



REVISED AGENDA
WOODLAND PARK PLANNING COMMISSION
Thursday, December 14, 2023, 6:30 P.M.
Council Chambers – 220 W. South Avenue

Zoom link from the calendar at the bottom of the front page of the City website (www.city-woodlandpark.org).

1. **CALL TO ORDER & ROLL**
2. **PLEDGE OF ALLEGIANCE**
3. **APPROVE MINUTES:** November 9, 2023
4. **PUBLIC HEARINGS**

A. CUP/SPR2023-04: A request by Pikes Peak Taco, Mexican Restaurant, Inc. (applicant) and Morales Enterprises, LLC (property owner) for a Conditional Use Permit with a Site Plan Review to accommodate a drive thru Mexican restaurant and associated site improvements along with a common lot $\frac{3}{4}$ driveway off Highway 24 with a legal description of Lot 3, Brecken Heights (19569 E. US 24) in the Community Commercial (CC) zone. (QJ)

B. ITEM PULLED – TO BE RESCHEDULED

~~**SUB2023-07 & CUP/SPR2023-05: Victory Ridge Subdivision Preliminary Plat & Victory Life Church CUP/SPR :** A request by Seth Emerson of Kingdom Design Group (Applicant) and Legacy Title Holding Corporation (Property Owner) for a Preliminary Plat to plat 66.37 acres into one lot and a Conditional Use Permit with a Site Plan Review for a church (MC S18.09.090 K.4.), which includes a 38,440 SF building with a 1,500 seat main sanctuary and weekday daycare. The subject property is located north of the intersection of Highway 24 and Trout Creek Road in Sections 23 & 26, T12S, R69W of the 6th P.M., also known as “Gold Mountain” (5955 Trout Creek Road) in the Agricultural (AG) zone district. (QJ)~~

5. **REPORTS**
6. **ADJOURN**

For more information, please contact the Planning Department 719.687.5202

WOODLAND PARK PLANNING COMMISSION

MEETING MINUTES for November 9, 2023

Council Chambers, 220 W. South Avenue, Woodland Park

This meeting was a hybrid meeting with in-person and virtual attendance. The Zoom meeting link is in the calendar on the City website front page. Public input is very important to the Planning Commission. Comments were encouraged in writing in advance of the meeting to be submitted by mail to the Planning Department at PO Box 9007, Woodland Park, CO, 80866 or email to kschminke@city-woodlandpark.org.

1. CALL TO ORDER & ROLL:

Due to technical difficulties, Chair Ken Hartsfield called the meeting to order at 6:42 pm.

Present	Chair Ken Hartsfield
Present	Vice-Chair Lee Brown
Present	Commissioner Don Dezellem
Present	Commissioner George Jones
Present	Commissioner Kenneth Kennedy
Present	Commissioner Larry Larsen
Present	Commissioner Shawn Nielsen
Present	Commissioner Koal Middleton
Staff Present:	Planning Director Karen Schminke
	Senior Planner C.J. Gates

2. PLEDGE OF ALLEGIANCE

3. APPROVE MINUTES: Commissioner Brown requested that Chair Hartsfield's first name be included in the roll call. With that note, Commissioner Brown moved and Commissioner Middleton seconded approving the October 12, 2023 Planning Commission Meeting Minutes.

YES: All.

NO: None.

Motion PASSES 8 – 0.

4. PUBLIC HEARINGS

As an introduction to this portion of the agenda, Chair Hartsfield noted that agenda item 4.B. SUB2023-05: Woodland Station Filing No. 2 Preliminary Plat, is postponed to a later date. Director Schminke stated that once a date is set, the item will be renoticed.

Chair Hartsfield then introduced agenda item 4.A:

A. SUB2023-06: Kings Crown Preliminary Plat: A request by Terrence and Fadile OMalley (Applicants and Property Owners) for a Preliminary Plat to plat 11.3 acres into one lot. The subject property is located east of the intersection of Ponderosa Way and Kings Crown Road, in Sections 19 and 30, T12S, R68W of the 6th P.M. (lying in the center of Paradise Estates Filing #3 and #4 – Paradise Ranch Addition), in the Suburban Residential (SR) zone. (QJ)

Vice Chair Brown asked to make a statement. He stated he had been contacted by a neighbor who wanted to talk about this hearing item, but Mr. Brown directed them to bring their concerns to this hearing. He wanted to use this as an opportunity, on behalf of the Planning Department and Planning Commission, to remind everyone that if any citizens have questions or comments on any public hearing items, the way to have comments heard is to write to the planning department or better yet, come to the meetings with comments or questions. Planning Commissioners cannot discuss any matters outside of the meeting.

Senior Planner Gates began his presentation of the application by reviewing the staff report, including the site location, access to the subject property from Kings Crown Road, zoning of Suburban Residential (SR), and the history of the original master plan for the area. The subject property was originally planned to be subdivided into eight lots, but the applicants would like to plat it as one lot. The Code requires any parcel to be platted before development or issuance of building permit. Staff reviewed Municipal Code 17.20 Preliminary Plat when reviewing this application, and noted that the application has met the standards therein. The application was referred to all the required City and outside agencies. The City Utilities Department commented that they were in support of the application. Public notice requirements were met, and no public comments were received during the review process.

Staff concluded the presentation with the recommendation **that the Planning Commission recommend to City Council:**

Approval of the Kings Crown Preliminary Plat to plat 11.3 acres into one lot subject to the following conditions:

1. Subject to recording a final plat for the subdivision.
2. Prior to any construction on the subject property, the applicant must submit for and gain approval of a Single Family Residence Zoning Development Permit through the City of Woodland Park Planning Department and a building permit through Pikes Peak Regional Building Department.

Planning Commissioners clarified with staff that this is considered a major subdivision because since a preliminary plat has not been established yet, the applicant has to go through the preliminary and final plat process. Other areas in the Top of Paradise Master Plan are also not yet platted but are owned by other parties. Any future changes in the remaining master plan, including density, would require a stand-alone application for an amendment to the preliminary plat. The Parks and Recreation Advisory Board will review this case at final plat. While the parcel has a steep hillside along the southeast edge, much of the land is flat enough to develop. Since only one lot is proposed instead of eight, enough water taps have been allocated. Land dedication and fees in lieu requirements have already been met through other phases of development.

Craig Nelson, the applicants' representative, introduced himself. The applicants planned on being present, but are currently unavailable due to a car accident this afternoon. He added that this was originally part of Will Brown's master planned development for eight lots and is subject to the Metropolitan District for the area. The applicants would like to plat it as one lot and build their forever home.

Chair Hartsfield opened the Public Comment.

Julie Jabaay, 1151 Kings Crown Road, raised concerns about erosion, especially in the steep areas, managing the build-out, and location of the proposed house site because her property is at the bottom of this property's hillside.

With no one else wishing to speak, Chair Hartsfield closed the Public Comment, and Mr. Nelson showed the location of the access off of Kings Crown Road, the driveway, and the single family residence. He added there will be much less drainage and erosion for one lot instead of the originally proposed eight lots, and that the SFR is being professionally designed, engineered and constructed. Director Schminke added that the house is proposed on a flat spot, pulled back from the steepest hillside.

Planning Commissioners then verified with staff the driveway slope maximum is 17%, that the build is on a relatively flat part of the lot, the drainage and grading plans must be approved by the City Engineer and must meet city engineering requirements at time of

grading and zoning development permits, the applicant proposed the subdivision name, and the impacts should be less since the proposed number of lots is decreased from eight to one.

MOTION: Vice-Chair Brown moved, and Commissioner Nielsen seconded, to adopt the staff recommendation that the Planning Commission recommend to City Council: Approval of the Kings Crown Preliminary Plat to plat 11.3 acres into one lot subject to the following conditions:

1. Subject to recording a final plat for the subdivision.
2. Prior to any construction on the subject property, the applicant must submit for and gain approval of a Single Family Residence Zoning Development Permit through the City of Woodland Park Planning Department and a building permit through Pikes Peak Regional Building Department.

YES: Brown, Dezellem, Jones, Kennedy, Larsen, Nielsen, Hartsfield.

NO: None.

Abstain: Middleton

Motion carries 7 – 0.

City Council is currently scheduled to hear this item on January 4, 2024 at 6:30 p.m.

B. SUB2023-05: Woodland Station Filing No. 2 Preliminary Plat: A request by TAVA House Properties LLC (Applicant and Property Owner) for a Preliminary Plat to plat 6.63 acres into one lot and two tracts. The subject property is located west of Woodland Hardware in Section 24, T12S, R69W of the 6th P.M., (201 Saddle Club Avenue) in the Central Business District (CBD) zone. (QJ)

As noted earlier in the meeting, this item will be renoticed for a future date.

5. **REPORTS:** Director Schminke will email the STR Ordinance which City Council has placed on the ballot for a special election in December. She thanked the Commissioners for their kindness and grace during the evening's technical difficulties. Due to the Thanksgiving holiday, the next Planning Commission meeting is December 14, 2023, which will be the last meeting of the year.

6. **ADJOURN:** The meeting was adjourned at 7:11 p.m.

Approved this _____ day of _____, 2023 by

Ken Hartsfield, Chair



Planning Commission Staff Report Public Hearing December 14, 2023

Agenda Item

4A

Department

Planning

Presenter

C.J. Gates
Senior Planner

AGENDA ITEM 4A

CUP/SPR2023-034 Pikes Peak Taco CUP/SPR: A request by Pikes Peak Taco, Mexican Restaurant, Inc. (applicant) and Morales Enterprises, LLC (property owner) for a Conditional Use Permit with a Site Plan Review to accommodate a drive-thru Mexican restaurant and associated site improvements along with a common lot $\frac{3}{4}$ driveway off Highway 24 with a legal description of Lot 3, Brecken Heights (19569 E. US 24) in the Community Commercial (CC) zone. (QJ)

BACKGROUND

The subject property is located within the Brecken Heights Subdivision which was originally approved by the City Council in 2021. As seen on Figure 2, the original plat (Brecken Heights Subdivision) consisted of a total of four lots including the subject property which is outlined in red. In association with the Brecken Heights Subdivision, Lot 2 which is a total of 175,960 square-feet in size was deeded to the City of Woodland Park. Currently, a social trail exists on Lot 2 that leads to Sun Valley Park to the northeast. A townhouse plat for Lot 1 and a portion of Lot 4 of the Brecken Heights subdivision was approved by the City in 2022; this is now know as the "Homes at Brecken Heights" which and consists of a total of 28 townhome lots.

Figure 1: Vicinity Map

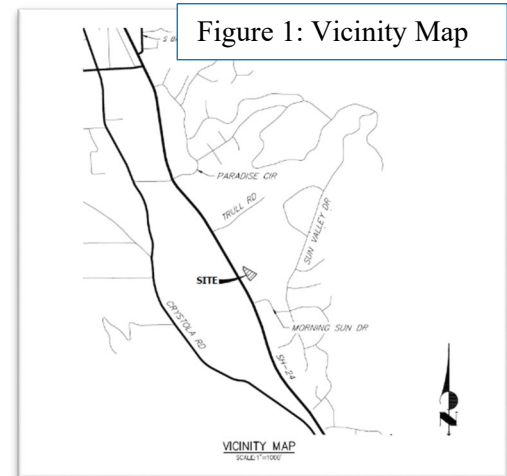
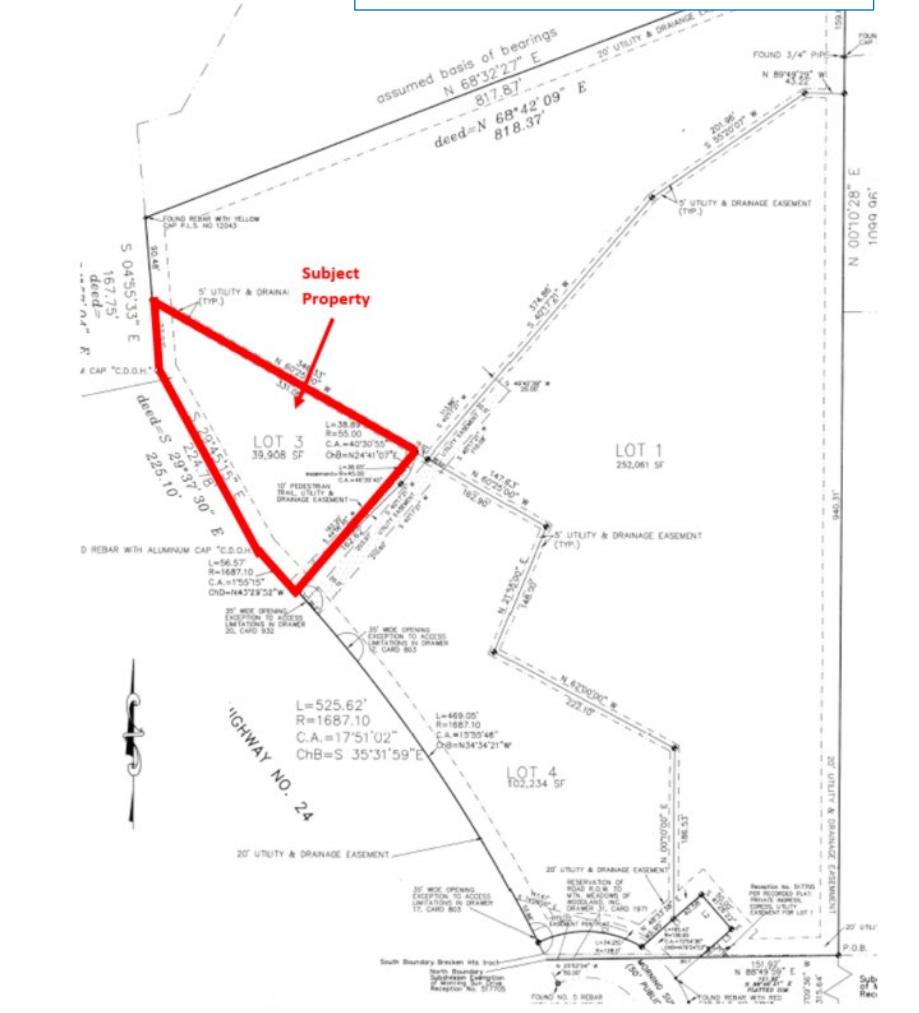
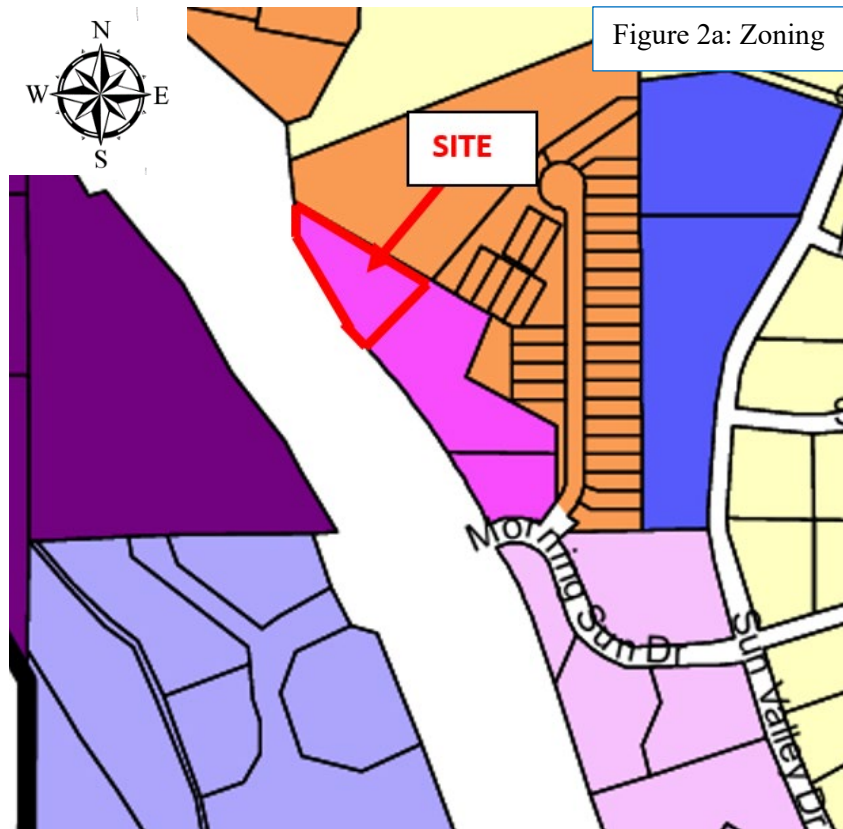


Figure 2: Brecken Heights Subdivision



SITE AND SURROUNDING PROPERTIES

Per the zoning map on Figure 2a, the subject property is zoned Community Commercial (CC) and is bordered by additional CC zoned property to the southeast. To the north and east of the subject property is the City owned parcel previously mentioned as well as the Homes at Brecken Heights townhome development, all zoned Multi-family Residential (MFS). Across Colorado State Highway 24 to the west is a Service Commercial (SC) zoned parcel where the Woodland Village Mobile Home Park currently exists. Just to the south of the mobile home park, southwest of the subject property, is the Wal-Mart Center Planned Unit Development (PUD).



City of Woodland Park - Zoning Map

<u>Residential</u>	<u>Commercial</u>	<u>Other Zones</u>
Suburban Residential (SR)	Central Business District (CBD)	Public / Semi-Public Land (P/SPL)
Urban Residential (UR)	Neighborhood Commercial (NC)	Planned Unit Development (PUD)
Multi-Family Residential Suburban (MFS)	Community Commercial	Agricultural (AG)
Multi-Family Residential Urban (MFU)	Service Commercial (SC)	City Limits
Mobile Home Park (MHP)	Heavy Service Commercial Light Industrial	

The uses and zone districts for the area immediately surrounding the subject property are as follows:

USE		ZONE
Southeast	Vacant Land	CC
North/ Northeast	Vacant Land/Homes at Brecken Heights	MFS
West	Woodland Village Mobile Home Park	SC
Southwest	Walmart PUD	PUD

Figure 2b below is the Future Land Use Map that comes from the City of Woodland Park Comprehensive Master Plan. The subject property which is outlined in red is labeled as “Commercial”.



Figure 3 is a photo of the subject property taken from Colorado State Highway 24.



CURRENT PROPOSAL

Pikes Peak Taco Mexican Restaurant, Inc. (applicant) and Morales Enterprises, LLC (property owner) are applying for a conditional use permit and site plan review in order to construct a 1,650 square-foot drive-thru Mexican restaurant with associated site improvements on the subject property with access to the property from Highway 24. The applicant has stated that the primary function of the proposed building is to function as a drive-thru restaurant but will also include four tables for indoor seating. Outside of the building is proposed to have an outdoor seating area which includes three umbrella style tables which holds approximately 4 customers per table. The City of Woodland Park Municipal Code section 18.09.090 Districts Established – table of permitted uses outlines that “Fast food restaurants and other food serving establishments with drive-in food service” is an allowed use within the CC zone district in conjunction with a Conditional Use Permit.

PROPOSED SITE PLAN & ELEVATIONS

Figure 4 is the proposed site plan which is also attached within the application. As seen here, the applicant is proposing a 1,600 square-foot building on the south side of the property. The proposed site plan includes a parking area with a total of 17 parking spaces which meets the City requirement. Also as seen on the site plan, the proposal includes a drive-thru. According to City Code, the site must accommodate a minimum of four stacking spaces per drive-thru window. The site plan below in figure 4 has a total of four cars illustrated which meets City Code.

Also as seen on the site plan, the proposed restaurant will be accessed from Highway 24 using a proposed 30-foot wide common access driveway. The access point is located on Lot 4 and will

Figure 4: Proposed Site Plan

LOT 3 BRECKEN HEIGHTS

PROJ. CONCRETE DITCH

PROJ. RETAINING WALL

EMPLOYEE PARKING

PROJ. ORDER BOX & MENU BOARD

COLORADO SPRINGS TYPE 5 MOUNTABLE CURB (TYP.)

PROJ. RETAINING WALL

PROJECT BOUNDARY (TYP.)

PROJ. SAND FILTER

WOODLAND PARK TYPE 1 CATCH (TYP.)

PROJ. BUILDING

PROJ. DUMPSTER

PROJ. PARKING LOT STRIPING

COLORADO SPRINGS TYPE 3 C&G SPILL (TYP.)

PROJ. ADA PARKING

PROJ. CURB RAMP

PROJ. CURB RAMP

STOP SIGN

COLORADO SPRINGS TYPE 3 C&G CATCH (TYP.)

PARKING COUNT (TYP.)

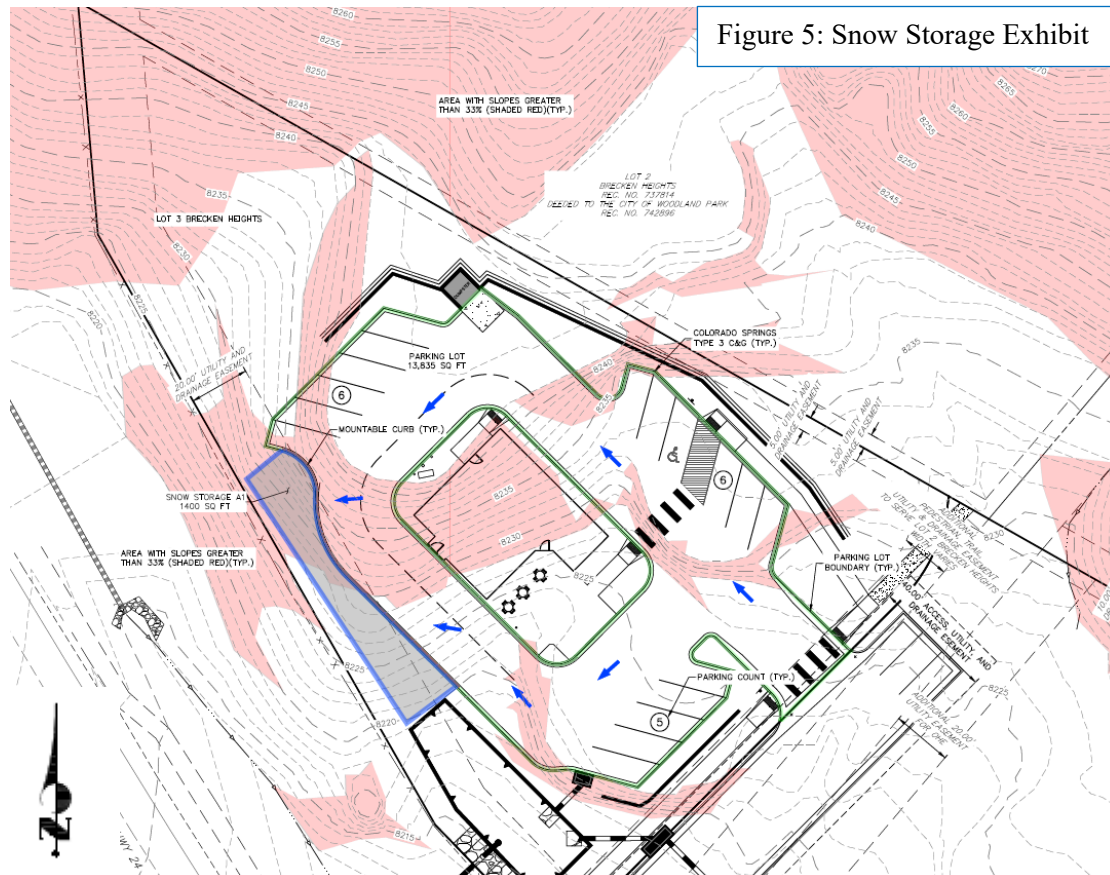
LANDSCAPE WALL

PROJ. CROSS PAN

LOT 4 HOMES AT BRECKEN HEIGHTS REC. NO. 737814

Figure 5 below is the applicant's snow storage exhibit which also includes slopes existing on the site that are over 33 percent which are shaded in red. The City of Woodland Park Municipal Code

Section 17.08.155 defines a “Hillside lot” as “any lot with fifty percent of its area having a slope of thirty percent or greater, or any lot where more than fifty percent of its front yard area as defined in section 18.06.590 has a slope of thirty percent or greater”. According to the front yard definition outlined in code, the front yard is the portion of the site that faces Highway 24. The property as a whole is approximately a total of 40,075 square-feet in size. During the review period of the application, Planning staff analyzed the amount of slope on the property. Approximately 12,120 square-feet (30.24%) of the lot is within the shaded area on Figure 5 below. feet in size.



Within the City of Woodland Park Municipal code, when a commercial development is bordered by residential zoned land, the applicant must outline what measures are being taken in order to screen the commercial use from the residential use. The applicant is proposing a 17' retaining wall on the northern side of the property where the parcel borders residential land. The proposed retaining wall will screen the restaurant from the City owned Lot 2. In conjunction with the proposed retaining wall the applicant is also proposing to install landscaping on all sides of the property as well as landscaped islands next to the outdoor eating area. As previously noted, the subject property is currently vacant land. According to the preliminary site plan the applicant has submitted, after construction of the restaurant open space and landscaping will occupy 53.3

percent of the property. A bulk of the open space will occur on the northwestern side of the property.

Figures 6a-6e are renderings of the elevations for the proposed restaurant. The building is planned to be a total of 20'-6" in height and is proposed to be constructed with a mixture of materials. As seen later in the report, there is a condition of approval that the applicant must work with Planning staff to ensure the building meets the Woodland Park architectural design guidelines.



Figure 6b: South Elevation



South
3/16" = 1'-0"

Figure 6c: West Elevation



West
3/16" = 1'-0"

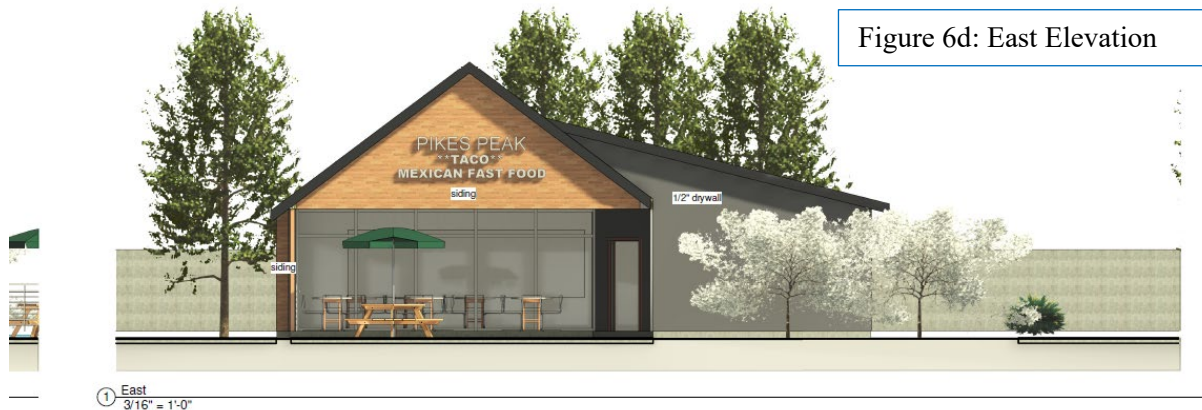


Figure 6d: East Elevation



Figure 6e: North Elevation

REFERRALS

The application was referred to City departments, including the City Attorney, the City Manager, the City Clerk, Utilities, Public Works, Police Department, Planning and Building; and external agencies including Northeast Teller County Fire Protection District, Black Hills Energy, Core Electric, Colorado Department of Transportation, Century Link/Lumen, and TDS Telecom.

CDOT returned comments on November 17, 2023 outlining issues with the applicant's site plan and traffic study (copy of letter attached). As previously stated, the applicant is submitting for an access permit with CDOT for lot's 3 and 4. CDOT would like to see the site plan showing a reduced access width and reduced radii OR an exhibit showing turning movement into and out of the access warranting the size. The applicant will need to submit an updated traffic study and site plan exhibit to CDOT in order to receive the access permit.

CORE Electric submitted a comment via email on November 28, 2023 and their full comments are also attached hereto. CORE's comments outlined that CORE Electric Cooperative currently does not approve of the CUP as proposed. The applicant will be required to revise the retaining walls as they are not allowed to encroach into the utility easements. Also, CORE is requiring the applicant to provide a transformer and a metering location.

No public comments have been received on this application.

ANALYSIS OF CONDITIONAL USE PERMIT AND FINDINGS

Municipal code section §18.57 *Conditional Use Permit* regulates the review of conditional use permit requests. §18.57.040.A states: “The standards for conditional use permits are intended only as a minimum necessary for review. An application for a conditional use permit, even though meeting the minimal standards of the chapter and code, may be denied, if it is determined that the development and use is not in the best interest of the city.” §18.57.040.B specifies the standards by which all conditional uses must comply in order to receive approval.

Below is a listing of the applicable CUP standards from Code Section 18.57 complete with staff’s analysis.

1. *The proposed development and use shall have a demonstrated direct need to be located at the location proposed and provide adequate mitigation measures to lessen all identified impacts.*

Complies. The proposed commercial development includes a new building, parking lot, access driveway, utility connection, and other associated improvements required for the development of the site. As previously noted, the subject property is zoned CC and a drive-thru restaurant is an allowed use in conjunction with approval of a Conditional Use Permit. The City of Woodland Park Future Land Use Map within the Comprehensive Master Plan also outlines the property as commercial. The proposed restaurant will be accessed off of Colorado State Highway 24 and customers of the proposed development will not be required to travel through any residential zones in order to access the site.

2. *The proposed development and use shall not endanger the public health and welfare.*

Complies. The use poses no threat to public health and welfare. Zoning of the property and the Future Land Use Map supports the specific activities that are proposed for the subject property. As previously noted, the site will be accessed off of Colorado State Highway 24 and accessing traffic of the site will not impact the residentially zoned lands to the north.

3. *The proposed development and use shall not substantially injure the value of vicinity properties.*

Complies. The subject property is zoned CC which allows the proposed use with the approval of a Conditional Use Permit. The applicant is also proposing the site to be a total of 53.5 percent open space after the full buildout of the restaurant which will help buffer the residential zoned land to the north from the proposed commercial development. Lastly, in conjunction with the landscaping, the applicant is proposing a 17’ retaining wall on the north side of the property for further screening. The estimated average elevation of the top of the retaining wall will be at approximately 8257 feet. For context, the middle of the City owned Lot 2 is at an elevation of 8260 feet.

4. *The proposed development and use shall be in harmony with the area in which it is to be located.*

Complies. The proposed use is allowed with a conditional use permit within the Community Commercial Zone District. There are other commercial zoned land along Highway 24 in the

immediate area. Lastly, the site will be accessed off of Highway 24 and the traffic generated will not affect the current residential homes in the area.

5. *The proposed development and use shall conform to the provisions, objectives and policies of all city plans, adopted and in effect at the time of application, including but not limited to growth management, transportation, utilities, capital improvements and downtown redevelopment.*

Complies. The development is consistent with the following principles and goals as specified in the City's Comprehensive Plan and future land use map.

Economic Development Objective 1.2: Retain area business and assist with expansion or adding complementary businesses to create clusters and critical mass.

Land Use and Growth Objective 1.1: Ensure that new development fits the intent of the Future Land Use Map and uses the land and community resources. Facilities efficiently and in an environmentally sensitive manner. All new development should contribute to Woodland Park's mountain western identity.

Land Use and Growth Objective 1.2: Evaluate City regulations and requirements to ensure that a proposed development's negative impact on the neighborhood and commercial district in which it will be located is minimized, and the positive impact is optimized. Ensure that development is consistent with the goals, objectives, and actions in this Plan.

The Future Land Use Map found within the City of Woodland Park Comprehensive Master Plan labels this parcel as "Commercial".

6. *The proposed development and use shall conform to the provisions, standards and requirements of all city regulations, adopted and in effect at the time of application, including but not limited to zoning, subdivision, utilities, buildings and construction, business regulations and engineering specifications.*

May Comply. Attached within this staff report is a copy of the City redline comments on the applicant's proposed site plan. Within the attached redline comments, staff has called out specific issues on the site plan, including but not limited to, the location of loading and unloading zones, the proposed renderings, and utility issues. Per condition of approval number 2, the applicant must submit a final site plan resolving all issues on the attached redline plans. As stated, a final site plan application must be processed administratively through the Planning Department.

7. *The proposed development and use shall be designed, constructed and maintained to accommodate the on-site and off-site traffic generated.*

May Comply. The applicant has submitted a Traffic Impact Analysis which is also attached hereto. The application was referred to Colorado Department of Transportation (CDOT) for review. CDOT provided comments that stated the applicant must submit for and gain approval of an access permit. Prior to issuance of the access permit, the applicant must submit an updated site plan and traffic study to CDOT for approval. CDOT's full comment letter is attached hereto. As seen in the staff recommendation section of the report, this requirement is a condition of approval.

8. *The proposed development and use shall be designed, constructed and maintained with appropriate regard to topography, surface drainage, soil potentials, natural and man-made hazards, streams and environmentally significant features.*

Complies. The development plan has been prepared with care to minimize impacts to existing topography conserving unique features where feasible. Surface drainage is handled with an existing detention pond to the south of the subject property. Final site grading and drainage are reviewed and inspected by the City Engineer and must be approved administratively during the construction document phase of the application process.

9. *The proposed development and use shall be designed, constructed and maintained with adequate water supply, wastewater disposal, solid waste disposal, air quality protection methods and surface water drainage.*

Complies. The proposed development will be served by municipal water and wastewater; the Utilities Department has no issue with the proposed water usage. During their review the Utilities Department had minor comments that will be resolved during the Final Site Plan submittal. The final utility plan must be submitted by the applicant and reviewed and approved administratively by the City of Woodland Park Utilities Department.

10. *The proposed development and use shall be designed, constructed and maintained to not unduly increase the public danger of fire, explosion and other safety hazards upon the public, and persons residing or working on the site and vicinity.*

May Comply. This application was referred to North East Teller County Fire Protection District (NETCFPD) during the referral period. Chief Lambert has not submitted a formal comment letter to staff. NETCFDP must approve of the site plan when the applicant submits plans to Pikes Peak Regional Building Department.

11. *The development and use may be required to provide architectural design schemes and may also require amenities such as, but not limited to, fencing, landscaping, buffer areas and other aesthetic enhancement measures, as required by the city council. (Ord. 589-1993 § 6(part), 1993)*

May Comply. As noted previously in the staff report, the applicant has submitted preliminary renderings of the proposed building. After Planning Staff's analysis, the proposed structure does not meet the City of Woodland Park Architectural Guidelines outlined within Municipal Code Section 18.33.180 including but not limited to Code Section 18.33.180 H.7. which states "Blank building walls that are visible to the public shall, to the extent possible, be avoided. Blank walls shall be designed to be less oppressive through the use of interesting details, design patterns and features that diminish the scale of the structure. For an expansive wall, consideration shall be given to implementing a pattern on the wall with a different color or type of the same material, or creating an area of the wall that is a different texture, color and material. Jogging the walls of the building shall be considered to break up large building façades." The application may comply if the applicant adheres with the City's architectural design standards. As seen within the Conditions of approval, the applicant shall amend the proposed building façade to better harmonize with the Woodland Park "mountain western" aesthetic.

SITE PLAN REVIEW CRITERIA AND FINDINGS

Municipal code section §18.34 Site Plan regulates the review of site plan reviews. §18.34.010 states: *“In order to ensure a quality development in the city, it is essential that new development meet minimum standards for the design, construction and the use of such developments to complement existing uses, to insure adequate utility and service systems, and to promote the health, safety and welfare of the city's citizens. (Ord. No. 966-2003, § 2, 4-3-2003).”* § 18.34.070 specifies the standards by which all conditional uses must comply in order to receive approval. The proposed site plan was analyzed within the CC zone district

A. *The proposed development shall conform to the provisions, objectives, and policies of all city plans, adopted and in effect at the time of application, including but not limited to: growth management, transportation, utilities, capital improvements, and downtown redevelopment.*

Complies. The development is consistent with the following principles and goals as specified in the City's Comprehensive Plan and future land use map.

Economic Development Objective 1.2: Retain area business and assist with expansion or adding complementary businesses to create clusters and critical mass.

Land Use and Growth Objective 1.1: Ensure that new development fits the intent of the Future Land Use Map and uses the land and community resources. Facilities efficiently and in an environmentally sensitive manner. All new development should contribute to Woodland Park's mountain western identity.

Land Use and Growth Objective 1.2: Evaluate City regulations and requirements to ensure that a proposed development's negative impact on the neighborhood and commercial district in which it will be located is minimized, and the positive impact is optimized. Ensure that development is consistent with the goals, objectives, and actions in this Plan.

B. *The proposed development shall conform to the provisions, standards and requirements of all city regulations, adopted and in effect at the time of application, including but not limited to: zoning, subdivision, mobile homes, utilities, buildings and construction, business regulations, and engineering specifications.*

May Comply. Attached within this staff report is a copy of the City redline comments on the applicant's proposed site plan. Within the attached redline comments, staff has called out specific issues on the site plan including but not limited to the location of loading and unloading zones, the proposed renderings, and utility issues. Per condition of approval number 2, the applicant must submit a final site plan resolving all issues on the attached redline plans. As stated, a final site plan application must be processed administratively through the Planning Department.

C. *The proposed development shall be designed, constructed, and maintained to accommodate the traffic generated and not unduly increase congestion or traffic on the site and in the vicinity of the site.*

May Comply. The applicant has submitted a Traffic Impact Analysis which is also attached hereto. The application was referred to Colorado Department of Transportation (CDOT) for review. CDOT provided comments that stated the applicant must submit for and gain

approval of an access permit. Prior to issuance of the access permit, the applicant must submit an updated site plan and traffic study to CDOT for approval. As seen later within the report, this requirement is an additional condition of approval. CDOT's full comment letter is attached hereto.

***D.** The proposed development shall be designed, constructed, and maintained with appropriate regard to topography, surface drainage, soil potentials, natural and manmade hazards, streams, and environmentally significant features.*

Complies. The development plan has been prepared with care to minimize impacts to existing topography conserving unique features where feasible. Surface drainage is handled with an existing detention pond to the south of the subject property. Final site grading and drainage are reviewed and inspected by the City Engineer and must be approved administratively during the construction document phase of the application process.

***E.** The proposed development shall be designed, constructed, and maintained with adequate water supply, wastewater disposal, solid waste disposal, air quality protection methods, and surface water drainage.*

Complies. The proposed development will be served by municipal water and wastewater; the Utilities Department has no issue with the proposed water usage. During their review the Utilities Department had minor comments that will be resolved during the Final Site Plan submittal. The final utility plan must be submitted by the applicant and reviewed and approved administratively by the City of Woodland Park Utilities Department.

***F.** The proposed development shall be designed, constructed, and maintained to not unduly increase the public danger of fire, explosion, and other safety hazards upon the public, and persons residing or working on the site and vicinity.*

May Comply. This application was referred to North East Teller County Fire Protection District (NETCFPD) during the referral period. Chief Lambert has not submitted a formal comment letter to staff. NETCFPD must approve of the site plan when the applicant submits plans to Pikes Peak Regional Building Department.

***G.** The proposed development shall be designed, constructed and maintained to not unduly diminish or impair but to become compatible with the use and enjoyment of vicinity property. To such end the development may be required to provide architectural design schemes and fixtures such as, but not limited to, fencing, landscaping, and buffer areas.*

May Comply. As noted previously in the staff report, the applicant has submitted preliminary renderings of the proposed building. After Planning Staff's analysis, the proposed structure does not meet the City of Woodland Park Architectural Guidelines outlined within Municipal Code Section 18.33.180 including but not limited to Code Section 18.33.180 H.7. which states "Blank building walls that are visible to the public shall, to the extent possible, be avoided. Blank walls shall be designed to be less oppressive through the use of interesting details, design patterns and features that diminish the scale of the structure. For an expansive wall, consideration shall be given to implementing a pattern on the wall with a different color or type of the same material, or creating an area of the wall that is a different texture, color and material. Jogging the walls of the building shall be considered to break up large building

façades.” The application may comply if the applicant adheres with the City’s architectural design standards. As seen within the Conditions of approval, the applicant shall amend the proposed building façade to better harmonize with the Woodland Park “mountain western” aesthetic.

NOTIFICATIONS

Adjacent property owners within 150 feet were mailed a letter notifying them of the submittal of the application as well as all meeting dates including the scheduled Planning Commission and City Council public hearings. The site was posted with public notice posters and notice of the public hearings was published in the Pikes Peak Courier in compliance with the Municipal Code.

STAFF RECOMMENDATION

That the Planning Commission recommend to City Council: Approval of a conditional use permit and site plan to allow for a proposed drive-thru restaurant and associated site improvements along with a common lot $\frac{3}{4}$ driveway off Highway 24 with a legal description of Lot 3, Brecken Heights (19569 E. US 24) in the Community Commercial (CC) zone, subject to the following conditions:

1. Prior to the issuance of a building permit, the applicant shall submit for and receive approval of a:
 - a. Final Site Plan for a permitted use including landscaping, drainage, architectural elevations, access, etc.;
 - b. Infrastructure Zoning Development Permit
 - c. ZDP’s and Building Permits for all new construction, including:
 - i. All Civil/Construction drawings
 - ii. Final Drainage Report
 - iii. Final Landscaping Plan
 - iv. Final Site Plan
 - v. Final Floor Plans and Elevations
 - vi. Final Grading, Sediment and Erosion Control Plan (with BMP’s)
 - vii. Final Utility Plan (water, sewer, power, etc.)
 - viii. Final Photometric Plan
 - ix. CO Stormwater Permit/Stormwater Management Plan
2. A final updated site plan, resolving all issues identified on the redlined plans must be approved by the City before any Zoning Development Permit (ZDP) will be issued.
3. All development impact fees must be paid prior to any ZDP issuance including but not limited to tap fees, stormwater capital improvement fees, transportation capital fees, etc. Fees shall be calculated concurrent with the ZDP review.
4. The applicant shall amend the proposed building façade to better harmonize with the Woodland Park “mountain western” aesthetic.
5. The applicant must submit for and gain approval of an Access Permit from CDOT.
6. The applicant must satisfy all requirements and gain approval from CORE Electric prior to final site plan approval.

ATTACHMENTS

1. Applicant CUP Application
2. CUP Application - City Review Red-line Comments
3. CDOT Comment
4. CORE Comment

Planning Application Entry Form

[Print Record](#)[Go To Development Fees Receipt Form](#)ID

Permit Number 202310299

Project # EXT/Case # CUP/SPR2023-04

Public Hearing Required ☒

Date Received 10/3/2023

Date Routed Date Initial Permit Approved *Date Permit Paid

Open Permit Comments

*NOTE: If Non-profit enter Date Approved in Date Permit Paid field for report

Project Type CUP/SPR2023-04

Project Type Number 2/4

Project Classification CUP/SPR

Non-Profit, Residential or Commercial Commercial

Date CO Requested Temp CO Auth Approved Date Temp CO Expires

NOTE: Above Field required only for SInS and TUPs

Project Name Pikes Peak Taco - CUP & SP

Site Address Number 19569

Site Address Name E. US 24

Lot Number 3

Block Number

Subdivision Brecken Heights

Filing #

Applicant Business Name Pikes Peak Taco, Me

App First Name App Last Name

App Phone Number 719-306-8508

PO Box 501

Mailing Address Street # Mailing Address Street Name

City Woodland Park

State CO

Zip Code 80866

Owner First Name Morales Enterprises L

Owner Last Name

Zone Class CC

Applicant Project Value \$0.00

UTILITIES SECTION

Tap Allocation Date Allocation Exp Date Water Tap # Sewer Tap # Tap Paid Date Tap Exp Date Taps Refunded ☐Inside/Outside User Meter Installed ☐

Filed in Area

Senior Planner



2023 GENERAL APPLICATION

(Revised 1/1/2023)

received
10/3/2023

Project # 202310299
Case # CUP/SPR 2023-04
Fee(s): See City of Woodland Park
Fees Sheet (Plus publication/recording
fees, as applicable)

Type of Application (Check one or more as applicable)

- | | | |
|--|---|---|
| ☐ Site Plan Review Permitted Use | ☐ Special Use Permit | ☐ Preliminary Plat |
| ☒ Site Plan Review Conditional Use | ☐ Planned Unit Development (PUD) | ☐ Exemption Plat |
| ☒ Conditional Use Permit | ☐ PUD Amendment | ☐ Final Plat |
| ☐ Zoning Change | ☐ Appeal | ☐ Townhouse Plat |
| ☐ Extension of Development | ☐ Variance | ☐ Condominium Plat |

1. Applicant Information

- a. Applicant Name PIKES PEAK TACO, MEXICAN RESTAURANT, INC
- b. Project Coordinator ☒ Property Owner ☐
- c. Mailing Address PO BOX 501, WOODLAND PARK CO, 80866
- d. E-mail Address JUDGESCHARGRILLWP@YAHOO.COM
- e. Phone Numbers Home 719-306-8508 Work 719-306-8508 Mobile 719-306-8508

2. Property Owner Information (if different from above)

- a. Name MORALES ENTERPRISES, LLC Project Contact? Yes ☐ No ☒
- b. Mailing Address PO BOX 501, WOODLAND PARK CO, 80866
- c. E-mail Address JUDGESCHARGRILLWP@YAHOO.COM
- d. Phone Numbers Home 719-306-8508 Work 719-306-8508 Mobile 719-306-8508

3. Site Information

- a. Site Address Lot 3 BRECKEN HEIGHTS - ADDRESS NOT ASSIGNED
- b. Lot 3 Block N/A Subdivision BRECKEN HEIGHTS
- c. Property Zoning CC Lot Size 0.92 Acres ☒ Square Feet ☐

4. Is the property subject to covenants? Yes ☐ No ☒ If yes, then submit copy of covenants and current contact for HOA. It is the responsibility of the landowner to submit HOA approval with this application.

5. Project Information

- a. Project Name PIKES PEAK TACO, MEXICAN RESTAURANT
- b. Brief Description of Project/Request CONDITIONAL USE PERMIT FOR A 1,650 SQ.FT. DRIVE THRU MEXICAN RESTAURANT AND ASSOCIATED SITE IMPROVEMENTS ALONG WITH A COMMON LOT 3/4 DRIVEWAY OFF HWY. 24

Project Narrative (On a separate sheet provide additional project details and how the proposal complies with the applicable code requirements, which can be found in Section 8 of this application.)

5. **Consultant Information** (if applicable)

a. **Architect**

- i. Project Contact MIKE MORLEY
- ii. Firm Name MORLEY ENTERPRISES
- iii. Physical Address 1671 SUMMERNIGHT TERRACE, COLORADO SPRINGS CO 80909
- iv. Mailing Address 1671 SUMMERNIGHT TERRACE, COLORADO SPRINGS CO 80909
- v. E-mail Address MIKE@MORLEYBUILT.COM
- vi. Phone Numbers: Business 719-330-0259 Mobile 719-330-0259

b. **Engineer**

- i. Project Contact MIKE BRAMLETT
- ii. Firm Name JR ENGINEERING
- iii. Physical Address 5475 TECH CENTER DR., STE 235, COLORADO SPRINGS, CO 80919
- iv. Mailing Address 5475 TECH CENTER DR., STE 235, COLORADO SPRINGS, CO 80919
- v. E-mail Address MBRAMLETT@JRENGINEERING.COM
- vi. Phone Numbers: Business 719-593-2593 Mobile 719-659-7679

c. **Planner**

- i. Project Contact JOSEPH HUERTA
- ii. Firm Name BIC RESTORATION
- iii. Physical Address 1355 BATES DR., COLORADO SPRINGS, CO 80909
- iv. Mailing Address 1355 BATES DR., COLORADO SPRINGS, CO 80909
- v. E-mail Address JOSEPH@BICRESTORATION.COM
- vi. Phone Numbers: Business 719-314-9311 Mobile 719-314-9311

d. **Surveyor**

- i. Project Contact CHRIS THOMPSON
- ii. Firm Name ROCKY MOUNTAIN LAND SERVICES
- iii. Physical Address 4465 Northpark Drive Ste. 303, Colorado Springs, CO 80907
- iv. Mailing Address 4465 Northpark Drive Ste. 303, Colorado Springs, CO 80907
- v. E-mail Address clt@rmls-survey.com
- vi. Phone Numbers: Business 719-502-9738 Mobile 719-502-9738

e. **Other** (specify role) _____

- i. Project Contact _____
- ii. Firm Name _____
- iii. Physical Address _____
- iv. Mailing Address _____
- v. E-mail Address _____
- vi. Phone Numbers: Business _____ Mobile _____

6. Submittal Requirements

The following items must be included at time of submittal (in addition to items on the submittal checklists) or the application will not be processed (additional copies may be requested).

Type of Application	24" x 36" Plan Set	11" x 17" Plan Set	Adobe Acrobat Portable Document Format (.pdf) electronic Plan Set on a flash drive	Warranty Deed or Title Policy	List of adjoining property owners within 150'	Copies of reports (narrative, traffic study, drainage, etc.)
All Types	1	1	1	1	1	1

7. Applicable Code Sections

The following are the applicable code sections by type of application and are for assisting applicants in completing the required project narrative. The City of Woodland Park's Municipal Code can be found at www.city-woodlandpark.org/Charter&Code. Subdivision requirements are in Title 17 and Zoning is in Title 18 of the Municipal Code.

Type of Application	Applicable Code Sections
Site Plan Review Permitted Use	Chapters 18.34, 18.33 and 18.39
Site Plan Review Conditional Use	Chapters 18.34, 18.57, 18.33 and 18.39
Conditional Use Permit	Chapter 18.57 plus applicable site plan regulations
Zoning Change	There are no specific standards, but the applicant should provide supporting argument for a zoning change, including how it complies with the Comprehensive Plan
Special Use Permit	Chapter 18.61 plus applicable site plan regulations
Planned Unit Development	Chapters 18.30, 18.33, 18.39, Sections 17.20.070, and 17.20.080
Appeal	Chapter 18.54
Variance	Chapter 18.60
Preliminary Plat	Chapter 17.20 plus applicable subdivision sections
Exemption Plat	Section 17.52.030 plus applicable subdivision sections
Final Plat	Chapter 17.24 plus applicable subdivision sections
Townhouse Plat	Chapter 17.32 plus applicable subdivision sections
Condominium Plat	Chapter 17.32 plus applicable subdivision sections

8. Certification of Ownership

I (We) do hereby declare and affirm that I (we) am (are) the exclusive owner(s) and title holder(s) of the above described property.

Owner  Date 9/28/23

Owner _____ Date _____

9. Certification: The undersigned applicant certifies under oath and under penalties of perjury that the information found in the application is true and accurate to the best of their knowledge.

I certify that I understand that the proposed development is in accordance with all provisions of the City of Woodland Park's Municipal Code and other applicable regulations.

Applicant  Date 9/28/23

City Use Only

1. Submission _____, 20____, taken by _____
Fee Received _____, 20____, taken by _____
2. Application is deemed complete – OR – deemed incomplete and returned to applicant to complete on ____/____/____.
3. Public Hearing Notice
Published _____, 20____
Posted _____, 20____
Adjacent Property Notification _____, 20____.
4. Planning Commission Public Hearing _____, 20____.
Board of Adjustment Public Hearing (when applicable) _____, 20____.
5. City Council First Reading of Ordinance (if applicable) _____, 20____.
City Council Public Hearing _____, 20____.
Notes _____

6. Letter of Approval/Denial to applicant sent _____, 20____.
7. Additional Information

Letter of Intent

Project Description

Lot 3, Brecken Heights is a 0.92 acre parcel located within the City of Woodland Park. The parcel is located east of Highway 24 and north of Morning Sun Drive. The land is vegetated with established grasslands, small shrubs, evergreen and aspen trees. The Pikes Peak Taco project consists of a 1,650 sq. ft. one story restaurant building and associated site improvements. Access to Lot 3 is by a proposed 30 foot wide common access driveway physically located on Lot 4 Homes at Brecken Heights. This common access drive will connect to Highway 24 with only right in-right out turns allowed.

Project Information:

1. The parcel zoned Community Commercial proposed "Restaurant" is permitted conditional use.
2. The primary function of the 1,700 sq. ft. restaurant will be "Drive-Thru", however, there will be inside seating for 4 tables, an order counter and restrooms. Outside seating at 3 umbrella style table will be on the outside concrete patio. Hours general will be 7:00 to 11pm.
3. The building will be less than 30 feet tall consistent with the Community Commercial zoning.
4. The traffic pattern will be "one-way" around the building and 17 angled parking spaces are provided.
5. A dumpster enclosure is located at the NW corner of the parking.
6. Developer is undecided regarding signage identifying the restaurant. If a sign becomes necessary, it will be through a separate application.
7. The restaurant will utilize a proposed common access drive with Lot 4 that connect to Highway 24. An access easement will be granted by Lot 4 to allow Lot 3 access. Streetlights along the drive are not proposed.
8. Application has been made to CDOT for grant of an Access Permit.
9. Public water lines and fire hydrants are available adjacent to the site. A private sanitary sewer service will be extended across Lot 4 from the public sewer adjacent to Morning Sun Drive. All services will be private and within proposed easements.
10. Stormwater control will be private and will be installed to direct stormwater to a proposed private Full Spectrum Detention pond located at the southeast corner of Lot 3. Pond discharge will be the existing Hwy 24 drainage swale and will be limited to historic rates.
11. Applicant will provide construction drawings for City review and approval as the project progresses.
12. No variances are requested.
13. Adequate open space is proposed within the project

Applicant: _____

Name: Fernando Morales

Date: 9/29/23

Brecken Heights LLC
620 W Midland Avenue
Woodland Park, CO 80863

November 28, 2023

Re: Access driveway to Pikes Peak Taco

To: City of Woodland Park Planning and Building

This letter is to inform your department that as sole member and manager of Brecken Heights LLC, the owner of Lot 4, Brecken Heights, I agree to the proposed location of the access driveway for Pikes Peak Taco on Lot 3, Brecken Heights. The shared entrance to Lots 3 and 4 is located on Lot 4.

Sincerely,

A handwritten signature in black ink, appearing to be 'Mark McNab', with a stylized flourish extending to the right.

Mark McNab

By: Brecken Heights LLC

Email: markmcnab@gmail.com

Cell: 719-499-5160

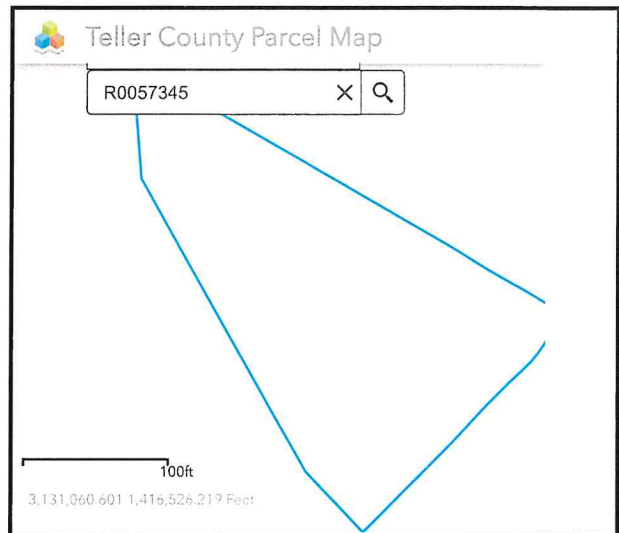
Teller County Property Records

Property Record

Acct No:R0057345



Map



[Full Screen Map](#) [Vacant Land Sales Map](#) [Comps Worksheet](#)

Ownership

Account No	R0057345
Parcel Id	6031.303040030
Notice of Value	PDF of 2023 Notice of Value
Actual	\$36,003
Assessed	\$10,040
Acct Type	Vacant Land
Owner Name	MORALES ENTERPRISES LLC, A COLORADO LLC
Mailing Address	PO BOX 501 WOODLAND PARK, CO 808660501

Location

Physical Address	19569 E US 24
School Dist	RE-2
Acres	0.916000
Map No.	6031
Tax Dist	60
Area	CATAMOUNT AREA
Brief Legal	L3 BRECKEN HEIGHTS

Brief Legal Description is not intended for use on legal documents

Zoning

Zoned MFS- **CC**

Zoning Information (provided by City of Woodland Park for Questions call 719-687-5202)

Land Attributes

Land Type	Abst Code	Acres
Vacant	0100	0.92

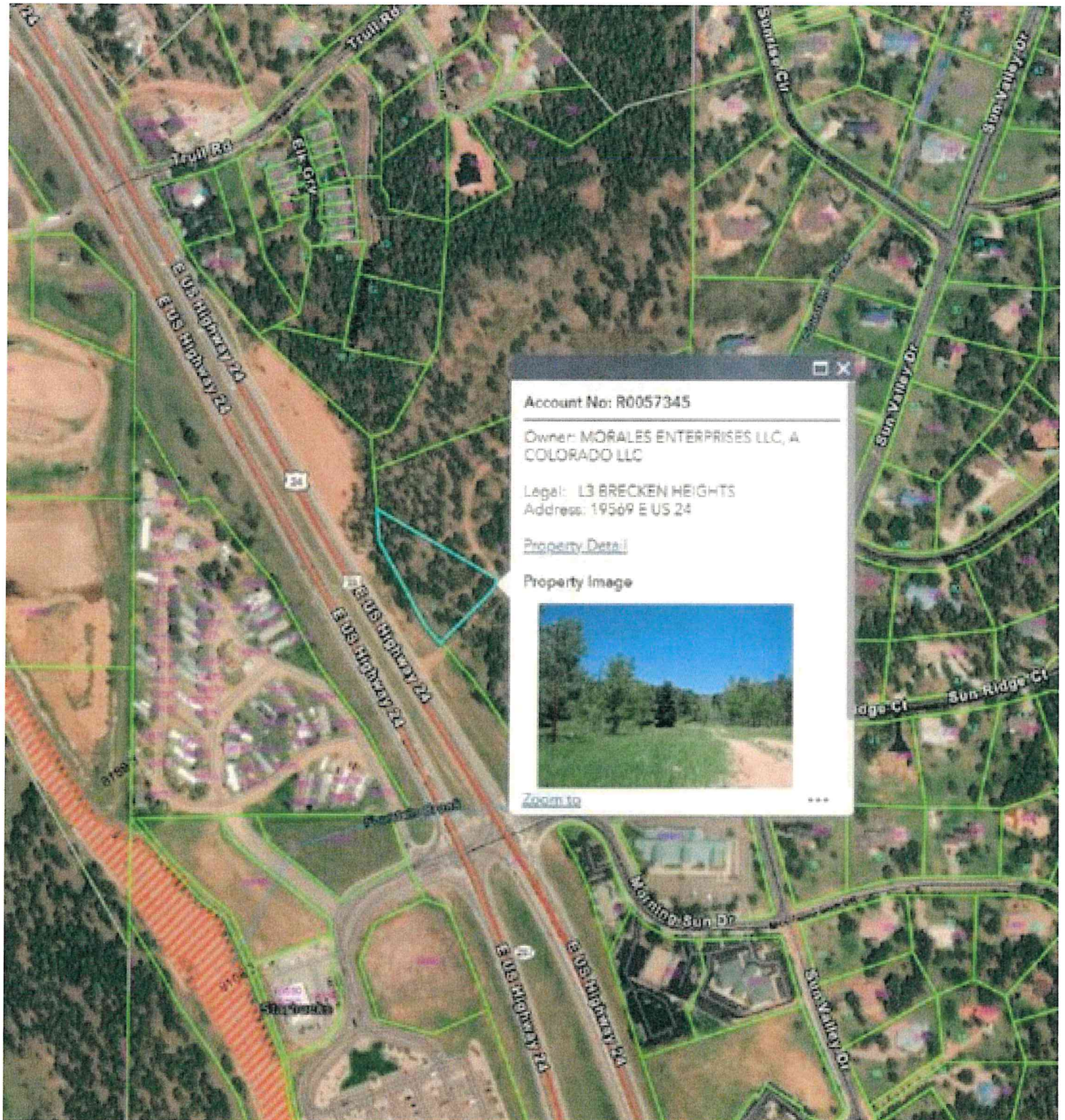
Building Information (provided by Assessor)

Transfers (provided by Assessor)

Sale Date	Reception No	Deed Type	Sale Price
05/04/2021	737814	Plat	\$0
08/17/2022	753404	Warranty Deed	\$200,000

Building Permits

Date	Permit No.	Description	Permit Issued By
	A22015	None	Teller County



Account No: R0057345

Owner: MORALES ENTERPRISES LLC, A
COLORADO LLC

Legal: L3 BRECKEN HEIGHTS
Address: 19569 E US 24

[Property Detail](#)

Property Image



[Zoom to](#)



Order No.: 310-F13441-22

FNTC

Doc Fee: \$20.00

GENERAL WARRANTY DEED

THIS DEED, Made this 17 day of August, 2022, between

Brecken Heights LLC, a Colorado limited liability company,

grantor, and

The Morales Enterprises, LLC, a Colorado limited liability company

whose legal address is 19569 E. US Highway 24, Woodland Park, CO 80863,

grantees:

WITNESS, That the grantor, for and in consideration of the sum of **Two Hundred Thousand And No/100 Dollars (\$200,000.00)**, 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 Teller, State of COLORADO, described as follows:

Lot 3, Brecken Heights,
County of Teller, State of Colorado.

also known by street and number as 19569 E. US Highway 24, Woodland Park, CO 80863

TOGETHER with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise 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, 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. And the grantor, for themselves, their 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, they are 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 for taxes for the current year, a lien but not yet due and payable, subject to statutory exceptions as defined in CRS 38-30-113, revised.

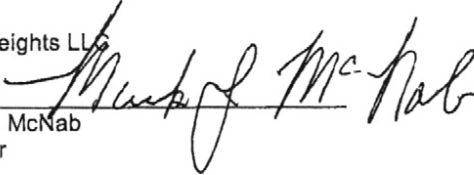
The grantor shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantees, their heirs and assigns, against all and every person or persons lawfully claiming the whole or any part thereof.

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.

GRANTOR:

Brecken Heights LLC

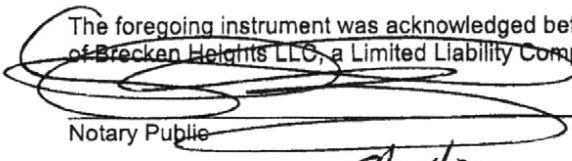
BY: 

Mark S. McNab
Member

STATE OF COLORADO

COUNTY OF Teller

The foregoing instrument was acknowledged before me this 17 day of August, 2022, by Mark S. McNab, Member, of Brecken Heights LLC, a Limited Liability Company.

Notary Public 

My Commission Expires: 8/27/23

(SEAL)

KRISA J. EUDALEY
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20194032914
My Commission Expires 08-27-2023

Brecken Heights LLC
620 W Midland Avenue
Woodland Park, CO 80863

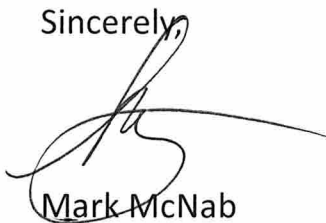
November 28, 2023

Re: Access driveway to Pikes Peak Taco

To: City of Woodland Park Planning and Building

This letter is to inform your department that as sole member and manager of Brecken Heights LLC, the owner of Lot 4, Brecken Heights, I agree to the proposed location of the access driveway for Pikes Peak Taco on Lot 3, Brecken Heights. The shared entrance to Lots 3 and 4 is located on Lot 4.

Sincerely,

A handwritten signature in black ink, appearing to be 'Mark McNab', with a stylized flourish extending to the right.

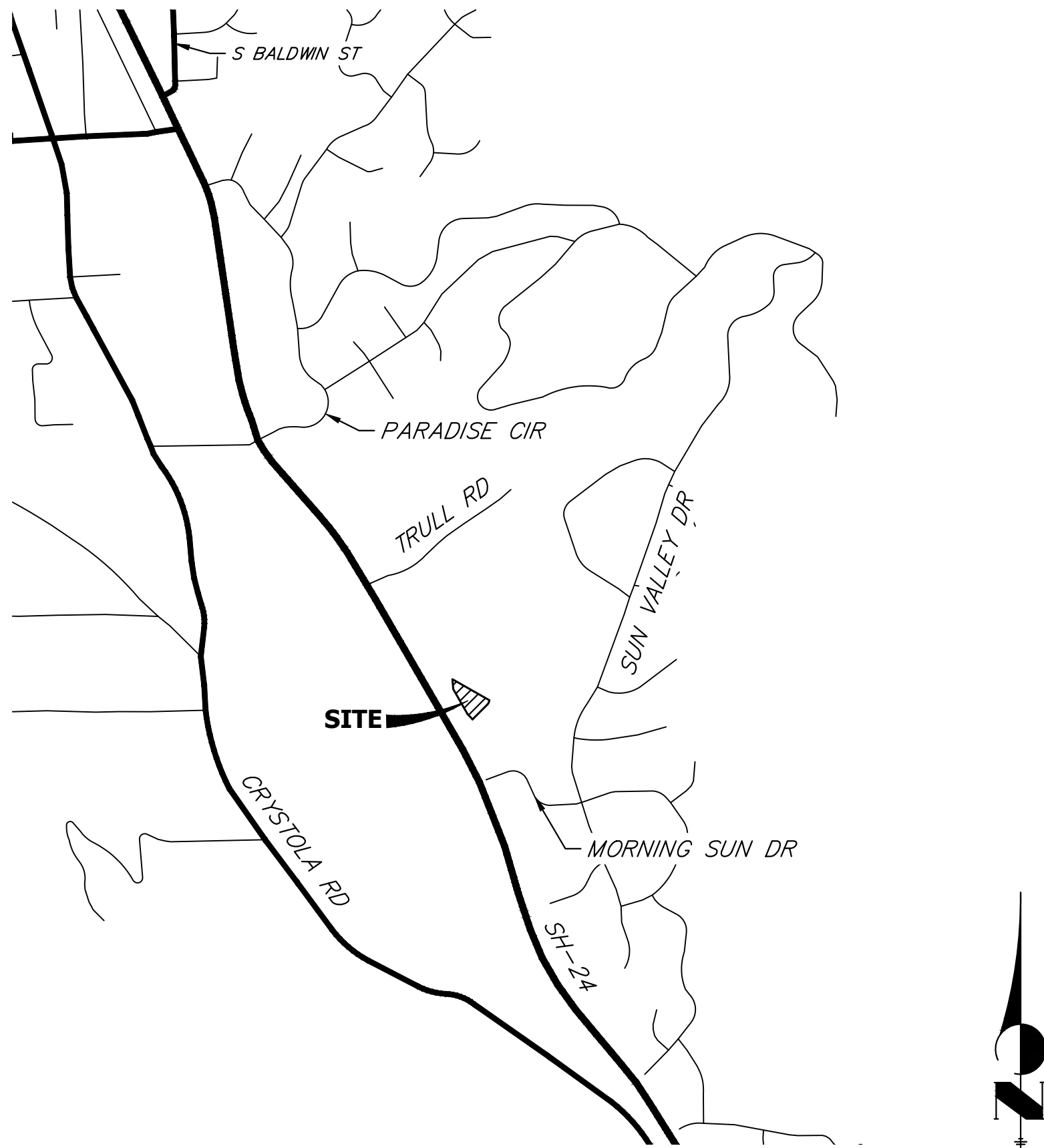
Mark McNab

By: Brecken Heights LLC

Email: markmcnab@gmail.com

Cell: 719-499-5160

LOT 3 BRECKEN HEIGHTS
CITY OF WOODLAND PARK, COUNTY OF TELLER, STATE OF COLORADO
TACO SHOP CONDITIONAL USE PRELIMINARY SITE PLAN



VICINITY MAP
SCALE: 1"=1000'

SHEET INDEX		
1	-	COVER SHEET
2	-	SITE PLAN
3	-	PRELIMINARY GRADING PLAN
4	-	PRELIMINARY UTILITY PLAN
5	-	SLOPE & SNOW STORAGE EXHIBIT

APPROVAL CONDITIONS AND RESTRICTIONS

APPROVAL

I HEREBY CERTIFY THAT I AM THE CITY PLANNER FOR THE CITY OF WOODLAND PARK, COLORADO, AND THAT I ATTEST THAT THIS PRELIMINARY PLAT/SITE PLAN WAS APPROVED, SUBJECT TO CONDITIONS, AS CONTAINED HEREIN, CITY OF WOODLAND PARK, PLANNING DEPARTMENT, BY THE CITY OF CITY OF WOODLAND PARK PLANNING COMMISSION ON, 20____, AFTER A PROPERLY CONDUCTED PUBLIC HEARING BY THE CITY COUNCIL HELD ON _____, 20____.

DATE

CITY PLANNER
CITY OF WOODLAND PARK

SITE DATA

OWNER / DEVELOPER: MORALES ENTERPRISES, LLC
PO BOX 501
WOODLAND PARK, CO 80866
719-306-8508
PIKES PEAK TACO, INC

LIMITS OF DISTURBANCE AREA: 1.25 ACRES

TOTAL SITE AREA: 0.92 ACRES

SCHEDULE OF DEVELOPMENT: SPRING 2024

CURRENT ZONING: CC - COMMUNITY COMMERCIAL

EXISTING USE: VACANT

PROPOSED USE: 1,650 SF DRIVE THRU MEXICAN RESTAURANT

IMPERVIOUS SITE AREA: IMPERVIOUS EXISTING: 0 SF
IMPERVIOUS NEW: 0.42 AC
% OPEN SPACE (PERVIOUS): 53.5%

MAX BUILDING HEIGHT: 30- FEET FOR PRIMARY STRUCTURE

SETBACKS: FRONT 25' MIN
REAR 25' MIN
SIDE YARD 8' MIN

ENGINEER: JR ENGINEERING, LLC
5475 TECH CENTER DRIVE, SUITE 235
COLORADO SPRINGS, CO 80919
719-630-0559

ARCHITECT: MORLEY ENTERPRISES
1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909
719-330-0259

SURVEYOR: ROCKY MOUNTAIN LAND SERVICES
4465 NORTHPARK DRIVE STE 303
COLORADO SPRINGS, CO 80907
719-502-9738

PLANNER: BIC RESTORATION
1355 BATES DR
COLORADO SPRINGS, CO 80909
719-314-9311

LANDSCAPE DESIGN: MORLEY ENTERPRISES
1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909
719-330-0259

PARKING DATA

1 PARKING SPACE PER 100 SF OF BUILDING

BUILDING SF = 1,650

PARKING SPOTS REQUIRED: 17
PARKING SPOTS PROVIDED: 17

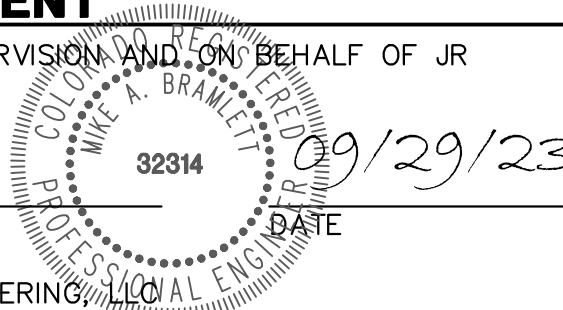


ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

Mike A. Bramlett
Mike A. Bramlett, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING, LLC



LOT 3 BRECKEN HEIGHTS

COVER SHEET

SHEET 1 OF 5

JOB NO. 25198.03

BY DATE

No. REVISION

H-SCALE 1"=1000'
V-SCALE N/A
DATE 09/29/23
DESIGNED BY PAL
DRAWN BY PAL
CHECKED BY

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, JR ENGINEERING APPROVES THEIR USES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
MORALES ENTERPRISES, LLC
PO BOX 501
WOODLAND PARK, CO 80866
ATTN: FERNANDO MORALES
JUDGESCHARGILLWP@YAHOO.COM



Central 303-740-8888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

LOT 3 BRECKEN HEIGHTS SITE PLAN

LOT 2
BRECKEN HEIGHTS
REC. NO. 737814
DEEDED TO THE CITY OF WOODLAND PARK
REC. NO. 742896

LOT 4
HOMES AT BRECKEN HEIGHTS
REC. NO. 737814

FULL CROSS SECTION

WOODLAND PARK TYPE 1
SCALE: N.T.S.

COLORADO SPRINGS TYPE 5 (MOUNTABLE)
SCALE: N.T.S.

COLORADO SPRINGS TYPE 3
SCALE: N.T.S.

LEGEND

- MOUNTABLE CURB (CS TYPE 5)
- SPILL C&G
- CATCH C&G

NOTE:

UTILITIES NOT SHOWN FOR CLARITY, SEE PRELIMINARY UTILITY PLAN SHEET 4 FOR EX./PROP. UTILITY LOCATIONS.

SITE PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 2 OF 5

J-R ENGINEERING
A Westrian Company

Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

MOUNTABLE CURB
(CS TYPE 5)
SPILL C&G
CATCH C&G

UTILITIES NOT SHOWN FOR
CLARITY, SEE PRELIMINARY
UTILITY PLAN SHEET 4 FOR
EX./PROP. UTILITY
LOCATIONS.

WOODLAND PARK TYPE 1
SCALE: N.T.S.

SPILL $\frac{1}{2}$ "/FT

6"

12"

18"

6"

4"

A

C

F

COLORADO SPRINGS TYPE 3

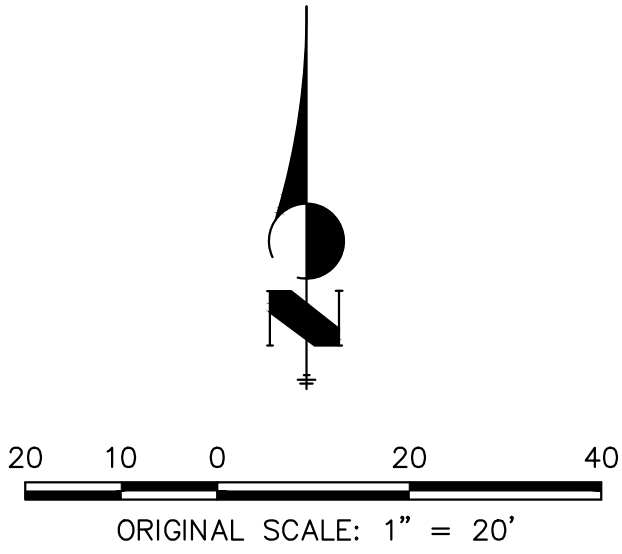
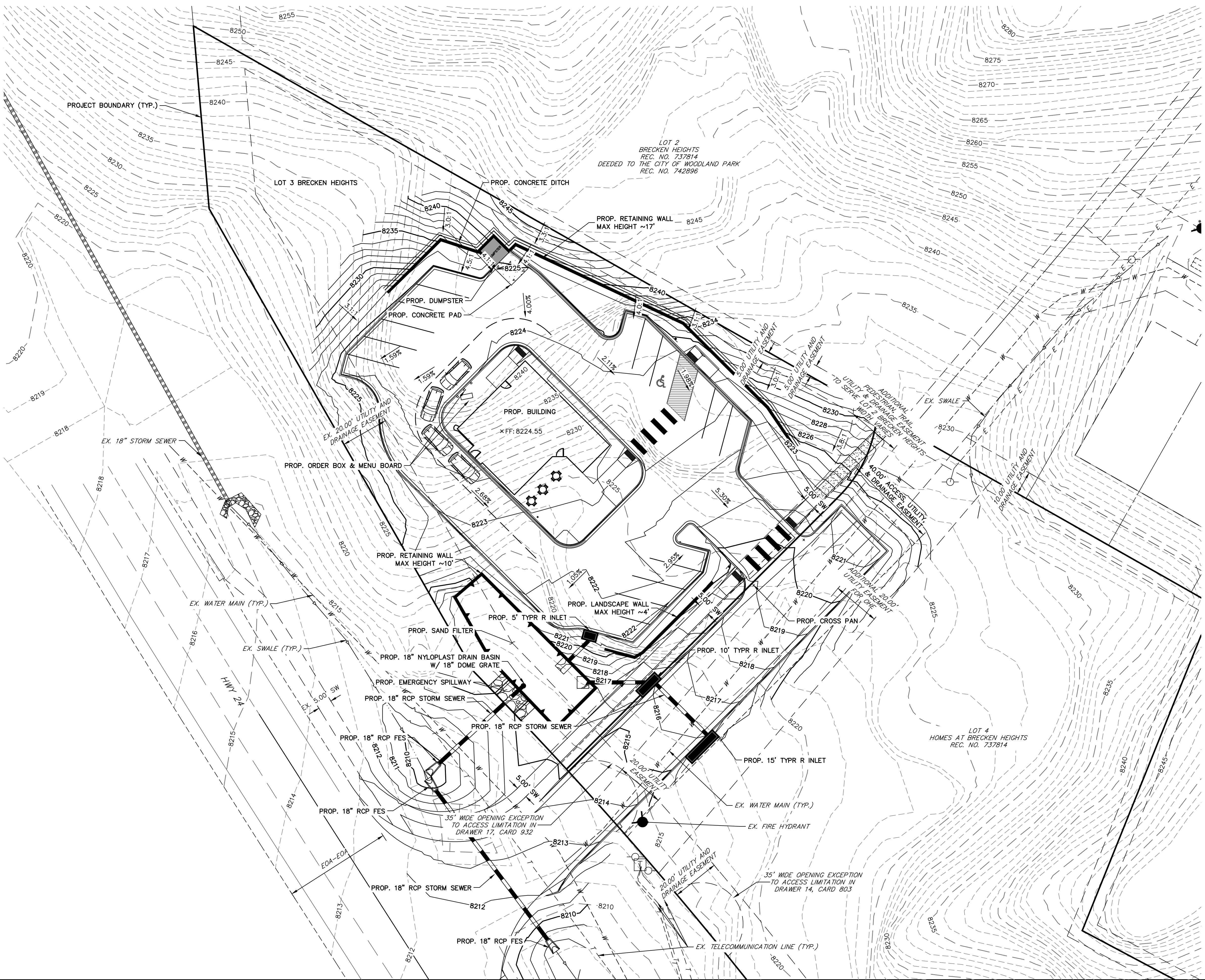
SCALE: N.T.S.

SITE PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 2 OF 5

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Fort Collins 970-491-9888 • www.jengineering.com

LOT 3 BRECKEN HEIGHTS

PRELIMINARY GRADING PLAN



PRELIMINARY GRADING PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 3 OF 5



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LOT 3 BRECKEN HEIGHTS

PRELIMINARY UTILITY PLAN

LOT 2
BRECKEN HEIGHTS
REC. NO. 737814
DEEDED TO THE CITY OF WOODLAND PARK
REC. NO. 742896

LOT 3 BRECKEN HEIGHTS

PROP. BUILDING

PROP. GREASE INTERCEPTOR
(TO BE SIZED BY MECHANICAL)

PROP. 6" X 6" WYE

PROP. DBL CLEAN-OUT
MAX SPACING EVERY 100' (TYP.)

PROP. 18" RCP STORM SEWER

PROP. SAND FILTER

PROP. 18" NYLOPLAST DRAIN BASIN
W/ 18" DOME GRATE

PROP. 18" RCP STORM SEWER

EX. 12" PVC WATER MAIN

PROP. 18" RCP FES

PROP. 18" RCP FES

PROP. 18" RCP STORM SEWER

PROP. 18" RCP FES

PROP. CURB STOP

PROP. 1.5" POTABLE WATER SERVICE

PROP. 5' TYPE R INLET

PROP. 10' TYPE R INLET

PROP. 15' TYPE R INLET

PROP. DBL CLEAN-OUT
MAX SPACING EVERY 100' (TYP.)

LOT 4 HOMES AT
BRECKEN HEIGHTS
REC. NO. 737814

35' WIDE OPENING EXCEPTION
TO ACCESS LIMITATION IN
DRAWER 14, CARD 803

SEE INSERT 1
(RIGHT)

INSERT 1
SCALE: 1"=20'

PROP. DBL CLEAN-OUT
MAX SPACING EVERY 100' (TYP.)

PROP. DBL CLEAN-OUT
MAX SPACING EVERY 100' (TYP.)

PROP. 6" SANITARY
SEWER SERVICE

PROP. DBL CLEAN-OUT
MAX SPACING EVERY 100' (TYP.)

EX. 20.00' UTILITY AND
DRAINAGE EASEMENT

EX. 12" PVC WATER MAIN

EX. TELEPHONE LINES

EX. 18" RCP CULVERT

CONNECT TO EX.
SANITARY MANHOLE

NOTES

1. ANY SURFACE IMPROVEMENTS WITHIN EASEMENTS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
2. PARKING NOT SHOWN ON THIS SHEET FOR UTILITY VISIBILITY.

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

PRELIMINARY UTILITY PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 4 OF 5

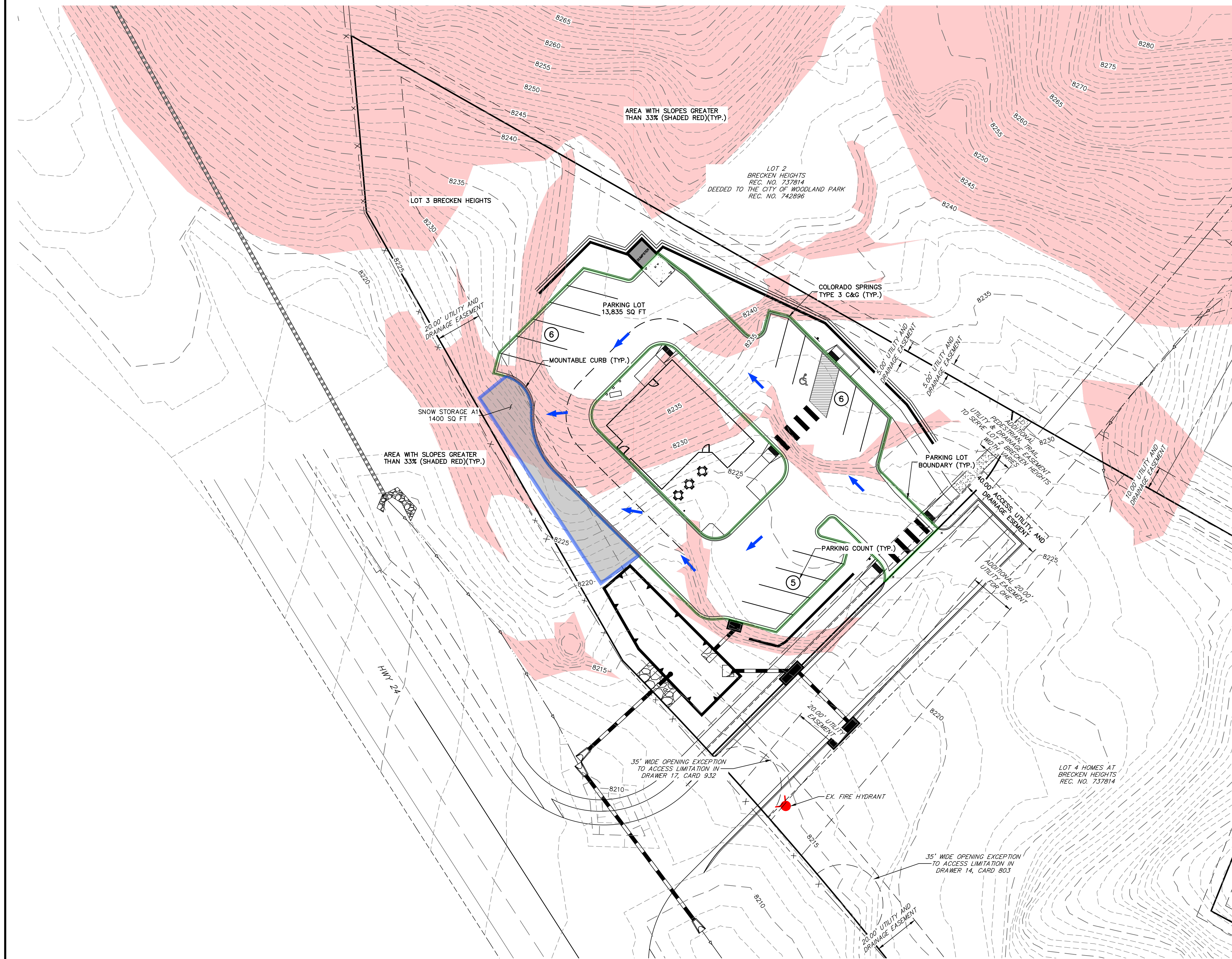
J-R ENGINEERING
A Westrian Company

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THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

LOT 3 BRECKEN HEIGHTS

SLOPE AND SNOW STORAGE EXHIBIT



NOTES

1. SNOW STORAGE DESIGN TO BE FINALIZED AT FINAL DESIGN.

LEGEND

SNOW PLOW PATH →

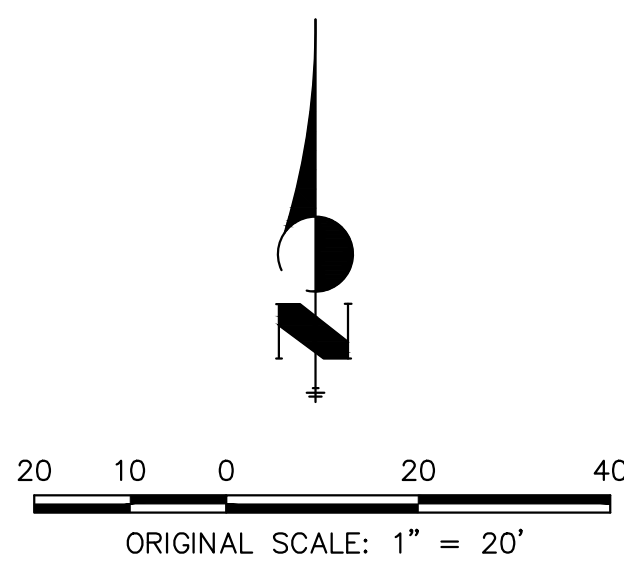
MOUNTABLE CURB ———

FIRE HYDRANT ●

SNOW STORAGE AREA [Blue Outline]

PARKING LOT BOUNDARY [Green Outline]

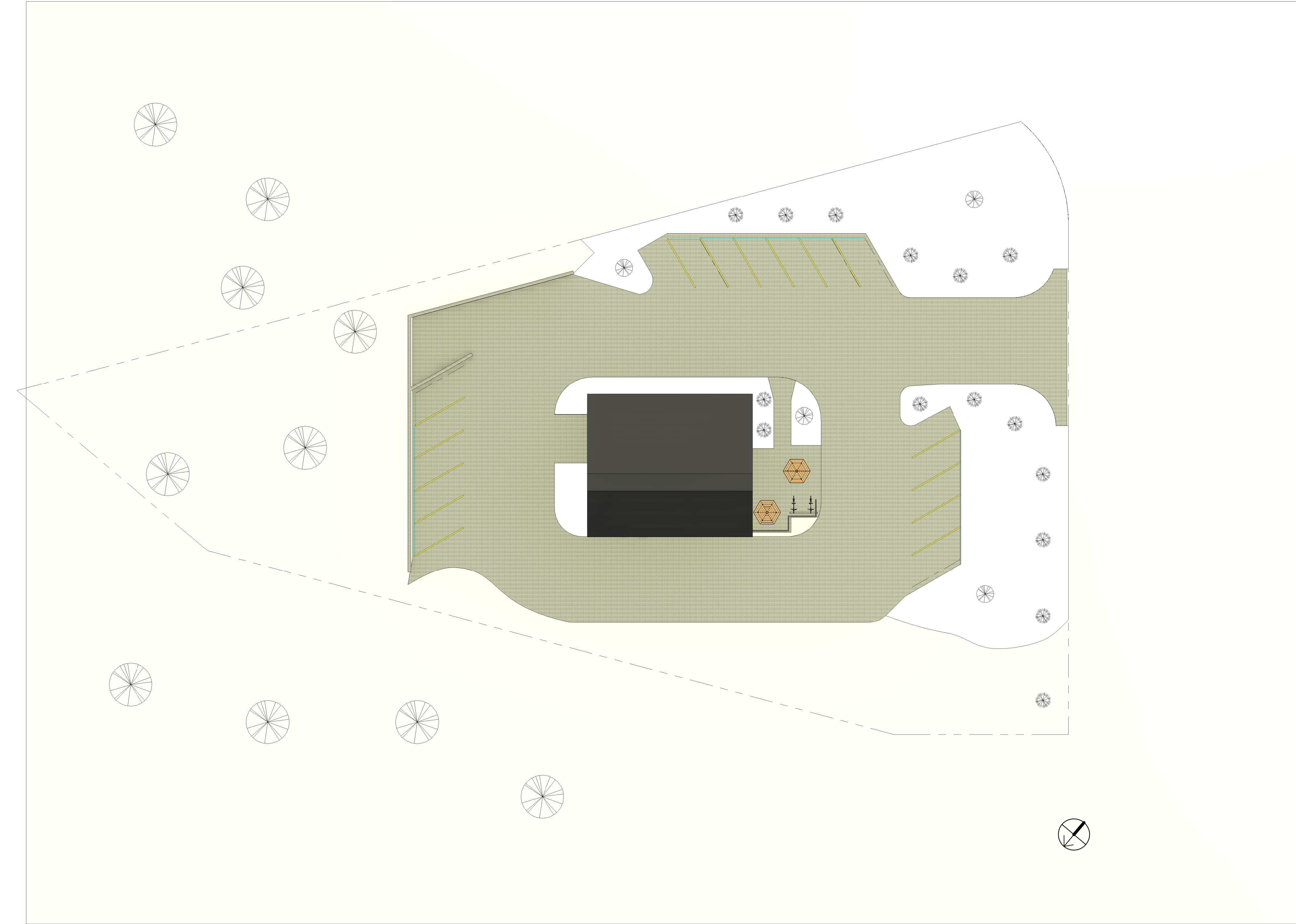
Lot 3 Brecken Heights			
Snow Storage			
Date	9/29/2023		
Created by	PAL		
Checked by	APL		
Storage Required = Paved Area x 0.1			
Parking Lot	(SQ. FT.)		
Parking area	13,835		
Island area	-		
Total Paved area	13,835		
Storage required	1,384	Area needed	
Storage area A1	1,400		-17
Storage area A2	-		
Total Storage	1,400		



SLOPE & SNOW STORAGE EXHIBIT
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 5 OF 5

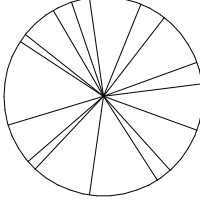


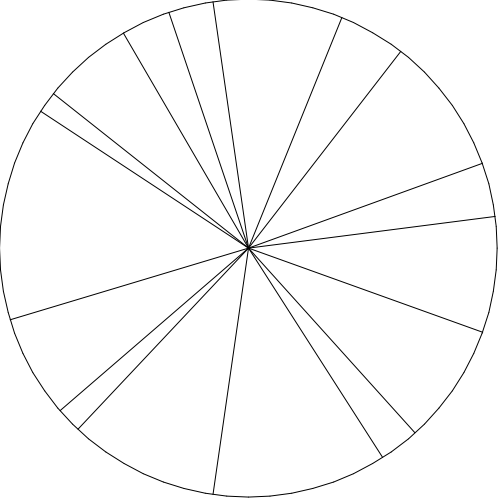
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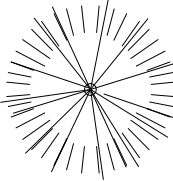


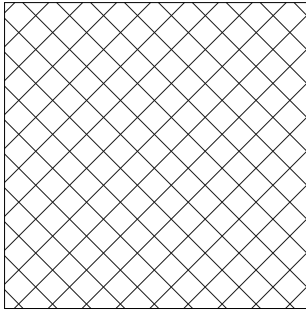
① Site
1" = 20'-0"

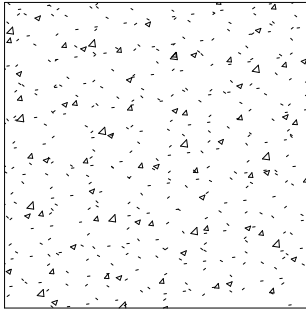
Material Legend

- 

Wildfire Black Gum Tree
- 

Existing Trees to remain not exist location
- 

Kark Foerster Grass
- 

Brown munch
- 

Concrete
- 

Brown block retaining wall

CONTRACTOR
MORLEY
ENTERPRISES



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1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909

PIKES PEAK TACO
Woodlan Park, CO

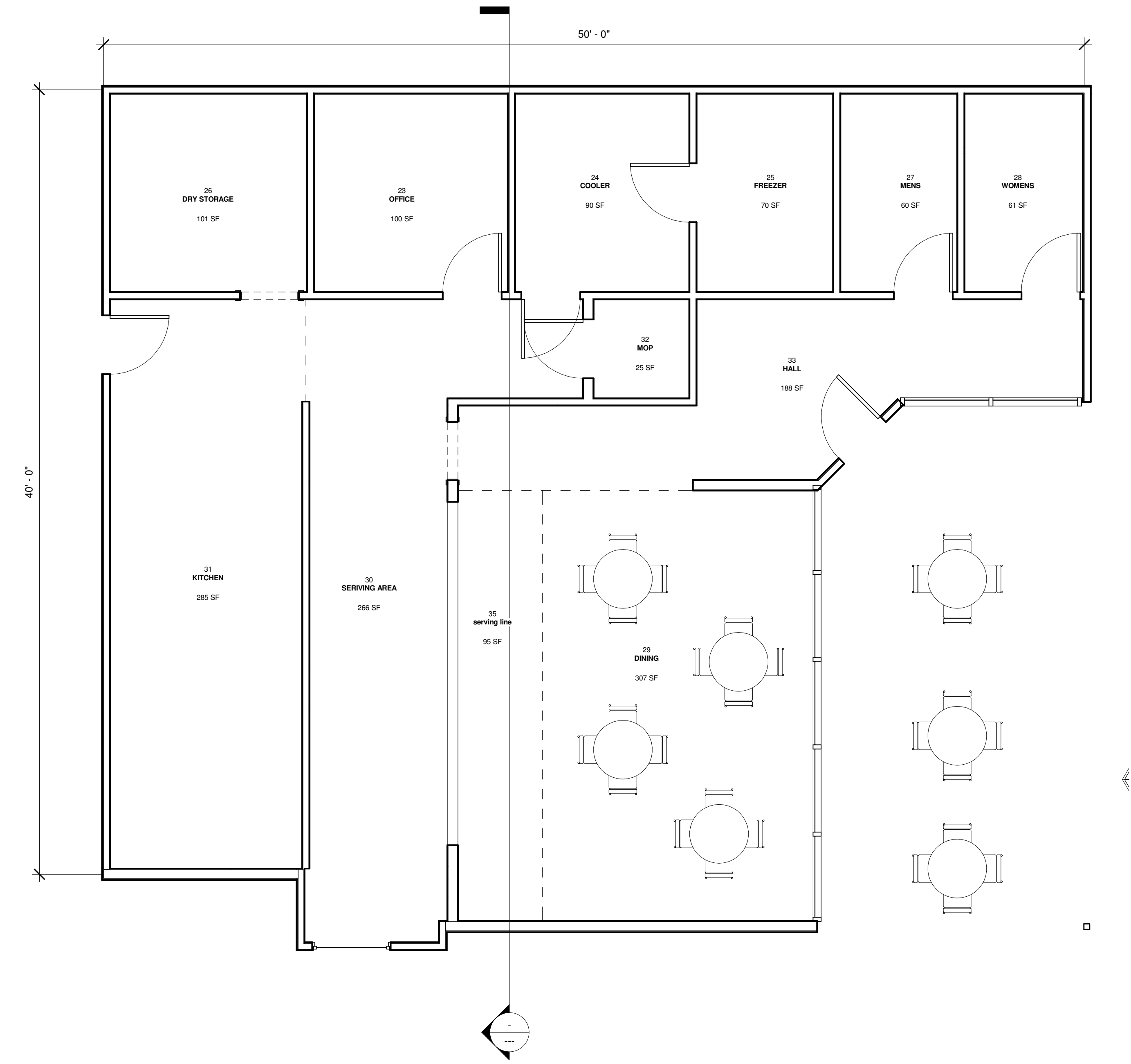
Current Revisions

Landscaping

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker

A1

ScaleAs indicated



① Main Floor Plan
1/4" = 1'-0"

Room Schedule Occupancy Calcs.					
Room Number	Room Name	Area	Load Factor 1	Occupant	Occupant Load
23	OFFICE	100 SF	200		1
24	COOLER	90 SF	0		
25	FREEZER	70 SF	0		
26	DRY STORAGE	101 SF	300		1
27	MENS	60 SF	0		
28	WOMENS	61 SF	0		
29	DINING	307 SF	15		21
30	SERIVING AREA	266 SF	200		2
31	KITCHEN	285 SF	200		2
32	MOP	25 SF	0		
33	HALL	188 SF	0		
35	serving line	95 SF	7		14
: 12		1648 SF			41
Grand total: 12		1648 SF			41

CONTRACTOR
MORLEY
ENTERPRISES



719-330-0259
1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909

PIKES PEAK TACO

Woodlan Park, CO

Current Revisions

Faming Plan

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker
A1	
Scale	1/4" = 1'-0"



STUCCO: ELITE STUCCO 18 COCONUT BY OMEGA # 9314 AFCFC FINE TEXTURE
SIDING: Nicjiha VintageWood Cement siding cedar
TRIM PAINT: HARDIE BOARD PAINTED BLACK
METAL ROOF: BLACK
GUTTER COLOR: BLACK TO MATCH METAL ROOF
CONCRETE COLOR: STANDARD CONCRETE NO ADDED COLOR

CONTRACTOR
MORLEY
ENTERPRISES



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COLORADO SPRINGS, CO 80909

PIKES PEAK TACO

Woodlan Park, CO



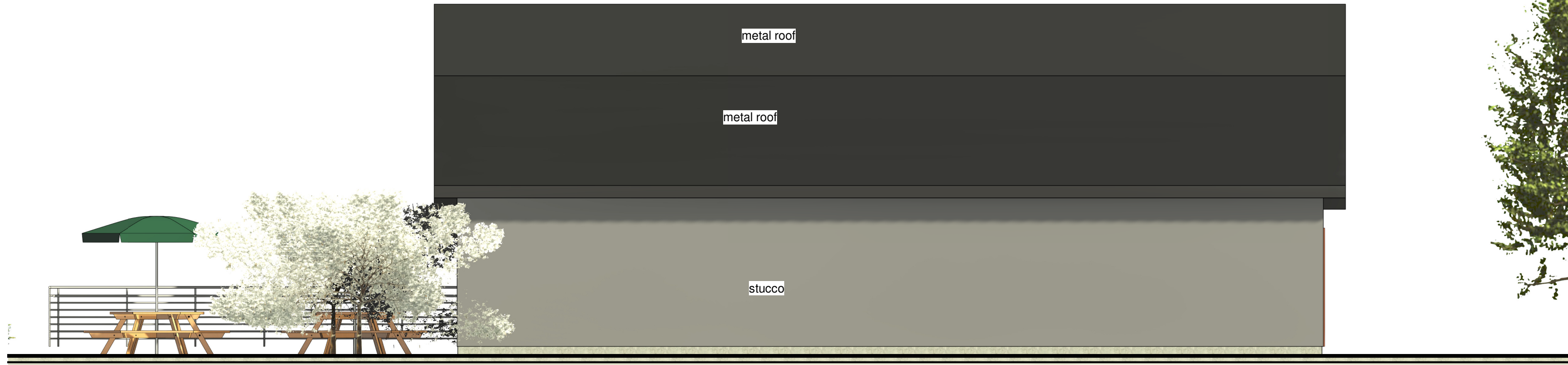
③ South
3/16" = 1'-0"



① East
3/16" = 1'-0"



④ West
3/16" = 1'-0"



② North
3/16" = 1'-0"

Current Revisions

Concept Plan

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker

A2

Scale 3/16" = 1'-0"

**PRELIMINARY DRAINAGE REPORT
FOR
BRECKEN HEIGHTS LOT 3**

Prepared For:

**Pikes Peak Taco, Mexican Restaurant, Inc.
PO Box 501
Woodland Park, CO 80866**

**September 27, 2023
Project No. 25198.03**

**Prepared By:
JR Engineering, LLC
5475 Tech Center Drive, Suite 235
Colorado Springs, CO 80919
719-593-2593**

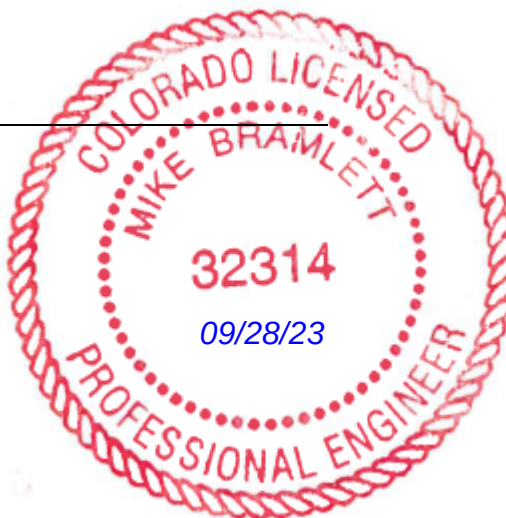
PRELIMINARY DRAINAGE REPORT
BRECKEN HEIGHTS LOT 3

Engineer's Certification Block

This report and plan for the preliminary drainage design of Brecken Heights Lot 3 was prepared by me (or under my direct supervision) in accordance with the City of Woodland Park Drainage Design and Technical Criteria and was designed to comply with the provisions thereof. I understand that the City of Woodland Park does not and will not assume liability for drainage facilities designed by others.



Mike A. Bramlett, Colorado P.E. 32314
For and On Behalf of JR Engineering, LLC



CITY OF WOODLAND PARK:

City Engineer

Date

Conditions:

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APPENDIX

- Appendix A – Vicinity Map, Soil Descriptions, FEMA Floodplain Map
- Appendix B – Rational Hydrologic Calculations
- Appendix C – Water Quality & Detention and Hydraulic Calculations
- Appendix D – Reference Material
- Appendix E – Drainage Maps



PURPOSE

This document is the Preliminary Drainage Report for Brecken Heights Lot 3. The purpose of this report is to identify on-site and off-site drainage patterns, storm sewer, culvert and inlet locations, areas tributary to the site, and to safely route storm water to adequate outfall facilities.

GENERAL SITE DESCRIPTION

GENERAL LOCATION

The proposed Brecken Heights Subdivision is a tract of land in the northeast of the southwest of Section 30, Township 12 South, Range 68 West of the 6th P.M. in Teller County, Colorado. Brecken Heights Lot 3 (hereby referred to as “the site”) is 0.92-acre area within the Brecken Heights Subdivision and is zoned as community commercial. The site is bounded by Brecken Heights Lot 2 to the north, Highway 24 to the southwest, and Brecken Heights Lot 4 to the east. A vicinity map of the area is presented in Appendix A.

No major drainageways or irrigation wells exist on the site.

DESCRIPTION OF PROPERTY

Brecken Heights Lot 3 is currently unoccupied and undeveloped. The existing ground cover is dense coniferous trees and native grasses on steep terrain. There is a water main and overhead utilities that are located within easements in adjacent Lot 4. In general, Brecken Heights Lot 3 slopes from north to south and ranges from 4% to 45%.

The proposed land use consists of a drive-thru restaurant with some parking areas, private road, and associated infrastructure.

Per an NRCS web soil survey of the area, Hydrologic Soil Group A and B soils exist on the site. The Group A soil is the Boyett-Frenchcreek complex and the Group B soil is the Tecolote very gravelly sandy loam. Group A soils have a high infiltration rate and low runoff potential. Group B soils have a moderate infiltration rate. A majority of the site is comprised of Group A soils. A soil survey map has been presented in Appendix A.

No major drainageways or irrigation wells exist on the site.

FLOODPLAIN STATEMENT

Based on the FEMA Firm Map Number 08119CO206D, revised September 25, 2009, the entire development is located within Zone X, or areas area outside the Special Flood Hazard Area (SFHA)



PRELIMINARY DRAINAGE REPORT BRECKEN HEIGHTS LOT 3

and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood. The FEMA map is presented in Appendix A.

EXISTING DRAINAGE CONDITIONS

MAJOR BASIN DESCRIPTIONS

The site lies within the Fountain Creek watershed basin which was studied in the “Fountain Creek Drainage Basin Planning Study: Volume I” dated July 1994 by Muller Engineering Company. Fountain Creek is a perennial stream originating near the town of Woodland Park in Teller County. Fountain Creek flows southeasterly through a narrow, steep-walled canyon for about 22 miles before joining Monument Creek in west Colorado Springs. The headwaters of Fountain Creek are fed from snowmelt, rainfall and springs. The Fountain Creek watershed in the area adjacent to the Brecken Heights Lot 3 site is characterized by mountain ranges and river valleys. For applicable excerpts from the Fountain Creek DBPS, see Appendix D. The site does not propose discharging directly into Fountain Creek and therefore no negative impacts are anticipated.

EXISTING SUB-BASIN DRAINAGE

Existing basin drainage patterns are generally from north to south by way of sheet flow. On-site runoff flows off-site to an existing roadside swale within the CDOT right-of-way (R.O.W.) along the eastern lane of Highway 24. The flows within the roadside ditch are then piped southeast under Morning Sun Dr. via existing culvert (Culvert #1660 in the City of Woodland Park Stormwater Capital Improvement and Master Plan). These flows continue flowing southeast via roadside ditch, eventually crossing Highway 24 via culvert and ultimately outfalls into Fountain Creek.

The Brecken Heights Lot 3 site contains one on-site existing sub-basin totaling approximately 0.92 acres and one off-site existing sub-basin tributary to the site with an area of approximately 4.04 acres. Refer to the existing basin and design point summary Tables 1 and 2 at the end of this section for basin and design point flows. See the existing conditions drainage map in Appendix E.

Existing off-site Basin OS1 is approximately 4.04 acres and consists of undeveloped forest part of Brecken Heights Lot 2. Flows from this basin travel southwest via sheet flow and existing natural drainage swales and enters into Basin EXA at DP1 ($Q_5=0.9$ cfs, $Q_{100}=10.6$ cfs). DP1 flows will follow the drainage patterns of Basin EXA to the combination at DP2.1.

Existing Basin EXA is approximately 0.92 acres and consists of undeveloped forest part of Brecken Heights Lot 3. Flows from this basin DP2 ($Q_5=0.2$ cfs, $Q_{100}=2.5$ cfs) travel southwest via sheet flow and existing natural drainage swales to the site boundary at DP2. Flows from DP1 and DP2 combine at DP2.1 ($Q_5=1.0$ cfs, $Q_{100}=13.1$ cfs) before flowing off-site to the exiting Highway 24 roadside ditch. DP2.1 is just upstream of the existing dirt access and 18' CMP culvert that conveys runoff from the north side to south side of the future Lot 3 & 4 access.



Table 1: Existing Basin Summary

BASIN SUMMARY TABLE							
Tributary Sub-basin	Area (acres)	Percent Impervious	C ₅	C ₁₀₀	t _c (min)	Q ₅ (cfs)	Q ₁₀₀ (cfs)
EXA	0.92	0%	0.08	0.35	12.0	0.2	2.5
OS1	4.04	0%	0.08	0.35	12.4	0.9	10.6

Table 2: Existing Design Point Summary

DESIGN POINT SUMMARY TABLE		
DP	Q ₅ (cfs)	Q ₁₀₀ (cfs)
	Total	Total
1	0.9	10.6
2	0.2	2.5
2.1	1.0	13.1

PROPOSED DRAINAGE CONDITIONS

PROPOSED SUB-BASIN DRAINAGE

The proposed site was broken into 10 sub-basins: Basins A through E, and OS1A through OS3. Refer to the proposed basin and design point summary Tables 3 and 4 at the end of this section for basin and design point flows. See the proposed conditions drainage map in Appendix E.

Proposed Basin OS1A is approximately 0.60 acres in area and consists of undeveloped vegetated area part of Brecken Heights Lot 2. Flows from this basin travel south and west via sheet flow where they enter Basin A at DP1 (Q₅=0.2 cfs, Q₁₀₀=1.6 cfs). Flows continue within Basin A and combine at DP2.1, the property boundary.

Proposed Basin A is approximately 0.16 acres in area and consists of undeveloped vegetated area on the northwestern portion of the site. Flows from this basin travel southwest via sheet flow to the property boundary at DP2 (Q₅=0.0 cfs, Q₁₀₀=0.5 cfs). Flows from DP1 and DP2 combine at DP2.1 (Q₅=0.2 cfs, Q₁₀₀=2.0 cfs) before flowing off-site to the existing Highway 24 roadside ditch which follows the existing ditch flowing southeast.

Proposed Basin B is approximately 0.42 acres in area located on the central portion of the site. Basin B consists of a private street, parking areas, concrete sidewalks, drive-thru building, retaining walls, a dumpster, and lawn areas. Flows from this basin (Q₅=1.1 cfs, Q₁₀₀=2.7 cfs) travel south via Colorado Springs Type 3 curb and gutter to the sump 5' Type R Inlet at DP3. This inlet was sized to capture all

PRELIMINARY DRAINAGE REPORT BRECKEN HEIGHTS LOT 3

flow in the 5 and 100-year storm. In the event that the sump inlet at DP3 is clogged, the flow will overtop the local depression and sheet flow south into the proposed sand filter. All flow from DP3 is piped to the sand filter and combines at the outlet structure DP9.1.

Proposed Basin OS1B is approximately 3.36 acres in area and consists of undeveloped vegetated area part of Brecken Heights Lot 2. Flows from this basin travel south and west via sheet flow where they enter Basin OS2 at DP4 ($Q_5=0.7$ cfs, $Q_{100}=6.8$ cfs). Flows continue within Basin OS2 and combine at DP5.1, the on-grade 15' Type R Inlet.

Proposed Basin OS2 is approximately 0.18 acres in area and consists of undeveloped vegetated area part of Brecken Heights Lot 2, the south-half of the access road for Brecken Heights Lots 3 and 4, and lawn areas. Flows from this basin ($Q_5=0.2$ cfs, $Q_{100}=0.7$ cfs) travel south via Woodland Park Type I curb and gutter to the inlet at DP5. Flows from DP4 and DP5 combine at the on-grade 15' Type R Inlet at DP5.1 ($Q_5=0.9$ cfs, $Q_{100}=7.3$ cfs). This inlet was sized to capture all flow in the 5 and 100-year storm. All flow from DP5.1 is piped to combination at DP8.2.

Proposed Basin OS1C is approximately 0.08 acres in area and consists of undeveloped vegetated area part of Brecken Heights Lot 2. Flows from this basin travel south via sheet flow where they enter Basin C at DP6 ($Q_5=0.0$ cfs, $Q_{100}=0.2$ cfs). Flows continue within Basin C and combine at DP8.1, the on-grade 10' Type R Inlet.

Proposed Basin C is approximately 0.23 acres in area located on the central portion of the site. Basin B consists of a private street, parking areas, concrete sidewalks, gravel trail, and lawn areas. Flows from this basin ($Q_5=0.6$ cfs, $Q_{100}=1.4$ cfs) travel south via Colorado Springs Type 3 curb and gutter where they enter Basin OS3 at DP7. Flows continue within Basin OS3 and combine at DP8.1, the on-grade 10' Type R Inlet.

Proposed Basin OS3 is approximately 0.06 acres in area and consists of the north-half of the access road for Brecken Heights Lots 3 and 4 and lawn areas. Flows from this basin ($Q_5=0.2$ cfs, $Q_{100}=0.4$ cfs) travel south via Woodland Park Type I curb and gutter to the inlet at DP8. Flows from DP7 and DP8 combine at the on-grade 10' Type R Inlet at DP8.1 ($Q_5=0.3$ cfs, $Q_{100}=1.0$ cfs). This inlet was sized to capture all flow in the 5 and 100-year storm. All flow from DP8.1 is combined with DP6.1 flows at DP8.2 basin ($Q_5=1.2$ cfs, $Q_{100}=8.1$ cfs). All flow from DP8.2 is piped to the sand filter and combines at the outlet structure DP9.1.

Proposed Basin D is approximately 0.08 acres in area and consists of retaining walls, riprap, and the sand filter. Flows from this basin ($Q_5=0.0$ cfs, $Q_{100}=0.3$ cfs) travel south via overland flow towards the sand filter at DP9. Flows from DP3, DP8.2, and DP9 combine at the outlet structure at DP9.1 ($Q_5=1.4$ cfs, $Q_{100}=8.9$ cfs). The outlet structure then releases the sand filter flows at 9.2 ($Q_5=0.0$ cfs, $Q_{100}=0.8$ cfs) and is piped to the existing Highway 24 roadside ditch. Flows will enter the proposed 18" CMP

PRELIMINARY DRAINAGE REPORT
BRECKEN HEIGHTS LOT 3

culvert under the proposed access road for Lot 3 and 4. The flows then follow the historic pattern eventually reaching Fountain Creek.

Proposed Basin E is approximately 0.02 acres in area located adjacent to the access road for Lots 3 and 4. Basin E consists of a landscape wall, concrete sidewalks, and lawn areas. Flows from this basin ($Q_5=0.0$ cfs, $Q_{100}=0.1$ cfs) travels to the property boundary at DP10. Flows continue within the existing Highway 24 roadside ditch.

Table 3: Proposed Basin Summary

BASIN SUMMARY TABLE							
Tributary Sub-basin	Area (acres)	Percent Impervious	C_5	C_{100}	t_c (min)	Q_5 (cfs)	Q_{100} (cfs)
A	0.16	0%	0.08	0.35	6.9	0.0	0.5
B	0.42	70%	0.65	0.77	5.8	1.1	2.7
C	0.23	58%	0.55	0.70	5.0	0.6	1.4
D	0.08	9%	0.15	0.40	5.0	0.0	0.3
E	0.02	66%	0.59	0.73	5.0	0.0	0.1
OS1A	0.60	0%	0.08	0.35	7.7	0.2	1.6
OS1B	3.36	0%	0.08	0.35	12.7	0.7	6.8
OS1C	0.08	0%	0.08	0.35	5.9	0.0	0.2
OS2	0.18	22%	0.26	0.49	6.6	0.2	0.7
OS3	0.06	67%	0.63	0.76	5.0	0.2	0.4

Table 4: Proposed Design Point Summary

DESIGN POINT SUMMARY TABLE		
DP	Q_5	Q_{100}
	Total	Total
1	0.2	1.6
2	0.0	0.5
2.1	0.2	2.0
3	1.1	2.7
4	0.7	6.8
5	0.2	0.7
5.1	0.9	7.3
6	0.0	0.2
7	0.6	1.4
8	0.2	0.4
8.1	0.7	2.0
8.2	1.4	8.7
9	0.0	0.3
9.1	1.4	8.9
9.2	0.0	0.8
10	0.0	0.1

DRAINAGE DESIGN CRITERIA

DEVELOPMENT CRITERIA REFERENCE

Storm drainage analysis and design criteria for this project were taken from the “*Woodland Park Drainage Criteria Manual*” (WPDCM), dated March 2014, and the “*Urban Storm Drainage Criteria Manual*” Volumes 1 to 3 (USDCM).

HYDROLOGIC CRITERIA

All hydrologic data was obtained from the “*Woodland Park Drainage Criteria Manual*”, and the “*Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual*” Volumes 1, 2, and 3. On-site drainage improvements were designed based on the 5-year (minor) storm event and the 100-year (major) storm event. Existing basin runoff (off-site and on-site) was calculated using the Rational Method. On-site developed condition runoff was calculated using the Rational Method, and rainfall intensities for the 5-year and the 100-year storm return frequencies were obtained from Table 6-2 of the WPDCM. One hour point rainfall data for the storm events is identified in the table below. Runoff coefficients were determined based on proposed land use and from data in Table 6-6 from the WPDCM. Time of concentrations were developed using equations from WPDCM. All runoff calculations and applicable charts and graphs are included in the Appendices.

Table 5: 1-hr Point Rainfall Data

Storm	Rainfall (in.)
5-year	0.97
100-year	2.03

HYDRAULIC CRITERIA

The Rational Method and USDCM’s SF-2 and SF-3 forms were used to determine the runoff from the minor and major storms on the site. The MHFD-Detention v4.06 spreadsheet was used to calculate the required detention, WQCV and EURV for the on-site sand filter. The MHFD-Inlet v5.02 spreadsheet was used to size the proposed inlets. Hydraflow Express extension for Autodesk Civil 3D was used to size the proposed storm sewer system.

PREVIOUS STUDIES

The site was previously studied in the *Final Drainage Report for Brecken Heights Subdivision* prepared by JR Engineering and dated May 24, 2021. This proposed drainage report is in conformance with the previously approved report and excerpts are shown in Appendix D. The proposed development will not have a negative impact to the adjacent communities.

DRAINAGE FACILITY DESIGN

STORM SEWER

The proposed developed site will convey runoff via roadway curb & gutter towards proposed inlets at various design points. Developed flows will be treated within a proposed sand filter and released through the outlet structure to the existing Highway 24 roadside ditch. The site development releases flows at less than existing and therefore the development will not negatively impact any CDOT drainage infrastructure downstream.

WATER QUALITY/DETENTION

In accordance with the City of Woodland Park Drainage Criteria Manual, this proposed development will use the full spectrum detention approach as an alternative to the standard low-flow/5-year/100-year criteria specified by City of Woodland Park Resolution No. 299, Series 1994. The site has an impervious area of approximately 0.5 acres, which is under the threshold of a full-spectrum extended detention basin. Following the recommendations in Table EDB-4 from the MHFD Urban Storm Drainage Criteria Manual Volume 3, this site proposes a private sand filter.

To avoid any adverse impacts to downstream facilities, the sand filter will have a maximum release rate for the 100-year storm that is less than or equal to the predevelopment rate. The sand filter will be designed to have a 12-hour drain time for the calculated WQCV. The location of the sand filter is on the southern side of the site at DP9.1 and receives runoff from Basins OS1B-OS3 and B-D. To limit erosion, inflow pipes to the sand filter will outfall to riprap pads sized per MHFD suggestions. Preliminary design volumes and elevations are listed in Table 6.

Table 6: Sand filter design

WQCV (ac-ft)	0.02
EURV (ac-ft)	0.04
Total Provided Volume (ac-ft)	0.10
Pond Bottom/ Top of Media	8211.75'
WQCV Elevation	8212.47'
EURV Elevation	8213.03'
100-yr Elevation	8213.93'
Spillway Crest Elevation	8214.75'
Top of Pond Elevation	8216.00'

The sand filter will include a proposed spillway with an overflow path to the existing Highway 24 roadside ditch. The spillway will be sized to convey the undetained 100-year peak flow rate with 1 foot of freeboard. The spillway will be armored with Type L buried soil riprap, sized per UDFCD and Woodland Park criteria. The proposed sand filter outlet structure will convey flows via an 18" RCP

PRELIMINARY DRAINAGE REPORT BRECKEN HEIGHTS LOT 3

storm sewer to the existing Highway 24 roadside ditch. Flows will stay in the existing roadside ditch through CDOT culverts ultimately outfalling to Fountain Creek. The final design and configuration of the spillway, emergency overflow path, pond maintenance access, outlet structure, and appurtenances will be detailed during the construction document process, and further expanded upon in the Final Drainage Report.

SITE CONSTRAINTS

The proposed roadways and associated structures have been designed to maintain historic drainage patterns in the developed condition. The proposed site grading and resulting drainage patterns were largely determined by the access roadway connection to Highway 24.

RELATIONSHIP TO UPSTREAM AND DOWNSTREAM PROPERTIES

Upstream runoff enters the site from Brecken Heights Lot 2 to the north and will be captured and treated within the sand filter. The Brecken Heights Lot 2 is constrained and it is not anticipated that the lot will be developed other than open and trail space. If this assumption changes, Lot 2 will need to ensure future development will not negatively impact the site design.

In the existing condition, the total flow from the site is $Q_5=1.0$ cfs and $Q_{100}=13.1$ cfs to the existing Highway 24 roadside ditch. The developed site will release flows to the existing roadside ditch in three locations. The first is at the site boundary at DP2.1, the second is from the sand filter outlet structure released flows at DP9.2, and the third is at the site boundary at DP10. The sum of the flows from DP2.1 ($Q_5=0.2$ cfs, $Q_{100}=2.0$ cfs), DP9.2 ($Q_5=0.0$ cfs, $Q_{100}=0.8$ cfs), and DP10 ($Q_5=0.0$ cfs, $Q_{100}=0.1$ cfs) is $Q_5=0.2$ cfs and $Q_{100}=2.9$ cfs. Overall, the amount of stormwater that the developed site is anticipated to discharge to the existing Highway 24 roadside ditch is less than what was in the existing condition. Therefore, no negative impacts to downstream infrastructure is anticipated.

EROSION CONTROL PLAN

A Grading and Erosion Control Plan will be submitted as part of the Construction Documents submittal package with the Final Drainage Report (FDR).

OPERATION & MAINTENANCE

In order to ensure the function and effectiveness of the stormwater infrastructure, maintenance activities such as inspection, routine maintenance, restorative maintenance, rehabilitation and repair, are required. The property owner shall be responsible for the inspection, maintenance, rehabilitation and repair of stormwater and erosion control facilities located on the property unless another party accepts such responsibility in writing and responsibility is properly assigned through legal documentation. Access is provided from on-site facilities and easements for proposed infrastructure located off-site. An operation and maintenance plan will be provided at the time of the FDR.

SUMMARY

The hydrologic and detention calculations were performed using the required methods as outlined in the City of Woodland Park Drainage Criteria Manual. Drainage improvements meet or exceed the City's requirements for inlet sizing, detention pond storage, and detention pond maximum outfall rates. In accordance with the City of Woodland Park Drainage Criteria Manual, this proposed development will use the full spectrum detention approach as an alternative to the standard low-flow/5-year/100-year criteria specified by City of Woodland Park Resolution No. 299, Series 1994. The drainage concept for the development of the Brecken Heights Lot 3 involves detention and off-site surface flows discharging to an existing roadside ditch along Highway 24 at or below the existing flow rates. No downstream properties will be adversely impacted by the construction of this site.

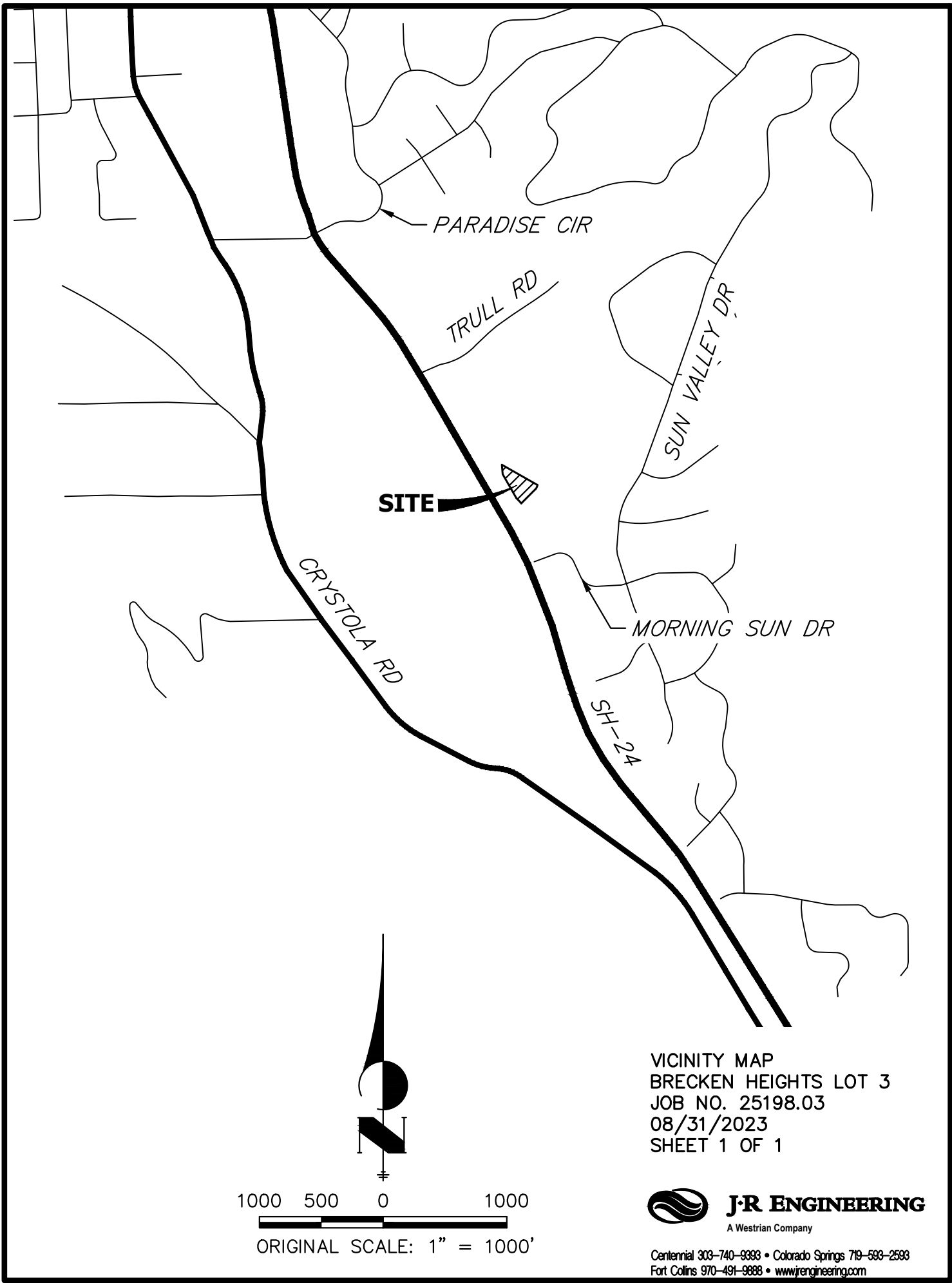
REFERENCES

1. City of Woodland Park Drainage Criteria Manual (DCM); City of Woodland Park, March 2014.
 2. Urban Storm Drainage Criteria Manual (Volumes 1, 2, and 3), Urban Drainage and Flood Control District, June 2001.
 3. “Hydrologic Group Rating for Teller County Area, Colorado”, USDA-Natural Resources Conservation Service, National Cooperative Soil Survey. Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>. [June 21, 2017]
 4. “City of Woodland Park-Zoning Map”, City of Woodland Park. June 23, 2021.
 5. “Fountain Creek Drainage Basin Planning Study Volume I”, Muller Engineering Company, Inc. July, 1994.
 6. “Final Drainage Report for Brecken Heights Subdivison”, JR Engineering. May 24, 2021.
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Appendix A
Vicinity Map, Soil Descriptions, FEMA Floodplain Map



X:\2510000.all\2519803\Drawings\Blocks\2519803 Vic Map.dwg, 8.5x11 Portrait, 8/16/2023 9:44:03 AM, CS

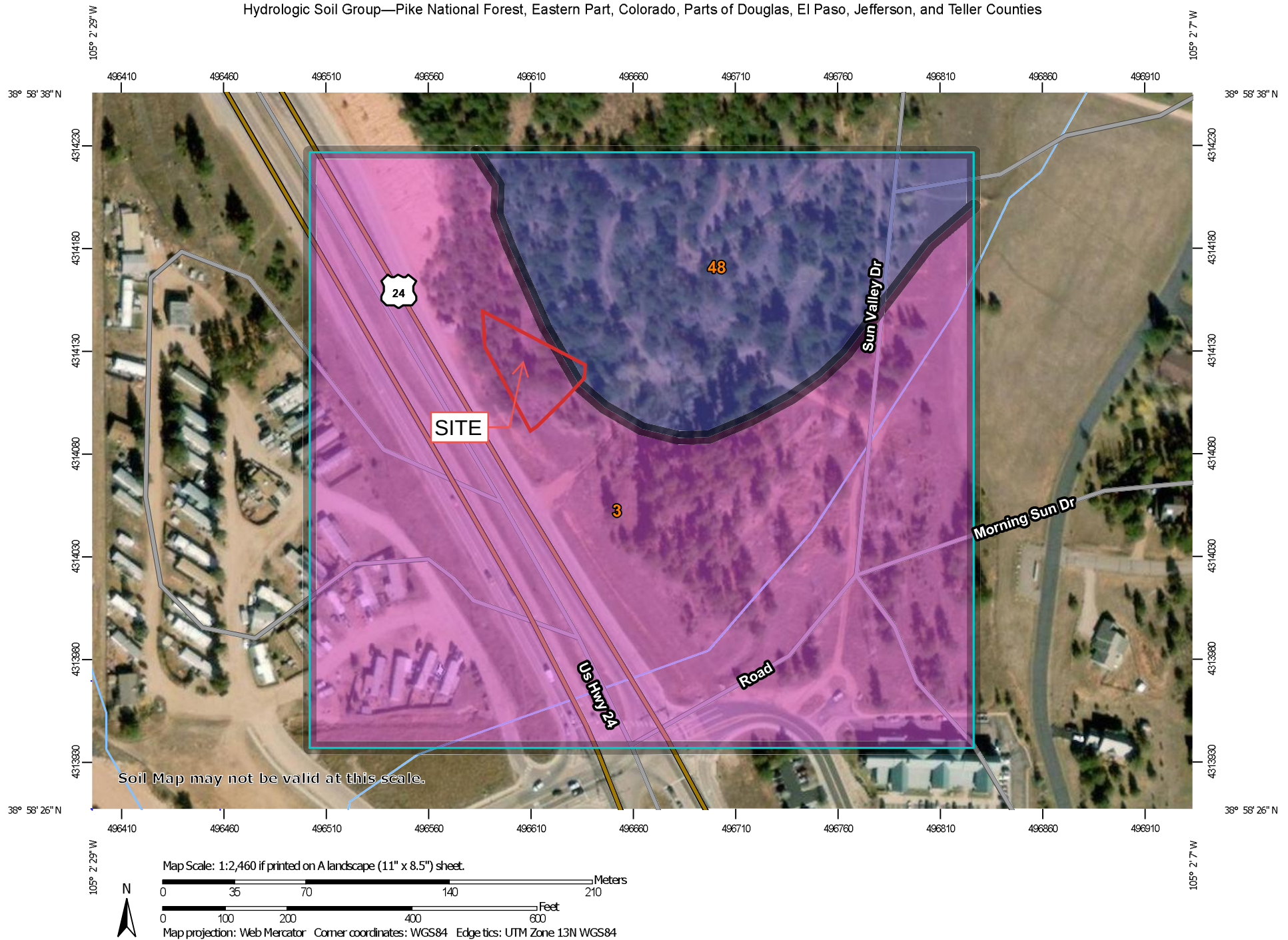


VICINITY MAP
BRECKEN HEIGHTS LOT 3
JOB NO. 25198.03
08/31/2023
SHEET 1 OF 1



Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

Hydrologic Soil Group—Pike National Forest, Eastern Part, Colorado, Parts of Douglas, El Paso, Jefferson, and Teller Counties



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/10/2019
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pike National Forest, Eastern Part, Colorado, Parts of Douglas, El Paso, Jefferson, and Teller Counties
 Survey Area Data: Version 5, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 4, 2010—Oct 16, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Boyett-Frenchcreek complex, 2 to 15 percent slopes	A	17.6	75.3%
48	Tecolote very gravelly sandy loam, 15 to 40 percent slopes, very stony	B	5.8	24.7%
Totals for Area of Interest			23.4	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD88). These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-2, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov/>.

Base Map information shown on this FIRM was provided in digital format by Teller County. These data are current as of 2007.

This map reflects more detailed and up-to-date stream channel configurations and floodplain delineations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the *Flood Insurance Study Report* (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels, community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a *Flood Insurance Study Report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov/>.

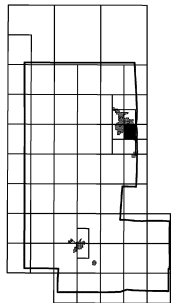
If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA Map (1-877-336-2827) or visit the FEMA website at <http://www.fema.gov/>.

Teller County Vertical Datum Offset Table

Flooding Source	Vertical Datum Offset (ft)
East Fork Fountain Creek	4.2
East Fork Paint Pony	4.2
Fountain Creek	4.2
Lovell Gulch	4.2
Lov Gulch	4.2
Paint Pony	4.2
Trial Creek	4.2

Example: To convert Fountain Creek elevations to NAVD 88, 4.2 feet were added to the NGVD 29 elevations.

Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).



Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equalled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently derelict. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 1000-meter Universal Transverse Mercator grid ticks, zone 13
- 5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

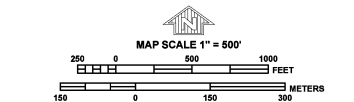
MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
September 25, 1998

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
SEPTEMBER 25, 2009 - to update corporate limits, to change Base Flood Elevations and Special Flood Hazard Areas, to update map format, to add roads and road names, and to incorporate previously issued Letters of Map Revision

For community map revision history prior to countywide mapping, refer to the Community Map History Table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



PANEL 0206D

FIRM
FLOOD INSURANCE RATE MAP
TELLER COUNTY,
COLORADO
AND INCORPORATED AREAS

PANEL 0206 OF 0415
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
TELLER COUNTY	080173	0206	D
WOODLAND PARK, CITY OF	080175	0206	D

Notice to User: The Map Number shown below should be used when displaying map online. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
08119C0206D

MAP REVISED
SEPTEMBER 25, 2009

Federal Emergency Management Agency

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 12 SOUTH.

Appendix B

Hydrologic Calculations

COMPOSITE % IMPERVIOUS & COMPOSITE RUNOFF COEFFICIENT CALCULATIONS - EXISTING CONDITONS

Subdivision: Brecken Heights
 Location: User Defined

Project Name: Brecken Heights-Lot 3
 Project No.: 25198.03
 Calculated By: GAG
 Checked By: _____
 Date: 8/31/23

Basin ID	Total Area (ac)	Hardscape (100% Impervious)				Gravel (80% Impervious)				Lawns (0% Impervious)				Basins Total Weighted C		Basins Total Weighted % Imp.
		C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	
EXA	0.92	0.90	0.96	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	0.92	0.0%	0.08	0.35	0.0%
OS1	4.04	0.90	0.96	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	4.04	0.0%	0.08	0.35	0.0%
TOTAL	4.96															0.0%

STANDARD FORM SF-2 EXISTING CONDITIONS TIME OF CONCENTRATION

Subdivision: Brecken Heights
Location: User Defined

Project Name: Brecken Heights-Lot 3
Project No.: 25198.03
Calculated By: GAG
Checked By: _____
Date: 8/31/23

SUB-BASIN						INITIAL/OVERLAND			TRAVEL TIME					tc CHECK			FINAL
DATA						(Ti)			(Tt)					(URBANIZED BASINS)			
BASIN ID	D.A. (ac)	Hydrologic Soils Group	Impervious (%)	C5	C100	L (ft)	So (%)	ti (min)	Lt (ft)	St (%)	K	VEL. (ft/s)	tt (min)	COMP. tc (min)	TOTAL LENGTH (ft)	Urbanized tc (min)	tc (min)
EXA	0.92	A	0%	0.08	0.35	195	10.0%	12.0	0	0.0%	7.0	0.0	0.0	12.0	195.0	26.0	12.0
OS1	4.04	A	0%	0.08	0.35	300	27.0%	10.7	315	20.0%	7.0	3.1	1.7	12.4	615.0	27.3	12.4

NOTES:

$$t_c = t_i + t_t$$

Where:

t_c = computed time of concentration (minutes)

t_i = overland (initial) flow time (minutes)

t_t = channelized flow time (minutes).

$$t_t = \frac{L_t}{60K\sqrt{S_o}} = \frac{L_t}{60V_t}$$

Where:

t_t = channelized flow time (travel time, min)

L_t = waterway length (ft)

S_o = waterway slope (ft/ft)

V_t = travel time velocity (ft/sec) = K√S_o

K = NRCS conveyance factor (see Table 6-2).

Equation 6-2

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_o^{0.33}}$$

Where:

t_i = overland (initial) flow time (minutes)

C₅ = runoff coefficient for 5-year frequency (from Table 6-4)

L_i = length of overland flow (ft)

S_o = average slope along the overland flow path (ft/ft).

Equation 6-4

$$t_t = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$$

Where:

t_t = minimum time of concentration for first design point when less than t_c from Equation 6-1.

L_t = length of channelized flow path (ft)

i = imperviousness (expressed as a decimal)

S_t = slope of the channelized flow path (ft/ft).

Equation 6-3

Table 6-2. NRCS Conveyance factors, K

Type of Land Surface	Conveyance Factor, K
Heavy meadow	2.5
Tillage/field	5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

Equation 6-5

Use a minimum t_c value of 5 minutes for urbanized areas and a minimum t_c value of 10 minutes for areas that are not considered urban. Use minimum values even when calculations result in a lesser time of concentration.

STANDARD FORM SF-3 - EXISTING CONDITIONS
STORM DRAINAGE SYSTEM DESIGN
(RATIONAL METHOD PROCEDURE)

Subdivision: Brecken Heights
Location: User Defined
Design Storm: 5-Year

Project Name: Brecken Heights-Lot 3
Project No.: 25198.03
Calculated By: GAG
Checked By: _____
Date: 8/31/23

STREET	Design Point	DIRECT RUNOFF							TOTAL RUNOFF				STREET / SWALE			PIPE				TRAVEL TIME			REMARKS
		Basin ID	Area (Ac)	Runoff Coeff.	t_c (min)	C*A (Ac)	I (in/hr)	Q (cfs)	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	$Q_{street/swale}$ (cfs)	C*A (ac)	Slope (%)	Q_{pipe} (cfs)	C*A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	
	1	OS1	4.04	0.08	12.4	0.32	2.68	0.9															Runoff from Basin OS1, overland flows south in natural drainage ways to DP1. Enters into Basin EXA.
	2	EXA	0.92	0.08	12.0	0.07	2.74	0.2															Runoff from Basin EXA, overland flows south in natural drainage ways to DP2. Outfalls to CDOT R.O.W. Hwy 24 ditch.
	2.1								12.4	0.39	2.68	1.0											Combination of flows from DP1 and DP2 in the Hwy 24 ditch.
Notes: Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.																							

STANDARD FORM SF-3 - EXISTING CONDITIONS
STORM DRAINAGE SYSTEM DESIGN
(RATIONAL METHOD PROCEDURE)

Subdivision: Brecken Heights
Location: User Defined
Design Storm: 100-Year

Project Name: Brecken Heights-Lot 3
Project No.: 25198.03
Calculated By: GAG
Checked By:
Date: 8/31/23

Description	Design Point	DIRECT RUNOFF							TOTAL RUNOFF				STREET / SWALE			PIPE				TRAVEL TIME			REMARKS
		Basin ID	Area (ac)	Runoff Coeff.	t_c (min)	C*A (ac)	$\bar{y}$ (in/hr)	Q (cfs)	t_c (min)	C*A (ac)	$\bar{y}$ (in/hr)	Q (cfs)	Q _{street/swale} (cfs)	C*A (ac)	Slope (%)	Q _{pipe} (cfs)	C*A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	
	1	OS1	4.04	0.35	12.4	1.41	7.55	10.6															Runoff from Basin OS1, overland flows south in natural drainage ways to DP1. Enters into Basin EXA.
	2	EXA	0.92	0.35	12.0	0.32	7.70	2.5															Runoff from Basin EXA, overland flows south in natural drainage ways to DP2. Outfalls to CDOT R.O.W. Hwy 24 ditch.
	2.1								12.4	1.73	7.55	13.1											Combination of flows from DP1 and DP2 in the Hwy 24 ditch.
Notes: Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.																							

COMPOSITE % IMPERVIOUS & COMPOSITE RUNOFF COEFFICIENT CALCULATIONS - PROPOSED CONDITONS

Subdivision: Brecken Heights
 Location: Woodland Park

Project Name: Brecken Heights-Lot 3
 Project No.: 25198.03
 Calculated By: GAG
 Checked By: _____
 Date: 9/27/23

Basin ID	Total Area (ac)	Hardscape (100% Impervious)				Roofs (90% Impervious)				Gravel (80% Impervious)				Lawns (0% Impervious)				Basins Total Weighted C		Basins Total Weighted % Imp.
		C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	Area (ac)	Weighted % Imp.	C ₅	C ₁₀₀	
A	0.16	0.90	0.96	0.00	0.0%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	0.16	0.0%	0.08	0.35	0.0%
B	0.42	0.90	0.96	0.25	59.5%	0.73	0.81	0.05	10.7%	0.59	0.70	0.00	0.0%	0.08	0.35	0.12	0.0%	0.65	0.77	70.2%
C	0.23	0.90	0.96	0.13	56.5%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	1.0%	0.08	0.35	0.10	0.0%	0.55	0.70	57.6%
D	0.08	0.90	0.96	0.00	5.0%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	4.0%	0.08	0.35	0.07	0.0%	0.15	0.40	9.0%
E	0.02	0.90	0.96	0.01	50.0%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	16.0%	0.08	0.35	0.01	0.0%	0.59	0.73	66.0%
OS1A	0.60	0.90	0.96	0.00	0.0%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	0.60	0.0%	0.08	0.35	0.0%
OS1B	3.36	0.90	0.96	0.00	0.0%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	3.36	0.0%	0.08	0.35	0.0%
OS1C	0.08	0.90	0.96	0.00	0.0%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	0.08	0.0%	0.08	0.35	0.0%
OS2	0.18	0.90	0.96	0.04	22.2%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	0.14	0.0%	0.26	0.49	22.2%
OS3	0.06	0.90	0.96	0.04	66.7%	0.73	0.81	0.00	0.0%	0.59	0.70	0.00	0.0%	0.08	0.35	0.02	0.0%	0.63	0.76	66.7%
TOTAL SAND FILTER	4.41																			11.7%
TOTAL ON-SITE	0.91																			49.2%

STANDARD FORM SF-2 PROPOSED CONDITIONS TIME OF CONCENTRATION

Subdivision: Brecken Heights
Location: Woodland Park

Project Name: Brecken Heights-Lot 3
Project No.: 25198.03
Calculated By: GAG
Checked By:
Date: 9/27/23

SUB-BASIN						INITIAL/OVERLAND			TRAVEL TIME					t _c CHECK			FINAL
DATA						(T _i)			(T _i)					(URBANIZED BASINS)			
BASIN ID	D.A. (ac)	Hydrologic Soils Group	Impervious (%)	C ₅	C ₁₀₀	L (ft)	S _o (%)	t _i (min)	L _t (ft)	S _t (%)	K	VEL. (ft/s)	t _t (min)	COMP. t _c (min)	TOTAL LENGTH (ft)	Urbanized t _c (min)	
A	0.16	A	0%	0.08	0.35	85	15.0%	6.9	0	0.0%	7.0	0.0	0.0	6.9	85.0	26.0	6.9
B	0.42	A	70%	0.65	0.77	45	1.9%	4.5	165	1.0%	20.0	2.0	1.4	5.8	210.0	15.5	5.8
C	0.23	A	58%	0.55	0.70	20	25.0%	1.5	180	8.0%	20.0	5.7	0.5	2.1	200.0	16.8	5.0
D	0.08	A	9%	0.15	0.40	20	25.0%	2.7	50	0.5%	15.0	1.1	0.8	3.4	70.0	25.6	5.0
E	0.02	A	66%	0.59	0.73	20	30.0%	1.3	45	3.5%	20.0	3.7	0.2	1.5	65.0	15.0	5.0
OS1A	0.60	A	0%	0.08	0.35	230	50.0%	7.7	0	0.0%	7.0	0.0	0.0	7.7	230.0	26.0	7.7
OS1B	3.36	A	0%	0.08	0.35	300	27.0%	10.7	355	18.0%	7.0	3.0	2.0	12.7	655.0	27.5	12.7
OS1C	0.08	A	0%	0.08	0.35	75	20.0%	5.9	0	0.0%	7.0	0.0	0.0	5.9	75.0	26.0	5.9
OS2	0.18	A	22%	0.26	0.49	100	15.0%	6.2	115	5.0%	20.0	4.5	0.4	6.6	215.0	22.9	6.6
OS3	0.06	A	67%	0.63	0.76	50	28.0%	2.0	110	4.9%	20.0	4.4	0.4	2.4	160.0	15.1	5.0

NOTES:

$$t_c = t_i + t_t$$

Where:

t_c = computed time of concentration (minutes)

t_i = overland (initial) flow time (minutes)

t_t = channelized flow time (minutes).

$$t_t = \frac{L_t}{60KV_t} = \frac{L_t}{60V_t}$$

Where:

t_t = channelized flow time (travel time, min)

L_t = waterway length (ft)

S_o = waterway slope (ft/ft)

V_t = travel time velocity (ft/sec) = K√S_o

K = NRCS conveyance factor (see Table 6-2).

Equation 6-2

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_o^{0.33}}$$

Where:

t_i = overland (initial) flow time (minutes)

C₅ = runoff coefficient for 5-year frequency (from Table 6-4)

L_i = length of overland flow (ft)

S_o = average slope along the overland flow path (ft/ft).

$$\text{Equation 6-4} \quad t_t = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$$

Where:

t_c = minimum time of concentration for first design point when less than t_c from Equation 6-1.

L_t = length of channelized flow path (ft)

i = imperviousness (expressed as a decimal)

S_t = slope of the channelized flow path (ft/ft).

Equation 6-3

Table 6-2. NRCS Conveyance factors, K

Type of Land Surface	Conveyance Factor, K
Heavy meadow	2.5
Tillage/field	5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

Equation 6-5

Use a minimum t_c value of 5 minutes for urbanized areas and a minimum t_c value of 10 minutes for areas that are not considered urban. Use minimum values even when calculations result in a lesser time of concentration.

STANDARD FORM SF-3 - PROPOSED CONDITIONS
STORM DRAINAGE SYSTEM DESIGN
(RATIONAL METHOD PROCEDURE)

Subdivision: Brecken Heights
 Location: Woodland Park
 Design Storm: 5-Year

Project Name: Brecken Heights-Lot 3
 Project No.: 25198.03
 Calculated By: GAG
 Checked By:
 Date: 9/27/23

STREET	Design Point	DIRECT RUNOFF							TOTAL RUNOFF				STREET/SWALE			PIPE				TRAVEL TIME			REMARKS
		Basin ID	Area (Ac)	Runoff Coeff.	t_c (min)	C*A (Ac)	I (in/hr)	Q (cfs)	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	$Q_{street/swale}$ (cfs)	C*A (ac)	Slope (%)	Q_{pipe} (cfs)	C*A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_r (min)	
	1	OS1A	0.60	0.08	7.7	0.05	3.56	0.2															Sheet flows overland to DP1 Enters Basin A and combines at DP2.1
	2	A	0.16	0.08	6.9	0.01	3.73	0.0															Sheet flows overland to DP2 Combines at DP2.1
	2.1								7.7	0.06	3.56	0.2											Combination of DP1 and DP2 Released off-site to Hwy 24 roadside ditch
	3	B	0.42	0.65	5.8	0.27	4.01	1.1															Flows overland and then via C&G to sump inlet at DP3 Piped to sand filter and outlet structure at DP9.1
	4	OS1B	3.36	0.08	12.7	0.27	2.76	0.7															Sheet flows overland to DP4 Enters Basin OS2 and combines at inlet at DP5.1
	5	OS2	0.18	0.26	6.6	0.05	3.80	0.2															Flows overland and then via C&G to DP5 Combines at inlet at DP5.1
	5.1								12.7	0.32	2.76	0.9											Combination of DP4 and DP5 flows at on-grade inlet Piped to combination at DP8.2
	6	OS1C	0.08	0.08	5.9	0.01	3.98	0.0															Sheet flows overland to DP6 Enters Basin C and combines at inlet at DP8.1
	7	C	0.23	0.55	5.0	0.13	4.25	0.6															Flows overland and then via C&G to DP7 Enters Basin OS3 and then combines at inlet at DP8.1
	8	OS3	0.06	0.63	5.0	0.04	4.25	0.2															Flows overland and then via C&G to DP8 Combines at inlet at DP8.1
	8.1								5.9	0.18	3.98	0.7											Combination of DP6, DP7, and DP8 flows at on-grade inlet Piped to combination at DP8.2
	8.2								12.7	0.50	2.76	1.4											Combination of DP5.1 and DP8.1 Piped to sand filter and outlet structure at DP9.1
	9	D	0.08	0.15	5.0	0.01	4.25	0.0															Flows overland to sand filter at DP9 Flows to sand filter outlet structure at DP9.1
	9.1								12.7	0.51	2.76	1.4											Combination of DP3, DP8.2, and DP9 at outlet structure Released through outlet structure at rates DP9.2
	9.2								-	-	-	0.0											Flow released through the sand filter outlet structure Released to Hwy 24 roadside ditch
	10	E	0.02	0.59	5.0	0.01	4.25	0.0															Flows overland to property boundary at DP10 Flows to Hwy 24 roadside ditch

Notes:
 Street and Pipe C*A values are determined by Q/i using the catchment's intensity value.

STANDARD FORM SF-3 - PROPOSED CONDITIONS
STORM DRAINAGE SYSTEM DESIGN
(RATIONAL METHOD PROCEDURE)

Subdivision: Brecken Heights
Location: Woodland Park
Design Storm: 100-Year

Project Name: Brecken Heights-Lot 3

Project No.: 25198.03

Calculated By: GAG

Checked By:

Date: 9/27/23

Description	Design Point	DIRECT RUNOFF							TOTAL RUNOFF				STREET/SWALE			PIPE				TRAVEL TIME			REMARKS
		Basin ID	Area (ac)	Runoff Coeff.	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	t_c (min)	C*A (ac)	I (in/hr)	Q (cfs)	Q _{street/swale} (cfs)	C*A (ac)	Slope (%)	Q _{pipe} (cfs)	C*A (ac)	Slope (%)	Pipe Size (inches)	Length (ft)	Velocity (fps)	t_t (min)	
	1	OS1A	0.60	0.35	7.7	0.21	7.46	1.6															Sheet flows overland to DP1 Enters Basin A and combines at DP2.1
	2	A	0.16	0.35	6.9	0.06	7.80	0.5															Sheet flows overland to DP2 Combines at DP2.1
	2.1								7.7	0.27	7.46	2.0											Combination of DP1 and DP2 Released off-site to Hwy 24 roadside ditch
	3	B	0.42	0.77	5.8	0.32	8.38	2.7															Flows overland and then via C&G to sump inlet at DP3 Piped to sand filter and outlet structure at DP9.1
	4	OS1B	3.36	0.35	12.7	1.18	5.77	6.8															Sheet flows overland to DP4 Enters Basin OS2 and combines at inlet at DP5.1
	5	OS2	0.18	0.49	6.6	0.09	7.96	0.7															Flows overland and then via C&G to DP5 Combines at inlet at DP5.1
	5.1								12.7	1.27	5.77	7.3											Combination of DP4 and DP5 flows at on-grade inlet Piped to combination at DP8.2
	6	OS1C	0.08	0.35	5.9	0.03	8.33	0.2															Sheet flows overland to DP6 Enters Basin C and combines at inlet at DP8.1
	7	C	0.23	0.70	5.0	0.16	8.89	1.4															Flows overland and then via C&G to DP7 Enters Basin OS3 and then combines at inlet at DP8.1
	8	OS3	0.06	0.76	5.0	0.05	8.89	0.4															Flows overland and then via C&G to DP8 Combines at inlet at DP8.1
	8.1								5.9	0.24	8.33	2.0											Combination of DP6, DP7, and DP8 flows at on-grade inlet Piped to combination at DP8.2
	8.2								12.7	1.51	5.77	8.7											Combination of DP5.1 and DP8.1 Piped to sand filter and outlet structure at DP9.1
	9	D	0.08	0.40	5.0	0.03	8.89	0.3															Flows overland to sand filter at DP9 Flows to sand filter outlet structure at DP9.1
	9.1								12.7	1.54	5.77	8.9											Combination of DP3, DP8.2, and DP9 at outlet structure Released through outlet structure at rates DP9.2
	9.2								-	-	-	0.8											Flow released through the sand filter outlet structure Released to Hwy 24 roadside ditch
	10	E	0.02	0.73	5.0	0.01	8.89	0.1															Flows overland to property boundary at DP10 Flows to Hwy 24 roadside ditch

Notes:

Street and Pipe C*A values are determined by Q/I using the catchment's intensity value.

Appendix C

Hydraulic/Detention Calculations



INLET MANAGEMENT

Worksheet Protected

INLET NAME	DP3	DP5.1	DP8.1
Site Type (Urban or Rural)	URBAN	URBAN	URBAN
Inlet Application (Street or Area)	STREET	STREET	STREET
Hydraulic Condition	In Sump	On Grade	On Grade
Inlet Type	CDOT Type R Curb Opening	CDOT Type R Curb Opening	CDOT Type R Curb Opening

USER-DEFINED INPUT

User-Defined Design Flows			
Minor Q_{Known} (cfs)	1.1	0.9	0.7
Major Q_{Known} (cfs)	2.7	7.3	2.0
Bypass (Carry-Over) Flow from Upstream Inlets must be organized from upstream (left) to downstream (right) in order for bypass flows to be linked.			
Receive Bypass Flow from:	No Bypass Flow Received	No Bypass Flow Received	No Bypass Flow Received
Minor Bypass Flow Received, Q_b (cfs)	0.0	0.0	0.0
Major Bypass Flow Received, Q_b (cfs)	0.0	0.0	0.0
Watershed Characteristics			
Subcatchment Area (acres)			
Percent Impervious			
NRCS Soil Type			
Watershed Profile			
Overland Slope (ft/ft)			
Overland Length (ft)			
Channel Slope (ft/ft)			
Channel Length (ft)			
Minor Storm Rainfall Input			
Design Storm Return Period, T_r (years)			
One-Hour Precipitation, P_1 (inches)			
Major Storm Rainfall Input			
Design Storm Return Period, T_r (years)			
One-Hour Precipitation, P_1 (inches)			

CALCULATED OUTPUT

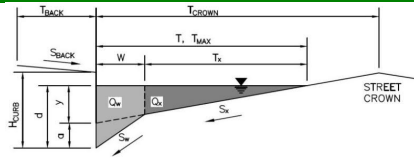
Minor Total Design Peak Flow, Q (cfs)	1.1	0.9	0.7
Major Total Design Peak Flow, Q (cfs)	2.7	7.3	2.0
Minor Flow Bypassed Downstream, Q_b (cfs)	N/A	0.0	0.0
Major Flow Bypassed Downstream, Q_b (cfs)	N/A	0.0	0.0

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Brecken Heights Lot 3

Inlet ID: DP3

**Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	0.0	ft
S_{BACK}	=	0.000	ft/ft
n_{BACK}	=	0.016	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	34.0	ft
W	=	2.00	ft
S_x	=	0.030	ft/ft
S_W	=	0.083	ft/ft
S_O	=	0.000	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Check boxes are not applicable in SUMP conditions

	Minor Storm	Major Storm	
T_{MAX}	18.0	18.0	ft
d_{MAX}	6.0	6.0	inches
	☐	☐	

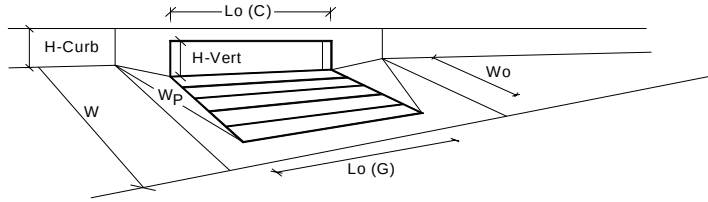
MINOR STORM Allowable Capacity is not applicable to Sump Condition

MAJOR STORM Allowable Capacity is not applicable to Sump Condition

	Minor Storm	Major Storm	
Q_{allow}	SUMP	SUMP	cfs

INLET IN A SUMP OR SAG LOCATION

MHFD-Inlet, Version 5.02 (August 2022)



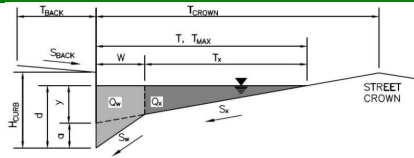
Design Information (Input)		MINOR		MAJOR	
Type of Inlet	CDOT Type R Curb Opening	Type =	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a' from above)		a _{local} =	3.00	3.00	inches
Number of Unit Inlets (Grate or Curb Opening)		No =	1	1	
Water Depth at Flowline (outside of local depression)		Ponding Depth =	6.0	6.0	inches
Grate Information		MINOR		MAJOR	
Length of a Unit Grate		L _o (G) =	N/A	N/A	feet
Width of a Unit Grate		W _o =	N/A	N/A	feet
Open Area Ratio for a Grate (typical values 0.15-0.90)		A _{ratio} =	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)		C _r (G) =	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)		C _w (G) =	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)		C _o (G) =	N/A	N/A	
Curb Opening Information		MINOR		MAJOR	
Length of a Unit Curb Opening		L _o (C) =	5.00	5.00	feet
Height of Vertical Curb Opening in Inches		H _{vert} =	6.00	6.00	inches
Height of Curb Orifice Throat in Inches		H _{throat} =	6.00	6.00	inches
Angle of Throat (see USDCM Figure ST-5)		Theta =	63.40	63.40	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)		W _p =	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)		C _r (C) =	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)		C _w (C) =	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)		C _o (C) =	0.67	0.67	
Low Head Performance Reduction (Calculated)		MINOR		MAJOR	
Depth for Grate Midwidth		d _{grate} =	N/A	N/A	ft
Depth for Curb Opening Weir Equation		d _{curb} =	0.33	0.33	ft
Grated Inlet Performance Reduction Factor for Long Inlets		RF _{grate} =	N/A	N/A	
Curb Opening Performance Reduction Factor for Long Inlets		RF _{curb} =	1.00	1.00	
Combination Inlet Performance Reduction Factor for Long Inlets		RF _{combination} =	N/A	N/A	
Total Inlet Interception Capacity (assumes clogged condition)		MINOR		MAJOR	
Inlet Capacity IS GOOD for Minor and Major Storms (>Q Peak)		Q _a =	5.4	5.4	cfs
		Q _{PEAK REQUIRED} =	1.1	2.7	cfs

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Brecken Heights Lot 3

Inlet ID: DP5.1

**Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	5.0	ft
S_{BACK}	=	0.020	ft/ft
n_{BACK}	=	0.020	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	13.0	ft
W	=	2.00	ft
S_x	=	0.030	ft/ft
S_w	=	0.083	ft/ft
S_o	=	0.049	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Allow Flow Depth at Street Crown (check box for yes, leave blank for no)

	Minor Storm	Major Storm	
T_{MAX}	5.0	9.0	ft
d_{MAX}	6.0	6.0	inches
	☐	☐	

MINOR STORM Allowable Capacity is based on Spread Criterion

MAJOR STORM Allowable Capacity is based on Spread Criterion

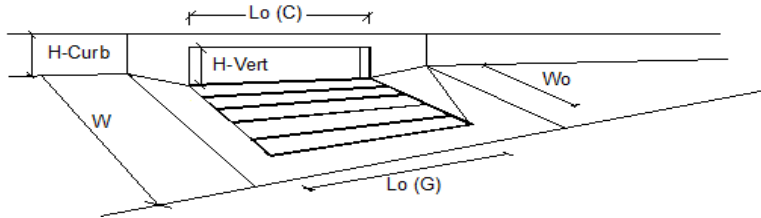
	Minor Storm	Major Storm	
Q_{allow}	2.7	9.4	cfs

Minor storm max. allowable capacity GOOD - greater than the design peak flow of 0.90 cfs on sheet 'Inlet Management'

Major storm max. allowable capacity GOOD - greater than the design peak flow of 7.30 cfs on sheet 'Inlet Management'

INLET ON A CONTINUOUS GRADE

MHFD-Inlet, Version 5.02 (August 2022)



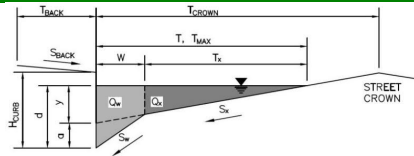
Design Information (Input)		MINOR		MAJOR	
Type of Inlet	CDOT Type R Curb Opening	Type =	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a')		a_{LOCAL} =	3.0	3.0	inches
Total Number of Units in the Inlet (Grate or Curb Opening)		No =	3	3	
Length of a Single Unit Inlet (Grate or Curb Opening)		L_0 =	5.00	5.00	ft
Width of a Unit Grate (cannot be greater than W, Gutter Width)		W_0 =	N/A	N/A	ft
Clogging Factor for a Single Unit Grate (typical min. value = 0.5)		C_1 (G) =	N/A	N/A	
Clogging Factor for a Single Unit Curb Opening (typical min. value = 0.1)		C_1 (C) =	0.10	0.10	
Street Hydraulics: OK - $Q < \text{Allowable Street Capacity}$			MINOR	MAJOR	
Total Inlet Interception Capacity		Q =	0.9	7.3	cfs
Total Inlet Carry-Over Flow (flow bypassing inlet)		Q_b =	0.0	0.0	cfs
Capture Percentage = Q_i/Q_a		C% =	100	100	%

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: Brecken Heights Lot 3

Inlet ID: DP8.1

**Gutter Geometry:**

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

T_{BACK}	=	5.0	ft
S_{BACK}	=	0.020	ft/ft
n_{BACK}	=	0.020	

H_{CURB}	=	6.00	inches
T_{CROWN}	=	12.0	ft
W	=	2.00	ft
S_x	=	0.030	ft/ft
S_w	=	0.083	ft/ft
S_o	=	0.049	ft/ft
n_{STREET}	=	0.016	

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Allow Flow Depth at Street Crown (check box for yes, leave blank for no)

	Minor Storm	Major Storm	
T_{MAX}	5.0	9.0	ft
d_{MAX}	6.0	6.0	inches
	☐	☐	

MINOR STORM Allowable Capacity is based on Spread Criterion

MAJOR STORM Allowable Capacity is based on Spread Criterion

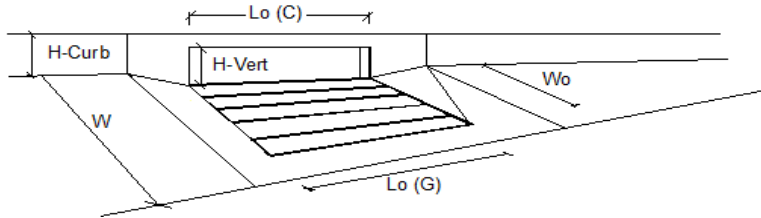
	Minor Storm	Major Storm	
Q_{allow}	2.7	9.4	cfs

Minor storm max. allowable capacity GOOD - greater than the design peak flow of 0.70 cfs on sheet 'Inlet Management'

Major storm max. allowable capacity GOOD - greater than the design peak flow of 2.00 cfs on sheet 'Inlet Management'

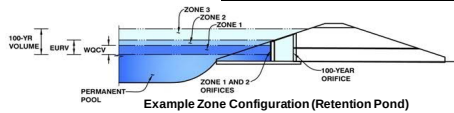
INLET ON A CONTINUOUS GRADE

MHFD-Inlet, Version 5.02 (August 2022)



Design Information (Input)		MINOR		MAJOR	
Type of Inlet	CDOT Type R Curb Opening	Type =	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a')		a_{LOCAL} =	3.0	3.0	inches
Total Number of Units in the Inlet (Grate or Curb Opening)		No =	2	2	
Length of a Single Unit Inlet (Grate or Curb Opening)		L_0 =	5.00	5.00	ft
Width of a Unit Grate (cannot be greater than W, Gutter Width)		W_0 =	N/A	N/A	ft
Clogging Factor for a Single Unit Grate (typical min. value = 0.5)		$C_1 (G)$ =	N/A	N/A	
Clogging Factor for a Single Unit Curb Opening (typical min. value = 0.1)		$C_1 (C)$ =	0.10	0.10	
Street Hydraulics: OK - $Q < \text{Allowable Street Capacity}$			MINOR	MAJOR	
Total Inlet Interception Capacity		Q =	0.7	2.0	cfs
Total Inlet Carry-Over Flow (flow bypassing inlet)		Q_b =	0.0	0.0	cfs
Capture Percentage = Q_i/Q_a		$C\%$ =	100	100	%

MHFD-Detention, Version 4.06 (July 2022)

Basin ID: Sand Filter

Example Zone Configuration (Retention Pond)

8211.75

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Optional User Overrides

	acre-feet
	acre-feet
0.76	inches
0.97	inches
1.17	inches
1.48	inches
1.75	inches
2.03	inches
2.80	inches

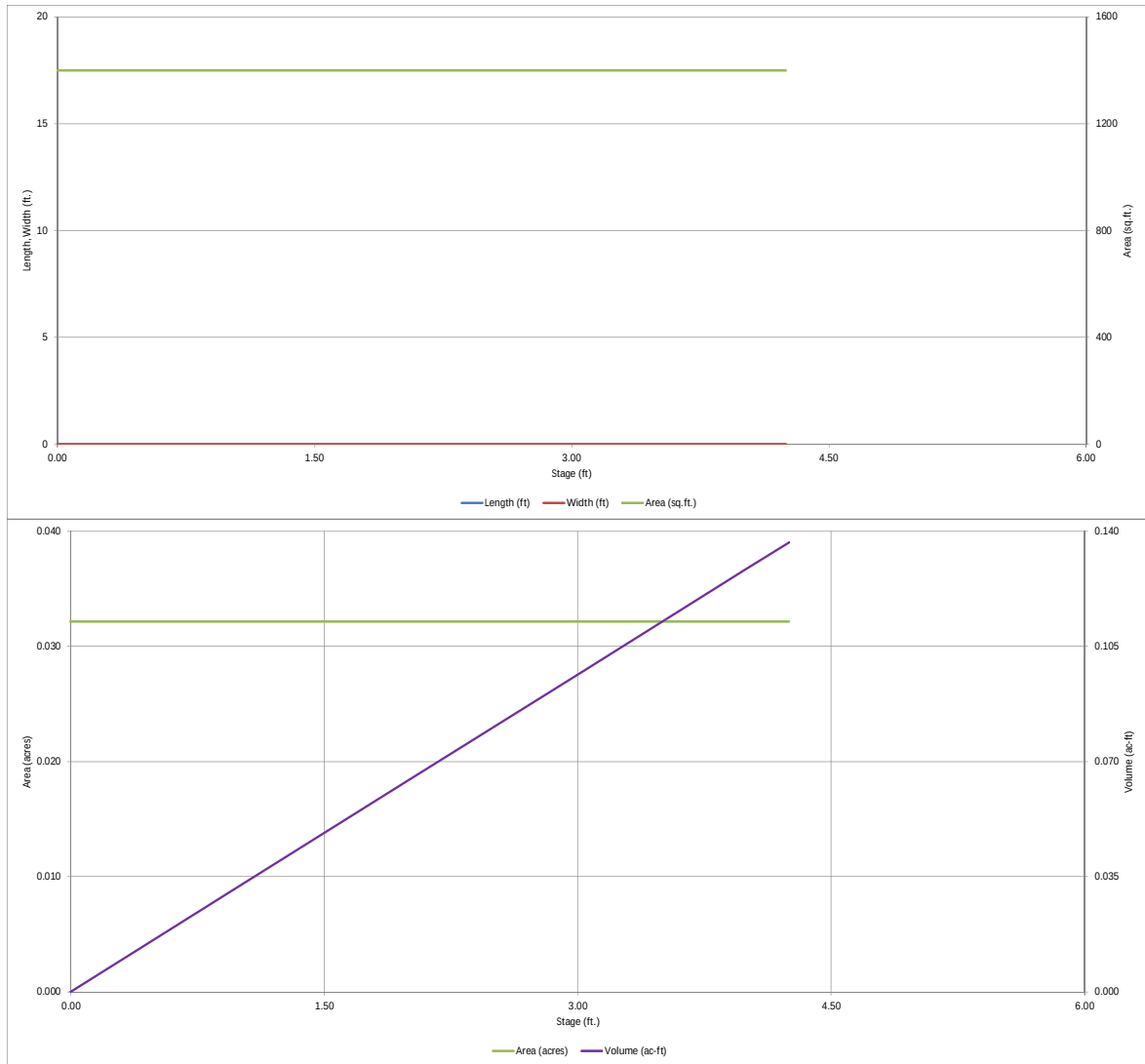
Zone 1 Volume (WQV_1) =	0.023	acre-feet
Zone 2 Volume ($EURV - Zone 1$) =	0.018	acre-feet
Zone 3 Volume (100-year - Zones 1 & 2) =	0.054	acre-feet
Total Detention Basin Volume =	0.095	acre-feet
Initial Surcharge Volume (ISV) =	N/A	ft ³
Initial Surcharge Depth (ISD) =	N/A	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	N/A	ft
Slope of Trickle Channel (S_{TC}) =	N/A	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	

Initial Surcharge Area (A_{S1}) =	user	ft ²
Surcharge Volume Length (L_{S1}) =	user	ft
Surcharge Volume Width (W_{S1}) =	user	ft
Depth of Basin Floor ($H_{1,LOC}$) =	user	ft
Length of Basin Floor ($L_{1,LOC}$) =	user	ft
Width of Basin Floor ($W_{1,LOC}$) =	user	ft
Area of Basin Floor ($A_{1,LOC}$) =	user	ft ²
Volume of Basin Floor ($V_{1,LOC}$) =	user	ft ³
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft ²
Volume of Main Basin (V_{MAIN}) =	user	ft ³
Calculated Total Basin Volume (V_{TMB}) =	user	acre-feet

[illegible]

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.06 (July 2022)

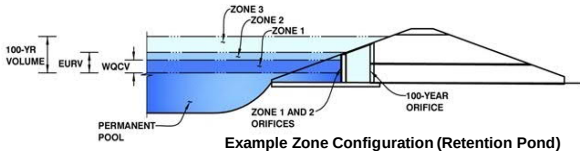


DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Project: Brecken Heights Lot 3

Basin ID: Sand Filter



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	0.72	0.023	Filtration Media
Zone 2 (EURV)	1.28	0.018	Circular Orifice
Zone 3 (100-year)	2.95	0.054	Weir&Pipe (Restrict)
Total (all zones)		0.095	

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth =	2.00	ft (distance below the filtration media surface)
Underdrain Orifice Diameter =	0.75	inches

Calculated Parameters for Underdrain

Underdrain Orifice Area =	0.0	ft ²
Underdrain Orifice Centroid =	0.03	feet

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Calculated Parameters for Plate

Centroid of Lowest Orifice =	N/A	ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Orifice Plate =	N/A	ft (relative to basin bottom at Stage = 0 ft)
Orifice Plate: Orifice Vertical Spacing =	N/A	inches
Orifice Plate: Orifice Area per Row =	N/A	sq. inches

WQ Orifice Area per Row =	N/A	ft ²
Elliptical Half-Width =	N/A	feet
Elliptical Slot Centroid =	N/A	feet
Elliptical Slot Area =	N/A	ft ²

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (optional)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Orifice Area (sq. inches)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Orifice Area (sq. inches)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

User Input: Vertical Orifice (Circular or Rectangular)

Calculated Parameters for Vertical Orifice

	Zone 2 Circular	Not Selected	
Invert of Vertical Orifice =	1.25	N/A	ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Vertical Orifice =	1.44	N/A	ft (relative to basin bottom at Stage = 0 ft)
Vertical Orifice Diameter =	0.38	N/A	inches

	Zone 2 Circular	Not Selected	
Vertical Orifice Area =	0.00	N/A	ft ²
Vertical Orifice Centroid =	0.02	N/A	feet

User Input: Overflow Weir (Dropbox with Flat or Sloped Gate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

Calculated Parameters for Overflow Weir

	Zone 3 Weir	Not Selected	
Overflow Weir Front Edge Height, Ho =	2.00	N/A	ft (relative to basin bottom at Stage = 0 ft)
Overflow Weir Front Edge Length =	1.40	N/A	feet
Overflow Weir Gate Slope =	0.00	N/A	H:V
Horiz. Length of Weir Sides =	1.40	N/A	feet
Overflow Gate Type =	Close Mesh Gate	N/A	
Debris Clogging % =	50%	N/A	%

	Zone 3 Weir	Not Selected	
Height of Gate Upper Edge, H ₁ =	2.00	N/A	feet
Overflow Weir Slope Length =	1.40	N/A	feet
Gate Open Area / 100-yr Orifice Area =	8.01	N/A	
Overflow Gate Open Area w/o Debris =	1.55	N/A	ft ²
Overflow Gate Open Area w/ Debris =	0.78	N/A	ft ²

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

	Zone 3 Restrictor	Not Selected	
Depth to Invert of Outlet Pipe =	2.00	N/A	ft (distance below basin bottom at Stage = 0 ft)
Outlet Pipe Diameter =	18.00	N/A	inches
Restrictor Plate Height Above Pipe Invert =	3.00	N/A	inches

	Zone 3 Restrictor	Not Selected	
Outlet Orifice Area =	0.19	N/A	ft ²
Outlet Orifice Centroid =	0.15	N/A	feet
Half-Central Angle of Restrictor Plate on Pipe =	0.84	N/A	radians

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Calculated Parameters for Spillway

Spillway Invert Stage =	3.00	ft (relative to basin bottom at Stage = 0 ft)
Spillway Crest Length =	10.00	feet
Spillway End Slopes =	4.00	H:V
Freeboard above Max Water Surface =	1.00	feet

Spillway Design Flow Depth =	0.13	feet
Stage at Top of Freeboard =	4.13	feet
Basin Area at Top of Freeboard =	0.03	acres
Basin Volume at Top of Freeboard =	0.13	acre-ft

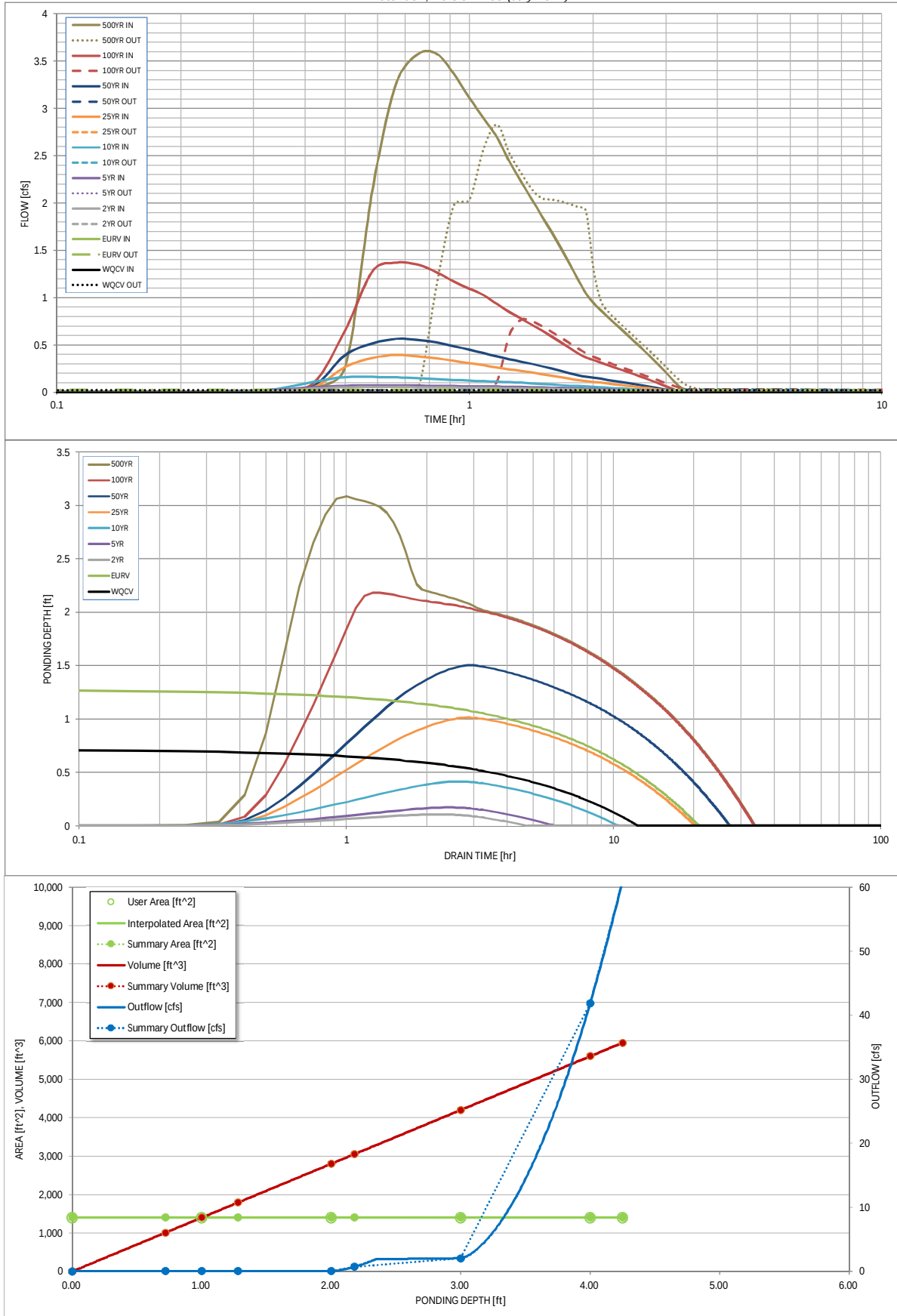
Routed Hydrograph Results

The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
Design Storm Return Period =	N/A	N/A	0.76	0.97	1.17	1.48	1.75	2.03	2.80
One-Hour Rainfall Depth (in) =	N/A	N/A	0.008	0.010	0.019	0.038	0.055	0.127	0.331
CUHP Runoff Volume (acre-ft) =	N/A	N/A	0.008	0.010	0.019	0.038	0.055	0.127	0.331
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.0	0.0	0.0	0.1	0.1	0.9	3.0
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A							
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.00	0.00	0.00	0.01	0.02	0.19	0.68
Peak Inflow Q (cfs) =	N/A	N/A	0.1	0.1	0.2	0.4	0.6	1.4	3.6
Peak Outflow Q (cfs) =	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.8
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	10.9	1.2	0.4	0.3	0.9	0.9
Structure Controlling Flow =	Filtration Media	Vertical Orifice 1	Filtration Media	Filtration Media	Filtration Media	Filtration Media	Vertical Orifice 1	Overflow Weir 1	Spillway
Max Velocity through Gate 1 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.5	1.3
Max Velocity through Gate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	12	20	5	6	10	20	26	32	32
Time to Drain 99% of Inflow Volume (hours) =	12	21	5	6	10	20	27	33	38
Maximum Ponding Depth (ft) =	0.72	1.28	0.11	0.17	0.42	1.01	1.50	2.18	3.08
Area at Maximum Ponding Depth (acres) =	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Maximum Volume Stored (acre-ft) =	0.023	0.041	0.003	0.005	0.013	0.032	0.048	0.070	0.099

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)



S-A-V-D Chart Axis Override	X-axis	Left Y-Axis	Right Y-Axis
minimum bound			
maximum bound			

DETENTION BASIN OUTLET STRUCTURE DESIGN

Outflow Hydrograph Workbook Filename:

Inflow Hydrographs

The user can override the calculated inflow hydrographs from this workbook with inflow hydrographs developed in a separate program.

	SOURCE	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP
Time Interval	TIME	WQCV [cfs]	EURV [cfs]	2 Year [cfs]	5 Year [cfs]	10 Year [cfs]	25 Year [cfs]	50 Year [cfs]	100 Year [cfs]	500 Year [cfs]
5.00_min	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:15:00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02
	0:20:00	0.00	0.00	0.02	0.02	0.03	0.02	0.03	0.03	0.05
	0:25:00	0.00	0.00	0.04	0.06	0.11	0.05	0.06	0.09	0.27
	0:30:00	0.00	0.00	0.05	0.07	0.16	0.27	0.40	0.66	2.16
	0:35:00	0.00	0.00	0.06	0.07	0.16	0.36	0.52	1.29	3.28
	0:40:00	0.00	0.00	0.06	0.07	0.16	0.40	0.57	1.37	3.58
	0:45:00	0.00	0.00	0.06	0.07	0.15	0.38	0.55	1.35	3.58
	0:50:00	0.00	0.00	0.05	0.07	0.14	0.36	0.53	1.27	3.37
	0:55:00	0.00	0.00	0.05	0.07	0.13	0.33	0.49	1.17	3.11
	1:00:00	0.00	0.00	0.05	0.07	0.13	0.31	0.45	1.10	2.89
	1:05:00	0.00	0.00	0.05	0.06	0.12	0.29	0.42	1.03	2.70
	1:10:00	0.00	0.00	0.05	0.06	0.11	0.26	0.38	0.93	2.44
	1:15:00	0.00	0.00	0.05	0.06	0.11	0.24	0.35	0.85	2.23
	1:20:00	0.00	0.00	0.04	0.06	0.10	0.23	0.33	0.78	2.04
	1:25:00	0.00	0.00	0.04	0.06	0.10	0.21	0.30	0.72	1.86
	1:30:00	0.00	0.00	0.04	0.05	0.09	0.19	0.28	0.65	1.69
	1:35:00	0.00	0.00	0.04	0.05	0.08	0.18	0.25	0.59	1.52
	1:40:00	0.00	0.00	0.04	0.05	0.08	0.16	0.23	0.53	1.36
	1:45:00	0.00	0.00	0.03	0.04	0.07	0.14	0.20	0.47	1.20
	1:50:00	0.00	0.00	0.03	0.04	0.07	0.13	0.18	0.41	1.05
	1:55:00	0.00	0.00	0.03	0.04	0.07	0.12	0.17	0.37	0.95
	2:00:00	0.00	0.00	0.03	0.04	0.06	0.11	0.16	0.34	0.87
	2:05:00	0.00	0.00	0.03	0.04	0.06	0.10	0.14	0.32	0.80
	2:10:00	0.00	0.00	0.02	0.03	0.05	0.09	0.13	0.29	0.73
	2:15:00	0.00	0.00	0.02	0.03	0.05	0.09	0.12	0.26	0.67
	2:20:00	0.00	0.00	0.02	0.03	0.04	0.08	0.11	0.24	0.61
	2:25:00	0.00	0.00	0.02	0.02	0.04	0.07	0.10	0.22	0.55
	2:30:00	0.00	0.00	0.02	0.02	0.03	0.06	0.09	0.19	0.49
	2:35:00	0.00	0.00	0.01	0.02	0.03	0.06	0.08	0.17	0.43
	2:40:00	0.00	0.00	0.01	0.02	0.03	0.05	0.07	0.15	0.38
	2:45:00	0.00	0.00	0.01	0.01	0.02	0.04	0.06	0.13	0.32
	2:50:00	0.00	0.00	0.01	0.01	0.02	0.04	0.05	0.11	0.26
	2:55:00	0.00	0.00	0.01	0.01	0.02	0.03	0.04	0.09	0.21
	3:00:00	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.06	0.15
	3:05:00	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.04	0.10
	3:10:00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.03	0.05
	3:15:00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.03
	3:20:00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02
	3:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
	3:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
	3:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	3:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

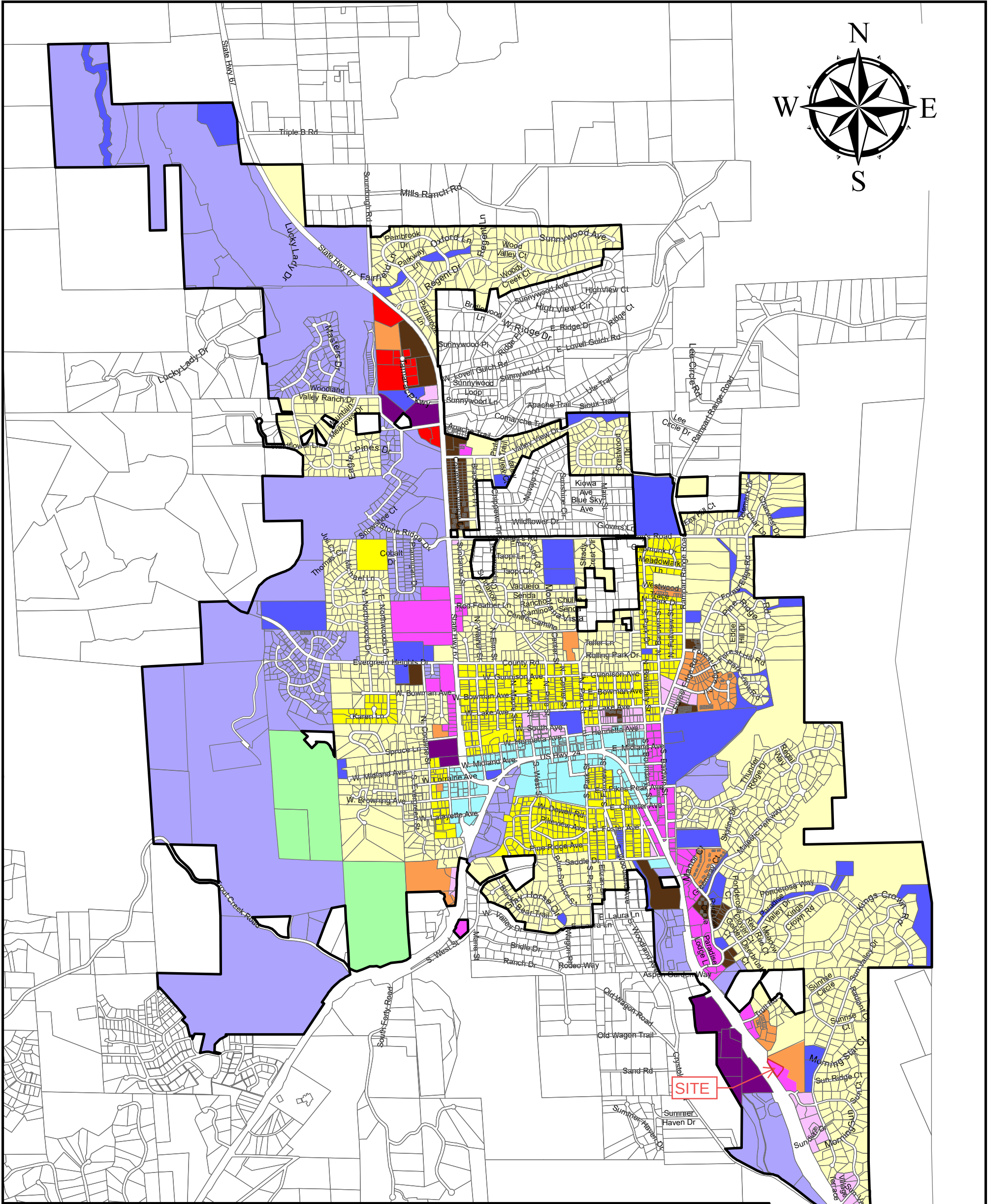
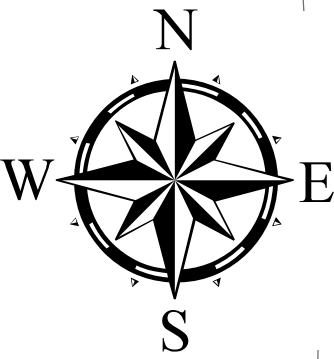
DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

[illegible]

Appendix D

Reference Material



City of Woodland Park - Zoning Map

Residential

- Suburban Residential (SR)
- Urban Residential (UR)
- Multi-Family Residential Suburban (MFS)
- Multi-Family Residential Urban (MFU)
- Mobile Home Park (MHP)

Commercial

- Central Business District (CBD)
- Neighborhood Commercial (NC)
- Community Commercial
- Service Commercial (SC)
- Heavy Service Commercial Light Industrial

Other Zones

- Public / Semi-Public Land (P/SPL)
- Planned Unit Development (PUD)
- Agricultural (AG)
- City Limits

0 500 1,000 2,000 3,000 4,000 Feet
Scale: 1" = 2000'



**FOUNTAIN CREEK DRAINAGE BASIN
PLANNING STUDY**

VOLUME I

Prepared For:

THE CITY OF COLORADO SPRINGS
P.O. Box 1575
Colorado Springs, Colorado B0901

Prepared By:

MULLER ENGINEERING COMPANY, INC.
Irongate 2, Suite 100
777 South Wadsworth Boulevard
Lakewood, Colorado B0226
MEC Project No. 9117

July, 1994

3.0 FOUNTAIN CREEK AND BASIN RESOURCE CHARACTERISTICS

3.1 STUDY AREA LOCATION

For hydrologic purposes, the study area includes the total drainage basin above the downstream study limit, including the Monument Creek drainage basin area. The Fountain Creek drainage basin upstream of the confluence encompasses an area of approximately 120 square miles and at the downstream study limits the drainage basin encompasses approximately 420 square miles incorporating both Fountain and Monument Creek drainage basins. The entire drainage basin is shown on the Vicinity Map (Figure 3.1-1).

The alternative concepts for drainageways along Fountain Creek were investigated for that section of Fountain Creek lying within the incorporated southwest area of Colorado Springs, El Paso County, Colorado. The stream corridor which is the subject of this evaluation extends approximately 7.3 miles from a point 3,500 feet downstream of Circle Drive, upstream to and beyond the confluence with Monument Creek to approximately 33rd Street (westerly City limits).

3.2 GEOGRAPHY

Physiography

The physiography of the Fountain Creek watershed to the west of the Monument and Fountain Creek confluence is characterized by mountain ranges and river valleys. To the east of the confluence, the physiography of the watershed is characterized by gentle sloping plains. This sudden contrast from mountains to plains is regionally a unique geographic position along the Colorado Front Range. Elevations in the Fountain Creek watershed range from 14,110 feet at Pikes Peak to 5,948 feet at the confluence with Monument Creek to 5,800 feet at the downstream study boundary. The drastic changes in elevations from the high points in the watershed to the outskirts of Colorado Springs are covered over relatively short distances. Hydrologically, this physiological setting creates very variable flooding situations.

Fountain Creek is a perennial stream that originates in Teller County, near the town of Woodland Park. Fountain Creek's source is from the mountains of the Rampart Range, approximately seven miles northwest of Pikes Peak. The headwaters are fed from snowmelt, rainfall and springs. Fountain Creek flows in a southeasterly direction through a narrow, steep-walled canyon for about 22 miles before joining Monument Creek in west Colorado Springs at the junction of U.S. 24 (Midland Expressway) and I-25. The canyon is straight and well drained with ground cover including aspen, spruce, and pine trees. The transition through the foothills area varies from rough sharp-crested ridge formations to gently sloping, narrow-topped mesas covered with cedar, oak, pine and pinon trees. The stream emerges on the high plains near the upstream boundary of the study reach in Colorado Springs.

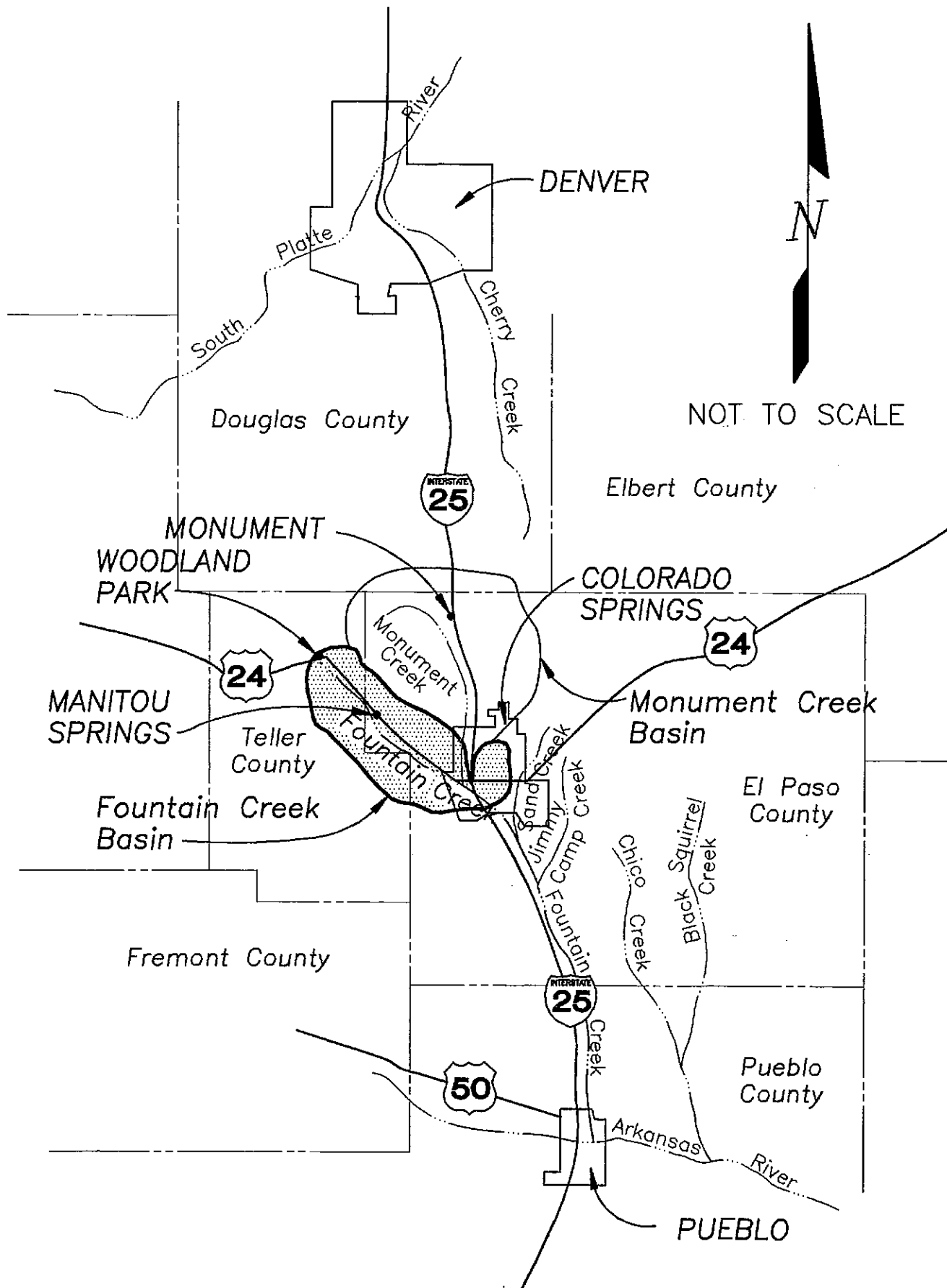


FIGURE 3.1-1
Vicinity Map

In the study reach above the Monument and Fountain Creek confluence, the valley width averages about 400 feet with a stream bed slope average of approximately 90 feet per mile. Along the reach in the Manitou Springs area the channel is severely constricted by bridges and building foundations with the channel varying in width from 12 to 50 feet and an estimated average channel capacity of 2,000 cfs. In the study reach downstream of the confluence, the average stream bed slope is approximately 63 feet per mile. The channel in this reach varies in width from 80 to 130 feet and has an estimated average capacity of 8,000 cfs.

The Fountain Creek streambed is composed mostly of some bedrock, some weathered bedrock, mostly sand, and smaller amounts of rock and boulders. Vegetation densities within the channel and on the overbanks vary throughout the study reach from sparse to heavily vegetated regions. Fountain Creek is an alluvial, mobile bed stream which is, hydraulically, subject to fluctuations between aggradation and degradation from reach to reach in the stream corridor. Its upper reaches have a limited tendency to armor.

Agricultural water rights on Fountain Creek are continually being converted to municipal and industrial uses. Irrigation is essentially non-existent along the stream corridor due to the dense development in the area. Only two active diversion structures exist within or near the stream corridor; one is for municipal water supply purposes and the second is for irrigation. The municipal water supply diversion structure is owned by the City of Colorado Springs and is located just upstream of the upstream boundary of the stream corridor. The irrigation diversion structure is owned by the Fountain Mutual Irrigation Company and is located adjacent to the Colorado Springs wastewater treatment facility at the downstream end of the stream corridor.

Several utilities cross Fountain Creek along the stream corridor. Water, wastewater, gas, and electric facilities were researched from the Colorado Springs Department of Utilities records, and this information is available as reference documents for this study. Also researched in this study were the jurisdictional dams within the Fountain Creek watershed. Approximately thirty dams were identified from State records; five of these dams are controlled by the Colorado Springs Water Department. This supporting information is part of Volume III.

Urban development continues to grow throughout Colorado Springs and along the stream corridor. The development of Manitou Springs, Colorado City and Colorado Springs had a dramatic impact on Fountain Creek. Channel realignment for railroad and highway development, mining, utilities construction and land development resulted in such significant changes to Fountain Creek that it bears little resemblance to its "natural" condition. Solid waste and other urban refuse, floodplain filling and intense development of its riparian area have degraded the streams ecologic, aesthetic and recreational value, and the Creek primarily functions as an urban drainageway.

Climate

Within the watershed, precipitation and temperature vary considerably due to altitude differences and wind patterns. Annual precipitation normals within the watershed vary from 24.27 inches at Lake Moraine to 13.19 inches at Colorado

**FINAL DRAINAGE REPORT
FOR
BRECKEN HEIGHTS SUBDIVISION**

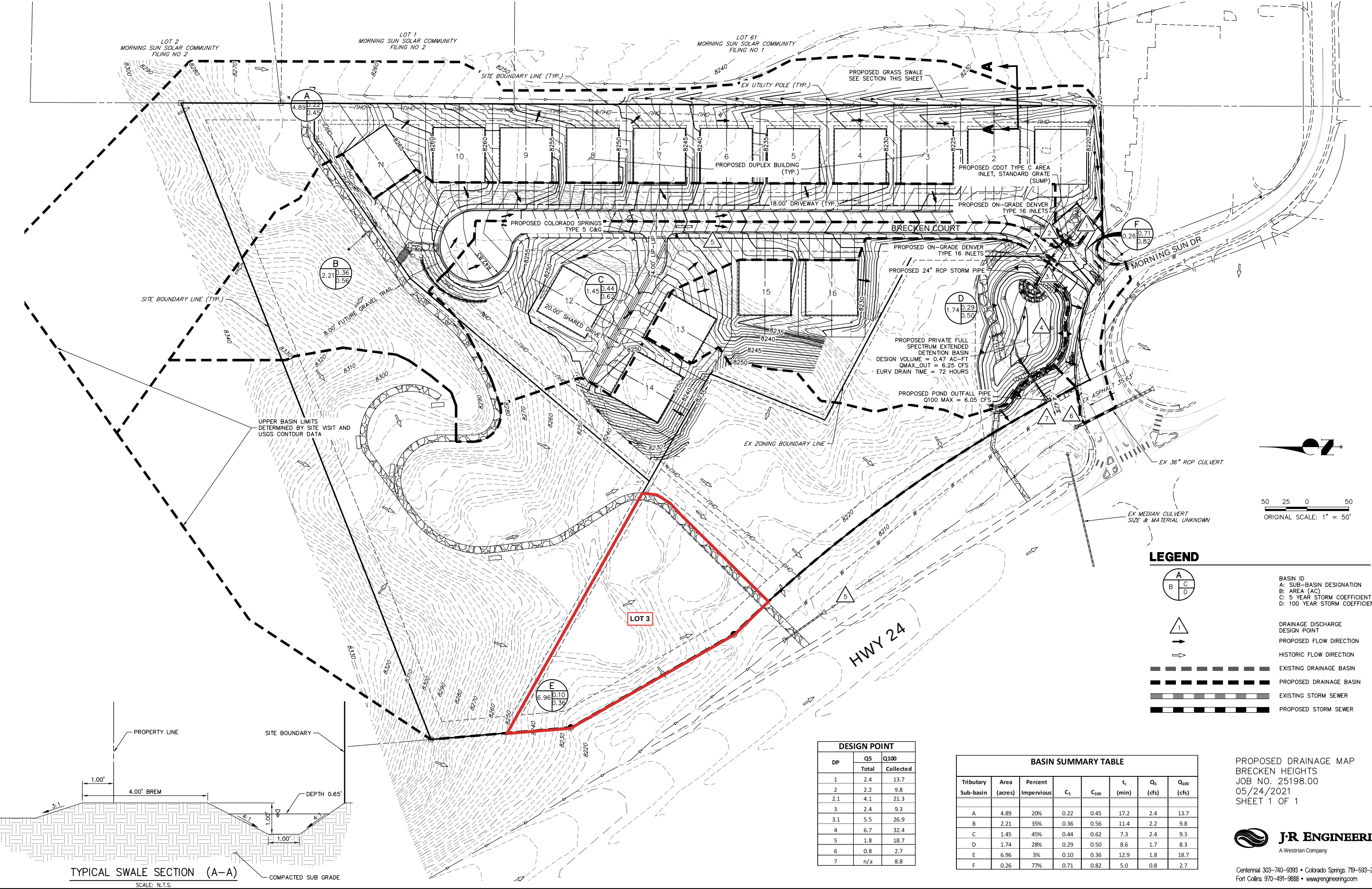
Prepared For:

**Brecken Heights, LLC
602 W. Midland Ave.
Woodland Park, CO 80863**

**May 24, 2021
Project No. 25198.00**

**Prepared By:
JR Engineering, LLC
5475 Tech Center Drive, Suite 235
Colorado Springs, CO 80919
719-593-2593**

BRECKEN HEIGHTS
PRELIMINARY PROPOSED DRAINAGE PLAN



50 25 0 50
ORIGINAL SCALE: 1" = 50'

LEGEND

- A

B

C

D

1

2

3

4

5

6

7
- BASIN ID

A: SUB-BASIN DESIGNATION

B: AREA (AC)

C: 5 YEAR STORM COEFFICIENT

D: 100 YEAR STORM COEFFICIENT
- 1

2

3

4

5

6

7
- DRAINAGE DISCHARGE

DESIGN POINT

PROPOSED FLOW DIRECTION

HISTORIC FLOW DIRECTION

EXISTING DRAINAGE BASIN

PROPOSED DRAINAGE BASIN

EXISTING STORM SEWER

PROPOSED STORM SEWER

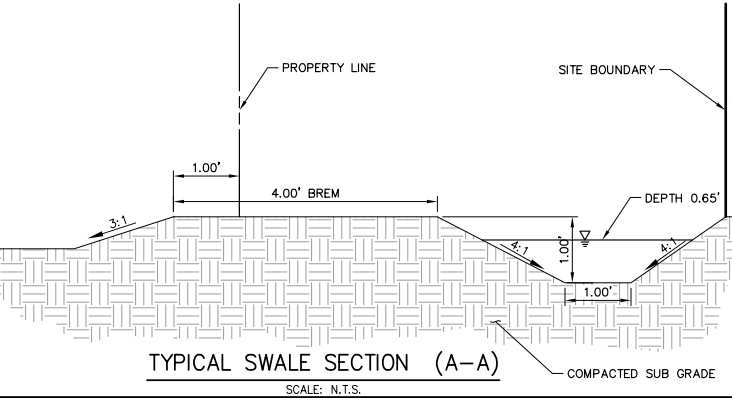
DP	DESIGN POINT	
	Q5	Q100
Total	Collected	
1	2.4	13.7
2	2.2	9.8
2.1	4.1	21.3
3	2.4	9.3
3.1	5.5	26.9
4	6.7	32.4
5	1.8	18.7
6	0.8	2.7
7	n/a	8.8

BASIN SUMMARY TABLE							
Tributary Sub-basin	Area (acres)	Percent Impervious	C _s	C ₁₀₀	t _c (min)	Q ₅ (cfs)	Q ₁₀₀ (cfs)
A	4.89	20%	0.22	0.45	17.2	2.4	13.7
B	2.21	35%	0.36	0.56	11.4	2.2	9.8
C	1.45	45%	0.44	0.62	7.3	2.4	9.3
D	1.74	28%	0.29	0.50	8.6	1.7	8.3
E	6.96	3%	0.10	0.36	12.9	1.8	18.7
F	0.26	77%	0.71	0.82	5.0	0.8	2.7

PROPOSED DRAINAGE MAP
BRECKEN HEIGHTS
JOB NO. 25198.00
05/24/2021
SHEET 1 OF 1



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X:\25198\000\Drawings\Sheet Draw\25198001.PROP DRAINAGE Map Layout.dwg, 5/24/2021 3:03:37 PM, CS

Appendix E

Drainage Maps



BRECKEN HEIGHTS LOT 3

EXISTING DRAINAGE MAP

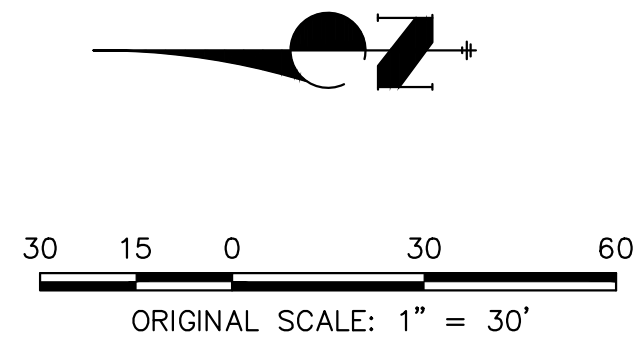


LEGEND

	BASIN ID A: SUB-BASIN DESIGNATION B: AREA (AC) C: 5 YEAR STORM COEFFICIENT D: 100 YEAR STORM COEFFICIENT
	DRAINAGE DISCHARGE DESIGN POINT
	PROPOSED FLOW DIRECTION
	HISTORIC FLOW DIRECTION
	EXISTING DRAINAGE BASIN
	PROPOSED DRAINAGE BASIN
	EXISTING STORM SEWER
	PROPOSED STORM SEWER

BASIN SUMMARY TABLE							
Tributary Sub-basin	Area (acres)	Percent Impervious	C _s	C ₁₀₀	t _c (min)	Q _s (cfs)	Q ₁₀₀ (cfs)
EXA	0.92	0%	0.08	0.35	12.0	0.2	2.5
OS1	4.04	0%	0.08	0.35	12.4	0.9	10.6

DESIGN POINT SUMMARY TABLE		
DP	Q _s (cfs)	Q ₁₀₀ (cfs)
	Total	Total
1	0.9	10.6
2	0.2	2.5
2.1	1.0	13.1



EXISTING DRAINAGE MAP
BRECKEN HEIGHTS LOT 3
JOB NO. 25198.03
09/27/2023
SHEET 1 OF 1



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BRECKEN HEIGHTS LOT 3 PROPOSED DRAINAGE MAP



LEGEND

- Basin ID**
A: SUB-BASIN DESIGNATION
B: AREA (AC)
C: 5 YEAR STORM COEFFICIENT
D: 100 YEAR STORM COEFFICIENT
- Drainage Discharge Design Point**
1: PROPOSED FLOW DIRECTION
2: HISTORIC FLOW DIRECTION
- Existing Drainage Basin**
3: PROPOSED DRAINAGE BASIN
- Existing Storm Sewer**
4: PROPOSED STORM SEWER

BASIN SUMMARY TABLE							
Tributary Sub-basin	Area (acres)	Percent Impervious	C _s	C ₁₀₀	t _c (min)	Q _s (cfs)	Q ₁₀₀ (cfs)
A	0.16	0%	0.08	0.35	6.9	0.0	0.5
B	0.42	70%	0.65	0.77	5.8	1.1	2.7
C	0.23	58%	0.55	0.70	5.0	0.6	1.4
D	0.08	9%	0.15	0.40	5.0	0.0	0.3
E	0.02	66%	0.59	0.73	5.0	0.0	0.1
OS1A	0.60	0%	0.08	0.35	7.7	0.2	1.6
OS1B	3.36	0%	0.08	0.35	12.7	0.7	6.8
OS1C	0.08	0%	0.08	0.35	5.9	0.0	0.2
OS2	0.18	22%	0.26	0.49	6.6	0.2	0.7
OS3	0.06	67%	0.63	0.76	5.0	0.2	0.4

DESIGN POINT SUMMARY TABLE		
DP	Q _s	Q ₁₀₀
	Total	Total
1	0.2	1.6
2	0.0	0.5
2.1	0.2	2.0
3	1.1	2.7
4	0.7	6.8
5	0.2	0.7
5.1	0.9	7.3
6	0.0	0.2
7	0.6	1.4
8	0.2	0.4
8.1	0.7	2.0
8.2	1.4	8.7
9	0.0	0.3
9.1	1.4	8.9
9.2	0.0	0.8
10	0.0	0.1

PROPOSED DRAINAGE MAP
BRECKEN HEIGHTS LOT 3
JOB NO. 25198.03
09/27/2023
SHEET 1 OF 1



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Traffic Memorandum

To: Mark McNab, Brecken Heights, LLC

From: Eli Farney, PE, PTOE

Date: May 10, 2023

Brecken Heights Lots 3 and 4

Woodland Park, Colorado

Prepared By:



JR ENGINEERING



Eli Farney, PE, PTOE

efarney@jrengineering.com

JR Engineering

7200 South Alton Way, Suite C400

Centennial, CO 80112

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Appendix B: Traffic Counts
Appendix C: Trip Generation
Appendix D: Synchro Reports

Executive Summary

JR Engineering (JR) has completed a review of the traffic impacts resulting from the proposed development of Brecken Heights Lots 3 and 4 (Project) in the City of Woodland Park, Colorado (City).

The objectives of this Traffic Memorandum (Memo) are:

- Estimate site-generated traffic and route trips onto adjacent streets
- Analyze 2024 (Opening Day) and 2045 (Future Year) traffic operations
- Make recommendations for improvements to accommodate future traffic volumes

Key Findings of this Traffic Memorandum

- The right-out movement onto US 24 is expected to operate at LOS C or better in all scenarios.
- No queuing issues were identified for the right-out movement.
- JR recommends that striping on US 24 be modified to include deceleration and acceleration lanes at the site access.

Introduction

JR has completed a review of the existing and forecasted traffic operations in the vicinity of Brecken Heights Lots 3 and 4. As shown in **Figure 1**, the Project is located near the northeast corner of US 24 & Morning Sun Drive in Woodland Park, Colorado. A site plan is included in **Appendix A**.

Proposed Land Use

The development is anticipated to contain the following land uses:

- 1,200 SF Drive-Through Restaurant with No Indoor Dining Area (ITE 935)
- 165 Unit Storage Facility (ITE 151)

Study Intersections

This Memo includes analysis of the right-in, right-out (RIRO) access that serves the site. The access is approximately 400 feet northwest of the US 24 & Morning Sun Drive signalized intersection.

Proposed Mitigations

The following mitigations are proposed in order to accommodate forecasted traffic volumes:

- Modify striping on US 24 to include deceleration and acceleration lanes at the site access.



Figure 1: Project Location

Existing Conditions

Existing Land Use

The Project site is currently vacant. The site does not generate trips in the existing condition.

Existing Traffic Volumes

Existing traffic volumes were used from the Brecken Heights Multi-Family Traffic Memorandum by JR Engineering, dated August 28, 2020. The volumes were counted on August 18, 2020 by All Traffic Data Services for the intersection of US 24 & Morning Sun Drive. Traffic counts are included in **Appendix B**.

Existing Lane Geometry

The northbound direction of US 24 includes two through lanes and a continuous acceleration/deceleration lane. The site access exists as a gravel road.

Traffic Volumes and Distribution

Background Traffic Growth Rate

To determine future background traffic volumes, JR applied a 1% growth rate to the existing traffic volumes, based on data from the CDOT Online Transportation Information System (OTIS) for US 24.

Site-Generated Traffic Volumes

Site-generated traffic volumes were estimated using ITE Trip Generation Manual, 10th Edition*. The development is expected to produce the following trips:

- Average Daily Trips: 581
- AM Peak Entering Site: 21
- AM Peak Exiting Site: 22
- PM Peak Entering Site: 28
- PM Peak Exiting Site: 26

A trip generation report is included in **Appendix C**.

*Note: JR used ITE 10th Edition because ITE 11th Edition does not provide weekday daily trip volumes for the drive-through restaurant land use (935).

Distribution of Site-Generated Traffic

JR assumed that all trips to/from the drive-through restaurant will use the RIRO access on US 24. Meanwhile, 80% of trips to/from the storage facility will use the RIRO access, with the remaining 20% using the signalized intersection at US 24 & Morning Sun Drive.

Total Traffic

Total traffic is the sum of background and site-generated traffic. JR forecasted total traffic volumes at the Study intersections in the years 2024 (Opening Day) and 2045 (Future Year).

Background, site-generated, and total traffic volumes are shown in **Figure 2**.

Traffic Volumes and Lane Geometry

Traffic volumes at the RIRO access are included in **Figure 2**. Lane geometry is shown.

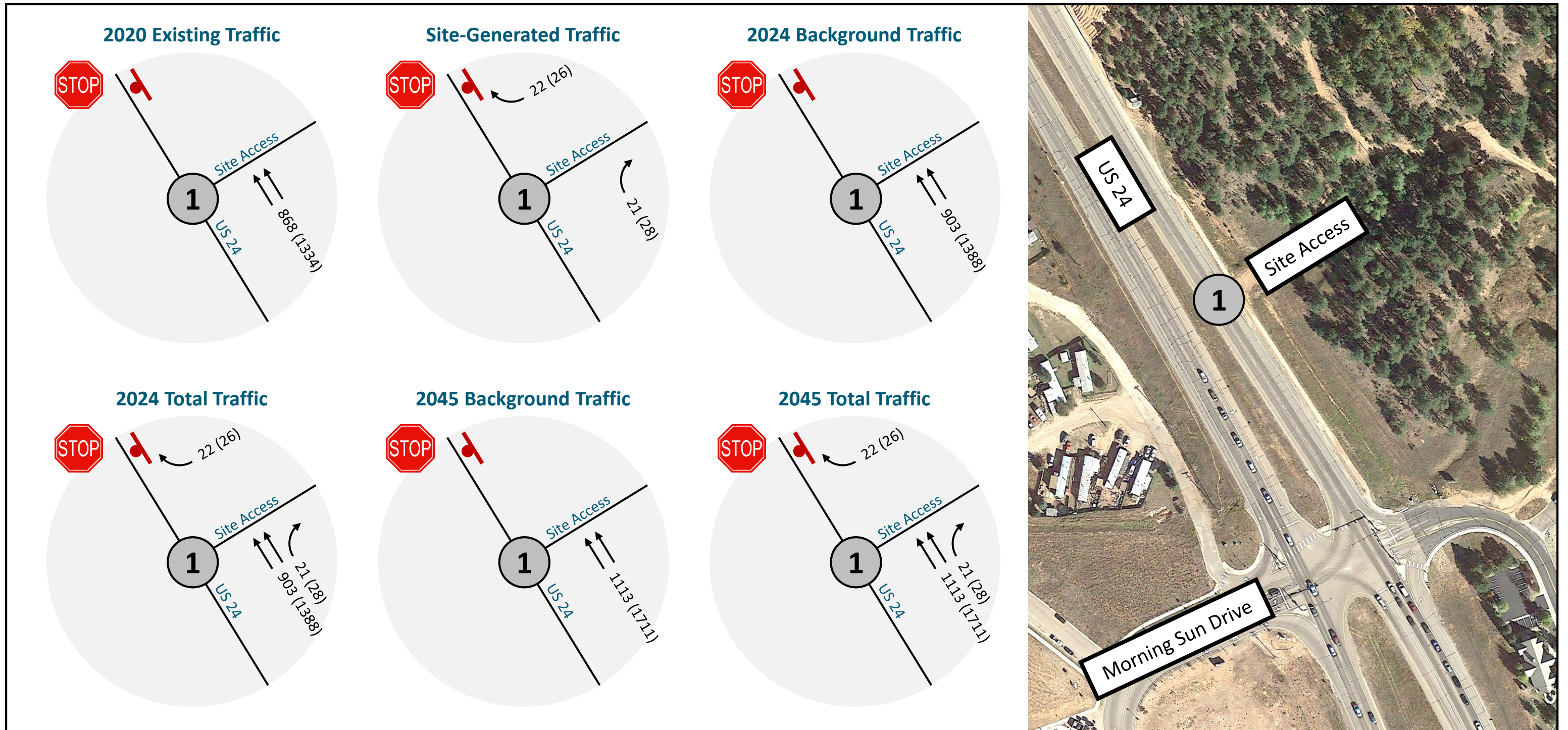


Figure 2: Traffic Volumes and Lane Geometry

Traffic Operations Analysis

Traffic operations were analyzed using HCM 6th Edition methodology. Synchro reports are included in **Appendix D**.

Levels of Service

JR analyzed the RIRO access for peak hour levels of service (LOS). **Table 1** includes the LOS for the right-out movement in years 2024 (Opening Day) and 2045 (Future Year). This movement was modeled as stop-controlled. The right-in movement is free-flowing, and therefore, was not analyzed.

Table 1: Right-Out Movement Levels of Service

Year	AM Peak Hour	PM Peak Hour
2024	B	C
2045	B	C

Discussion on Levels of Service

All levels of service are considered acceptable for the right-out movement.

Queue Lengths

JR analyzed the RIRO access for 95th percentile queue lengths using HCM 6th Edition methodology. **Table 2** includes the queue lengths for the right-out movement in years 2024 (Opening Day) and 2045 (Future Year).

Table 2: Right-Out Movement 95th Percentile Queue Lengths

Year	AM Peak Hour	PM Peak Hour
2024	<25'	<25'
2045	<25'	<25'

Discussion on Queue Lengths

Due to low traffic volumes, queuing is expected to be nominal for the right-out movement. JR does not anticipate any issues related to queuing.

Conclusion

Below is a summary of the conclusions and findings of this Memo.

Levels of Service

The right-out movement onto US 24 is expected to operate at LOS C or better in all scenarios.

Queue Lengths

No queuing issues were identified for the right-out movement.

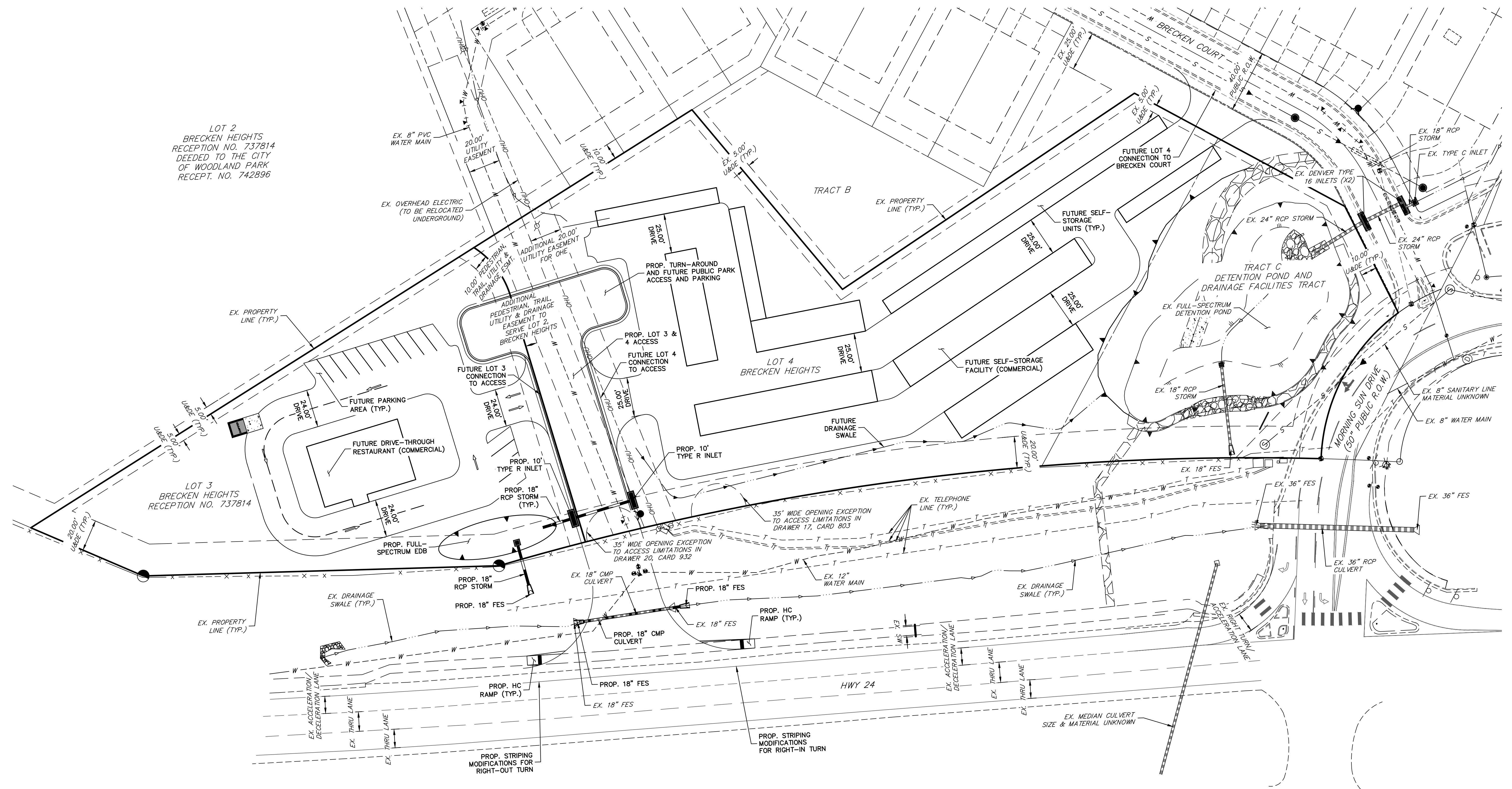
Recommendations

JR recommends that striping on US 24 be modified to include deceleration and acceleration lanes at the site access.

Appendix A: Site Plan

BRECKEN HEIGHTS LOT 3 & 4 - ACCESS

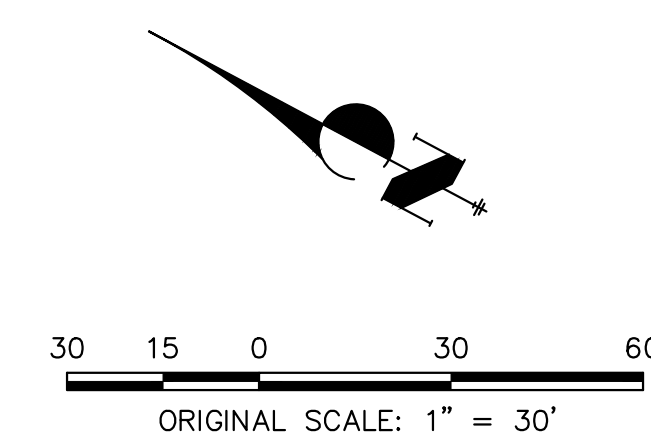
PROPOSED SITE PLAN



PROPOSED SITE PLAN
BRECKEN HEIGHTS
LOT 3 & 4 - ACCESS
JOB NO. 25198.02
06/16/2023
SHEET 1 OF 1



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RIRO
Access

US 24

Approx. 200'
Weaving Distance

Morning Sun Drive



Appendix B: Traffic Counts



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

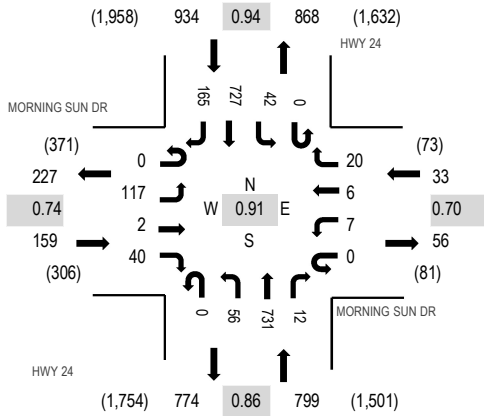
Location: 1 HWY 24 & MORNING SUN DR AM

Date: Tuesday, August 18, 2020

Peak Hour: 08:00 AM - 09:00 AM

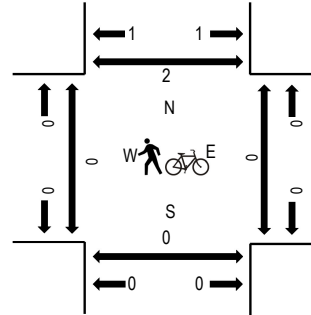
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	MORNING SUN DR Eastbound				MORNING SUN DR Westbound				HWY 24 Northbound				HWY 24 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	21	0	20	0	8	1	3	0	8	133	0	0	3	238	31	466	1,913	0	0	0	0
7:15 AM	0	18	0	13	0	0	0	2	0	7	158	0	0	0	239	24	461	1,878	0	0	0	4
7:30 AM	0	23	0	17	0	6	1	4	0	9	188	3	0	7	211	26	495	1,913	0	0	0	1
7:45 AM	0	21	2	12	0	5	2	8	0	9	185	2	0	8	211	26	491	1,886	0	0	0	0
8:00 AM	0	15	0	8	0	2	1	4	0	11	166	2	0	7	183	32	431	1,925	0	0	0	0
8:15 AM	0	40	1	13	0	0	4	4	0	17	174	6	0	11	189	37	496		0	0	0	1
8:30 AM	0	30	0	9	0	3	1	8	0	14	174	2	0	11	174	42	468		0	0	0	0
8:45 AM	0	32	1	10	0	2	0	4	0	14	217	2	0	13	181	54	530		0	0	0	1
Count Total	0	200	4	102	0	26	10	37	0	89	1,395	17	0	60	1,626	272	3,838		0	0	0	7
Peak Hour	0	117	2	40	0	7	6	20	0	56	731	12	0	42	727	165	1,925		0	0	0	2



(303) 216-2439
www.alltrafficdata.net

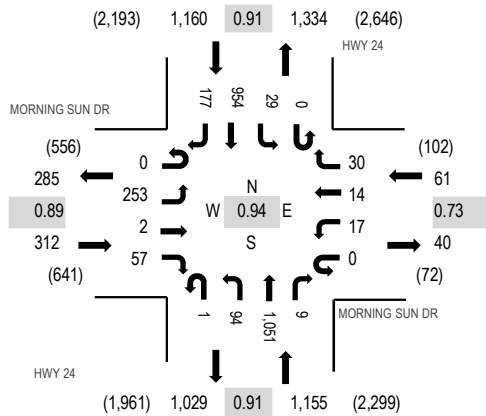
Location: 1 HWY 24 & MORNING SUN DR PM

Date: Tuesday, August 18, 2020

Peak Hour: 04:30 PM - 05:30 PM

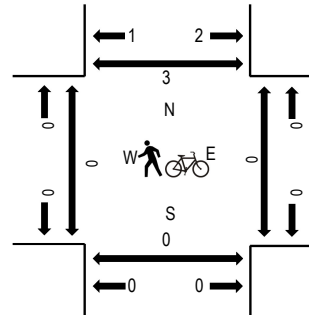
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	MORNING SUN DR Eastbound				MORNING SUN DR Westbound				HWY 24 Northbound				HWY 24 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	53	2	20	0	1	2	6	1	22	253	2	0	3	243	44	652	2,668	0	0	0	0
4:15 PM	0	73	5	20	0	4	0	12	1	30	258	4	0	7	211	49	674	2,649	0	0	0	0
4:30 PM	0	74	1	18	0	6	6	11	0	21	274	4	0	8	234	51	708	2,688	0	0	0	0
4:45 PM	0	69	1	12	0	2	1	6	0	32	236	2	0	5	239	29	634	2,632	0	0	0	1
5:00 PM	0	51	0	17	0	8	5	6	0	24	243	2	0	9	211	57	633	2,567	0	0	0	1
5:15 PM	0	59	0	10	0	1	2	7	1	17	298	1	0	7	270	40	713		0	0	0	0
5:30 PM	1	58	0	17	0	2	2	8	0	20	273	0	0	3	227	41	652		0	0	0	0
5:45 PM	0	63	1	16	0	1	1	2	2	23	253	2	0	3	166	36	569		0	0	0	0
Count Total	1	500	10	130	0	25	19	58	5	189	2,088	17	0	45	1,801	347	5,235		0	0	0	2
Peak Hour	0	253	2	57	0	17	14	30	1	94	1,051	9	0	29	954	177	2,688		0	0	0	2

Appendix C: Trip Generation

Trip Generation Summary

Alternative: Alternative 1

Phase:

Open Date: 5/4/2023

Project: Brecken Heights Lots 3 and 4

Analysis Date: 5/4/2023

ITE	Land Use	Weekday Average Daily Trips				Weekday AM Peak Hour of Adjacent Street Traffic				Weekday PM Peak Hour of Adjacent Street Traffic			
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
151	Storage Facility		15	15	30		1	1	2		2	1	3
	1.65 Storage Units (100s)												
935	Drive-Through Restaurant		276	275	551		20	21	41		26	25	51
	1.2 1000 Sq. Ft. GFA												
Unadjusted Volume			291	290	581		21	22	43		28	26	54
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			291	290	581		21	22	43		28	26	54

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

TRIP GENERATION 10, TRAFFICWARE, LLC

P. 1

Detailed Land Use Data
For 1.2 1000 Sq. Ft. GFA of Drive-Through Restaurant
(935) Fast-Food Restaurant with Drive-Through Window and No Indoor Seating

Project: Brecken Heights Lots 3 and 4

Open Date: 5/4/2023
Analysis Date: 5/4/2023

<u>Day / Period</u>	<u>Total Trips</u>	<u>Pass-By Trips</u>	<u>Avg Rate</u>	<u>Min Rate</u>	<u>Max Rate</u>	<u>Std Dev</u>	<u>Avg Size</u>	<u>% Enter</u>	<u>% Exit</u>	<u>Use Eq.</u>	<u>Equation</u>	<u>R2</u>
Weekday Average Daily Trips Source : Trip Generation Manual 10th Edition	551	0	459.2	95.91	1053.57	294.09	1	50	50	False		
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 10th Edition	41	0	33.76	17.37	52.79	15.88	2	48	52	False		
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 10th Edition	51	0	42.65	10.23	196.67	34.86	1	51	49	False		

Detailed Land Use Data
For 1.65 Storage Units (100s) of Storage Facility
(151) Mini-Warehouse

Project: Brecken Heights Lots 3 and 4

Open Date: 5/4/2023
Analysis Date: 5/4/2023

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips Source : Trip Generation Manual 10th Edition	30	0	17.96	12.25	33.33	4.13	5	50	50	False	$T = 18.86(X) - 4.09$	0.96
Weekday AM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 10th Edition	2	0	1.39	0.81	1.7	0.33	6	51	49	False	$T = 1.98(X) - 3.79$	0.98
Weekday PM Peak Hour of Adjacent Street Traffic Source : Trip Generation Manual 10th Edition	3	0	1.95	0.92	8.33	1.4	5	50	50	False	$T = 1.52(X) + 2.02$	0.61

Appendix D: Synchro Reports

Lanes, Volumes, Timings
1: US 24 & Site Access

JR Engineering
05/04/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			
Traffic Volume (vph)	0	22	903	21	0	0
Future Volume (vph)	0	22	903	21	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	1583	0	0
Link Speed (mph)	25		45			45
Link Distance (ft)	540		353			355
Travel Time (s)	14.7		5.3			5.4
Peak Hour Factor	0.92	0.78	0.93	0.78	0.92	0.92
Adj. Flow (vph)	0	28	971	27	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	971	27	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.0%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	903	21	0	0
Future Vol, veh/h	0	22	903	21	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	78	93	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	971	27	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	486	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	527	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	527	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	12.2		0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		-		527	
HCM Lane V/C Ratio	-		-		0.054	
HCM Control Delay (s)	-		-		12.2	
HCM Lane LOS	-		-		B	
HCM 95th %tile Q(veh)	-		-		0.2	

Lanes, Volumes, Timings
1: US 24 & Site Access

JR Engineering
05/04/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			
Traffic Volume (vph)	0	26	1388	28	0	0
Future Volume (vph)	0	26	1388	28	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	1583	0	0
Link Speed (mph)	25		45			45
Link Distance (ft)	540		353			355
Travel Time (s)	14.7		5.3			5.4
Peak Hour Factor	0.92	0.78	0.94	0.78	0.92	0.92
Adj. Flow (vph)	0	33	1477	36	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	1477	36	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	26	1388	28	0	0
Future Vol, veh/h	0	26	1388	28	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	78	94	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	1477	36	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	739	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	360	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	360	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	16		0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		-		360	
HCM Lane V/C Ratio	-		-		0.093	
HCM Control Delay (s)	-		-		16	
HCM Lane LOS	-		-		C	
HCM 95th %tile Q(veh)	-		-		0.3	

Lanes, Volumes, Timings
1: US 24 & Site Access

JR Engineering
05/04/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			
Traffic Volume (vph)	0	22	1113	21	0	0
Future Volume (vph)	0	22	1113	21	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	1583	0	0
Link Speed (mph)	25		45			45
Link Distance (ft)	540		353			355
Travel Time (s)	14.7		5.3			5.4
Peak Hour Factor	0.92	0.78	0.93	0.78	0.92	0.92
Adj. Flow (vph)	0	28	1197	27	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	28	1197	27	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	22	1113	21	0	0
Future Vol, veh/h	0	22	1113	21	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	78	93	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	28	1197	27	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	599	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	445	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	445	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	13.6		0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		-		445	
HCM Lane V/C Ratio	-		-		0.063	
HCM Control Delay (s)	-		-		13.6	
HCM Lane LOS	-		-		B	
HCM 95th %tile Q(veh)	-		-		0.2	

Lanes, Volumes, Timings
1: US 24 & Site Access

JR Engineering
05/04/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			
Traffic Volume (vph)	0	26	1711	28	0	0
Future Volume (vph)	0	26	1711	28	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		150	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1611	3539	1583	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	1583	0	0
Link Speed (mph)	25		45			45
Link Distance (ft)	540		353			355
Travel Time (s)	14.7		5.3			5.4
Peak Hour Factor	0.92	0.78	0.94	0.78	0.92	0.92
Adj. Flow (vph)	0	33	1820	36	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	33	1820	36	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	57.3%			ICU Level of Service B		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	26	1711	28	0	0
Future Vol, veh/h	0	26	1711	28	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	150	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	78	94	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	33	1820	36	0	0
Major/Minor	Minor1		Major1			
Conflicting Flow All	-	910	0	0		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Critical Hdwy	-	6.94	-	-		
Critical Hdwy Stg 1	-	-	-	-		
Critical Hdwy Stg 2	-	-	-	-		
Follow-up Hdwy	-	3.32	-	-		
Pot Cap-1 Maneuver	0	277	-	-		
Stage 1	0	-	-	-		
Stage 2	0	-	-	-		
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	-	277	-	-		
Mov Cap-2 Maneuver	-	-	-	-		
Stage 1	-	-	-	-		
Stage 2	-	-	-	-		
Approach	WB		NB			
HCM Control Delay, s	19.8		0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT		NBRWBLn1			
Capacity (veh/h)	-		-		277	
HCM Lane V/C Ratio	-		-		0.12	
HCM Control Delay (s)	-		-		19.8	
HCM Lane LOS	-		-		C	
HCM 95th %tile Q(veh)	-		-		0.4	

ACCESS EASEMENT AND MAINTENANCE AGREEMENT

This ACCESS EASEMENT AND MAINTENANCE AGREEMENT is executed as of _____, 2023, by and between **MORALES ENTERPRISES LLC**, a Colorado limited liability company (“Morales”) and **MBI CONTRACTORS INC.**, a Colorado corporation (“MBI”).

RECITALS

WHEREAS, the City of Woodland Park (the “City”) is the current owner of the real property described as follows (“Lot 2”):

LOT 2 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MORALES is the current owner of the real property described as follows (“Lot 3”):

LOT 3 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MBI is the current owner of the real property described as follows (“Lot 4”, and together with Lot 2 and Lot 3, the “Lots” or each a “Lot”):

LOT 4 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MBI is in the process of developing Lot 4, as further depicted on the preliminary site plan (the “Site Plan”), a copy of which is attached hereto as Exhibit A and incorporated herein by this reference.

WHEREAS, in connection with the filing and approval of the Site Plan the respective owner of Lot 4 desires to: (i) grant an access easement over a portion of Lot 4 for the benefit of Lot 3; and (ii) dedicate to the City certain rights to said access easement for the benefit of the public for pedestrian, trail, utility and drainage purposes, upon the terms and conditions set forth herein.

NOW THEREFORE, the parties hereto, as owners of Lot 3 and Lot 4, respectively, and on behalf of their respective successors and assigns, hereby establish the following:

ARTICLE I DEFINITIONS; INCORPORATION OF RECITALS

1.1 Incorporation. The Recitals set forth above and all Exhibits attached hereto are hereby incorporated herein as if fully set forth in this Article.

1.2 Definitions.

a. Owner. The term Owner, as used in this Agreement, shall include MORALES and MBI, and any successors in interest to the fee ownership of each Lot. "Owner" does not include the City, a person or entity who holds title to Lot 3 or Lot 4 merely as security for the performance of an obligation, such as a mortgagee or trustee under a deed of trust or a person who merely has an equitable interest in any Lot or any portion thereof, under a contract of purchase.

b. Permittee. "Permittee" shall mean and refer to any employees, licensees, invitees, guests, tenants, licensees, visitors, agents, occupants, contractors, customers or concessionaires of the following: (i) an Owner, (ii) the tenant of an Owner or (iii) any other person or entity occupying the Lot of an Owner with the express or implied consent of such Owner.

ARTICLE II CREATION AND USE OF EASEMENT

2.1 Grant of Easement. MBI, for itself and for its successors and assigns, hereby declares, grants, establishes and conveys to MORALES a _____-foot (_____) wide perpetual, non-exclusive permanent easement (the "Access Easement") on, under, through, over and across that certain portion of Lot 4 as further depicted and legally described on Exhibit B attached hereto and incorporated herein by this reference (the "Easement Area"), for the purposes of pedestrian and motor vehicle access to and from U.S. Highway 24 and Lot 3 (as further depicted on the Site Plan); and (ii) maintaining and repairing the Easement Area to the terms and conditions contained in this Agreement. The Easement and rights granted herein and the provisions of this Agreement shall run with each of the Lots, shall be appurtenant to each of the Lots, shall be binding on each of the Lots and the present and future Owners of each Lot, and shall inure to the benefit of each Lot and all present and future owners of each Lot, and shall burden the Lot upon which the Easement is located.

2.2 Public Use of Easement. The Easement is created for the purposes set forth in this Agreement, provided however, the Owners hereby grant to the City, for the benefit of the public, the right to use the Easement for: (i) pedestrian ingress and egress and associated trail easement purposes; (ii) public utilities and drainage purposes; and (iii) fire, emergency and police access by the appropriate governmental entities.

2.3 No Barriers or Obstructions. No fences, barriers, impediments, gates or other improvements ("Impediments") shall be constructed, erected, installed or maintained in the Easement Area which would impede the use of the Easement Area and free flow of traffic to and from each Lot and U.S. Highway 24. Each Owner shall have the right to remove any Impediments from the Easement Area and shall have no liability to the owner of such Impediments for any damage caused to such Impediment. If an Owner has caused or allowed an Impediment to be constructed, erected, installed or maintained in the Easement Area, then such Owner shall bear the costs of the removal of such Impediment. The respective Owners of each Lot, and his/her/its Permittees are expressly prohibited from parking within the Easement Area, except (i) any

temporary parking for deliveries being made to Lot 3 or Lot 4; and (ii) any parking within the designated parking lot area depicted on the site plan and located on Lot 4.

2.4 Construction. MBI shall be solely responsible for all costs and expenses, without reimbursement from any other Owner, associated with the construction of a drive aisle and other Improvements (as defined below) within the Easement Area prior to the issuance of any certificate of occupancy on Lot 4. "Improvements" shall constitute, for purposes of this Agreement, all grading and fill, retaining walls, landscaping, governmental required drainage facilities, curb and gutter installation, traffic signage, and asphalt or other roadway surface within the Easement Area, including any parking lot improvements set forth on the Site Plan.

ARTICLE III MAINTENANCE AND REPAIR

3.1 Maintenance Obligations of Owners. The Owner of Lot 4 shall responsible for the maintenance and repair of the Easement Area and any Improvements within the Easement Area, as is necessary to maintain such Improvements in a condition equivalent to or better than that which shall exist at the time of initial construction of the Improvements, ordinary wear and tear excepted, subject to reimbursement from the Owner of Lot 3 for 50% of all costs associated with such Maintenance (defined below). Such maintenance and repair shall include removal of ice, snow, weeds, trash and debris, and to resurface and repair asphalt, and other preventative actions intended to extend the useful life of the Improvements as well as such repairs and replacement as shall be reasonably necessary (collectively, "Maintenance"). The Owner of Lot 3 shall pay to the Owner of Lot 4 all costs and expenses associated with such Maintenance allocable to Lot 3 as provided above within Thirty (30) days after receipt of the bill for such cost and expenses delivered in writing by the Lot 4 Owner. Any failure to pay such cost shall entitle the Owner of Lot 4 to a lien upon Lot 3 pursuant to Article 4 below. In the event of an emergency, e.g., a break in a water or sewer line, within the Easement Area, each Owner shall be authorized to take such action as is necessary to remediate the emergency situation. In the event that any one Owner takes action to remediate an emergency situation, then each other Owner shall be liable to the Owner who incurred the expense to remediate the emergency for the pro rata share of that Owner so that the cost of remediation of the emergency is shared equally by the Owners of Lot 3 and Lot 4. It shall be presumed that any action taken by an Owner to remediate an emergency situation shall be a common obligation of the Owners unless it is established that such action was clearly taken in bad faith and not for the common good of the Owners.

3.3 Damage to Easements. If an Owner's use of the Easement Area, or any portion thereof, including the use by a Permittee of that Owner, results in any damage or destruction to the Easement Area, or any portion thereof, the Owner causing, or whose Permittee caused, such damage shall repair the damaged property and/or Improvements to its original condition prior to such damage or destruction. All such repairs and replacements shall be made with materials at least of equal quality to that originally installed or used. The damaging Owner shall be solely liable for all costs and expenses incurred in repairing that portion of the Easement Area so damaged. If any damaging Owner fails to repair any such damage as provided in this Agreement, the other Owners, individually or collectively, shall have the right to repair the same after Thirty (30) days prior written notice to the damaging Owner, in which event all of the other Owner's

costs and expenses associated with such repair and replacement shall be paid by the damaging Owner within Thirty (30) days after such Owner's receipt of the bill for such cost and expenses. Any Owner's failure to pay such cost shall entitle the other Owners to a lien upon the Lot(s) of said defaulting Owner.

ARTICLE IV ENFORCEMENT

4.1 General Rights of Enforcement. This Agreement may be enforced as provided hereinafter by each Owner. Each such Owner, by acquiring an interest in a Lot, shall automatically become vested with the rights provided under this Agreement and burdened by the obligations contained herein. Each Owner shall have the right to bring an action against another Owner who violates this Agreement to enjoin such violation, to cause any such violation to be remedied and to recover damages resulting from such violation. The action may be brought against the Owner, the Permittee or the person or entity who has caused the damage or violated this Agreement by the other Owners, individually or collectively.

4.2 Enforcement of Obligations by Lien or Action. The obligations set forth in this Agreement shall be personal obligations of each Owner. In addition, if any Owner fails to pay any obligations required to be paid by such Owner pursuant to this Agreement, the other Owners shall have the right to file a lien against the Lot of such Owner for the amounts due and owing, together with the attorney's fees incurred by the other Owners. The delinquent amounts due and owing shall bear interest at the rate of Fifteen percent (15%) per annum. An amount due and owing shall be delinquent Thirty (30) days after the Owner is billed for such amount. The other Owners shall have the right to collect the delinquent amounts by an action to collect such amounts, which action may include the foreclosure of the lien against the Property of the delinquent Owner by judicial foreclosure or an action directly against the Owner, or both. The right to claim such lien shall be evidenced by the recording of a lien in the real property records of the Clerk and Recorder of Teller County that meets the following requirements and includes the following matters: (i) the lien shall reference this Agreement as the authority for the right to file the lien, (ii) the name of the delinquent Owner, (iii) the identification of the Lot of the delinquent Owner, (iv) the name of the Owner claiming the lien, (v) the amount for which the lien is claimed and (v) a general description of the purpose for which the amounts were paid. A lien must be recorded within Nine (9) months after the amounts for which the lien is claimed were incurred. Prior to recording the lien, the Owner desiring to file the lien shall give written notice to the delinquent Owner of the intent of such Owner to file the lien, which notice shall be mailed at least ten days prior to recording the lien. If a lien is recorded, an action to foreclose such lien shall be commenced within six months after the lien is recorded, and a notice of lis pendens shall also be recorded within such time. The failure to timely file the lien, commence the action to foreclose the lien or record the lis pendens shall invalidate the lien, but shall not bar an action personally against the delinquent Owner. The lien shall only affect title to a Lot when recorded. There shall be no priority of such lien that relates back to any earlier date than the date the lien is recorded.

4.3 Attorneys' Fees. In any legal or equitable proceeding for the enforcement of this Agreement, or any provision hereof, whether it be an action for damage, to assert or foreclose the lien, declaratory relief, injunctive relief, or any other action, the prevailing party in such action

shall be entitled to recover from the non-prevailing party all of its costs incurred in such action and interest thereon at the rate of Fifteen percent (15%) per annum from the date of delinquency. Any judgment entered shall provide for interest on the delinquent amounts at the rate of Fifteen percent (15%) per annum after the date of entry of judgment. Costs for purposes of this Section 4.4 shall include court costs and reasonable attorneys' fees. All remedies provided herein or at law or in equity shall be cumulative and not exclusive.

4.4 No Waiver. The failure of any Owner to enforce any of the conditions, covenants, restrictions or reservations contained herein shall in no event be deemed to be a waiver of the right to do so for subsequent violations or the right to enforce any other conditions, covenants, restrictions or reservations contained herein.

ARTICLE V INDEMNIFICATION; INSURANCE

5.1 Indemnification. Each Owner shall indemnify, hold harmless and defend the other Owners, their respective heirs, personal representatives, successors and assigns from and against any claim, liability, loss, damage or expense, including attorneys' fees, arising from or related to any injury to person or property occurring on the portion of the Easement Area arising out of the negligence, acts, omissions or conduct of such Owner or the Permittees of such Owner.

5.2 Insurance. Each Owner shall maintain liability insurance with a combined single limit of coverage in the minimum amount of \$1,000,000.00 to insure against any claims for injury to person or property related to the use of the Easement Area. Each Owner shall be responsible for requiring that any person or entity doing any work on the Easement Area by or at the request of such Owner has workers' compensation insurance for all persons performing any work on the Easement Area.

ARTICLE VI ESTOPPEL CERTIFICATE

Each Owner shall, without charge, deliver to the other Owners within Thirty (30) days after written request therefore by the other Owners, a written instrument duly executed and acknowledged, certifying: (a) whether or not the Owner has observed and performed all of the terms and conditions required to be performed and observed under this Agreement and, if not, specifying the same; and (b) the amounts, if any, which the certifying Owner has expended pursuant to the terms of this Agreement, for which a claim for reimbursement will be made to such other Owner. If such estoppel certificate is not executed and returned to the requesting Owner by the other Owner within Thirty (30) days, then it shall be conclusively presumed that the Owner from whom the certificate was requested has no claims against the Owner requesting the certificate and any person may rely on such presumption for all purposes.

ARTICLE VII AMENDMENTS AND TERMINATION

This Agreement, and any provision hereof or any Easement granted herein, may be amended by a unanimous vote of the Owners of the Lots. This Agreement may only be terminated by unanimous consent of the Owners of all Lots and each mortgagee or deed of trust beneficiary encumbering the Lots. No amendment, modification or termination shall be effective until a written instrument setting forth the terms of such amendment or modification or termination has been duly executed, acknowledged and recorded in the Office of the Clerk and Recorder of Teller County. No amendment shall be permitted that affects the right of access to any Lot or the right of the Owner to use the Easement Area in the manner set forth in this Agreement without the written consent of the Owner of the Lot and each mortgagee or deed of trust beneficiary encumbering each Lot. Any amendment or termination affecting the rights granted to the City, on behalf of the public, as set forth in Section 2.2 above shall require the written consent of the City.

ARTICLE VIII BINDING EFFECT

8.1 Easements Runs with Land. The Easements, and other rights and obligations in this Agreement shall run with each Lot, shall be appurtenant to each Lot, shall be binding upon each Lot and all present and future Owners of each Lot and shall inure to the benefit of each Lot and all present and future Owners of each Lot and shall burden the Lot upon which each Easement is located. Each Permittee of an Owner shall also be bound by the terms, conditions and provisions of this Agreement.

8.2 Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon each Owner their respective, heirs, personal representatives, successors and assigns.

ARTICLE IX MISCELLANEOUS

9.1 Severability. In the event any clause, sentence or any portion of the terms, conditions, covenants and provisions of this Agreement are deemed illegal, null or void for any reason, or are held by any court of competent jurisdiction to be so, the remaining portions of this Agreement shall remain in full force and effect.

9.2 Notices. All notices required or permitted under this Agreement shall be in writing. Notices to an Owner or Permittee shall be deemed given if mailed to the Owner or Permittee by first class mail addressed to the Owner or Permittee, as applicable, to the address of the Lot of the Owner or the Permittee, or by email or facsimile and provided that "answer back" confirmation is received by sender. Any party may, from time to time, change the address to which notice shall be sent by like notice given to the other parties hereto, except that no party may change its address to other than a street address.

9.3 Governing Law; Venue. The laws of the State of Colorado shall govern the interpretation, validity, performance and enforcement of this Agreement. Venue shall be in Teller County, Colorado.

9.4 Counterparts. This Agreement may be signed in multiple counterparts each of which shall be deemed an original, but all of which shall, taken together, be but one and the same instrument. Delivery by facsimile, or e-mail of a PDF copy, of a counterpart of this Agreement executed by any party shall constitute delivery by such party of such party's executed counterpart of this Agreement.

[SIGNATURE AND NOTARIZATION PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement is executed by the undersigned as of the day and year first above written.

MORALES ENTERPRISES, LLC,
a Colorado limited liability company

MBI CONTRACTORS, INC.,
a Colorado corporation

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023, by _____ as _____ of **Morales Enterprises, LLC**, a Colorado limited liability company.

Witness my hand and official seal.

[SEAL]

Notary Public
My Commission Expires: _____

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023, by _____ as _____ of **MBI Contractors Inc.**, a Colorado corporation.

Witness my hand and official seal.

[SEAL]

Notary Public
My Commission Expires: _____

EXHIBIT A
SITE PLAN; DEPICTION OF EASEMENT AREA

[SEE ATTACHED]

EXHIBIT B
LEGAL DESCRIPTION AND DEPICTION OF ACCESS EASEMENT

[SEE ATTACHED]

UTILITY EASEMENT AND MAINTENANCE AGREEMENT

This UTILITY EASEMENT AND MAINTENANCE AGREEMENT is executed as of _____, 2023, by and between **MORALES ENTERPRISES LLC**, a Colorado limited liability company (“Morales”) and **MBI CONTRACTORS INC.**, a Colorado corporation (“MBI”).

RECITALS

WHEREAS, MORALES is the current owner of the real property described as follows (“Lot 3”):

LOT 3 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MBI is the current owner of the real property described as follows (“Lot 4”, and together with Lot 3, the “Lots” or each a “Lot”):

LOT 4 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, the Owner of Lot 4 desires to grant a utility easement over a portion of Lot 4 for the benefit of Lot 3, upon the terms and conditions set forth herein.

NOW THEREFORE, the parties hereto, as owners of Lot 3 and Lot 4, respectively, and on behalf of their respective successors and assigns, hereby establish the following:

ARTICLE I DEFINITIONS; INCORPORATION OF RECITALS

1.1 Incorporation. The Recitals set forth above and all Exhibits attached hereto are hereby incorporated herein as if fully set forth in this Article.

1.2 Definitions.

a. Owner. The term Owner, as used in this Agreement, shall include MORALES and MBI, and any successors in interest to the fee ownership of each Lot. “Owner” does not include a person or entity who holds title to Lot 3 or Lot 4 merely as security for the performance of an obligation, such as a mortgagee or trustee under a deed of trust or a person who merely has an equitable interest in any Lot or any portion thereof, under a contract of purchase.

b. Permittee. “Permittee” shall mean and refer to any employees, licensees, invitees, guests, tenants, licensees, visitors, agents, occupants, contractors, customers or concessionaires of the following: (i) an Owner, (ii) the tenant of an Owner or (iii) any other person or entity occupying the Lot of an Owner with the express or implied consent of such Owner.

ARTICLE II CREATION AND USE OF EASEMENT

2.1 Grant of Easement. MBI, for itself and for its successors and assigns, hereby declares, grants, establishes and conveys to MORALES a _____-foot (_____) wide perpetual, non-exclusive permanent easement (the “Easement”) on, under, through, over and across that certain portion of Lot 4 as further depicted and legally described on Exhibit A attached hereto and incorporated herein by this reference (the “Easement Area”), to use, operate, maintain, repair, replace, upgrade, or remove the existing sanitary sewer pipelines located within the Easement Area, and any conduits, vaults, meters, valves, hydrants, manholes, or any other utility structures, and all necessary underground appurtenances thereto (the “Utility Improvements”) and to make cuts and fills in the earth necessary to the reasonable performance of such work. The plans and specifications for any work performed on the Utility Improvements shall be submitted to MBI, for its review. MORALES shall obtain the prior written approval from MBI of said plans and specifications prior to performing any work related thereto. MBI shall not unreasonably withhold its approval. The Easement and rights granted herein and the provisions of this Agreement shall run with each of the Lots, shall be appurtenant to each of the Lots, shall be binding on each of the Lots and the present and future Owners of each Lot, and shall inure to the benefit of Lot 3 and to the burden of Lot 4 and each Lot’s respective present and future owners.

2.2 Construction. MORALES shall be solely responsible for all costs and expenses, without reimbursement from any other Owner, associated with the construction of any and all Utility Improvements within the Easement Area.

2.3 Grantor’s Rights Unaffected. MBI shall retain the right to make full use of Lot 4, provided however, MBI shall not hereafter construct or place any permanent structure or building on any part of the Easement Area.

2.4 Surface Restoration to Land. MORALES shall replace and/or repair any physical damage to MBI’s improvements on Lot 4, whether or not within the Easement Area, if such damage is caused by, or reasonably related to, Grantee’s construction, use, operation, maintenance, repair, replacement, upgrading, or removal of its Utility Improvements (except to the extent any improvements are located within the Easement Area in violation of Section 2.3 above. In the use, operation, maintenance, repair, replacement, upgrading, or removal of its Utility Improvements, MORALES shall promptly restore, replace, or repair the surface of the Easement Area to as close to its condition immediately prior to such work as may be reasonably possible.

ARTICLE III MAINTENANCE AND REPAIR

3.1 Maintenance. MORALES shall be responsible for any and all maintenance, repair and replacement of the Utility Improvements. In the event of an emergency, e.g., a break in a water or sewer line, within the Easement Area, MBI shall be authorized to take such action as is necessary to remediate the emergency situation. In the event MBI takes action to remediate an emergency situation, then MORALES shall be liable to MBI for all costs and expenses incurred by MBI to remediate the emergency. It shall be presumed that any action taken by MBI to

remediate an emergency situation shall be reasonable unless it is established that such action was clearly taken in bad faith.

ARTICLE IV ENFORCEMENT

4.1 General Rights of Enforcement. This Agreement may be enforced as provided hereinafter by each Owner. Each such Owner, by acquiring an interest in a Lot, shall automatically become vested with the rights provided under this Agreement and burdened by the obligations contained herein. Each Owner shall have the right to bring an action against another Owner who violates this Agreement to enjoin such violation, to cause any such violation to be remedied and to recover damages resulting from such violation. The action may be brought against the Owner, the Permittee or the person or entity who has caused the damage or violated this Agreement by the other Owners, individually or collectively.

4.2 Enforcement of Obligations by Lien or Action. The obligations set forth in this Agreement shall be personal obligations of each Owner. In addition, if any Owner fails to pay any obligations required to be paid by such Owner pursuant to this Agreement, the other Owners shall have the right to file a lien against the Lot of such Owner for the amounts due and owing, together with the attorney's fees incurred by the other Owner. The delinquent amounts due and owing shall bear interest at the rate of Fifteen percent (15%) per annum. An amount due and owing shall be delinquent Thirty (30) days after the Owner is billed for such amount. The other Owner shall have the right to collect the delinquent amounts by an action to collect such amounts, which action may include the foreclosure of the lien against the Property of the delinquent Owner by judicial foreclosure or an action directly against the Owner, or both. The right to claim such lien shall be evidenced by the recording of a lien in the real property records of the Clerk and Recorder of Teller County that meets the following requirements and includes the following matters: (i) the lien shall reference this Agreement as the authority for the right to file the lien, (ii) the name of the delinquent Owner, (iii) the identification of the Lot of the delinquent Owner, (iv) the name of the Owner claiming the lien, (v) the amount for which the lien is claimed and (v) a general description of the purpose for which the amounts were paid. A lien must be recorded within Nine (9) months after the amounts for which the lien is claimed were incurred. Prior to recording the lien, the Owner desiring to file the lien shall give written notice to the delinquent Owner of the intent of such Owner to file the lien, which notice shall be mailed at least ten days prior to recording the lien. If a lien is recorded, an action to foreclose such lien shall be commenced within six months after the lien is recorded, and a notice of lis pendens shall also be recorded within such time. The failure to timely file the lien, commence the action to foreclose the lien or record the lis pendens shall invalidate the lien, but shall not bar an action personally against the delinquent Owner. The lien shall only affect title to a Lot when recorded. There shall be no priority of such lien that relates back to any earlier date than the date the lien is recorded.

4.3 Attorneys' Fees. In any legal or equitable proceeding for the enforcement of this Agreement, or any provision hereof, whether it be an action for damage, to assert or foreclose the lien, declaratory relief, injunctive relief, or any other action, the prevailing party in such action shall be entitled to recover from the non-prevailing party all of its costs incurred in such action and interest thereon at the rate of Fifteen percent (15%) per annum from the date of delinquency. Any

judgment entered shall provide for interest on the delinquent amounts at the rate of Fifteen percent (15%) per annum after the date of entry of judgment. Costs for purposes of this Section 4.3 shall include court costs and reasonable attorneys' fees. All remedies provided herein or at law or in equity shall be cumulative and not exclusive.

4.4 No Waiver. The failure of any Owner to enforce any of the conditions, covenants, restrictions or reservations contained herein shall in no event be deemed to be a waiver of the right to do so for subsequent violations or the right to enforce any other conditions, covenants, restrictions or reservations contained herein.

ARTICLE V INDEMNIFICATION; INSURANCE

5.1 Indemnification. MORALES shall and hereby does protect, defend, indemnify and hold harmless Grantor, its officers, directors employees, agents and representatives from and against any and all claims, costs and fees (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or other dispute resolution costs), losses, damages, causes of action, or liability of any nature (including, but not limited to environmental) arising from or in connection with MORALES' use of the Easement or the Utility Improvements.

5.2 Insurance. MORALES shall maintain liability insurance with a combined single limit of coverage in minimum amounts reasonably determined by MBI to insure against any claims for injury to person or property related to the use of the Easement Area and Utility Improvements and shall name MBI as an additional insured on such policy(ies). MORALES shall be responsible for requiring that any person or entity doing any work on the Easement Area or Utility Improvements by or at the request of such Owner has workers' compensation insurance for all persons performing any work on the Easement Area or the Utility Improvements

ARTICLE VI ESTOPPEL CERTIFICATE

Each Owner shall, without charge, deliver to the other Owners within Thirty (30) days after written request therefore by the other Owners, a written instrument duly executed and acknowledged, certifying: (a) whether or not the Owner has observed and performed all of the terms and conditions required to be performed and observed under this Agreement and, if not, specifying the same; and (b) the amounts, if any, which the certifying Owner has expended pursuant to the terms of this Agreement, for which a claim for reimbursement will be made to such other Owner. If such estoppel certificate is not executed and returned to the requesting Owner by the other Owner within Thirty (30) days, then it shall be conclusively presumed that the Owner from whom the certificate was requested has no claims against the Owner requesting the certificate and any person may rely on such presumption for all purposes.

ARTICLE VII AMENDMENTS AND TERMINATION

This Agreement, and any provision hereof or any Easement granted herein, may be amended by a unanimous vote of the Owners of the Lots. This Agreement may only be terminated by unanimous consent of the Owners of all Lots and each mortgagee or deed of trust beneficiary encumbering the Lots. No amendment, modification or termination shall be effective until a written instrument setting forth the terms of such amendment or modification or termination has been duly executed, acknowledged and recorded in the Office of the Clerk and Recorder of Teller County. No amendment shall be permitted that affects the right of access to any Lot or the right of the Owner to use the Easement Area in the manner set forth in this Agreement without the written consent of the Owner of the Lot and each mortgagee or deed of trust beneficiary encumbering each Lot.

ARTICLE VIII BINDING EFFECT

8.1 Easement Runs with Land. The Easement and other rights and obligations in this Agreement shall run with each Lot, shall be appurtenant to each Lot, shall be binding upon each Lot and all present and future Owners of each Lot and shall inure to the benefit of Lot 3 and all present and future Owners of Lot 3 and shall burden Lot 4 and all present and future Owners of Lot 4. Each Permittee of an Owner shall also be bound by the terms, conditions and provisions of this Agreement.

8.2 Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon each Owner their respective, heirs, personal representatives, successors and assigns.

ARTICLE IX MISCELLANEOUS

9.1 Severability. In the event any clause, sentence or any portion of the terms, conditions, covenants and provisions of this Agreement are deemed illegal, null or void for any reason, or are held by any court of competent jurisdiction to be so, the remaining portions of this Agreement shall remain in full force and effect.

9.2 Notices. All notices required or permitted under this Agreement shall be in writing. Notices to an Owner or Permittee shall be deemed given if mailed to the Owner or Permittee by first class mail addressed to the Owner or Permittee, as applicable, to the address of the Lot of the Owner or the Permittee, or by email or facsimile and provided that "answer back" confirmation is received by sender. Any party may, from time to time, change the address to which notice shall be sent by like notice given to the other parties hereto, except that no party may change its address to other than a street address.

9.3 Governing Law; Venue. The laws of the State of Colorado shall govern the interpretation, validity, performance and enforcement of this Agreement. Venue shall be in Teller County, Colorado.

9.4 Counterparts. This Agreement may be signed in multiple counterparts each of which shall be deemed an original, but all of which shall, taken together, be but one and the same

instrument. Delivery by facsimile, or e-mail of a PDF copy, of a counterpart of this Agreement executed by any party shall constitute delivery by such party of such party's executed counterpart of this Agreement.

9.5 No Third-Party Beneficiaries. Except as expressly provided otherwise, the Easement is intended to be solely for the benefit of the Parties and shall not otherwise be deemed to confer upon or give to any other person or third party any remedy, claim, cause of action or other right.

9.6 No Dedication for Public Use. The Easement is created for the purposes set forth in this Agreement, and there shall be no express or implied dedication of the Easement for public purposes.

[SIGNATURE AND NOTARIZATION PAGE FOLLOWS]

Notary Public
My Commission Expires: _____

EXHIBIT A
LEGAL DESCRIPTION OF EASEMENT

[SEE ATTACHED]

REVIEW COMMENTS



Date: December 8, 2023

Project: Pikes Peak Taco – CUPSPR2023-04 – CUP Plan Set

Staff has determined the submitted Site Plan will **require revisions**.

For Municipal Code and Engineering Specification Reference, please visit:

- *City of Woodland Park Municipal Code (CWPMC):*
https://library.municode.com/co/woodland_park/codes/code_of_ordinances
- *City of Woodland Park Drainage Criteria Manual (CWPDCM):*
<https://city-woodlandpark.org/272/Drainage-Criteria-Manual>
- *City of Woodland Park Engineering Specifications (CWPES):*
<https://city-woodlandpark.org/273/Engineering-Specifications>

A majority of the following comments will need to be addressed when construction drawings are submitted.

Page Label	Comments	Reviewer
2 of 5	Please show plan for ADA ramps, stop sign, striping for this intersection.	Bschmitt
2 of 5	Please call out Loading and unloading areas and ensure it meets code section 18.39.808 of WP City Code	Cgates
2 of 5	Please call out any other proposed signs within site. (ie. site circulation signs. etc.)	Cgates
3 of 5	Stamped Engineering design will be required for walls over 4'	Bschmitt
3 of 5	What is the area detailed to be parking?	Skozurek
3 of 5	how will the water make a turn like that with out blowing out the other side of the ditch	Skozurek
4 of 5	A sewer main will need to be extended to the lot. Nearist sewer line is at the corner of morning Sun and HWY 24. A Wastewater report showing peak flows will need to be submitted to verify capacity within the City's Lift station.	Kwiley
4 of 5	8" sewer main required. Designed by licensed Engineer.	Kwiley
4 of 5	Tap size and fees will be determined from the WFU count. Will the building need fire suppression?	Kwiley
4 of 5	Public sewer main? 8" sewer main required to service this lot. The buildings service line is 6" in size	Kwiley
A1	Plan does not include any "Brown Mulch". Is this correct?	Cgates
A1	Please note that per section - 18.21.100 - Landscaping. Twenty-five percent of the lot size shall be landscaped with one-half the requirement abutting residentially zoned areas. (Ord. 692-1996 § 4(part))	Cgates
A2	Please include elevations (call out how tall building is, with measurements) on this sheet as well.	Cgates
A2	Building currently does not meet WP Code Section 18.33.180 H - Architectural Design Guidelines.	Cgates

I have also included an Adobe PDF of the Site Plan markups with the above comments noted.

Respectfully,

C. J. Gates

Senior Planner

(719) 687-5209

cgates@city-woodlandpark.org

Please call out Loading and unloading areas and ensure it meets code section 18.39.808 of WP City Code



WOODLAND PARK TYPE 1
SCALE: N.T.S.



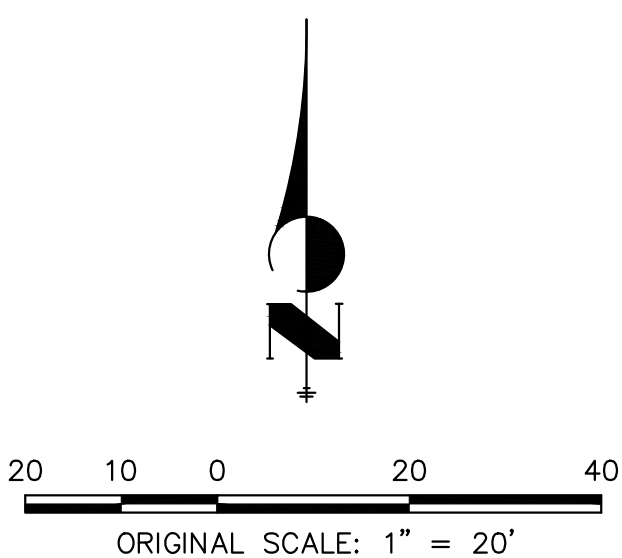
SCALE: N.T.S.



SCALE: N.T.S.

MOUNTABLE CURB
(CS TYPE 5)
SPILL C&G
CATCH C&G

UTILITIES NOT SHOWN FOR
CLARITY, SEE PRELIMINARY
UTILITY PLAN SHEET 4 FOR
EX./PROP. UTILITY
LOCATIONS.



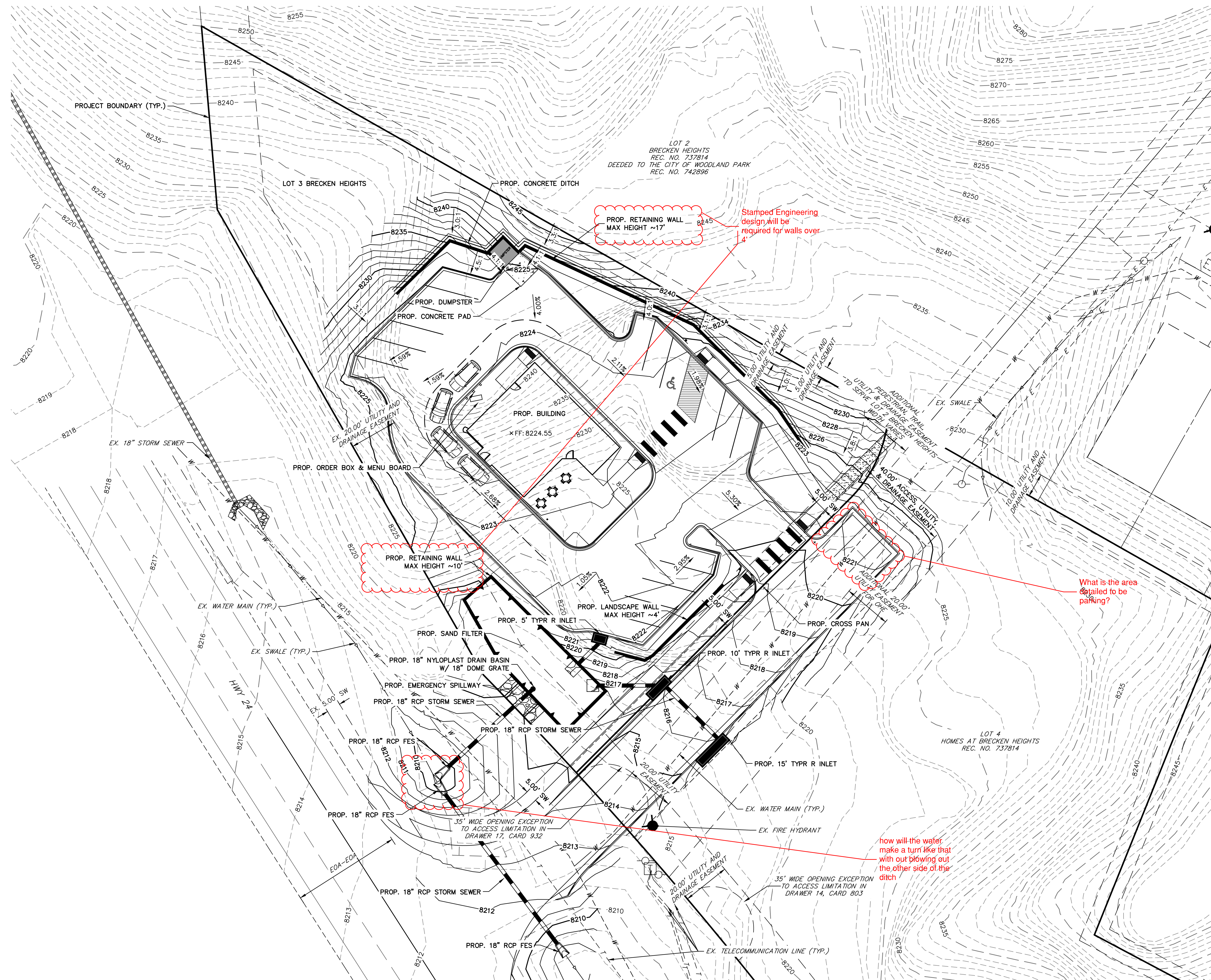
SITE PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 2 OF 5



Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

LOT 3 BRECKEN HEIGHTS

PRELIMINARY GRADING PLAN



PRELIMINARY GRADING PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 3 OF 5


J·R ENGINEERING
 A Westrian Company

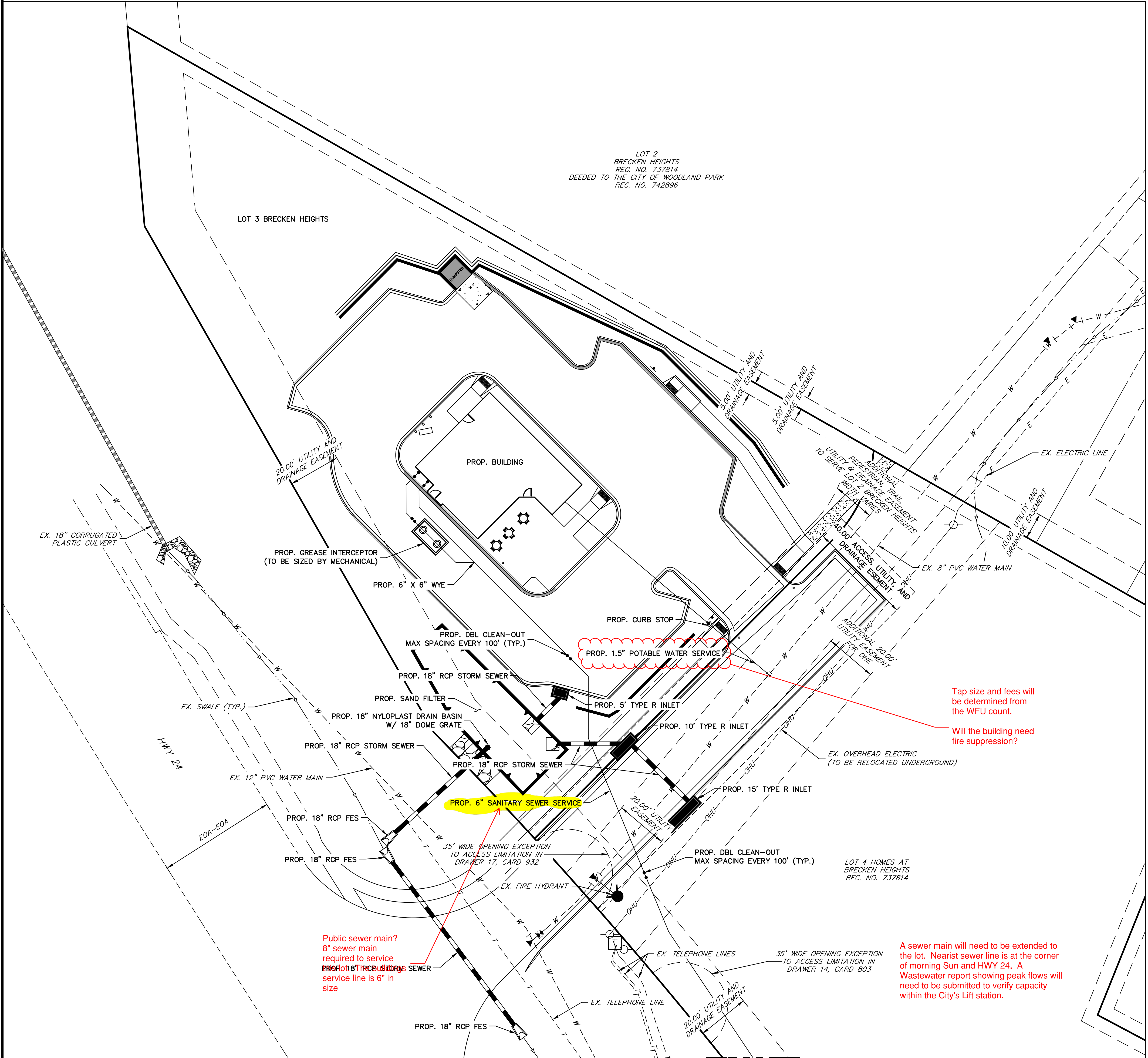
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.wireengineering.com

LOT 3 BRECKEN HEIGHTS

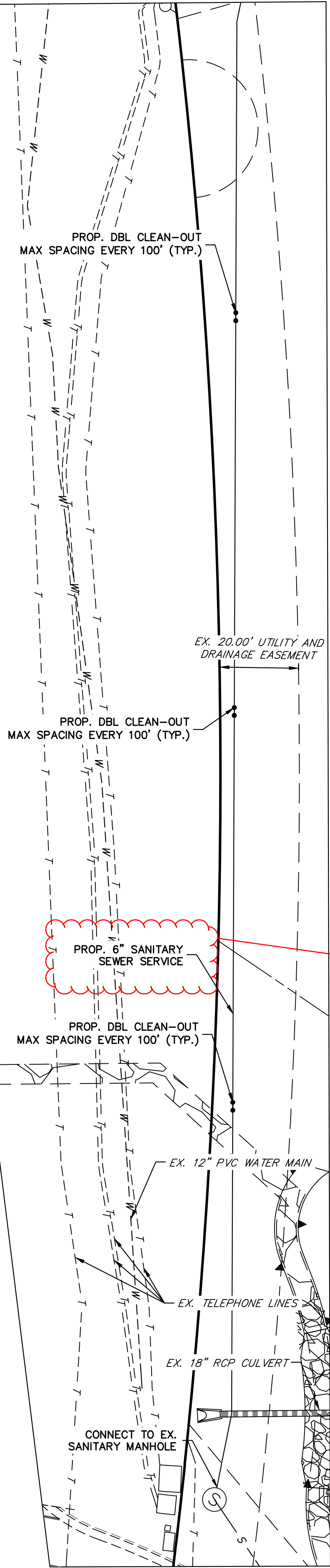
PRELIMINARY UTILITY PLAN

LOT 2
BRECKEN HEIGHTS
REC. NO. 737814
DEEDED TO THE CITY OF WOODLAND PARK
REC. NO. 742896

LOT 3 BRECKEN HEIGHTS



INSERT 1
SCALE: 1"=20'



NOTES

1. ANY SURFACE IMPROVEMENTS WITHIN EASEMENTS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
2. PARKING NOT SHOWN ON THIS SHEET FOR UTILITY VISIBILITY.

8" sewer main
required. Designed
by licensed Engineer.

Tap size and fees will
be determined from
the WFU count.

Will the building need
fire suppression?

Public sewer main?
8" sewer main
required to service
building. If
service line is 6" in
size

A sewer main will need to be extended to
the lot. Nearest sewer line is at the corner
of morning Sun and HWY 24. A
Wastewater report showing peak flows will
need to be submitted to verify capacity
within the City's Lift station.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

20 10 0 20 40
ORIGINAL SCALE: 1" = 20'

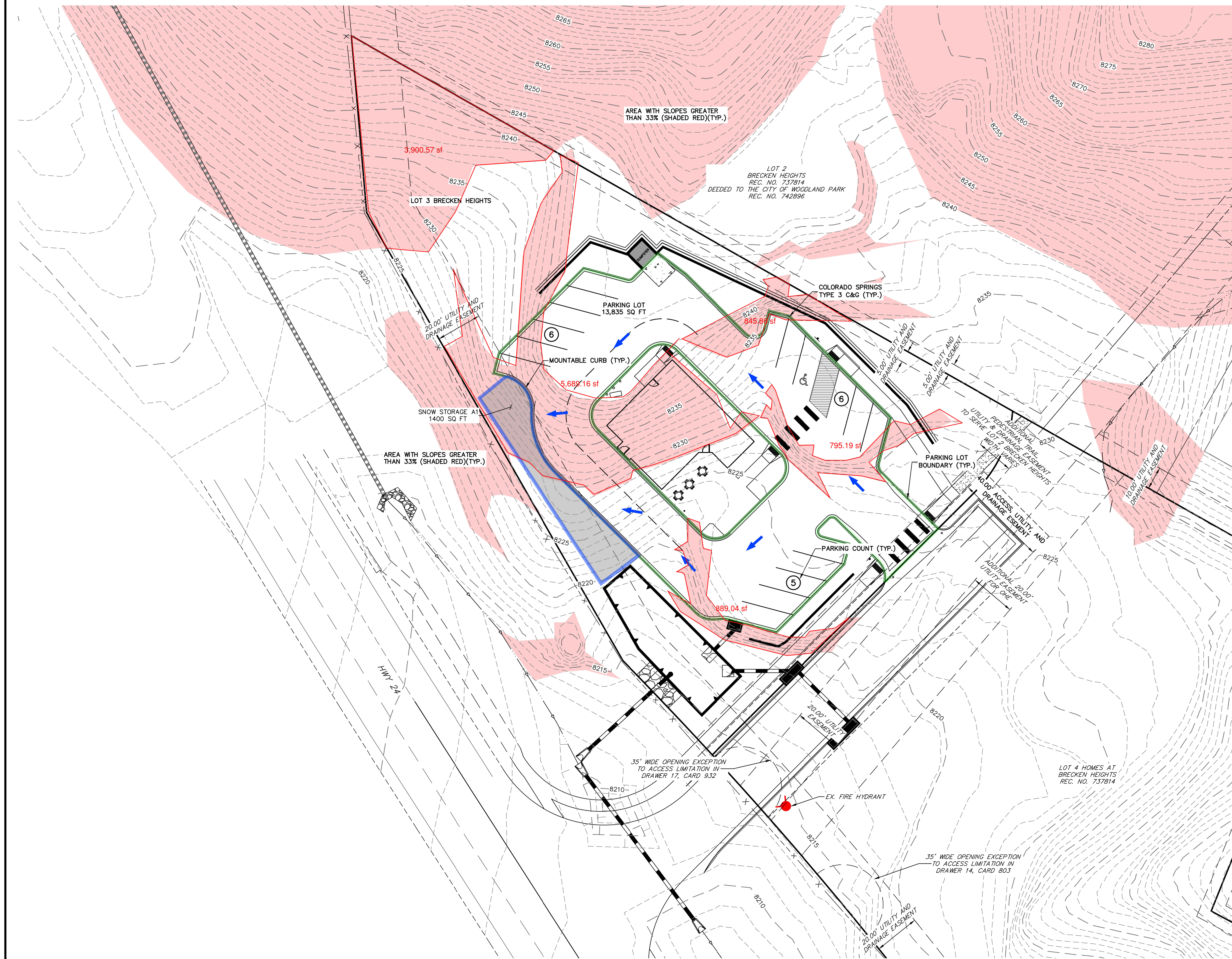
PRELIMINARY UTILITY PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 4 OF 5

J-R ENGINEERING
A Westrian Company

Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

LOT 3 BRECKEN HEIGHTS

SLOPE AND SNOW STORAGE EXHIBIT



NOTES

1. SNOW STORAGE DESIGN TO BE FINALIZED AT FINAL DESIGN.

LEGEND

SNOW PLOW PATH →

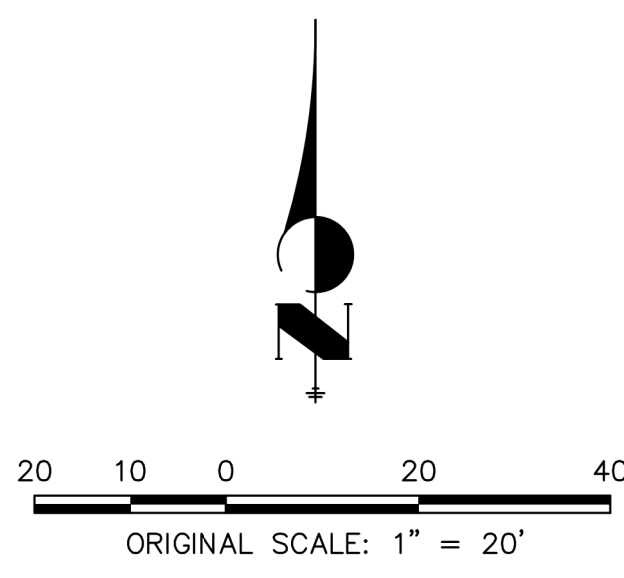
MOUNTABLE CURB ———

FIRE HYDRANT ●

SNOW STORAGE AREA [Blue Outline]

PARKING LOT BOUNDARY [Green Outline]

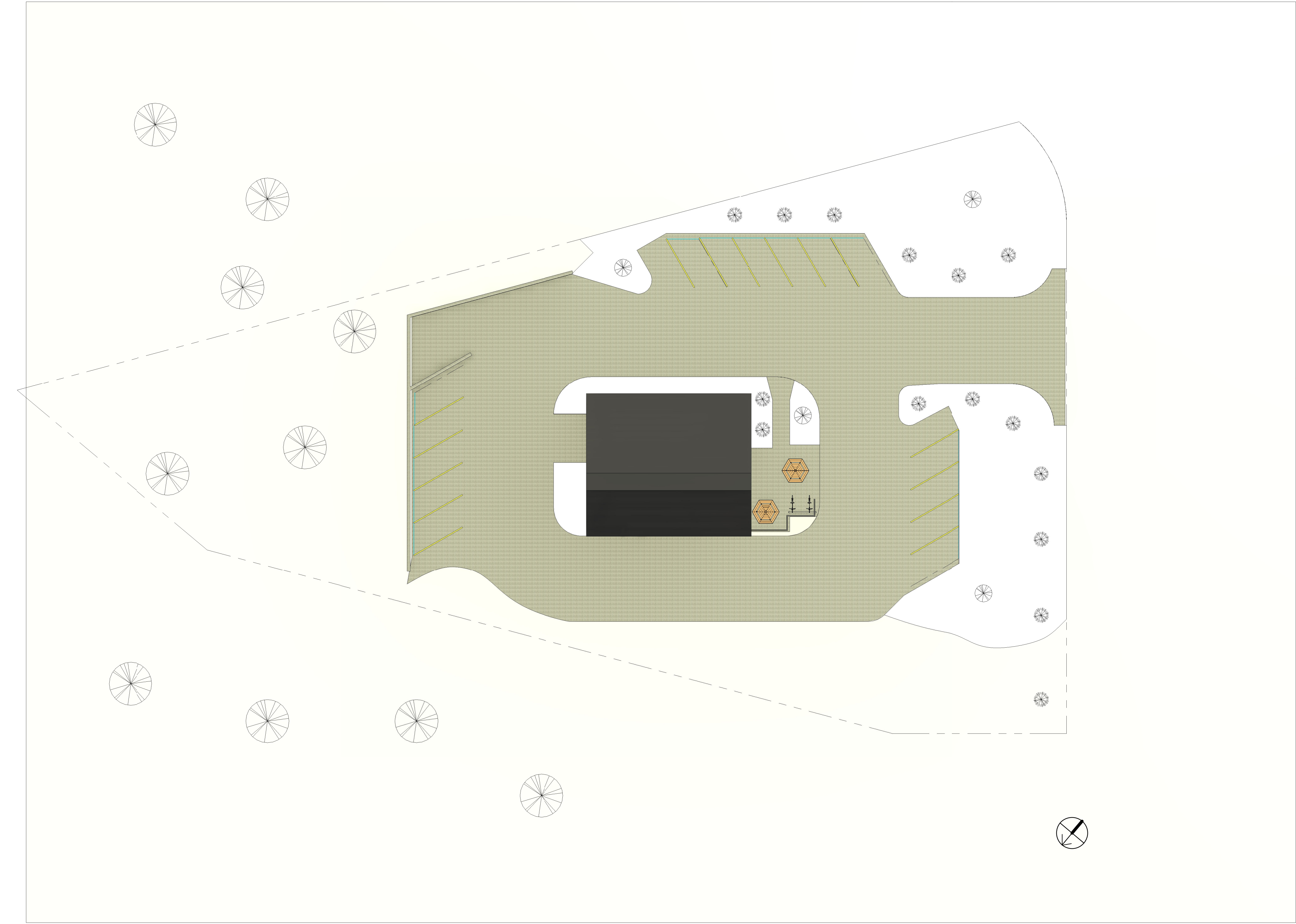
Lot 3 Brecken Heights			
Snow Storage			
Date	9/29/2023		
Created by	PAL		
Checked by	APL		
Storage Required = Paved Area x 0.1			
Parking Lot	(SQ. FT.)		
Parking area	13,835		
Island area	-		
Total Paved area	13,835		
Storage required	1,384	Area needed	
Storage area A1	1,400		-17
Storage area A2	-		
Total Storage	1,400		



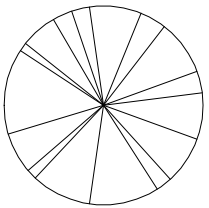
SLOPE & SNOW STORAGE EXHIBIT
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 5 OF 5

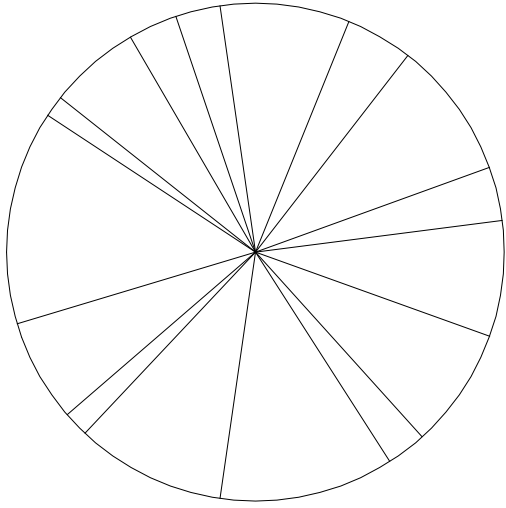


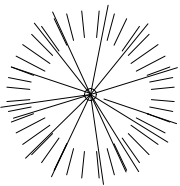
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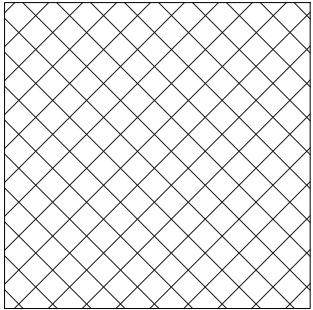


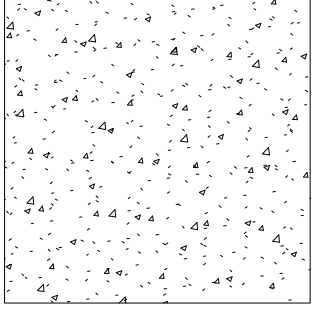
Material Legend

- 

Wildfire Black Gum Tree
- 

Existing Trees to remain not exist location
- 

Kark Foerster Grass
- 

Brown munch
- 

Concrete
- 

Brown block retaining wall

Plan does not include any "Brown Mulch". Is this correct?

Please note that per section - 18.21.100 - Landscaping. Twenty-five percent of the lot size shall be landscaped with one-half the requirement abutting residentially zoned areas. (Ord. 692-1996 § 4(part))

1 Site
1" = 20'-0"

CONTRACTOR
MORLEY
ENTERPRISES



719-330-0259
1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909

PIKES PEAK TACO
Woodlan Park, CO

Current Revisions

Landscaping

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker

A1

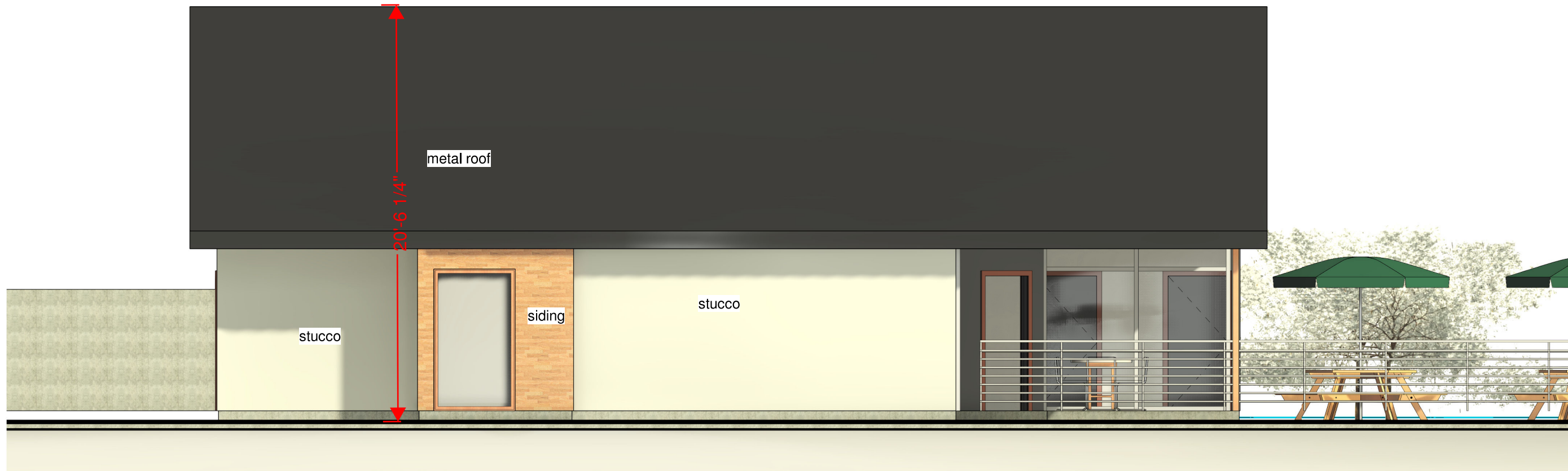
Scale As indicated



STUCCO: ELITE STUCCO 18 COCONUT BY OMEGA # 9314 AFCFC FINE TEXTURE
SIDING: Nicjiha VintageWood Cement siding cedar
TRIM PAINT: HARDIE BOARD PAINTED BLACK
METAL ROOF: BLACK
GUTTER COLOR: BLACK TO MATCH METAL ROOF
CONCRETE COLOR: STANDARD CONCRETE NO ADDED COLOR

Please include elevations (call out how tall building is, with measurements) on this sheet as well.

Building currently does not meet WP Code Section 18.33.180 H - Architectural Design Guidelines.



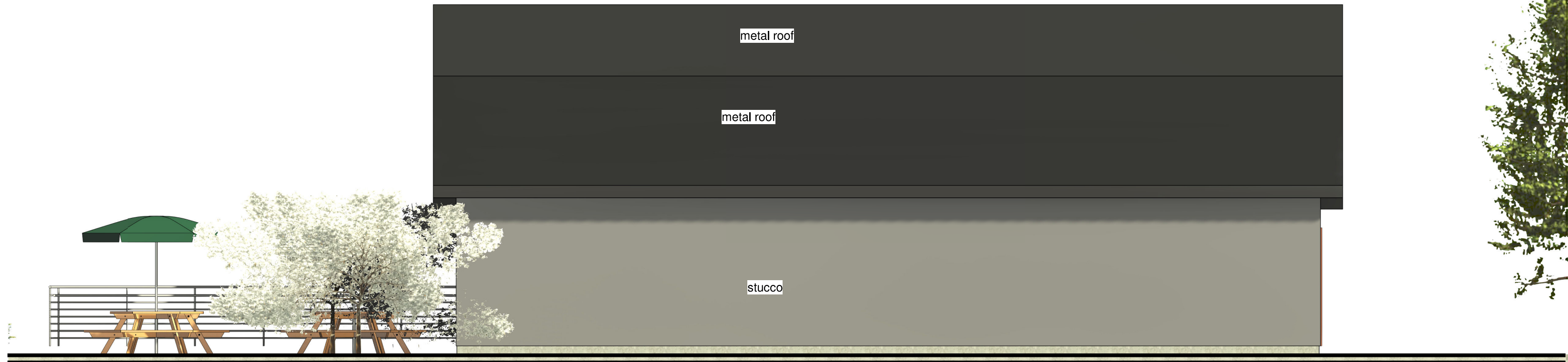
③ South
3/16" = 1'-0"



① East
3/16" = 1'-0"



④ West
3/16" = 1'-0"



② North
3/16" = 1'-0"

CONTRACTOR
MORLEY
ENTERPRISES



719-330-0259

1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909

PIKES PEAK TACO

Woodlan Park, CO

Current Revisions

Concept Plan

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker

A2

Scale 3/16" = 1'-0"

REVIEW COMMENTS



Date: December 8, 2023

Project: Pikes Peak Taco – CUPSPR2023-04 – Preliminary Drainage Report

Staff has determined the submitted Site Plan will **require revisions**.

For Municipal Code and Engineering Specification Reference, please visit:

- *City of Woodland Park Municipal Code (CWPMC):*
https://library.municode.com/co/woodland_park/codes/code_of_ordinances
- *City of Woodland Park Drainage Criteria Manual (CWPDCM):*
<https://city-woodlandpark.org/272/Drainage-Criteria-Manual>
- *City of Woodland Park Engineering Specifications (CWPES):*
<https://city-woodlandpark.org/273/Engineering-Specifications>

A majority of the following comments will need to be addressed when construction drawings are submitted.

Page Label	Comments	Reviewer
1 of 1	Inlets and pond will need to be sized for future hammerhead turnaround	Bschmitt

I have also included an Adobe PDF of the Site Plan markups with the above comments noted.

Respectfully,

C. J. Gates

Senior Planner

(719) 687-5209

cgates@city-woodlandpark.org

BRECKEN HEIGHTS LOT 3 PROPOSED DRAINAGE MAP

LEGEND

- BASIN ID**
A: SUB-BASIN DESIGNATION
B: AREA (AC)
C: 5 YEAR STORM COEFFICIENT
D: 100 YEAR STORM COEFFICIENT
- DRAINAGE DISCHARGE**
DESIGN POINT
- PROPOSED FLOW DIRECTION**
- HISTORIC FLOW DIRECTION**
- EXISTING DRAINAGE BASIN**
- PROPOSED DRAINAGE BASIN**
- EXISTING STORM SEWER**
- PROPOSED STORM SEWER**

BASIN SUMMARY TABLE

Tributary Sub-basin	Area (acres)	Percent Impervious	C _s	C ₁₀₀	t _c (min)	Q _s (cfs)	Q ₁₀₀ (cfs)
A	0.16	0%	0.08	0.35	6.9	0.0	0.5
B	0.42	70%	0.65	0.77	5.8	1.1	2.7
C	0.23	58%	0.55	0.70	5.0	0.6	1.4
D	0.08	9%	0.15	0.40	5.0	0.0	0.3
E	0.02	66%	0.59	0.73	5.0	0.0	0.1
OS1A	0.60	0%	0.08	0.35	7.7	0.2	1.6
OS1B	3.36	0%	0.08	0.35	12.7	0.7	6.8
OS1C	0.08	0%	0.08	0.35	5.9	0.0	0.2
OS2	0.18	22%	0.26	0.49	6.6	0.2	0.7
OS3	0.06	67%	0.63	0.76	5.0	0.2	0.4

DESIGN POINT SUMMARY TABLE

DP	Q _s		Q ₁₀₀	
	Total	Q _s	Total	Q ₁₀₀
1	0.2	1.6		
2	0.0	0.5		
2.1	0.2	2.0		
3	1.1	2.7		
4	0.7	6.8		
5	0.2	0.7		
5.1	0.9	7.3		
6	0.0	0.2		
7	0.6	1.4		
8	0.2	0.4		
8.1	0.7	2.0		
8.2	1.4	8.7		
9	0.0	0.3		
9.1	1.4	8.9		
9.2	0.0	0.8		
10	0.0	0.1		

PROPOSED DRAINAGE MAP
BRECKEN HEIGHTS LOT 3
JOB NO. 25198.03
09/27/2023
SHEET 1 OF 1

J-R ENGINEERING
A Westrian Company
Centennial 303-740-9393 • Colorado Springs 719-593-2505
Fort Collins 970-491-9888 • www.jrengineering.com

	BASIN ID A: SUB-BASIN DESIGNATION B: AREA (AC) C: 5 YEAR STORM COEFFICIENT D: 100 YEAR STORM COEFFICIENT
	DRAINAGE DISCHARGE DESIGN POINT PROPOSED FLOW DIRECTION
	HISTORIC FLOW DIRECTION
	EXISTING DRAINAGE BASIN
	PROPOSED DRAINAGE BASIN
	EXISTING STORM SEWER
	PROPOSED STORM SEWER

Tributary Sub-basin	Area (acres)	Percent Impervious	C ₅	C ₁₀₀	t _c (min)	Q ₅ (cfs)	Q ₁₀₀ (cfs)
A	0.16	0%	0.08	0.35	6.9	0.0	0.5
B	0.42	70%	0.65	0.77	5.8	1.1	2.7
C	0.23	58%	0.55	0.70	5.0	0.6	1.4
D	0.08	9%	0.15	0.40	5.0	0.0	0.3
E	0.02	66%	0.59	0.73	5.0	0.0	0.1
OS1A	0.60	0%	0.08	0.35	7.7	0.2	1.6
OS1B	3.36	0%	0.08	0.35	12.7	0.7	6.8
OS1C	0.08	0%	0.08	0.35	5.9	0.0	0.2
OS2	0.18	22%	0.26	0.49	6.6	0.2	0.7
OS3	0.06	67%	0.63	0.76	5.0	0.2	0.4

DP	Q ₆	Q ₁₀₀
	Total	Total
1	0.2	1.6
2	0.0	0.5
2.1	0.2	2.0
3	1.1	2.7
4	0.7	6.8
5	0.2	0.7
5.1	0.9	7.3
6	0.0	0.2
7	0.6	1.4
8	0.2	0.4
8.1	0.7	2.0
8.2	1.4	8.7
9	0.0	0.3
9.1	1.4	8.9
9.2	0.0	0.8
10	0.0	0.1



J-R ENGINEERING
A Westrian Company

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Fort Collins 970-491-9888 • www.jengineering.com

REVIEW COMMENTS



Date: December 8, 2023

Project: Pikes Peak Taco – CUPSPR2023-04 – Traffic Memo

Staff has determined the submitted Site Plan will **require revisions**.

For Municipal Code and Engineering Specification Reference, please visit:

- *City of Woodland Park Municipal Code (CWPMC):*
https://library.municode.com/co/woodland_park/codes/code_of_ordinances
- *City of Woodland Park Drainage Criteria Manual (CWPDCM):*
<https://city-woodlandpark.org/272/Drainage-Criteria-Manual>
- *City of Woodland Park Engineering Specifications (CWPES):*
<https://city-woodlandpark.org/273/Engineering-Specifications>

A majority of the following comments will need to be addressed when construction drawings are submitted.

Page Label	Comments	Reviewer
3	CDOT will need to review and approve prior to City Approval	Bschmitt
1 of 1	Streets shall be laid out so as to intersect as nearly as possible at right angles. A proposed intersection of two new streets at an angle of less than seventy-five degrees shall not be acceptable. An oblique street should be curved approaching an intersection and should be approximately at right angles for at least one hundred feet therefrom. Not more than two streets shall intersect at any one point unless specifically approved by the city. (CWPMC 17.40.130 A)	Bschmitt
1 of 1	Proposed new intersections along one side of an existing street shall whenever practicable, coincide with any existing intersections on the opposite side of such street. Street jogs with center line offsets of less than one hundred fifty feet shall not be permitted, except where the intersected street has separated dual drives without median breaks at either intersection. Where local streets intersect arterial streets, their alignment shall be continuous. There shall be eight hundred feet between intersections along arterial streets (CWPMC 17.40.130 B)	Bschmitt
1 of 1	Please show sidewalk connections from sites/trail links to existing Hwy 24 sidewalk	Bschmitt
1 of 1	Proposed parking needs to be shown to ensure no conflict with turnaround design	Bschmitt
1 of 1	Please reconfigure path to instead be a sidewalk connection between Brecken heights (along Morning sun) to Hwy 24	Bschmitt

I have also included an Adobe PDF of the Site Plan markups with the above comments noted.

Respectfully,

C. J. Gates

Senior Planner

(719) 687-5209

cgates@city-woodlandpark.org

Executive Summary

JR Engineering (JR) has completed a review of the traffic impacts resulting from the proposed development of Brecken Heights Lots 3 and 4 (Project) in the City of Woodland Park, Colorado (City).

The objectives of this Traffic Memorandum (Memo) are:

- Estimate site-generated traffic and route trips onto adjacent streets
- Analyze 2024 (Opening Day) and 2045 (Future Year) traffic operations
- Make recommendations for improvements to accommodate future traffic volumes

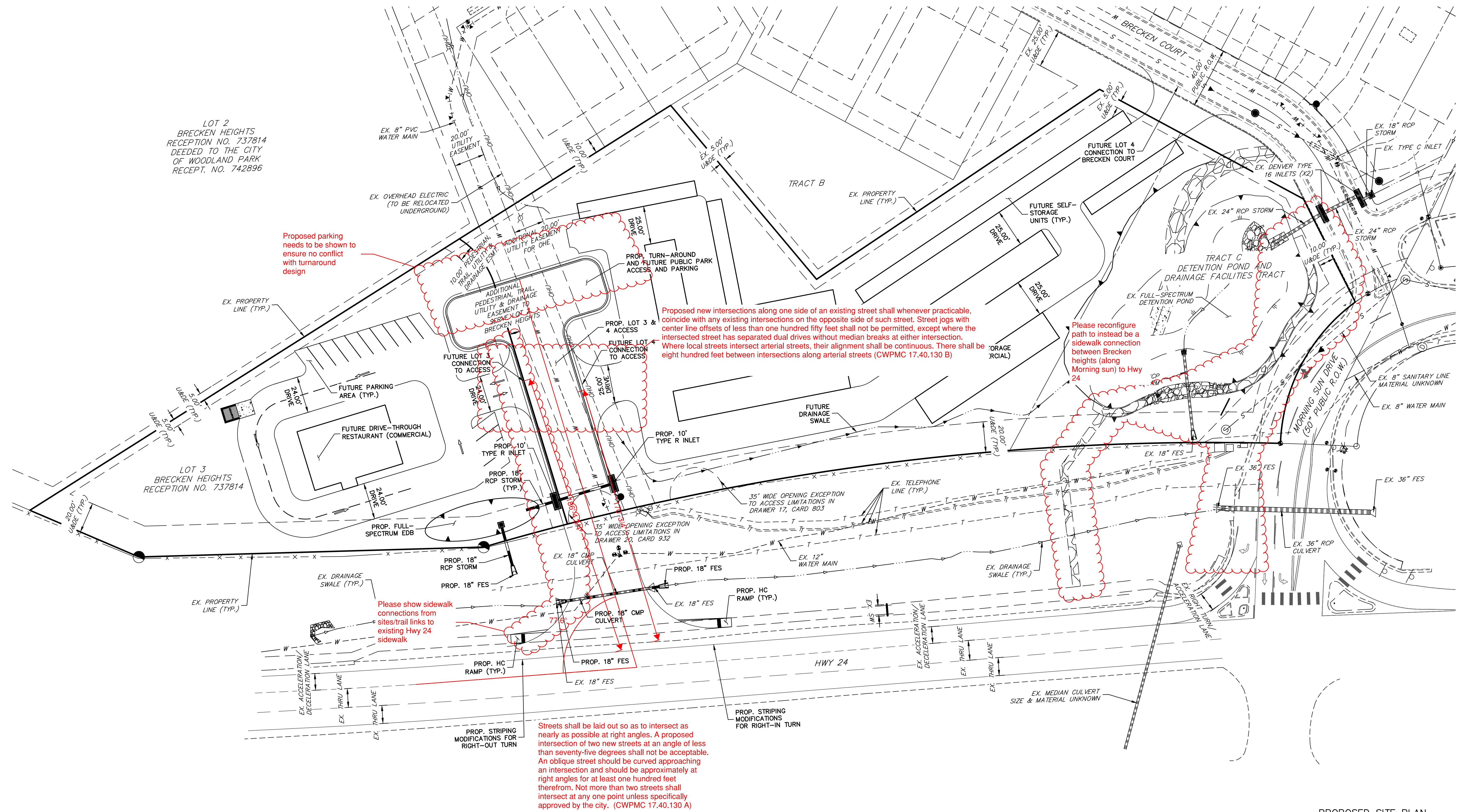
Key Findings of this Traffic Memorandum

- The right-out movement onto US 24 is expected to operate at LOS C or better in all scenarios.
- No queuing issues were identified for the right-out movement.
- JR recommends that striping on US 24 be modified to include deceleration and acceleration lanes at the site access.

CDOT will need to review and approve prior to City Approval

BRECKEN HEIGHTS LOT 3 & 4 - ACCESS

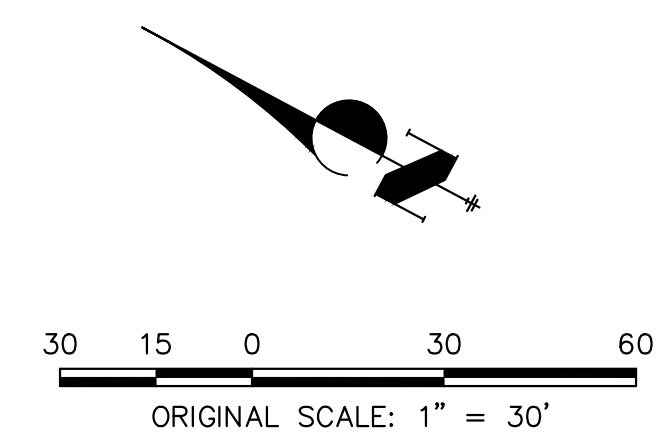
PROPOSED SITE PLAN



PROPOSED SITE PLAN
BRECKEN HEIGHTS
LOT 3 & 4 - ACCESS
JOB NO. 25198.02
06/16/2023
SHEET 1 OF 1



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Fort Collins 970-491-9888 • www.jrengineering.com



REVIEW COMMENTS



Date: December 8, 2023

Project: Pikes Peak Taco – CUPSPR2023-04 – Draft Utility Easement and Maintenance Agreement & Draft Easement and Maintenance Agreement

Staff has determined the submitted Site Plan will **require revisions**.

For Municipal Code and Engineering Specification Reference, please visit:

- *City of Woodland Park Municipal Code (CWPMC):*
https://library.municode.com/co/woodland_park/codes/code_of_ordinances
- *City of Woodland Park Drainage Criteria Manual (CWPDCM):*
<https://city-woodlandpark.org/272/Drainage-Criteria-Manual>
- *City of Woodland Park Engineering Specifications (CWPES):*
<https://city-woodlandpark.org/273/Engineering-Specifications>

A majority of the following comments will need to be addressed when construction drawings are submitted.

Page Label	Comments	Reviewer
1	This must say "Brecken Heights, LLC as this is who the Teller Co. Assessors has for the property owner of Lot 4.	Cgates
1	This must say "Brecken Heights, LLC as this is who the Teller Co. Assessors has for the property owner of Lot 4.	Cgates

I have also included an Adobe PDF of the Site Plan markups with the above comments noted.

Respectfully,

C. J. Gates

Senior Planner
(719) 687-5209

cgates@city-woodlandpark.org

This must say
"Brecken Heights,
LLC as this is who the
Teller Co. Assessors
has for the property
owner of Lot 4.

UTILITY EASEMENT AND MAINTENANCE AGREEMENT

~~UTILITY EASEMENT AND MAINTENANCE AGREEMENT~~ is executed as of _____, 2023, by and between ~~MORALES ENTERPRISES LLC~~, a Colorado limited liability company ("Morales") and ~~MBI CONTRACTORS INC.~~, a Colorado corporation ("MBI").

RECITALS

WHEREAS, MORALES is the current owner of the real property described as follows ("Lot 3"):

LOT 3 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MBI is the current owner of the real property described as follows ("Lot 4", and together with Lot 3, the "Lots" or each a "Lot"):

LOT 4 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, the Owner of Lot 4 desires to grant a utility easement over a portion of Lot 4 for the benefit of Lot 3, upon the terms and conditions set forth herein.

NOW THEREFORE, the parties hereto, as owners of Lot 3 and Lot 4, respectively, and on behalf of their respective successors and assigns, hereby establish the following:

**ARTICLE I
DEFINITIONS; INCORPORATION OF RECITALS**

1.1 Incorporation. The Recitals set forth above and all Exhibits attached hereto are hereby incorporated herein as if fully set forth in this Article.

1.2 Definitions.

a. Owner. The term Owner, as used in this Agreement, shall include MORALES and MBI, and any successors in interest to the fee ownership of each Lot. "Owner" does not include a person or entity who holds title to Lot 3 or Lot 4 merely as security for the performance of an obligation, such as a mortgagee or trustee under a deed of trust or a person who merely has an equitable interest in any Lot or any portion thereof, under a contract of purchase.

b. Permittee. "Permittee" shall mean and refer to any employees, licensees, invitees, guests, tenants, licensees, visitors, agents, occupants, contractors, customers or concessionaires of the following: (i) an Owner, (ii) the tenant of an Owner or (iii) any other person or entity occupying the Lot of an Owner with the express or implied consent of such Owner.

This must say
"Brecken Heights,
LLC as this is who the
Teller Co. Assessors
has for the property
owner of Lot 4.

ACCESS EASEMENT AND MAINTENANCE AGREEMENT

This ACCESS EASEMENT AND MAINTENANCE AGREEMENT is executed as of _____, 2023, by and between ~~MORALES ENTERPRISES LLC~~, a Colorado limited liability company ("Morales") and **MBI CONTRACTORS INC.**, a Colorado corporation ("MBI").

RECITALS

WHEREAS, the City of Woodland Park (the "City") is the current owner of the real property described as follows ("Lot 2"):

LOT 2 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MORALES is the current owner of the real property described as follows ("Lot 3"):

LOT 3 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MBI is the current owner of the real property described as follows ("Lot 4", and together with Lot 2 and Lot 3, the "Lots" or each a "Lot"):

LOT 4 BRECKEN HEIGHTS, COUNTY OF TELLER, STATE OF COLORADO.

WHEREAS, MBI is in the process of developing Lot 4, as further depicted on the preliminary site plan (the "Site Plan"), a copy of which is attached hereto as Exhibit A and incorporated herein by this reference.

WHEREAS, in connection with the filing and approval of the Site Plan the respective owner of Lot 4 desires to: (i) grant an access easement over a portion of Lot 4 for the benefit of Lot 3; and (ii) dedicate to the City certain rights to said access easement for the benefit of the public for pedestrian, trail, utility and drainage purposes, upon the terms and conditions set forth herein.

NOW THEREFORE, the parties hereto, as owners of Lot 3 and Lot 4, respectively, and on behalf of their respective successors and assigns, hereby establish the following:

ARTICLE I DEFINITIONS; INCORPORATION OF RECITALS

1.1 Incorporation. The Recitals set forth above and all Exhibits attached hereto are hereby incorporated herein as if fully set forth in this Article.



COLORADO

Department of Transportation

Region 2 - Permits
5615 Wills Blvd.
Pueblo CO 81008

November 17, 2023

SH 24A
City of Woodland Park

Christopher Gates, Project Manager & Planner
City of Woodland Park
220 W. South Ave.
Woodland Park, CO 80866

RE: Brecken Heights | Lots 3 & 4, Lot 3 Pike Peak Taco, Piles Peak Taco CUPSPR2-023-04

Dear CJ,

I am in receipt for a request for comments regarding the above mentioned planning referrals. The Brecken Heights development will consist of a 1,200-SF Pike Peak Taco Restaurant on Lot 3 and a 165-unit Storage Unit Facility on Lot 4. Lot 3's parcel idID. No. is R0057345 and Lot 4 ID. No. is R0057564 located along SH24A at approximately 425-feet west of the intersection of SH24A and Mornign Sun Dr. in Woodland Park. Both parcels will share access to an existing break in the Access Control Line along SH24A at approximate Mile Market of 286.88. There are two out parcels noted as Tractc B and Tract C that are part of this development but not mentioned in the use. CDOT staff comments are as follows;

Traffic:

The Traffic Impact Study for Brecken Heights Lots 3 & 4 dated May 10, 2023 has been reviewed by a CDOT Traffic Engineer and their comments are as follows.

- The radii for the access are large and more than double the crossing distance for multi use trail along US24. I recognize the access must accommodate a truck / trailer. Can the width of the access and radii be reduced?
- Also, CDOT will not require striping changes on US24. The existing striping functions as a combine accel / decel lane already.
- Site plan showing a reduced access width and reduced radii OR an exhibit showing turning movement into and out of the access warranting the size. The exhibit should demonstrate the most common unit using the storage unit - not a tractor trailer.
- Please update the site plan and the study.

HydraulicsL

The Final Drainage Report Date June 15, 2023 and the Preliminary Drainage Report dated September 27, 2023 for Brecken Heights Lots 3 & 4 been reviewed by a CDOT Hydraulics Engineer and their comments are as follows.

- Report Comments: Does the existing median culvert near DP 7.3 contribute flows to DP 7.3? If so, what are the impacts to the 36" RCP? The proposed public 18" CMP at DP 2.2 has a headwater to depth ratio (HW/D) exceeding 2. The CDOT Drainage Design Manual (DDM) requires a maximum HW/D of 2 for culverts with diameters of less than 36". The report indicates that the future spillway will outfall directly into the adjacent US 24 ditch and



that freeboard will be maintained in the spillway. Please verify if freeboard is maintained in the US 24 ditch during the scenario when the spillway is to be utilized (i.e. pond overtopping).

- ***Please note: This review ended up only being for Lot 3 (the previous review included both Lots 3 and 4). The following comments pertain to Lot 3. The previous comments from 7/31/23 still apply:
- Report Comments: 1) Included hydraulic calculations for Final Design. It cannot be verified if the proposed 18" culvert adjacent to CDOT ROW has adequate HW/D and outfall protection.
- 2) The report indicates the emergency overflow path will be detailed at final design. Verify that there are no impacts to CDOT facilities as a result of overflow events. This includes capacity of the ditch adjacent to Hwy 24 and any overtopping of culverts as a result of the increased spillway flows.
- 3) Suggest labeling the ROW.
- Please revise and resubmit.

Right of Way:

The documents provided were reviewed by CDOT Right of Way and the following comment apply.

- ROW has no comments.
- A 35-foot A-Line break exists all construction is required to be within this 35-foot break.

Environmental:

We are currently reviewing the submitted documents for comments.

- Comments will be forthcoming.

Access:

The various submittals have been reviewed by CDOT Access and there will be impacts to CDOT Infrastructure. My comments are as follows.

- Section 1.4(1) of the State Highway Access Code, states in part that no person, shall construct any access providing direct vehicular movement to or from any state highway from or to property in close proximity or abutting a state highway without an access permit issued by the designated issuing authority with the written approval of the Department.
- Under Section 2.6 (Change in Land Use and Access Use) of the State Highway Access Code, states the requirements of a new access permit. It states in part that if any significant changes are made or will be made in the use of the property which will affect access operation, traffic volume increases by 20% and or vehicle type, the permittee or property owner will coordinate with the local authority and the Department to determine if a new access permit and modifications to the access are required.
- A CDOT Access Permit will be required for these developments for a shared access at the A-Line opening per CDOT Right of Way Drawings.
- A maximum width for the access opening is to reflect the existing Access Control Line Opening of 35-feet. The access road is required to be located at the exact same open spot and cannot be relocated.
- Shared access easements are required between both development prior to making application for access for the single share use access.
- Radii in the supplied drawing is too large and will be detailed in the access permit of 25-radius from the 35-foot A-line opening is required.



- Special consideration shall be taken at the roadway connection to Lot #2 for runoff and natural material flows for stabilization of these runoffs.
- Stabilization of curb and gutter ends is required to be shown in the plans the flows to CDOT ROW.
- Proposed curb line appears to extend to far into CDOT ROW for the least amount of impact tot eh proposed slope grading.
- Private pipe is not allowed to discharge or be located within CDOT ROW from the detention basin. This could result in a separate Inter Governmental Agreement or re-engineering of this structure is required.
- A cleaning program and schedule is required to be submitted and approved by CDOT Hydraulics for the detention basin.
- Access Application is not complete. We are missing copies pf the Property Maps for this development location. These may be taken from the from the Assessor's office.
- Roadway improvements may be required and detailed in the terms and conditions of the access permits.
- Drainage to CDOT ROW cannot be beyond historical rates of flow. See Hydraulic comments.

Additionally,

- On-premise and off-premise signing shall comply with the current Colorado Outdoor Advertising Act, sections 43-1-401 to 421, C.R.S., and all rules and regulations pertaining to outdoor advertising. Please contact Mr. Todd Ausbun at (719) 696-1403 for any questions regarding advertising devices.
- Any utility work within the state highway right of way will require a utility permit from the CDOT. Information for obtaining a utility permit can also be obtained by contacting Mr. Ausbun.

Please contact me in Pueblo at (719) 546-5732 or arthur.gonzales@state.co.us with any questions.

Sincerely,



Arthur Gonzales, R2 - Access Manager

Xc: /file



From: [Brooks Kaufman](#)
To: [Christopher Gates](#)
Subject: RE: Christopher Gates shared the folder "Pikes Peak Taco - CUPSPR2023-04" with you
Date: Tuesday, November 28, 2023 8:02:11 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image011.png](#)
[image010.png](#)
[Bldr-Dev Service Requirements - Aug 2022 Final.pdf](#)
[APPROVAL STANDARDS CT Cabinet 800AMP.pdf](#)
[CORE Comments Pikes Peak Taco CUP Plan Set rev1 11-28-23.pdf](#)

[EXTERNAL]

Dear Mr. Gates

CORE Electric Cooperative does not approve the CUP. The applicant will be required to revise the retaining walls as there not allowed to encroach into the utility easements. In addition provide transformer and metering location per CORE requirements.

Respectfully

Brooks Kaufman

Lands and Rights of Way Manager

800.332.9540 MAIN
720.733.5493 DIRECT
303.912.0765 MOBILE

www.core.coop.

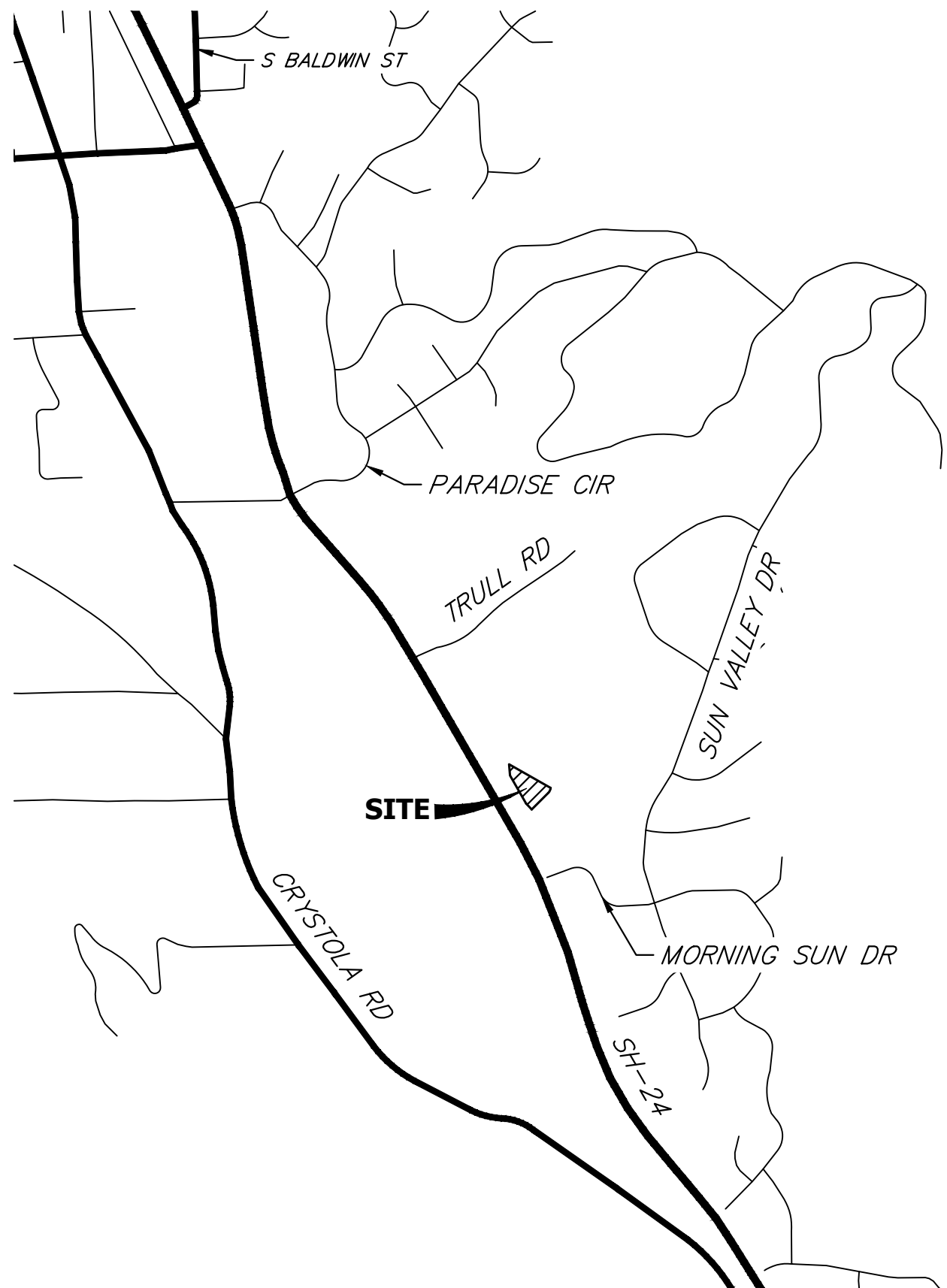


From: Christopher Gates <cgates@city-woodlandpark.org>

Sent: Wednesday, November 1, 2023 3:50 PM

To: Tyler Lambert <tlambert@netellerfire.org>; arthur.gonzales@state.co.us;
adam.lancaster@state.co.us; Brooks Kaufman <BKaufman@core.coop>;
richie.bailey@blackhillscorp.com; patricia.riber@blackhillscorp.com; ken.davis2@lumen.com

LOT 3 BRECKEN HEIGHTS
CITY OF WOODLAND PARK, COUNTY OF TELLER, STATE OF COLORADO
TACO SHOP CONDITIONAL USE PRELIMINARY SITE PLAN



VICINITY MAP
SCALE: 1"=1000'



SHEET INDEX		
1	-	COVER SHEET
2	-	SITE PLAN
3	-	PRELIMINARY GRADING PLAN
4	-	PRELIMINARY UTILITY PLAN
5	-	SLOPE & SNOW STORAGE EXHIBIT

APPROVAL CONDITIONS AND RESTRICTIONS

APPROVAL

I HEREBY CERTIFY THAT I AM THE CITY PLANNER FOR THE CITY OF WOODLAND PARK, COLORADO, AND THAT I ATTEST THAT THIS PRELIMINARY PLAT/SITE PLAN WAS APPROVED, SUBJECT TO CONDITIONS, AS CONTAINED HEREIN, CITY OF WOODLAND PARK, PLANNING DEPARTMENT, BY THE CITY OF CITY OF WOODLAND PARK PLANNING COMMISSION ON, 20____, AFTER A PROPERLY CONDUCTED PUBLIC HEARING BY THE CITY COUNCIL HELD ON _____, 20____.

DATE

CITY PLANNER
CITY OF WOODLAND PARK

SITE DATA

OWNER / DEVELOPER: MORALES ENTERPRISES, LLC
PO BOX 501
WOODLAND PARK, CO 80866
719-306-8508
PIKES PEAK TACO, INC

LIMITS OF DISTURBANCE AREA: 1.25 ACRES

TOTAL SITE AREA: 0.92 ACRES

SCHEDULE OF DEVELOPMENT: SPRING 2024

CURRENT ZONING: CC - COMMUNITY COMMERCIAL

EXISTING USE: VACANT

PROPOSED USE: 1,650 SF DRIVE THRU MEXICAN RESTAURANT

IMPERVIOUS SITE AREA: IMPERVIOUS EXISTING: 0 SF
IMPERVIOUS NEW: 0.42 AC
% OPEN SPACE (PERVIOUS): 53.5%

MAX BUILDING HEIGHT: 30-FEET FOR PRIMARY STRUCTURE

SETBACKS: FRONT 25' MIN
REAR 25' MIN
SIDE YARD 8' MIN

ENGINEER: JR ENGINEERING, LLC
5475 TECH CENTER DRIVE, SUITE 235
COLORADO SPRINGS, CO 80919
719-630-0559

ARCHITECT: MORLEY ENTERPRISES
1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909
719-330-0259

SURVEYOR: ROCKY MOUNTAIN LAND SERVICES
4465 NORTHPARK DRIVE STE 303
COLORADO SPRINGS, CO 80907
719-502-9738

PLANNER: BIC RESTORATION
1355 BATES DR
COLORADO SPRINGS, CO 80909
719-314-9311

LANDSCAPE DESIGN: MORLEY ENTERPRISES
1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909
719-330-0259

PARKING DATA

1 PARKING SPACE PER 100 SF OF BUILDING

BUILDING SF = 1,650

PARKING SPOTS REQUIRED: 17
PARKING SPOTS PROVIDED: 17

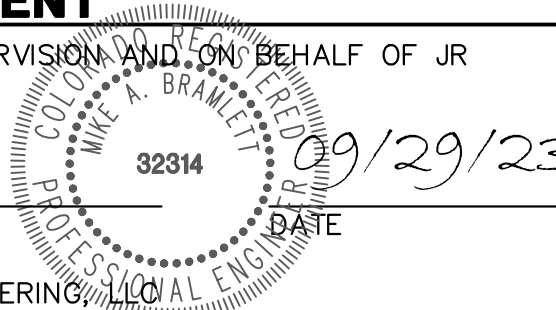


ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

Mike A. Bramlett
MIKE A. BRAMLETT, P.E.
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING, LLC



LOT 3 BRECKEN HEIGHTS

COVER SHEET

SHEET 1 OF 5

JOB NO. 25198.03

BY		DATE		No.	REVISION
H-SCALE	V-SCALE	DATE	DESIGNED BY		
1"=1000'	N/A	09/29/23	PAL		
			PAL		

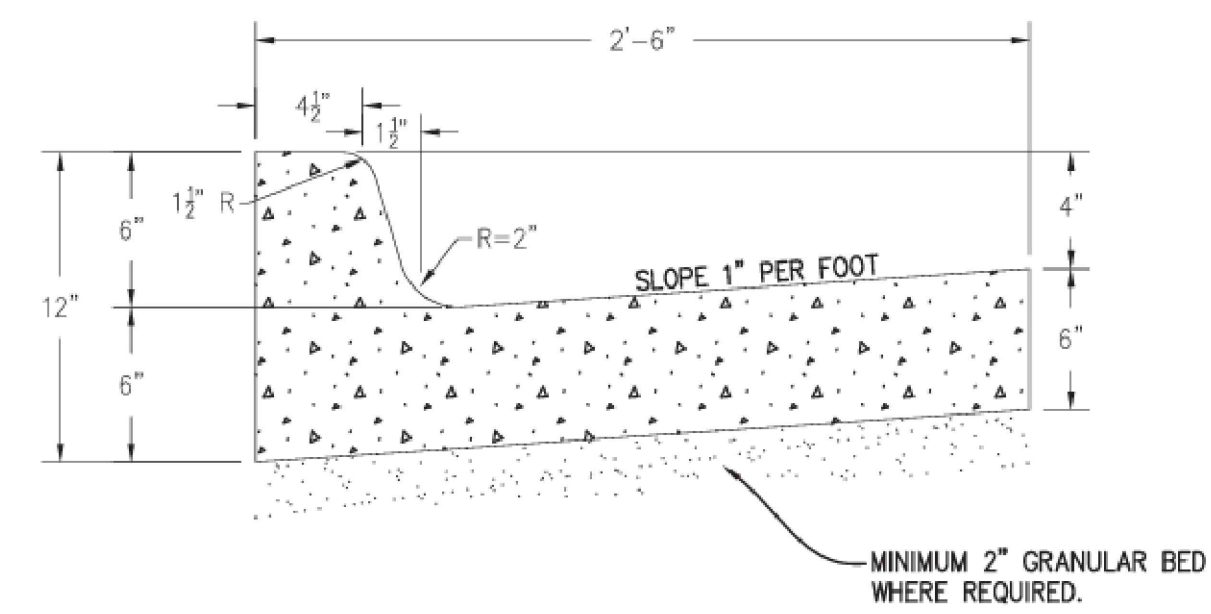
PREPARED FOR
MORALES ENTERPRISES, LLC
PO BOX 501
WOODLAND PARK, CO 80866
ATTN: FERNANDO MORALES
JUDGESCHARGILLWP@YAHOO.COM



Central 303-740-9888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

UNTIL SUCH TIME AS
THESE DRAWINGS ARE
APPROVED BY THE
APPROPRIATE REVIEWING
AGENCIES, JR ENGINEERING
APPROVES THEIR USE
FOR THE PROJECTS
DESIGNATED BY WRITTEN
AUTHORIZATION.

PROVIDE TRANSFORMER LOCATION AND METERING LOCATION
MEET CORE REQUIREMENTS - SEE ATTACHED BUILDER HANDBOOK

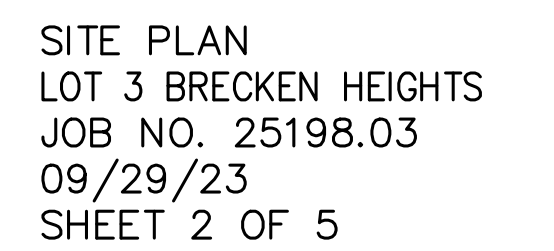


WOODLAND PARK TYPE 1
SCALE: N.T.S.



MOUNTABLE CURB (CS TYPE 5)	
SPILL C&G	
CATCH C&G	

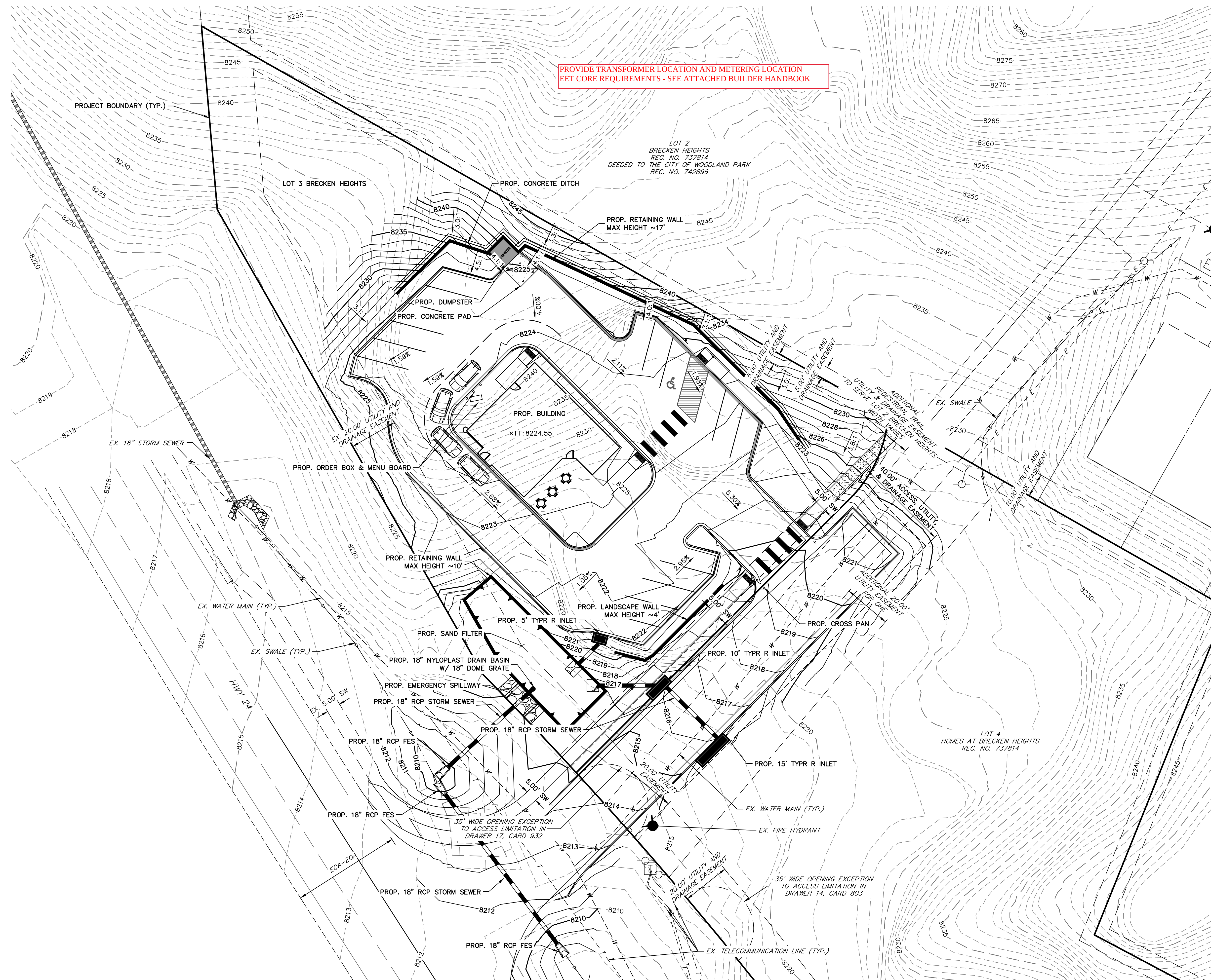
UTILITIES NOT SHOWN FOR
CLARITY, SEE PRELIMINARY
UTILITY PLAN SHEET 4 FOR
EX./PROP. UTILITY
LOCATIONS.



Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

LOT 3 BRECKEN HEIGHTS

PRELIMINARY GRADING PLAN



PRELIMINARY GRADING PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 3 OF 5



Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

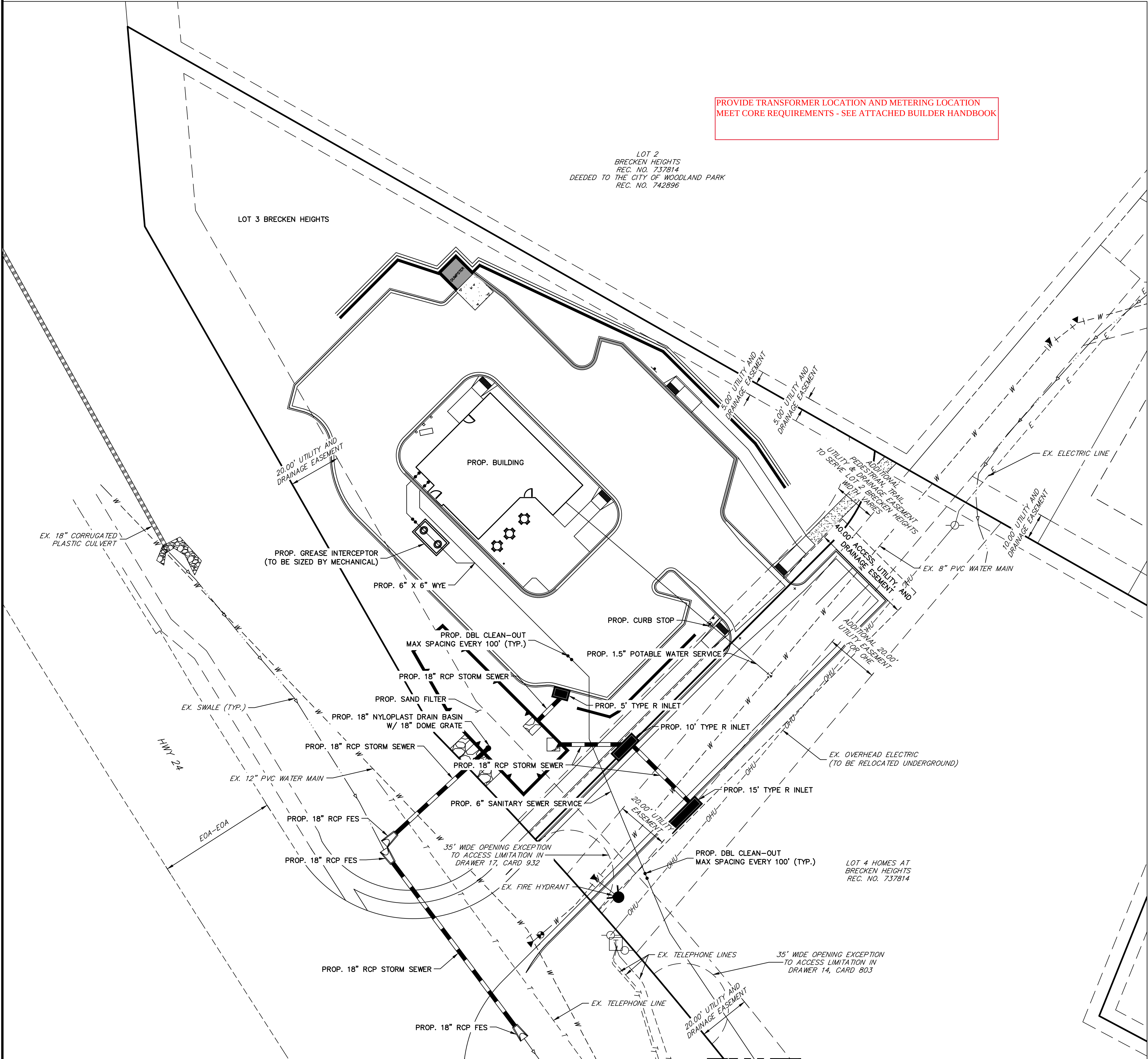
LOT 3 BRECKEN HEIGHTS

PRELIMINARY UTILITY PLAN

PROVIDE TRANSFORMER LOCATION AND METERING LOCATION
MEET CORE REQUIREMENTS - SEE ATTACHED BUILDER HANDBOOK

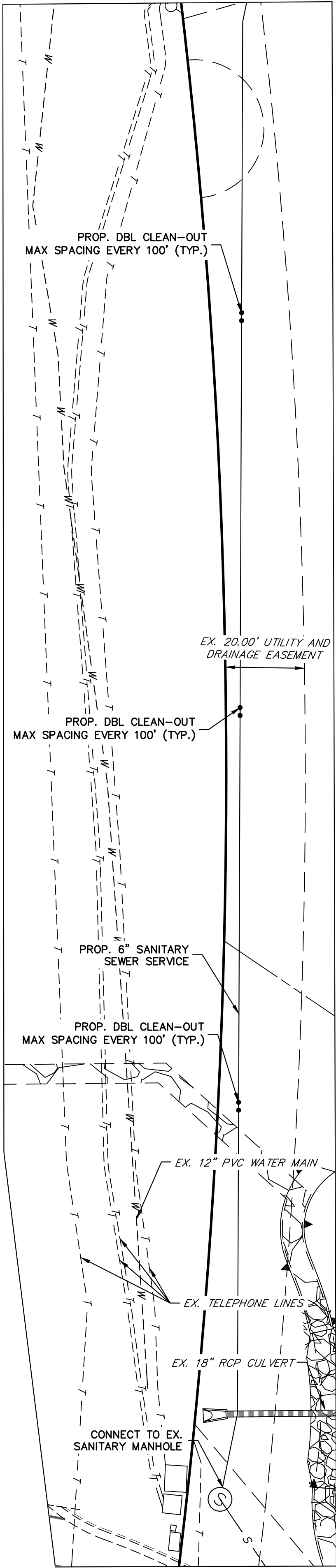
LOT 2
BRECKEN HEIGHTS
REC. NO. 737814
DEEDED TO THE CITY OF WOODLAND PARK
REC. NO. 742896

LOT 3 BRECKEN HEIGHTS



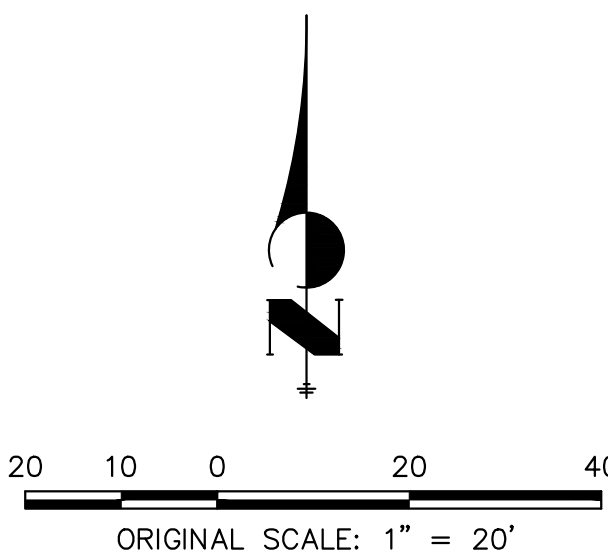
SEE INSERT 1
(RIGHT)

INSERT 1
SCALE: 1"=20'



NOTES

1. ANY SURFACE IMPROVEMENTS WITHIN EASEMENTS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
2. PARKING NOT SHOWN ON THIS SHEET FOR UTILITY VISIBILITY.

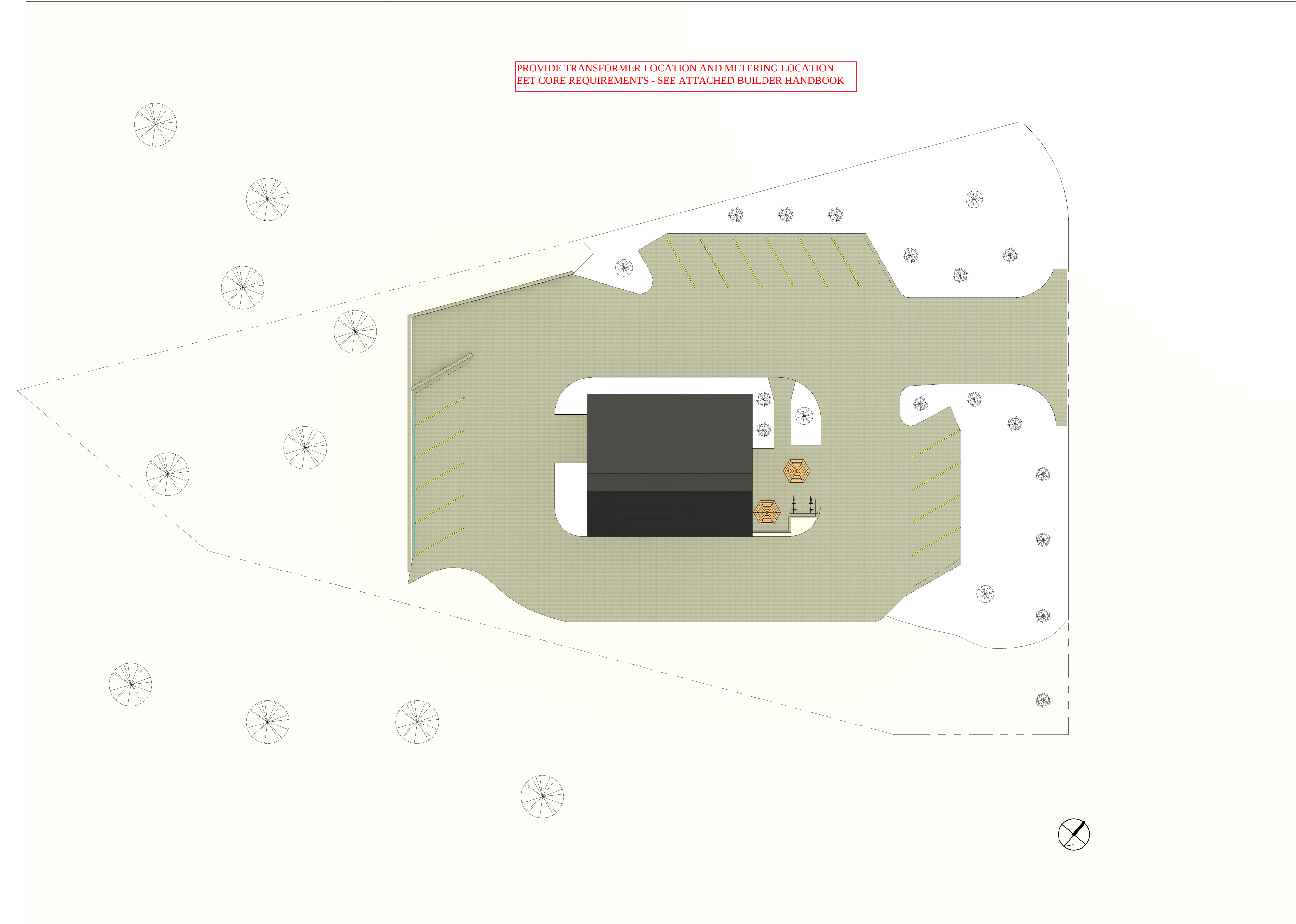


PRELIMINARY UTILITY PLAN
LOT 3 BRECKEN HEIGHTS
JOB NO. 25198.03
09/29/23
SHEET 4 OF 5

J-R ENGINEERING
A Westrian Company

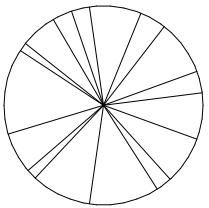
Centennial 303-740-9393 • Colorado Springs 719-593-2593
Fort Collins 970-491-9888 • www.jrengineering.com

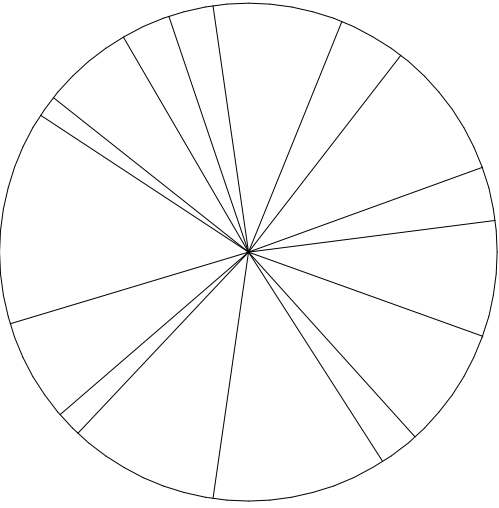
THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

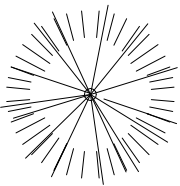


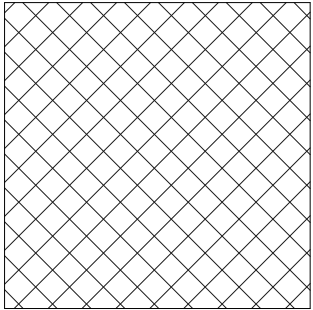
PROVIDE TRANSFORMER LOCATION AND METERING LOCATION
EET CORE REQUIREMENTS - SEE ATTACHED BUILDER HANDBOOK

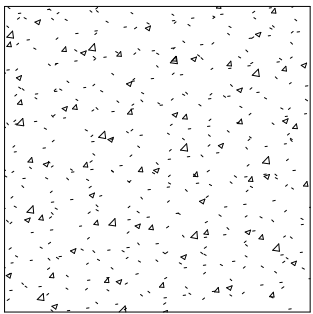
Material Legend

- 

Wildfire Black Gum Tree
- 

Existing Trees to remain not exist location
- 

Kark Foerster Grass
- 

Brown munch
- 

Concrete
- 

Brown block retaining wall

CONTRACTOR
MORLEY
ENTERPRISES



719-330-0259

1671 SUMMERNIGHT TERRACE
COLORADO SPRINGS, CO 80909

PIKES PEAK TACO

Woodlan Park, CO

Current Revisions

Landscaping

Project number	Project Number
Date	Issue Date
Drawn by	Author
Checked by	Checker

A1

Scale As indicated

1 Site
1" = 20'-0"

CORE ELECTRIC DISTRIBUTION STANDARDS APPROVAL FORM

☐ Revised Procedure

☐ New Procedure

☐ New Material

☒ Other: CT Cabinet

(NEW)

ITEM/PROCEDURE:

Specifications for Single-Phase or Three-Phase Service, 800 amps or less, 120/240V 1Ø 3-Wire; 120/208V 3Ø, and 277/480V 3Ø, 4-Wire Cabinet. Can be used at consumer's option

CORE SPECIFICATION NUMBER: _____

DESCRIPTION:

See attached specification.

(EXISTING)

ITEM/PROCEDURE:

EUSERC Only

CORE SPECIFICATION NUMBER: _____

DESCRIPTION:

STANDARDS APPROVED:

CHAIRMAN

DATE: _____

VICE CHAIRMAN

DATE: _____

INVENTORY # _____ ASSET # _____

IMMEDIATE CHANGE: ☒ USE EXISTING INVENTORY: ☐

PRODUCT INFORMATION SHEET ATTACHED: YES ☒ NO ATTACHMENTS: ☐

CORE Electric Cooperative

Specifications for Single-Phase or Three-Phase Service, 800 amps or less, 120/240V 1Ø 3-Wire; 120/208V 3Ø, and 277/480V 3Ø, 4-Wire

- Must be a single service/meter location.
- Must be 800 amps or below.
- The cabinet must have a lockable door at minimum of 90 degrees, hinged, and shall be permanently installed against a wall with adequate mounting hardware.
- CT's in CT cabinet shall be 48" +/- 6" from ground to center of CT at final grade.
- The meter housing should be installed within 12" of the CT cabinet and must be on the opposite side of CT cabinet door hinge, level with top of CT cabinet.
- Conduit from the meter housing to CT cabinet shall be 1" metal.
- Meter housing must have provision for test switch:
 - Test Switch spacing shall be 5 1/8" depth.
 - Auto shunting test switches shall not be used.
- 480V services require space on hinge side of CT cabinet for PT installation:
 - Specify on .dwg file (6" space of PTs between CT cabinet wall and bus)
 - PTs cannot be covered by any conductors.
- Area shall meet all other metering requirements:
 - 3' clear and level working area in front of 90-degree open door for entire width of CT cabinet and meter housing.
 - Clean and level working space shall not be part of a street, drive thru, etc.
- Service disconnect shall be installed within 30" and reachable of metering equipment.
- Drawing package for review shall include:
 - Cut sheet for CT Cabinet
 - Cust sheet for meter housing
 - Site diagram
 - One line
- CT cabinet shall accept bar type CT's only.
- The maximum number of conductors per phase is three (3).
- Minimum dimensions for CT cabinet:
 - Single-Phase – 24"W x 30"H x 11"D
 - Three-Phase 208V - 30"W x 30"H x 11"D
 - Three-Phase 480V - 36"W x 30"H x 11"D
- Warning placards made from plastic laminate mounted with permanent adhesive or rivets shall be provided as follows:
 - CT Cabinet shall have service address or unit number and voltage
 - Meter housing shall have service address or unit number. May use a brass tag if necessary for space constraints
 - Service Disconnect cabinet shall be labeled with address or unit number.



Builder/Developer Service Requirements

Revised August 2022

We understand that obtaining electrical facilities is only one of many tasks our members must achieve during the construction of a new residence or commercial facility. Therefore, it is our goal to provide the best member service possible.

Please do not hesitate to contact our Engineering Services Department with any questions or concerns at 303-688-3100, ext. 5302.

Providing us with the *work order (WO#)* number or description of the property will help us answer your questions promptly.

We look forward to serving you!

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SMALL GENERATION INTERCONNECTION – www.CORE.coop/my-cooperative/renewables	

PROCESSING NEW SERVICE APPLICATIONS

There are two separate phases in the processing of each new service application. Each of the two phases requires that the applicant complete certain steps. This may involve supplying information about the requirements for electric service to CORE or completing certain actions at the construction site. In all cases, a delay in providing information needed for engineering or construction will delay the availability of electric service. Therefore, it is important that information is provided as needed, and all steps are completed as quickly as possible. This guideline is provided to assist the applicant with this process. Some requests may have unusual aspects not specifically described here.

Phase 1 – Engineering

Initial contact with CORE will open a work order, which identifies the owner as an applicant for new service. The information required in STEP 1 may be provided by phone, email, fax, or in person at our office. A *Contract Authorization* form will be submitted to the applicant requesting the items listed within STEP 1. Upon receipt of the completed and signed *Contract Authorization* with proof of ownership and payment of the design fee, the work order will be released to engineering for assignment.

STEP 1

- o Owner name to appear on all accounts
- o Owner's current mailing address
- o Street address of property, if available
- o Legal description of property to which service is required
- o Owner/builder telephone numbers, fax numbers, email, etc.
- o Amperage required
- o Payment of applicable design fee
- o Proof of ownership (Warranty Deed, Property Tax Statement, etc.)
- o Any distributed generation (solar, wind, etc.) interconnection requirements.

For commercial, industrial, and large residential services:

- o Copy of engineered electric one-line diagram and panel schedules
- o Copy of site plan, drainage, grading and utility site plan – PDF and CADD format
- o Total electric demand (kW)
- o Largest motor(s) and type of motor starting to be used
- o Size and quantity of service entrance conductors

The engineer will contact the applicant at the phone numbers provided and arrange an on-site meeting to discuss the service requirements and explain CORE's policy and procedures. During the on-site meeting, the applicable items in STEP 2 will be discussed. Be prepared to show plans and drawings to the engineer. A recorded plat of the property may be required. It may be necessary for the applicant to obtain right-of-way if the routing of the power line crosses a property on which CORE does not have an easement. The engineer will instruct the applicant in this regard, when necessary. The engineer will design, route, and stake the line extension at that time or later in certain situations.

STEP 2

- o Survey/location of property pins, including corner, points of line and road right-of-way, as required
- o Location of well, septic system, and leach field
- o Location of driveway or other access
- o Location of structures
- o Location of the meter
- o Electric service requirements: voltage, amp size, phase
- o Right-of-way acquisition
- o Recorded Plat

Phase 2 – Contract and Construction

When the design is complete, the engineer will contact the applicant with an estimated cost and copy of construction print for review. A construction contract will be sent to the applicant with an estimated cost that is valid for 60 days. If redesigns are required, payment of an additional design fee may be required. If the construction contract expires, the work order will be canceled and a new work order will be required with an additional design fee. The items shown within STEP 3 are required before a job can be released for construction.

STEP 3

- o Signed construction contract
- o Payment of total amount due
- o Signed and notarized easements and/or filed final plat, if required
- o Payment of outstanding balances on other accounts, if required
- o Posting of the street address or addresses on the property

Following construction of distribution facilities, CORE will set a meter in accordance with the stipulations shown in STEP 4. Typically, the meter can be set within three to ten working days following the receipt of the inspector's approval of the temporary or permanent meter inspection. Other permitting requirements may apply to some jobs.

STEP 4

- o Establishment of a billing account per each metered location
- o Meter loop constructed to current CORE specifications
- o Meter loop constructed in location approved by CORE
- o Meter inspection approved by the Electrical Inspector
- o Service order issued to set meter and energize service

ELECTRIC SAFETY AND CODE CLEARANCES

It is the policy of CORE to operate the transmission and distribution electric system with the highest degree of care and safety for the public and CORE employees. To ensure the care and safety needed for an electrical distribution system, the National Electrical Safety Code (NESC) is used for design, construction, maintenance, and operation of the electrical transmission and distribution system by CORE. The current National Electrical Safety Code in effect at the time of distribution installation will apply. CORE reserves the right to terminate service without prior notice when hazardous conditions exist.

Contact with electric lines can result in SEVERE INJURY OR DEATH! Federal OSHA standards and Colorado State Statutes require that all equipment be maintained at a minimum distance of twenty feet (20') from 12.47kV and twenty feet (20') from transmission overhead lines.

If work near an overhead electric line is anticipated, contact CORE Operations Department at (720) 733-5555 at least 24 hours in advance for assistance in avoiding contact with any energized facilities.

Any attachments to existing facilities that may violate the minimum clearances as determined by the National Electrical Safety Code must be reported ninety (90) days prior to attaching to CORE's facilities by contacting CORE's Engineering Department at (303) 688-3100, ext. 5302.

To comply with NESC requirements, easement and right-of-way grades cannot be changed more than six inches (6") by excavation or filling without prior written approval of all utility companies involved. Full cost of any necessary alteration or relocation of utility lines will be borne by the member requesting the change.

If a violation has already occurred and CORE determines that relocating the existing facilities is necessary, CORE will perform this relocation at the expense of the property owner or party creating the violation.

If CORE determines that relocation is not feasible, other alternatives will be considered; however, CORE will take the steps necessary to protect the safety of

the public and the electric facilities at the expense of the party creating the clearance violation.

Maps of CORE facilities are not generally provided to the public. If required for engineering, maps may be requested through the Utility Notification Center by dialing 811.

LOCATES FOR UNDERGROUND UTILITIES

CALL BEFORE YOU DIG! 1-800-922-1987 or 811

- Contact the Utility Notification Center by dialing 811 or visit www.uncc.org, before you dig.
- Trained service personnel will locate CORE's underground electric facilities (up to the meter) at no cost.
- **Member owned underground facilities (beyond the meter) will require a private locating service at the requestor's expense.**
- Do not start grading or excavation work until all underground facilities have been located.

**CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987 or 811
CALL 3 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
CORE UTILITIES.**

RIGHT-OF-WAY, EASEMENTS, AND ACCESS

Types of Easements

CORE generally uses two types of easements:

- A platted/dedicated easement is provided to CORE by virtue of a dedication statement for every platted subdivision. A five-foot (5') side lot and fifteen-foot (15') front lot easement are typical platted easements. In some cases, a rear lot design will require a dedication of ten-foot (10') easement on the rear lot. However, if the subdivision is served by overhead facilities or if larger easements are necessary, CORE will require additional easements.
- CORE requires the member to grant, at no cost to CORE, easements for power lines and any associated equipment prior to installation of any CORE facilities. In the event CORE is required to cross property other than that of the member requesting service, the new member will be required to obtain all easements. Please note that all easements require a legal survey to be provided for documentation.

Access to Utility Easements

Periodically CORE may need to access facilities within the utility easement. Therefore, CORE requires reasonable access to facilities. To access facilities, CORE may use existing roads, driveways and/or entrance thru fenced yards.

General Restrictions on Easements/Right-of-Way

- To comply with NESC requirements, easement and right-of-way grades cannot be changed more than six inches (6") by excavation or filling without prior written approval of all utility companies involved. Full cost of any necessary alteration or relocation of utility lines will be borne by the member requesting the change.
- Fences and landscaping may be installed on utility easements, except where such materials would prevent access to utility lines or conflict with utility equipment.
- Permanent structures or buildings are not allowed within the utility easement, below CORE's overhead conductors, or above CORE's underground cables.

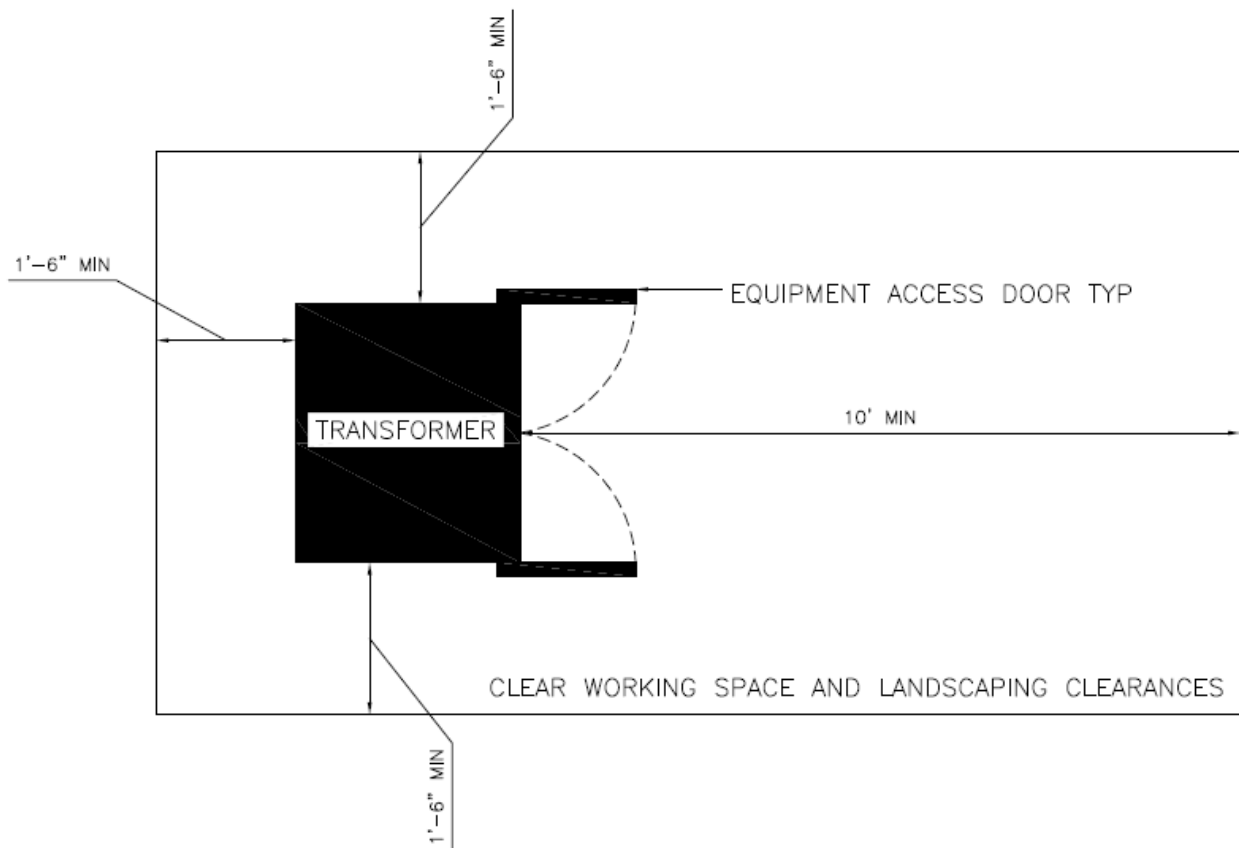
Landscaping on Utility Easements (Working Space)

- *Call the Utility Notification Center, toll-free, 1-800-922-1987 or 811, prior to digging.*
- Permanent structures cannot be constructed on utility easements. However, landscaping within an easement is permissible. A minimum clearance is required around all vaults and pad mounted equipment. A distance of 10 feet must be kept clear in front of all service doors. Equipment side clearances vary from 1.5 to 3 feet.
- Trees should be planted far enough away from pad mounted equipment so that, at maturity, overhanging branches will not obstruct a crane setting or removing equipment. It is best to select trees with supple branches that can be tied back without risk of breaking.
- Responsibility for upkeep and any landscaping maintenance in a utility easement is borne by the property owner/member.
- In the event a fence must be removed by CORE to repair or maintain electrical facilities, reasonable effort will be made to replace existing fencing when repairs are completed.
- Landscaping, fences, and other obstructions shall not encroach upon the working space clearances.
- A clear and level working space shall be equal to the full width of the equipment and shall extend a minimum of 10 feet from the compartment opening for pad mount equipment. Roadways and drive-throughs are not considered working space.

Single-phase Pad Mounted Equipment

- Single-phase pad mounted equipment shall have a minimum of 1'-6" of clear working space on the sides and rear of the equipment, and 10' of level ground in front of the equipment. CORE's written approval is required for any variance. Roadways and drive-throughs are not considered working space.

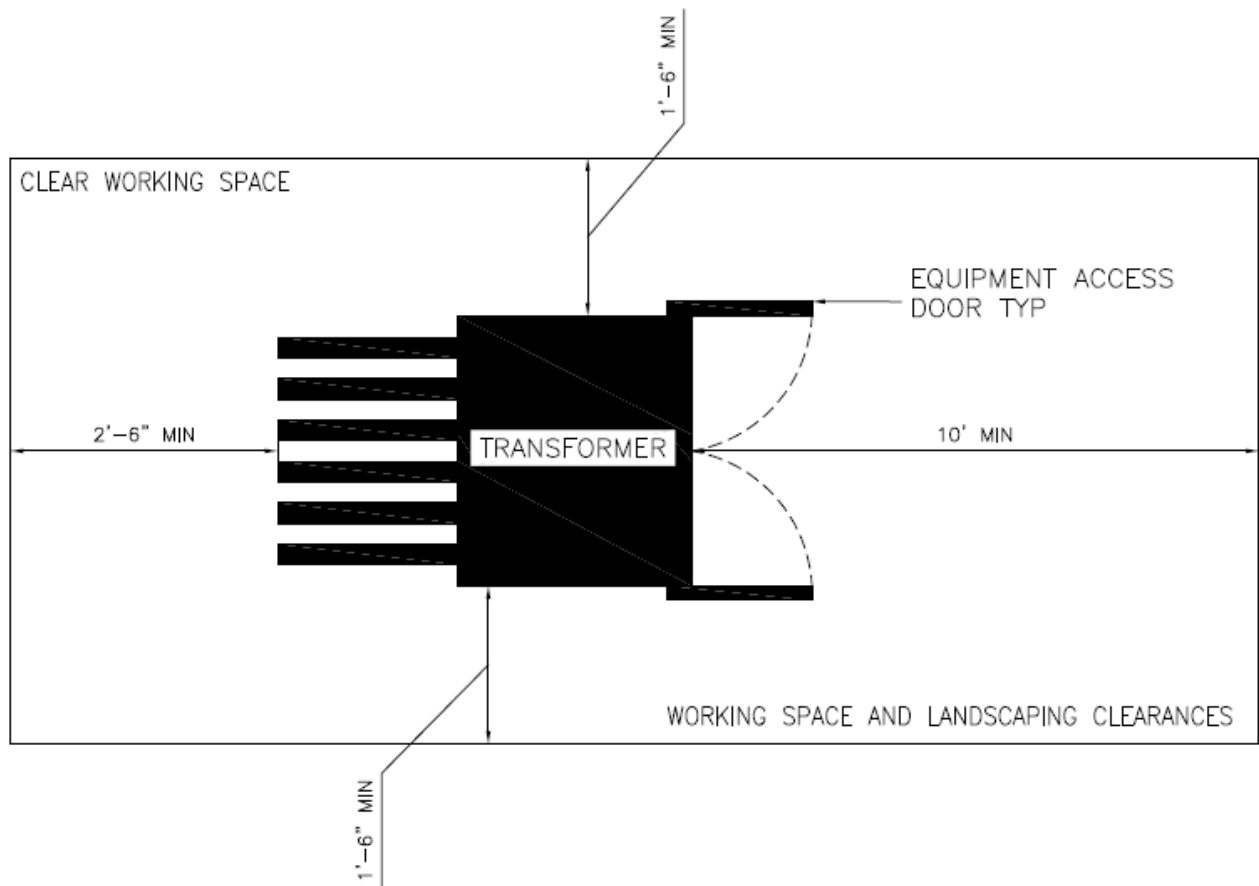
PLAN VIEW OF SINGLE-PHASE PAD MOUNTED EQUIPMENT WORKING SPACE AND LANDSCAPING CLEARANCES



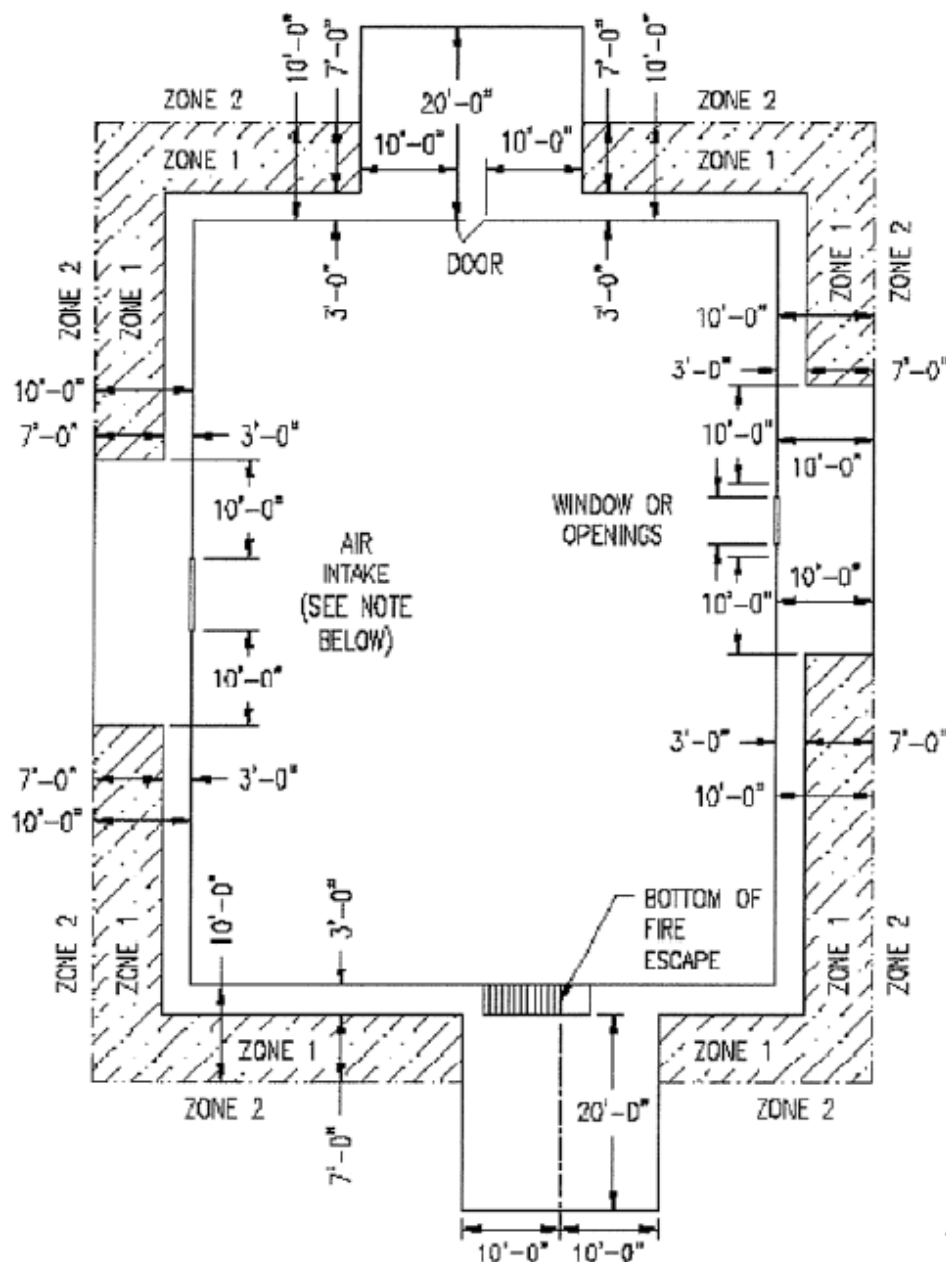
Three-phase Pad Mounted Equipment

- Three-phase pad mounted equipment with cooling fins shall have a clear working space minimum of 1'-6" on the sides, 2'-6" at the rear of the equipment, and 10' of level ground in front of the equipment. CORE's written approval is required for any variance. Roadways and drive-throughs are not considered working space.

PLAN VIEW OF THREE-PHASE PAD MOUNTED EQUIPMENT WORKING SPACE AND LANDSCAPING CLEARANCES



PAD-MOUNTED TRANSFORMER LOCATION MAP AND MINIMUM CLEARANCES



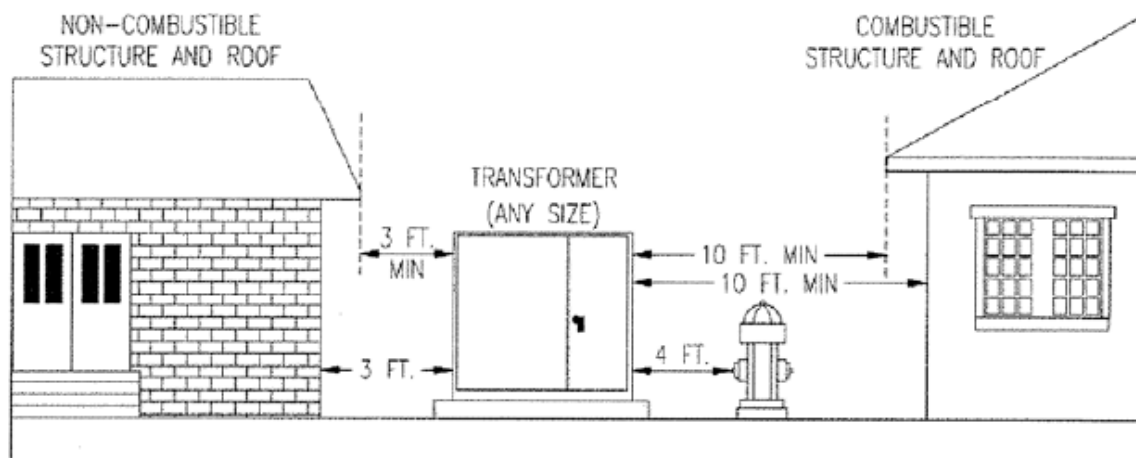
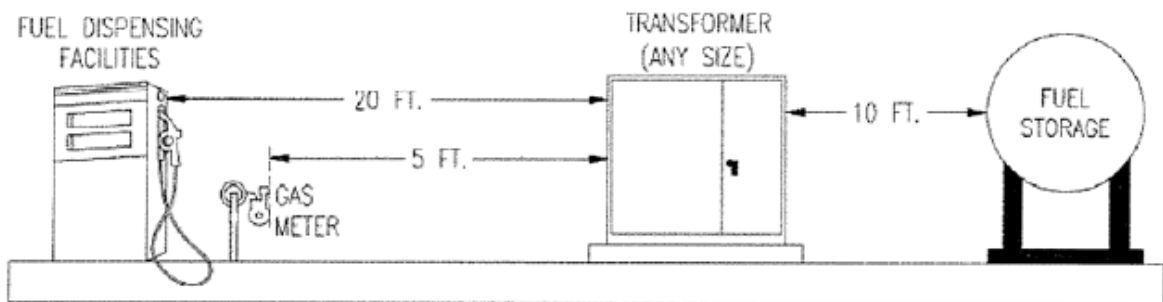
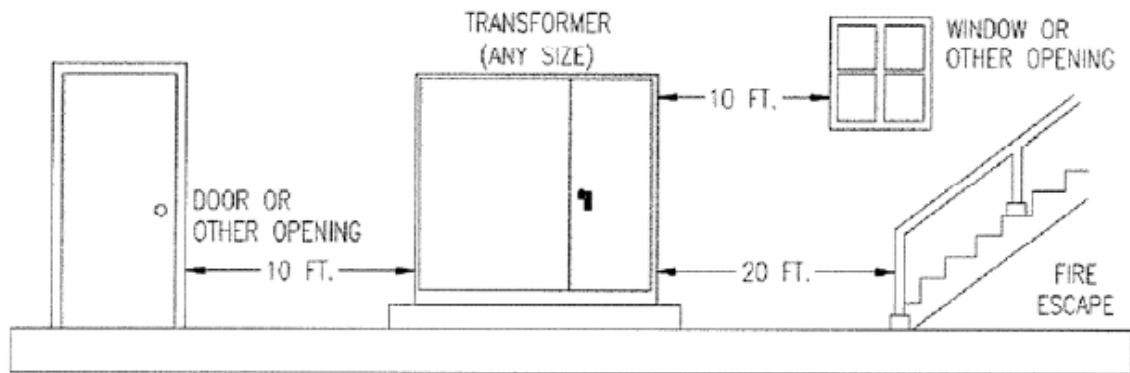
NOTES:

ZONE 1 (Shaded Area) = Minimum distance for pad-mounted transformer from a non-combustible building.

ZONE 2 = Minimum distance for pad-mounted transformers from a combustible building.

Air intake clearance must be a minimum of 25 feet diagonal from transformer (not shown). additional clearances are shown on Minimum Distances for Pad-Mount Transformers drawing.

MINIMUM DISTANCES FOR PAD-MOUNT TRANSFORMERS



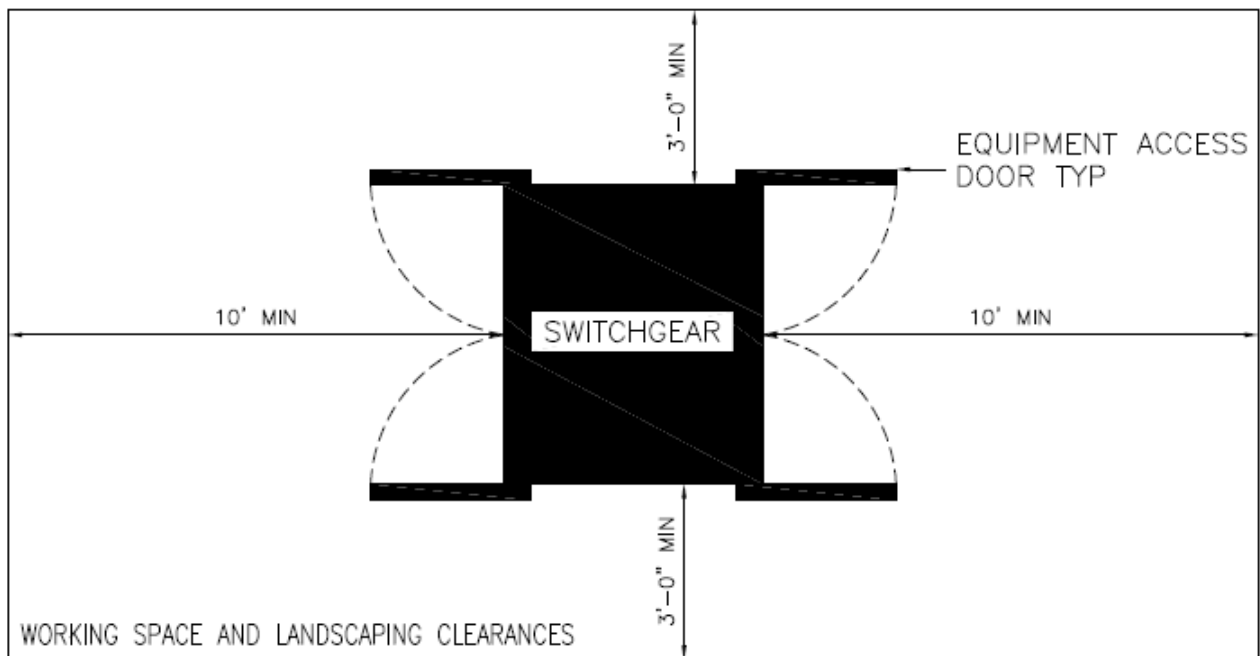
NOTES:

The minimum separation distances shown may not meet insurance property loss prevention requirements. Builder/developer is responsible for confirming these minimum separation distances and informing CORE engineering personnel prior to construction if additional clearances are needed.

Pad Mounted Switchgear

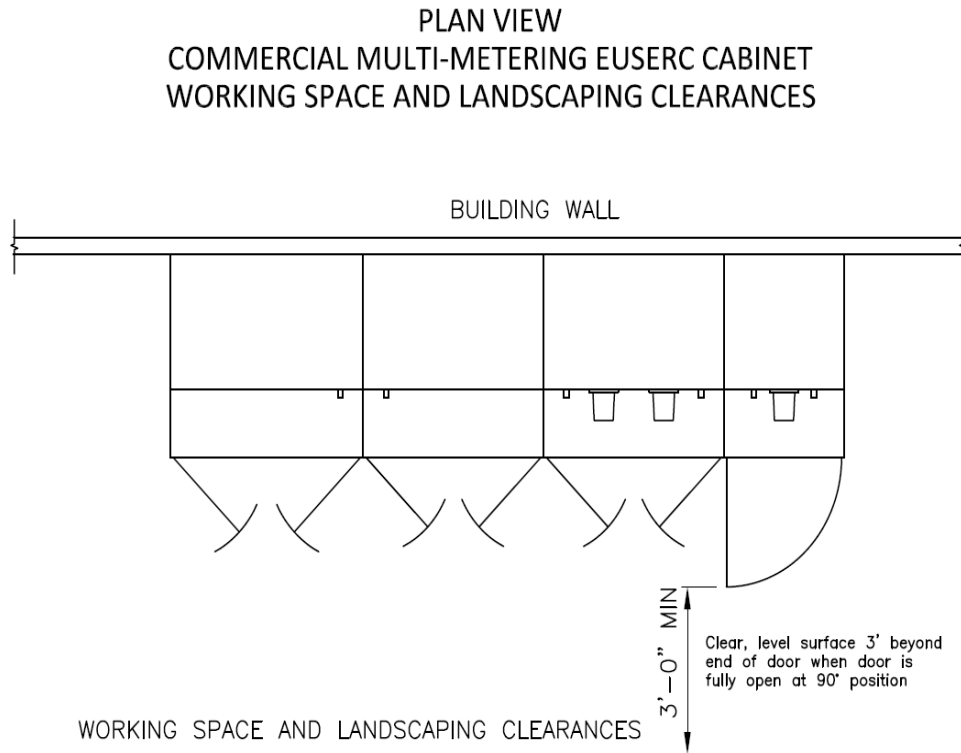
- Pad mounted air switchgear shall have a minimum clear working space of 3' on the sides of the equipment, and 10' of level ground in front and rear of the equipment. CORE's written approval is required for any variance. Roadways and drive-throughs are not considered working space.

PLAN VIEW OF PAD MOUNTED SWITCHGEAR WITH DOORS ON BOTH SIDES WORKING SPACE AND LANDSCAPING CLEARANCES



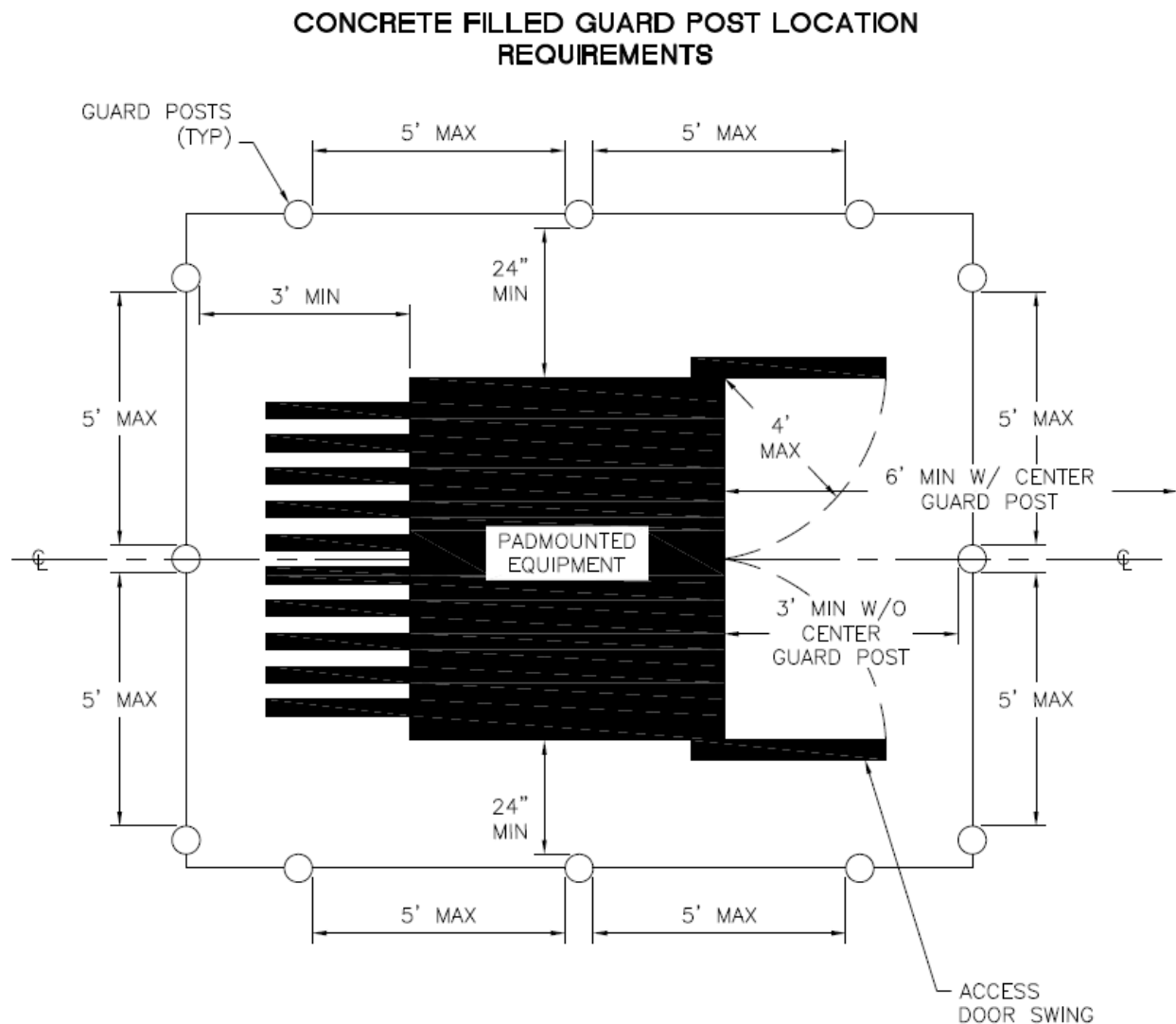
EUSERC Cabinets

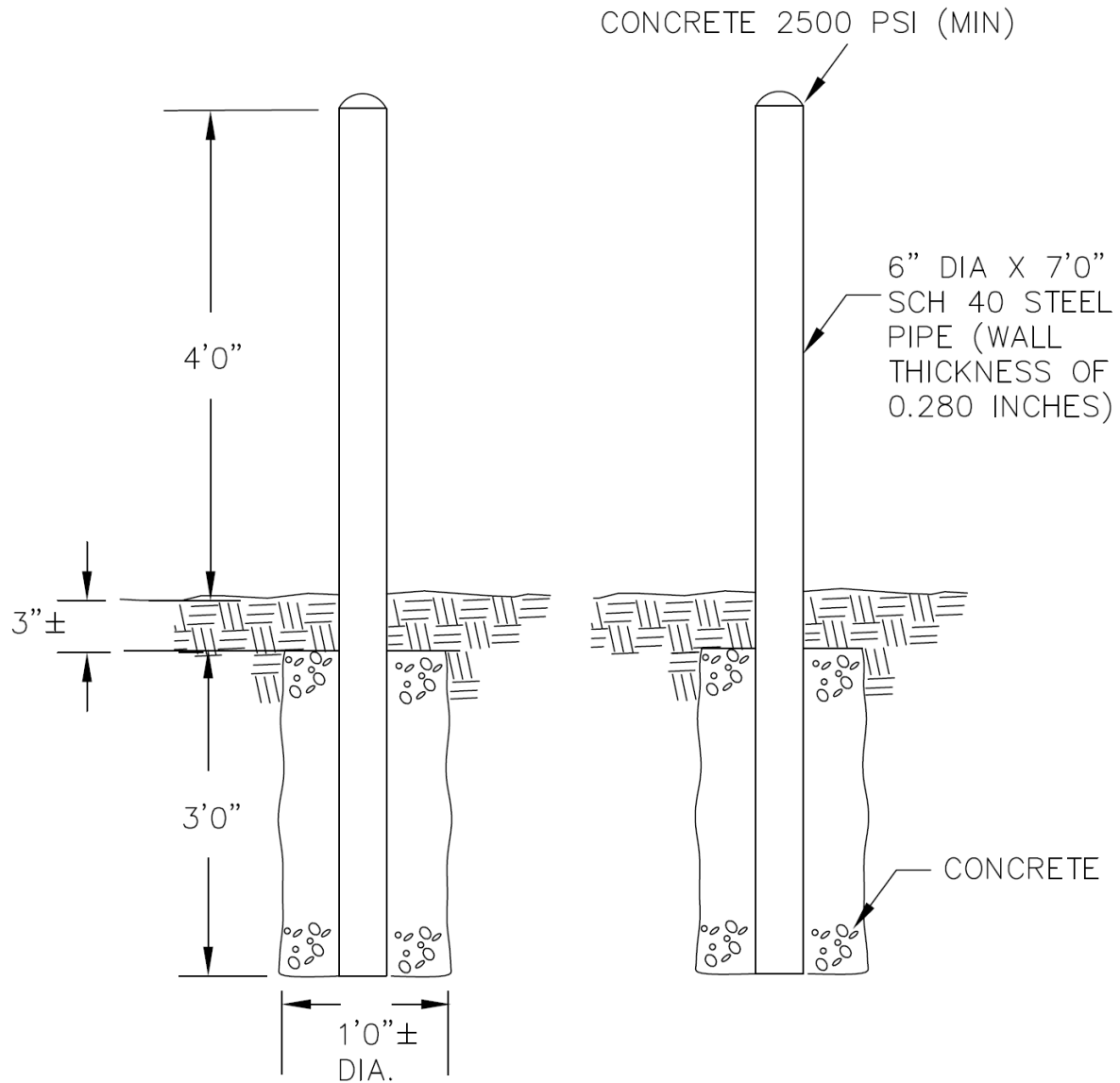
- EUSERC Cabinets shall have a minimum of 3' clear, level space beyond the door when fully open at 90-degree position. This equipment is typically placed parallel to the building wall.



Guard Posts for Pad Mounted Equipment

Cement filled guard posts shall be installed around pad mounted equipment that is exposed to vehicular traffic. The member may be required to supply and install these guard posts to protect the pad mounted equipment. These posts may be set to surround the equipment at a maximum of 5' between posts, with a minimum clearance of 2' on the sides and 3' at the front and rear of the equipment. If a center post is placed in front of the doors to the equipment, a minimum clearance of 6' is required.





NOTES:

1. CLEAN AND PRIME ALL EXPOSED METAL. PAINT UNIT WITH GLOSS OR SEMI-GLOSS CANARY YELLOW EXTERIOR ACRYLIC.
2. UNIT SHALL NOT OBSTRUCT OR INTERFERE WITH EQUIPMENT OPERATION OR ACCESS TO EQUIPMENT.
3. FILL PIPE COMPLETELY WITH CONCRETE. TOP OF PIPE SHALL HAVE CONCRETE ROUNDED TO SHED WATER.

TEMPORARY POWER SERVICES

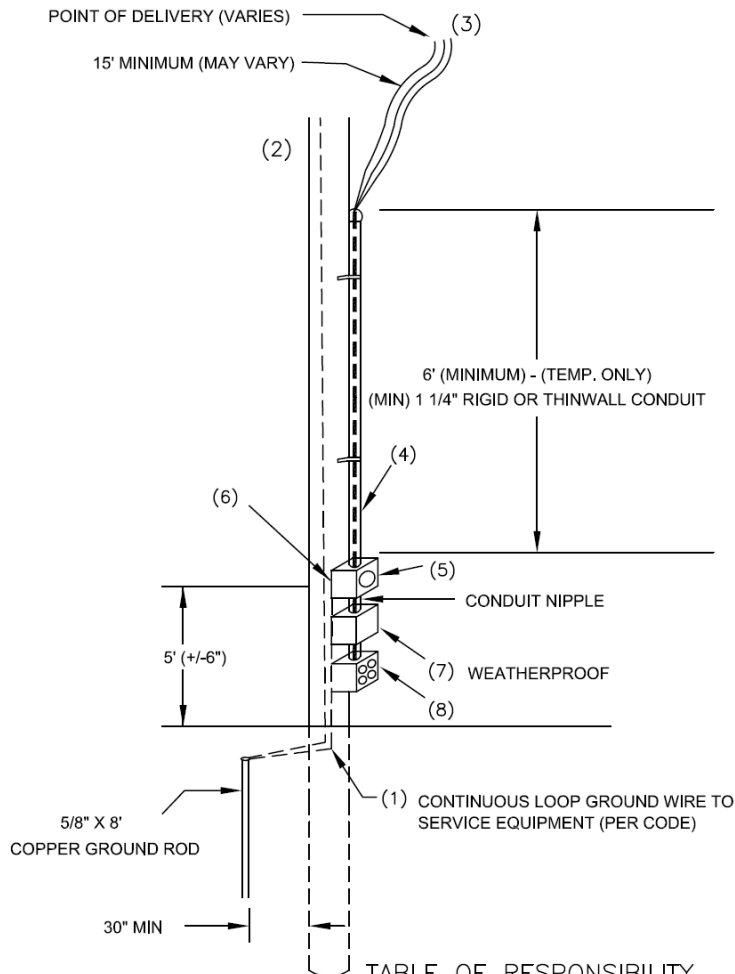
A temporary service connection may be installed to supply electricity for a limited time (up to 18 months). Services used for construction purposes, fairs, carnivals, holiday lighting, street decorations, or other uses are considered temporary.

- A billing account must be established for each specific location with CORE.
- A temporary electric meter will be installed upon receipt of the inspector's approval of the temporary or permanent meter loop inspection.
- It is the responsibility of the applicant to obtain such an inspection and release.
- The meter will not be installed unless it meets CORE's specifications.
- Contact Engineering Services (303) 688-3100, ext. 5302 with any questions.
- Anyone making unauthorized meter bypasses may be prosecuted.

Temporary Overhead Power Source

- A temporary service is installed on a CORE pole, preferably one equipped with a transformer.
- A temporary service may not be installed on a pole with risers or other special equipment on it.
- If a meter pole is available when temporary service is required, the applicant may avoid installing two services by constructing a permanent service loop on the meter pole and using it for temporary purposes (check for county regulations).

OVERHEAD – TEMPORARY CONSTRUCTION SINGLE PHASE (400 AMPS OR LESS) THREE PHASE (200 AMPS OR LESS)



NOTES

1. MAGNETIC CIRCUIT BREAKERS REQUIRED FOR ALL SINGLE-PHASE SERVICES UP TO 200A, FUSED DISCONNECTS NOT ALLOWED.
2. ALL METER LOOP CONDUITS ARE REQUIRED TO BE METALLIC.
3. METER LOOP MUST BE INSTALLED ON CORE OWNED POLE, PREFERABLY WITH A TRANSFORMER, OR THERE WILL BE A CHARGE TO INSTALL A TRANSFORMER.
4. IF A METER POLE IS INSTALLED PRIOR TO TEMPORARY SERVICE, CORE RECOMMENDS CUSTOMER INSTALL PERMANENT METER LOOP FOR TEMPORARY POWER.
5. TEMPORARY SERVICE WILL BE ALLOWED A MAXIMUM OF 18 MONTHS.
6. CORE RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE SERVICE INSTALLATION.
7. PLEASE CHECK WITH YOUR LOCAL INSPECTOR FOR NATIONAL, STATE, OR LOCAL CODE REQUIREMENTS. THIS INFORMATION MAY NOT BE SUPPLIED BY CORE.
8. ANYONE MAKING UNAUTHORIZED METER BYPASSES MAY BE PROSECUTED.
9. ALL CONNECTIONS TO CORE SERVICE MUST BE MADE BY CORE PERSONNEL ONLY.

TABLE OF RESPONSIBILITY

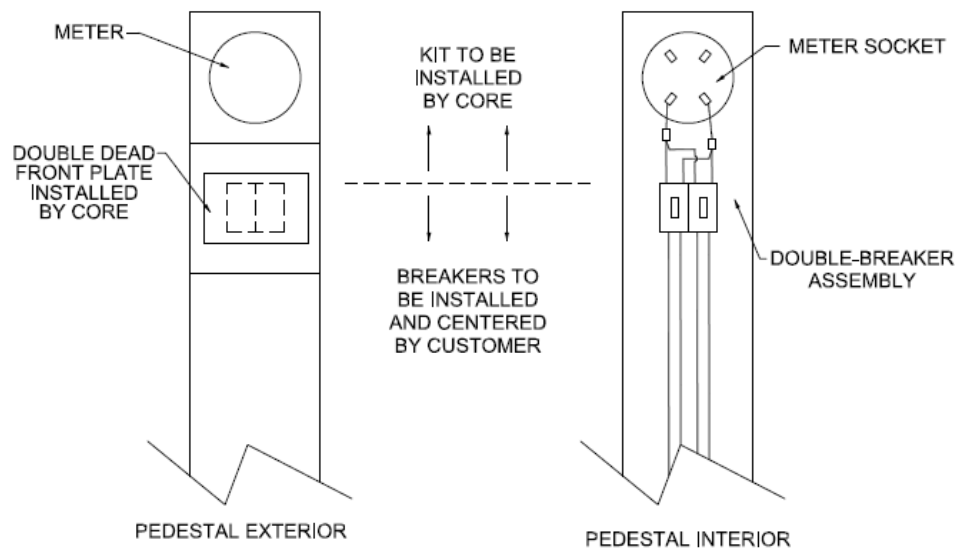
KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	CONTINUOUS LOOP GROUND WIRE TO SERVICE EQUIPMENT (PER CODE)	CUSTOMER	CUSTOMER	CUSTOMER
2	POLE & GROUND ROD	CORE	CORE	CORE
3	SERVICE CONNECTION	-----	CORE	-----
4	CONDUIT & CONDUCTOR TO SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
5	METER HOUSING, RINGLESS (CORE REQUIRED SPECS.) 200 AMP	CUSTOMER	CUSTOMER	CUSTOMER
6	WIRING/ CONNECTIONS	-----	CUSTOMER	-----
7	MAIN & GROUND-FAULT BREAKER REQ'D	CUSTOMER	CUSTOMER	CUSTOMER
8	WEATHER PROOF RECEPTACLES	CUSTOMER	CUSTOMER	CUSTOMER

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Temporary Underground Power Source

- Areas with underground facilities may have metering pedestals, power pedestals, or pad-mounted transformers available.
- A metering pedestal will contain the permanent meter even while the temporary loop is in use. For this reason, a main breaker large enough to protect the permanent service must be installed in the metering pedestal before a temporary service may be connected.
- If a double-breaker kit is required (available with some Milbank pedestals) whereas the service amperage exceeds 200 amps and is less than 400 amp or 320 amp continuous load), the second breaker must be installed prior to the installation of the temporary meter. Note that these kits do not meet the 2020 NEC separation requirements
- CORE supplies and installs jumpers from meter socket to breakers.

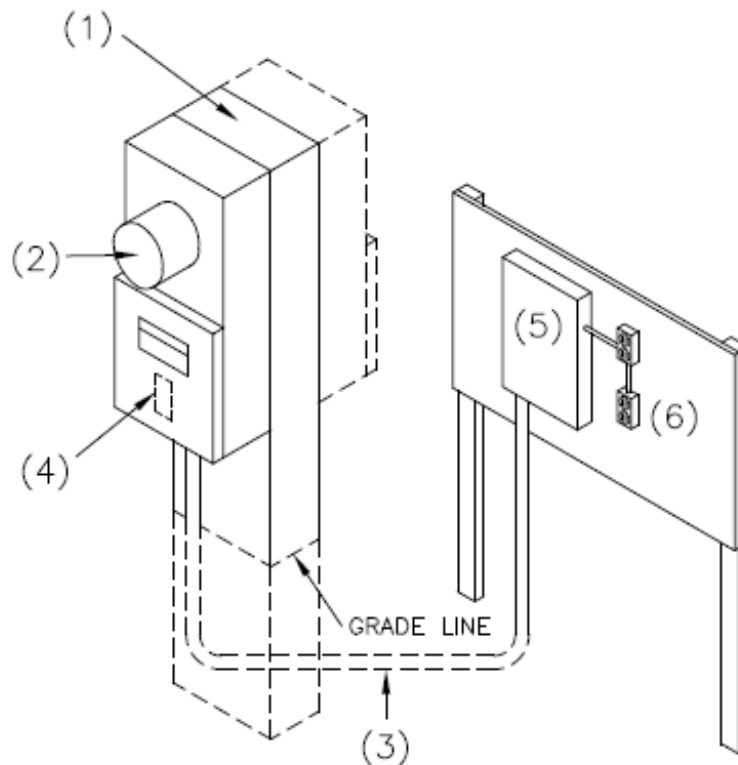
DOUBLE-BREAKER KIT IN METER PEDESTAL 200-400 AMP SERVICE



NOTE:

1. BOTH BREAKER ASSEMBLIES MUST BE INSTALLED AND CENTERED PRIOR TO TEMP SERVICE.
2. CONTINUOUS LOADS GREATER THAN 200 AMP MAY REQUIRE THE INSTALLATION OF A NEW 400 AMP PEDESTAL.
3. LEVER BYPASS REQUIRED FOR 400 AMP SERVICES.

TEMPORARY UNDERGROUND SERVICE AT METER PEDESTAL, SINGLE PHASE (400 AMPS OR LESS)



NOTES:

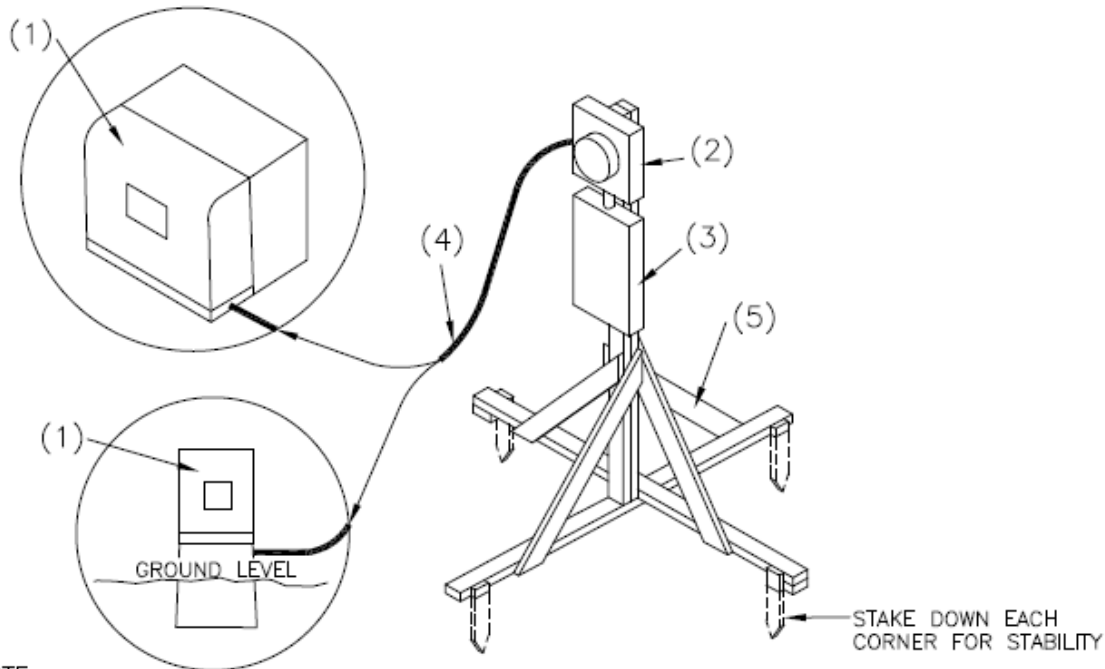
1. THE MAIN BREAKER IS REQUIRED IN THE METER PEDESTAL. IF SECOND BREAKER WILL BE REQUIRED FOR PERMANENT SERVICE, BOTH BREAKERS MUST BE INSTALLED AT TEMPORARY STATUS.
2. TEMPORARY METER WILL BE INSTALLED IN METER PEDESTAL.
3. SERVICE ADDRESS MUST BE PROMINENTLY DISPLAYED ON TEMPORARY SERVICE INSTALLATION.
4. ALL CONNECTIONS TO CORE EQUIPMENT MUST BE MADE BY CORE PERSONNEL.
5. TEMPORARY SERVICE WILL BE ALLOWED FOR A MAXIMUM OF 18 MONTHS.
6. CORE RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE INSTALLATIONS.

TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	METER PEDESTAL	CORE	CORE	CORE
2	ELECTRIC METER	CORE	CORE	CORE
3	CONDUIT AND SERVICE CONDUCTOR	CUSTOMER	CUSTOMER	CUSTOMER
4	BREAKER(S) IN PEDESTAL	CUSTOMER	CUSTOMER	CUSTOMER
5	BREAKER PANEL	CUSTOMER	CUSTOMER	CUSTOMER
6	CONNECTION, METER HOUSING	CUSTOMER	CUSTOMER	CUSTOMER

- If the source is a power pedestal or power transformer, the temporary stand must be located within 10' of its source. The temporary stand also must be set at the permanent source as designated by CORE's maps.

TEMPORARY UNDERGROUND SERVICE AT TRANSFORMER OR SECONDARY TAP ENCLOSURE SINGLE PHASE (400 AMPS OR LESS)



NOTE:

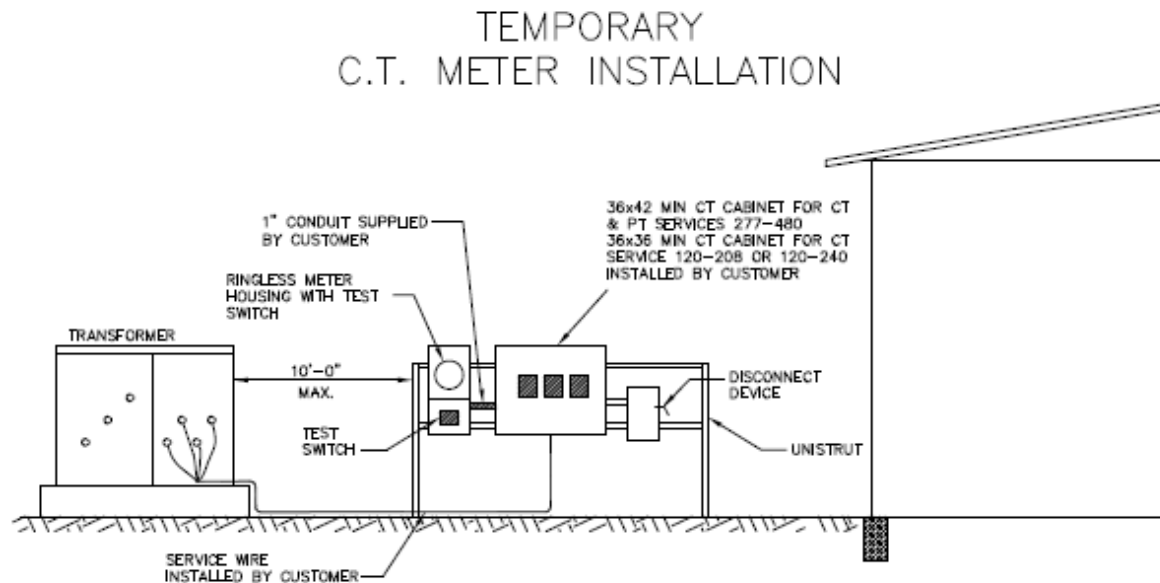
1. ALL CONNECTIONS TO CORE DISTRIBUTION EQUIPMENT MUST BE MADE BY CORE PERSONNEL ONLY.
2. CORE RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE INSTALLATION.
3. INSTALLATION MUST BE LESS THAN 10 FEET FROM SERVICE PEDESTAL OR RIGHT SIDE OF PADMOUNT TRANSFORMER (FACING FRONT). SERVICE GROUND PROVIDED BY CONNECTION TO DRIVEN GROUND ROD WITHIN CORE PEDESTAL OR TRANSFORMER WHERE PERMITTED BY LOCAL NEC CODE. (NO GROUND ROD SHALL BE DRIVEN WITHIN THE UTILITY EASEMENT).
4. WHERE FLEX CONDUIT ATTACHES TO PEDESTAL OR TRANSFORMER, A SUITABLE CONNECTOR FOR 1 1/2" FLEXIBLE CONDUIT TO 1" KNOCK-OUT MUST BE SUPPLIED BY CUSTOMER.
5. MINIMUM WIRE SIZE 3 #6 AL. OR CU.
6. SERVICE ADDRESS MUST BE PROMINENTLY DISPLAYED ON TEMPORARY SERVICE INSTALLATION.
7. TEMPORARY SERVICE LOCATION IS SUBJECT TO CORE APPROVAL.
8. TEMPORARY SERVICE WILL BE ALLOWED FOR 18 MONTHS.
9. NO MORE THAN TWO TEMPORARY SERVICES SHALL BE ATTACHED TO EACH POWER SOURCE.

TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	DISTRIBUTION FACILITY TRANSFORMER OR POWER PEDESTAL	CORE	CORE	CORE
2	METER HOUSING, RINGLESS	CUSTOMER	CUSTOMER	CUSTOMER
3	DISCONNECT DEVICE (GROUND FAULT BREAKERS REQ'D)	CUSTOMER	CUSTOMER	CUSTOMER
4	FLEXIBLE CONDUIT AND SERVICE WIRE	CUSTOMER	CUSTOMER	CUSTOMER
5	TEMPORARY STRUCTURE	CUSTOMER	CUSTOMER	CUSTOMER

Temporary CT Metering

- CT/PT metering is required for single-phase loads greater than 320amp continuous or 400amp peak and three-phase loads greater than 200amp. See Current Transformer – CT and Potential Transformer – PT Metering Section.



	METER SOCKET	# OF CTS	METER	TEST SWITCH	MISC.
CT 1 PHASE	8 TERM.	2 CTS	SINGLE PHASE OR SINGLE PHASE DEMAND	YES	MISC. HARDWARE
CT 208 3 PHASE	13 TERM.	3 CTS	THREE PHASE OR THREE PHASE DEMAND	YES	MISC. HARDWARE
CT 480 3 PHASE	13 TERM.	3 CTS/3 PTS	THREE PHASE OR THREE PHASE DEMAND	YES	MISC. HARDWARE

NOTES:

- LOCATION OF SERVICE MUST BE ACCESSIBLE TO CORE AT ALL TIMES.
- CT METER TO BE INSTALLED BY CORE PERSONNEL ONLY.
- CTS MAY BE MOUNTED IN CUSTOMER SUPPLIED CT CAN OR SWITCHGEAR.
- ANY VARIANCE CONTACT METER DEPARTMENT AT CORE
- TEMP. SERVICE SHOULD BE LESS THAN 18 MONTHS
- CT METERING IS REQUIRED FOR SINGLE PHASE SERVICE GREATER THAN 400 AMP (OR 320 AMP CONTINUOUS LOADS), AND THREE PHASE SERVICE GREATER THAN 200 AMP.

RESIDENTIAL POWER SERVICES (Single Lot, Multi-Family and Development)

Street Lighting

- CORE offers streetlight facilities upon request to serve cities, towns, villages, residential, and commercial consumers of CORE for the installation of streetlights at or near the entrance to consumer-owned property, subdivision lighting, and highway lighting. Two styles of LED ornamental streetlight facilities are used in subdivisions with underground facilities; whereas in areas with overhead facilities; LED lights are placed on wooden poles.
- The cost of installation for a streetlight and electrical feed is typically incorporated into the distribution design of developments. The cost for streetlight facilities will vary depending upon the size of the lots, the desired location of the streetlights, and the electric sources available to serve the new streetlights.
- It will be the responsibility of the property owner or developer to contact the proper city or county authorities for streetlight specifications, as design requirements may vary.
- Should the applicant wish to install ornamental lights that are not within CORE's specifications, they may do so at their own expense. CORE will provide metering points at the applicant's cost and will bill for the actual energy consumption. The applicant will be responsible for the acquisition, installation, and maintenance of all such facilities beyond the metering point.

Joint Trench

- Subdivisions with underground electrical service frequently have telephone and cable television facilities in the same trench with electrical distribution. The applicant may contact CORE's Engineering Department for information required to coordinate joint trenching of facilities.
- If construction is assigned to CORE's contractor, any contracts or agreements regarding joint trench will be made with that contractor, not CORE. Joint trench facilities are normally used for distribution lines but can include secondary (house) laterals as well.
- Gas and water lines cannot be included in the electrical trench. All utilities requesting joint trench use must be designed and ready to install at the time CORE's facilities are scheduled for construction.

Meter Sets

- The applicant must establish an account for new service. A *New Location Request Form* will be mailed, faxed or emailed to the applicant. This form needs to be completed and returned to Engineering Services via fax at (720)733-5764 or email engineeringervices@CORE.coop.
- If the meter is to be used strictly for temporary construction purposes only and then to be removed from the site, the applicant should indicate “temp only” on this form.
- CORE will issue a service order to set the meter upon receipt of the inspector’s approval of the temporary or permanent meter loop inspection.
- Please allow three to ten business days for the meter set to be completed.
- A deposit in the amount of an estimated 60-day bill may be required. Such deposit may be in addition to any advance, contribution, or guarantee provided for in the extension regulations.

Choosing the Right Service Voltage

CORE offers their members the voltages shown in the table below.

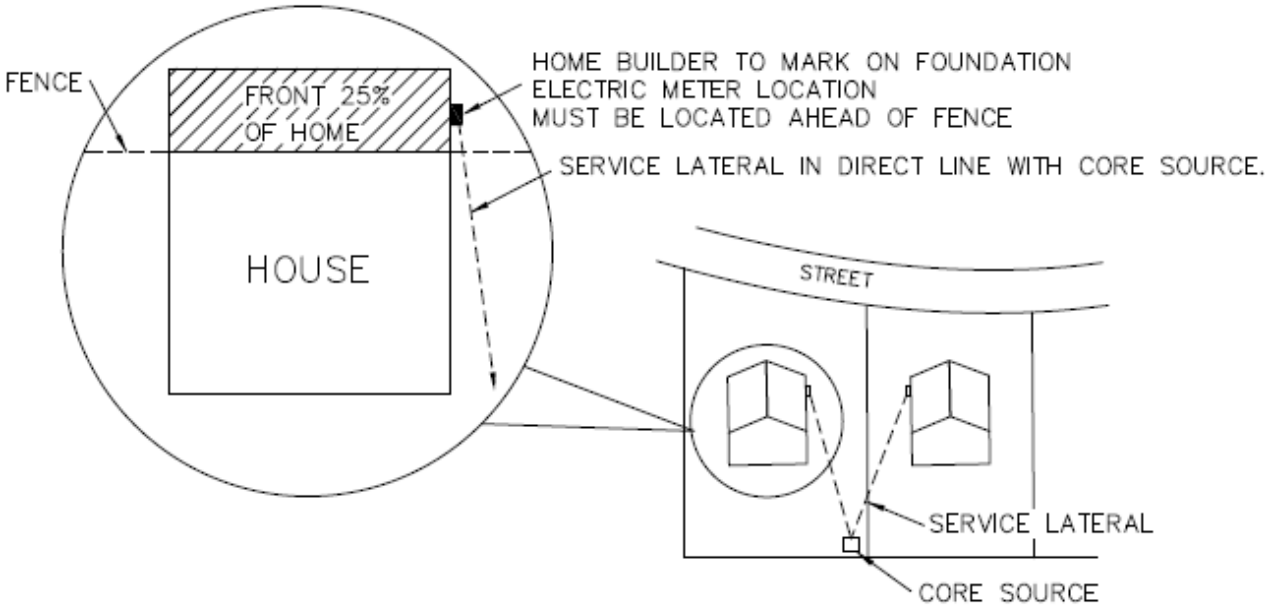
Service Type	Voltage
Single-phase	120/240V, 3-wire*
Three-phase	120/208V, 4-wire 277/480V, 4-wire
Primary Single-Phase	7200V, 3-wire
Primary Three-Phase	7200/12470V, 4-wire

*Available for loads to a maximum demand of 100kW. Larger loads may be served, if determined feasible by a CORE engineer. All motors must be rated 10 HP or less.

Meter Locations

- An electric meter will not be located within any area considered hazardous or inside where reading, testing, or servicing of the meter may become impracticable.
- A clear and level working space of 4' must be maintained around the meter at all times. Roadways and drive-throughs are not considered working space.
- The meter shall be located 5' (+or-6") at center of glass, above clear and level ground.
- The meter will be located on the front 25% of the house, *ahead of any fences*, and in a direct line with CORE's electrical facility designated to serve that location.
- Where meters, originally installed in accessible locations satisfactory to CORE, are rendered inaccessible by virtue of alterations or new construction by the owner of the premises or his agents, such meters shall be reinstalled at a point designated by CORE at the expense of the property owner.
- The location of meters and metering equipment shall be designated by CORE's Engineering Department personnel. No wiring dependent upon the meter location should be started until such location has been established.
- Service disconnect shall be located within 30" and accessible from meter housing.
- Meter housings (must be ringless) are not provided by CORE and all terminations (line side and load side) in the meter socket are the responsibility of the member (electrician). See Specifications for Meter Housings, Locations, and Installations.
- Only one meter will be issued per structure. Contact CORE's Metering Department for detailed information.

METER AND CONDUIT LOCATION DETAIL



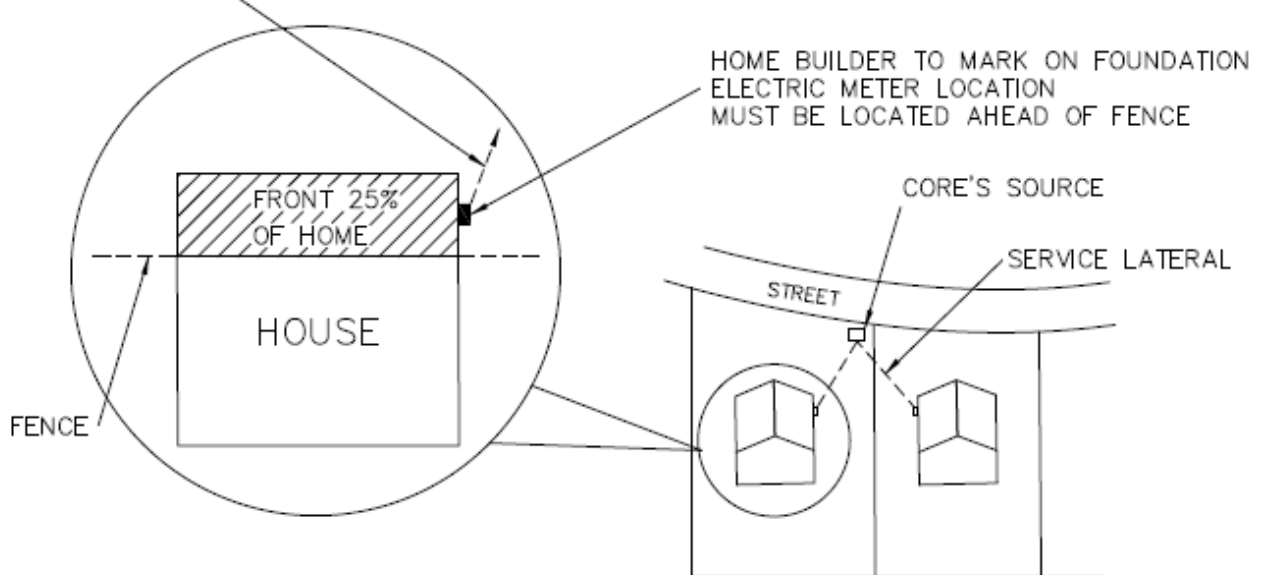
* Meter Base/Socket Configurations

A	B	C	D	E
2S	5S	25S NETWORK	16S	9S
4 TERMINAL	8 TERMINAL	5 TERMINAL	7 TERMINAL	13 TERMINAL

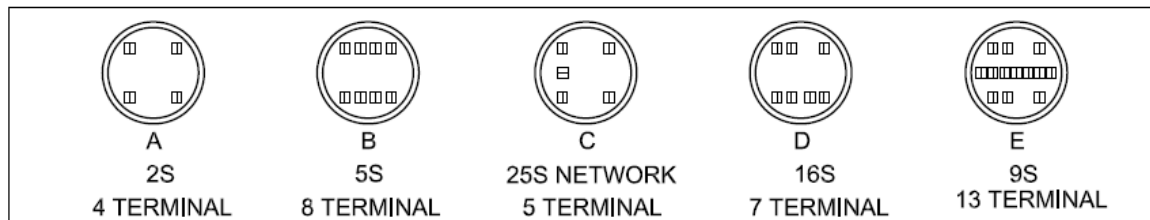
*RINGLESS REQUIRED ON ALL RESIDENTIAL
 *RINGLESS PREFERRED ON COMMERCIAL
 *(SEE FULL BOOK)

FRONT LOT CONSTRUCTION METER AND CONDUIT LOCATION DETAIL

SERVICE LATERAL IN DIRECT
LINE WITH CORE'S SOURCE.



* Meter Base/Socket Configurations



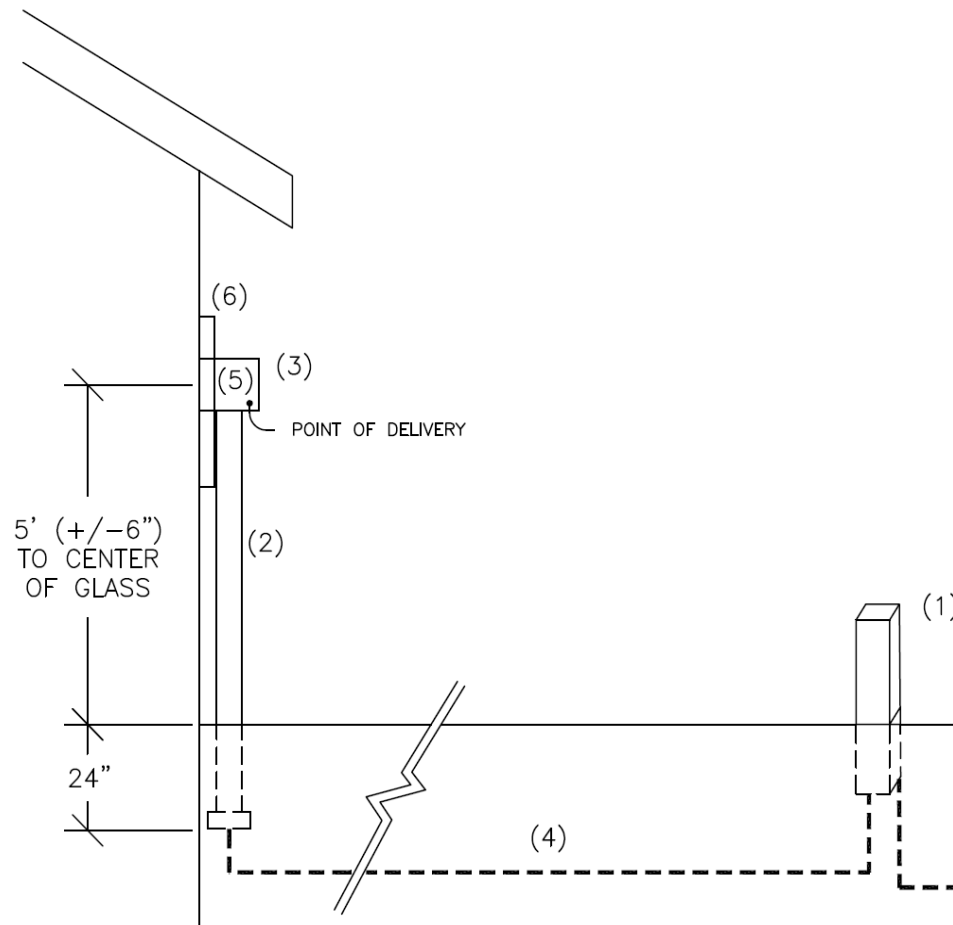
*RINGLESS REQUIRED ON ALL RESIDENTIAL

*RINGLESS PREFERRED ON COMMERCIAL

*(SEE FULL BOOK)

- If the service is underground to a power pedestal, CORE will install a secondary lateral to the house and the meter will be located on the house.

METER ON BUILDING
UNDERGROUND RESIDENTIAL SINGLE-PHASE
SERVICE (400 AMPS OR LESS)



NOTES:

1. SERVICE DISCONNECT SHALL BE LOCATED WITHIN 30" AND ACCESSIBLE FROM METER HOUSING.
2. LEVER BYPASS REQUIRED FOR 400 AMP SERVICES.

TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	DISTRIBUTION FACILITIES (TRANS. OR PED.)	CORE	CORE	CORE
2	CONDUIT SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
3	METER HOUSING, RINGLESS	CUSTOMER	CUSTOMER	CUSTOMER
4	CONDUCTOR, SERVICE LATERAL	CORE	CORE	CORE
5	CONNECTION, METER HOUSING	----	CORE/CUST.	----
6	DISCONNECT	CUSTOMER	CUSTOMER	CUSTOMER

If the service is underground to a meter pedestal, the meter is located within the meter pedestal, and the applicant will be required to install the secondary lateral to the house. Loads greater than 320 amp continuous will require CT metering and adhere to the EUSERC standards.

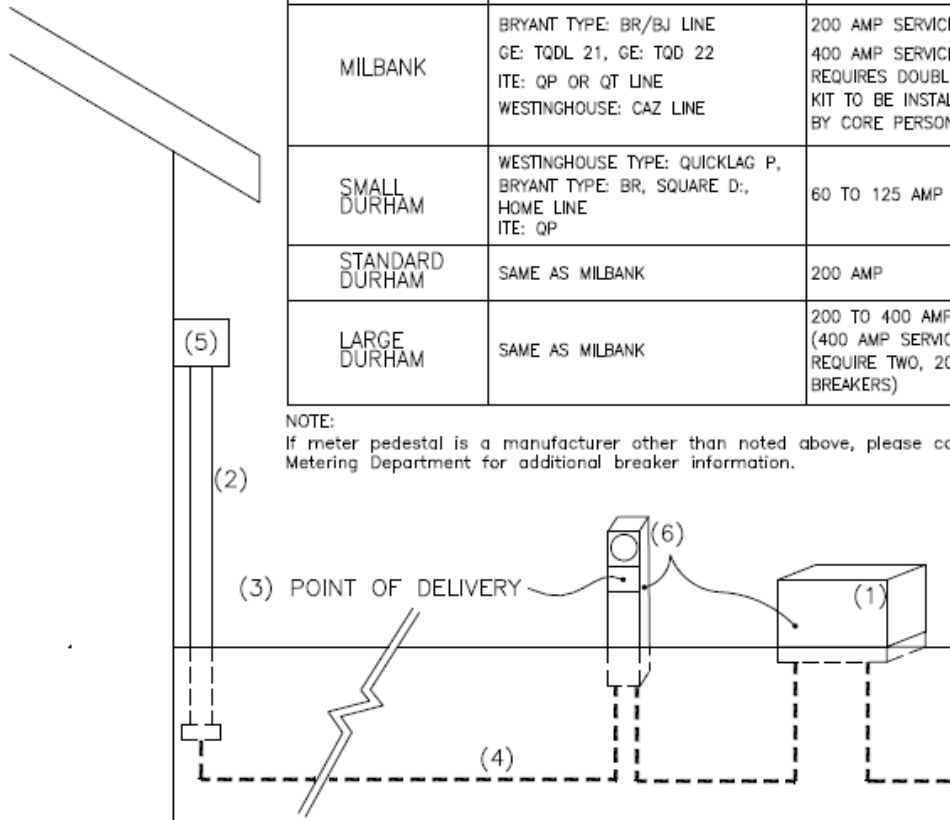
METER PEDESTAL UNDERGROUND RESIDENTIAL SINGLE-PHASE SERVICE (400 AMPS OR LESS)

BREAKER TYPE (3R ENCLOSURE)

TYPE METER PEDESTAL	BREAKER TYPE	COMMENTS
MILBANK	BRYANT TYPE: BR/BJ LINE GE: TQDL 21, GE: TQD 22 ITE: QP OR QT LINE WESTINGHOUSE: CAZ LINE	200 AMP SERVICE 400 AMP SERVICE REQUIRES DOUBLE-BREAKER KIT TO BE INSTALLED BY CORE PERSONNEL
SMALL DURHAM	WESTINGHOUSE TYPE: QUICKLAG P, BRYANT TYPE: BR, SQUARE D:, HOME LINE ITE: QP	60 TO 125 AMP
STANDARD DURHAM	SAME AS MILBANK	200 AMP
LARGE DURHAM	SAME AS MILBANK	200 TO 400 AMP (400 AMP SERVICES REQUIRE TWO, 200 AMP BREAKERS)

NOTE:

If meter pedestal is a manufacturer other than noted above, please contact CORE's Metering Department for additional breaker information.



NOTES:

1. DOUBLE-BREAKER KIT FOR 400 AMP SERVICE ON MILBANK PEDESTALS ARE SUPPLIED AND INSTALLED BY CORE.
2. IF DOUBLE-BREAKER KIT IS REQUIRED, BOTH BREAKER ASSEMBLIES MUST BE INSTALLED AND CENTERED PRIOR TO TEMPORARY SERVICE.
3. FINAL CONNECTIONS FROM BREAKER TO METER MUST BE MADE BY CORE'S PERSONNEL.
4. CONTINUOUS LOADS GREATER THAN 320 AMP SHALL MEET CORE'S EUSERC METERING REQUIREMENTS.
5. LEVER BYPASS REQUIRED FOR 400 AMP SERVICES.
6. NEC REQUIRES COMMUNICATION PEDESTALS TO MAINTAIN A MINIMUM CLEARANCE OF 3'-6" IN FRONT OF AND 30" ACROSS THE WIDTH OF THE METER PEDESTAL.

TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	DISTRIBUTION FACILITIES	CORE	CORE	CORE
2	CONDUIT SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
3	BREAKER(S) IN PEDESTAL	CUSTOMER	CUSTOMER	CUSTOMER
4	CONDUCTOR, SERVICE LATERAL	CUSTOMER	CUSTOMER	CUSTOMER
5	PANEL CONNECTION	---	CUSTOMER	---
6	METER PEDESTAL	CORE	CORE	---

- If the service is overhead to the house, the meter will be located on the house.

SINGLE-PHASE OVERHEAD RESIDENTIAL (200 TO 400 AMPS)

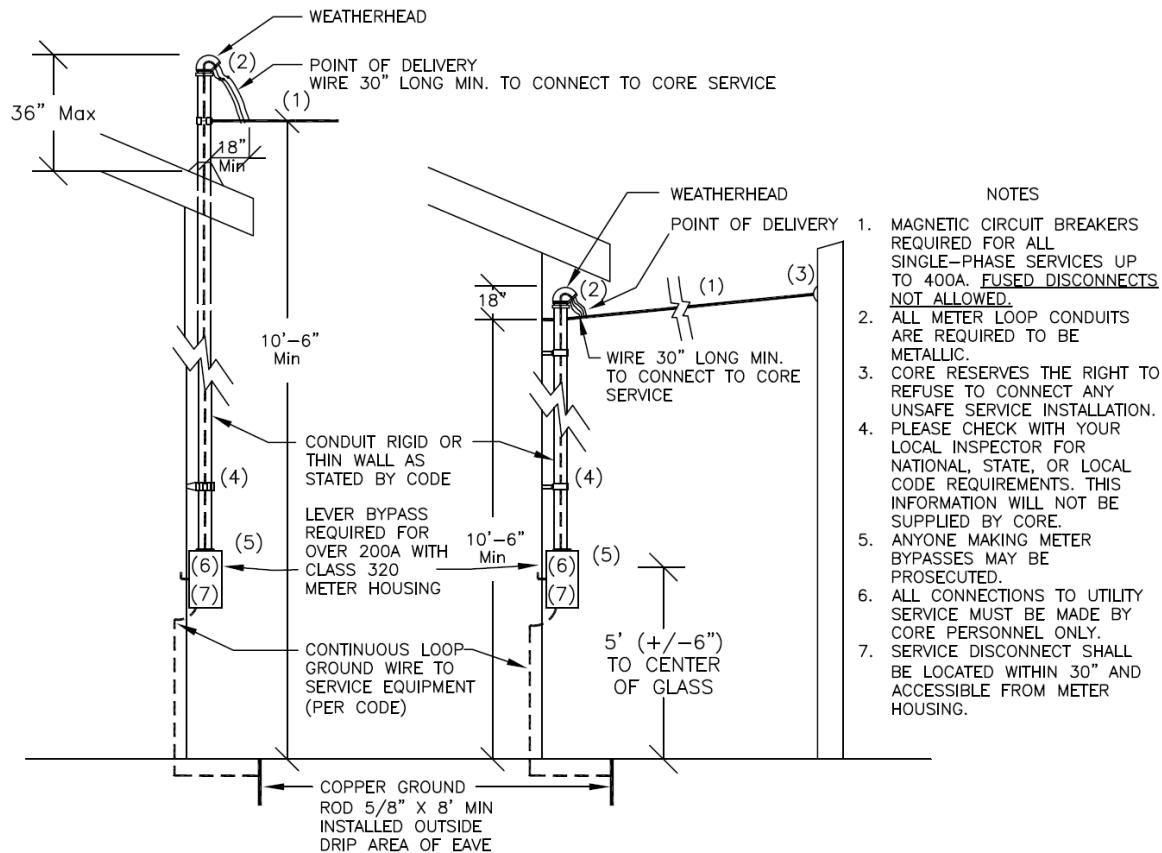


TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	SERVICE DROP	CORE	CORE	CORE
2	SERVICE CONNECTION	----	CORE	----
3	SERVICE DROP CONNECTION	----	CORE	----
4	CONDUIT AND CONDUCTOR TO SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
5	METER HOUSING WITH LEVER BYPASS	CUSTOMER	CUSTOMER	CUSTOMER
6	CONNECTION, METER HOUSING	----	CUSTOMER	----
7	DISCONNECT	CUSTOMER	CUSTOMER	CUSTOMER

- If the service is overhead to the meter pole and then underground to the house, the meter will remain on the meter pole, and the applicant will be required to install the secondary to the house.

SINGLE-PHASE OVERHEAD – METER POLE RESIDENTIAL (200 TO 400 AMPS)

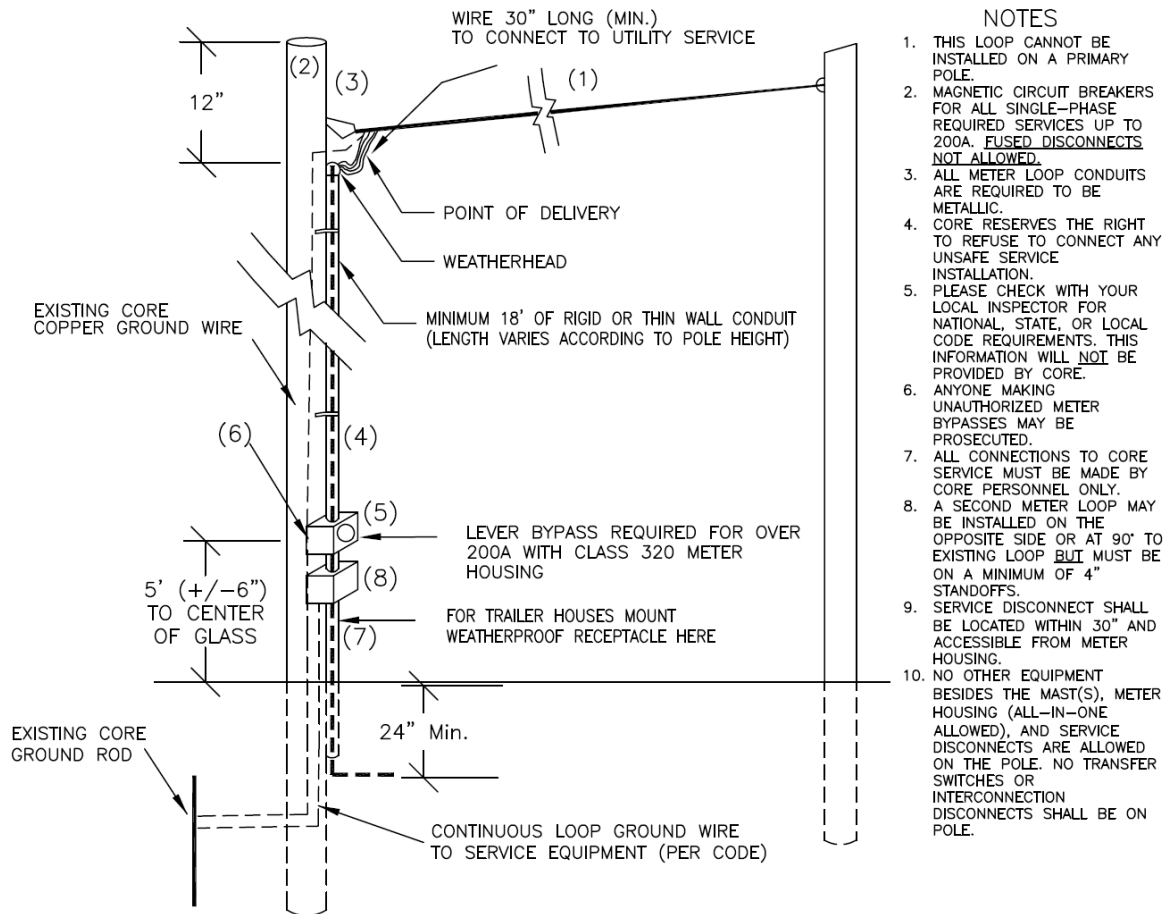


TABLE OF RESPONSIBILITY

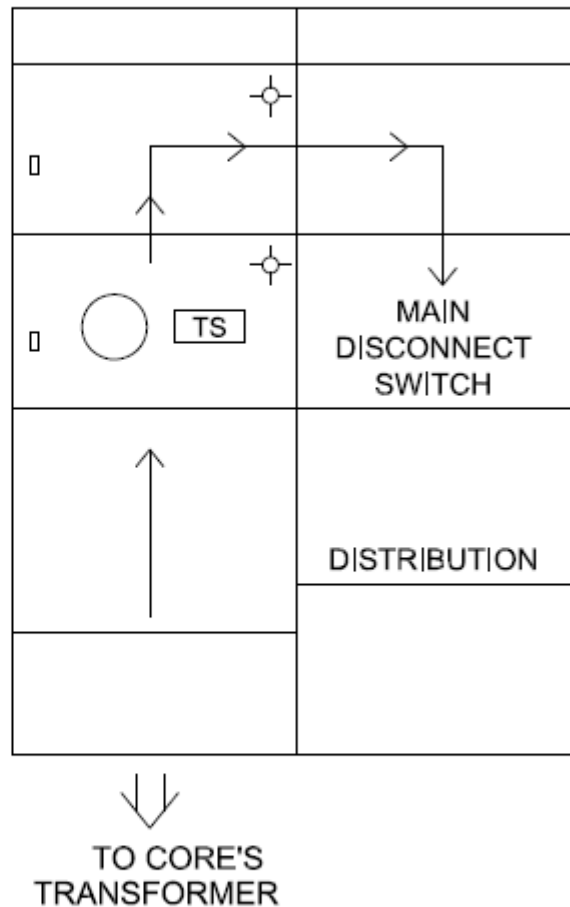
KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	SECONDARY	CORE	CORE	CORE
2	POLE & GROUND ROD	CORE	CORE	CORE
3	SERVICE CONNECTION	----	CORE	----
4	CONDUIT AND CONDUCTOR TO SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
5	METER HOUSING WITH LEVER BYPASS	CUSTOMER	CUSTOMER	CUSTOMER
6	CONNECTION, METER HOUSING	----	CUSTOMER	----
7	CONDUIT AND CONDUCTOR	CUSTOMER	CUSTOMER	CUSTOMER
8	WEATHERPROOF MAIN DISCONNECT DEVICE	CUSTOMER	CUSTOMER	CUSTOMER

- CT/PT metering is required for single-phase loads greater than 320amp continuous or 400amp peak and three-phase loads greater than 200amp. See Current Transformer – CT and Potential Transformer – PT Metering Section.

EUSERC SINGLE METER

NOTES:

- ENCLOSED BY LOCKABLE DOORS.
- HINGED DOORS
CT'S & PT'S ARE LOCATED BEHIND METER AND TEST SWITCH.
- LOCATED OUTDOORS ONLY



UNIT DESIGNATION

CT-4 240V — 1Ø 240 VOLT OVER 400 AMP

CT-4 208V — 3Ø 208 VOLT OVER 200 AMP

CT-4 480V — 3Ø 480 VOLT OVER 200 AMP

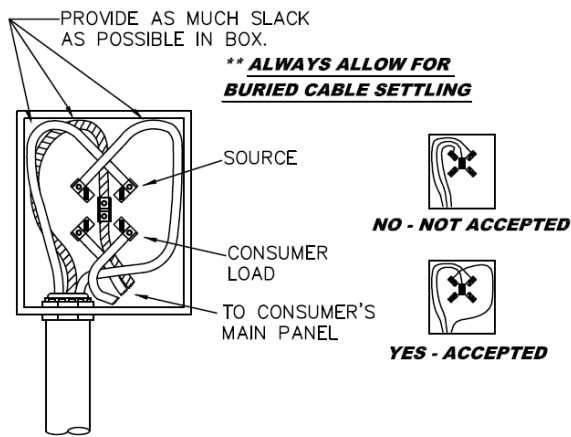
STANDARD ADOPTED - 02/01/1997

Service Laterals (installed by CORE)

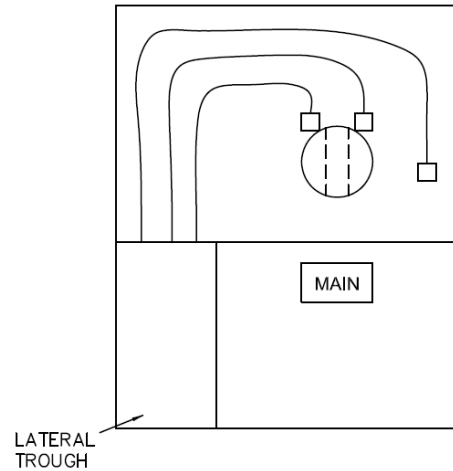
CORE will install the service lateral at such time that the foundation is in and backfilled to final grade ($\pm 6''$), and the location of the meter service has been marked on the foundation. To facilitate the timely installation of the service lateral and eliminate additional costs, please refer to the following procedure.

1. A *New Location Request Form* for the new permanent service must be requested to initiate an account prior to ordering the lateral if an account has not yet been established.
2. Notify CORE to schedule the lateral service installation by submitting a *Builder/Developer Service Lateral Form* to Engineering Services for processing.
3. Mark "E" (with paint) on the foundation wall. Remember the following guidelines when marking the location of the meter socket.
 - a. Meters will not be located in any area considered hazardous or inside where reading, testing, or servicing of the meter may become impracticable.
 - b. Meters will be located on the front 25% of the house, *ahead of any fence*, and in a direct line with CORE's electrical facility designated to serve the house. The meter will be located 5' ($\pm 6''$) to center of glass above final grade.
 - c. A clear and level working space of 4' must be maintained around the meter at all times.

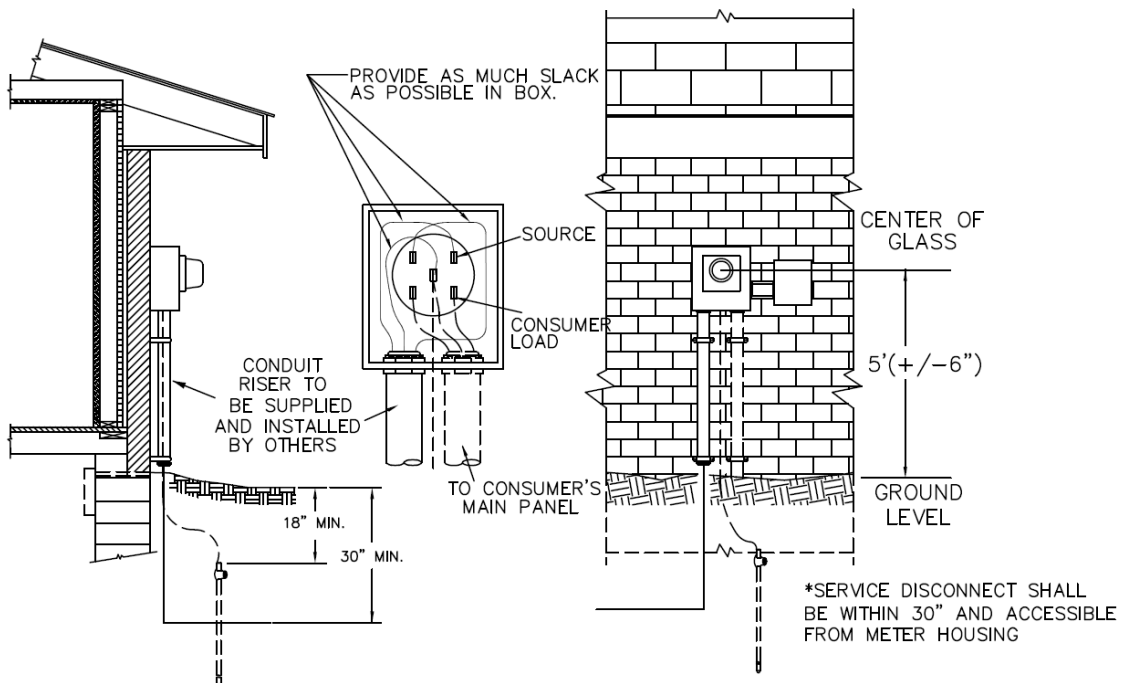
METER WIRING DETAIL



ALL IN ONE METER HOUSING DETAIL



METER HOUSING DETAIL



4. Post the address of the property at the curb or in a visible location for locators and construction crews.
5. CORE will install a lateral from the electric power source to the foundation. The wire will be coiled next to the foundation wall. The electrical service will not be energized. Once the house has been framed and sided, an electrician can then mount the meter socket, install the riser, and terminate the wire (line side and load side) in the meter socket. Note that the wire will be color coded. It is imperative that the electrician leave the color code markings on the wire and ***provide as much slack as possible***.
6. Remove all trash and building material from the area where the service lateral will be located.

Upon notification, CORE will continuously inspect each location to verify readiness (site condition and foundation being marked for electric service entrance, etc.). The installation of the lateral will be scheduled within a period not to exceed two weeks upon verification of site readiness. If CORE's lateral crew arrives at a site that is not ready, rescheduling the lateral could mean an additional two weeks from that date.

The builder/member will be responsible for any costs incurred from:

- Cable cuts and any damages caused by the builder or their subcontractor.
- Reinstallation of lateral due to grade changes, meter housing changes, etc.
- Additional materials, i.e., conduit under retaining walls, extended laterals due to location of house, etc.
- Relocation of lateral from original design (other side of house from its source).

Multiple Meter Installations

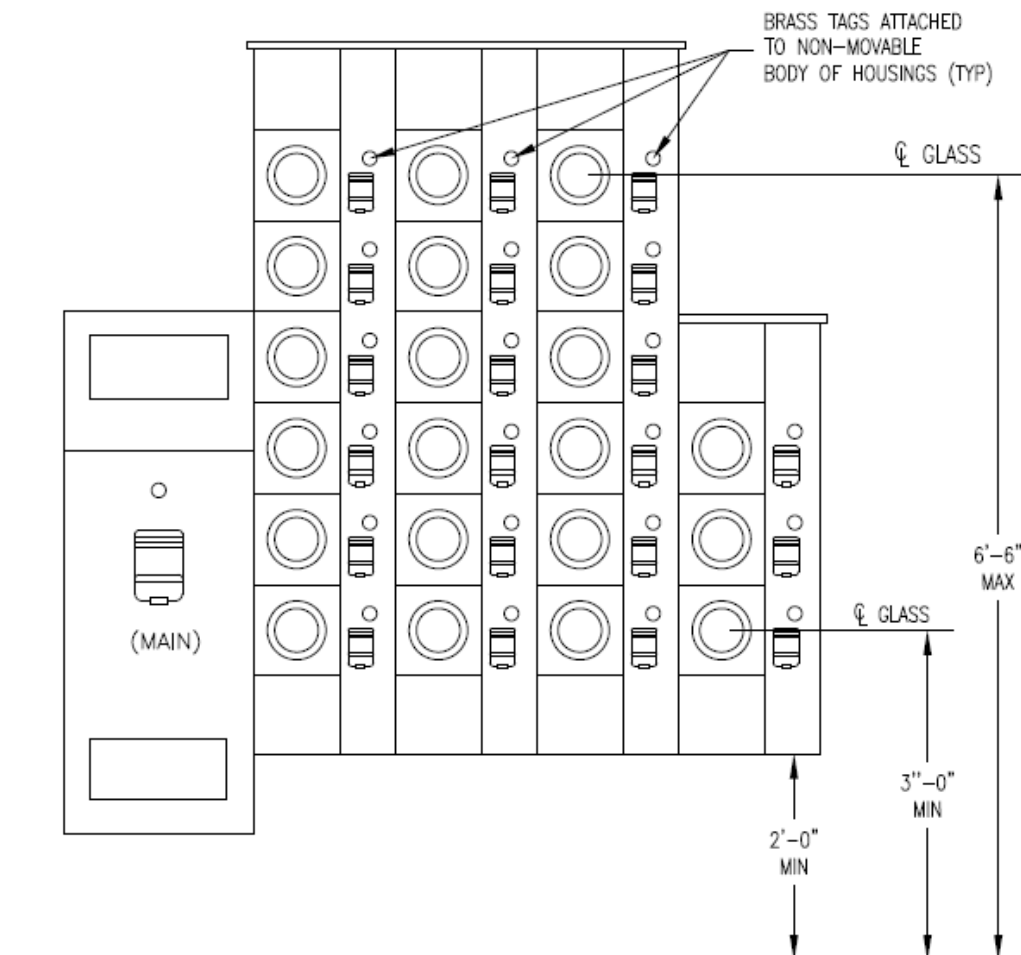
Multi-family

On residential multi-meter panels, the centerline of the bottom row of meters shall be a minimum of 3' and the top row of meters shall be a maximum of 6'- 6" above finished grade or floor.

Meter base/socket jumpers shall not be used to serve house meters.
House meters shall be served in the following manor:

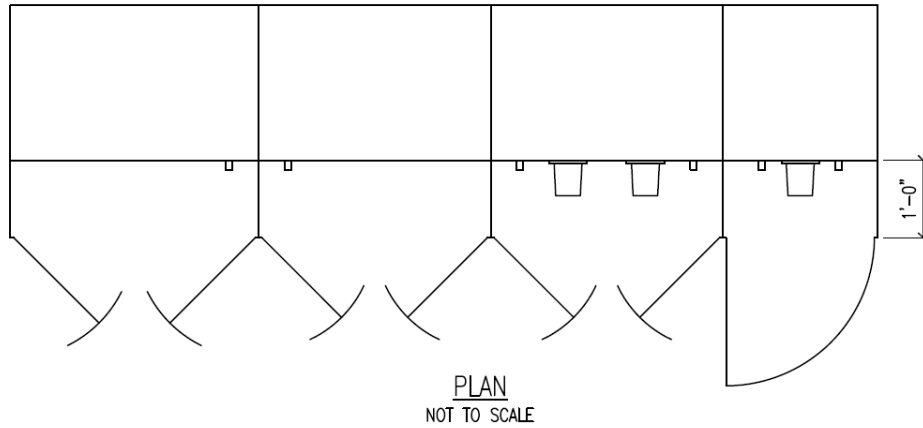
- A dedicated set of service entrance conductors.
- A tap at the bussing of residential multi-meter panels.
- All-in-one factory assembled multi-meter panels.

MULTIPLE METER SINGLE-PHASE
RESIDENTIAL
(200 AMPS OR LESS PER METER)

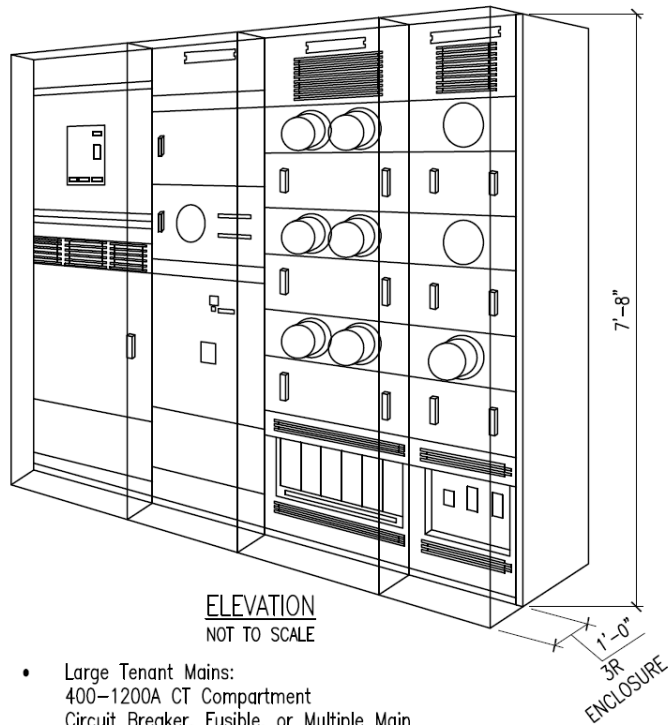


If disconnects are located on different parts of the building (like an apartment complex), mapping placards will be required at the disconnect locations.

RESIDENTIAL MULTI-METERING FOR EUSERC APPLICATIONS



- UL Listed Service Entrance
- Service:
 - 120/240V 1Ø3W ac
 - 120/240V 3Ø4W ac Δ *Restricted
 - 120/208V 3Ø4W ac
 - 277/480V 3Ø4W ac
- Ampacity 400–4000A
- SCCR 100,000A rms Symmetrical
- Bussing:
 - Aluminum (Standard)
 - Copper (Optional)
- Enclosure:
 - NEMA Type 3R
- Hot Sequence Metering: EXCEPTION
6 HANDLE RULE
- Mains:
 - Underground Pull Section 400–4000A
 - Circuit Breaker 400–4000A
 - Fusible Switch 400–4000A



- Large Tenant Mains:
 - 400–1200A CT Compartment
 - Circuit Breaker, Fusible, or Multiple Main
- Meter Sections:
 - 3-Socket or 6-Socket
 - Circuit Breaker or Fusible
- Meter Sockets:
 - 200A Continuous (5-Jaw or 7-Jaw)
 - Plug-On Construction

*Available only on existing services – may require upgrade to 120/208V or 277/480V

4 panels–R

Specifications for Single-Phase 120/240V 3-Wire Meter Housings

- Housings shall be constructed from metal in accordance with the latest revision of Underwriters' Laboratories (UL) Standard No. 414 for meter sockets. All meter housings shall be UL listed and labeled, and they shall be installed and used in accordance with their labeling.
- The line-side of each socket shall be equipped so proper sealing of the socket can be maintained by padlock. **All sockets shall be ringless.**
- After installation and sealing are completed, the socket shall not have any openings except as permitted by NEMA Type 3R construction.
- Meter housing installations shall be installed per National Electric Code (NEC) procedures and shall be enforced by the local inspection authority. All 200amp meters shall be hot sequenced except as required by the National Electric Code (NEC). See "six-handle" rule.
- Meter housing shall be located 5 feet (+or-6") to center glass above finished grade. On multi-meter panels, the centerline of meters shall be a minimum of 3' and a maximum of 6'-6" above finished grade or floor. The minimum spacing between socket centers shall be 12" horizontally and 12" vertically.
- Maximum amp size to be metered by a self-contained 1Ø meter will not exceed 320amp continuous or 400amp peak loads. All single-phase services in excess of 200 amps require a class 320 meter and lever bypass meter housing unless preapproved by CORE. Class 320 meters have a maximum continuous load rating of 320 amps. Continuous loads greater than 320 amps will require CT metering which will adhere to the EUSERC standards.
- Meters shall be protected from mechanical damage and have 4' clear, level working space in front of the meters.
- Factory-built multi-meter equipment cut sheet shall be approved by CORE's Metering Department along with a site diagram and one line.
- Multi-metered services require all sockets to be permanently labeled with an etched metal tag or permanent tag approved by CORE's Metering Department personnel noting the service location that it feeds on the body of housing, not on the removable panel.
- All existing services that are changed or upgraded because of increased loads, transformer size, wire size, interconnection agreements, or reconstruction will be brought up to CORE's current Standards at the member's expense.

Additional requirements may be found on our website (www.CORE.coop). Approval will be given to meter/load center combinations as well as multiple combinations, which meet all other provisions for meter housings.

It is understood that CORE's approval does not mean approval in any area where there may be a conflict with any national or local code, or where the local inspecting body will have the final authority.

It is also understood that in case of a disaster, CORE will not have spare parts and will not be responsible for the repair.

Questions can be answered by CORE's Metering Department.

Additional Requirements for 1Ø Underground Feed Residential Meter Housings

- Minimum size permitted must be 200 amp capable of terminating 350 MCM aluminum wire.
- Meter will be located on the front 25% of the house, ahead of fence, and in a direct line with CORE's electric facility designated to serve that location.

Additional Requirements for 120/208V 1Ø Hookups

- Fifth (5th) terminal is required and will be allowed in the 9 o'clock position only and must be bonded within the housing. Typically used for 1Ø network service fed by 3Ø transformer, 120/208 voltage as approved by CORE.
- The members wiring on three-wire, single-phase installations shall be so arranged that the connected load from one phase to neutral shall not exceed 60 percent of the members total connected load. The use of single-phase loads on three-phase transformers shall not unbalance the current per phase more than ten percent.

Fault Current Levels and Standard KVA Size Transformers

The most commonly used transformers installed by CORE are shown in the tables below. Tables also show the maximum available short-circuit current at the transformer's secondary connection point.

Maximum short circuit current in amps for single-phase pole mounted transformers

		240 V Windings		120 V Winding	
Secondary Voltage	KVA	Min. % Z	Fault Current	Min. % Z	Fault Current
120/240	10	1.5	2778	1.5	5556
120/240	15	1.5	4167	1.5	8333
120/240	25	1.5	6944	1.5	13889
120/240	37.5	1.5	10417	1.5	20833
120/240	50	1.5	13889	1.5	27778

Maximum short circuit current in amps for single-phase pad mounted transformers

		240 V Winding		120 V Winding	
Secondary Voltage	KVA	Min. % Z	Fault Current	Min. % Z	Fault Current
120/240	15	1.5	4167	1.5	8333
120/240	25	1.5	6944	1.5	13889
120/240	37.5	1.5	10417	1.5	20833
120/240	50	1.5	13889	1.5	27778
120/240	75	1.5	20833	1.5	41667
120/240	100	1.5	27778	1.5	55556
120/240	167.5	1.5	46528	1.5	93056

COMMERCIAL/INDUSTRIAL POWER SERVICES

Street Lighting

- CORE offers to provide street lighting on public streets. It shall be the responsibility of the developer to provide lighting in private parking lots.

Joint Trench

- Subdivisions with underground electrical service frequently have telephone and cable television facilities in the same trench with electrical distribution. The builder/developer may contact CORE's Engineering Department for information required to coordinate joint trenching of facilities.

If construction is assigned to CORE's contractor, any contracts or agreements regarding joint trench will be made with that contractor, not CORE.

- Gas and water lines cannot be included in the electrical trench. All utilities requesting joint trench use must be designed and ready to install at the time CORE's facilities are scheduled for construction.

Meter Sets

- The applicant must establish an account for new service. *A New Location Request Form* will be mailed, faxed or emailed to the builder/member. This form needs to be completed and returned to Engineering Services via fax (720)733-5764 or email engineering@CORE.coop.
- If the meter is to be used strictly for temporary construction purposes only and then to be removed from the site, the applicant should indicate "temp only" on this form.
- CORE will issue a service order to set the meter upon receipt of the inspector's approval if the temporary or permanent meter inspection.
- Please allow 3 to 10 business days for the meter set to be completed.
- A deposit in the amount of an estimated 60-day bill may be required. Such deposit may be in addition to any advance, contribution, or guarantee provided for in the extension regulations.

Meter Locations

- An electric meter will not be in any area considered hazardous or inside where reading, testing, or servicing of the meter may become impracticable.
- A clear and level working space of 4' must be maintained around the meter at all times. Roadways and drive-throughs are not considered working space.
- The meter shall be located 5' (+or-6") at center of glass, above clear and level ground.
- Service disconnect shall be within 30" and accessible from meter housing.
- Meter housings are not provided by CORE. See Specifications for Meter Housings, Locations, and Installations.
- Only one meter will be issued per business. Strip malls and warehouses with multiple suites, units, or businesses will be allowed to have a commercial multi-metering configuration with one meter per business. Contact CORE's Metering Department for detailed information.
- Where multiple buildings are served by one power source (transformer), all secondary runs must be mapped by the electrical contractor.
- Brass tags required on non-movable part of meter housing(s).

UNDERGROUND COMMERCIAL SINGLE-PHASE (400 AMPS OR LESS) THREE-PHASE (200 AMPS OR LESS)

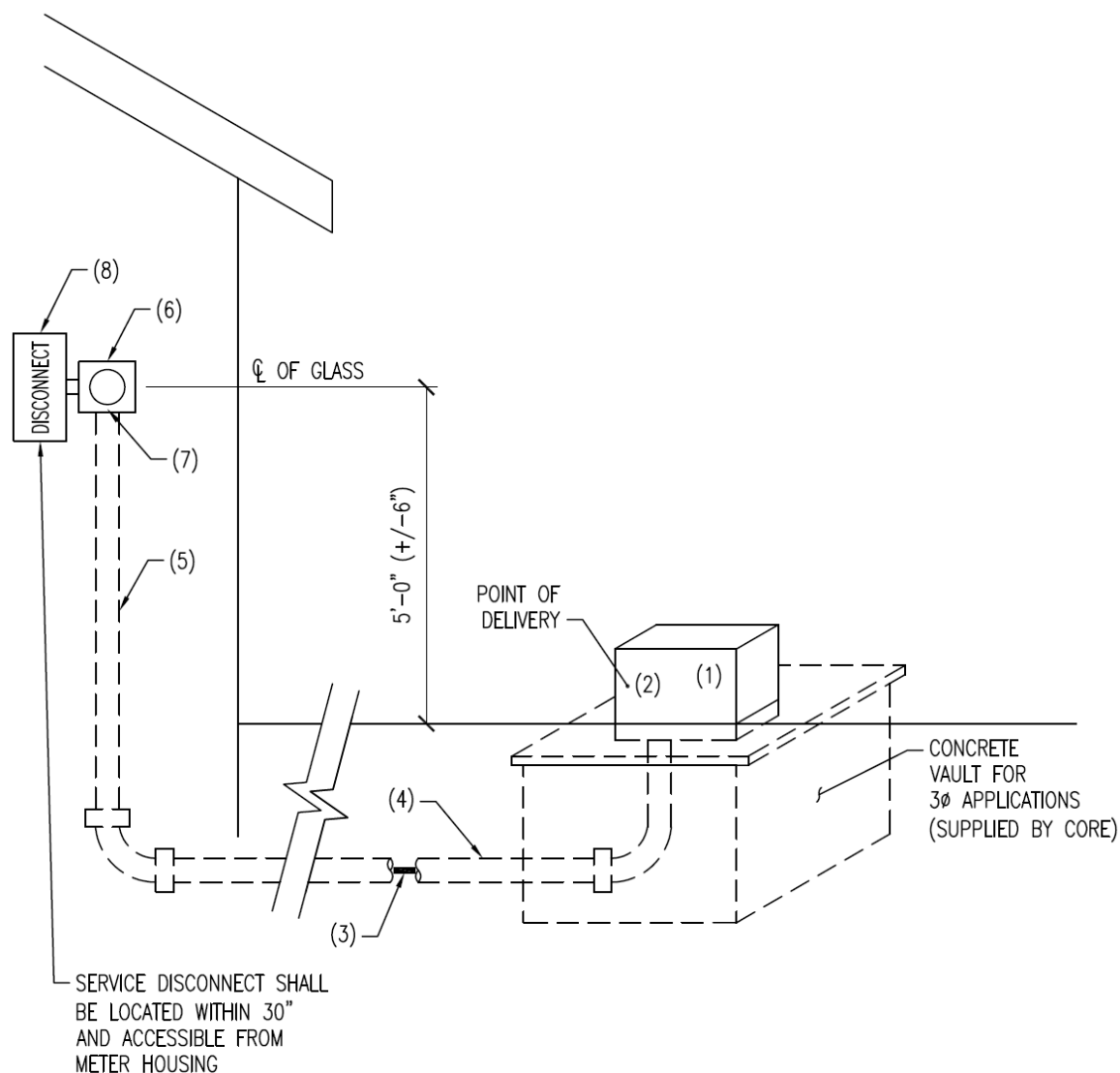


TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	DISTRIBUTION FACILITIES (TRANS. OR PED.)	CORE	CORE	CORE
2	CONNECTION, SOURCE	CORE	CORE	---
3	CONDUCTOR, SERVICE LATERAL	CUSTOMER	CUSTOMER	CUSTOMER
4	CONDUIT, HORIZONTAL, AND RELATED MATERIAL	CUSTOMER	CUSTOMER	CUSTOMER
5	CONDUIT SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
6	METER HOUSING LEVER BYPASS ON SAFETY - SEALED	CUSTOMER	CUSTOMER	CUSTOMER
7	CONNECTION, METERING HOUSING	---	CUSTOMER	---
8	DISCONNECT - MAGNETIC OR FUSED	CUSTOMER	CUSTOMER	CUSTOMER

SPECIAL NOTE: KEY NO. 2 - CONNECTORS ARE FURNISHED AND INSTALLED BY CORE.

- If the service is underground to a meter pedestal, the meter is located within the meter pedestal, and the applicant will be required to install the secondary lateral to the building load.

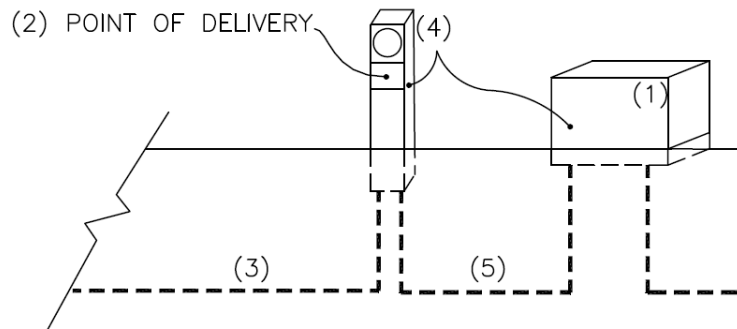
METER PEDESTAL – COMMERCIAL SINGLE-PHASE (400 AMPS OR LESS)

BREAKER TYPE (3R ENCLOSURE)

TYPE METER PEDESTAL	BREAKER TYPE	COMMENTS
MILBANK	BRYANT TYPE: BR/BJ LINE GE: TQDL 21, GE: TQD 22 ITE: QP OR QT LINE WESTINGHOUSE: CAZ LINE	200 AMP SERVICE 400 AMP SERVICE REQUIRES DOUBLE-BREAKER KIT TO BE INSTALLED BY CORE PERSONNEL
SMALL DURHAM	WESTINGHOUSE TYPE: QUICKLAG P, BRYANT TYPE: BR, SQUARE D:, HOME LINE ITE: QP	60 TO 125 AMP
STANDARD DURHAM	SAME AS MILBANK	200 AMP
LARGE DURHAM	SAME AS MILBANK	200 TO 400 AMP (400 AMP SERVICES REQUIRE TWO, 200 AMP BREAKERS)

NOTE:

If meter pedestal is a manufacturer other than noted above, please contact CORE's Metering Department for additional breaker information.



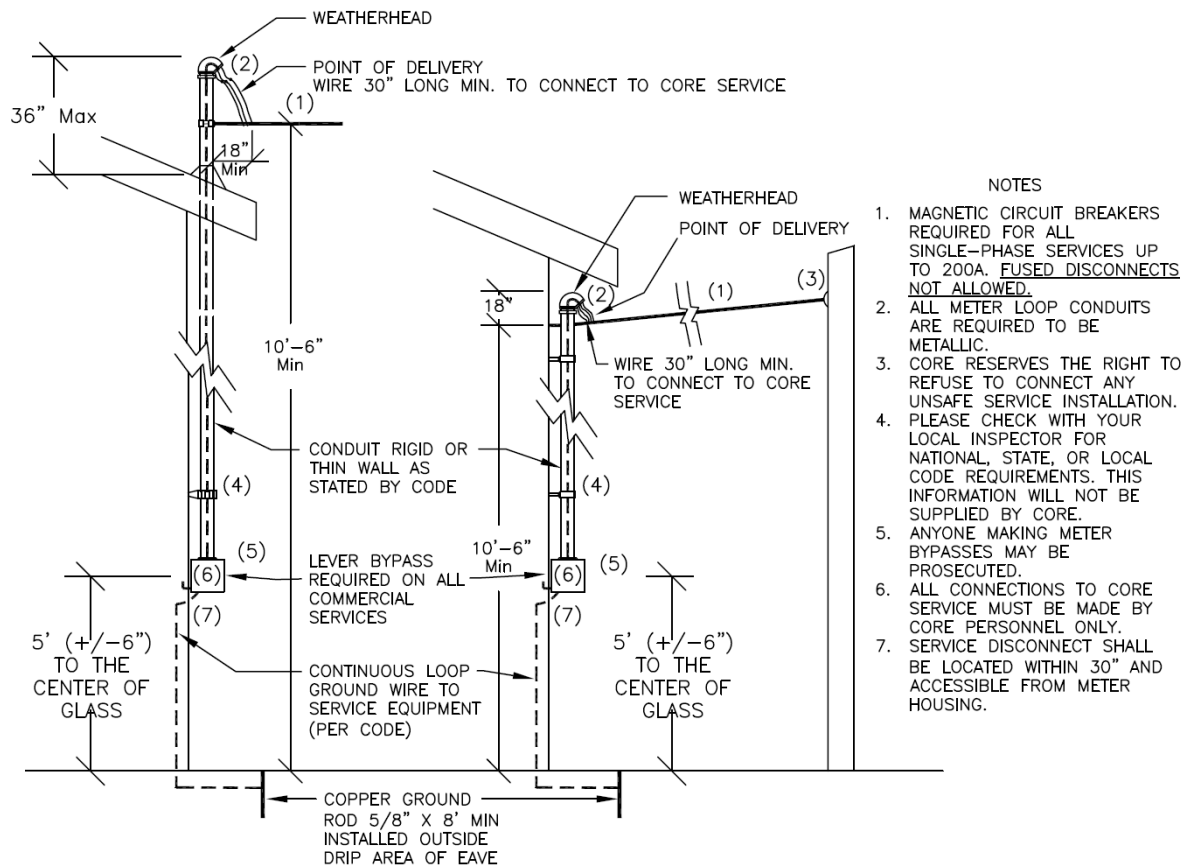
NOTES:

1. DOUBLE-BREAKER KIT FOR 400 AMP SERVICE ON MILBANK PEDESTALS ARE SUPPLIED AND INSTALLED BY CORE.
2. IF DOUBLE-BREAKER KIT IS REQUIRED, BOTH BREAKER ASSEMBLIES MUST BE INSTALLED AND CENTERED PRIOR TO TEMP SERVICE.
3. FINAL CONNECTIONS FROM BREAKER TO METER MUST BE MADE BY CORE'S PERSONNEL.
4. LEVER BYPASS REQUIRED FOR ALL COMMERCIAL SERVICES.

TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	DISTRIBUTION FACILITIES	CORE	CORE	CORE
2	BREAKER(S) IN PEDESTAL	CUSTOMER	CUSTOMER	CUSTOMER
3	CONDUCTOR, SERVICE LATERAL	CUSTOMER	CUSTOMER	CUSTOMER
4	METER PEDESTAL	CORE	CORE	---
5	SECONDARY WIRE	CORE	CORE	CORE

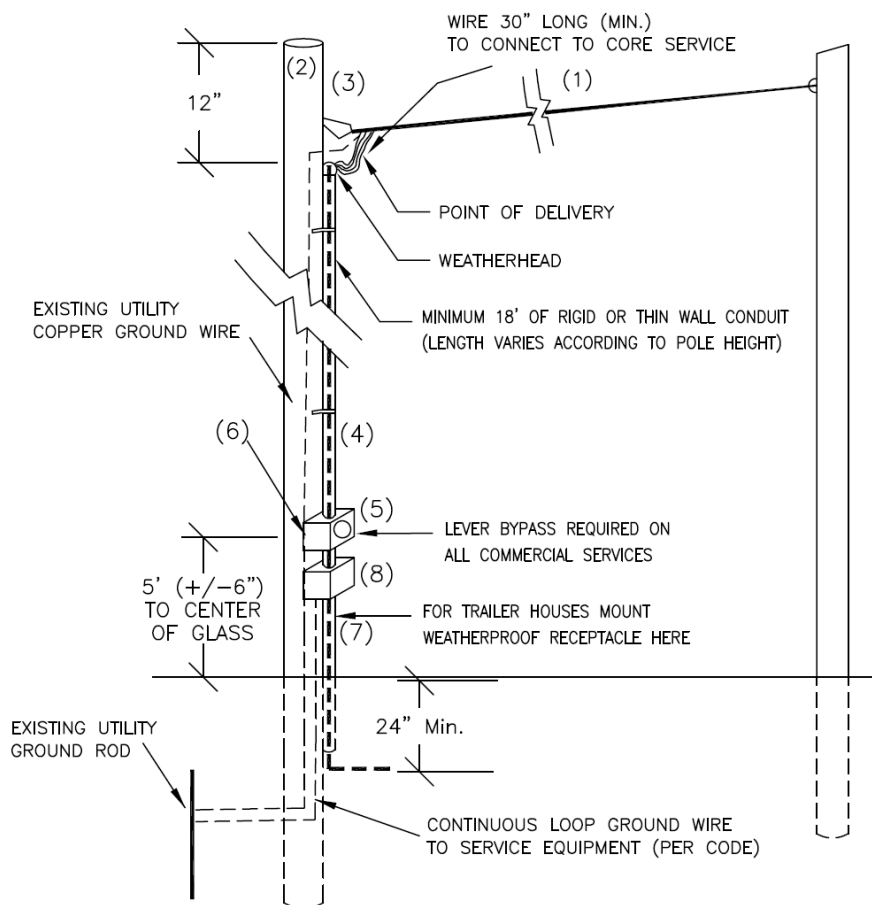
- OVERHEAD – COMMERCIAL
SINGLE-PHASE (400 AMPS OR LESS)
THREE-PHASE (200 AMPS OR LESS)



KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	SERVICE DROP	CORE	CORE	CORE
2	SERVICE CONNECTION	-----	CORE	-----
3	SERVICE DROP CONNECTION	-----	CORE	-----
4	CONDUIT AND CONDUCTOR TO SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
5	METER HOUSING WITH LEVER BYPASS	CUSTOMER	CUSTOMER	CUSTOMER
6	CONNECTION, METER HOUSING	-----	CUSTOMER	-----
7	DISCONNECT	CUSTOMER	CUSTOMER	CUSTOMER

- If the service is overhead to the meter pole and then underground to the building, the meter will remain on the meter pole, and the applicant will be required to install the secondary to the building.

METER POLE – COMMERCIAL OR INDUSTRIAL SINGLE-PHASE (400 AMPS OR LESS) THREE-PHASE (200 AMPS OR LESS)



NOTES

1. THIS LOOP CANNOT BE INSTALLED ON A PRIMARY POLE.
2. MAGNETIC CIRCUIT BREAKERS OR FUSED DISCONNECT REQUIRED FOR ALL SINGLE-PHASE SERVICES UP TO 200A. FUSED DISCONNECTS NOT ALLOWED.
3. ALL METER LOOP CONDUITS ARE REQUIRED TO BE METALLIC.
4. CORE RESERVES THE RIGHT TO REFUSE TO CONNECT ANY UNSAFE SERVICE INSTALLATION.
5. PLEASE CHECK WITH YOUR LOCAL INSPECTOR FOR NATIONAL, STATE, OR LOCAL CODE REQUIREMENTS. THIS INFORMATION WILL NOT BE PROVIDED BY CORE.
6. ANYONE MAKING UNAUTHORIZED METER BYPASSES MAY BE PROSECUTED.
7. ALL CONNECTIONS TO CORE SERVICE MUST BE MADE BY CORE PERSONNEL ONLY.
8. A SECOND METER LOOP MAY BE INSTALLED ON THE OPPOSITE SIDE OR AT 90° TO EXISTING LOOP BUT MUST BE ON A MINIMUM OF 4" STANDOFFS.
9. SERVICE DISCONNECT SHALL BE LOCATED WITHIN 30" AND ACCESSIBLE FROM METER HOUSING.
10. NO OTHER EQUIPMENT BESIDES THE MAST(S), METER HOUSING (ALL-IN-ONE ALLOWED), AND SERVICE DISCONNECTS ARE ALLOWED ON THE POLE. NO TRANSFER SWITCHES OR INTERCONNECTION DISCONNECTS SHALL BE ON POLE.

TABLE OF RESPONSIBILITY

KEY NO.	MATERIAL OR WORK DESCRIPTION	MATERIAL	INSTALLATION	OWNERSHIP AND MAINTENANCE
1	SECONDARY	CORE	CORE	CORE
2	POLE & GROUND ROD	CORE	CORE	CORE
3	SERVICE CONNECTION	-----	CORE	-----
4	CONDUIT AND CONDUCTOR TO SERVICE ENTRANCE	CUSTOMER	CUSTOMER	CUSTOMER
5	METER HOUSING WITH LEVER BYPASS	CUSTOMER	CUSTOMER	CUSTOMER
6	CONNECTION, METER HOUSING	-----	CUSTOMER	-----
7	CONDUIT AND CONDUCTOR	CUSTOMER	CUSTOMER	CUSTOMER
8	WEATHERPROOF MAIN DISCONNECT DEVICE	CUSTOMER	CUSTOMER	CUSTOMER

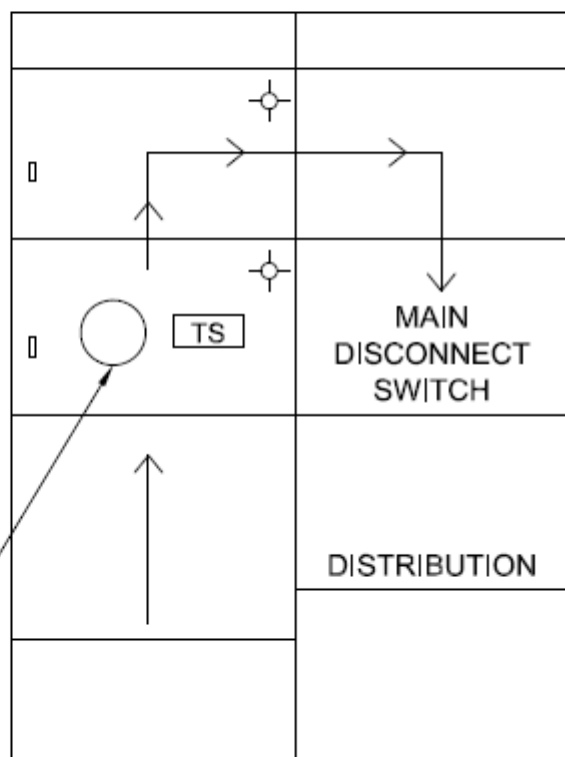
- CT/PT metering is required for single-phase greater than 320 amp continuous or 400 amp peak loads and three-phase greater than 200 amp. See Current Transformer – CT and Potential Transformer – PT Metering.

EUSERC SINGLE METER (ELECTRIC UTILITY SERVICE EQUIPMENT REQUIREMENT COMMITTEE)

NOTES:

- ENCLOSED BY LOCKABLE DOORS.
- HINGED DOORS
CT'S & PT'S ARE LOCATED
BEHIND METER AND
TEST SWITCH.
- LOCATED OUTDOORS ONLY
- ENCLOSURE: NEMA TYPE 3R

3Ø 13 TERMINALS
1Ø 8 TERMINALS



* ↓↓ HOT SEQUENCE

TO CORE'S
TRANSFORMER

1Ø 240 VOLT OVER 400 AMP
3Ø 208 VOLT OVER 200 AMP
3Ø 480 VOLT OVER 200 AMP

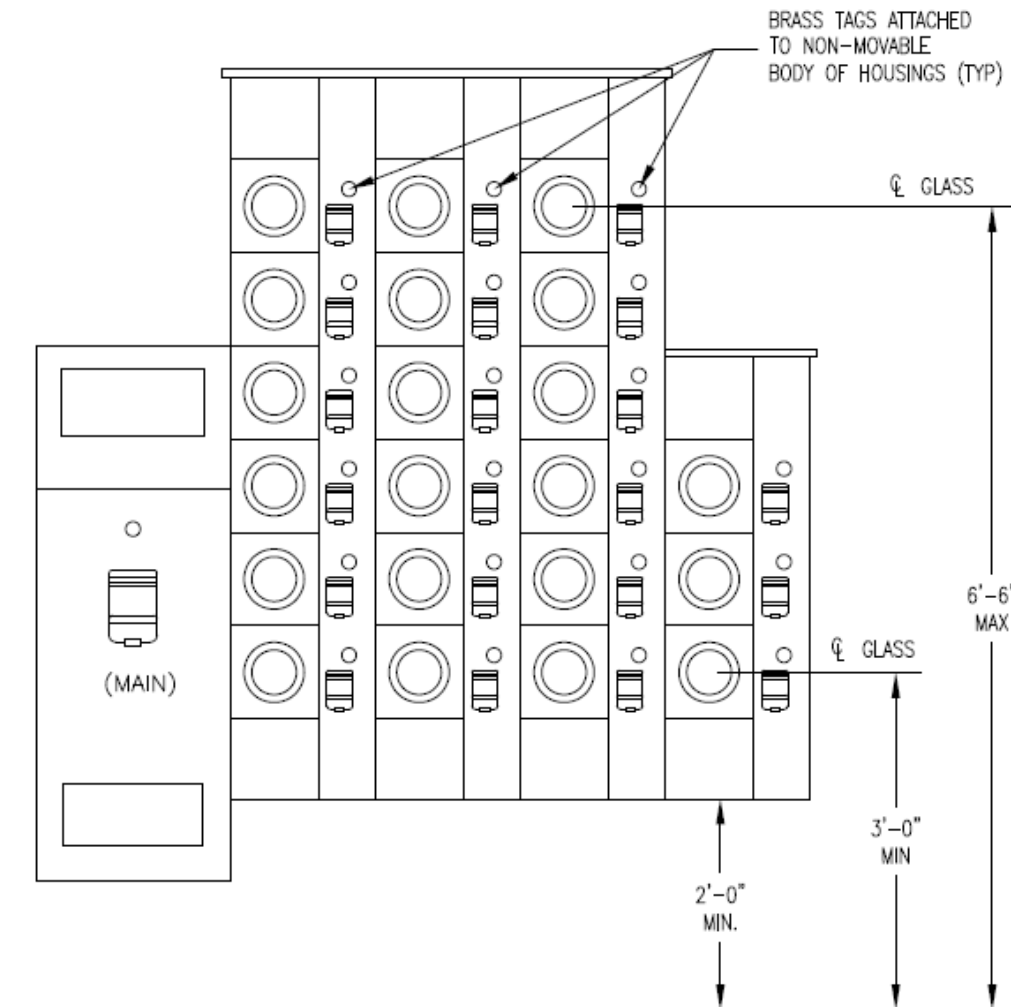
Multiple Meter Installations

Nonresidential

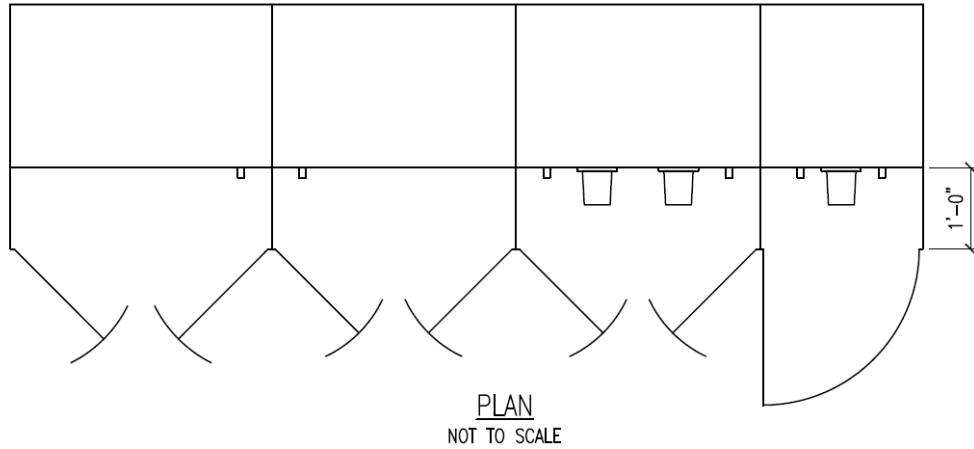
On nonresidential multi-meter panels, the centerline of meters shall be a minimum of 3' and a maximum of 6'-6" above finished grade or floor. The minimum spacing between socket centers shall be 12" horizontally and 12" vertically.

Meters shall be protected from mechanical damage. Factory-built multi-meter equipment shall be approved by CORE's Metering Department.

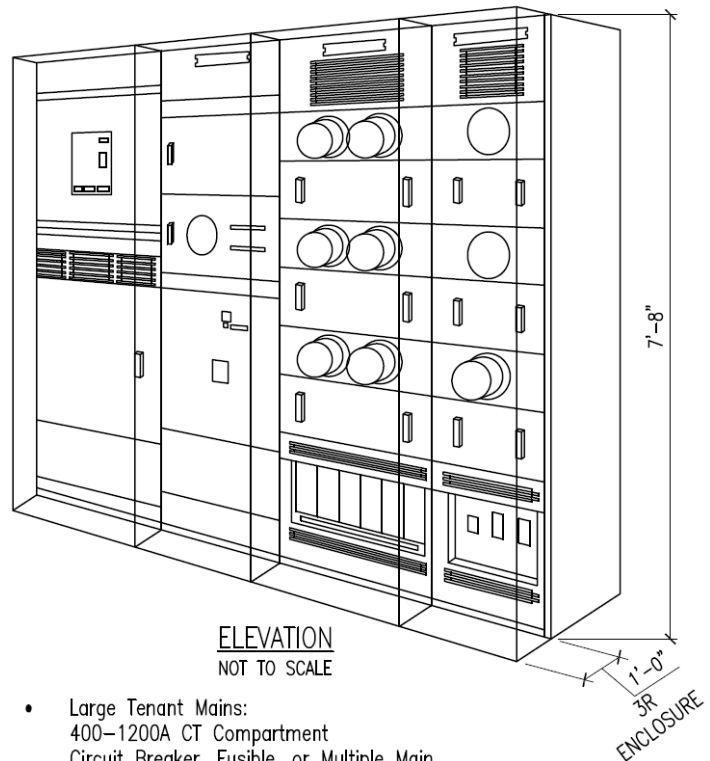
MULTIPLE METER SINGLE-PHASE COMMERCIAL (200 AMPS OR LESS PER METER)



COMMERCIAL MULTI-METERING FOR EUSERC APPLICATIONS



- UL Listed Service Entrance
- Service:
 - 120/240V 1Ø3W ac
 - 120/240V 3Ø4W ac Δ Restricted*
 - 120/208V 3Ø4W ac
 - 277/480V 3Ø4W ac
- Ampacity 200–4000A
- SCCR 100,000A rms Symmetrical
- Bussing:
 - Aluminum (Standard)
 - Copper (Optional)
- Enclosure:
 - NEMA Type 3R
- Hot Sequence Metering: EXCEPTION
6 HANDLE RULE
- Mains:
 - Underground Pull Section 400–4000A
 - Circuit Breaker 400–4000A
 - Fusible Switch 400–4000A



- Large Tenant Mains:
 - 400–1200A CT Compartment
 - Circuit Breaker, Fusible, or Multiple Main
- Meter Sections:
 - 3–Socket or 6–Socket
 - Circuit Breaker or Fusible
- Meter Sockets:
 - 200A Continuous (5–Jaw or 7–Jaw)
 - Plug-On Construction

*Available only on existing services – may require upgrade to 120/208V or 277/480V

Cable Limits for Three-Phase Pad-Mounted Transformers

Seven (7) runs is the maximum number of secondary conductors allowed for three-phase transformer sizes 45KVA to 3000KVA with a maximum conductor size of 500 MCM. The member shall provide an additional 10' of cable for transformers installed on vaults to accommodate transformer replacements or upgrades.

Voltages

CORE offers their member the voltages shown in the table below.

Service Type	Voltage
Single-phase	120/240V, 3-wire*
Three-phase	120/208V, 4-wire 277/480V, 4-wire
Primary Single-Phase	7200V, 3-wire
Primary Three-Phase	7200/12470V, 4-wire

*Available for loads to a maximum demand of 100kW. Larger loads may be served, if determined feasible by a CORE engineer. All motors must be rated 10 HP or less.

Cable Limits for Single-Phase Pad-Mounted Transformers

Seven (7) runs is the maximum number of secondary conductors allowed for single-phase transformer installations with a maximum conductor size being 350 MCM. The member shall provide an additional 10' of cable for transformers installed on vaults to accommodate transformer replacements or upgrades.

Fault Current Levels and Standard KVA Size Transformers

The most used transformers installed by CORE are shown in the tables below. Tables also show the maximum available short-circuit current at the transformer's secondary connection point.

Maximum short circuit current in amps for single-phase pole mounted transformers

Secondary Voltage	KVA	240 V Windings		120 V Winding	
		Min. % Z	Fault Current	Min. % Z	Fault Current
120/240	10	1.5	2778	1.5	5556
120/240	15	1.5	4167	1.5	8333
120/240	25	1.5	6944	1.5	13889
120/240	37.5	1.5	10417	1.5	20833
120/240	50	1.5	13889	1.5	27778

Maximum short circuit current in amps for single-phase pad mounted transformers

Secondary Voltage	KVA	240 V Winding		120 V Winding	
		Min. % Z	Fault Current	Min. % Z	Fault Current
120/240	15	1.5	4167	1.5	8333
120/240	25	1.5	6944	1.5	13889
120/240	37.5	1.5	10417	1.5	20833
120/240	50	1.5	13889	1.5	27778
120/240	75	1.5	20833	1.5	41667
120/240	100	1.5	27778	1.5	55556
120/240	167.5	1.5	46528	1.5	93056

Maximum short circuit current in amps for Three-single phase pole mounted transformer bank

Secondary Voltage	KVA	208 V Winding		120 V Winding	
		Min. % Z	Fault Current	Min. % Z	Fault Current
120/208	10	1.5	1850	1.5	3208
120/208	15	1.5	2776	1.5	4811
120/208	25	1.5	4626	1.5	8019
120/208	37.5	1.5	6939	1.5	12028
120/208	50	1.5	9252	1.5	16038

Maximum short circuit current in amps for Three-phase pad mounted transformers

Secondary Voltage	KVA	3 Phase L-G	
		Min. % Z	Fault Current
120/208	75	1.5	13879
120/208	112.5	1.5	20725
120/208	150	1.5	27757
120/208	225	1.5	41636
120/208	300	1.5	55514
120/208	500	1.5	92524
120/208	750	2.5	83272
120/208	1000	5.0	55514

Secondary Voltage	KVA	480 V Winding		277 V Winding	
		Min. % Z	Fault Current	Min. % Z	Fault Current
277/480	10	1.5	802	1.5	1390
277/480	15	1.5	1203	1.5	2084
277/480	25	1.5	2005	1.5	3474
277/480	37.5	1.5	3007	1.5	5211
277/480	50	1.5	4009	1.5	6948

Secondary Voltage	KVA	3 Phase L-G	
		Min. % Z	Fault Current
277/480	75	1.5	6014
277/480	112.5	1.5	8981
277/480	150	1.5	12028
277/480	225	1.5	18042
277/480	300	1.5	24056
277/480	500	1.5	40094
277/480	750	2.5	36084
277/480	1000	4.0	30070
277/480	1500	4.5	40094
277/480	3000	5.0	72169

Specifications for Single & Three-Phase Self-Contained Meter Housings (120/240V 1Ø, 3-Wire; 120/208V, 3Ø, and 277/480V 3Ø 4-Wire)

- Housings shall be constructed from metal in accordance with the latest revision of Underwriters' Laboratories (UL) Standard No. 414 for meter sockets. All meter housings shall be UL listed and labeled, and they shall be installed and used in accordance with their labeling.
- The line-side of each socket shall be equipped so proper sealing of the socket can be maintained by padlock. **All sockets shall be ringless.**
- After installation and sealing are completed, the socket shall not have any openings except as permitted by NEMA Type 3R construction.
- Meter housing installations shall be installed per National Electric Code (NEC) Standards and shall be enforced by the local inspection authority. All 200amp meters shall be hot sequenced except as required by the National Electric Code (NEC). See "six-handle" rule.
- Center of glass on meter housing shall be located 5' (+or-6") above finished grade. A clear and level working space of 4'-0" must be always maintained around the meter
- All commercial applications will have a meter socket with a heavy-duty locking jaw with lever-type bypass or meet the EUSERC Standards for commercial metering with safety sockets. On multi-meter panels, the centerline of meters shall be a minimum of 3' and a maximum of 6'-6" above finished grade or floor. The minimum spacing between socket centers shall be 12' horizontally and 12" vertically.
- All sockets (including CT/PT installations) will be permanently labeled with an etched metal tag or permanent tag noting the service location that it feeds on the body of housing, not on the removable panel.
- Maximum amp size to be metered by a self-contained 3Ø meter will not exceed 200 amps.
- All existing services that are changed or upgraded because of increased loads, transformer size, wire size, or reconstruction will be brought up to CORE's current Standards.
- All 3Ø polyphase sockets will have a seven-terminal mounting block with a heavy duty 200-amp locking jaw with lever-type bypass or meet the EUSERC Standards for commercial metering with safety sockets.

- All 3Ø member will provide their own single-phase protection.
- All 1Ø meter housing will require lever-type-bypass.
- Maximum amp size to be metered by a self-contained 1Ø meter will not exceed 320amp continuous or 400amp peak loads. All single-phase services in excess of 200 amps require a class 320 meter and lever bypass meter housing unless preapproved by CORE. Class 320 meters have a maximum continuous load rating of 320 amps. Continuous loads greater than 320 amps will require CT metering which will adhere to the EUSERC Standards.
- Brass tags required on non-movable part of meter housing(s).
- Self-contained meter housing shall have a spare access hole. The spare access hole shall be capped and secured from the inside of the meter housing with a metal cap such that the cap cannot be removed from the outside of the housing. The spare access hole shall be sized at 2 inches for 200A and above rated meter housings, or 1.5 inches for 150A and below meter housings.

Additional requirements may be found on our website (www.CORE.coop). Approval will be given to meter/load center combinations as well as multiple combinations, which meet all other provisions for meter housings.

It is understood that CORE's approval does not mean approval in any area where there may be a conflict with any national or local code, or where the local inspecting body will have the final authority.

It is also understood that in case of a disaster, CORE will not have spare parts and will not be responsible for the repair.

Specifications for Meter Location and Installation

Subject to CORE's Metering Department personnel approval, the member shall provide and maintain, without cost to CORE, an easily accessible meter location on or within the premises to be supplied service. All locations must comply with CORE Rates and Regulations.

Where meters, originally installed in accessible locations satisfactory to CORE, are rendered inaccessible by virtue of alterations or new construction by the owner of the premises or his agents, such meters shall be reinstalled at a point designated by CORE at the expense of the property owner.

The location of meters and metering equipment shall be designated by CORE. No wiring dependent upon the meter location should be started until such location has been approved.

Meters

- Meters shall be installed outdoors in accordance with rules governing outdoor meter installations. Meters and EUSERC cabinets are to be installed outside the building either free standing (EUSERC cabinet) or against an exterior wall (EUSERC cabinet or meter) allowing unobstructed access by CORE's personnel.
- EUSERC Cabinets shall have a minimum of 3'-0" clear and level space beyond the door when opened at 90-degree position.
- The cabinet or meter may NOT be installed in an interior room, courtyard, or any other structure that could possibly have a lockable entry way.
- If the EUSERC cabinet, metering, and main disconnect are not installed in a proper location and manner, CORE will refuse service. Major changes may be required at the member's cost and delay the service connection.
- Meter mounting and associated equipment shall be mounted securely and plumb. Where attachment is made to masonry, concrete, or plaster walls, expansion bolts, plugs, or anchors shall be used.
- Meter mountings shall not be placed in a location where meter reading or servicing may become impracticable or may cause damage to any part of the member's premises.
- Meter housing must be located within 30" of load side disconnect.

Line-side Conductors

- The line-side conductors in meter mounting devices shall be required to be separated from the load-side conductors by means of permanent barrier.
- Access to the line-side conductors shall be sealable.
- No conductors other than line-side conductors shall be permitted in line-side conduits, troughs, or lug landings.
- All line-side (unmetered) conductors must be in a continuous length of conduit or CORE sealed raceway from the point of delivery to the service entrance.

- Line-side and load-side conductors shall not be combined within the same conduit or raceway.
- The use of line-side (ahead of the meter) disconnects or other open devices are not permitted with exception to 277/480V self-contained commercial accounts and/or multiple-meter stacks following the NEC 6 handle rule.
- CORE's Distribution Operations personnel must approve the location of any ahead-of-the-meter devices.
- An approved location will be limited to installation in secured switch gear or on the same surface wall directly ahead and within 24" of the meter.

Meter location, point of delivery, and service disconnect will be determined by CORE in accordance with standard practices, including the National Electrical Code, and will be accessible to CORE's service personnel at all times.

Three-Phase Services: 120/240V, Four-Wire Delta

In addition to the requirements for all three-phase services, the high-leg (power leg) shall be connected through the right-hand terminals of the socket. Applicants upgrading service may be required to convert to 120/208 or 277/480 voltage.

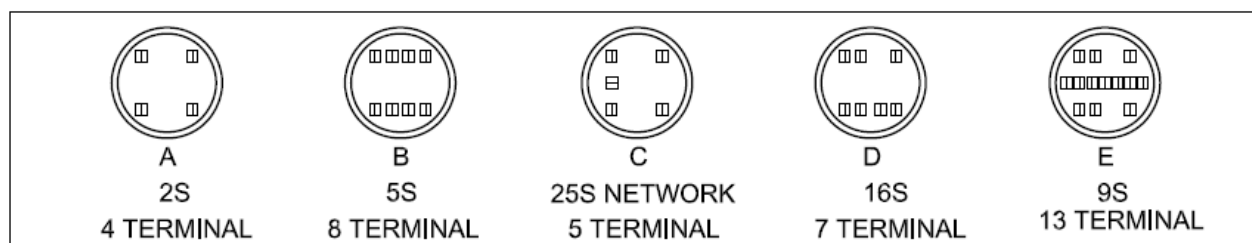
(Restricted – available only for existing services)

Three-Phase Self- Contained Services: 277/480V

An accessible meter disconnect switch before each meter base/socket and a safety socket with a manual bypass is required. Meter disconnect switch shall not be overcurrent protected. Additionally, a service disconnect is required after the meter.

Meter Form Socket/Base Types								
Voltage	Wires	Service Amps	# of Terminals	Meter Socket Config	By-Pass Required	Sequence	Meter Socket Requirement	EUSERC Drawings
<u>Single Phase</u>								
120/240	3	1 - 200 A	4	A	<u>Yes*</u>	Hot	Lever bypass or safety socket required (*Not required on residential services).	
120/240	3	201 - 400 A	4	A	<u>Yes</u>	Hot	Lever bypass or safety socket required	
120/240	3	401 - 1000 A	8	B	No	Hot	see EUSERC.org	319 - 327, 354
120/240	3	1001 - 3000 A	8	B	No	Hot	see EUSERC.org	319 - 327, 354
<u>Poly Phase</u>								
120/208	3	1 - 200 A	5	C	<u>Yes*</u>	Hot	5th Terminal in 9 o'clock position. Lever bypass or safety socket required (*Not required on residential services).	
120/208	4	1 - 200 A	7	D	<u>Yes</u>	Hot	Lever-bypass or safety socket required	
120/208	4	201 -1000 A	13	E	No	Hot	see EUSERC.org	319 - 327, 354
120/208	4	1001 - 3000 A	13	E	No	Hot	see EUSERC.org	319 - 327, 354
120/208	4	> 3000 A	13	E	No	Hot	see EUSERC.org	319 - 327, 354
277/480	4	1 - 200 A	7	D	<u>Yes</u>	Cold	Lever-bypass or safety socket required	
277/480	4	201 - 1000 A	13	E	No	Hot	see EUSERC.org and CORE Drawings 3-5	319 - 327, 354
277/480	4	1001 - 3000 A	13	E	No	Hot	see EUSERC.org and CORE Drawings 3-5	319 - 327, 354
277/480	4	> 3000 A	13	E	No	Hot	see EUSERC.org and CORE Drawings 3-5	319 - 327, 354
Note: Existing services needing repair not covered above, contact Metering Department								

*** Meter Base/Socket Configurations**



*RINGLESS REQUIRED ON ALL RESIDENTIAL

*RINGLESS PREFERRED ON COMMERCIAL

*(SEE FULL BOOK)

Three-Phase Services, Above 200 Amps

All three-phase services above 200 amps will require EUSERC specification switchgear, which will include a pull section, metering section and disconnect section. NEMA 3R rated enclosures will be on all sections with double locking device provided for joint access to applicable sections. (See Drawings 325, 354 of EUSERC information). Any 277/480 volt service will have an additional width to accommodate the placement of Potential Transformers attached to a removable PT pan. (See Drawing 326 of EUSERC information & Instrument-Transformer Compartment Drawings and CORE Drawings 3-5) All EUSERC systems will be hot sequenced per EUSERC SINGLE METER drawing.

Fire pumps fed from EUSERC switchgear may be tapped ahead of the main disconnect and shall have a dedicated labeled disconnect. Fire pump installations shall meet NEC and local standards.

Manufacturer Drawings Required for Services Over 200 Amps

Manufacturer drawings shall be submitted to CORE for approval for all switch board metering prior to shipment from manufacturer.

CURRENT TRANSFORMER (CT) / POTENTIAL TRANSFORMER (PT) METERING

Current and potential transformers provide the intelligence for measuring or metering power flows, such as large amperes flowing in a high-voltage circuit. More specifically, CORE will use CT's and PT's on services as listed below:

- CT** - 120/208V, three-phase larger than 200 amp service entrance
- 120/240V, single-phase larger than 400 amp* service entrance
- *320 amp continuous load or 400 amp Peak

CT/PT - 277/480V, three-phase larger than 200 amp service entrance

If you are requiring this type of service, please contact CORE's Metering Department for installation procedures, guidelines, and equipment specifications.

EUSERC standards are used when a service requires the use of CT (Current Transformer) metering. It is recognized by many safety agencies, including NEMA, UL and ETL Testing Labs. The equipment used is handled by many manufacturers, including AMP, Eaton/Cutler-Hammer, GE, Siemens, and Square D. It is a standard used by 80 utilities in 14 states.

EUSERC is required when an expected load (amperage) exceeds the maximum limit for which self-contained metering is capable of handling. For a single-phase service, the maximum limit is 320 amps continuous or 400 amps peak. For a three-phase service, the maximum limit is 200 amps.

The benefits of following EUSERC standards are many:

- Due to the metering being enclosed and protected, less theft and vandalism occurs, and there are no environmental conditions.
- Since EUSERC is standardized with simplified construction, fewer wiring errors can occur which reduces billing errors due to incorrect metering.
- It is more aesthetically pleasing with one cabinet that is inter-connectable and with everything enclosed and hidden from view.
- The time and labor involved in installing a EUSERC cabinet is often much less than other forms of CT metering, resulting in a savings to the member.

The cabinet is a *switchboard* which is usually 90 inches tall, 26 inches deep, and can range from 38 to 90 or more inches in width. It has a pull section and a metering section on the line side, and a main disconnect (per each meter housing) switch on the load side. This is all enclosed in the self-contained switchboard, which is a rain tight enclosure with exterior locking doors, protecting it from the elements, vandalism, etc. Please note that the member's main disconnect switch **MUST** be within the EUSERC cabinet.

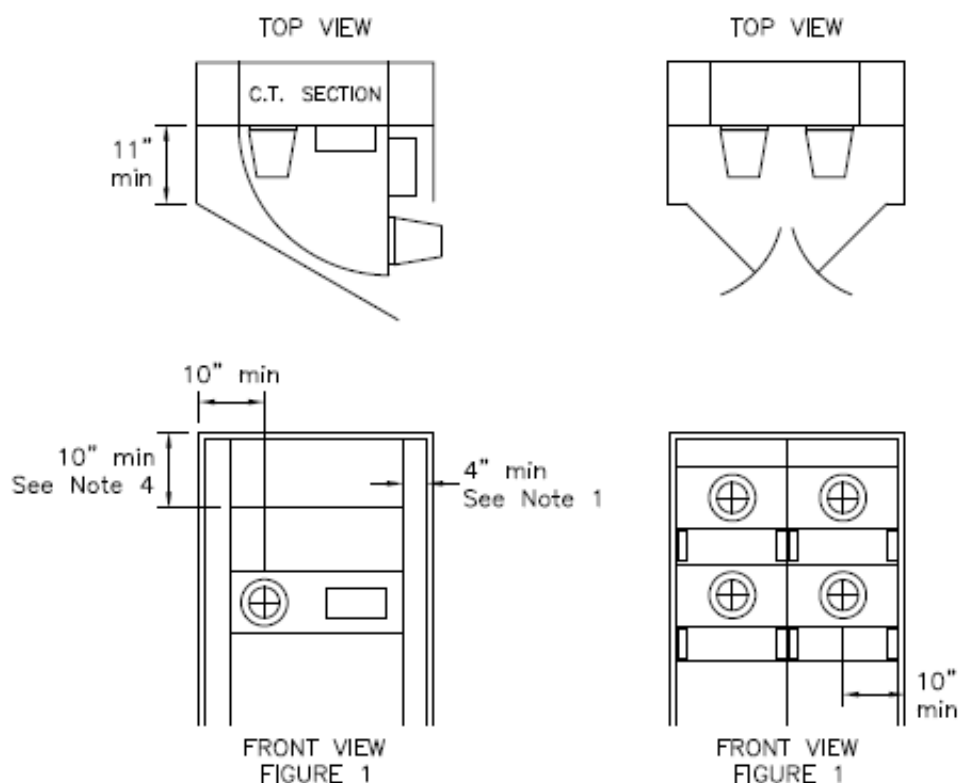
It is to be installed outside the building, either free standing, or against an exterior wall, allowing unobstructed access by CORE personnel. At least a three-foot clear, level unobstructed working space beyond the door when fully open at 90-degree position is also required. Roadways or drive-throughs are not considered working space.

Please note that the cabinet may **NOT** be installed in an interior room, courtyard, or any other structure that could possibly have a lockable entryway. Please be aware that if the EUSERC cabinet is not installed in a proper accessible location, the member will be required to make the necessary changes at their cost, and a delay in receiving electrical service may be inevitable.

CT/PT Requirements:

- CT/PT cabinets must be furnished and installed by the member, located outside in accordance with CORE's policies, and meet EUSERC Standards.
- Metering connections are performed by CORE's personnel.
- CORE will install a lock on CT/PT cabinet. Member shall supply a double locking device for joint access.
- CTs/PTs are supplied by CORE (prepaid by member) and installed by the member's electrician.
- Construction must follow national, state, or local code requirements.
- Polarity of CTs toward source.

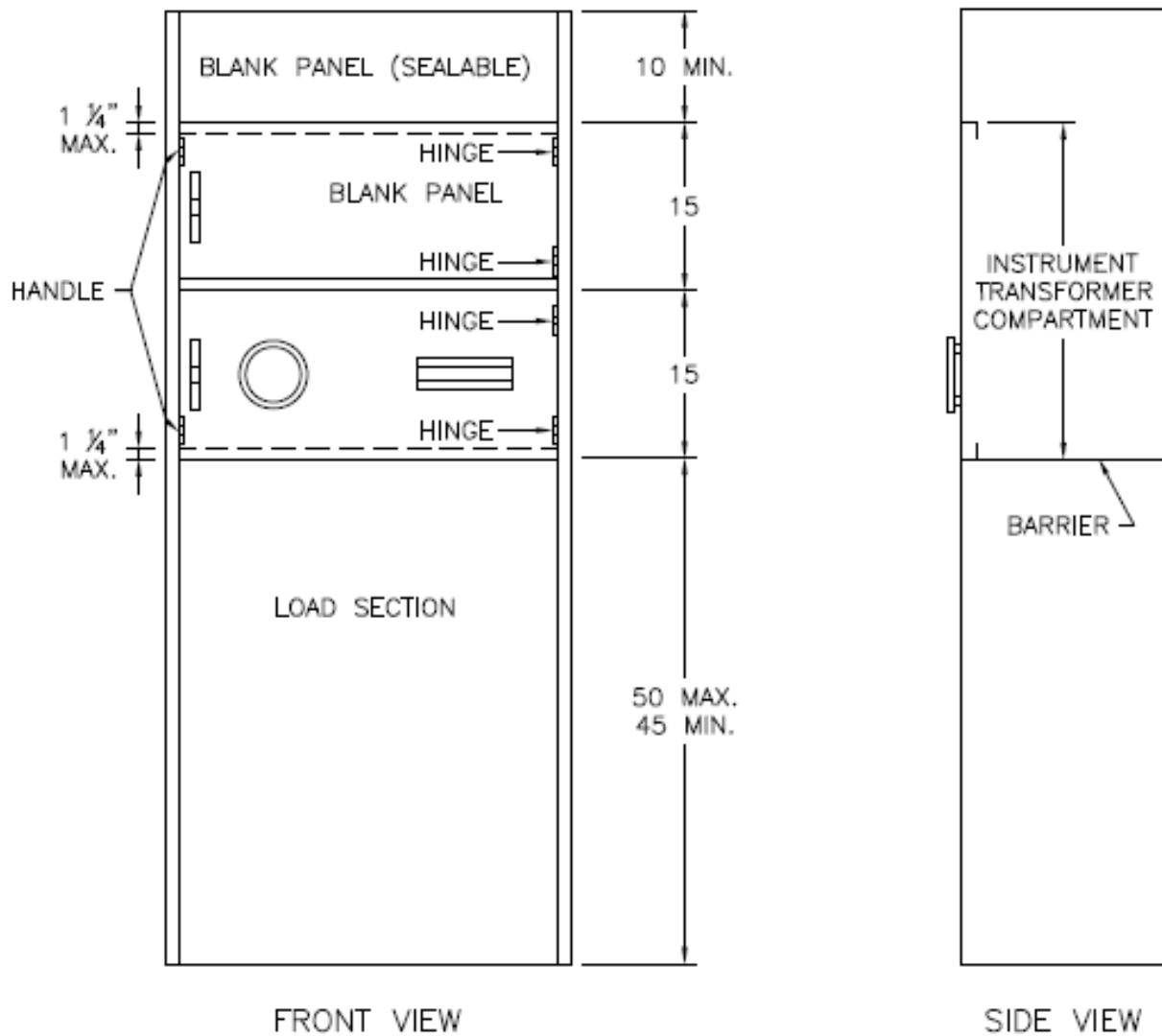
- All existing services that are changed or upgraded because of increased loads, transformer size, wire size, or reconstruction will be brought up to CORE's current Standards.
- All sockets will be permanently labeled with an etched metal tag or permanent tag approved by CORE's Metering Department personnel noting the service location that it feeds on the body of housing, not on the removable panel.



NOTES:

1. Hinged meter panel shall be capable of being opened 90° with meter and test facilities in place, and provide the following clearances to any obstruction – 11" at the meter socket and 4" at the test-switchslotted opening.
2. Meter panels, either socket or blank, shall not be hinged to a hinged filler panel. Non-hinged filler panels shall not extend into the required instrument-transformer compartment access opening.
3. Enclosure doors providing access to utility compartments (i.e., metering sections and pull sections) shall be:
 - a. Equipped with a device to secure the doors in the open position at 90° or more.
 - b. Secured in the closed position with a single, handle-operated, latching system. When provided with a locking means, each door, or set of doors, shall be equipped with an approved double-locking device, accepting padlocks with a $\frac{5}{16}$ " lock shaft, to allow access by both the serving utility and the customer.
4. Dimension may be reduced if the service sections supplied from horizontal cross-bussing or bus duct.
5. See EUSERC.org for details (DWG NO. 354)

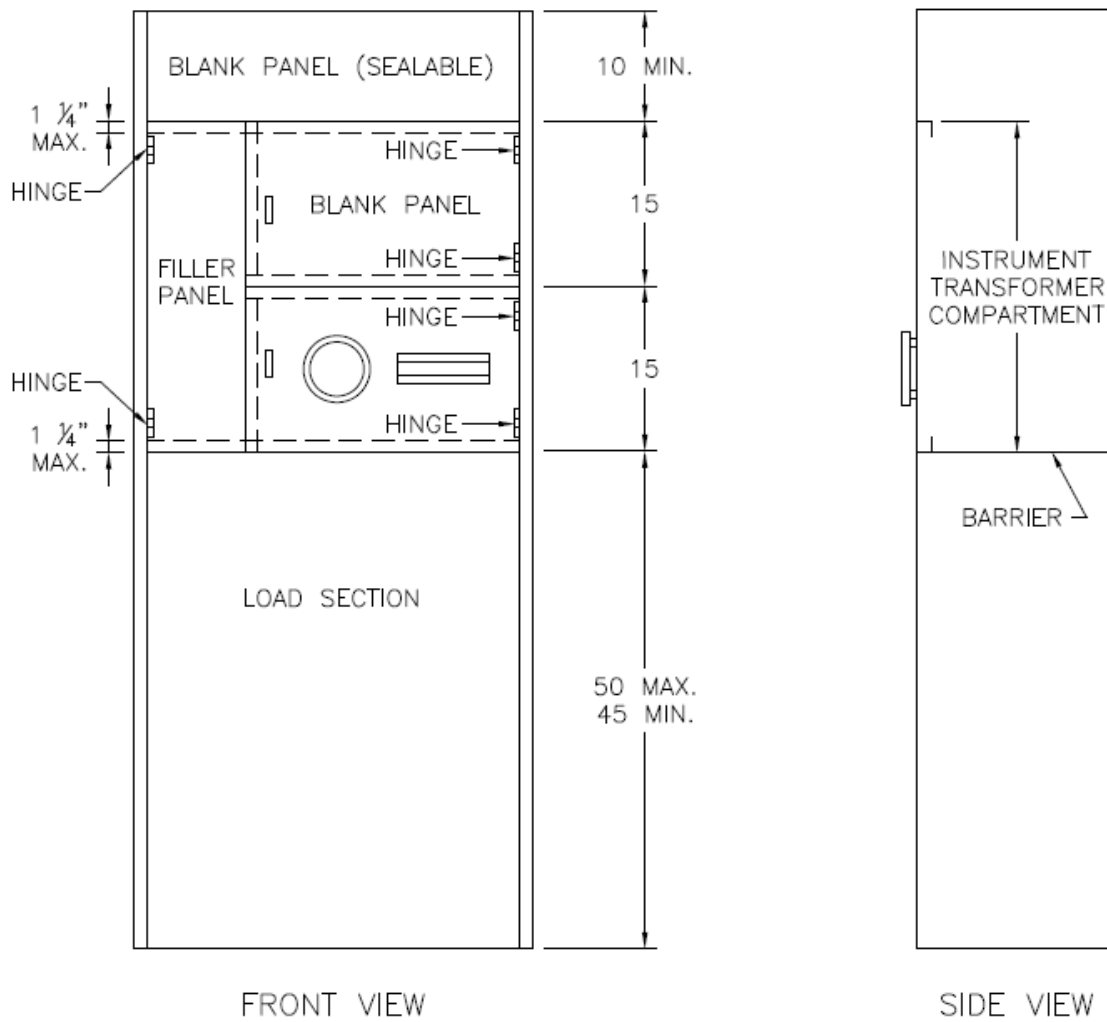
120/208 VOLTS



NOTES:

1. Shown without 3R doors.
2. See EUSERC.org for details (DWG NO. 325)

277/480 VOLTS

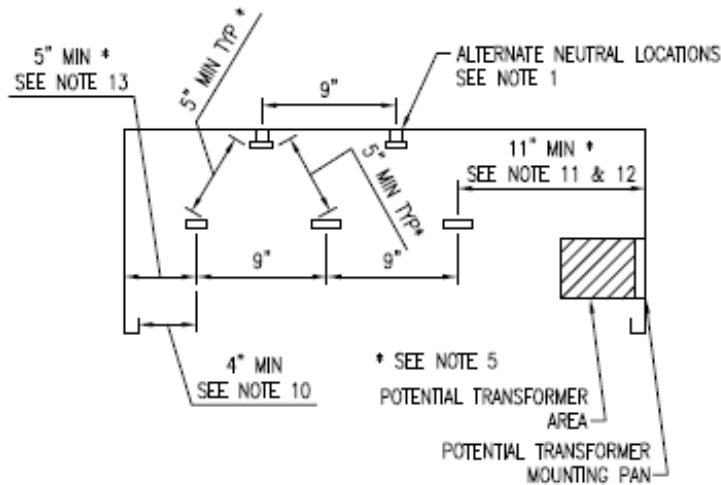


NOTES:

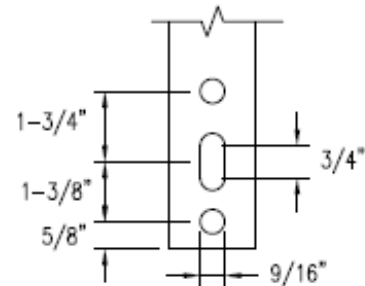
1. Shown without 3R doors.
2. See EUSERC.org for details (DWG NO. 326)

INSTRUMENT-TRANSFORMER COMPARTMENT WITH P.T. MOUNTING PAN

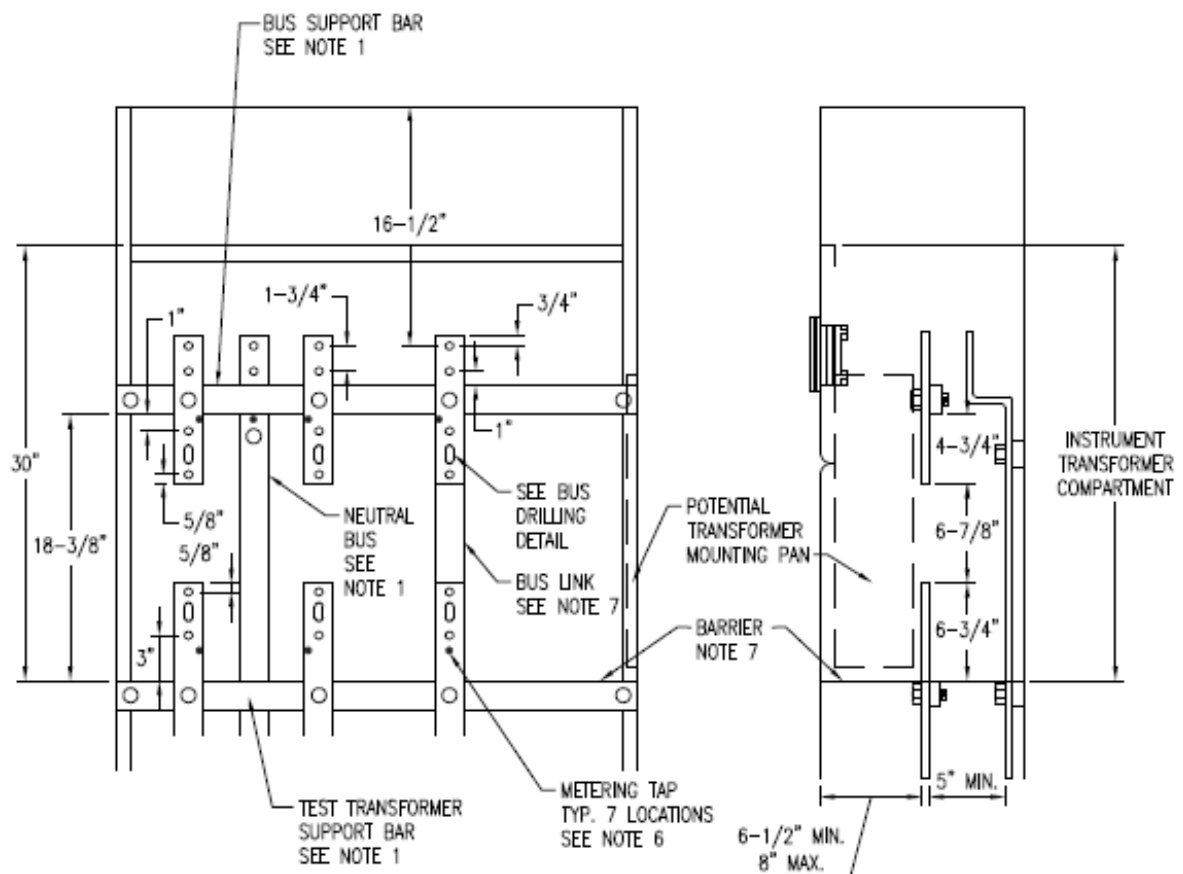
0-1000 AMPERES, 480 VOLTS SERVICE ONLY. 3Ø 3-WIRE AND 3Ø 4-WIRE



TOP VIEW



BUS DRILLING DETAIL
TYPICAL 6 LOCATIONS



FRONT VIEW

SIDE VIEW

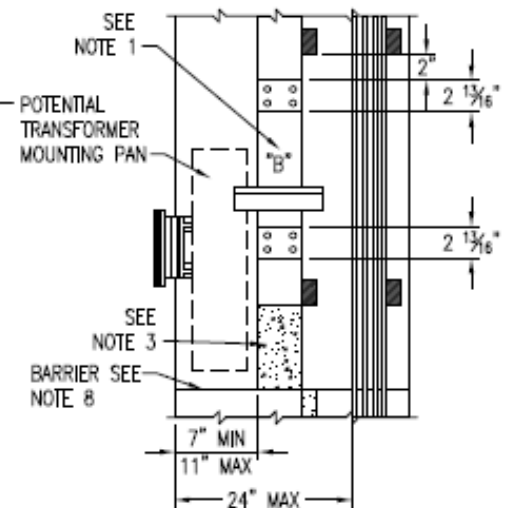
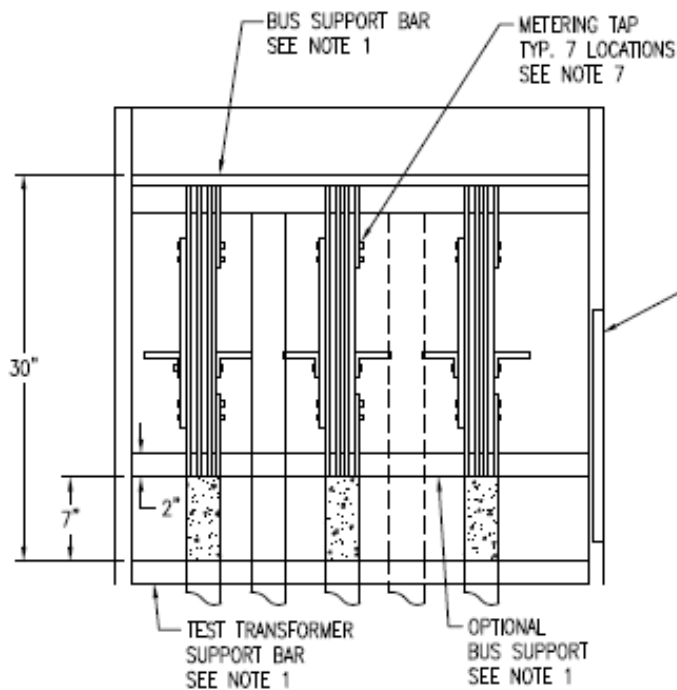
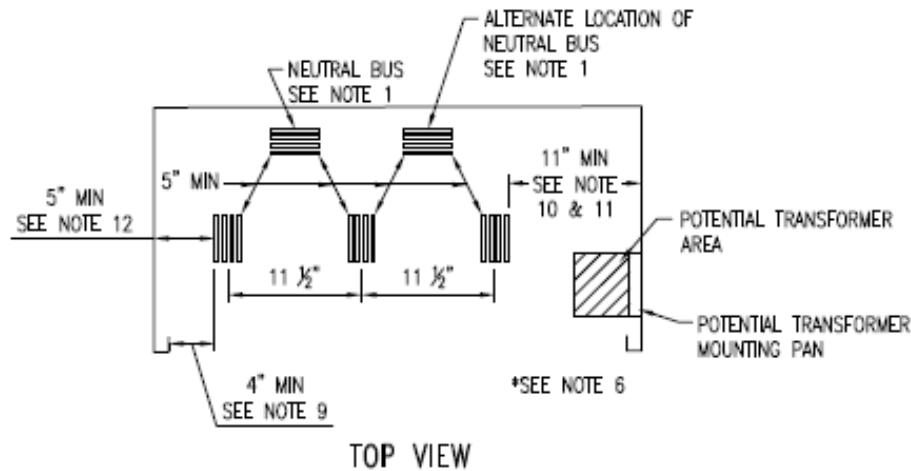
CORE Drawing #3

NOTES:

1. Bus arrangements and supports shall be provided as shown, except the neutral bus may be located at either side or on either side or on either side wall (Note: Neutral bus not required for 3-phase, 3-wire services). Bus supports shall be constructed of a continuous bar or insulating material and shall be rigid to prevent misalignment of the bus units with the cables in place.
2. The bus units may be supplied from the top or bottom and shall be anchored to prevent turning. Bus units shall be constructed of rectangular bus and when laminated shall have no space between laminations. Bus dimensions shall be provided as follows:
Minimum: $\frac{1}{4}$ inch x 2 inches
Maximum: $\frac{3}{4}$ inch x 2 inches
3. When the compartment is supplied from horizontal cross-bussing, the bussing shall pass through the compartment or in the sealed area above the compartment.
4. Except for conductors supplying the instrument-transformer compartment, no other conductors or devices shall be installed in, or routed through, the compartment or the sealed area above the compartment.
5. A clear unobstructed work space shall be provided around the current-transformer bus units from the barrier to the upper support bar.
6. Taps for attachment of meter wiring shall be provided as follows:
 - a. One tap on each upper and lower phase bus unit with a 10-32 screw and washer provided for each phase bus in either the upper or lower position.
 - b. One tap on the neutral bus as shown, or when the compartment is supplied from cross bussing a tap may be provided on the neutral cross-bus, or on a bus bar extension provided from the neutral cross-bus. A 10-32 screw and washer shall be provided for the neutral bus. Tap locations shall be centered between phase bus units, or at either side, and shall be readily accessible under energized conditions and with current-transformer.
7. The barrier shall be constructed of a rigid insulating material resistant to ARC tracking, and shall be secured in place with a maximum deflection of $\frac{1}{2}$ inch from an applied force of 25 pounds downward. Openings in the barrier (i.e., peripheral gaps around barrier, cutouts around bus bars, and hole diameters provided for ventilation) shall not exceed $\frac{3}{8}$ inch. The barrier shall be attached with nonconductive fasteners.
8. A removable link shall be installed in the right side phase bus for 3-phase, 3-wire service.
9. The power leg bus for a 4-wire delta service shall be identified by an orange outer finish, or by tagging or other effective means.
10. Dimensional measured to inside edge of the compartment access opening.
11. When line to line voltage exceeds 250 volts, the compartment width shall be increased by 6 inches minimum to allow for installation of potential transformer. The C.T. bus stubs shall remain at their original dimensions allowing this extra width to be clear area.
12. Minimum distance is measured from the P.T. pan mounting surface to bus center line.
13. Alternate location of potential transformer area.

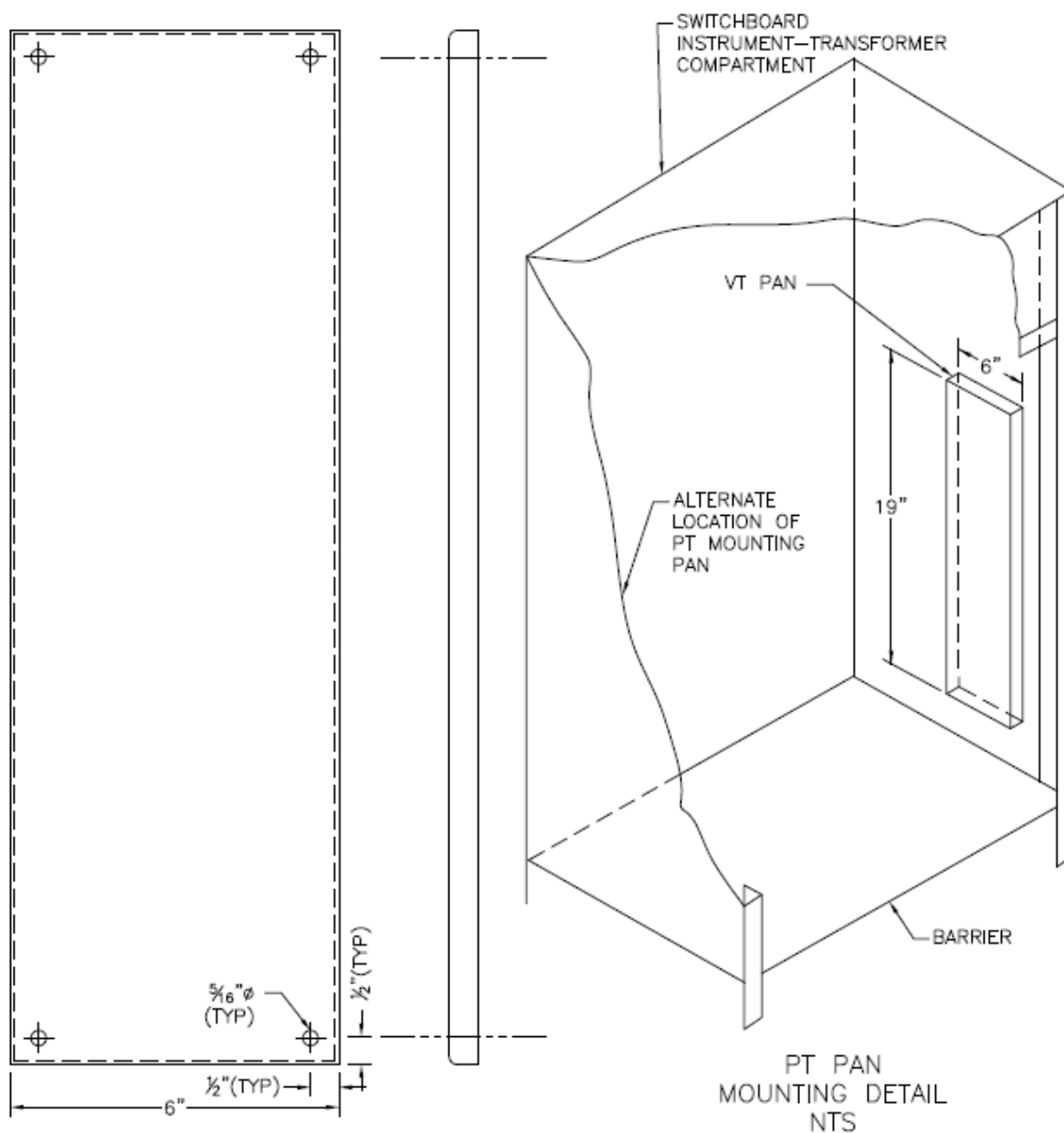
INSTRUMENT-TRANSFORMER COMPARTMENT WITH P.T. MOUNTING PAN

1000-3000 AMPERES, 480 VOLTS SERVICE ONLY. 3Ø 3-WIRE AND 3Ø 4-WIRE



NOTES:

1. Bus arrangements and supports shall be provided as shown, except the neutral bus may be located at either side or on either side or on either side wall (Note: Neutral bus not required for 3-phase, 3-wire services). Bus supports shall be anchored so that buses will remain in position when section "B" is removed. Bus supports shall be constructed of a continuous bar or insulating material.
2. Bus units may be supplied from the top or bottom, and shall be constructed of rectangular bus. Maximum allowable bus size shall be four ¼-inch x 4-inch bars spaced ¼ inch.
3. Bus units shall be insulated as shown and the insulating material shall be rated for the serving voltage. Round bus corners as necessary to prevent damage to insulation.
4. When the compartment is supplied from horizontal cross-bussing, the bussing shall pass through the compartment or in the sealed area above the compartment.
5. Except for bus supplying the instrument-transformer compartment, no other conductors or devices shall be installed in, or routed through, the compartment or the sealed area above the compartment.
6. A clear unobstructed work space shall be provided around the current-transformer bus units from the barrier to 2 inches above the removable current-transformer bus sections ("B").
7. A 10-32 tap for attachment of meter wiring shall be provided as follows:
 - a. One tap on each upper and lower phase bus unit with a 10-32 screw and washer provided for each phase bus in either the upper or lower position.
 - b. One tap on the neutral bus as shown, or when the compartment is supplied from cross bussing a tap may be provided on the neutral cross-bus, or on a bus bar extension provided from the neutral cross-bus. A 10-32 screw and washer shall be provided for the neutral bus. Tap locations shall be centered between phase bus units, or at either side, and shall be readily accessible under energized conditions and with current-transformer in place.
8. The barrier shall be constructed of a rigid insulating material resistant to ARC tracking, and shall be secured in place with a maximum deflection of ½ inch from an applied force of 25 pounds downward. Openings in the barrier (i.e., peripheral gaps around barrier, cutouts around bus bars, and hole diameters provided for ventilation) shall not exceed 3/8 inch. The barrier shall be attached with nonconductive fasteners.
9. Dimensions measured to inside edge of the compartment access opening.
10. When line to line voltage exceeds 250 volts, the compartment width shall be increased by 6 inches minimum to allow for installation of voltage transformers. The C.T. bus stubs shall remain at the original dimensions allowing this extra width to be clear area.
11. Minimum distance is measured from the P.T. pan mounting surface to bus center line.
12. Alternate location of potential transformer area.



NOTES:

1. FABRICATE FROM 12 GAUGE SHEET METAL. USE STEEL, PER ASTM A36.
2. MOUNT TO SIDE OF CT CABINET WITH 1/4"-20UNC STUDS. EACH MOUNTING STUD SHALL BE LONG ENOUGH TO ALLOW PAN TO BE BOLTED ON WITH ONE NUT AND ONE WASHER.

GLOSSARY

Approved - Acceptable to the authority having jurisdiction.

CORE – CORE Electric Cooperative.

Backfill - Native soil or soil brought in from another area, free from sharp objects, rocks, scrap building material, and corrosive material.

City/Town, County or State Inspector - The qualified representative of a city/town, county or the State of Colorado, who has been authorized by governmental agencies to inspect electrical service installations on their behalf.

Clearance - A set distance between two objects.

Cold Sequence Metering – The member's circuit breakers are located upstream from the meter. (Turning off the circuit breakers does de-energize the meter.)

Conduit - A listed or approved wireway with a smooth interior surface to permit easy drawing-in of the electrical conductors. A conduit may be metallic or nonmetallic, depending on its usage, in accordance with codes and CORE's Standards.

Member – Any person or company applying for, receiving, using, or agreeing to take electric service or other services supplied by CORE Electric Cooperative.

Demand - The maximum average kilowatt load used by the member for a specific period of time during the billing period.

Direct Burial - The installation of electrical conductors in a trench, without the use of conduit.

Enclosure - A sealable cabinet designed for surface or flush mounting and provided with a frame or trim in which doors or removable covers are hung.

EUSERC – Electric Utility Service Equipment Requirements Committee

Fault Current – Is the current that flows during a fault condition.

Hot Sequence Metering – The member's circuit breakers are located downstream from the meter. (Turning off the circuit breakers does not de-energize the meter.)

Lever Bypass - A provision for paralleling the meter circuit, allowing the meter to be removed without interrupting service to the member.

Meter Loop - Any provision in which an electrical meter may be installed. Does not include the service disconnect device.

Meter Pole - A pole which supports member owned and maintained metering equipment.

Meter Base/Socket - The mounting device consisting of meter jaws, connectors and enclosure for accommodating socket-type meters. The mounting device may be either a single socket or a trough to accommodate more than one mounting unit.

Metering Equipment - Any equipment associated with measuring electric energy.

NEC - National Electrical Code

NESC - National Electrical Safety Code

Neutral - The grounded conductor in a single-phase, three-wire or three-phase, four-wire system. The service conductor that is at zero potential to ground.

Point of Attachment (Point of Service) - The point at which CORE's service conductors are attached to the member's premises by an approved insulated clevis.

Point of Delivery - The connection point of the meter base, on the member's premises, where CORE's circuit and the member's system are interconnected.

Seal - The locking device used to secure meter and/or service entrance equipment to assure safety and security for the unit.

Secondary Voltage - The lower voltage, after transformation, used to supply the member with electrical energy. Normally less than 600 V.

Self-Contained - In reference to meter sockets: a device designed and rated to continuously carry the entire capacity of the service entrance equipment through the meter.

Service Entrance Conductors - Those conductors which extend between the member's load center and point of delivery.

Service Entrance Equipment - Service conduit, conductors, weather head, meter base, enclosures, service disconnect, and load center.

Service Mast - The conduit above the meter used to provide mechanical protection for the service conductors and to support the service drop from CORE's system.

Short Current – Current flow when there is short circuit in the system and will represent the highest possible fault current that the system can experience.

Temporary Service - An electrical service connection installed by CORE to provide power to a member for a limited time (up to 18 months).

UL - (Underwriters Laboratories) A nationally recognized test laboratory which lists materials it has tested and accepted.

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