**STAFF REPORT**
**CITY OF DONALD PLANNING COMMISSION**

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| HEARING: | Thursday, February 22, 2024 |
| FILE: | Site Development Review #SDR 2023-01 |
| APPLICANT: | Attn. Jessican Iselin, Iselin Architects, PC. |
| OWNER: | Attn. Darren Monen, Monen Holdings, LLC. |
| **REQUEST:** | **Site Development Review approval for demolition of the existing Donald Café structure and replacement with a new mixed-use building containing a restaurant on the ground floor and one residential apartment on the second floor. Other proposed site improvements include a covered eating patio, small plaza, landscaping, parking spaces in the rear to serve the apartment, and stormwater planters. A Lot Line Adjustment application was submitted concurrently to consolidate the three small underlying historic lots into one.** |
| LOCATION: | The Donald Café. 10780 Main Street NE in Donald. Block 7 Lots 3, 4, and 5. |
| TAX LOT: | 041W17CA05900 |
| ZONE: | DMU – Downtown Mixed Use |
| CRITERIA: | Donald Development Ordinance (DDO) Sections: 2.108 Downtown Mixed Use (DMU) Zone including 2.108.04 Building Design Standards, 2.3 General Development Standards, 3.106 Site Development Review. |
| ATTACHMENTS: | A - Request for Comments (RFC) Department & Agency Responses<br>B - Application Materials |

## I. PROCEDURE & AUTHORITY:

Pursuant to section 3.101.02 of the Donald Development Ordinance (DDO), Site Development Review (SDR) applications are a Type II action. Type II actions are a quasi-judicial review in which the Planning Commission applies a mix of objective and subjective standards that allow considerable discretion. Staff has an advisory role. Public notice and a public hearing are provided. Appeal of a Type II decision is to the City Council.

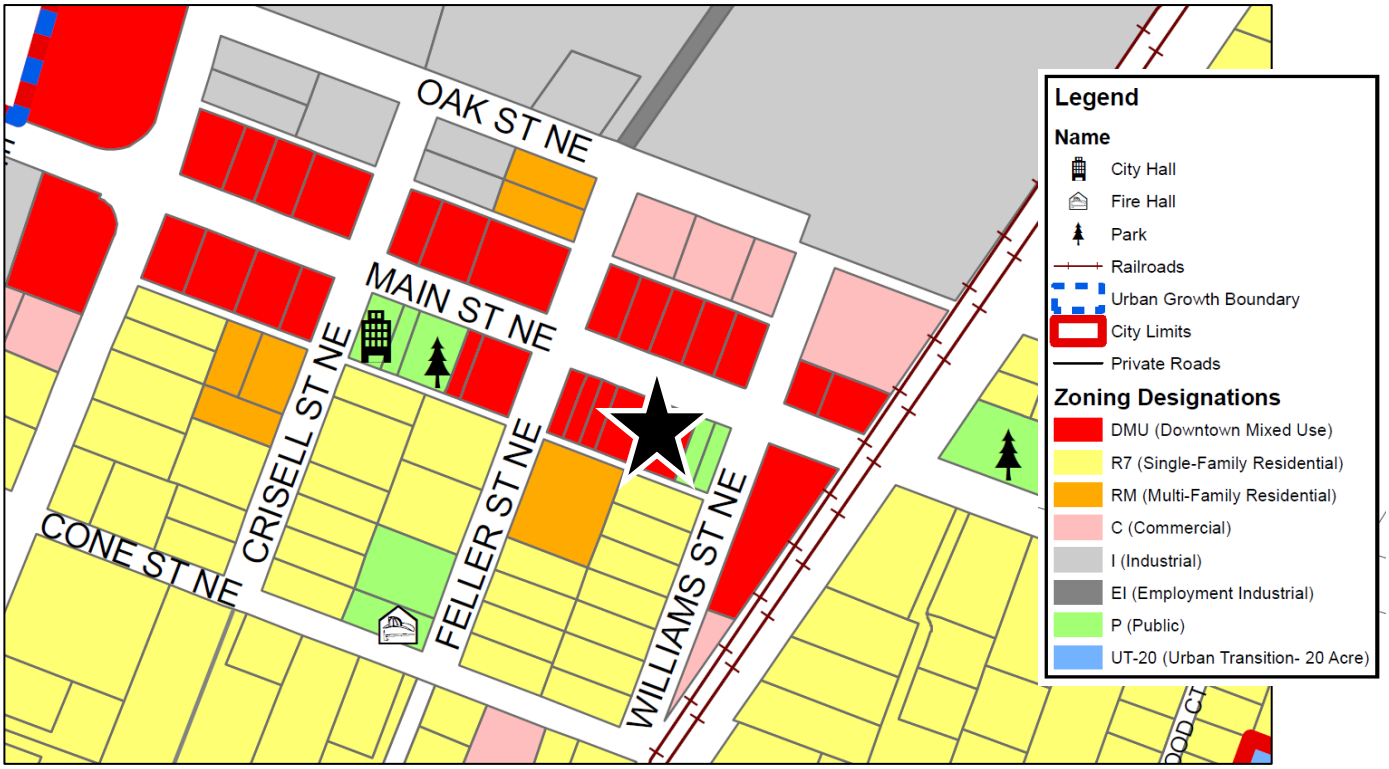
## II. BACKGROUND

A. EXISTING CONDITIONS

The subject property consists of three historic lots of record, referred to as Lots 3, 4, and 5 of Block 7 of the original Donald town plat. Each historic lot measures 25 ft x 100 ft. Once combined into one parcel, the lots will total 7,500 SF. Marion County Assessor records report that the existing Donald Café structure was built in 1935. The property has frontage on Main Street NE, with 12 ft wide gravel alley access from the rear. There is an existing frontage sidewalk and street parking on Main Street NE. The existing septic tank is in the rear. The City of Donald recently razed the Community Center on the public

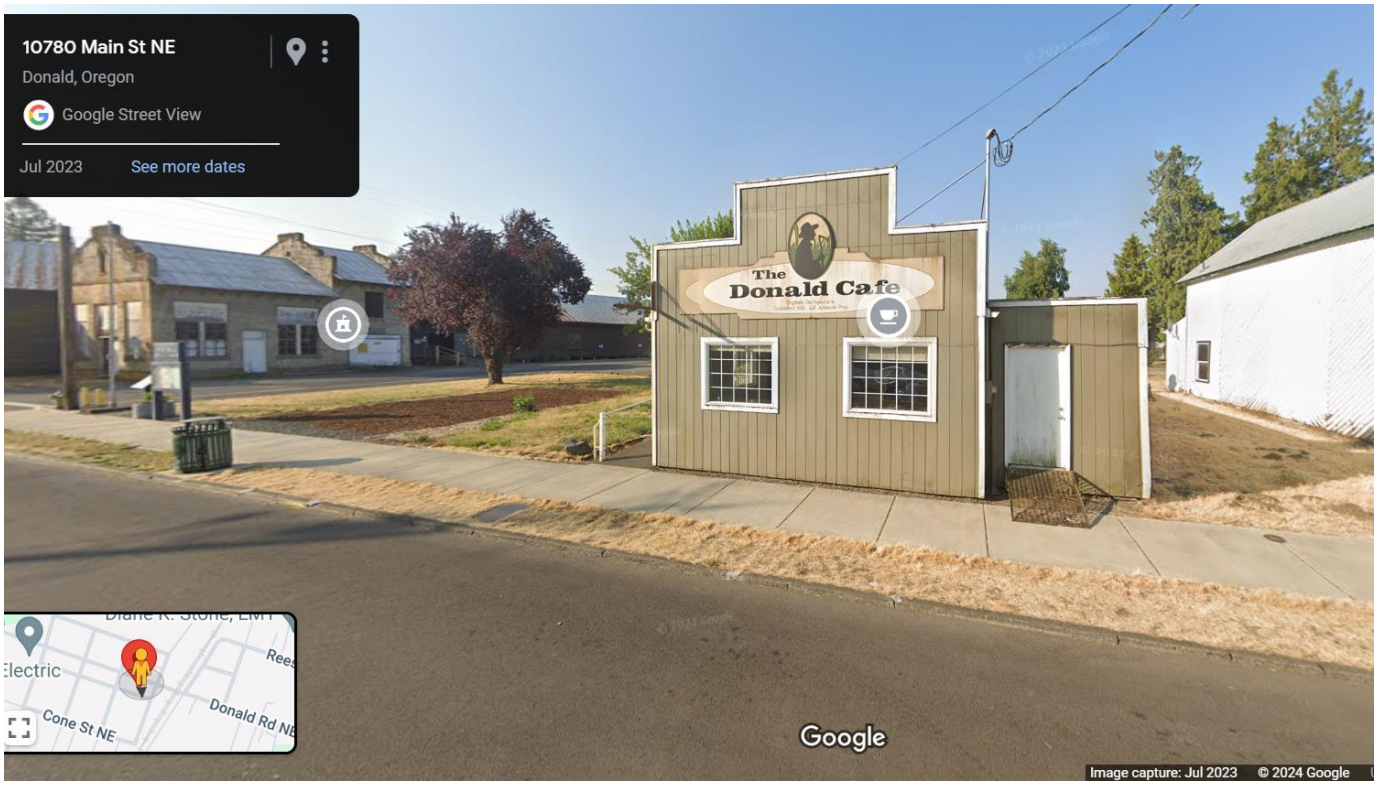
property to the east. The owner of the subject property also holds the property to the west. With similar aspirations to rebuild, following this project.

B. DONALD VICINITY & ZONING MAP



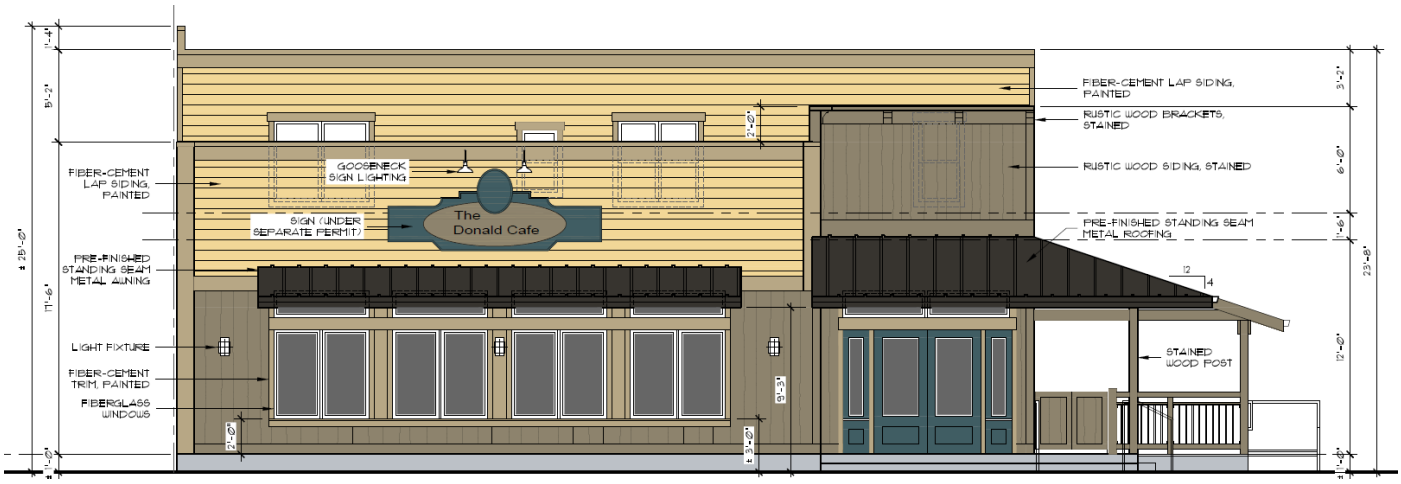

C. AERIAL IMAGE (Source: Marion County Survey GIS, 2023)

D. STREETVIEW (Source: Google Streetview, dated July 2023)



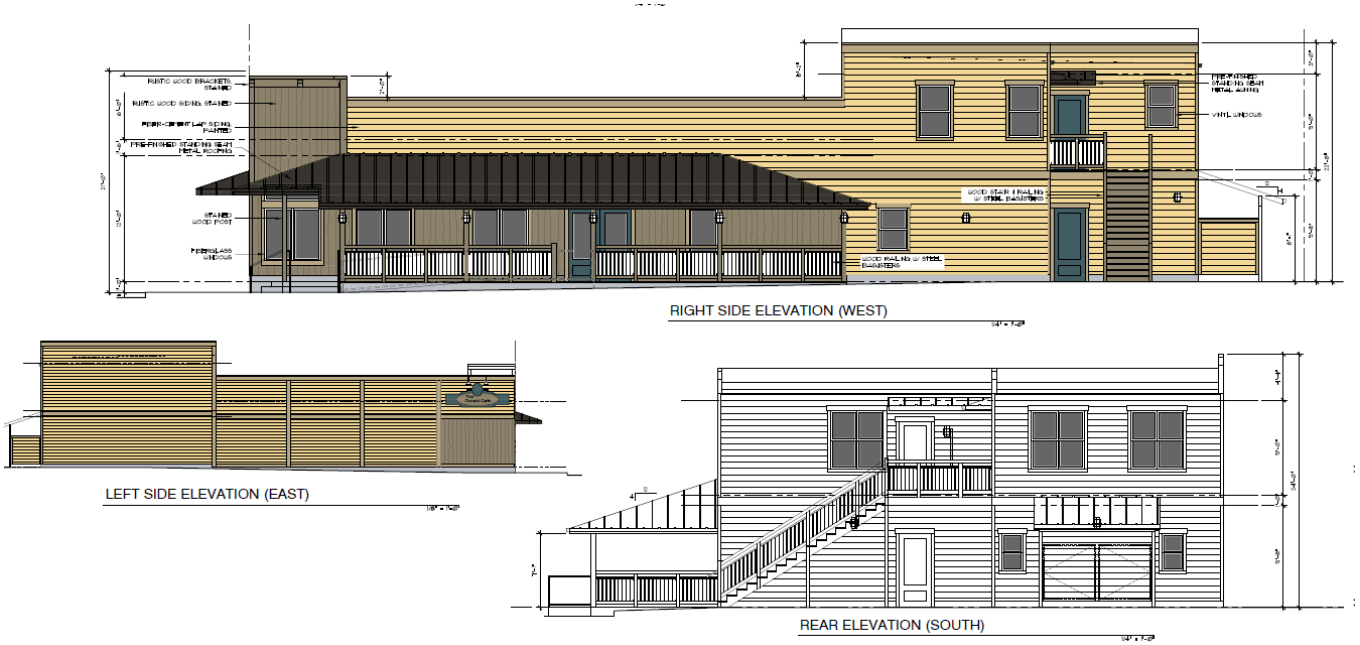

## III. PROPOSED DEVELOPMENT

A. ELEVATIONS




FRONT ELEVATION (NORTH)

1/4" = 1'-0"




B. SITE PLAN, CROPPED TO ZOOM

C. FULL PROJECT DESCRIPTION, PROVIDED BY THE APPLICANT:

The proposed development includes the demolition of the existing Donald Café building and construction of a new structure to accommodate a new restaurant with a covered outdoor eating deck. The new building will be primarily single-story with a two-story section at the back of the building. The upper level will consist of a single apartment unit and storage/mechanical space for the restaurant.

Site development will include a small paved plaza at the public sidewalk, a grass yard/landscape area, an ADA ramp to the restaurant and deck, a pathway from the public sidewalk to the alley and an exterior stair to the upper level of the building. Accessed from the alley will be two parking spaces, a loading space and a garbage/recycling enclosure.

The building will be raised approximately 12" from the level of the public sidewalk, primarily to accommodate the gravity flow conveyance of roof water to the street via an opening in the curb. This water will travel through a stormwater canal system below the covered deck, as detailed in the civil drawings. In addition, two stormwater planters at the back of the site will address surface water from the parking area.

As part of the development, three individual lots will be consolidated into a single lot as required for the building and site development.

**IV. DECISION CRITERIA**

The purpose of this section is to assist the Donald Planning Commission in their review and decision on this Site Development Review land use application by providing findings in response to the applicable decision criteria found in the adopted Donald Development Ordinance (DDO) and the Donald Public Works Design Standards.

*§ 2.108 DOWNTOWN MIXED USE (DMU).*

*2.108.01 Purpose. The purpose of the Downtown Mixed Use Zone is to allow a mix of complementary uses in the Downtown/Main Street area, promote pedestrian-friendly development, encourage efficient use of land, and preserve the small town character of Donald.*

*2.108.02 Allowed uses.*

*Eating and drinking establishments (without drive-through facilities) – (P) Permitted*
*Residential on second or upper story – (P) Permitted*

FINDINGS: The proposed mixed-use building shows a ground-floor restaurant with one second story residential apartment. Both of the proposed uses are listed as outright permitted in the DMU zone, subject to the applicable dimensional and development standards.

*2.108.03 Development standards.*
*A. Applicability. The standards in this section apply to all new development and major building*

*expansions in the DMU Zone. For the purpose of this section, major building expansion means a building expansion of more than 50% of the square footage of the existing building.*
*B. Minimum lot area: None.*
*C. Minimum lot width and depth: None.*
*D. Residential density requirements: None.*
*E. Maximum building height: 45 feet, 60 feet with height bonus…*

FINDINGS: The height of the restaurant's front facade is labeled as 17'6", and the height of the second floor of the apartment toward the rear of the building is labeled as 23'8". The application narrative states that the maximum building height is 25 feet. This standard is met.

*F. Minimum setback requirements:*
*1. Front setback: zero feet.*
*2. Rear and side setbacks: zero feet, unless adjacent to residential.*
*a. Rear and side setback adjacent to residentially-zoned property or residential alley: 10 feet.*

FINDINGS: No front or side setbacks are required in the DMU Zone when abutting commercial and public-zoned properties. There are residentially-zoned properties located to the south of the subject property on the other side of the alley. The proposed building meets the minimum 10 ft rear setback, as proposed.

*G. Maximum lot coverage: None.*
*H. Minimum landscaping: None.*

FINDINGS: There is no maximum lot coverage or minimum landscaping required in this section.

*I. Frontage occupancy requirement: 75%.*
*1. This standard is met when a building or buildings occupy at least 75% of the site's frontage area along a public street. For this standard, frontage is considered the area between zero to ten feet from the front property line, extending the entire width of the frontage. Portions of the building not used to meet this standard may setback more than ten feet from the front property line.*
*2. For corner lots, this standard must be met on Main Street or Oak Street, as applicable.*
*3. The portion of the site's frontage area not occupied by building(s) shall be landscaped or developed as civic space in accordance with division J. below.*

FINDINGS: The application narrative states: "Of the 75' total frontage of the combined three lots, the building and covered eating deck cover 60', for 80% of the frontage. The building is primarily located on the front property line, with the covered entry steps set back 13" to allow for handrail extensions and the covered deck set back 8'-8". The portion of frontage no covered by building includes the ADA access ramp, a paved pedestrian plaza and landscaped courtyard." This standard is met.

*J. Civic space requirements. At least 2% of the gross area of the subject lot shall be designated*

*and improved as civic space (plaza, landscaped courtyard, or similar space) that is accessible to the public, pursuant to the following:*

*1. Civic spaces shall abut a public right-of-way or otherwise be connected to and visible a public right-of-way by a sidewalk or pedestrian accessway.*

*2. Where public access to a civic space is not practical due to existing development patterns, physical site constraints, or other hardship presented by the applicant, the City may allow a private area, such as an outdoor eating area attached to a restaurant, in finding the project complies with the standard.*

*3. All civic spaces shall have dimensions that allow for reasonable pedestrian access. For example, by extending the width of an existing sidewalk by four feet, a developer might provide space for an outdoor eating area; whereas a larger development at a street corner could meet the standard by creating a plaza adjacent to a building entrance.*

*4. All civic spaces will be improved with at least one pedestrian amenity from the following list:*

*a. Plaza surfaces (e.g., pavers, landscaping).*

*b. Sidewalk extensions.*

*c. Street furnishings (e.g., benches, public art, planter with seat wall, informational kiosk, sheltered seating area).*

*d. Way-finding signage.*

*e. Similar amenity as approved by the City.*

FINDINGS: Once combined, the subject property will total 7,500 SF. A minimum of 2% civil space is a minimum of 150 SF civil space. The submitted site plan proposes 156 SF in the front pedestrian plaza. The application narrative states that the open landscaped courtyard and pedestrian accessway provides an additional 700 SF+ of "additional area that will be open for public use and benefit." The front pedestrian plaza abuts the public sidewalk (public right-of-way). An additional outdoor area is incorporated into the proposed site plan. The narrative states "The paved plaza is roughly 10' x 15' and will accommodate a small table or bench. It is the owner's intention to expand the plaza and landscape courtyard when the adjacent property to the west, which they also own, develops." This standard is met.

*K. Primary building entrances. All buildings shall have at least one primary entrance facing the street (i.e., within 45 degrees of the street property line); or if the building entrance must be turned more than 45 degrees from the street (i.e., front door is on a side or rear elevation) due to the configuration of the site or similar constraints, a pedestrian walkway must connect the primary entrance to the sidewalk in conformance with § 2.311.*

FINDINGS: The primary building entrance for the ground floor restaurant faces Main Street, and takes pedestrian access from the public sidewalk. This standard is met.

*L. Off-street parking applicability. The off-street parking requirements of § 2.303 apply in the DMU Zone as follows:*

*1. Non-residential uses in the DMU Zone are not subject to the off-street parking requirements of § 2.303.*

*2. Residential uses in the DMU must comply with the off-street parking requirements of*

*§ 2.303.*

FINDINGS: Consistent with the applicant's response: "No parking is required for the restaurant in the DMU zone. The single upper-level dwelling unit requires two parking spaces. A total of three parking spaces are provided at the back of the building, accessed from the alley." This standard is met.

*2.108.04 Building design standards.*

*A. Purpose. Building design standards regulate the exterior design of buildings to create a pedestrian-friendly environment; provide natural surveillance of public spaces; and maintain and enhance the rural, small-town character of downtown Donald.*

*B. Applicability. The standards in this section apply to all new development and substantial redevelopment of an existing building. For this section, a substantial redevelopment is any expansion or addition that impacts more than 50% of the street-facing façade of an existing building.*

*C. Transparency - windows and entrances.*

*1. Ground floor entrances oriented to the street shall be at least partially transparent. This standard may be met by providing a door with window(s), a transom window above the door, or sidelights beside the door. Windows used to meet this standard may count toward the storefront window percentage in division 2. below. Transom windows above a door shall not be covered by an awning, canopy, or similar cover.*

FINDINGS: The applicant's narrative confirms "The primary entrance will include glazed doors, sidelights and a transom. The doors and sidelights will be approximately 75% glazed to provide proportions appropriate to a traditional building style." This standard is met.

*2. Transparent windows shall cover at least 60% of the ground-floor, street-facing elevation of all buildings. For this standard, the ground-floor elevation is the area between the building base (or 30 inches above the sidewalk grade, whichever is less) and a plane six feet above the sidewalk grade.*

FINDINGS: The applicant's narrative confirms "Calculated as indicated, from 30" to 6' above the sidewalk, the building frontage contains approximately 61% glazing, including the entry door/sidelight opening and the overall length of the storefront window grouping. On a lineal footage basis, the windows and doors cover 36' of the 48' frontage width, for 75%." Applicant shall confirm transparency of proposed windows. This standard can be met through compliance with the conditions of approval.

*3. Upper floor, street-facing elevations may have less window coverage than ground-floor elevations. Orientation of upper floor windows shall be primarily vertical, or have a width that is no greater than height. Paired or grouped windows that, together, are wider than they are tall, shall be visually divided to express the vertical orientation of individual windows.*

FINDINGS: The applicant's narrative confirms "There is no upper floor along the building frontage. The small upper level portion of the building is located approximately 56.5' behind the front property line. The front facing wall of the upper floor contains single and pairs of vertically oriented windows that will be partially visible from the street and sidewalk." This standard is met as submitted.

*4. Side and rear ground-floor building elevations shall provide a minimum of 30% window transparency.*

FINDINGS: The applicant's narrative confirms "The courtyard side of the building contains approximately 32% window and door openings within the ground floor elevation. Due to the constraints of the building use, including the need for utility and storage space, the need for an exterior garbage and recycling enclosure and the demand for limited opening sizes for security reasons, the rear window/door area is approximately 15%. The upper level of the rear elevation provides approximately 42% window/door area if calculated similarly to the ground floor elevation definition. The east wall of the building is located on the property line and is not allowed to have any window opening per building code."

The intent of the standard is largely met by the applicant's submitted design, in consideration of the limitations posed by the building code with a downtown district's zero lot line construction type for the east wall. Regarding the west wall, the applicant should confirm whether "door openings" in their calculation includes the solid man doors without glazing, as those would not meet the intent of the standard for "window transparency." As for the rear wall, staff recommends a corresponding condition of approval for the applicant to increase the window coverage by adding either real or false windows to the first and second floor storage areas, to increase the total window coverage aesthetic of the rear wall along the alley, while also protecting the security of the structure. This standard can be met through compliance with the corresponding condition of approval.

*5. All windows shall have trim, reveals, recesses or similar detailing of not less than four inches in width or depth, as applicable.*

FINDINGS: The applicant's narrative confirms "All windows and doors will be fully trimmed with trim measuring a minimum of 4" nominal." This standard is met.

*6. Windows and display cases shall not break the front plane of the building (e.g., projecting display boxes are discouraged). For durability and aesthetic reasons, display cases, when provided, shall be flush with the building façade (not affixed to the exterior) and integrated into the building design with trim or other detailing. Window flower boxes are allowed.*

FINDINGS: The applicant's narrative confirms "No projecting windows or display cases will be installed." This standard is met.

*D. Defined upper story. Building elevations shall contain detailing that visually defines street-level storefronts from upper stories. This standard may be met through any of the following elements:*

*1. Awnings or canopies.*

*2. Belt course (molding or projecting bricks or stones running horizontally along the face of a building to emphasize the junction between two floors).*
*3. Similar detailing, materials or fenestration.*

FINDINGS: The applicant's narrative states "The street front façade is single story. A sloped roof cover at the entry and an awning over the storefront window grouping helps to define a ceiling line and provide pedestrian scale to the façade. At the two story areas of the building and along the east façade, a horizontal trim member will be located at the upper floor line." This standard is met as submitted.

*E. Building articulation. All building elevations that orient to a public street or civic space must have at least one break in the wall plane every 25 feet of building length or width, as follows:*
*1. A "break" for the purposes of this subsection is a change in wall plane of not less than 24 inches in depth. Breaks may include but are not limited to an offset, recess, window reveal, pilaster, frieze, pediment, cornice, parapet, gable, dormer, eave, coursing, canopy, awning, column, building base, balcony, permanent awning or canopy, marquee, or similar architectural feature.*
*2. Changes in paint color and features that are not designed as permanent architectural elements, such as display cabinets, window boxes, retractable and similar mounted awnings or canopies, and other similar features, do not count toward meeting this break-in-wall-plane standard.*
*3. See Figure 2.108.D for visual illustration of building articulation standards.*

FINDINGS: The length of the primary front wall along Main Street NE is labeled as 36 feet on the architect's plan set. To meet the articulation standard requiring a break in the wall plane every 25 feet of building length, the applicant states the following "The front façade provides articulation through various measures, including a change in wall plane in excess of 8' with steps to the main entrance, a covered patio, a 27' long awning, storefront windows and trim, vertical corner boards, horizontal trim and panels below the windows, cornice trim, a gate and railing at the covered dining porch and a variety of materials and colors." It is not clear to staff that the articulation proposed meets the definition of "break" being "not less than 24 inches in depth. The permanent awning exceeds that depth, however, the awning also exceeds the 25-foot span requirement.

*F. Pedestrian shelters.*
*1. Permanent awnings, canopies, recesses or similar pedestrian shelters shall be provided along at least 60% of ground-floor elevation(s) that abut a public sidewalk or civic space. Pedestrian shelters used to meet this standard shall extend at least five feet over the pedestrian area; except that the City, through Site Development Review, may reduce this standard where it finds that existing right-of-way dimensions, easements, or building code requirements preclude standard shelters.*
*2. Pedestrian shelters shall comply with applicable building codes, and shall be designed to be visually compatible with the architecture of a building. If mezzanine or transom windows exist, the shelter shall be below such windows where practical. Where applicable, pedestrian shelters shall be designed to accommodate pedestrian signage (e.g., blade signs), while maintaining required vertical clearance.*

FINDINGS: The applicant's narrative states "Of the 48' of building width at the front façade, over 39' is covered by the entry roof cover and the awning, for a total of over 80%. The entry porch and dining porch roofs extend an additional 14' beyond the width of the enclosed building. The porch roof provides a total depth of 9' of cover and the awning extends 5' from the building." This standard is met.

*G. Mechanical equipment. Rooftop mechanical equipment shall be setback or screened behind a parapet wall so it is not visible from any public right-of-way or civic space. Where such placement and screening is not practicable, the City may approve painting of mechanical units in lieu of screening; such painting may consist of muted, earth-tone colors that make the equipment visually subordinate to the building and adjacent buildings, if any.*

FINDINGS: The applicant's narrative states "Rooftop mechanical units will be placed at the back section of the single-story roof, 35' or more back of the front wall. A parapet wall 3' – 4' high will screen the equipment." This standard is met.

*H. Exterior building materials. This standard applies to the exterior wall(s) of buildings that face a public street or civic space. Table 2.108.B lists building materials that are primary (P), secondary (S), accent (A), and not allowed (N).*

*1. Buildings shall utilize primary materials (P) for at least 60% of the applicable building facades.*

*2. Secondary materials (S) are permitted on no greater than 40% of applicable building facades.*

*3. Accent materials (A) are permitted on no greater than 10% of applicable building facades as trim or accents only.*

*4. Materials listed as N in Table 2.108.B are prohibited on applicable building facades.*

| ***Table 2.108.B Building Material*** | ***Designation*** |
|---|---|
| *Brick* | *P* |
| *Stucco* | *P* |
| *Stone/masonry* | *P* |
| *Glass* | *P* |
| *Finished wood, wood veneers, wood siding* | *P* |
| *Concrete (poured in place or precast)* | *S* |
| *Concrete blocks with integral color (ground, polished, or glazed finish)* | *S* |
| *Finished metal panels-such as anodized aluminum, Stainless steel, or copper-featuring polished, brushed, or patina finish* | *S* |
| *Fiber-reinforced cement siding and panels* | *S* |
| *Ceramic tile* | *S* |
| *Concrete blocks with integral color (split-face fin.)* | *A* |
| *Standing seam and corrugated metal* | *A* |
| *Glass block* | *A* |
| *Vegetated wall panel or trellis* | *A* |
| *Vinyl siding* | *N* |
| *Plywood paneling* | *N* |

FINDINGS: The applicant's narrative states "The front façade consists of stained wood siding as the primary material, as indicated on the building elevations. Stained wood trim will be utilized where adjacent to the wood siding. This wood siding and trim, along with the windows and wood entry doors comprise 518 sf of the total 866 sf of front façade area, for 60%. The remaining 40% of wall area will be sided with painted fiber-cement lap siding and trim, as noted on the building elevations. No disallowed materials are proposed." This standard is met.

***§ 3.106 SITE DEVELOPMENT REVIEW.***

*3.106.06 Evaluation of site development plan. The review of a site development plan shall be based upon consideration of the following:*

*A. Conformance with the general development standards in Subchapter 2.3.*

FINDINGS: Pursuant to DDO 2.301.02 Application of Standards, the standards set forth in subchapter 2.3 apply to commercial development. These requirements are further detailed in 2.301.03 Public Facilities Improvement Requirements Table. A commercial development is responsible for: fire hydrant, street improvement, water hookup, sewer hookup, and storm drain. The applicable standards are detailed in the following sections, and have been reviewed by City of Donald Public Works, City Engineer, Marion County Public Works, and the Aurora Rural Fire Department.

*B. Adequacy of public and private facilities.*

FINDINGS: Site Development Reviews are required to comply with DDO 2.304 'Storm Drainage.' The submitted application package included a Preliminary Storm Drainage Report prepared by project engineer Sisul Engineering, dated December 14, 2023. The storm report calculations were reviewed by City of Donald Public Works and the City Engineers. Their review comments are included in Exhibit A to this report. Compliance with their comments is required as a condition of approval.

DDO 2.305 'Utility Lines and Facilities' states that all public utility improvements shall comply with the Donald Public Works Design and Construction Standards. The submitted application package includes civil plans which show capping the existing water service at the Main Street main, and installing a new tap of for "new domestic and fire water services" to the west. A FDC with fire system backflow is shown on the property frontage. There are multiple new septic tanks shown in the rear of the property, to be traffic load-rated due to their location beneath the parking spaces. Detailed Public Works and City Engineer review comments are attached in Exhibit A to this report.

The applicant can meet applicable public and private facility criteria through compliance with the recommended conditions of approval.

*C. Traffic safety, internal circulation and parking;*

DDO 2.302 addresses 'Street Standards.' The project has frontage on Main Street NE, which is a public street in the permitting jurisdiction of Marion County Public Works. No additional right-of-way dedication or street widening are required at this time. Improvements are proposed to the front sidewalk and curb line to raise the curb height from 4.5" to 6" to allow for a storm outflow into the street. Marion County staff reviewed the proposal and commented that County permitting is required prior to construction within the public right-of-way. The property also has rear access to a 12-foot wide gravel public alley. The alley has been approved by Donald Public Works, the City Engineer, and Aurora Fire Department to remain graveled. The alley will be used for residential parking access, utilities, and deliveries. No modifications to the public street standards are requested or approved with this application.

DDO 2.303 addresses 'Off-Street Parking and Loading.' DDO 2.303.03(D) 'Combined Uses' states "In the event several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements of the several uses computed separately, unless a reduction is approved by the Manager, or designee, for shared parking." No spaces are required for the restaurant in the DMU Zone. Two parking spaces are required for a dwelling unit in the DMU Zone. The development's proposed paved parking and loading areas are located in the rear of the building, accessed off of the alley. The applicant's narrative states that a 12 ft x 30 ft loading space is provided. There are two vehicle parking spaces in the rear, three spaces are possible when the loading space is used. The spaces measure at least 18 ft x 9 ft, which meet the minimum dimensions. A condition of approval requires compliance with ADA parking standards. A backing distance of 12 ft is provided on private property for the two 90-degree parking spaces to allow a full 24-foot backing distance when combined with the 12-ft alley width. Two bicycle parking spaces are proposed on a permanent rack near the front entrance to the restaurant. Parking lot landscaping can be met through the landscaped stormwater planters and nearby landscaping. Parking and loading standards can be met through compliance with the recommended conditions of approval.

DDO 2.311 'Pedestrian and Bicycle Circulation' addresses the non-vehicular connectivity to and through a new commercial development. As previously addressed, the applicant is proposing to rebuild a portion of the existing public frontage sidewalk to raise the curb height enough to allow for a stormwater out flow, to match the existing sidewalk width on either side. The submitted site plan shows a continuous walkway system from the front property line to the rear, which meets the minimum four-foot ADA width.

*D. Provision for adequate noise and/or visual buffering from non-compatible uses.*

FINDINGS: Provisions for screening and buffering are found in DDO 2.306.05 'Screening and buffering.' The submitted plan set shows a sight-obscuring enclosure for the garbage and recycling bins, to be located in the rear of the building. The submitted plan set includes a landscaping plan which shows one tree and several types of shrubs near the rear parking area. All landscaping is required to be installed prior to final occupancy, unless otherwise guaranteed. As previously addressed, rooftop mechanical will be screened by architectural features. This standard can be met through compliance with the conditions of approval.

## V. STAFF CONCLUSIONS & RECOMMENDATION:

Based upon the findings of fact detailed above, the proposed mixed-use development can be found to meet the applicable development criteria found in the Donald Development Ordinance (DDO) through compliance with the recommended conditions of approval listed below.

Saff recommends that the Donald Planning Commission therefore APPROVE the submitted Site Development Review application, and adopt the recommended findings and conditions of approval contained in the staff report dated February 16, 2024.

## VI. RECOMMENDED CONDITIONS OF APPROVAL:

1) SDR APPROVAL. Pursuant to DDO 3.102.04, Site Development Review approval is valid for a one-year time frame from the date of final approval. Six-month time extensions are permitted, pursuant to DDO Section 3.102.05.

2) LOT CONSOLIDATION. As approved with City file #LLA 2023-01, the three underlying historic lots of record shall be consolidated prior to issuance of building permits. Pursuant to DDO 3.104.06 'Completion of a lot line adjustment,' within one year of the final decision approving the lot line adjustment, the applicant shall record a replat in the form of a partition plat and corresponding revised deeds with Marion County.

3) BUILDING PERMITS. Pursuant to DDO 2.201.02(A) 'Building Permits,' no building shall be constructed or structure erected without receiving the appropriate building permit. Building permits shall include electrical, mechanical, structural, foundation and similar types of permits issued by the appropriate building codes agency. The development shall be reviewed, permitted, and inspected by Marion County Building Department, in partnership with the City of Donald.

4) FINAL OCCUPANCY. Pursuant to DDO 2.201.02(B) 'Completion of a Structure,' commercial structures shall receive a certificate of occupancy within two years of beginning construction. A structure not completed within the required time period shall constitute a violation of the DDO, and is subject to the violation provisions in DDO Section 1.102.05.

5) COMPLIANCE. Compliance with these conditions of approval shall be the ongoing responsibility of the property owner. Property owner shall notify future building tenants of their obligations to comply, prior to occupancy.

6) REVISED PLAN SET. Prior to building permits, applicant shall submit revised plan set(s) demonstrating compliance with the adopted conditions of approval.

7) PUBLIC WORKS STANDARDS. All public facility improvements shall comply with the Donald Public Works Design and Construction Standards.

8) PUBLIC WORKS COMMENTS. Prior to building permits, applicant shall demonstrate plan revisions in compliance with Public Works comments attached in Exhibit A to the staff report.

9) CITY ENGINEER COMMENTS. Prior to building permits, applicant shall demonstrate plan revisions in compliance with City Engineer comments attached in Exhibit A to the staff report.

10) FIRE DEPT APPROVAL. Fire Department approval shall be required prior to building permits, and again prior to final occupancy.

11) MARION COUNTY PERMITS. All construction and utility work within the Main Street right-of-way shall secure permits from Marion County Public Works prior to commencing work.

12) EASEMENTS. Public utility easements deemed necessary by the City shall be submitted to the City of Donald prior to building permits. Public utility easements of 15 feet are required for all utilities maintained by the City on private properties.

13) DMU BUILDING DESIGN STANDARDS. Prior to building permits, applicant shall demonstrate compliance with the following design subsections:

A. Pursuant to DDO 2.108.04(C)(2), applicant shall demonstrate that a minimum of 60% of the ground-floor street-elevation of the building is covered by transparent windows.

B. Pursuant to DDO 2.108.04(C)(3), applicant shall demonstrate compliance with the intent to provide a minimum of 30% window transparency (rather than simply window and door openings) on the west side elevation facing the courtyard. False windows may be acceptable to balance design intent with security concerns.

C. Pursuant to DDO 2.108.04(C)(4), applicant shall demonstrate compliance with the intent to provide a minimum of 30% window transparency on the rear (south) side of the building. False windows may be acceptable to balance design intent with security concerns.

D. Pursuant to DDO 2.108.04(E), applicant shall demonstrate compliance with building articulation requirements every 25 feet of the building's frontage.

14) ADA PARKING. The number of disabled parking spaces shall comply with the Oregon Structural Specialty Code. Striping and signing of the ADA space(s) shall conform with the Oregon Transportation Commission's standards.

15) PARKING SPACES. Required parking spaces shall be available for the parking of operable passenger automobiles of residents, customers, patrons or employees only, and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the use.

16) LANDSCAPING. Landscaping shall be installed to plan prior to final certificate of occupancy unless otherwise guaranteed in a manner acceptable to the City. Trees or shrubs which die-off within one year of planting shall be replaced with a new similar plant.

17) IRRIGATION. Applicant shall demonstrate compliance with the DDO requirements for xeriscape methods and drought tolerance prior to final occupancy.

18) SIGNAGE. City of Donald sign permit approval is required for all on-site signage, in compliance with DDO 2.310.

19) LIGHTING. Lighting plan shall be reviewed and approved by the City Engineer prior to building permits. All lighting shall be directed entirely onto the loading or parking area and away from any residential use. The lighting shall not cast a glare or reflection onto the public rights-of-way. Lighting shall be installed prior to final certificate of occupancy.

## VII. PLANNING COMMISSION OPTIONS:

**A. Motion to APPROVE Site Development Review #SDR 2023-01, and ADOPT the findings and recommended conditions of approval contained in the staff report to the Planning Commission, as submitted.**

B. Motion to APPROVE Site Development Review #SDR 2023-01, and ADOPT the findings and recommended conditions of approval contained in the staff report to the Planning Commission, AS REVISED BY THE PLANNING COMMISSION (stating desired revisions).

C. Motion to DENY Site Development Review #SDR 2023-01, stating findings for the denial.

D. Motion to CONTINUE the public hearing on Site Development Review #SDR 2023-01 to a time and date certain, stating what additional information is needed to make an informed decision at that later date.

# EXHIBIT A

**REQUEST FOR DEPARTMENT & PARTNER AGENCY COMMENTS**
**COMBINED COMMENTS**

1. **City Public Works Director, Alonso Limones**

After reviewing the materials provided to me on 2/1/2024, I have the following comments and concerns:

- Sheet C1.2, Strom Drain: Concerns of floor drain connected to sewer system at GAR and REC area. Potential for I&I source, run off water entering the sewer system. These types of connections are prohibited.
- Sheet C1.2, Strom Drain: Minimum storm drain pipe slope for mains and laterals are 1%. In all cases where less than 1% is not achieved, a Design Exception is required.
- Sheet C1.4, Utility Plan: Septic tanks system and new water meter/backflow service will require utility easements since they are located inside private property. A 15ft Public Utility easement is required for all utilities maintain by the City in private property.
- Frontage improvements and work on Main St ROW shall be reviewed and approved by Marion County.
- Sheet C1.4. Utility Plan, water meter service: The water meter and backflow device will be installed in accordance to Design Standards. The developer shall provide Water Fixture Unit count to properly sized the water meter and calculate SDC's and installation fee. I highly recommend a separate water meter to serve the apartment building for billing purposes.
- Sheet C1.4. Utility Plan: Number of septic tanks being proposed seem excessive, City Engineer and PW will have to review DEQ's table of recommendation and finalize number of tanks needed to serve the project. The way that is being proposed now will highly impact the sewer SDC's and installation fees.
- Comply with City's Code of Ordinance "Use of Public Sewer" Chapters 51.40 to 51.47.
- All proposed public infrastructure and facilities to serve the project will have to comply with City's Design Construction Standards.

2. **Contract City Engineer, Matt Huxley, PE. TetraTech**

C1.3 – The proposed 3" PVC storm drain is very shallow and will be in the sidewalk. PVC drain pipe will likely settle and may undermine the sidewalk. Use a continuously welded steel pipe instead.
C1.4 – Provide sprinkler system flow and pressure so the City can determine if the water system has adequate pressure. If not then a fire pump may be required.
C1.4 – Drawing notes existing meter is to be removed. I suggest replacing it with a meter to serve the apartment separate from the restaurant.

C1.4 – Confirm unit flow of 50 gallons per day and sizing factor for the restaurant with bar. These are not consistent with City (and DEQ) septic tank sizing guidelines.
C1.4 – Install a grease trap between the building and septic tanks. A grease trap will be required to meet the City's sewer ordinances that prohibit discharge of any fats, oil, and grease to the public sewer.
C1.4 – Multiple septic tanks shall be connected in series with one STEP pump in the last tank in the train. All tanks shall be placed in an area accessible to City PW staff and a vactor truck.

**3. Marion County Public Works & Engineering Division, John Rasmussen PE Civil Engr Assoc 3**

No exception taken to preliminary design put forth. Developer shall acquire permits from MCPW Engineering for any work in Main St public R/W.

**4. Aurora Rural Fire Department, Mike Corless, Assistant Chief**

In reviewing this proposal. We noticed a sprinkler system for the cafe portion, but it doesn't look like there is one for the second story apartment. It would be beneficial to all involved if the second story was sprinkler also. That is all that we have at this point.

**5. Donald City Manager, Eric Underwood, MPA**

I'm ok with moving it forward. Thank you.

# EXHIBIT B

# Consolidated Land Use Application

# CITY OF DONALD

**10710 Main Street N.E. • P.O. Box 388 • Donald, OR 97020-0388**
Phone 503-678-5543 • Fax 503-678-2750
www.donaldoregon.gov
Emergency pager for Water and Sewer: 503-301-6479


**Office Use Only:**

Permit No. _____

Date _____

Fee _____

## LAND USE ACTION APPLICATION

Donald Development Code Section 3.1

---

**Applicant:**

Iselin Architects, PC Contact: Jessica Iselin
Name

1307 7th Street
Mailing Address

Oregon City | OR | 97045
City | State | Zip

503-656-1942
Phone | Fax

jessica@iselinarch.com
Email

**Property Owner:**
(if different than Applicant)

Monen Holdings, LLC
Name

23633 S. Rondevic Drive
Mailing Address

Canby | OR | 97013
City | State | Zip

503-970-4065
Phone | Fax

darrenmonen@gmail.com
Email

**Contractor:**
(if applicable)

_____
Name

_____
Mailing Address

_____
City | State | Zip

_____
Phone | Fax

_____
Email

**Location:**

Street Address: 10780 Main St N.E.

Map and Tax Lot No: 041W17CA05900

Legal Description: Block 7, Lots 3, 4, 5

Property Size: 7,500 sf

Existing Structure/Use: Vacant land

**Description:** Comp. Plan Designation: _____

Current Zoning: DMU, Downtown Mixed Use

**Proposed Action:** construction of new building

**Purpose and Description of Proposed Action:**

Construction of a new restaurant with partial upper floor with storage and one apartment

Site improvements to include parking and loading off of alley, garbage/recycling enclosure

and stormwater facilities

**Number of proposed parcels/lots:** one

**Are you applying for an Expedited Land Division?**

____ Yes (If yes, attach a written description of how the proposal satisfies ORS 197.360)

✔ No

Applicant Name: Jessica Iselin, Iselin Architects, PC Phone: 503-656-1942

Applicant Mailing Address: 1307 7th Street Oregon City, OR 97045

Site Address: 10780 Main Street Donald, OR 97020

Jessica A. Iselin — Signature

Jessica Iselin — Print Name

12-12-23 — Date

**Authorization and Finalization Signatures**

I am the owner/authorized agent of the owner empowered to submit this application and affirm that the information submitted with this application is correct to the best of my knowledge. I further acknowledge that I have read the applicable standards for review of the land use action I am requesting and understand that I must demonstrate to the City review authorities compliance with these standards prior to approval of my request. I understand that the filing fee is nonrefundable and that I am responsible for all additional costs of processing this application in excess of the filing fee, including but not limited to, all planning, engineering, city attorney, and city administration fees and costs. I understand that no final application approval shall be given and/or building permit shall be issued until all actual costs for processing this application are paid in full.

**Applicant's Signature** Jessica A. Iselin **Date** 12-12-23

**Owner's Signature** _____ **Date** 12/13/23

See Attached: Supplemental Materials

# CITY OF DONALD

## Supplemental Materials

**Must Be Submitted With Application**

In order to complete the processing of this application, the City of Donald requires that all pertinent material required for review of the application is submitted at the time application is made along with the application fee. If the application is found to be incomplete, review and processing of the application will not begin until the application is made complete. The submittal requirements relative to the application may be obtained from the specific sections of the Donald Development Ordinance pertaining to the application but include, at a minimum, those items outlined below.

In submitting this application, the applicant must be prepared to give evidence and information which will justify the request and satisfy all the required applicable criteria. The filing fee must be paid at the time of submission. This fee in no way assures approval of the application.

**Submit one paper copy and one electronic version of the following:**

✔ A brief statement describing how the proposed action satisfies the required findings criteria contained in the Land Development Ordinance for the action requested. (Mark "Exhibit A").

✔ Plans, with dimensions, of the proposed action (if applicable). These would include vicinity maps, plot plans, development plans, etc. For maps larger than 11x17, include 10 copies (Mark "Exhibit B").

✔ An accurate list of names and addresses of all owners of property within 100 feet of all boundaries for a Type I action and 200 feet of all boundaries for a Type II or Type III action. The applicant assumes notification problems associated with notification lists which are more than 30 days old. (Mark "Exhibit C").

✔ A copy of the applicable County Assessor's map. (Mark "Exhibit D").

✔ Applicable existing conditions and proposed development plan information. (Mark "Exhibit E")

**Office Use Only:**

Application Received by _____ Date _____
Planning Dept. Review by _____ Date _____
Public Works Review by _____ Date _____
Engineer Review by _____ Date _____
Legal Review by _____ Date _____
Fire Dept. Review by _____ Date _____
School Dist. Review by _____ Date _____
Marion Co Sheriff Office Review by _____ Date _____

**Level of Decision**

Staff Approval by _____ Date _____

Planning Commission Approval _____ Public Hearing Date _____
Council Approval - 1st Public Hearing Date _____ 2nd Public Hearing Date _____

Application for

# Type II Site Development Review

**&**

**Type I Lot Consolidation**

Building & Site Development for a new

## Restaurant

10780 Main Street N.E.
Donald, OR 97020

December 14, 2023

City of Donald
10710 Main Street N.E.
Donald, OR 97020

# TABLE OF CONTENTS

**Project Information:**

| | |
|---|---|
| Property Owner: | Monen Holdings, LLC<br>23633 S Rondevic Drive<br>Canby, OR 97013<br>Contact: Darren Monen, Darrenmonen@gmail.com<br>503-970-4065 |
| Architect: | Iselin Architects, P.C.<br>1307 Seventh Street<br>Oregon City, OR 97045<br>Contact: Jessica Iselin, jessica@iselinarch.com<br>503-656-1942 |
| Civil Engineer: | Sisul Engineering, Inc<br>375 Portland Avenue<br>Gladstone, OR 97027<br>Contact: Pat Sisul, patsisul@sisulengineering.com<br>503-657-0188 |

**Project Description:**

The proposed development includes the demolition of the existing Donald Café building and construction of a new structure to accommodate a new restaurant with a covered outdoor eating deck. The new building will be primarily single-story with a two-story section at the back of the building. The upper level will consist of a single apartment unit and storage/mechanical space for the restaurant.

Site development will include a small paved plaza at the public sidewalk, a grass yard/landscape area, an ADA ramp to the restaurant and deck, a pathway from the public sidewalk to the alley and an exterior stair to the upper level of the building. Accessed from the alley will be two parking spaces, a loading space and a garbage/recycling enclosure.

The building will be raised approximately 12” from the level of the public sidewalk, primarily to accommodate the gravity flow conveyance of roof water to the street via an opening in the curb. This water will travel through a stormwater canal system below the covered deck, as detailed in the civil drawings. In addition, two stormwater planters at the back of the site will address surface water from the parking area.

As part of the development, three individual lots will be consolidated into a single lot as required for the building and site development.

**Project Summary:**

| | | |
|---|---|---|
| Site Address: | 10780 Main Street N.E.<br>Donald, OR 97020 | |
| | Block 7, Lots 3, 4 ,5<br>Tax Lot 041W17CA05900 | |
| Zoning: | DMU, Downtown Mixed Use | |
| Site Area: | 7,500 sf | |
| Building Area: | Main Level: | 3,853 sf |
| | Upper Level: | 1,234 sf |
| | Total: | 5,087 sf |
| | Covered Dining: | 576 sf |
| | Covered Porch: | 96 sf |
| Vehicle Parking: | Minimum Required: | 0 Required for Commercial use<br>2 Required for Residential use<br>2 Total Required |
| | Provided: | 3 standard |
| Bike Parking: | Minimum Required: | 2 |
| | Provided: | 2 |

***§ 2.108 DOWNTOWN MIXED USE (DMU) ZONE:***

*Table 2.108.A Allowed Uses in DMU Zone. Eating & drinking establishments are P – Permitted.*

***2.108.03 Development standards.***

*A. Applicability. The standards in this section apply to all new development and major building expansions in the DMU Zone. For the purpose of this section, major building expansion means a building expansion of more than 50% of the square footage of the existing building.*

The project consists of new development and is subject to the requirements of the zone.

*B. Minimum lot area: None.*

*C. Minimum lot width and depth: None.*

*D. Residential density requirements: None.*

*E. Maximum building height: 45 feet, 60 feet with height bonus. 1. Height bonus for residential use on upper story: 15 feet. To be eligible for the height bonus, at least 75% of the gross floor area of the upper story must be used for residential dwellings.*

The maximum proposed building height is 25'.

*F. Minimum setback requirements: 1. Front setback: zero feet. 2. Rear and side setbacks: zero feet, unless adjacent to residential. a. Rear and side setback adjacent to residentially-zoned property or residential alley: 10 feet.*

A 10' rear setback is provided adjacent to the alley.

*G. Maximum lot coverage: None.*

*H. Minimum landscaping: None.*

*I. Frontage occupancy requirement: 75%.*

*1. This standard is met when a building or buildings occupy at least 75% of the site's frontage area along a public street. For this standard, frontage is considered the area between zero to ten feet from the front property line, extending the entre width of the frontage. Portions of the building not used to meet this standard may setback more than ten feet from the front property line.*

Of the 75' total frontage of the combined three lots, the building and covered eating deck cover 60', for 80% of the frontage. The building is primarily located on the front property line, with the covered entry steps set back 13" to allow for handrail extensions and the covered deck set back 8'-8".

*2. For corner lots, this standard must be met on Main Street or Oak Street, as applicable.*

*3. The portion of the site's frontage area not occupied by building(s) shall be landscaped or developed as civic space in accordance with division J. below.*

The portion of frontage not covered by building includes the ADA access ramp, a paved pedestrian plaza and landscaped courtyard.

*4. See Figure 2.108.A for visual illustration of the frontage occupancy requirement.*

*J. Civic space requirements. At least 2% of the gross area of the subject lot shall be designated and improved as civic space (plaza, landscaped courtyard, or similar space) that is accessible to the public, pursuant to the following: 7,500 SF @ 2% = 150 SF*

The paved pedestrian plaza is approximately 156 sf in area, not including the bicycle parking area, for a total of 2% of the overall property. In addition, The open, landscaped courtyard and pedestrian accessway provides in excess of 700 sf of additional area that will be open for public use and benefit.

*1. Civic spaces shall abut a public right-of-way or otherwise be connected to and visible from a public right-of-way by a sidewalk or pedestrian accessway.*

The paved plaza is immediately adjacent to the public sidewalk and is also open to the landscape area. A pedestrian accessway connects the public sidewalk to the courtyard and extends to the alley.

*2. Where public access to a civic space is not practical due to existing development patterns, physical site constraints, or other hardship presented by the applicant, the City may allow a private area, such as an outdoor eating area attached to a restaurant, in finding the project complies with the standard.*

An outdoor eating area is also incorporated into the development.

*3. All civic spaces shall have dimensions that allow for reasonable pedestrian access. For example, by extending the width of an existing sidewalk by four feet, a developer might provide space for an outdoor eating area; whereas a larger development at a street corner could meet the standard by creating a plaza adjacent to a building entrance.*

The paved plaza is roughly 10' x 15' and will accommodate a small table or bench. It is the owner's intention to expand the plaza and landscape courtyard when the adjacent property to the west, which they also own, develops.

*4. All civic spaces will be improved with at least one pedestrian amenity from the following list:*

*a. Plaza surfaces (e.g., pavers, landscaping).*
*b. Sidewalk extensions.*
*c. Street furnishings (e.g., benches, public art, planter with seat wall, informational kiosk, sheltered seating area).*
*d. Way-finding signage.*
*e. Similar amenity as approved by the City.*

The plaza will be paved, immediately adjacent and open to the public sidewalk and adjacent and accessible to the landscaped courtyard.

*5. See Figure 2.108.B for visual illustration of the civic space requirement.*

*K. Primary building entrances. All buildings shall have at least one primary entrance facing the street (i.e., within 45 degrees of the street property line); or if the building entrance must be turned more than 45 degrees from the street (i.e., front door is on a side or rear elevation) due to the configuration of the site or similar constraints, a pedestrian walkway must connect the primary entrance to the sidewalk in conformance with § 2.311.*

The primary building entrance faces the street.

*L. Off-street parking applicability. The off-street parking requirements of § 2.303 apply in the DMU Zone as follows:*

*1. Non-residential uses in the DMU Zone are not subject to the off-street parking requirements of § 2.303.*
*2. Residential uses in the DMU must comply with the off-street parking requirements of § 2.303.*

No parking is required for the restaurant in the DMU zone. The single upper-level dwelling unit requires two parking spaces. A total of three parking spaces are provided at the back of the building, accessed from the alley.

***2.108.04 Building design standards.***

*A. Purpose. Building design standards regulate the exterior design of buildings to create a pedestrian-friendly environment; provide natural surveillance of public spaces; and maintain and enhance the rural, small-town character of downtown Donald.*
*B. Applicability. The standards in this section apply to all new development and substantial redevelopment of an existing building. For this section, a substantial redevelopment is any expansion or addition that impacts more than 50% of the street-facing façade of an existing building.*

The proposed new development is subject to the Building Design Standards.

*C. Transparency - windows and entrances.*

*1. Ground floor entrances oriented to the street shall be at least partially transparent. This standard may be met by providing a door with window(s), a transom window above the door, or sidelights beside the door. Windows used to meet this standard may count toward the storefront window percentage in division 2. below. Transom windows above a door shall not be covered by an awning, canopy, or similar cover.*

The primary entrance will include glazed doors, sidelights and a transom. The doors and sidelights will be approximately 75% glazed to provide proportions appropriate to a traditional building style.

*2. Transparent widows shall cover at least 60% of the ground-floor, street-facing elevation of all buildings. For this standard, the ground-floor elevation is the area between the building base (or 30 inches above the sidewalk grade, whichever is less) and a plane six feet above the sidewalk grade.*

Calculated as indicated, from 30" to 6' above the sidewalk, the building frontage contains approximately 61% glazing, including the entry door/sidelight opening and the overall length of the storefront window grouping. On a lineal footage basis, the windows and doors cover 36' of the 48' frontage width, for 75%.

*3. Upper floor, street-facing elevations may have less window coverage than ground-floor elevations. Orientation of upper floor windows shall be primarily vertical, or have a width that is no greater than height. Paired or grouped windows that, together, are wider than they are tall, shall be visually divided to express the vertical orientation of individual windows.*

There is no upper floor along the building frontage. The small upper level portion of the building is located approximately 56.5' behind the front property line. The front facing wall of the upper floor contains single and pairs of vertically oriented windows that will be partially visible from the street and sidewalk.

*4. Side and rear ground-floor building elevations shall provide a minimum of 30% window transparency.*

The courtyard side of the building contains approximately 32% window and door openings within the ground floor elevation.

Due to the constraints of the building use, including the need for utility and storage space, the need for an exterior garbage and recycling enclosure and the demand for limited opening sizes for security reasons, the rear window/door area is approximately 15%. The upper level of the rear elevation provides approximately 42% window/door area if calculated similarly to the ground floor elevation definition.

The east wall of the building is located on the property line and is not allowed to have any window opening per building code.

*5. All windows shall have trim, reveals, recesses or similar detailing of not less than four inches in width or depth, as applicable.*

All windows and doors will be fully trimmed with trim measuring a minimum of 4" nominal.

*6. Windows and display cases shall not break the front plane of the building (e.g., projecting display boxes are discouraged). For durability and aesthetic reasons, display cases, when provided, shall be flush with the building façade (not affixed to the exterior) and integrated into the building design with trim or other detailing. Window flower boxes are allowed.*

No projecting windows or display cases will be installed.

*D. Defined upper story. Building elevations shall contain detailing that visually defines street-level storefronts from upper stories. This standard may be met through any of the following elements:*

*1. Awnings or canopies.*
*2. Belt course (molding or projecting bricks or stones running horizontally along the face of a building to emphasize the junction between two floors).*
*3. Similar detailing, materials or fenestration.*

The street front façade is single story. A sloped roof cover at the entry and an awning over the storefront window grouping helps to define a ceiling line and provide pedestrian scale to the façade. At the two story areas of the building and along the east façade, a horizontal trim member will be located at the upper floor line.

*E. Building articulation. All building elevations that orient to a public street or civic space must have at least one break in the wall plane every 25 feet of building length or width, as follows:*

*1. A "break" for the purposes of this subsection is a change in wall plane of not less than 24 inches in depth. Breaks may include but are not limited to an offset, recess, window reveal, pilaster, frieze, pediment, cornice, parapet, gable, dormer, eave, coursing, canopy, awning, column, building base, balcony, permanent awning or canopy, marquee, or similar architectural feature.*
*2. Changes in paint color and features that are not designed as permanent architectural elements, such as display cabinets, window boxes, retractable and similar mounted awnings or canopies, and other similar features, do not count toward meeting this break-in-wall-plane standard.*
*3. See Figure 2.108.D for visual illustration of building articulation standards.*

The front façade provides articulation through various measures, including a change in wall plane in excess of 8' with steps to the main entrance, a covered patio, a 27' long awning, storefront windows and trim, vertical corner boards, horizontal trim and panels below the windows, cornice trim, a gate and railing at the covered dining porch and a variety of materials and colors.

*F. Pedestrian shelters.*

*1. Permanent awnings, canopies, recesses or similar pedestrian shelters shall be provided along at least 60% of ground-floor elevation(s) that abut a public sidewalk or civic space. Pedestrian shelters used to meet this standard shall extend at least five feet over the pedestrian area; except that the City, through Site Development Review, may reduce this standard where it finds that existing right-of-way dimensions, easements, or building code requirements preclude standard shelters.*
*2. Pedestrian shelters shall comply with applicable building codes, and shall be designed to be visually compatible with the architecture of a building. If mezzanine or transom windows exist, the shelter shall be below such windows where practical. Where applicable, pedestrian shelters shall be designed to accommodate pedestrian signage (e.g., blade signs), while maintaining required vertical clearance*

Of the 48' of building width at the front façade, over 39' is covered by the entry roof cover and the awning, for a total of over 80%. The entry porch and dining porch roofs extend an additional 14' beyond the width of the enclosed building. The porch roof provides a total depth of 9' of cover and the awning extends 5' from the building

*G. Mechanical equipment. Rooftop mechanical equipment shall be setback or screened behind a parapet wall so it is not visible from any public right-of-way or civic space. Where such placement and screening is not practicable, the City may approve painting of mechanical units in lieu of screening; such painting may consist of muted, earth-tone colors that make the equipment visually subordinate to the building and adjacent buildings, if any.*

Rooftop mechanical units will be placed at the back section of the single-story roof, 35' or more back of the front wall. A parapet wall 3' – 4' high will screen the equipment

*H. Exterior building materials. This standard applies to the exterior wall(s) of buildings that face a public street or civic space. Table 2.108.B lists building materials that are primary (P), secondary (S), accent (A), and not allowed (N).*

*1. Buildings shall utilize primary materials (P) for at least 60% of the applicable building facades.*
*2. Secondary materials (S) are permitted on no greater than 40% of applicable building facades.*
*3. Accent materials (A) are permitted on no greater than 10% of applicable building facades as trim or accents only.*

The front façade consists of stained wood siding as the primary material, as indicated on the building elevations. Stained wood trim will be utilized where adjacent to the wood siding. This wood siding and trim, along with the windows and wood entry doors comprise 518 sf of the total 866 sf of front façade area, for 60%. The remaining 40% of wall area will be sided with painted fiber-cement lap siding and trim, as noted on the building elevations. No disallowed materials are proposed.

***SUBCHAPTER 2.3: GENERAL DEVELOPMENT STANDARDS***
***§ 2.301 GENERAL PROVISIONS.***

*2.301.01 Purpose. The purpose of this section is to carry out the Comprehensive Plan with respect to development standards and policies and promote and maintain healthy environments and minimize development impacts upon surrounding properties and neighborhoods. 2.301.02 Application of standards.*

*A. Application. The standards set forth in subchapter 2.3 shall apply to partitions; subdivisions; commercial and industrial development; public and non-commercial development; single-family dwellings, duplexes and multifamily structures. These regulations shall apply in all Zones.*

The General Development Standards apply to this commercial development.

*2.301.03 Application of public facility standards. Standards for the provision and utilization of Public facilities or services available within the City of Donald shall apply to all land developments in accordance with the following table of reference. No development permit, including building permit, shall be approved or issued unless the following improvements are provided prior to recording the final plat. Alternatively, a building permit may be issued without Public facilities in the following cases: …*

*A. Construction of public improvements is guaranteed through a performance bond or other instrument acceptable to the City Attorney;*
*B. The improvement is specifically waived by the Public Works Department due to existing improvements or circumstances within the area; or Development Code 59*
*C. Future provision is assured in accordance with § 3.202.01.*
*C-2. Street improvements for single-family dwellings: new single-family dwellings which require a street extension must provide street improvements complying with the Donald Public Woks Design and Construction Standards; otherwise, street improvements are not required.*

Public facility improvements, including sidewalk and curb at frontage, stormwater and sewer improvements will be completed as identified in the Pre-Application conference and further discussed and coordinated between Owner, Civil Engineer and city staff. Refer to Civil drawings.

*2.302.03 General provisions. All public street and utility improvements shall comply with the Donald Public Works Design and Construction Standards. The following provisions shall apply to the dedication, construction, improvement or other development of all public streets in the City of Donald: …*

*I. Alleys. Alleys are encouraged in Residential Zones and shall be provided in all commercial and Industrial Zones unless other permanent provisions for access to off-street parking and loading facilities are provided.*

An alley exists at the back of the property. The alley is currently gravel and will remain gravel. The alley will be utilized for utility access and parking. Where parking spaces are proposed, they will be set back 12' from the property line to provide required parking access width.

*2.302.04 General right-of-way and improvement widths. Street widths and design shall be as designated in the Public Works Design and Construction Standards, except where modifications are permitted under § 2.302.05.*

As identified in the Pre-Application conference, no street widening, dedication or improvements are

required by the city. Frontage improvements proposed are those required to increase curb height to allow stormwater outflow to the street.

*2.302.05 Modification of right-of-way and improvement width. The City may allow modification to the public street standards defined in the Public Works Design and Construction Standards, when the following criteria are satisfied:*

No modifications to the public street standards are requested.

***§ 2.303 OFF-STREET PARKING AND LOADING.***

*2.303.10 Commercial and industrial off-street loading requirements. All commercial or industrial buildings shall require a minimum loading space of 12 feet wide, 30 feet long, and 14 feet high in the following amount: for buildings containing over 5,000 square feet of gross floor area, one space; for each additional 40,000 square feet of gross floor area, or any portion thereof, one space.*

A 12' x 30' loading space is provided at the back of the property, access from the alley. The loading space has no vertical obstructions.

*2.303.11 Parking and loading area development requirements. All parking and loading areas shall be developed and maintained as follows:*

*A. Surfacing. All driveways, parking and loading areas shall have a durable, hard, dustless surface or other permeable paving such as cobblestone, masonry or grasscrete. These areas shall be improved prior to occupancy of the primary building.*

*B. Parking spaces. Parking spaces shall be a minimum nine feet wide and 18 feet in length.*

On site parking spaces are 9' x 18'.

*C. Driveways. The following driveway dimensions shall apply:*

*1. Without adjacent parking: a. Single-family residence: 12 feet. b. One-way: 12 feet. c. Two-way: 22 feet.*

*2. With adjacent parking: 90 degrees – 24 feet*

The alley is will be utilized for parking access and is 12' wide. Where 90 degree parking is provided, it is set back 12' from the property line to provide the required 24' access driveway.

*2.303.12 Bicycle parking requirements. A. Applicability. Bicycle parking requirements apply to all new commercial, civic, industrial and multi-family development. 2 spaces per commercial use*

Two bicycle parking spaces will be provided near the primary entrance porch, adjacent to the public sidewalk and paved plaza. A permanently mounted bike rack will be installed to provide secure locking of bicycles.

***§ 2.307 DEVELOPMENT STANDARDS FOR LAND DIVISIONS.***

*2.307.03 Standards for lots or parcels.*

*A. Minimum lot area. Minimum lot area shall conform to the requirements of the zoning district in which the parcel is located.*

There is no minimum lot size within the DMU zone.

*B. Access. All lots and parcels created after the effective date of this Development Ordinance shall provide a minimum frontage, on an existing or proposed public street, equal to the minimum lot width required by the underlying Zone. The following exceptions shall apply:*

*1. Residential lots or parcels may be accessed via a private street or partition access easement developed in accordance with the provisions of § 2.302 when the City finds that public street is not necessary to provide for the future*

*development of adjoining property.*

*2. Commercial or Industrial uses located in a campus or park like development may be accessed via private streets when developed in accordance with § 2.302.08.*

There are no lot width or depth minimums within the DMU zone.

*C. Flag lots. Flag lots shall only be permitted if it is the only reasonable method by which the rear portion of a lot being unusually deep or having an unusual configuration may be accessed. If a flag-lot is permitted, the following standards shall be met…*

No flag lots will be created.

*D. Through lots. Through lots are discouraged unless essential to provide separation of residential development from major traffic arteries, adjacent non-residential activities, or to overcome specific site disadvantages.*

No through lots will be created.

*E. Lot lines. The side lines of lots, as far as practicable, shall run at right angles to the right-of-way line of the street upon which the lots face. The rear lot line shall be no less than half the dimension of the front lot line.*

Three lots will be combined to a single lot, with the side property lines remaining to define the single lot.

*F. Utility easements. Utility easements shall be provided on lot areas where necessary to accommodate public utilities.*

No utility easement requirements were identified during the Pre-Application conference.

***§ 3.104 LOT LINE ADJUSTMENTS.***

*3.104.04 Process for preliminary review. Lot line adjustments shall be reviewed in accordance with the Type I review procedures specified in § 3.201.*

The request for Type I review of the lot consolidation is incorporated into this Type II Site Development Review.

*3.104.05 Review criteria. Approval of a lot line adjustment shall require compliance with the following:*

*A. After the adjustment, each parcel shall satisfy the dimensional standards of applicable zoning district, unless a variance from these standards is approved.*

There are no minimum lot size, width or depth requirements within the DMU zone.

*B. Each parcel shall meet the land division standards in § 2.307.*

The proposed lot consolidation satisfies the requirements of 2.307 as identified in that section.

*3.104.06 Completion of a lot line adjustment. Within one year of the final decision approving the lot line adjustment, the applicant shall either record modified deeds or a lot line adjustment map reflecting the adjustment approval.*

Upon approval of the lot consolidation, the owner shall record the necessary documents.


EXISTING CONDITIONS

N.T.S.

## LANDSCAPE LEGEND:

MAGNOLIA GRANDIFLORA, 'LITTLE GEM'

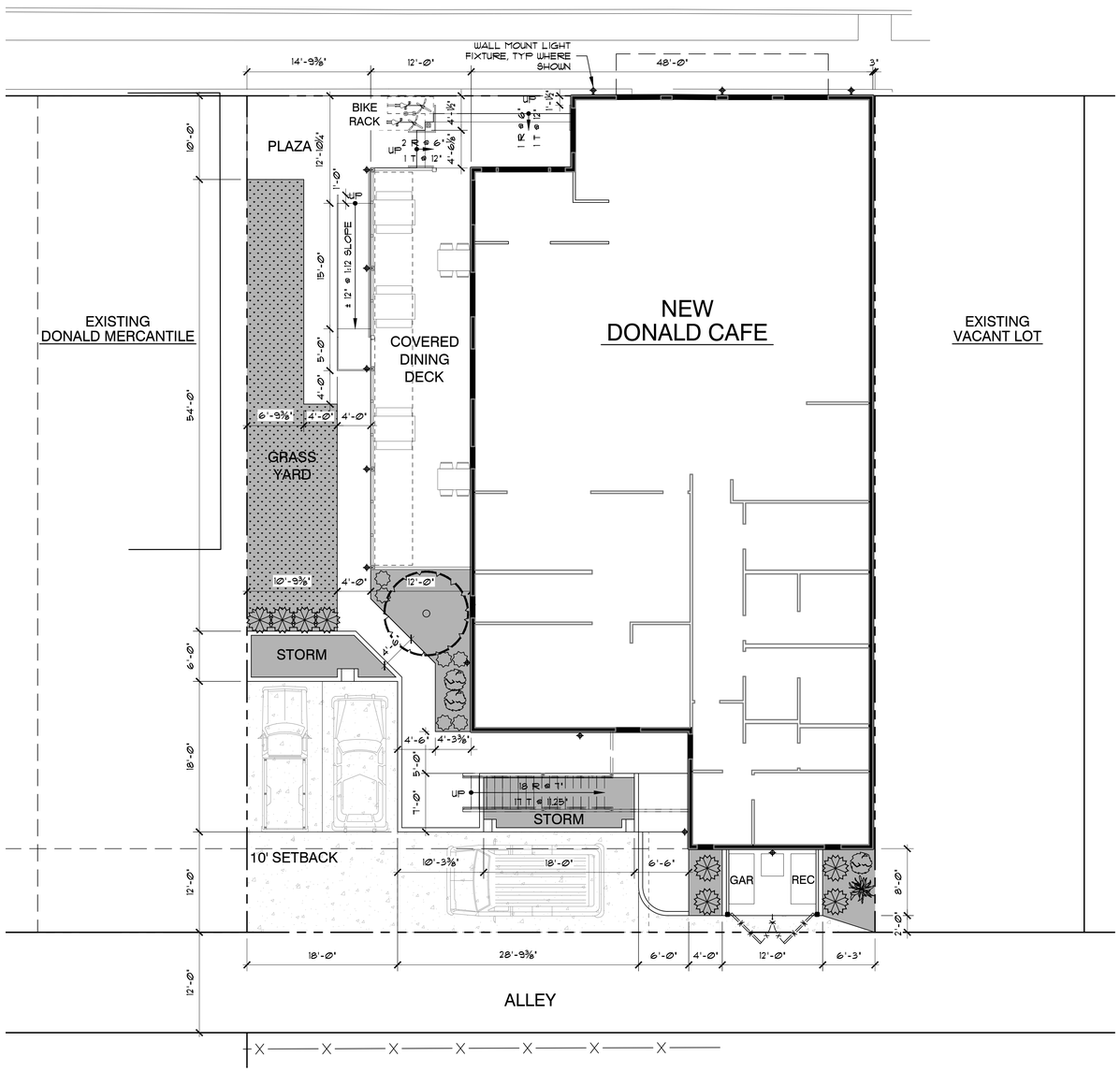
THUJA OCCIDENTALIS 'SMARAGD', EMERALD GREEN ARBORVITAE

VIBURNUM DAVIDII

RHODODENDRON IMPEDITUM, DWARF PURPLE RHODODENDRON

ALOE HYBRID ANDORA, SAFARI ORANGE ALOE

LAWN (ALL EXIST'G LAWN AREAS TO BE PATCHED & REPAIRED AS REQ'D DUE TO CONSTRUCTION WORK)




SITE PLAN

1/8" = 1'-Ø"

## DRAWING INDEX



## PROJECT INFORMATION

| | |
|---|---|
| PROJECT DESCRIPTION: | NEW BUILDING AND SITE IMPROVEMENTS FOR A NEW RESTAURANT WITH INDOOR & OUTDOOR SEATING & A PARTIAL UPPER LEVEL WITH A STORAGE/MECHANICAL ROOM AND A SINGLE APARTMENT UNIT |
| PROPERTY LOCATION: | 10780 MAIN STREET<br>DONALD, OR 97020<br>MARION COUNTY |
| PARCEL NO.: | Block 7, Lots 3, 4 ,5<br>Tax Lot 041W17CA05900 |
| ZONING | DMU - DOWNTOWN MIXED USE |
| SITE AREA: | 7,500 SF (TOTAL - 3 COMBINED LOTS) |
| BUILDING AREA: | |
| BUILDING | 3,582 SF |
| COVERED PATIO | 502 SF |


VICINITY MAP

N.T.S.


ISELIN ARCHITECTS P.C.

1307 Seventh Street
Oregon City, OR 97045
503-656-1942
www.iselinarchitects.com


NOT FOR PRELIMINARY CONSTRUCTION

SITE DEVELOPMENT REVIEW

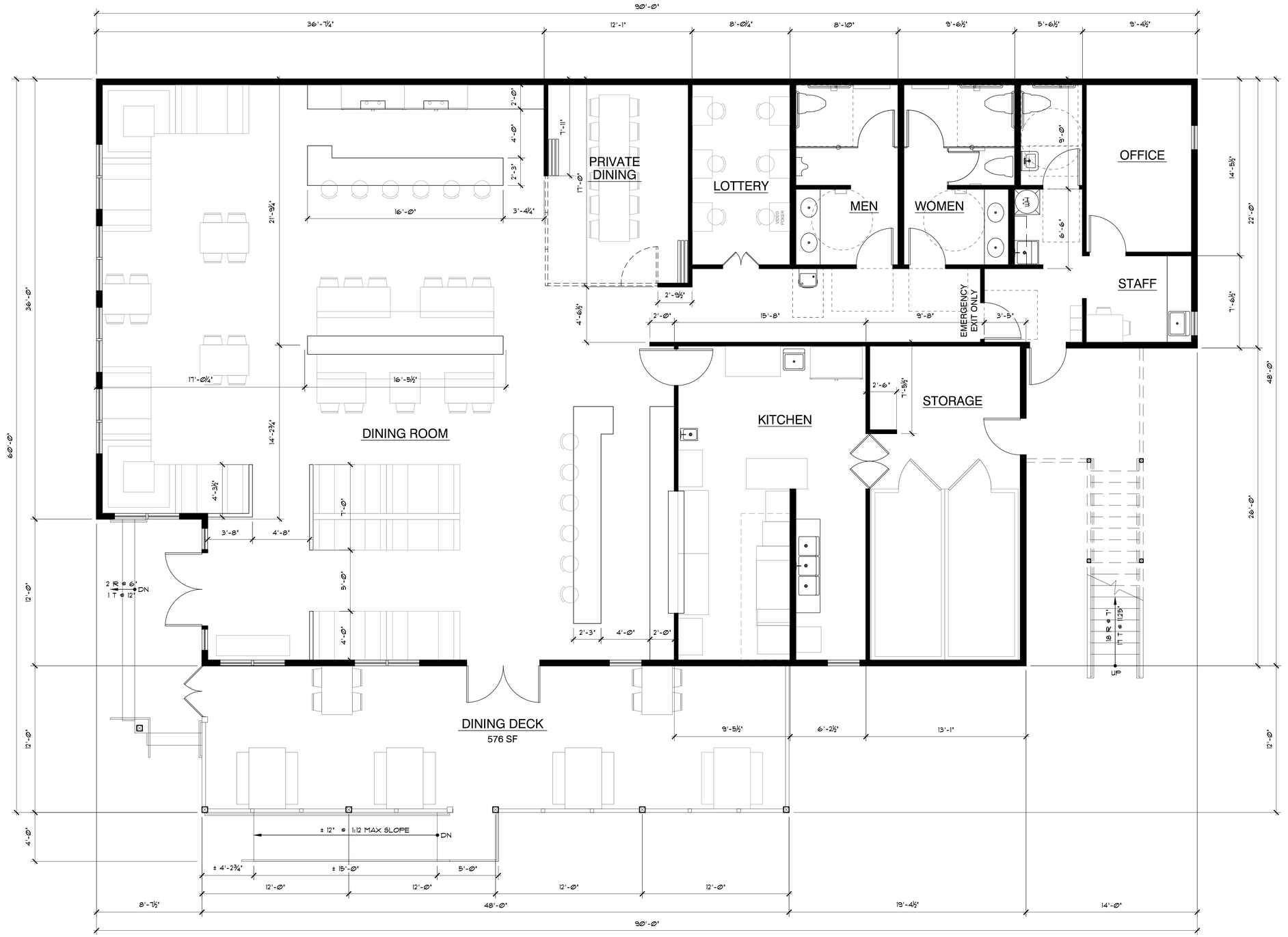
New Construction
**The Donald Cafe**
10780 Main Street N.E. Donald, OR 97020

PROJ. NO. : 2139
FILE : A-SIT
DATE : 12-14-23

SHEET #

**A1.0**

SITE PLAN




## MAIN LEVEL FLOOR PLAN

3,852 SF

1/4" = 1'-0"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Oregon City, OR 97045
503-656-1942
www.iselinarchitects.com


NOT FOR PRELIMINARY CONSTRUCTION

**SITE DEVELOPMENT REVIEW**

New Construction

# The Donald Cafe

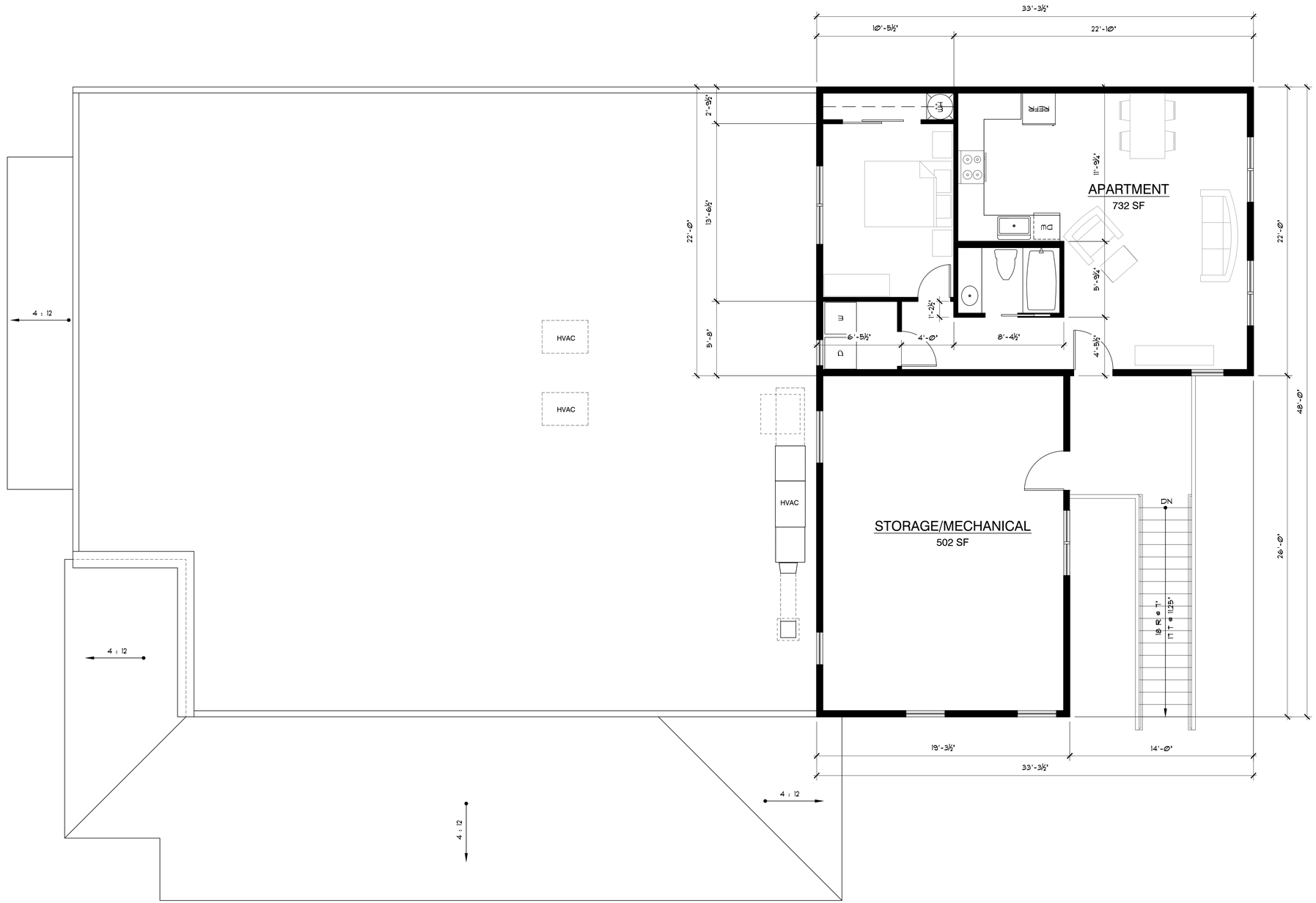
10780 Main Street N.E. Donald, OR 97020

| | |
|---|---|
| PROJ. NO. : | 2139 |
| FILE : | A-FP |
| DATE : | 12-14-23 |

SHEET #

**A1.1**

MAIN LEVEL FLOOR PLAN




UPPER LEVEL FLOOR PLAN

1/4" = 1'-0"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NOT FOR PRELIMINARY CONSTRUCTION

**SITE DEVELOPMENT REVIEW**

New Construction

# The Donald Cafe

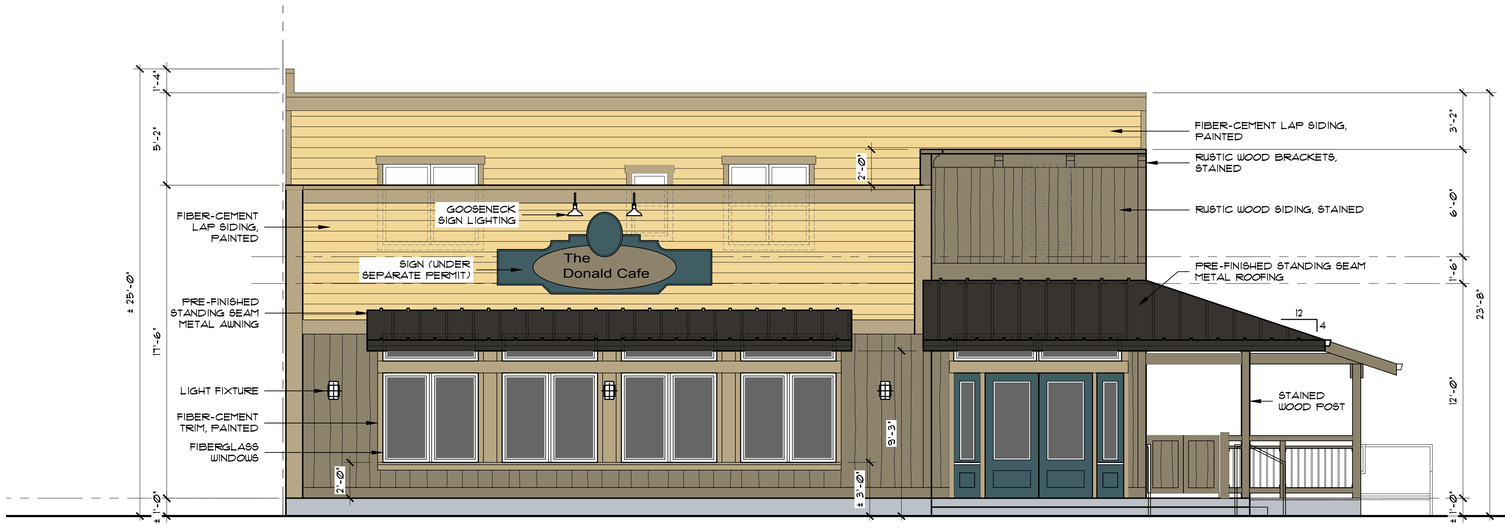
10780 Main Street N.E. Donald, OR 97020

| | |
|---|---|
| PROJ. NO. : | 2139 |
| FILE : | A-FP |
| DATE : | 12-14-23 |

SHEET #

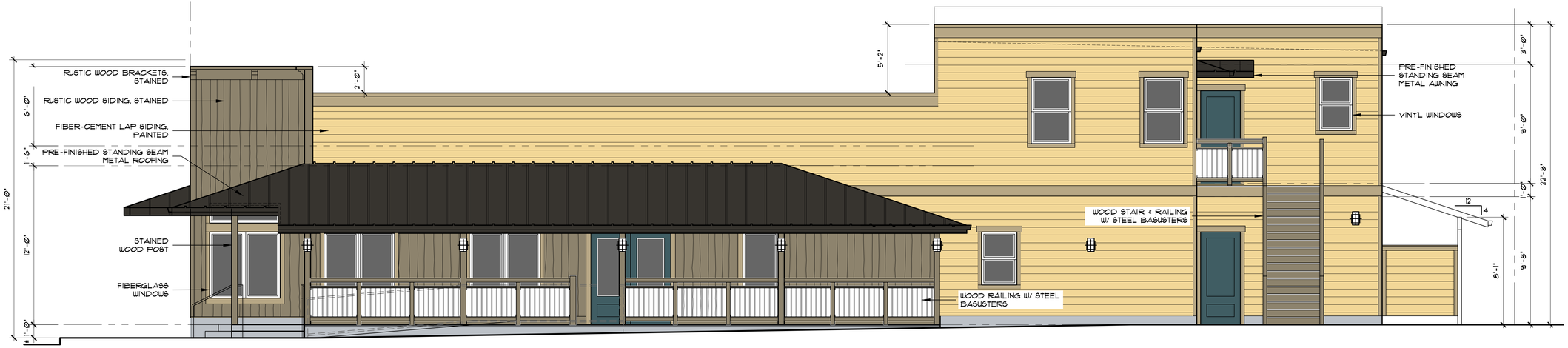
**A1.2**

UPPER LEVEL FLOOR PLAN



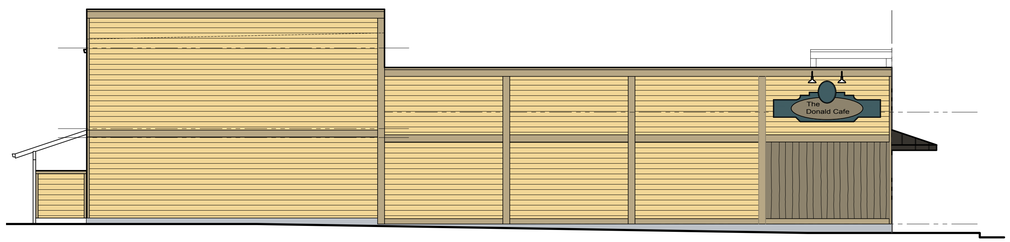

FRONT ELEVATION (NORTH)

1/4" = 1'-Ø"


RIGHT SIDE ELEVATION (WEST)

1/4" = 1'-Ø"




LEFT SIDE ELEVATION (EAST)

1/8" = 1'-Ø"


REAR ELEVATION (SOUTH)

1/4" = 1'-Ø"

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**SITE DEVELOPMENT REVIEW**

New Construction
**The Donald Cafe**
10780 Main Street N.E. Donald, OR 97020

| | |
|---|---|
| PROJ. NO. : | 2139 |
| FILE : | A-ELV |
| DATE : | 12-14-23 |

SHEET #
**A2.1**

BUILDING ELEVATIONS

0 10' 20'
GRAPHIC SCALE 1"=10'

MAIN STREET

60'

9.5'

REPLACE CURB WITH NEW CURB HAVING 6" EXPOSURE

EXISTING SIDEWALK TO REMAIN

1%

SIDEWALK TO BE RAISED 4"±

1.5%

EXISTING SIDEWALK TO REMAIN

PLAZA

CONC. SIDEWALK

RAMP

SURVEYED BUILDING WALL

LOT CONSOLIDATION TO REMOVE INTERNAL PROPERTY LINES. SEE SHEET C1.5.

4" RAISED CURB ABOVE SIDEWALK W/ DRAINAGE OPENINGS

STORM

STRUCTURAL LANDSCAPED PLANTER FOR COLLECTION & STORAGE OF RUNOFF

4" RAISED CURB ABOVE SIDEWALK W/ DRAINAGE OPENINGS

CONC. SIDEWALK

STORM

CURB INLET OPENING (TYPICAL)

GRAVEL PARKING AREA (SLOPE TO PLANTERS)

GAR

REC

CONSTRUCT AC BERM AT EDGE OF ALLEY TO KEEP PRIVATE & PUBLIC STORMWATER SEPARATED.

EXISTING GRAVEL ALLEY TO REMAIN

FELLER STREET

WILLIAMS AVENUE

ALLEY

12'

12'

Donald

| REVISIONS | BY |
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**The Donald Cafe**
**Monen Construction and Design**

# Site Plan

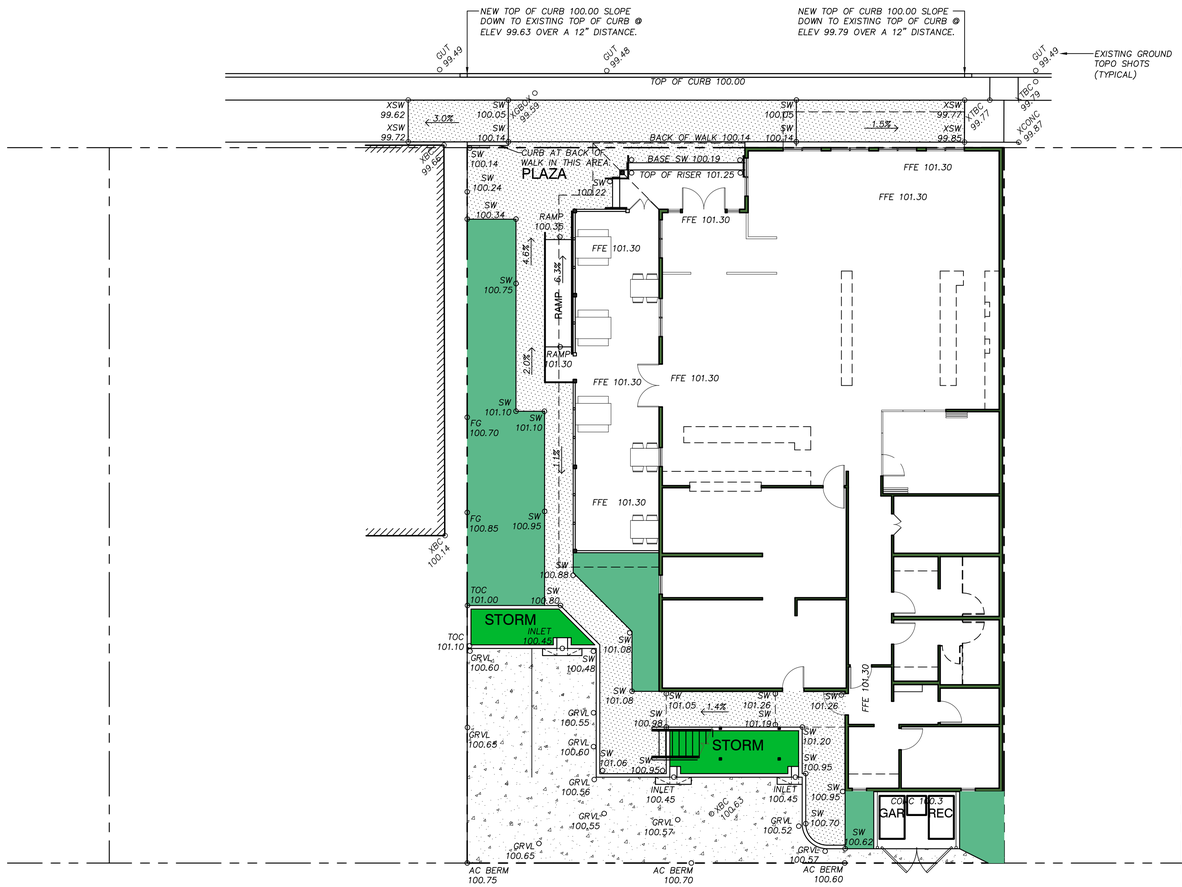

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188


DRAWING:Donald Cafe preliminary.dwg

| | |
|---|---|
| DATE | DEC., 2023 |
| SCALE | 1" = 10' |
| DRAWN | PS |
| JOB | SGL23-026 |
| SHEET | C1.0 |
| OF | SHEETS |

0 10' 20'

GRAPHIC SCALE 1"=10'




| REVISIONS | BY |
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# The Donald Cafe
## Monen Construction and Design

## Grading Plan


SISUL ENGINEERING
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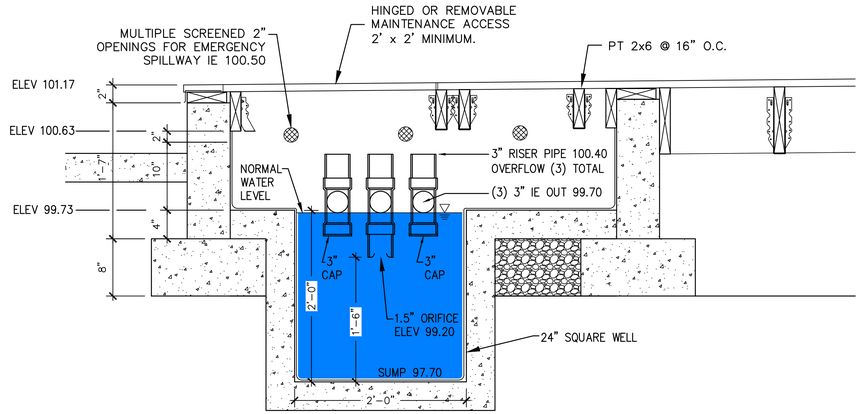
GLADSTONE, OREGON 97027
(503) 657-0188

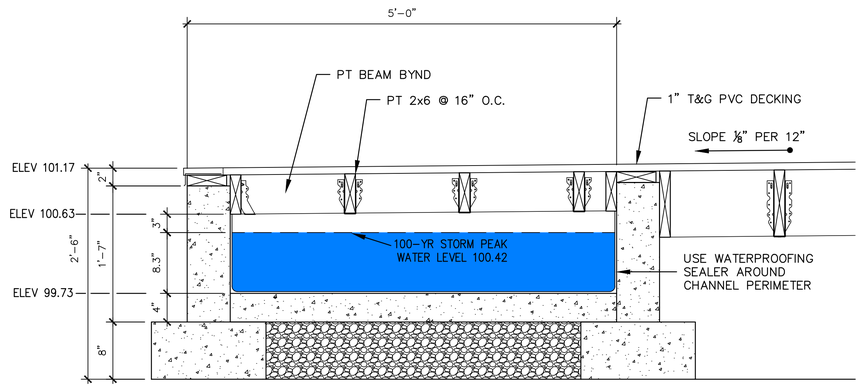

DRAWING:Donald Cafe preliminary.dwg

| | |
|---|---|
| DATE | DEC., 2023 |
| SCALE | 1" = 10' |
| DRAWN | PS |
| JOB | SGL23-026 |
| SHEET | C1.1 |
| OF | SHEETS |



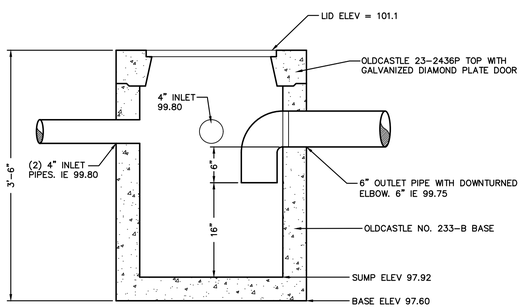

1 / C1.2 DECK - STORMWATER CHANNEL @ FLOW CONTROL OUTLET

1" = 1'-0"



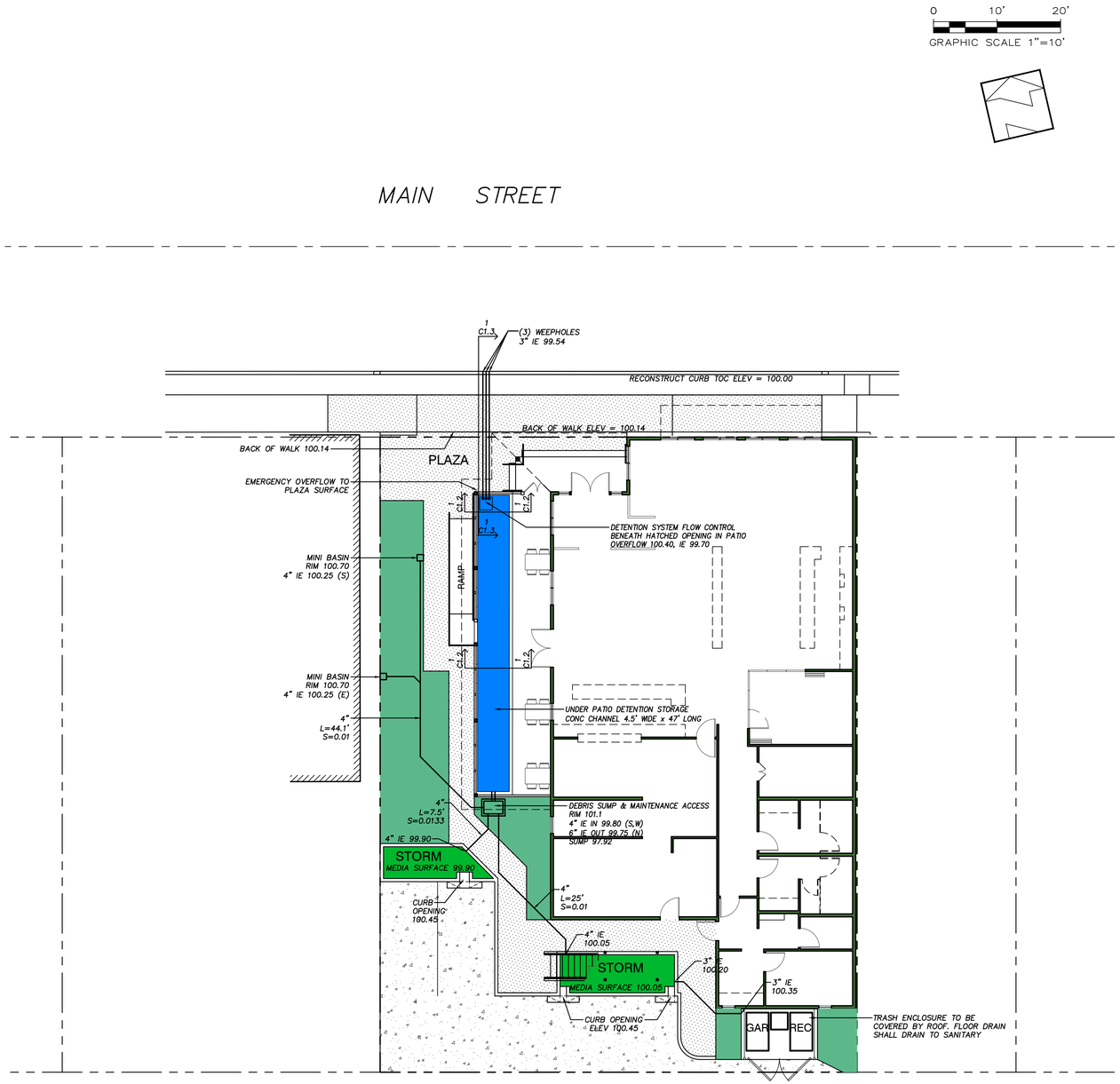

2 / C1.2 DECK - STORMWATER CHANNEL (TYPICAL)

1" = 1'-0"




3 / C1.2 DEBRIS SUMP AND MAINTENANCE ACCESS

1" = 1'-0"




*WATER QUALITY TREATMENT:*

*POLLUTANT GENERATING SURFACES:*

| | |
|---|---|
| GRAVEL PARKING | 920 SF |
| CONCRETE CURB OPENINGS | 19 SF |
| TOTAL | 939 SF |

*POLLUTANT GENERATING SURFACING TOTAL LESS THAN 1,000 SF, THEREFORE NO WATER QUALITY IMPROVEMENTS ARE TRIGGERED.*

*WATER QUANTITY CONTROL:*

*IMPERVIOUS SURFACING DRAINING TO DETENTION SYSTEM:*

| | |
|---|---|
| ROOF | 4,857 SF |
| SIDEWALK | 611 SF |
| GRAVEL PARKING | 920 SF |
| CONCRETE CURB OPENINGS | 19 SF |

*PERVIOUS SURFACING DRAINING TO DETENTION SYSTEM:*

| | |
|---|---|
| LANDSCAPING (GOOD) | 641 SF |

*IMPERVIOUS SURFACING BYPASSING DETENTION SYSTEM:*

| | |
|---|---|
| SIDEWALK (ONSITE) | 251 SF |

*PERVIOUS SURFACING BYPASSING DETENTION SYSTEM:*

| | |
|---|---|
| LANDSCAPING (GOOD) | 123 SF |
| LANDSCAPING (FAIR) | 78 SF |

| REVISIONS | BY |
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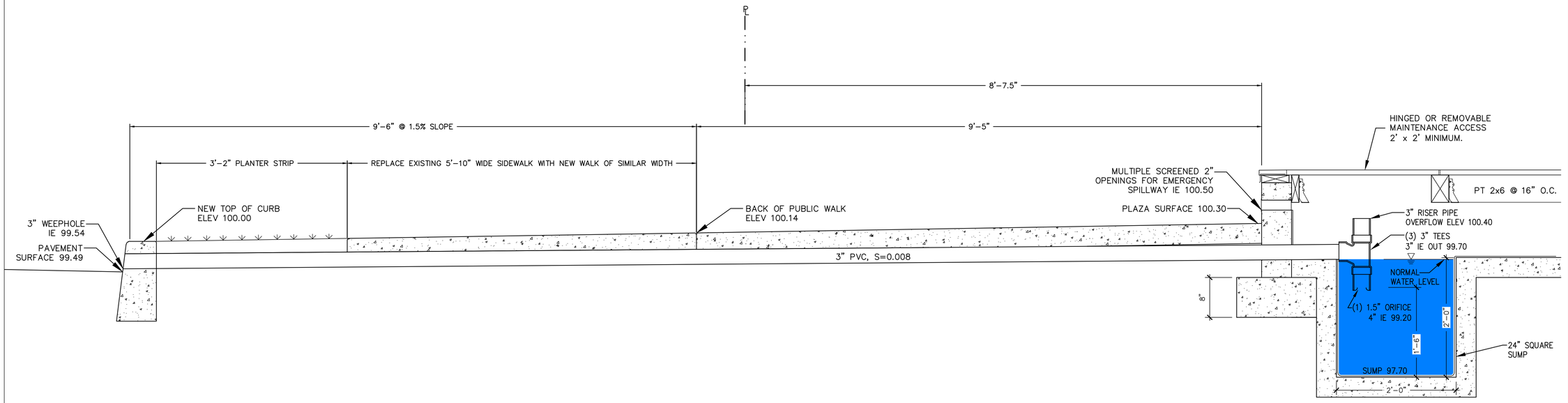
**The Donald Cafe**
**Monen Construction and Design**

***Storm Drain Plan***

SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188

DRAWING:Donald Cafe preliminary.dwg

| | |
|---|---|
| DATE | DEC., 2023 |
| SCALE | 1" = 10' |
| DRAWN | PS |
| JOB | SGL23-026 |
| SHEET | C1.2 |
| OF | SHEETS |




1 C1.3 DECK - STORMWATER CHANNEL @ FLOW CONTROL OUTLET TO WEEPHOLE

1" = 1'–0"

| REVISIONS | BY |
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**The Donald Cafe**
**Monen Construction and Design**

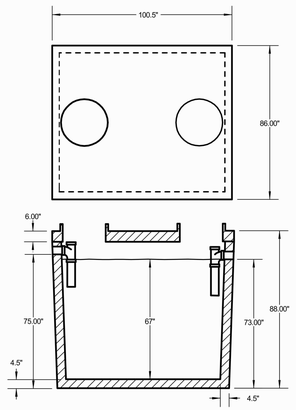
***Storm Drain Detail***


SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657–0188


DRAWING: Donald Cafe preliminary.dwg

| | |
|---|---|
| DATE | DEC., 2023 |
| SCALE | 1" = 1' |
| DRAWN | PS |
| JOB | SGL23–026 |
| SHEET | C1.3 |
| OF | SHEETS |

**WAITE** CONCRETE PRODUCTS, LLC




**2000 GALLON- SEPTIC TANK**

EXCAVATION DIMENSIONS

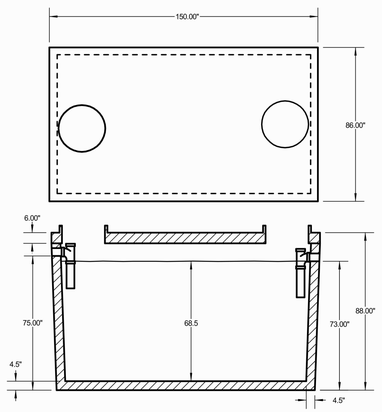
(040108.WCP).2000.2000.ST

| GALLON CAPACITY | WIDTH OF HOLE | LENGTH OF HOLE | HEIGHT OF TANK | INLET TO BOTTOM* | OUTLET TO BOTTOM* | TANK WEIGHT |
|---|---|---|---|---|---|---|
| 2000 | 9' | 10' | 88" | 75" | 73" | 18,000# |

*MEASUREMENT FROM THE BOTTOM OF THE TANK TO BOTTOM OF INLET HOLE.
TANK INCLUDES: TWO- 24" or 30" RISER ADAPTERS 4" ABS INLET/OUTLET COUPLERS

24526 S. HWY 99E • PO BOX 306 • CANBY, OR 97013 • TEL: 503 266 2670 • FAX: 503 266 7466

**WAITE** CONCRETE PRODUCTS, LLC




**3000 GALLON- SEPTIC TANK**

EXCAVATION DIMENSIONS

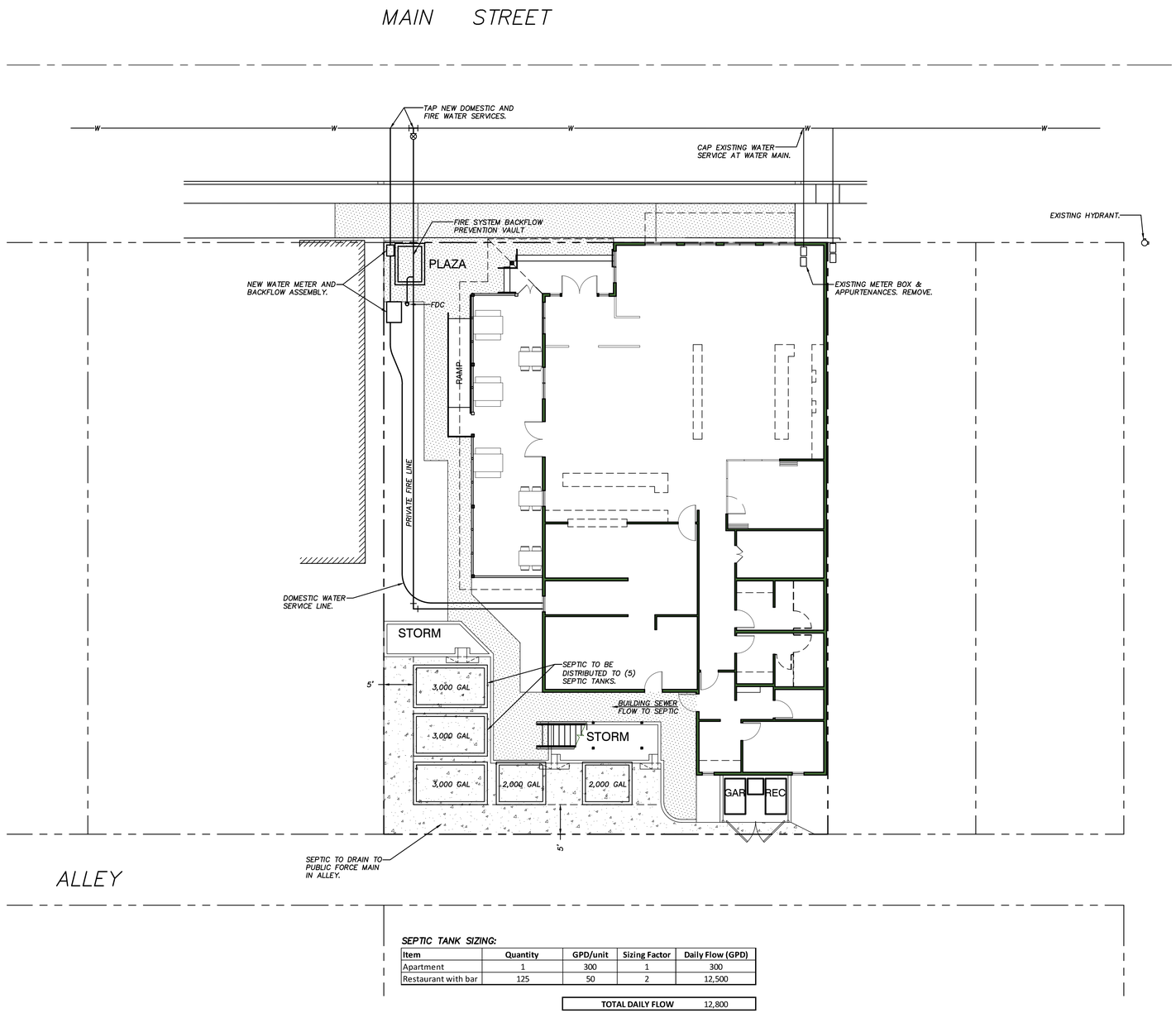
(041108.WCP).3000.3000.ST

| GALLON CAPACITY | WIDTH OF HOLE | LENGTH OF HOLE | HEIGHT OF TANK | INLET TO BOTTOM* | OUTLET TO BOTTOM* | TANK WEIGHT |
|---|---|---|---|---|---|---|
| 3000 | 9' | 14' | 88" | 75" | 73" | 24,000# |

*MEASUREMENT FROM THE BOTTOM OF THE TANK TO BOTTOM OF INLET HOLE.
TANK INCLUDES: TWO- 24" or 30" RISER ADAPTERS 4" ABS INLET/OUTLET COUPLER

24526 S. HWY 99E • PO BOX 306 • CANBY, OR 97013 • TEL: 503 266 2670 • FAX: 503 266 7466

0 10' 20'
GRAPHIC SCALE 1"=10'




*SEPTIC TANK SIZING:*

| Item | Quantity | GPD/unit | Sizing Factor | Daily Flow (GPD) |
|---|---|---|---|---|
| Apartment | 1 | 300 | 1 | 300 |
| Restaurant with bar | 125 | 50 | 2 | 12,500 |
| | | | TOTAL DAILY FLOW | 12,800 |

| REVISIONS | BY |
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| | |

# The Donald Cafe
## Monen Construction and Design

## Utility Plan


SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188


DRAWING: Donald Cafe preliminary.dwg

| | |
|---|---|
| DATE | DEC., 2023 |
| SCALE | 1" = 10' |
| DRAWN | PS |
| JOB | SGL23-026 |
| SHEET | C1.4 |
| OF | SHEETS |

0 10' 20'
GRAPHIC SCALE 1"=10'

MAIN STREET

TL 4601

TL 4600

TL 5900

TL 6000

TL 6100

25.0'

25.0'

25.0'

THESE (2) LOT LINES WILL BE REMOVED & THE PROPERTY WILL BE CONSOLIDATED INTO A SINGLE TAX LOT.

100.0'

100.0'

PROPERTY BOUNDARY

25.0'

25.0'

25.0'

ALLEY

WILLIAMS AVENUE

| REVISIONS | BY |
|---|---|
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| | |

**The Donald Cafe**
**Monen Construction and Design**

# Lot Consolidation


SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188


DRAWING:Donald Cafe preliminary.dwg

| | |
|---|---|
| DATE | DEC., 2023 |
| SCALE | 1" = 10' |
| DRAWN | PS |
| JOB | SGL23-026 |
| SHEET | C1.5 |
| OF | SHEETS |

SISUL ENGINEERING

*A Division of Sisul Enterprises, Inc.*

375 PORTLAND AVENUE, GLADSTONE, OREGON 97027
(503) 657-0188
FAX (503) 657-5779

December 14, 2023

# *Donald Cafe*
# *Donald, Oregon*

# *Preliminary Storm Drainage Report*

J.O. SGL 23-026


**VICINITY MAP**

REGISTERED PROFESSIONAL ENGINEER
10551
Patrick A. Sisul
OREGON
MAY 18, 1993
PATRICK A. SISUL

EXPIRATION DATE: 6/30/2024

# Donald Café, 10780 Main Street NE, Donald, OR:

**THE SITE**:
The Donald Café is on the south side of Main Street in Downtown Donald between Feller and Williams Streets. The site address is 10780 Main Street NE, Donald, OR and the legal description is T4S, R1W, Section 17, Tax Lot 5900. The dimensions of the site are 75 feet wide by 100 feet deep. The site has 75 feet of frontage on Main Street NE and 75 feet of frontage along a public alley on the rear of the property.

**EXISTING CONDITIONS**:
The site has been the home of Donald Café for many years. The existing café building is long and narrow with a residence on the back side of the building along the alley. The building includes a covered elevated concrete patio, sidewalk, and a gravel parking area behind the building. There is also lawn area.

**DEVELOPED CONDITIONS:**
The existing building will be removed and will be developed with a new Donald Café on the lower level with residential above. The new café will include a covered outdoor patio, sidewalks, and gravel parking area behind the building. Site landscaping will include some lawn and some non-lawn landscaping, including stormwater planters.

**STORMWATER QUALITY REQUIREMENTS:**
Per the City of Donald Engineering Standards, water quality requirements begin at 1,000 square feet of new or redeveloped impervious area. Water quality treatment shall be required, as determined by the City Engineer, for all existing commercial parking areas when the development applies for a building permit of paves the parking lot. Water quality is preferred to be provided through use of vegetated facilities.

**STORMWATER DETENTION REQUIREMENTS:**
Per the City of Donald Engineering Standards, detention requirements also begin at 1,000 square feet of new or developed impervious area. Post development peak flows are to be less than or equal to pre-development peak release levels for the 2, 5, 10, and 25 year, 24-hour storm events.

**SOIL TYPE:**
The soil type identified by Web Soil Survey for the site is Woodburn silt loam (WuA). See Web Soil Survey attachment in Appendix)

Woodburn silt loam (WuA) – Hydrologic Group ‘C’

Hydrologic Group C will be used for the calculations.

**RUNOFF CURVE NUMBERS & CORRESPONDING AREAS:** City of Donald Public Works Design Standards state for the designer to refer to the TR-55 “Urban Hydrology for Small Watersheds” Tables 2-2a through Table 2-2d for a list of Curve Numbers. The runoff curve numbers below are the applicable runoff curve numbers from that source for this development:

| | | | |
|---|---|---|---|
| Open space, good condition | 75% + grass cover | C soil | CN = 74 |
| Open space, fair condition | 50%< grass cover <75% | C soil | CN = 79 |
| Gravel, | | C soil | CN = 89 |
| Impervious Surfaces | | | CN = 98 |

Pre- and Post-Development Runoff Curve Numbers & Areas for the site follow:

Pre-Development:

Total Area = 7,500 square feet

| | | | |
|---|---|---|---|
| Pervious Area = | Landscaping | 3,138 sq ft | CN = 74 |
| Impervious Area = | | 4,362 sq ft | CN = 93.9 (weighted) |
| | Gravel | 2,010 sq ft | CN = 89 |
| | Roof | 2,022 sq ft | CN = 98 |
| | Concrete | 330 sq ft | CN = 98 |

---

Post-Development:

Total Area = 7,500 square feet

Portion of the Site Draining to Detention System = 7,048 square feet

| | | | |
|---|---|---|---|
| Pervious Area = | Landscaping | 641 sq ft | CN = 74 |
| Impervious Area = | | 6,407 sq ft | CN= 97.0 (weighted) |
| | Roof | 4,857 sq ft | CN= 98 |
| | Concrete | 630 sq ft | CN= 98 |
| | Gravel | 920 sq ft | CN= 91 |

Portion of the Site Not Draining to Detention System = 452 square feet

| | | | |
|---|---|---|---|
| Pervious Area = | | 201 sq ft | CN=76.5 (weighted) |
| | Landscaping | 123 sq ft | CN=74 |
| | Landscaping | 78 sq ft | CN=79 |
| Impervious Area = | Concrete | 251 sq ft | CN=98 |

**DESIGN STORM EVENTS:** The applicable rainfall events include the 2-, 5-, 10-, and 25-year storm events. Rainfall intensities are established by Table 9-1 of the of the Donald Public Works Design Standards.

**Table 9-1. ODOT Zone 7 24-hour Rainfall Intensities**

| Year | Rainfall intensity (inch/year) |
|---|---|
| 5 | 2.5 |
| 10 | 3.0 |
| 25 | 3.5 |
| 50 | 4.0 |
| 100 | 5.0 |

**TIME OF CONCENTRATION:**

The time of concentration is the time it takes runoff to travel from the hydraulically most distant point of the watershed to the point of interest. The point of interest for this site is Main Street NE.

Time of concentration is the cumulative travel time of the sheet flow, shallow concentrated flow, ditch flow, and pipe flow segments. The longest travel time generally occurs where the sheet flow segment is the

largest. The maximum length for sheet flow length can be up to 300 feet, however, a lower number is generally assumed for design purposes.

Pre-Development Time of Concentration:

Sheet flow for the undeveloped condition will be from the flattest and longest portion of sheet flow. Sheet flow will occur across 100 feet from the alley to the Main St. sidewalk. This lawn has a slope of 0.6 percent.

Sheet Flow:
Sheet flow will occur across a grass area. The flow length is 100 feet & slope is 0.006. Manning's roughness coefficient 'n' is from TR-55 "Urban Hydrology for Small Watersheds" , Table 3-1.

L = 100 feet, S = 0.006, $P_2$ (2-year, 24-hour rainfall) = 2.5 inches, n = 0.15 (lawn)

$$T_t \text{ (min)} = \frac{0.42(n*L)^{0.8}}{(P_2)^{0.5} * (S)^{0.4}} = 17.9 \text{ minutes}$$

There are no shallow concentrated flow or pipe flow segments for the existing condition.

**Pre-Development Time of Concentration = 17.9 min**

Post Development Time of Concentration:
Similar to the pre-development condition, the post development condition will consist of a mix of roof, gravel and lawn areas. The longest time of concentration for the post-development condition will occur across the lawn area on the west side of the site. The lawn area will have a slope of 0.5% across a distance of 30 feet.

Sheet Flow:
Sheet flow will occur across a grass area. The flow length is 30 feet & slope is 0.5%.

L = 30 feet, S = 0.005, $P_2$ (2-year, 24-hour rainfall) = 2.5 inches, n = 0.15 (lawn)

$$T_t \text{ (min)} = \frac{0.42(n*L)^{0.8}}{(P_2)^{0.5} * (S)^{0.4}} = 7.4 \text{ minutes}$$

There will be a short distance of flow across the sidewalk to the public sidewalk and Main St NE, this time will be negligible and will be ignored. The same time will be used for the portion of the site draining to detention and the portion of the site that does not drain to detention.

**Post Development Impervious Area T of C = 7.4 min.**

**PRE-DEVELOPMENT RUNOFF CALCULATIONS:** Pre-Development stormwater peak flows will be calculated using the Santa Barbara Urban Hydrograph (SBUH) method using a Type 1A SCS storm.

King County Hydrograph Programs Input Values:

| Area (perv) | CN (perv) | Area (imperv) | CN (imperv) | time of concentration |
|---|---|---|---|---|
| 0.07 Ac. | 74 | 0.10 Ac. | 93.9 | 17.9 minutes |

## 2-Year Storm Event:

```
                    KING COUNTY DEPARTMENT OF PUBLIC WORKS
                  Surface Water Management Division

                        HYDROGRAPH PROGRAMS
                            Version 4.20

                     1 - INFO ON THIS PROGRAM
                     2 - SBUHYD
                     3 - ROUTE
                     4 - ROUTE2
                     5 - ADDHYD
                     6 - BASEFLOW
                     7 - PLOTHYD
                     8 - DATA
                     9 - RDFAC
                    10 - RETURN TO DOS

ENTER OPTION: 2

SBUH/SCS METHOD FOR COMPUTING RUNOFF HYDROGRAPH

STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
2,24,2.5
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   2-YEAR  24-HOUR STORM  ****  2.50" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.07,74,0.10,93.9,17.9

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .1   74.0     .1   93.9        17.9

  PEAK-Q(CFS)    T-PEAK(HRS)     VOL(CU-FT)
       .05           7.83             827        ← 2-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-2.pre
```

**5-Year Storm Event:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
5,24,3.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   5-YEAR  24-HOUR STORM  ****  3.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.07,74,0.10,93.9,17.9

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .1  74.0      .1  93.9        17.9

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .06           7.83           1076        ← 5-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-5.pre
```

**10-Year Storm Event:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
10,24,3.5
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  10-YEAR  24-HOUR STORM  ****  3.50" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.07,74,0.10,93.9,17.9

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .1  74.0      .1  93.9        17.9

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .08           7.83           1336        ← 10-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-5.pre
```

**25-Year Storm Event:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
25,24,4.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  25-YEAR  24-HOUR STORM  ****  4.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.07,74,0.10,93.9,17.9

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .1  74.0      .1  93.9        17.9

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .10           7.83           1603        ← 25-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-25.pre
```

Peak runoff rates for the various storm events are summarized below, These will be the allowable runoff rate for the post-development condition.

| | | | |
|---|---|---|---|
| 2-Year Storm | 0.05 cfs | 10-year Storm | 0.08 cfs |
| 5-Year Storm | 0.06 cfs | 25-year Storm | 0.10 cfs |

**POST-DEVELOPMENT RUNOFF CALCULATIONS:** Post-Development stormwater flows will be calculated using the Santa Barbara Urban Hydrograph (SBUH) method and a Type 1A SCS storm.

King County Hydrograph Programs Input Values for the portion of the site bypassing detention:

| Area (perv) | CN (perv) | Area (imperv) | CN (imperv) | time of concentration |
|---|---|---|---|---|
| 0.005 Ac. | 76.5 | 0.006 Ac. | 98 | 7.4 minutes |

King County Hydrograph Programs Input Values for the portion of the site being detained:

| Area (perv) | CN (perv) | Area (imperv) | CN (imperv) | time of concentration |
|---|---|---|---|---|
| 0.015 Ac. | 74 | 0.147 Ac. | 97 | 7.4 minutes |

## 2-Year Storm Event Bypassing Detention:

```
                    KING COUNTY DEPARTMENT OF PUBLIC WORKS
                  Surface Water Management Division

                        HYDROGRAPH PROGRAMS
                            Version 4.20

                     1 - INFO ON THIS PROGRAM
                     2 - SBUHYD
                     3 - ROUTE
                     4 - ROUTE2
                     5 - ADDHYD
                     6 - BASEFLOW
                     7 - PLOTHYD
                     8 - DATA
                     9 - RDFAC
                    10 - RETURN TO DOS

ENTER OPTION: 2

SBUH/SCS METHOD FOR COMPUTING RUNOFF HYDROGRAPH

STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
2,24,2.5
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   2-YEAR  24-HOUR STORM  ****  2.50" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.005,76.5,0.006,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.0         .0  76.5     .0  98.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .00          7.83             62        ← 2-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-2B.pst
```

**5-Year Storm Event Bypassing Detention:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
5,24,3.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   5-YEAR  24-HOUR STORM  ****  3.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.005,76.5,0.006,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.0         .0  76.5      .0  98.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .01           7.83             79        ← 5-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-5B.pst
```

**10-Year Storm Event Bypassing Detention:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
10,24,3.5
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  10-YEAR  24-HOUR STORM  ****  3.50" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.005,76.5,0.006,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.0         .0  76.5      .0  98.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .01           7.83             96        ← 10-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe10B.pst
```

**25-Year Storm Event Bypassing Detention:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
25,24,4.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  25-YEAR  24-HOUR STORM  ****  4.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.005,76.5,0.006,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.0         .0  76.5     .0  98.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .01           7.83            114        ← 25-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe25B.pst
```

Peak runoff rates for the portion of the site bypassing detention for the various storm events are summarized below.

| | | | |
|---|---|---|---|
| 2-Year Storm | 0.00 cfs | 10-year Storm | 0.01 cfs |
| 5-Year Storm | 0.01 cfs | 25-year Storm | 0.01 cfs |

## 2-Year Storm Event Draining to Storm System:

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
2,24,2.5
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   2-YEAR  24-HOUR STORM  ****  2.50" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.015,74,0.147,97,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .0  74.0      .1  97.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .09           7.83           1187        ← 2-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-2.pst
```

## 5-Year Storm Event Draining to Storm System:

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
5,24,3.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********   5-YEAR  24-HOUR STORM  ****  3.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.015,74,0.147,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .0  74.0      .1  97.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .11           7.83           1467        ← 5-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-5.pst
```

**10-Year Storm Event Draining to Storm System:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
10,24,3.5
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  10-YEAR  24-HOUR STORM  ****  3.50" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.015,74,0.147,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .0  74.0      .1  97.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .13           7.83           1750        ← 10-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-10.pst
```

**25-Year Storm Event Draining to Storm System:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
25,24,4.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
*********  25-YEAR  24-HOUR STORM  ****  4.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.015,74,0.147,98,7.4

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .0  74.0      .1  97.0         7.4

  PEAK-Q(CFS)   T-PEAK(HRS)    VOL(CU-FT)
       .15           7.83           2035        ← 25-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-25.pst
```

Peak runoff rates for the various storm events are summarized below, These will be the peak post-development flows prior to detention.

| | | | |
|---|---|---|---|
| 2-Year Storm | 0.09 cfs | 10-year Storm | 0.13 cfs |
| 5-Year Storm | 0.11 cfs | 25-year Storm | 0.15 cfs |

**DETENTION STORAGE & ROUTING DATA:**

Detention will be provided using a concrete channel underneath the patio area and two landscaping areas. The available storage at various stages and elevations is listed below:

## Storage Data

| Stage | Elevation (ft) | Depth (ft) | Planter 1 Area (sf) | Planter 2 Area (sf) | Channel Area (sf) | Planter 1 Storage (cf) | Planter 2 Storage (cf) | Channel Storage (cf) | Total Storage (cf) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 99.73 | 0.00 | 72 | 111 | 211.5 | | | 0.0 | 0.0 |
| 2 | 99.90 | 0.17 | 72 | 111 | 211.5 | 0.0 | | 34.2 | 34.2 |
| 3 | 100.05 | 0.32 | 72 | 111 | 211.5 | 10.8 | 0.0 | 64.3 | 75.1 |
| 4 | 100.45 | 0.72 | 72 | 111 | 211.5 | 39.6 | 44.4 | 144.7 | 228.7 |
| 5 | 100.56 | 0.83 | 72 | 111 | 211.5 | 47.5 | 56.6 | 166.8 | 270.9 |

Storage and discharge with a 1.75” orifice by stage/elevation is noted in the spreadsheet below.

## ROUTING DATA:

| | | | | | |
|---|---|---|---|---|---|
| Orifice #1 Diameter: | 1 3/4 | inches | | | |
| Orifice #1 Elevation: | 99.70 | feet | | | |
| Orifice #2 Diameter: | | inches | | | |
| Orifice #2 Elevation: | | feet | | | |
| Orifice #3 Diameter: | | inches | Overflow Riser Diameter: | 4 | inches |
| Orifice #3 Elevation: | | feet | Overflow elevation: | 100.40 | ft |

| B | C | D | E | F | G | H | J | K |
|---|---|---|---|---|---|---|---|---|
| Stage | Elevation (ft) | Surface Area (sq.ft) | Storage Volume (cu.ft.) | Orifice #1 Discharge (cfs) | Orifice #2 Discharge (cfs) | Orifice #3 Discharge (cfs) | Overflow Discharge (cfs) | Actual Discharge (cfs) |
| 1 | 99.73 | 0 | 0 | 0.014 | | | | 0.014 |
| 2 | 99.90 | 0 | 34.2 | 0.037 | | | | 0.037 |
| 3 | 100.05 | 0 | 75.1 | 0.049 | | | | 0.049 |
| 4 | 100.40 | 0 | 228.7 | 0.070 | | | 0.000 | 0.070 |
| 5 | 100.56 | 0 | 270.9 | 0.077 | | | 0.180 | 0.257 |

| | |
|---|---|
| B | Stage Number |
| C | Water Surface Elevation. |
| D | Water Surface Area @ given Elevation |
| E | Storage Volume = [(Average Area) x (d Elevation)] + Previous Volume |
| *ORIFICE* | $Q = 0.62 \times (\text{area}) \times (2 \times g \times h)^{1/2}$ |
| F | Q = Orifice Eq. (area = pipe flow area) |
| *RECTANGULAR CONTRACTED WEIR* | |
| J | Q = (3.247 x L x H^1.48) - ((0.566 x L^1.9 x H^1.9/(1 + 2 x L^1.87)) |
| K | Column F + G + H + J |

**HYDROGRAPH ROUTING THROUGH DETENTION FACILITY:**
The Post-Development hydrographs for the portion of the site draining to the drainage system will be routed through the detention facility to determine the peak release rates from the detention system.

The King County Hydrograph Programs Reservoir Routing Routine will be used.

**2-Year Storm Event:**

```
                    KING COUNTY DEPARTMENT OF PUBLIC WORKS
                     Surface Water Management Division

                           HYDROGRAPH PROGRAMS
                               Version 4.20

                          1 - INFO ON THIS PROGRAM
                          2 - SBUHYD
                          3 - ROUTE
                          4 - ROUTE2
                          5 - ADDHYD
                          6 - BASEFLOW
                          7 - PLOTHYD
                          8 - DATA
                          9 - RDFAC
                         10 - RETURN TO DOS

ENTER OPTION:     3

RESERVOIR ROUTING INFLOW/OUTFLOW ROUTINE

SPECIFY [d:][path]filename[.ext] OF ROUTING DATA
Dcafe1.dat
 DISPLAY ROUTING DATA (Y or N)?     y

ROUTING DATA:

STAGE(FT)   DISCHARGE(CFS)   STORAGE(CU-FT)   PERM-AREA(SQ-FT)
    .00            .01              .0              .0
    .17            .04             34.2             .0
    .32            .05             75.1             .0
    .67            .07            228.7             .0
    .83            .26            270.9             .0

AVERAGE PERM-RATE:    .0 MINUTES/INCH

ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
Dcafe-2.pst
```

INFLOW/OUTFLOW ANALYSIS:

| PEAK-INFLOW(CFS) | PEAK-OUTFLOW(CFS) | OUTFLOW-VOL(CU-FT) | |
|---|---|---|---|
| 0.09 | **.05** | 1356 | ← **Peak Flow** |

| INITIAL-STAGE(FT) | TIME-OF-PEAK(HRS) | PEAK-STAGE-ELEV(FT) | |
|---|---|---|---|
| **99.73** | 8.00 | **100.07** | ← **Peak Elev** |

PEAK STORAGE: 8**0 CU-FT** ← **Peak Storage**

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
*Dcafe-2.out*

**5-Year Storm Event:**

ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
*Dcafe-5.pst*

INFLOW/OUTFLOW ANALYSIS:

| PEAK-INFLOW(CFS) | PEAK-OUTFLOW(CFS) | OUTFLOW-VOL(CU-FT) | |
|---|---|---|---|
| 0.11 | **.06** | 1541 | ← **Peak Flow** |

| INITIAL-STAGE(FT) | TIME-OF-PEAK(HRS) | PEAK-STAGE-ELEV(FT) | |
|---|---|---|---|
| **99.73** | 8.17 | **100.14** | ← **Peak Elev** |

PEAK STORAGE: **110 CU-FT** ← **Peak Storage**

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
*Dcafe-5.out*

**10-Year Storm Event:**

ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
*Dcafe-10.pst*

INFLOW/OUTFLOW ANALYSIS:

| PEAK-INFLOW(CFS) | PEAK-OUTFLOW(CFS) | OUTFLOW-VOL(CU-FT) | |
|---|---|---|---|
| 0.13 | **.06** | 1811 | ← **Peak Flow** |

| INITIAL-STAGE(FT) | TIME-OF-PEAK(HRS) | PEAK-STAGE-ELEV(FT) | |
|---|---|---|---|
| **99.73** | 8.17 | **100.23** | ← **Peak Elev** |

PEAK STORAGE: **150 CU-FT** ← **Peak Storage**

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
*Dcafe-10.out*

**25-Year Storm Event:**

```
ENTER [d:][path]filename[.ext] OF COMPUTED HYDROGRAPH:
Dcafe-25.pst

INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)    PEAK-OUTFLOW(CFS)    OUTFLOW-VOL(CU-FT)
        0.15                 .07                  2262          ← Peak Flow

  INITIAL-STAGE(FT)   TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
        99.73                8.17                 100.33        ← Peak Elev

  PEAK STORAGE:       190 CU-FT                                  ← Peak Storage

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-25.out
```

Peak release rates from the detention system for the various storm events are summarized below.

| Storm Event | Detention System Release Rate (cfs) |
|---|---|
| 2-Year Storm | 0.05 |
| 5-Year Storm | 0.06 |
| 10-year Storm | 0.06 |
| 25-year Storm | 0.07 |

**ADDITION OF HYDROGRAPHS:**

The Post-Development hydrographs for the portion of the site bypassing detention must be added to the hydrograph being released from the detention system in order to determine the peak site release rate and to confirm whether the peak rate is at or below the pre-development release rate.

**2-Year Storm Event:**

```
ROUTINE FOR ADDING HYDROGRAPHS

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 1      Dcafe-2B.pst

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 1         0

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 2      Dcafe-2.out

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 2         0

DATA PRINT-OUT:

  HYDROGRAPH 1: PEAK-Q=    .00 CFS   T-PEAK=   .00 HRS   TT=  0 MINUTES
  HYDROGRAPH 2: PEAK-Q=    .05 CFS   T-PEAK=  7.83 HRS   TT=  0 MINUTES

HYDROGRAPH SUM: PEAK-Q=    .05 CFS   T-PEAK=  7.83 HRS          ← Peak Flow

  TOTAL VOLUME:     1356CU-FT

SPECIFY: C - CONTINUE, N - NEWJOB, F - FILE, P - PRINT, S - STOP
f

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-2.tot
```

---

**5-Year Storm Event:**

```
ROUTINE FOR ADDING HYDROGRAPHS

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 1      Dcafe-5B.pst

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 1         0

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 2      Dcafe-5.out

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 2         0

DATA PRINT-OUT:

  HYDROGRAPH 1: PEAK-Q=    .01 CFS   T-PEAK=  7.67 HRS   TT=  0 MINUTES
  HYDROGRAPH 2: PEAK-Q=    .06 CFS   T-PEAK=  8.17 HRS   TT=  0 MINUTES

HYDROGRAPH SUM: PEAK-Q=    .06 CFS   T-PEAK=  7.67 HRS          ← Peak Flow

  TOTAL VOLUME:     1542CU-FT

SPECIFY: C - CONTINUE, N - NEWJOB, F - FILE, P - PRINT, S - STOP
f

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-5.tot
```

---

**10-Year Storm Event:**

```
ROUTINE FOR ADDING HYDROGRAPHS

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 1      Dcafe10B.pst

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 1         0

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 2      Dcafe-10.out

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 2         0

DATA PRINT-OUT:

  HYDROGRAPH 1: PEAK-Q=    .01 CFS   T-PEAK=  7.67 HRS   TT=  0 MINUTES
  HYDROGRAPH 2: PEAK-Q=    .06 CFS   T-PEAK=  7.83 HRS   TT=  0 MINUTES

HYDROGRAPH SUM: PEAK-Q=    .07 CFS   T-PEAK=  7.83 HRS
```

**← Peak Flow**

```
  TOTAL VOLUME:     1830CU-FT

SPECIFY: C - CONTINUE, N - NEWJOB, F - FILE, P - PRINT, S - STOP
f

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-10.tot
```

---

**25-Year Storm Event:**

```
ROUTINE FOR ADDING HYDROGRAPHS

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 1      Dcafe25B.pst

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 1         0

ENTER: [d:][path]filename[.ext] OF HYDROGRAPH 2      Dcafe-25.out

ENTER: TRAVEL TIME (MINUTES) OF HYDROGRAPH 2         0

DATA PRINT-OUT:

  HYDROGRAPH 1: PEAK-Q=    .01 CFS   T-PEAK=  7.67 HRS   TT=  0 MINUTES
  HYDROGRAPH 2: PEAK-Q=    .07 CFS   T-PEAK=  8.00 HRS   TT=  0 MINUTES

HYDROGRAPH SUM: PEAK-Q=    .08 CFS   T-PEAK=  8.00 HRS
```

**← Peak Flow**

```
  TOTAL VOLUME:     2280CU-FT

SPECIFY: C - CONTINUE, N - NEWJOB, F - FILE, P - PRINT, S - STOP
f

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe-25.tot
```

Peak release rates for the various storm events are summarized below and compared to the allowable runoff rates for the post-development condition.

| Storm Event | Allowable Runoff Rate (cfs) | Peak Runoff Rate (cfs) | |
|---|---|---|---|
| 2-Year Storm | 0.05 | 0.05 | ✓ |
| 5-Year Storm | 0.06 | 0.06 | ✓ |
| 10-year Storm | 0.08 | 0.07 | ✓ |
| 25-year Storm | 0.10 | 0.08 | ✓ |

**STORMWATER DETENTION SUMMARY:**
The proposed detention system will reduce post development peak flows for the 2 through 25-year 24-hour design storm events to equal or less than pre-development levels.

The detention system will include (2) open landscape areas on the rear side of the building and a concrete channel storage system underneath the patio of the Donald Café. A 1.75 inch orifice will be used within the flow control structure to control the release rate. An internal overflow will consist of (3) 3-inch standpipes inside the flow control structure.

In the 25-year event, the peak water elevation is modeled at 100.33. The inlets into the landscape stormwater planters on the rear of the building will be at elevation 100.45. Therefore, at the 25-year peak flow, all water will be contained within the proposed detention structures. The lowest onsite surface drain will have a rim elevation of 100.70.

**EMERGENCY OVERFLOW:**
The system should be designed to pass the 100-year storm event without damage. An emergency system should be able to allow for such a storm event. Per City of Donald Public Works Standards, the 100-year 24-hour storm event will measure 5.0 inches of precipitation in 24-hours.

Below, we determine the peak flow for the 100-year, 24-hour storm event.

**100-Year Storm Event:**

```
STORM OPTIONS:

1 - S.C.S. TYPE-1A
2 - 7-DAY DESIGN STORM
3 - STORM DATA FILE

SPECIFY STORM OPTION: 1

S.C.S. TYPE-1A RAINFALL DISTRIBUTION
ENTER: FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)
100,24,5.0
------------------------------------------------------------------------
******************** S.C.S. TYPE-1A DISTRIBUTION ********************
********* 100-YEAR  24-HOUR STORM  ****  5.00" TOTAL PRECIP. *********
------------------------------------------------------------------------
ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO.  1
0.02,79,0.15,96.9,9.1

DATA PRINT-OUT:

  AREA(ACRES)     PERVIOUS     IMPERVIOUS    TC(MINUTES)
                  A     CN     A     CN
       0.2         .0  79.0      .2  96.9         9.1

  PEAK-Q(CFS)   T-PEAK(HRS)     VOL(CU-FT)
       .19           7.83           2726        ← 100-Year Peak Flow

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe100.pst
```

Using the SBUH program and routing the 100-year storm event through the proposed detention facility results in the following:

```
INFLOW/OUTFLOW ANALYSIS:

  PEAK-INFLOW(CFS)    PEAK-OUTFLOW(CFS)    OUTFLOW-VOL(CU-FT)
        0.17                 0.09                  2514

  INITIAL-STAGE(FT)  TIME-OF-PEAK(HRS)    PEAK-STAGE-ELEV(FT)
       99.73                8.00                 100.42

  PEAK STORAGE:       230 CU-FT

ENTER [d:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:
Dcafe100.out
```

The detention system will be able to pass the 100-year event with a peak water elevation of 100.42 in the system. This water level will be slightly below the openings of the two stormwater planters on the rear side of the building where the gravel parking area will drain into the planters. The lowest onsite surface drain will have a rim elevation of 100.70. All water will be contained and will create no property damage. ✓

The 100-year event will be able to pass through the system with a peak flow of 0.17 cfs. ✓

If the system becomes blocked, emergency spillways will installed within the detention structure will drain to the surface of the private sidewalk plaza at the front of the Donald Café and could drain across the private and public walkways toward Main Street NE. If those are blocked, water would back up out of an area drain having a rim elevation of 100.70 and would flow overland toward Main Street.✓

**APPENDIX, SUPPORTING INFORMATION:**

1. Web Soil Survey Information for the site
2. Runoff Curve Numbers, TR-55 “Urban Hydrology for Small Watersheds” Tables 2a through 2d
3. Post-Development Condition Storm Drainage Plan

**APPENDIX 1:** Web Soil Survey Information for the site.


Soil Map—Marion County Area, Oregon
122° 50' 23" W
122° 50' 22" W
45° 13' 21" N
45° 13' 19" N
512566
512572
512578
512584
512590
512596
512602
5007695
5007689
5007683
5007677
5007671
5007665
5007659
5007653
5007647
WuA
Alley
Soil Map may not be valid at this scale.
Map Scale: 1:244 if printed on A portrait (8.5" x 11") sheet.
N
Meters
0 3 7 14 21
Feet
0 10 20 40 60
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84
USDA
Natural Resources Conservation Service
Web Soil Survey
National Cooperative Soil Survey
12/14/2023
Page 1 of 3

Soil Map—Marion County Area, Oregon
(Aurora Fire Station, 12810 Ehlen Rd NE)

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

**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 1:20,000.

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: Marion County Area, Oregon
Survey Area Data: Version 20, Sep 14, 2022

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

Date(s) aerial images were photographed: Aug 19, 2015—Sep 13, 2016

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.

## Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| WuA | Woodburn silt loam, 0 to 3 percent slopes | 0.2 | 100.0% |
| **Totals for Area of Interest** | | **0.2** | **100.0%** |

**APPENDIX 2:** Runoff Curve Numbers, TR-55 “Urban Hydrology for Small Watersheds” Tables 2a - 2d.

**Table 2-2a** Runoff curve numbers for urban areas [1/]

| Cover description: Cover type and hydrologic condition | Average percent impervious area [2/] | Curve numbers for hydrologic soil group: A | B | C | D |
|---|---|---|---|---|---|
| *Fully developed urban areas (vegetation established)* | | | | | |
| Open space (lawns, parks, golf courses, cemeteries, etc.) [3/]: | | | | | |
| Poor condition (grass cover < 50%) | | 68 | 79 | 86 | 89 |
| Fair condition (grass cover 50% to 75%) | | 49 | 69 | 79 | 84 |
| Good condition (grass cover > 75%) | | 39 | 61 | 74 | 80 |
| Impervious areas: | | | | | |
| Paved parking lots, roofs, driveways, etc. (excluding right-of-way) | | 98 | 98 | 98 | 98 |
| Streets and roads: | | | | | |
| Paved; curbs and storm sewers (excluding right-of-way) | | 98 | 98 | 98 | 98 |
| Paved; open ditches (including right-of-way) | | 83 | 89 | 92 | 93 |
| Gravel (including right-of-way) | | 76 | 85 | 89 | 91 |
| Dirt (including right-of-way) | | 72 | 82 | 87 | 89 |
| Western desert urban areas: | | | | | |
| Natural desert landscaping (pervious areas only) [4/] | | 63 | 77 | 85 | 88 |
| Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders) | | 96 | 96 | 96 | 96 |
| Urban districts: | | | | | |
| Commercial and business | 85 | 89 | 92 | 94 | 95 |
| Industrial | 72 | 81 | 88 | 91 | 93 |
| Residential districts by average lot size: | | | | | |
| 1/8 acre or less (town houses) | 65 | 77 | 85 | 90 | 92 |
| 1/4 acre | 38 | 61 | 75 | 83 | 87 |
| 1/3 acre | 30 | 57 | 72 | 81 | 86 |
| 1/2 acre | 25 | 54 | 70 | 80 | 85 |
| 1 acre | 20 | 51 | 68 | 79 | 84 |
| 2 acres | 12 | 46 | 65 | 77 | 82 |
| *Developing urban areas* | | | | | |
| Newly graded areas (pervious areas only, no vegetation) [5/] | | 77 | 86 | 91 | 94 |
| Idle lands (CN's are determined using cover types similar to those in table 2-2c). | | | | | |

[1] Average runoff condition, and $I_a = 0.2S$.

[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

**Table 2-2b** Runoff curve numbers for cultivated agricultural lands [1/]

| Cover description | | | Curve numbers for hydrologic soil group | | | |
|---|---|---|---|---|---|---|
| Cover type | Treatment [2/] | Hydrologic condition [3/] | A | B | C | D |
| Fallow | Bare soil | — | 77 | 86 | 91 | 94 |
| | Crop residue cover (CR) | Poor | 76 | 85 | 90 | 93 |
| | | Good | 74 | 83 | 88 | 90 |
| Row crops | Straight row (SR) | Poor | 72 | 81 | 88 | 91 |
| | | Good | 67 | 78 | 85 | 89 |
| | SR + CR | Poor | 71 | 80 | 87 | 90 |
| | | Good | 64 | 75 | 82 | 85 |
| | Contoured (C) | Poor | 70 | 79 | 84 | 88 |
| | | Good | 65 | 75 | 82 | 86 |
| | C + CR | Poor | 69 | 78 | 83 | 87 |
| | | Good | 64 | 74 | 81 | 85 |
| | Contoured & terraced (C&T) | Poor | 66 | 74 | 80 | 82 |
| | | Good | 62 | 71 | 78 | 81 |
| | C&T+ CR | Poor | 65 | 73 | 79 | 81 |
| | | Good | 61 | 70 | 77 | 80 |
| Small grain | SR | Poor | 65 | 76 | 84 | 88 |
| | | Good | 63 | 75 | 83 | 87 |
| | SR + CR | Poor | 64 | 75 | 83 | 86 |
| | | Good | 60 | 72 | 80 | 84 |
| | C | Poor | 63 | 74 | 82 | 85 |
| | | Good | 61 | 73 | 81 | 84 |
| | C + CR | Poor | 62 | 73 | 81 | 84 |
| | | Good | 60 | 72 | 80 | 83 |
| | C&T | Poor | 61 | 72 | 79 | 82 |
| | | Good | 59 | 70 | 78 | 81 |
| | C&T+ CR | Poor | 60 | 71 | 78 | 81 |
| | | Good | 58 | 69 | 77 | 80 |
| Close-seeded or broadcast legumes or rotation meadow | SR | Poor | 66 | 77 | 85 | 89 |
| | | Good | 58 | 72 | 81 | 85 |
| | C | Poor | 64 | 75 | 83 | 85 |
| | | Good | 55 | 69 | 78 | 83 |
| | C&T | Poor | 63 | 73 | 80 | 83 |
| | | Good | 51 | 67 | 76 | 80 |

[1] Average runoff condition, and $I_a$=0.2S

[2] Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

[3] Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good ≥ 20%), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

**Table 2-2c** Runoff curve numbers for other agricultural lands [1/]

| Cover description | | Curve numbers for hydrologic soil group | | | |
|---|---|---|---|---|---|
| Cover type | Hydrologic condition | A | B | C | D |
| Pasture, grassland, or range—continuous forage for grazing. [2/] | Poor | 68 | 79 | 86 | 89 |
| | Fair | 49 | 69 | 79 | 84 |
| | Good | 39 | 61 | 74 | 80 |
| Meadow—continuous grass, protected from grazing and generally mowed for hay. | — | 30 | 58 | 71 | 78 |
| Brush—brush-weed-grass mixture with brush the major element. [3/] | Poor | 48 | 67 | 77 | 83 |
| | Fair | 35 | 56 | 70 | 77 |
| | Good | 30 [4/] | 48 | 65 | 73 |
| Woods—grass combination (orchard or tree farm). [5/] | Poor | 57 | 73 | 82 | 86 |
| | Fair | 43 | 65 | 76 | 82 |
| | Good | 32 | 58 | 72 | 79 |
| Woods. [6/] | Poor | 45 | 66 | 77 | 83 |
| | Fair | 36 | 60 | 73 | 79 |
| | Good | 30 [4/] | 55 | 70 | 77 |
| Farmsteads—buildings, lanes, driveways, and surrounding lots. | — | 59 | 74 | 82 | 86 |

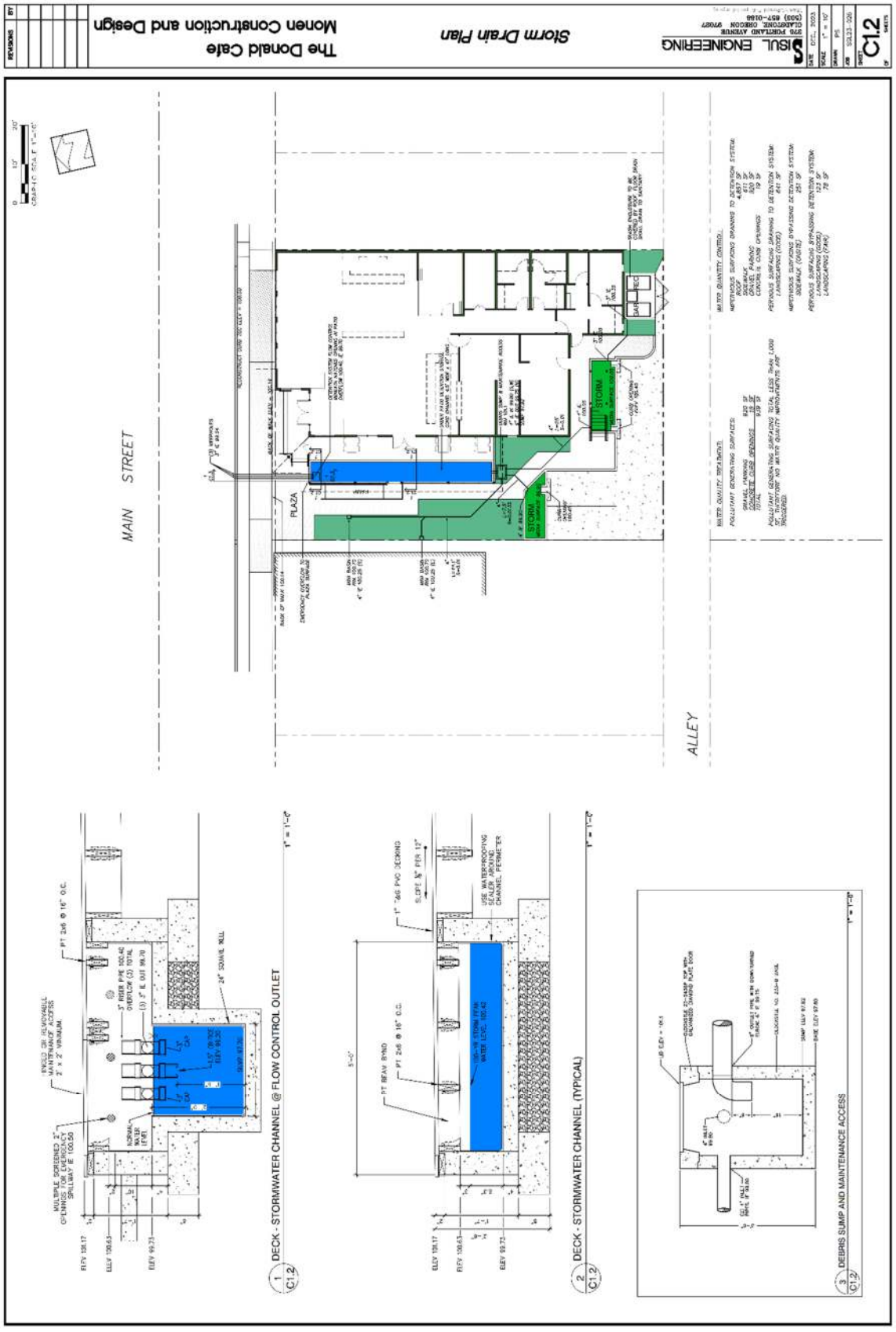
1 Average runoff condition, and $I_a = 0.2S$.
2 *Poor:* <50%) ground cover or heavily grazed with no mulch.
*Fair:* 50 to 75% ground cover and not heavily grazed.
*Good:* > 75% ground cover and lightly or only occasionally grazed.
3 *Poor:* <50% ground cover.
*Fair:* 50 to 75% ground cover.
*Good:* >75% ground cover.
4 Actual curve number is less than 30; use CN = 30 for runoff computations.
5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.
6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
*Fair:* Woods are grazed but not burned, and some forest litter covers the soil.
*Good:* Woods are protected from grazing, and litter and brush adequately cover the soil.

**Table 2-2d** Runoff curve numbers for arid and semiarid rangelands [1]

| Cover description | | Curve numbers for hydrologic soil group | | | |
|---|---|---|---|---|---|
| Cover type | Hydrologic condition [2] | A [3] | B | C | D |
| Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element. | Poor | | 80 | 87 | 93 |
| | Fair | | 71 | 81 | 89 |
| | Good | | 62 | 74 | 85 |
| Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush. | Poor | | 66 | 74 | 79 |
| | Fair | | 48 | 57 | 63 |
| | Good | | 30 | 41 | 48 |
| Pinyon-juniper—pinyon, juniper, or both; grass understory. | Poor | | 75 | 85 | 89 |
| | Fair | | 58 | 73 | 80 |
| | Good | | 41 | 61 | 71 |
| Sagebrush with grass understory. | Poor | | 67 | 80 | 85 |
| | Fair | | 51 | 63 | 70 |
| | Good | | 35 | 47 | 55 |
| Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus. | Poor | 63 | 77 | 85 | 88 |
| | Fair | 55 | 72 | 81 | 86 |
| | Good | 49 | 68 | 79 | 84 |

1 Average runoff condition, and $I_a$ = 0.2S. For range in humid regions, use table 2-2c.
2 Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover.
Good: > 70% ground cover.
3 Curve numbers for group A have been developed only for desert shrub.

**APPENDIX 3:** Post Development Storm Drain Plan.


The Donald Cafe
Monen Construction and Design
Storm Drain Plan
SISUL ENGINEERING
375 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188
C1.2
MAIN STREET
ALLEY
PLAZA
STORM
1 DECK - STORMWATER CHANNEL @ FLOW CONTROL OUTLET
2 DECK - STORMWATER CHANNEL (TYPICAL)
3 DEBRIS SUMP AND MAINTENANCE ACCESS