRED.

3.3 EROSION CONTROL:

- A. PROVIDE EROSION AND SILTATION CONTROL AS REQUIRED TO MEET ALL LOCAL AND STATE REQUIREMENTS.

END OF SECTION

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO	STATE CERTIFICATE OF AUTHORIZATION #	PE#	
ENGINEER:	PE#		
KMV KEVIN M. VANMAELE		CIVIL	C
REJ ROBERT E. JEWELL		CIVIL	C
TMS TERRA	36490	ELECTRICAL	E
SDK SHANE	49643	ELECTRICAL	E

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SPECIFICATIONS
(3 OF 7)

DWG INFORMATION:

DRAWN BY:	DML
CHECKED BY:	TKW

SHEET NUMBER:

SP-1.2

EARTH MOVING/EXCAVATION/BACKFILLING SECTION 31 20 00

PART 1: GENERAL

1.1 SUMMARY:

- A. PROVIDE EARTHWORK OPERATIONS INCLUDING BUT NOT LIMITED TO EXCAVATION, GRADING, TRENCHING AND COMPACTION.

1.2 QUALITY ASSURANCE COMPACTION:

- A. UNDER STRUCTURES, BUILDING SLABS, STEPS, PAVEMENTS, AND WALKWAYS, 95% MAXIMUM DENSITY, ASTM D 1557.
 - 1. GRADING TOLERANCES:
 - a. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1".
 - b. KEEP SITE FREE FROM ANY PONDING WATER
 - c. GRADING TOLERANCE FOR FILL UNDER BUILDING OR EQUIPMENT SLABS: PLUS OR MINUS 1/4" MEASURED WITH 10'-0" STRAIGHTEDGE.
 - 2. TESTING: FIELD TESTING OF EARTHWORK AND COMPACTION SHALL BE PERFORMED BY OWNER'S INDEPENDENT TESTING LAB. THIS WORK IS TO BE COORDINATED BY THE CONTRACTOR.
 - 3. ALL WORK SHALL BE INSPECTED AND RELEASED BY THE OWNER OR HIS AGENT WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK AS SPECIFIED AND/OR CALLED OUT BY THE CONSTRUCTION DOCUMENTS. PROVIDE A MINIMUM OF 48 HOURS NOTICE PRIOR TO ANY PLACEMENT OF CONCRETE OR BACKFILLING OF TRENCHES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.
 - 4. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY OWNER OR HIS AGENT AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.

PART 2: PRODUCTS

2.1 GENERAL:

- A. UTILITY TRENCH: PROVIDE WELL GRADED SAND (SW-SM) FROM BASE OF TRENCH TO MINIMUM ABOVE THE HIGHEST CONDUIT WITHIN TRENCH. REMAINDER OF TRENCH AREA CAN BE EITHER AB 3 OR CLEAN GRAVEL AS DESCRIBED HEREIN. COMPACT AS REQUIRED TO PREVENT SETTLING.
- B. ACCESS ROADS: 6" MINIMUM (UNLESS NOTED OTHERWISE ON DRAWINGS) COMPACTED AB 3 OR APPROVED EQUAL (UNWASHED CRUSHED LIMESTONE GRAVEL CONSISTING OF MULTIPLE AGGREGATE SIZES, ROCK CHIPS, AND ROCK DUST.)
- C. COMPOUND (NEW CONSTRUCTION): 2" THICK CLEAN GRAVEL, WITH 100% PASSING THROUGH A 1" SIEVE OVER 4" COMPACTED AB 3.
- D. COMPOUND (EXISTING): PROVIDE CLEAN GRAVEL WITH 100% PASSING THROUGH A 1" SIEVE AS REQUIRED TO BRING COMPOUND TO PROPER GRADE OR REPAIR EXISTING DAMAGED AREAS.
- E. STRUCTURAL FILL: PROVIDE 4" MINIMUM AB 3 BELOW STRUCTURES OR SLABS

2.2 MATERIALS:

- A. GEOTEXTILE FABRIC: PROVIDE MIRAFI 500X OR APPROVED EQUAL.
- B. PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES, 6" WIDE WITH A MINIMUM THICKNESS OF 0.004". TAPE SHALL HAVE MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL WIRES OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3'-0" DEEP. THE CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR OTHER MEANS TO PROTECT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION

PART 3: EXECUTION

3.1 INSTALLATION:

- A. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE AREA TO BE EXCAVATED AND/OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE OF ANY STRUCTURE NOT SHOWN THAT MIGHT INTERFERE WITH NEW CONSTRUCTION. NOTIFY THE OWNER OR HIS AGENT OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- B. EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS REQUIRED.
- C. MAINTAIN STABILITY OF EXCAVATIONS; COORDINATE SHORING AND BRACING AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. PREVENT SURFACE AND SUBSURFACE WATER FROM ACCUMULATING IN EXCAVATIONS. STOCKPILE SATISFACTORY MATERIALS FOR REUSE, ALLOW FOR PROPER DRAINAGE.

- D. COMPACT MATERIALS AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 1557 BY AERATION OR WETTING TO 95% OF MAXIMUM DRY DENSITY TO SUITABLE DEPTH.
- E. PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 8" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS:
 - 1. STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.
 - 2. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
 - 3. COMMON FILL: USE UNDER UNPAVED AREAS.
 - 4. SUBBASE MATERIAL: USE UNDER GENERAL COMPOUND AREA. IF THICKNESS OF LIFT IS GREATER THAN 6" SPREAD AND COMPACT THE CRUSHED STONE IN MULTIPLE LIFTS OF EQUAL THICKNESS WITH A MAXIMUM LIFT OF 6"
- F. GRADE TO 1/2" ABOVE OR BELOW REQUIRED SUBGRADE AND TO A TOLERANCE OF 1/4" IN 10'-0".
- G. PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. RE-COMPACT AND RE-GRADE SETTLED, DISTURBED AND DAMAGED AREAS TO RESTORE QUALITY, APPEARANCE, AND CONDITION.
- H. CONTROL EROSION TO PREVENT RUNOFF INTO SEWERS OR DAMAGE TO AREAS.
- I. CONTROL DUST TO PREVENT HAZARDS TO ADJACENT PROPERTIES AND VEHICLES. IMMEDIATELY REPAIR OR REMEDY DAMAGE CAUSED BY DUST INCLUDING AIR FILTERS IN EQUIPMENT AND VEHICLES. CLEAN SOILED SURFACES.
- J. DISPOSE OF WASTE AND UNSUITABLE MATERIALS OFF-SITE IN A LEGAL MANNER.

3.2 BACKFILL:

- A. AS SOON AS PRACTICAL AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING THE SPECIFIED MINIMUM CURING PERIOD FOR CAST-IN-PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
 - 1. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL HAVE BEEN REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.
 - 2. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL, WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8" LOOSE THICKNESS. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4" IN LOOSE DEPTH.
 - 3. IF THE DENSITY TESTING INDICATES THAT THE SPECIFIED DENSITY, THE SUCCEEDING LAYER SHALL NOT BE PLACED UNTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS AUTHORIZED BY THE GEO-TECHNICAL ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY TO OBTAIN PROPER COMPACTION.
- B. COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.3 TRENCH EXCAVATION:

- A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE OWNER OR HIS AGENT. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.
- B. EXTEND THE TRENCH WIDTH A MINIMUM OF 6" BEYOND THE OUTSIDE EDGE OF THE OUTER-MOST CONDUIT.
- C. WHEN SOFT, YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12" BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.4 TRENCH BACKFILL:

- A. PROVIDE GRANULAR BEDDING MATERIAL (WELL GRADED SAND) IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.
- B. NOTIFY THE OWNER OR HIS AGENT 24 HOURS IN ADVANCE OF BACKFILLING.
- C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6" UNCOMPACTED LIFTS UNTIL 6" OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACES AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE, OR UNBALANCED LOADING.

- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT BACKFILL MATERIAL IN 8" MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN EXISTING UNDISTURBED MATERIAL ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.5 AGGREGATE ACCESS ROAD (IF APPLICABLE):

- A. CLEAR, GRUB, STRIP AND EXCAVATE FOR ACCESS ROAD TO THE LINES AND GRADES INDICATED ON DRAWINGS. SCARIFY TO A DEPTH OF 6" AND PROOF-ROLL ALL HOLES, RUTS, SOFT PLACES AND OTHER DEFECTS.
- B. THE ENTIRE SUBGRADE SHALL BE COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 1557.
- C. AFTER PREPARATION OF THE SUBGRADE IS COMPLETE, THE GEOTEXTILE FABRIC (MIRAFI 500X) SHALL BE INSTALLED TO THE LIMITS INDICATED ON DRAWINGS BY ROLLING THE FABRIC OUT LONGITUDINALLY ALONG ROADWAY. THE FABRIC SHALL NOT BE DRAGGED ACROSS THE SUBGRADE. PLACE THE ENTIRE ROLL IN A SINGLE OPERATION, AS SMOOTHLY AS POSSIBLE.
 - 1. OVERLAPS PARALLEL TO THE ROADWAY WILL BE PERMITTED AT THE CENTERLINE AND AT LOCATIONS BEYOND THE ROADWAY SURFACE WIDTH. NO LONGITUDINAL OVERLAPS SHALL BE LOCATED BETWEEN THE CENTERLINE AND THE SHOULDER. PARALLEL OVERLAPS SHALL BE A MINIMUM OF 3'-0" WIDE.
 - 2. TRANSVERSE OR PERPENDICULAR OVERLAPS AT THE END OF A ROLL SHALL OVERLAP IN THE DIRECTION OF THE AGGREGATE PLACEMENT (PREVIOUS ROLL ON TOP) AND SHALL HAVE A MINIMUM LENGTH OF 3'-0".
 - 3. ALL OVERLAPS SHALL BE PINNED WITH STAPLES OR NAILS BETWEEN 10" AND 12" LONG TO INSURE POSITIONING DURING PLACEMENT OF AGGREGATE. PIN LONGITUDINAL SEAMS AT 25'-0" O.C. AND TRANSVERSE SEAMS EVERY 5'-0" O.C.
- D. THE AGGREGATE BASE AND SURFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 6" (COMPACTED) THICKNESS. AGGREGATE TO BE PLACED ON GEOTEXTILE FABRIC AND SHALL BE END-DUMPED ON THE FABRIC FROM THE FREE END OF THE FABRIC OR OVER PREVIOUSLY PLACED AGGREGATE. AT NO TIME SHALL EQUIPMENT BE PERMITTED ON THE ROADWAY WITH LESS THAN 6" OF MATERIAL COVERING THE FABRIC.
- E. THE AGGREGATE SHALL BE IMMEDIATELY COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE PROCTOR TEST, ASTM D 1557 WITH A TAMPING ROLLER, A PNEUMATIC-TIRED ROLLER, OR WITH A VIBRATORY MACHINE OR ANY COMBINATION OF THE ABOVE. THE TOP LAYER SHALL BE GIVEN A FINAL ROLLING WITH A THREE-WHEEL OR TANDEM ROLLER.

3.6 FINISH GRADING:

- A. PERFORM ALL GRADING TO PROVIDE SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.
- B. UTILIZE SATISFACTORY FILL MATERIALS RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR THE REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.
- C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 6" OF AB 3 ON TOP OF SOIL STABILIZER FABRIC.
- D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

END OF SECTION

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO
STATE CERTIFICATE OF AUTHORIZATION #
ENGINEER: PE#
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TMS TERRA ENGINEERING 36490 ELECTRICAL
SDK SHANE R. KING 49643 ELECTRICAL

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SUBMITTALS:

	DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW		08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SPECIFICATIONS
(4 OF 7)

DWG INFORMATION:

DRAWN BY: DML
CHECKED BY: TKW

SHEET NUMBER:

SP-1.3

NEW/REV EASEMENT
ACCESS/UTILITY EASEMENT
VZM LANDSPACE
PENETRATIONS
RR/RIBBU
ANTENNAS
FIBER
POWER/ GROUNDING
HYBRID & COAX CABLES

PART 1: GENERAL

1.1 SUMMARY:

- A. PROVIDE FENCING AND GATES INCLUDING ALL ASSOCIATED POSTS, RAILS, BRACES, TERMINAL POSTS, AND RELATED MATERIALS AS SHOWN ON DRAWINGS.
 1. TYPE A: GALVANIZED CHAIN LINK FENCING AND GATES
 2. TYPE B: GALVANIZED CHAIN LINK FENCING AND GATES WITH BARBED WIRE
 3. TYPE C: TREATED WOOD FENCING AND GATES
 4. MATCH EXISTING FENCE
- B. TERMINOLOGY:
 1. CHAIN LINK CLASSIFICATION: GALVANIZED (ZINC COATED).
 2. TREATED LUMBER: TREATED LUMBER SHALL BE "ACQ" OR APPROVED EQUAL. CCA WILL NOT BE ACCEPTED.
 3. O.D.: OUTSIDE DIMENSION

1.2 QUALITY ASSURANCE:

- A. COMPLY WITH GOVERNING CODES AND REGULATIONS.
- B. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS.

1.3 SCHEDULING AND SEQUENCING:

- A. CERTAIN PORTIONS OF THE WORK MAY BE SPECIFIED TO BE COMPLETED AND OPERATIONAL PRIOR TO COMPLETION OF ALL WORK. SEQUENCE AND PROPERLY PROTECT EQUIPMENT TO PREVENT CONTAMINATION OR DAMAGE TO EQUIPMENT IN ADJACENT WORK AREAS.
- B. STORAGE AND PROTECTION: STORE MATERIALS A MINIMUM OF 12" ABOVE GROUND.

PART 2A: PRODUCTS – CHAIN LINK FENCES AND GATES

2A.1 PRODUCTS:

- A. FENCE FABRIC, POSTS, TENSION WIRE, CORNER POSTS, AND APPURTENANCES SHALL CONFORM TO THE ASTM CODES AND STANDARDS FOR THE APPROPRIATE TYPE OF MATERIALS AS LISTED.
- B. MATERIALS SHALL BE UNIFORM, CONSISTENT, AND MEET THE FOLLOWING REQUIREMENTS.
 1. FENCE FABRIC: 6'-0" HIGH (UNLESS NOTED OTHERWISE), HEAVY GALVANIZED CHAIN LINK FENCE CONFORMING TO ASTM A392, CLASS 2, OF 2" MESH 9 GAGE WIRE (0.148" DIAMETER), WITH THE TOP SELVAGE BARBED AND THE BOTTOM KNUCKLED.
 2. LINE POSTS: FOR FABRIC UP TO AND INCLUDING 6'-0" IN HEIGHT, LINE POSTS SHALL BE GALVANIZED SCHEDULE 40 PIPE WITH 1.90" O.D. FOR FABRIC MORE THAN 8'-0" HIGH (IF REQUIRED TO MATCH EXISTING OR UNUSUAL SITE CONDITIONS), LINE POSTS SHALL BE GALVANIZED SCHEDULE 40 PIPE WITH 2.375" O.D. COMPLY WITH ASTM F 1083.3.
 3. END, CORNER, AND PULL POSTS: 2.375" O.D. GALVANIZED SCHEDULE 40 PIPE UP TO 6'-0" AND 2.875" O.D. FOR FENCES OVER 6'-0". COMPLY WITH ASTM F 1083.
 4. GATE POSTS: GALVANIZED SCHEDULE 40 PIPE WITH 2.875" O.D. COMPLY WITH ASTM F 1083.
 5. BRACE RODS (LOCATED ON EACH SIDE OF GATES AND EACH SIDE AT CORNERS): 1.66" O.D. GALVANIZED SCHEDULE 40.
 6. TRUSS RODS/CROSS BRACING: 3/8" DIAMETER DIAGONAL BARS WITH TURNBUCKLE.
 7. TENSION WIRE: 7 GA. US STEEL WIRE GALVANIZED PER ASTM A116 COATING CLASS III ATTACHED 1" BELOW TOP SELVAGE AND 2'-0" ABOVE BOTTOM SELVAGE OF FABRIC BY MEANS OF HOG RINGS AT 24" O.C.
 8. APPURTENANCES SUCH AS BRACE BANDS, TENSION BANDS AND BARS: FABRICATED OF 1/8" BY 7/8" GALVANIZED STEEL WITH GALVANIZED STEEL CARRIAGE BOLTS AND NUTS PER ASTM A123. TENSION BARS SHALL BE 1/4" BY 3/4" GALVANIZED STEEL BAR PER ASTM A153.
 9. FABRIC TIES: CLASS I GALVANIZED STEEL WIRE NO LESS THAN 9 GA.
 10. POST TOPS: PROVIDED FOR EACH POST. MATERIALS SHALL BE PRESSED STEEL OR MALLEABLE IRON THAT PROVIDES WATERTIGHT CLOSURE CAP FOR TUBULAR POSTS AND SHALL BE GALVANIZED PER ASTM A153.

11. BARBED WIRE: BARBED WIRE SHALL CONSIST OF DOUBLE STRANDED, 12-1 1/2 GAGE O.C. THE TOP 1'-0" WIRE ASTM A121, CLASS 3 WITH 4 POINT BARBS SPACED 5" OFF THE FENCE, SHALL CONSIST OF 3 STRANDS OF BARBED WIRE ATTACHED TO A 45 DEGREE ANGLE WITH HEAVY PRESSED ARMS CAPABLE OF WITHSTANDING, WITHOUT FAILURE 250 POUNDS DOWNWARD PULL AT THE OUTERMOST END OF THE ARM.
12. GATES
 - a. GATE MATERIALS SUCH AS FABRIC, BOLTS, NUTS, AND TENSION BARS, SHALL BE CONSISTENT WITH FENCE MATERIALS. GATES SHALL CONSIST OF BOTH SINGLE AND DOUBLE SWING GATES AS SHOWN ON THE DRAWINGS.
 - b. GATES SHALL BE MANUALLY OPERATED.
 - c. GATE FRAMES SHALL BE 1.90" O.D. PIPE TO BE FURNISHED WITH ALL NECESSARY FITTINGS, INCLUDING HEAVY DUTY COMMERCIAL DOUBLE GATE LATCH SIMILAR OR EQUAL TO DAC INDUSTRIES #4000.

PART 2B PRODUCTS: WOOD FENCES AND GATES

2B.1 PRODUCTS:

- A. FENCE MATERIALS, INCLUDING POSTS, RAILS, CORNER POSTS, AND PICKETS SHALL BE AS FOLLOWS:
 1. END CORNER, GATE, AND PULL POSTS 8'-0" HIGH OR LESS SHALL BE 2 1/2" NPS SCHEDULE 40 GALVANIZED STEEL PIPE PER ASTM A120. (OUTSIDE DIAMETER OF 2.875")
 2. LINE POSTS UP TO 8'-0" HIGH, SHALL BE 2" NPS GALVANIZED COLD-FORMED AND WELDED STEEL PIPE COMPLYING WITH ASTM F 1043 WITH AN OUTSIDE DIAMETER OF 2.375" OR PER ASTM A120.
 3. TOP, MIDDLE, AND BOTTOM RAILS SHALL BE 2'-0" x 4" TREATED LUMBER
 4. PICKETS SHALL BE 1" x 6" TREATED LUMBER
- B. TREATED LUMBER
 1. ALL ABOVE GROUND MATERIALS SHALL BE TREATED WITH A MINIMUM OF .25 POUNDS OF PRESERVATIVE PER CUBIC FOOT OF MATERIAL.
 2. TREATMENT FOR LUMBER SHALL BE APPROVED BY ALL GOVERNING BODIES.
- C. GATES:
 1. MANUALLY OPERATED WOOD GATES SHALL BE CONSTRUCTED WITH STEEL FRAME AND WOOD PICKETS. GATES SHALL BE SINGLE OR DOUBLE SWING AS INDICATED ON DRAWINGS.
- D. PIPE GRIP TIES: PROVIDE PIPE GRIP TIES OF RECOMMENDED SIZE FOR USE WITH STEEL POSTS SIMPSON PGT'S. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

PART 3: EXECUTION

3.1 INSTALLATION:

- A. PHYSICAL LOCATIONS OF FEATURES SUCH AS FENCE LINES, GATES, TERMINAL POSTS SHALL BE PER THE PLANS.
- B. INSTALL MATERIALS PER MANUFACTURER'S INSTRUCTIONS. COMPLY WITH ASTM F 567 FOR CHAIN LINK FENCES AND F 537 FOR WOOD FENCES. INSTALL MATERIALS WITH UNIFORM APPEARANCE. COORDINATE WITH OTHER SECTIONS.
- C. PROVIDE A REASONABLY SMOOTH PROFILE AT FENCE LINE. BOTTOM OF FENCE SHALL NOT BE MORE THAN 2" ABOVE FINISHED GRADE. IF FENCE CROSSES EXTREME GRADE DEPRESSION, CONFORM THE FENCE TO THE GROUND CONTOUR, UNLESS NOTED OTHERWISE. CLOSE SPACE BELOW THE BOTTOM OF THE FENCE WITH ADDITIONAL FENCE MATERIALS WHILE MAINTAINING A UNIFORM TOP.
- D. POST SPACING AND INSTALLATION
 1. INSTALL LINE POSTS AND BRACE AT INTERVALS NOT TO EXCEED 10'-0" (8'-0" FOR WOOD FENCES). POSTS SHALL BE EVENLY SPACED. LOCATE CORNER AND TERMINAL POSTS PER DRAWINGS. INSTALL CORNER POSTS WHERE CHANGES IN GRADE EXCEED 30 DEGREES.
 2. SET POSTS VERTICALLY IN CYLINDRICAL CONCRETE FOUNDATION PER THE SCHEDULE IN TABLE 1 AND IN ACCORDANCE WITH ASTM F567.

TABLE 1: LINE, TERMINAL, AND GATE POST INSTALLATION SCHEDULE

	FOUNDATION DIAMETER	FOUNDATION DEPTH	POST EMBEDMENT
LINE POST	0'-10"	3'-6"	3'-0"
TERMINAL POST	1'-0"	3'-6"	3'-0"
GATE POSTS	1'-6"	4'-0"	3'-6"

3. TOP SURFACE OF THE CONCRETE FOUNDATION SHALL BE SMOOTH 1/2" CROWN, SLOPING AWAY FROM THE POST AND BE A MINIMUM OF 4" BELOW GRADE. THE POST SHALL BE 6" FROM THE BOTTOM OF THE CONCRETE POUR.

4. HOLES MAY BE HAND AUGURED OR DRILLED. IF ROCK IS ENCOUNTERED, DRILL MIN. 12" FOR LINE POSTS AND 18" FOR CORNER, GATE, OR TERMINAL POSTS. DRILL HOLES 1" LARGER THAN SIZES IN TABLE 1. IF SOLID ROCK IS BELOW SOIL OVERBURDEN, DRILL TO FULL DEPTH REQUIRED, EXCEPT PENETRATION INTO ROCK NEED NOT EXCEED MINIMUM DEPTHS SPECIFIED.

E. SETTING POSTS

1. REMOVE ANY LOOSE AND FOREIGN MATERIALS FROM THE SIDES AND BOTTOMS OF THE HOLES; MOISTEN SOIL PRIOR TO PLACING THE CONCRETE. CENTER AND ALIGN POSTS, TAMP TO CONSOLIDATE, AND SECURE UNTIL CONCRETE IS FULLY CURED.
2. KEEP CONCRETE SURFACES MOIST FOR AT LEAST 7 DAYS AFTER PLACEMENT.
3. POSTS SET IN SLEEVED HOLES SHALL BE GROUTED IN PLACE USING A NON-SHRINK PORTLAND CEMENT GROUT APPROVED BY THE ENGINEER.
4. PRIOR TO PLACING COMPONENTS SUCH AS FABRIC, RAILS, TENSION WIRE, AND GATES, VERIFY THAT THE CONCRETE HAS REACHED AT LEAST 75% OF ITS DESIGN STRENGTH AS PRESCRIBED ON THE PLAN DETAILS, OR HAS CURED A MINIMUM OF 7 DAYS AFTER SETTING THE POSTS.

F. BRACING (CHAIN LINK FENCE ONLY)

1. INSTALL TENSION WIRES PARALLEL TO THE LINE OF FABRIC BY WEAVING NO LESS THAN 7 GA. WIRE OF THE APPROPRIATE TYPE THROUGH FABRIC AND TYING TO EACH POST. INSTALL TENSION WIRE BEFORE STRETCHING FABRIC.
2. INSTALL HORIZONTAL PIPE BRACE AT MID-HEIGHT ON EACH SIDE OF TERMINAL POSTS. FIRMLY ATTACH WITH FITTINGS. INSTALL DIAGONAL TRUSS RODS AT THESE POINTS. ADJUST TRUSS ROD, ENSURING POSTS REMAIN PLUMB.

G. INSTALLING FABRIC (CHAIN LINK FENCE ONLY)

1. INSTALL THE CHAIN LINK FENCE FABRIC SO THAT THE POSTS ARE ENCLOSED. STRETCH THE FABRIC TAUT, APPROXIMATELY 2" ABOVE THE GROUND, AND SECURELY TO THE POSTS.
2. CUT FABRIC AND ATTACH EACH SPAN INDEPENDENTLY AT ALL TERMINAL AND CORNER POSTS. USE STRETCHER BARS WITH FABRIC BANDS SPACED AT MAX. 5" INTERVALS TO FASTEN FABRIC TO TERMINAL POSTS. USE TIE WIRE, METAL BANDS, OR OTHER APPROVED MATERIAL ATTACHED AT MAXIMUM 15" INTERVALS TO FASTEN FABRIC TO LINE POSTS, TOP RAIL OR BOTTOM TENSION WIRE.

H. INSTALLING GATES

1. INSTALL GATES ACCORDING TO THE LOCATIONS, TYPE, AND SIZE INDICATED ON THE PLANS.
 2. GATES SHALL BE BRACED AND TRUSSED TO PREVENT SAGGING, BUCKLING, AND WEAVING, AND COVERED WITH SAME FABRIC AS THE FENCE, UNLESS NOTED OTHERWISE. FIXED END RATCHET BANDS SHALL BE FURNISHED FOR FASTENING. FURNISH GATES WITH ALL FITTINGS AND HARDWARE REQUIRED. HEAVY DUTY COMMERCIAL LATCHES PROVIDED FOR USE WITH PADLOCK AND HINGES SHALL ALLOW 180 DEGREE SWING. PROVIDE 3/8" DIAMETER CROSSBRACING.
 3. INSTALL GATES PLUMB, LEVEL, AND SECURE FOR THE FULL OPENING WITHOUT INTERFERENCES
 4. INSTALL ALL ITEMS PER MANUFACTURER'S RECOMMENDATIONS. INSPECT ALL PARTS AND ATTACHMENTS FOR DEFECTS, AND INSTALL, LUBRICATE, AND ADJUST EQUIPMENT TO ENSURE SMOOTH OPERATION.
 5. INSTALL (WELD TO GATE FRAME) (2) 8" SECTIONS (ONE PER GATE) OF 1/4" NOMINAL WELDED, GRADE 30 MINIMUM GALVANIZED STEEL CHAIN JUST BELOW LATCH FOR PADLOCKS. VERIFY INSIDE DIMENSIONS OF CHAIN LINK WILL RECEIVE STANDARD PADLOCKS.
- I. MISCELLANEOUS INSTALLATION (CHAIN LINK FENCE)
1. USE U-SHAPED TIE WIRES, CONFORMING TO THE DIAMETERS OF PIPE, THAT CLASP THE PIPE AND FABRIC FIRMLY WITH ENDS TWISTED AT LEAST 2 FULL TURNS.
 2. INSTALL NUTS FOR FASTENERS ON TENSION BANDS AND HARDWARE BOLTS ON THE SIDE OF THE FENCE OPPOSITE THE FABRIC. THE ENDS OF BOLTS, ONCE SECURE AND CHECKED FOR SMOOTH OPERATION, SHALL BE PEENED TO PREVENT REMOVAL OF NUTS.

3.2 PROTECTION:

- A. A GUARANTEE SHALL BE FURNISHED FOR ALL MATERIALS, INSTALLATION, AND WORKMANSHIP TO BE FREE OF DEFECTS FOR A PERIOD OF 1 YEAR FROM THE DATE OF ACCEPTANCE UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. ANY DEFECT IN INSTALLATION OR WORKMANSHIP SHALL BE REPAIRED, AND/OR REPLACED WITHOUT COST TO THE OWNER.
- B. REPAIR COATINGS DAMAGED IN THE FIELD AS RECOMMENDED BY THE MANUFACTURER.

END OF SECTION

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO	STATE CERTIFICATE OF AUTHORIZATION #	PE#	CIVIL	C
ENGINEER:	REI	KEVIN M. VANMAEL	CIVIL	
KMY	36490	TERRA	ELECTRICAL	E
TMS	49643	SDK	ELECTRICAL	

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SUBMITTALS:

	DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW		08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SPECIFICATIONS
(5 OF 7)

DWG INFORMATION:

DRAWN BY:	DML
CHECKED BY:	TKW

SHEET NUMBER:

SP-1.4

NEW/REVISED EASEMENT ACCESS/UTILITY EASEMENT VZM LANDSPACE PENETRATIONS RR/BBU ANTENNAS FIBER POWER/ GROUNDING HYBRID & COAX CABLES

ELECTRICAL SECTION 16000

PART 1: GENERAL

1.1 GENERAL CONDITIONS:

- A. THE CONTRACTOR SHALL INSPECT THE SITE WHERE THIS WORK IS TO BE PERFORMED AND FULLY FAMILIARIZE HIMSELF WITH ALL CONDITIONS RELATED TO THIS PROJECT.
- B. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND LICENSES AND SHALL MAKE ALL DEPOSITS AND PAY ALL FEES REQUIRED FOR THE PERFORMANCE OF WORK UNDER THIS SECTION.
- C. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.

1.2 LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES:

- A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE LOCAL LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES.

1.3 REFERENCES:

- A. THE PUBLICATIONS LISTED BELOW FORM PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND ADDENDUM IN EFFECT ON THE DATE THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS NOTED OTHERWISE. EXCEPT AS MODIFIED BY THE REQUIREMENTS SPECIFIED HEREIN OR THE DETAILS OF THE DRAWINGS, WORK INCLUDED IN THIS SPECIFICATION SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THESE PUBLICATIONS.

1. ANSI/IEEE (AMERICAN NATIONAL STANDARDS INSTITUTE)
2. IEEE (INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS)
3. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
4. ICEA (INSULATED CABLE ENGINEERS ASSOCIATION)
5. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION)
6. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)
7. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)
8. UL (UNDERWRITERS LABORATORIES, INC.)

1.4 SCOPE OF WORK:

- A. WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL AND ASSOCIATED SERVICES REQUIRED TO COMPLETELY CONSTRUCT AND LEAVE READY FOR OPERATION SYSTEMS AS SHOWN ON THE DRAWINGS AND HEREIN DESCRIBED.
- B. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY TESTED, ADJUSTED, AND ALIGNED BY THE CONTRACTOR.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING, DRAINING, TRENCHES, BACKFILLING, AND REMOVAL OF EXCESS DIRT.
- D. THE CONTRACTOR SHALL FURNISH TO THE OWNER, CERTIFICATES OF FINAL INSPECTION AND APPROVAL FROM THE INSPECTION AUTHORITIES HAVING JURISDICTION.

PART 2: PRODUCTS

2.1 GENERAL:

- A. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE NEW, FREE FROM DEFECTS AND OF THE BEST QUALITY NORMALLY USED FOR THE PURPOSE IN GOOD COMMERCIAL PRACTICE.
- B. ALL MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.
- C. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
- D. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT.

2.2 MATERIALS AND EQUIPMENT:

- A. CONDUIT:
 1. RIGID GALVANIZED STEEL CONDUIT (RGS) SHALL BE HOT-DIP GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED INSIDE IN ADDITION TO GALVANIZING.
 2. FLEXIBLE METAL CONDUIT SHALL BE GALVANIZED, ZINC-COATED STEEL, PVC COATED FOR OUTDOOR APPLICATIONS.

3. CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION TYPE AND WATERTIGHT.
 4. NON-METALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 40 PVC, HEAVY-WALL RIGID WITH SOLVENT-CEMENT-TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.
- B. WIRE AND CABLE:
 1. WIRE AND CABLE SHALL BE FLAME-RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN, 600 VOLT, SIZES AS INDICATED, #12 AWG MINIMUM.
 2. #10 AWG AND SMALLER CONDUCTORS SHALL BE SOLID AND #8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED.
 3. SOLDERLESS, PRESSURE-TYPE CONNECTORS CONSTRUCTED OF HIGH-STRENGTH, NON-CORRODIBLE, TIN-PLATED COPPER DESIGNED TO FURNISH HIGH-PULLOUT STRENGTH AND HIGH CONDUCTIVITY JOINTS SHALL BE USED.
 4. SUPPORT GRIPS SHALL BE SINGLE WEAVE, CLOSED MESH, HIGH-GRADE, NON-MAGNETIC, TIN-COATED BRONZE CAPABLE OF SUPPORTING TEN TIMES THE CABLE DEAD WEIGHT, HUBBELL KELLEMS OR APPROVED EQUAL.
 - C. DISCONNECT SWITCHES:
 1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD-FRONT, QUICK-MAKE, QUICK-BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCKED WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE D CLASS 3110 OR APPROVED EQUAL.
 - D. SYSTEM GROUNDING:
 1. GROUNDING CONDUCTOR SHALL BE BARE, STRANDED, COPPER, SIZE AS INDICATED, EXCEPT ABOVE GROUND GROUNDING CONDUCTORS SHALL BE INSULATED.
 2. GROUND BUSSES SHALL BE GALVANIZED STEEL BARS OF RECTANGULAR CROSS SECTION.
 3. CONNECTORS SHALL BE HIGH-CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS USED. USE TWO-HOLE COMPRESSION LUGS WITH HEAT SHRINK FOR MECHANICAL CONNECTIONS.
 4. EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.
 5. GROUND RODS SHALL BE COPPER-CLAD STEEL WITH HIGH-STRENGTH STEEL CORE AND ELECTROLYTIC-GRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE, 3/4" x 10'-0".
 - E. OTHER MATERIALS:
 1. THE CONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO	
STATE CERTIFICATE OF AUTHORIZATION #	PE#
ENGINEER:	
KMV KEVIN M. VANMAEL	CIVIL
REJ ROBERT E. JEVRE	CIVIL
TMS TERRA	36490 ELECTRICAL
SDK SHAW	49643 ELECTRICAL

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SP-2.0

NEW/REVISED EASEMENT
 ACCESS/UTILITY EASEMENT
 VZM LANDSPACE
 PENETRATIONS
 RR/RIBBU
 ANTENNAS
 FIBER
 POWER/ GROUNDING
 HYBRID & COAX CABLES

PART 3: EXECUTION

3.1 GENERAL:

- A. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- B. EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL INJURY DURING INSTALLATION AND CONSTRUCTION PERIODS.

3.2 LABOR AND WORKMANSHIP:

- A. ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE DONE BY EXPERIENCED MECHANICS OF THE PROPER TRADES.
- B. ALL ELECTRICAL EQUIPMENT FURNISHED SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE CONTRACTOR AS REQUIRED TO PRODUCE THE INTENDED PERFORMANCE.
- C. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DEBRIS, CRATING OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.

3.3 COORDINATION:

- A. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER-FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

3.4 INSTALLATION:

A. CONDUIT:

1. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS HEREIN SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4" NOMINAL SIZE SHALL BE USED.
2. PROVIDE RGS CONDUIT FOR ALL EXPOSED, EXTERIOR CONDUIT.
3. PROVIDE SCHEDULE 40 PVC OR RGS CONDUIT BELOW GRADE, 1" MINIMUM, UNLESS NOTED OTHERWISE. ALL 90 DEGREE BENDS TO ABOVE GRADE SHALL BE RGS. MINIMUM BURIAL DEPTH SHALL BE 24" CLEAR TO TOP OF CONDUIT, UNLESS NOTED OTHERWISE.
4. USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION IS NOT DESIRABLE FOR REASONS OF EQUIPMENT MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LIQUIDTIGHT, PVC COATED FLEXIBLE METAL CONDUIT FOR OUTDOOR APPLICATIONS.
5. INSTALL GALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT MOUNTED ON SUPPORTS TO ALLOW FOR EXPANSION AND CONTRACTION.
6. A RUN OF CONDUIT BETWEEN BOXES OR FITTINGS SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER-BENDS INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE BOX OR FITTING. THE RADIUS OF BENDS SHALL NEVER BE SHORTER THAN THAT OF THE CORRESPONDING TRADE ELBOW.
7. WHERE CONDUIT HAS TO BE CUT IN THE FIELD, IT SHALL BE CUT SQUARE WITH A PIPE CUTTER USING CUTTING KNIVES.
8. ALL CONDUITS SHALL BE SWABBED CLEAN BY PULLING AN APPROPRIATE SIZE MANDREL THROUGH THE CONDUIT BEFORE INSTALLATION OF WIRE OR CABLE. CLEAR ALL BLOCKAGES AND REMOVE BURRS, DIRT, AND DEBRIS.
9. INSTALL PULL STRINGS IN ALL EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END WITH ITS DESTINATION.
10. PROVIDE INSULATED GROUNDING BUSHINGS FOR ALL CONDUITS STUBBED INTO EQUIPMENT ENCLOSURES OR STUBBED OUT FOR FUTURE USE BY OTHERS.
11. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY OPENINGS IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOISTURE OR FOREIGN MATTER. CONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.
12. INSTALL 2" ORANGE DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUIT AND WIRE.
13. CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.

B. WIRE AND CABLE:

1. ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:

DESCRIPTION	120/240V	208Y/120V	480Y/277V
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C		BLUE	YELLOW
NEUTRAL	WHITE	WHITE	GRAY
GROUND	GREEN	GREEN	GREEN

2. SPLICES SHALL BE MADE ONLY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAYS WITH PRESSURE-TYPE CONNECTORS.
3. PULLING LUBRICANTS SHALL BE SOAPSTONE POWDER, POWDERED TALC, OR A COMMERCIAL PULLING COMPOUND. NO SOAP SUDS, SOAP FLAKES, OIL, OR GREASE SHALL BE USED, AS THESE MAY BE HARMFUL TO CABLE INSULATION. CONTRACTOR SHALL USE NYLON OR HEMP ROPE FOR PULLING CABLE TO AVOID SCORING THE CONDUIT.
4. CABLES SHALL BE NEATLY TRAINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES, EQUIPMENT, ETC. TO PERMIT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO AVOID TENSION ON CONDUCTORS OR TERMINALS, AND SHALL BE PROTECTED FROM MECHANICAL INJURY AND FROM MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS ARE PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

C. DISCONNECT SWITCHES:

1. INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUND AS INDICATED.

D. GROUNDING:

1. ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEMS INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
3. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
4. TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
5. ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
6. ALL GROUND CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC-WELDED CONNECTIONS SHALL BE APPROVED BY THE CONSTRUCTION INSPECTOR BEFORE BEING PERMANENTLY CONCEALED.
7. APPLY CORROSION-RESISTANT FINISH TO FIELD CONNECTIONS, AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED. USE COPPER-BASED "NO-OX" OR APPROVED EQUAL.
8. A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS
9. BOND ALL INSULATED GROUNDING BUSHINGS WITH A BARE #6 AWG GROUNDING CONDUCTOR TO A GROUND BUS OR GROUNDING LUG IN ENCLOSURE.
10. DIRECT BURIED GROUND CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 30" BELOW GRADE, UNLESS NOTED OTHERWISE.
11. ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSULATED OR INSTALLED IN PVC CONDUIT.
12. INSTALL ELECTROLYTIC GROUNDING SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMOVE SEALING TAPE FROM LEACHING AND BREATHER HOLES. INSTALL PROTECTIVE BOX FLUSH WITH GRADE.
13. DRIVE GROUND RODS UNTIL TOPS ARE 30" BELOW FINAL GRADE.
14. GROUNDING CONDUCTOR TO EQUIPMENT GROUND LUGS:
 - a. BOLTED TO EQUIPMENT HOUSING WITH STAINLESS STEEL BOLTS AND LOCK WASHERS.
 - b. ALL EQUIPMENT TO BE GROUNDED SHALL BE FREE OF PAINT OR ANY OTHER MATERIAL COVERING BARE METAL AT THE POINT OF CONNECTION.

3.5 ACCEPTANCE TESTING:

- A. PROVIDE PERSONNEL AND EQUIPMENT, MAKE REQUIRED TESTS, AND SUBMIT TEST REPORTS UPON COMPLETION OF TESTS.
- B. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, THE NONCOMPLYING ITEMS SHALL BE REMOVED FROM THE JOBSITE AND REPLACED WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS PROMPTLY AFTER RECEIPT OF NOTICE OF SUCH NON-COMPLIANCE.

C. TEST PROCEDURES:

1. ALL FEEDERS SHALL HAVE THEIR INSULATION TESTED AFTER INSTALLATION, BUT BEFORE CONNECTION TO DEVICES. THE CONDUCTORS SHALL TEST FREE FROM SHORT CIRCUITS AND GROUNDS. TESTING SHALL BE FOR ONE MINUTE USING 1000V DC. INVESTIGATE ANY VALUES LESS THAN 50 MEGOHMS.
2. PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING DEVICES FOR ELECTRICAL CONTINUITY AND PROPER POLARITY CONNECTIONS.
3. MEASURE AND RECORD VOLTAGES BETWEEN PHASES AND BETWEEN PHASE WIRES AND NEUTRALS. SUBMIT A REPORT OF MAXIMUM AND MINIMUM VOLTAGES.
4. PERFORM GROUND TEST TO MEASURE GROUND RESISTANCE OF GROUNDING SYSTEM USING THE IEEE STANDARD 3-POINT "FALL-OF-POTENTIAL" METHOD. PROVIDE PLOTTED TEST VALUES & LOCATION SKETCH. NOTIFY THE ENGINEER IMMEDIATELY IF MEASURED VALUE IS OVER 5 OHMS.

END OF SECTION

END OF SPECIFICATION

PLANS PREPARED FOR:



PLANS PREPARED BY:



ENGINEERING LICENSE:

STATE OF COLORADO	
STATE CERTIFICATE OF AUTHORIZATION #	
ENGINEER:	PE#
KMV KEVIN M. VANMAEL	CIVIL
REJ ROBERT E. JENKINS	CIVIL
TMS TERRA	36490 ELECTRICAL
SDK SHANE	49643 ELECTRICAL

DRAWING NOTICE:

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SUBMITTALS:

DESCRIPTION	DATE	BY	REV
ISSUED FOR REVIEW	08/19/19	DML	A

APPLICANT SITE NAME:

CO3 CASTERLY ROCK

APPLICANT LOCATION NUMBER:

313884

SITE ADDRESS:

2884 B 1/2 ROAD
GRAND JUNCTION, COLORADO
81503

SHEET DESCRIPTION:

SPECIFICATIONS
(7 OF 7)

DWG INFORMATION:

DRAWN BY:	DML
CHECKED BY:	TKW

SHEET NUMBER:

SP-2.1

NEW/REVISED EQUIPMENT, ACCESS/UTILITY EASEMENT, VZM LANDSPACE, PENETRATIONS, RR/RIBBU, ANTENNAS, FIBER, POWER/ GROUNDING, HYBRID & COAX CABLES



David Thornton
Community Development
250 North 5th Street
Grand Junction, CO 81501

September 12, 2019

Dear Mr. Thornton,

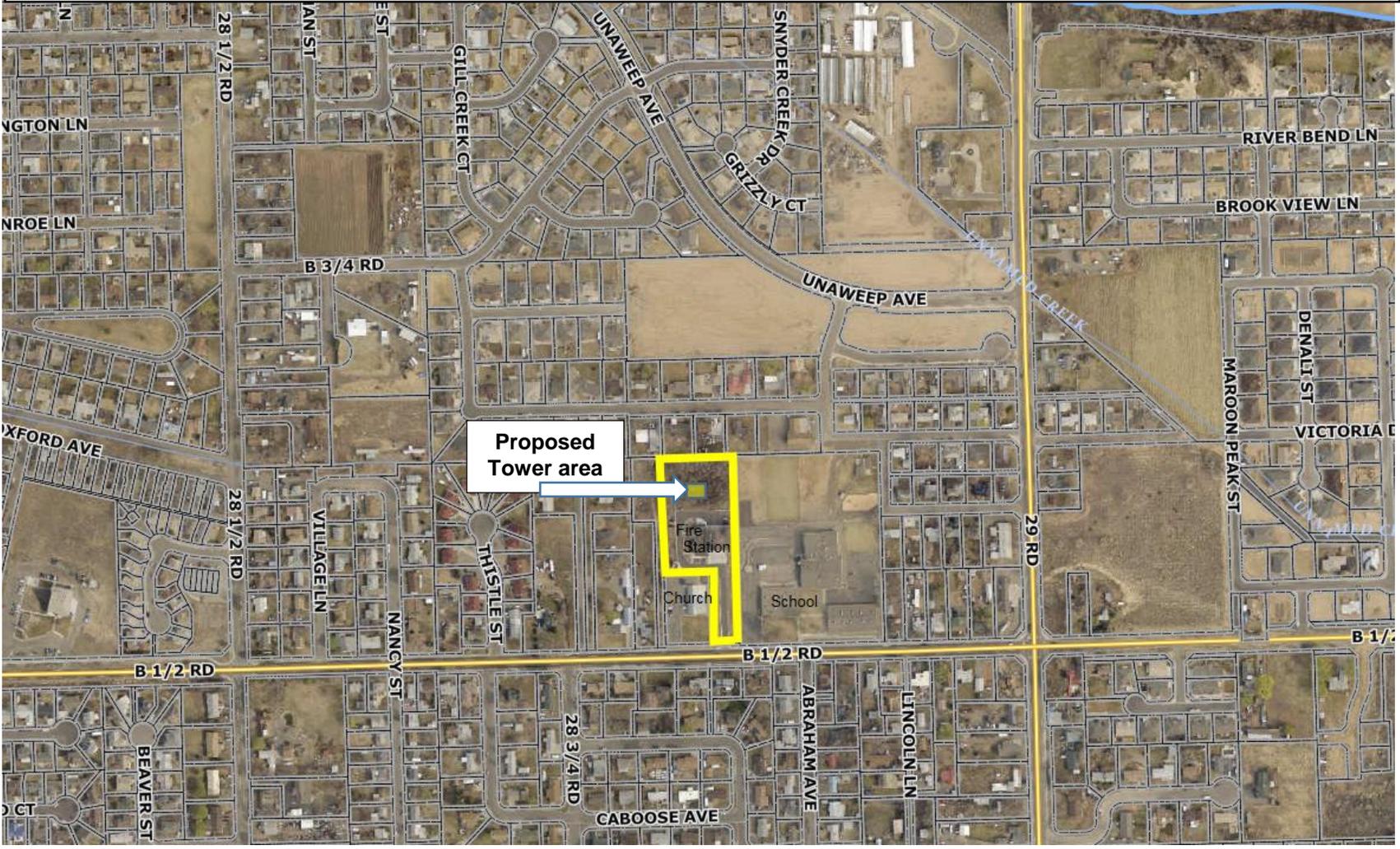
As you are aware, SSC on behalf of Verizon, is seeking a zoning permit for a wireless telecom site from the City of Grand Junction. Under the City's Zoning Code, Conditional Use Permits have one year to establish their use once the permit is approved. Because the proposed wireless telecom site will be co-locatable for at least two service providers, SSC on behalf of Verizon respectfully requests the Planning Commission to extend the development schedule for up to 10 years with the goal being to obtain other carriers to co-locate on the proposed wireless tower. SSC, on behalf of Verizon, will need to preserve the ability to conform to the City's Zoning Code and attain a cell tower with at least two service providers which is shown as a high priority on Grand Junction's 2016 Wireless Masterplan. It is Verizon's desire to partner with the city in an attempt to minimize the proliferation of telecom towers by making existing and new towers co-locatable whenever feasibly possible.

Thank you for your time.

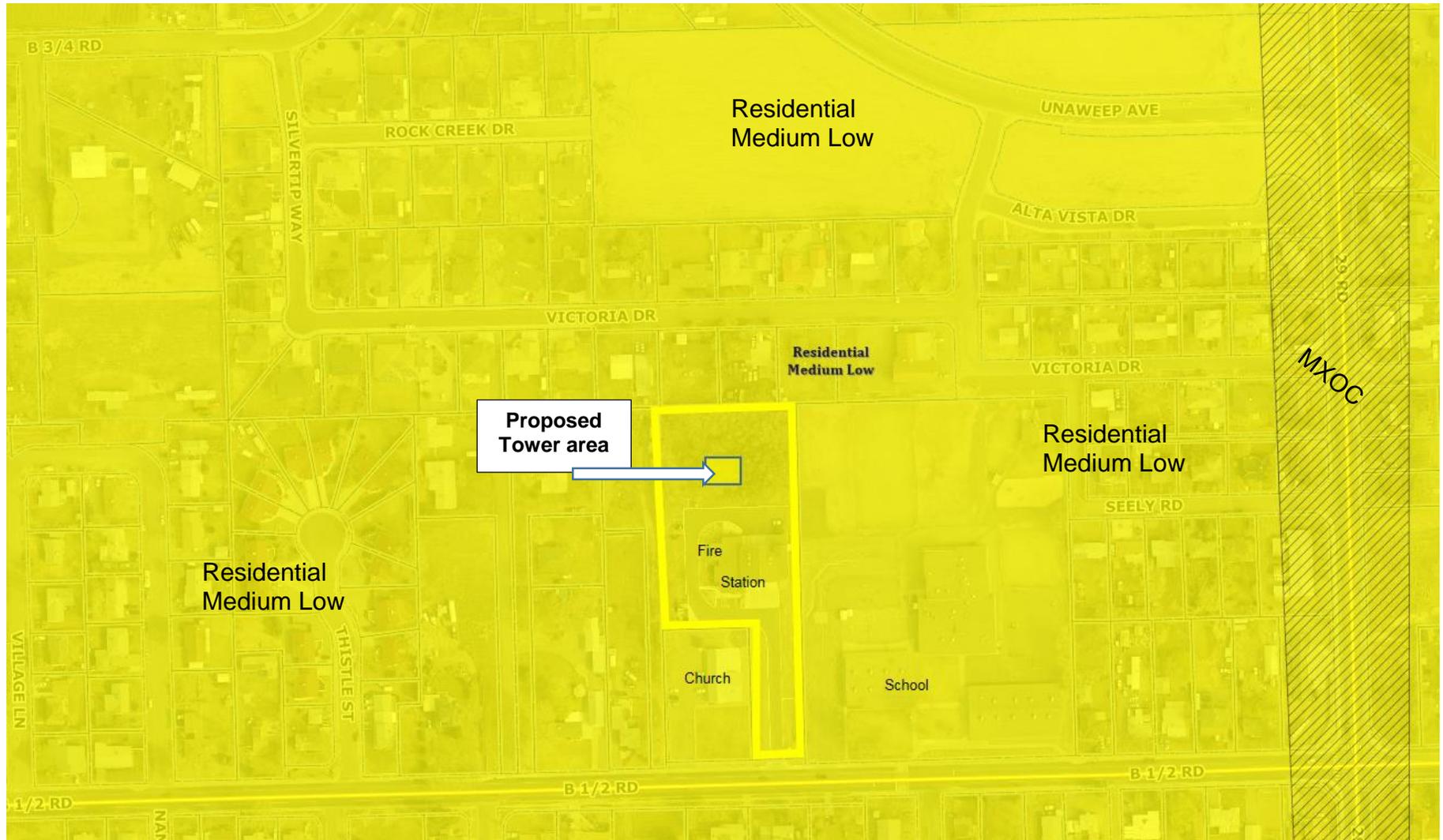
Sincerely,

Charmaine Dregalla

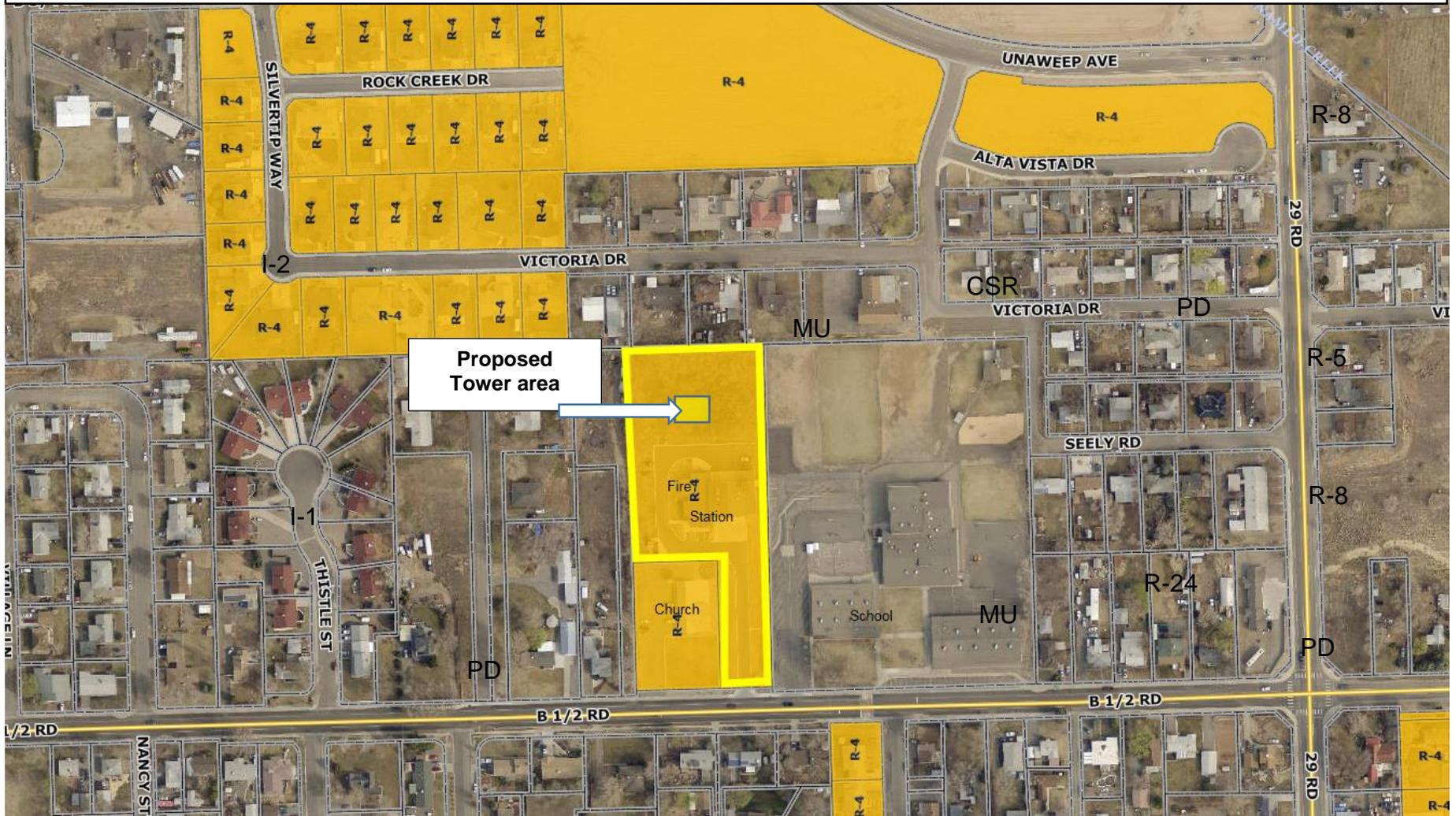
Verizon Mono-Pine Cellular Tower Conditional Use Permit Site Location Map



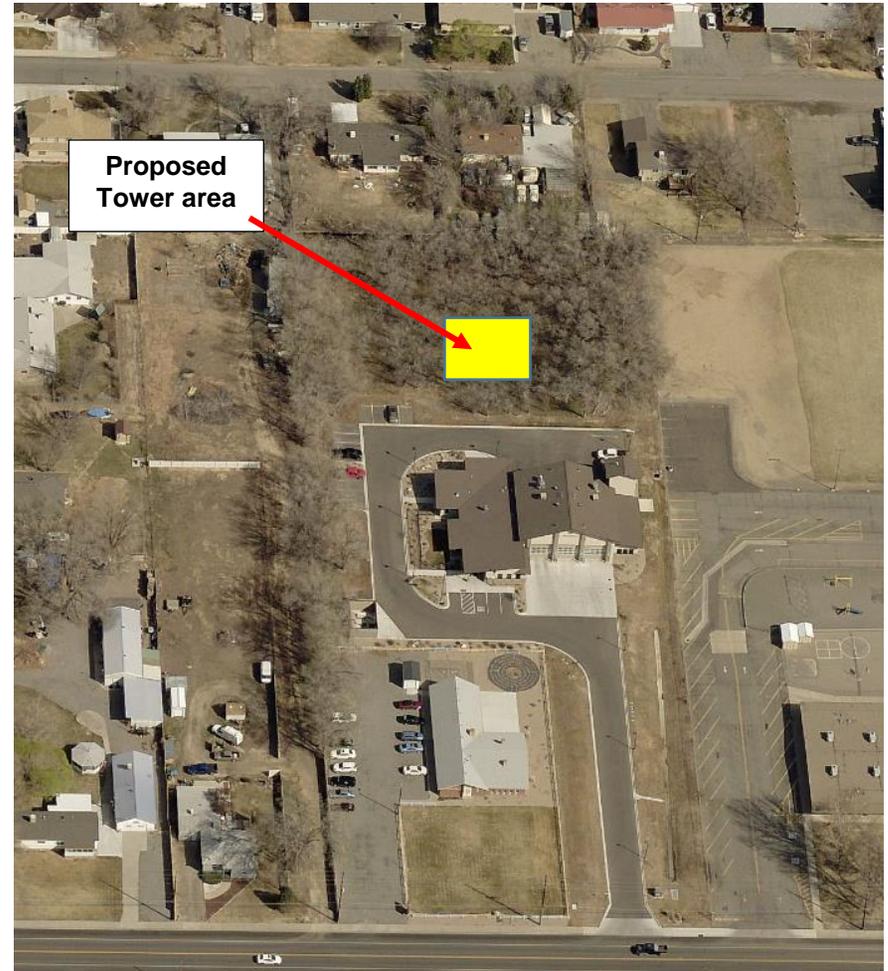
Verizon Mono-Pine Cellular Tower Conditional Use Permit Future Land Use Map



Verizon Mono-Pine Cellular Tower Conditional Use Permit Existing Zoning Map



Site Photo - Looking North



Site Photo – Looking South





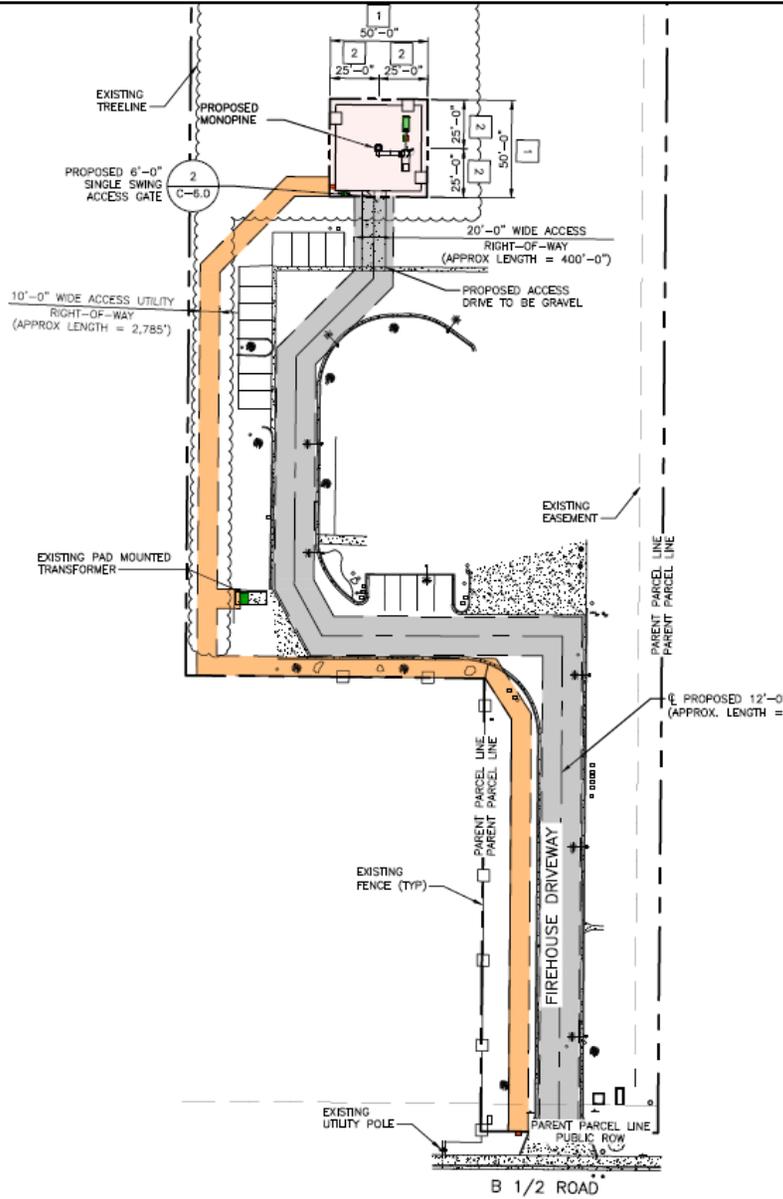
MAP

KEYED NOTES:

- 1 PROPOSED LEASE BOUNDARY
- 2 CENTER OF TOWER

NOTE:

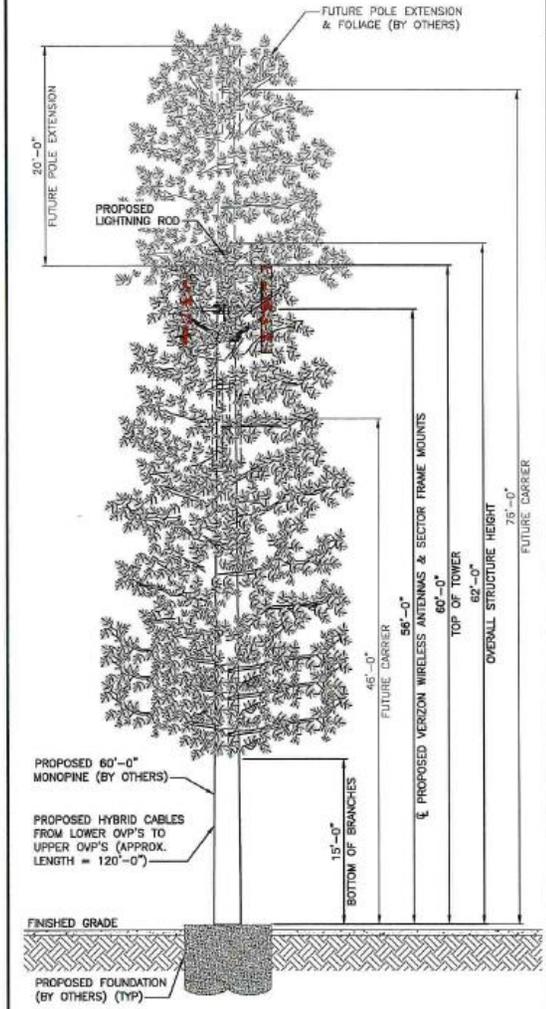
SEE OVERALL UTILITY PLAN (SHEET E-1.0) FOR SIZES, LENGTHS & ROUTING OF UTILITIES.



OVERALL SITE PLAN

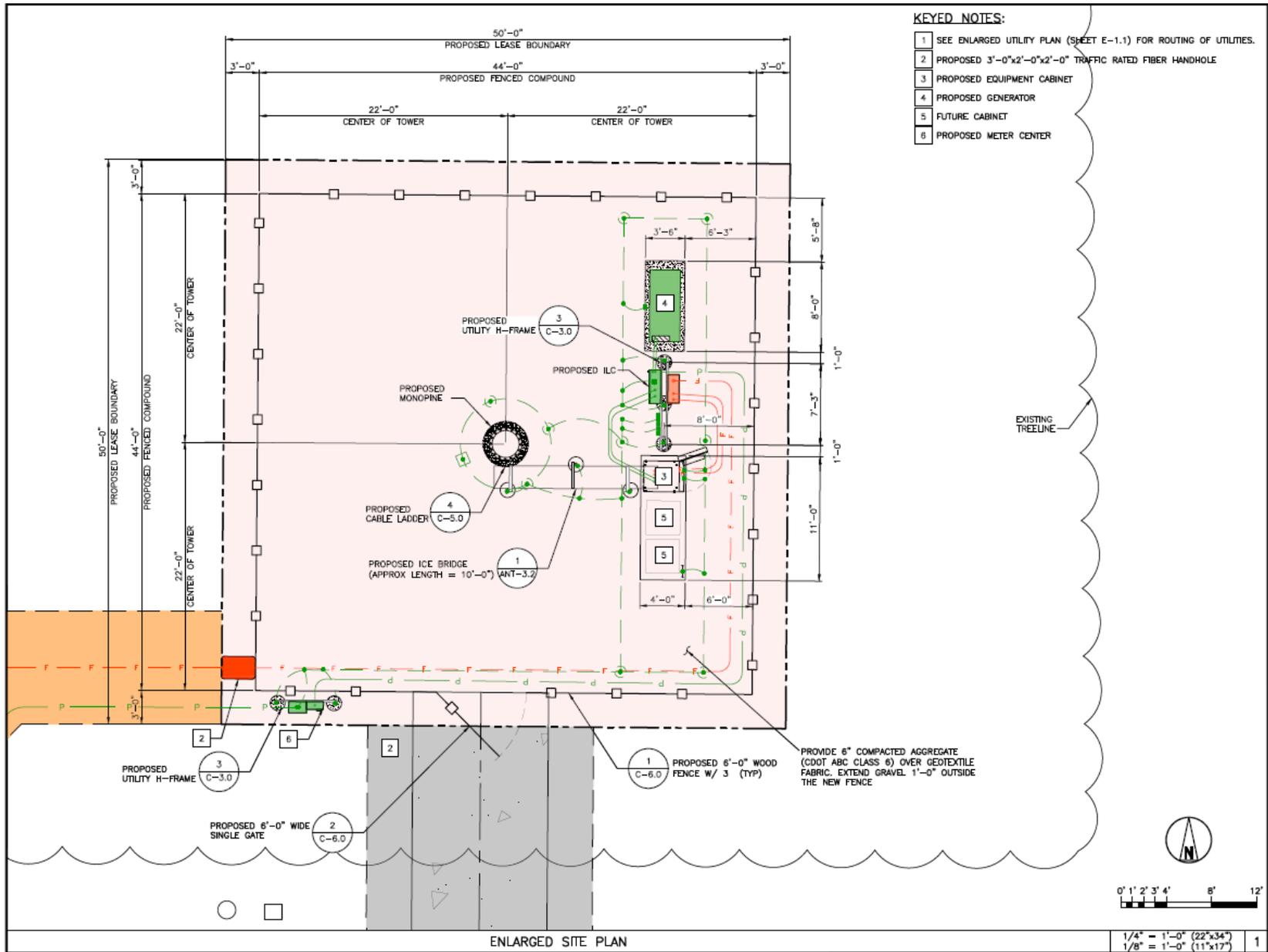
MOUNT NOTE:

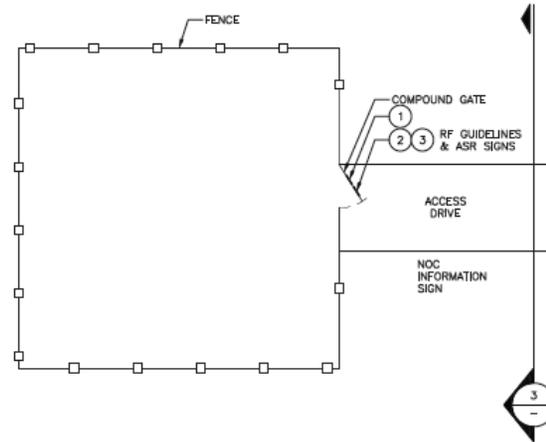
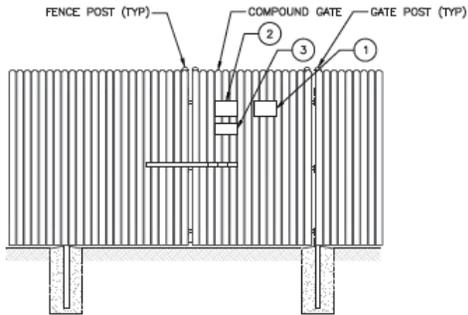
TOWER MANUFACTURER SHALL SUPPLY RING MOUNT THAT MEETS VERIZON WIRELESS' NSTD-445. IF THE SITE SPECIFIC REQUIRED MOUNT CLASSIFICATION IS GREATER THAN THE MINIMUM REQUIRED MOUNT CLASSIFICATION (M100005)-(6), THEN THE REQUIRED SITE SPECIFIC MOUNT CLASSIFICATION SHALL BE USED.



TOWER ELEVATION

1





NOTE:
ELEVATION IS LOOKING FROM EXTERIOR OF FENCED COMPOUND.

FENCE SIGNAGE PLACEMENT

3

FENCE SIGNAGE PLAN

1

GREEN BACKGROUND
W/ WHITE LETTERING

INFORMATION

This is an **ACCESS POINT** to an area with transmitting antennas.

Obey all postings and boundaries beyond this point.

Call Verizon at 1-800-264-6620 for more information.

STATE: _____ SWITCH: _____

SITE ID: _____

verizon

NOC INFORMATION SIGN
1'-0" WIDE x 8" HIGH 1

YELLOW BACKGROUND
W/ WHITE LETTERING

NOTICE

General Radio Frequency (RF) Safety Guidelines

Until ALL applicable antennas have been deactivated, please observe the following:

- ⚠ Obey all posted signs.
- ⚠ Assume all antennas are transmitting.
- ⚠ Do not touch any antenna.
- ⚠ Do not stand in front of any antenna.
- ⚠ Do not walk in front of any antenna.
- ⚠ Do not walk beyond any signs, barriers, or visual markers towards any antenna.
- ⚠ Contact antenna owner or property owner if there are any questions or concerns.

verizon

RF GUIDELINES SIGN
1'-0" WIDE x 8" HIGH 2

WHITE BACKGROUND
W/ BLACK LETTERING

FCC REG. NO

XXXXXXXXXX

FCC TOWER REGISTRATION NUMBER

ASR SIGN
1'-0" WIDE x 8" HIGH 3

FENCE SIGNAGE

2



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

Disclaimer: This photo simulation is a depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.



EXISTING VIEW LOOKING NORTH



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

Disclaimer: This photo simulation is a depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.

Proposed 60'
MonoPine

PROPOSED VIEW LOOKING NORTH



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

Disclaimer: This photo simulation is a depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.

Proposed 80'
MonoPine

PROPOSED VIEW LOOKING NORTH



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

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EXISTING VIEW LOOKING WEST



verizon✓

Site No: 313884
Grand Junction, Colorado
81503

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Proposed 60'
MonoPine



PROPOSED VIEW LOOKING WEST



verizon

Site No: 313884
Grand Junction, Colorado
81503

Disclaimer: This photo simulation is a depiction of a future installation. The actual construction may vary slightly in size, layout, color and texture from this simulation.

Proposed 80'
MonoPine



PROPOSED VIEW LOOKING WEST



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

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EXISTING VIEW LOOKING SOUTH



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

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color and texture from this simulation.

Proposed 60'
MonoPine



PROPOSED VIEW LOOKING SOUTH



verizon[✓]

Site No: 313884
Grand Junction, Colorado
81503

Disclaimer: This photo simulation is a depiction of a future installation.
The actual construction may vary slightly in size, layout,
color and texture from this simulation.

Proposed 80'
MonoPine



PROPOSED VIEW LOOKING SOUTH